THE UNIVERSITY OF HULL

HISTORICAL ORIGINS OF ACCOUNTING:

THE CONTRIBUTIONS OF IRAQ AND ANCIENT MESOPOTAMIA

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ABSTRACT

The origin of modern accounting is an unsettled phenomenon. Several scholars have traced that origin to the ancient Greece, to India, to Mesopotamia, and Egypt. There is no systematic study of the role which each ancient community has played in the development of modern accounting. Received knowledge from accounting history, to date, is that modern accounting has its roots in Europe, especially ancient Greece and Italy. The purpose of this thesis is to attempt to modify this accepted truth and to suggest that some aspects of the roots of modern accounting can be traced to Iraq and the ancient Mesopotamia.

Accounting is a progressive science which develops as it is passed from one generation to the next. Knowledge of our past helps us to understand our present and predict the future. Modern accounting may be said to have become possible with the introduction and gradual adoption of rational procedures in arithmetic and bookkeeping. Therefore, it is important to know how our forebears practised their accounting in the cradle of civilisation, i.e. Assyria and babylonia, where mankind is said to have built its first civilisation, and to have invented a unique writing system. Unfortunately, Iraq lacks sufficient literature dealing with the origins and the history of accounting.

One reason for the paucity of information on accounting in the Mesopotamia is that much of the archival information that would have led to the discovery of accounting history of the region are in ancient Mesopotamian languages and in clay tablets which have not been studied by archaeologists interested in accounting. Another reason is the lack of interest in the history of the Iraqi people brought about by the long period of wars with its neighbours and the lack of interest in Iraq by people outside its borders. Yet another reason and perhaps the most important is the scarcity of Iraqi scholars interested in accounting history of Iraq.

This lack of literature on Iraqi accounting history motivates the attempt to fill this

important gap in historical literature.

The study covers the period between 3600 BC and the advent of the Islamic religion (that is, until the beginning of the 12th century AD). With the help of archaeological discovery of the tools of writing, numbering systems and accounts of the ancient Mesopotamia, the analysis of socio-economic institutions such as palaces, temples, Islamic religion, capitalism and markets and their relation to accounting, I reconstructed the role of the ancient Mesopotamia in the discovery of modern accounting.

To discipline the synthesis and analysis, Littleton's (1966) framework for discovering the historical roots of bookkeeping (and indeed, accounting) was adopted. This required finding out how a society recorded their events and transactions (the art of writing); made computations (arithmetic and mathematics); dealt with property rights; exchanged goods either through the medium of money, credit or by barter, and the nature of their commerce and how they accumulated wealth and accounted for it. The presence of these prerequisites for the development of bookkeeping in Iraq 4000 or more years ago would lead to the suggestion that the inhabitants of ancient Iraq had a culture of accounting.

The thesis concludes that these prerequisites existed in the ancient Iraq and that, in several respects, the ancient Iraq had an accounting culture that predated many of these antecedents as a part of the protoliterage age.

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CHAPTER ONE

INTRODUCTION

1.1 DESCRIPTION OF THE RESEARCH

Accounting methods often reflect the degree of sophistication of the economic circumstances in which they were developed and used. Accounting is utilitarian in nature because it can be adapted to meet varying demands for information relating to transactions and events that are capable of being expressed in financial and non-financial terms. Unfortunately, little consideration has been given to the development of accounting activities throughout the long history of Iraq. Documentary evidence of such activities are available in what may be described as obscure to modern accounting scholars; that is clay tablets, some dating as far back as 7,000 BC, which have been discovered in Iraq and neighbouring countries since the 18th century AD. This thesis reports on the study of some of these early records from ancient Iraq until the beginning of the 12th century AD. Between these two periods are several epochs including those of the ancient Mesopotamia, the Dark Ages, and the emergence of the Islamic religion.

If accounting can be defined as the recording, analysis, and/or interpretation of financial data, then there is evidence that it was practised in ancient Iraq, from about 3600 BC until the advent of the Islamic religion. A wide range of financial activities were recorded, though there is no evidence of the analysis and interpretation of the recorded data. The role of the record-keeper in ancient Iraq appeared to have been limited to the recording of transactions such as receiving cash, issuing receipts, and paying debts, and the calculation of profits and losses.

During much of the period covered in this thesis, the society was male-dominated and many officials and individuals who practised what may be described as accounting and wide range of commercial activities were usually males. The role of the people who can be described as "accountants" of the ancient Iraqi state was not restricted to keeping of accounts, but they played important roles in business,

economic and social life in general. They were also business managers, controllers, treasurers and auditors of accounts and business transactions. There is no evidence that the ancient Iraqis drew up profit and loss accounts, trial balances, or balance sheets such as we have today, but there is evidence confirming that they had records of financial transactions, events and prepared and reports containing most of the information which could be used to produce financial statements. The records had not only to be accurate, but also had to be kept up-to-date and available for auditing at any time. Therefore, the Assyrians and Babylonians, as well as the Iraqis during the beginnings of the Islamic religion, can and should be recognised as having contributed to establishing the basis for modern accounting systems.

1.2 THE RESEARCH SETTING

While the primary focus of the research is ancient Iraq, the historical space covered includes other civilisations in ancient Mesopotamia such as several civilizations mentioned in the Bible (e.g. Assyrian, and Sumerian). For comparative purposes, Mediterranean countries will be brought into the analyses for effect. The ancient Mesopotamia was essentially composed of palace and/or temple economies (cities). As Glautier (1983, 56) suggests, these civilisations exhibited strong forms of centralised political power needed for constant external threats. They also had cities and temples and, seemingly, quite well-developed forms of commercial activities involving real property, inventories, loans, leases, etc.

Iraq, a west asian country, is crossed by the Euphrates and Tigris rivers between which Mesopotamia was originally located. The name Mesopotamia is Greek for "between rivers", the area being bordered by the Tigris and Euphrates rivers. Much of the present-day Iraq was formerly the ancient region of Mesopotamia. The early Mesopotamian civilisations of Summeria and Assyria and the city of Babylon

were all in present-day Iraq. It was in Mesopotamia, in about 3500 BC that the first forms of writing developed,; this was the cuneiform[1] script, inscribed in clay tablets. Agricultural organisation also began in Mesopotamia, along with detailed work in bronze and iron.

According to Garbutt (1981, 10), the Al-Ubain period (4500 - 3500 BC) in Mesopotamia was civilized; it laid the foundation for the writing that was to commence from 3400 BC, in the form of decoration on pottery in which animal motifs gradually became more stylised. Settlements have been found in North Mesopotamia which probably date from 8000 BC, and urban civilisation later arose in South Mesopotamia in city states such as Erech and Ur (which make up Summer). Akkad emerged around 2340 BC as the region's first empire and was followed by Babylonia and Assyria.

Mesopotamian rule extended South beyond the bounds of Summer and Akkad, under Sargon, the king of Akkad around 2300 BC. From this period comes the beautiful bronze head of Nineveh, thought o be the portrait of Sargon, and currently on display at the Iraqi Museum in Baghdad. In the 18th century BC, Mesopotamia was dominated by Babylonia under Hammurabi[2]. Following the death of Hammurabi and the demise of his empire under his successors, Mesopotamia suffered a number

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[1] The cuneiform writing system consisted of wedge-shaped symbols or letters drawn on a soft clay tablet with a sharpened reed. The tablet was baked in a kiln to harden it. Originally derived from pictograms, the symbols were later used to represent words, syllables and phonetic elements. Earliest examples of cuneiform were written from top to bottom, but around 3000 BC scribes found that they could write better by turning the tablets and writing from left to right in horizontal rows. This style of writing is different from the Semitic styles that works from right to left, except for two Semitic cultures where the writing is from left to right (that is, Ethiopian and Akkadian)

[2] Hammurabi, king of Babylon, was a contemporary of Abraham, though there is disagreement as to the exact date of his reign. For example, Goodspeed (1903) suggested that Hammurabi lived during 2282 - 2242 BC while Brinkman (1957?) suggested that he lived from 1982 - 1750 BC.

of invasions. This period of incessant invasions was generally known as the "Dark Ages" because little is known about it. For more than four centuries during this period, the Kassites rule Babylonia. Though of non-Mesopotamian origin, they adopted the age-old traditions and conventions of the region including rebuilding of ancient temples. Nebuchadenezzar II (c. 630 - 562 BC) was the king of Babylon from C. 605 BC. He created a large and powerful empire, and put down a revolt in Jerusalem in 586 BC, sending the Jews into exile in what is popularly called the "Babylonian captivity". He created the hanging Gardens of Babylon, one of the SEVEN WONDERS OF THE WORLD. Babylonia was invaded by, and fell to, the Persians in 539 BC. The Persians were later succeeded by Greeks and Romans.

Assyria was a warlike civilisation that flourished from 1300 BC until it was conquered by neighbouring peoples in 609 BC. From the 9th to the 7th centuries BC, the Assyrians created an empire that covered much of the Middle East from their base in what is now the present-day Iraq and Turkey.

Mesopotamia was still important in the Byzantine Empire and in the Abbasid Caliphate (749 AD - 1258 AD), but the Mongols devastated the area in 1258 AD. Today, the area previously known as Mesopotamia is largely arid and barren, but its rich oil fields have international importance.

1.3 THE NEED FOR THE RESEARCH

Accounting is a progressive science which develops as it is passed from one generation to the next. Knowledge of our past helps us to understand our present and predict the future. Modern accounting may be said to have become possible with the introduction and gradual adoption of rational procedures in arithmetic and bookkeeping. Therefore, it is important to know how our forebears practised their accounting in the cradle of civilisation, i.e. Assyria and babylonia, where mankind is

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This lack of literature on Iraqi accounting history motivates the attempt to fill this important gap in historical literature.

1.4 THE OBJECTIVES OF THE RESEARCH

The aim of this research is to gather literature concerning accounting history in ancient Mesopotamia and in Islamic state of Iraq and to present it in a systematic manner, to show that accounting has deep roots in ancient Iraq. Accounting has been known to exit in Iraq since 3600 BC and to have developed during the period of the Islamic state from the 7th century to the 12th century AD. The results of a historical study which depended on the analysis of information and data collected from different kinds of literature are reported upon and analysed.

The hope is that the study would, as Glautier (1983, 51) suggests, provide useful insights into modern problems in three significant ways:

(1) the uniqueness which characterises man's efforts to solve the difficulties with which he is confronted. This uniqueness is a synthesis of complex

behaviourial elements uneasily constrained by closely reasoned judgements;

(2) the ephemeral nature of those human problems which stem from the insecurity attaching to life, from the shortages created by human needs and from the mismanagement often evidenced in human affairs; and

(3) accumulation of knowledge as the significant factor by which successive generations may be differentiated.

1.5 RESEARCH METHODOLOGY

The topic of this thesis dictates the use of the historical method. Mere happenstance is, therefore, inimical to the evidence which is expected to be gathered. Looking behind a random chain of events brought to light by archaeological findings, this thesis describes an underlying matrix of logical causes and effects, so as to establish (1) a rational explanation for the development of accounting and (2) based upon historical data (tablets, and other archaeological evidence), a logical interpretation of the effects of that such development have upon the lives of individuals and the society in which they live.

Several scholars have suggested that there are preconditions for the development of bookkeeping. Littleton (1966, 12) recommended that in the historical search for the existence of bookkeeping in any country's past one should look for seven significant antecedents of bookkeeping in that country's past:

(1) the *art of writing*, since bookkeeping is first of all a record;

(2) *arithmetic*, since the mechanical aspects of bookkeeping consist of a sequence of simple computations;

(3) *private property*, since bookkeeping is concerned only with recording the facts about property and property rights;

(4) *money* (i.e. the existence of a money economy), since bookkeeping is

necessary except as it reduces all transactions in properties or property rights to this common denominator;

(5) *credit* (i.e. incomplete transactions or executory contracts), since there would be little impulse to make any record whatever if all exchanges were completed on the spot;

(6) *commerce*, a merely local trade would never have created enough pressure (volume of business) to stimulate men to coordinate diverse ideas into a system; and

(7) *capital*, not in the sense of productive capital. Capital did exist in the sense of wealth but wealth alone does not create capital in the modern sense of the word; but without capital commerce would be trivial and credit would be inconceivable.

The presence of these prerequisites for the development of bookkeeping in Iraq of more than 4000 years ago, would lead to the suggestion that the inhabitants of ancient Iraq might have a culture of accounting. The attempt of this research is to provide evidence which suggest that these prerequisite existed in the ancient Iraq and that in several respects, the ancient Iraqi had an accounting culture that predated many of these antecedents as a part of the protoliterate age.

Because this researcher is not an archaeologist, reliance will, essentially, be placed on documentary secondary sources <u>not</u> primary sources. In the attempt to study the history of ancient Iraq, their activities, the events they influenced and that influenced them, the attempt will be to reconstruct as nearly as possible the contemporary scenes of their time. The emphasis would be on the inferences or interpretations that would be extracted from the evidence - that is, on historiography (not chronology) based on the interpretation of the constellation of events.

As will be explained in the section captioned "Structure of the research", this

thesis is divided into two parts. The contents of the first part are from several obscure sources, relating to historical, cultural, educational, and economic aspects and so were difficult to collect. Because there is no detailed and coherent history of accounting in Iraq, information about the practice of accounting in Iraq had to be traced to non-accounting literatures such as those on the history of Iraq, old civilisations, education, and sociology. As a result, many of the non-accounting and antiquated literatures confronting this researcher were written in various languages, many of which are unfamiliar excepting those which had been translated into English. The collection required visits to museums in Iraq, Egypt, London and several other countries where relics of the ancient Mesopotamia could be found. It also required examination of several archives where antiquated literature on the origins of mathematics and writings can be found. These variegated literatures from widely different sources were gathered, translated (as necessary), classified, analysed, compared and presented in a systematic manner.

The literature connected with the second part of the thesis was better organised and more easily obtained, as there exists a body of Islamic literature on finance, business, education, law and history rewritten and published in a contemporary form.

Information regarding the origins of writing, trade, money, capital, credit, and accounting that can be traced to ancient Iraq was collected from English and American literature and from the British Museum in London. Other materials had to be translated into English from French, Latin, Italian, Turkish and German, as well as from Arabic. Majority of the literature on the existence of accounting during the Islamic state of Iraq, was in Arabic, though some were written in English.

To put it clearly, the sources of the information contained in this thesis include:

(a) the collection of translated works (in English) of Arabic originals and of information relating to ancient gold, silver and copper coins in the Iraqi

Museum in Baghdad.

(b) the collection of translated excepts from Khedival Library and the Islamic Art Museum including Arabic coins preserved in that library; and

(c) the collection of English translation of Arab writings from their original Arabic writings in the British Museum including the collections of Arabic coins in the Museum.

Many of the interpreted translations in English from their original ancient Mesopotamian writings, were, in the main, found to agree with other authoritative and more literal translations (for example, see Lane-Poole 1875, 1879 and Ebn Al-Zubair 1959).

1.6 STRUCTURE OF THE RESEARCH

Accounting in the modern professional sense is a detailed method of recording transactions and events in a systematic manner. It is the culmination of several practices which did not occur by chance, but originated in the past, and takes its present form, after a long history encompassing many stages of progress. Therefore this thesis is divided into two parts: the first covering the period described as ancient Mesopotamia from about 3600 BC until about the middle of the 7th century AD; the second, covering the period during which Iraq and other regions were controlled by the Islamic state from the middle of the 7th century AD to 12 century AD.

The first part of the thesis reports the result of a theoretical study of accounting history in ancient Iraq since 3600 BC till the middle of 7th century AD. This part examines the state of accounting during the early Mesopotamian civilisation as recorded on clay tablets. The development of writing, development of trade, existence of capital, credit, development of money, development of mathematical knowledge, and accounting systems in ancient Iraq were examined in detail because these are

prerequisites to practice, and the understanding of the state, of accounting in any period of time. The historical accounting research possibilities offered by Mesopotamia will also be discussed, and conclusions drawn as to whether accountancy has a valued tradition and history comparable to those of other disciplines the history of which may perhaps be documented.

Part 2 of the thesis is concerned with the features of economic thought connected with accounting in Iraq under the Islamic state. In order to explain the activities of bookkeepers, their role in the economy and business life and the services they rendered to the state, as well as to the ordinary people, this part examines some aspects of the Islamic business law, money, the banking system, money exchange, and the existence of accounting.

Although the period covered by this thesis ends with the 12 century AD, the last chapter shows that some of the financial and bookkeeping activities practised today can be traced to the accounting practice that existed in Iraq of the 1st to 12th century AD.

CHAPTER TWO

DEVELOPMENT OF WRITING IN ANCIENT IRAQ

2.1 THE ART OF WRITING IN ANCIENT IRAQ

Numerous tablets containing the writings of ancient Mesopotamia (now part of modern Iraq) and probably numbering several hundred thousands, can be found in museums and private collections in many countries, including France, Switzerland, Germany, Italy, Scandinavia, Holland, America, the United Kingdom and Russia. These tablets, covering the period from 2500 BC to the 1st century BC, contained personal letters and matters relating to bureaucratic administration (Garbutt 1984, 66).

Many different nationalities settled in or passed through Mesopotamia and a considerable number left documents written on tablets. The nationalities that settled in Mesopotamia included, in the south: the Sumerians, Babylonians, the Chaldeans; and in the north and west: the Assyrians, Hurrians, and Arameans. The first intelligible written documents are from Urdu and Ur in Sumer which was part of ancient Mesopotamia. It is quite likely that the Sumerians had adapted for their own use a system and technique of writing that already existed (Falkenstein 1936). The Mesopotamian system of writing, cuneiform signs on clay, represented a revolutionary advance, in that it had an alphabetic script, the sequence of whose letters was already much the same as that of the modern alphabet. This script was used to administer a complex bureaucracy and to write down transactions with legal implications. During the same period, there were scribes trained in the Mesopotamian system writing in Akkadian. In addition, as Cross and Lambdin (1960, 21-26) suggest, Hurrian used in Ugarit incorporated both the Ugaritic alphabet and the Mesopotamian cuneiform system.

Writing constituted a significant feature of the old Mesopotamia civilisation. From there, writing spread throughout the entire Middle Eastern region and the Mesopotamian system of writing was borrowed by a number of other cultures. Many different systems co-existed in the Mediterranean region in ancient times, including

the hieroglyphic system of the Egyptians and the family of writing systems based on the alphabetic script, as well as the cuneiform system found specifically in old Babylonia, on which emphasis is placed for the purposes of the present research. The latter system evolved its own characteristic writing techniques, materials and tools, which in turn directly influenced the chances of survival of the texts and thus the extent and even the nature of our knowledge concerning the uses of writing in the Mesopotamian civilisation. Clay, which was used for the cuneiform system, happens to have been the cheapest and most durable writing material yet utilised by man, while papyrus, parchment, leather, and wood have survived mainly by chance.

It is believed that writing was used in old Mesopotamia for many purposes, such as recording deals and contracts between people, debts and inventory, and for ceremonial use (Garbutt 1984, 88). Writing for the recording of data will be focused on here, first because the other functions referred to are beyond the scope of this research, and second, because writing for the recording of data is its best attested use and one which is vitally connected with accounting. Garbutt (ibid) suggests that five purposes may be recognised under this heading which is perhaps, of greatest interest to accountants:

1 Recording for administrative purposes;
2 The recording of legal transactions;
3 The formulation of sacred tradition;
4 The annals; and
5 Scholarly purposes.

These five purposes are discussed below in the context of ancient Iraq.

2.1.1 *Recording for Administrative Purposes*

Writing was used for administrative purposes in ancient Iraq wherever personnel and goods (staple materials, or finished goods) moved through the channels of a bureaucracy under the supervision of personally responsible officials who served for specified terms of office. Many redistribution system were centred in ancient Iraq

and officials recorded income taxes, tributes, and the yield of royal or priestly domains and workshops, as well as the distribution of materials and donations to craftsmen and workers. Many recording s of this type have survived in clay tablets as evidence of the use of the cuneiform system of writing for these purposes. Six examples of these tablets supplied by Clay (1906, 27-33) containing records of payments to officials by the bursar of the storehouse at Nazi-Muruttash, year 3 Tammuz 16th (about 2000 BC) are described below.

Tablet No. 1

Six qa of bututtum, twenty four qu kipatu, of the six qa tax, kuru the brother of Reshtushu the KA-ZID-DA officer, has received from Martuku.

This tablet shows that records of payments to officials were kept for future use as evidence. A receipt for grain which was paid to order of another, dated year 22nd and Marchesvan 19th, in the reign of the Cassite Rulers.

Tablet No. 2

Thirty-six qa of kipatu of the five qa tax from Bit-innannu, from the hand of Martuku, by order of Ninib-rish, son of Markudu-nadim-ahe. Taribu, son of Ekur-dari has received.

Receipts were important between people to show that what was shown in the document was paid and received, so that the parties could not deny what was included in the document. The third tablet shows that an official received grain for the purpose of paying maintenance expenses and salaries.

Tablet No. 3

Twenty qur of seed of the stored tas grain from the town of Zarat-Dur-Gula, Raba-sha-Norgal has received from the hand of Mactudu. The maintenance expenses and salaries he shall pay and he shall transact

the business.

This document shows that the maintenance expenses and salaries of officials could be paid in kind as well as in money.

Tablet No 4

Three gur, seventeen qa of flour out of the six qa tax as for Sin-muballi of the town of Irri, (for) the month of Kislev, from the 19th day, until the 30th. Seal of Rumutam.

A record of the payment of an official's salary which was given to an agent for delivery. The tablet is dated year 16th, in the reigns of the Cassite Rulers, whose dynasty lasted about 500 years, from about 2000 BC.

Tablet No. 5

Two gur of salary (grain) of the full tax from Pi-nari, Rigin-Rannuan, the riqqu officer, has received from Innannu.

Record of the payment of an officer's salary by the bursar, dated in the reign of the Cassite Rulers, year 24th, Kislev.

Tablet No. 6

Corn, by the 5 qa measure, details: 4 kor 16 seah to Tokultu, the miller; 3 kor to Iqishu; 2 kor to Iribu-Marduk; 1 kor to Ibitu; 1 kor to Arqu; 1 kor 10 seah to Shamash ...; 1 kor 10 seah to Iriba ...; 1 kor 20 seah to Ada ...; 1 kor 8 seah to ... Rev. 2 seah to Indara ...; 20 seah to Ubaru ...; 1 kor 15 seah to Shumulishir. 9 seah to Inguru; 1 kor 8 seah to Nazutu. Total 20 kor 28 seah of corn by the 5 qa measure, issued from barley of (city name). (Month ... day ... year...) of Enlil-nadid-ahi the King.

This is a record of quantities of grain (barley) issued to various persons. The quantities are recorded and the total is shown correctly. The date of the tablet goes

back to the reign of Enlil-nadin-ahi 1156 - 1145 BC.

The texts of the tablets illustrated above are only a few examples of the many which support the argument for the existence of a writing system which covered the main aspects of ancient Mesopotamian life. These texts represent important source material as documents which were written for the purpose of recording and conveying information to be read. They also show that the cuneiform tablets contained the records of the day-to-day economic activities of the inhabitants of ancient Iraq. The great majority of the record deal with a wide range of administrative transactions. The cuneiform source material of which the above mentioned texts are examples, provides a unique opportunity of observing the evolution of the writing system. More than 100,000 texts now in several museums across the world, have survived from ancient Iraq, proving, without doubt, that writing was known and was used for various purposes, in that age (Oppenheim 1965, 276).

2.1.2 *Recording of legal codes*

There were several codes, of the Sumerian, Akkadian and Hittite people, that were incorporated into the Old Testament which suggest the existence of legal tablets in ancient Mesopotamia. Saggs (1962, 197) suggests that

> Accumulating evidence now begins to make it appear that written collections of laws were by no means uncommon at the turn of the third Millennium BC. Indeed, it has been suggested, with some probability, that every city-state had such a collection, written according to local conditions in Akkadian or Sumerian.

The formation and collection of written laws may be assumed to have had two purposes: that of superseding oral traditions and practices and that of bringing the law into line with changed social, economic, and/or political conditions (Balkan 1955, 47). Writing was an important element in the development of law and one of its main functions was to record legal transactions.

Clay (1906), Lutz (1931d), Leemans (1954), and Gurney (1983) have discussed many tablets covering several periods of Mesopotamian civilisation dealing with deferment and legal matters such as deeds of sale, exchange of real estates, documentation of lending, labour contracts, the investigation and resolution of disputes and other matters. These and other texts constitute strong evidence that writing was used in Mesopotamia to record the law and legal incidents, showing that writing has been perhaps the greatest single factor in the advance of mankind to date.

Law was not bound up intimately with the very fabric of society, and Mesopotamian law emerged as an overriding cultural factor at home, a major influence over all parts of people's lives, so that it had to be recorded and preserved to ensure its continued application. One of the best known laws of ancient Iraq was the so called Hammurabi code which covered wide ranging matters including agricultural wages (Saggs 1962, 207-10), the administration of justice, offence against property, land and houses, merchants and agents, women, marriage, family property and inheritance, assault and personal injury, professional fees and responsibilities.

Saggs (1962, 199) suggests that

> Hammurabi and his successors are known [for their fiats on] lawsuits, breaches of contract, and so on, and that these royal ordinances were definite written instructions and denote merely law in the abstract is clear from a passage in a royal letter, in this letter the king, writing to an official, directs him to try a case, according to the ordinances.

Six examples (adapted into past tense from Harper (1904, 35-37)) of Hammurabi's laws governing the transactions of merchant's agents are given below.

(1) If a merchant gave money to an agent as a favour, and the latter met with a reverse where he went, he should return the principal of the money to the merchant.

(2) If when he went on a journey, an enemy robbed him of whatever he was carrying, the agent should take an oath in the name of God and go free.

(3) If a merchant gave to an agent grain, wool, oil or goods of any kind with which to trade, the agent should write down the value and return (the money) to the merchant. The agent should take a sealed receipt for money which he gave to the merchant.

(4) If the agent was careless and did not take a receipt for the money which he had given to the merchant, the money not receipted for should not be placed to his account.

(5) If an agent obtained money from a merchant and had a dispute with the merchant (i.e. denied the fact), that merchant should call the agent to account in the presence of God and witnesses for the money obtained and the agent should give to the merchant three- fold the amount of money he obtained.

(6) If a merchant lent to an agent and the agent returned to the merchant whatever the merchant had given him; and if the merchant denied (receiving) what the agent had given to him, that agent should call the merchant to account in the present of God and witnesses and the merchant, because he had had a dispute with his agent, should give to him sixfold the amount which he obtained.

A number of texts exist which may be viewed as proof that legal actions were recorded in writing. Some of these texts are now illustrated.

The first is translation by Gurney (1983, 31-33) of a text relating to a partnership dispute.

> Sin-Zera-Shubshi, (a priest of Ur), Gula-Shumu-lishir son of I ..., and Ubarru sone the dream-priestess, of the house of Burramashhu, came together for partnership, and Gula-Shumu-lishir and Ubarru received 2 cows from Sin-Zera-shubshi, their partner, and cultivated his fields, but the cows died. Gula-Shumu-lishir said to Ubarru, his partner: I and you as partners will repay the priest's property. His two cows that we received ....
>
> *Reverse*: ..., ..., ..., Ubarru ..., it the cow died with Ubarru. Gula-Shumu-lishir said to Ubbaru: That cow ... died. Why did you not take a cow and give it to its owner! Ubarru said to Gula-Shumu-lishir: The cow died with me. I will

> repay a cow to its owner ... . Gula-Shumu-lishir till now ... a waggon load the tax yield of field ... Ibra-Shamash son of Sabry, the scribe, was present with the priest ... small ...

The text above shows that the three partners had formed a partnership based on the use of cows which died, thus affecting the underlying basis of their partnership. Another text (quoted from Leemans (1954, 11/12)) representing a deed for a house is shown below.

> 1 sar with house built on it. Confining to the house of Sawiia and Ilsu-ellatsu, the house of Ahusunu, son of Saum, and Sin-semi, his brother, from Ahunusu and Sin-semi, his brother, Sarriqum has bought 8 sheqels[3] of silver as its full price he has paid. that in future they will not say "it is my house", Ahusunu and Sin-semi have sworn by the King. Against vindication of the house they will guarantee. Before pv Sin-rama, the King's Ibbi-ili, before Nur-Amurrum, son of Arsi-hum, before messenger, before ..., son of Hanna-Sawiia, son of Sasita, before Belum-Sin, mutu, before ..., dit-nuri, before ..., the silversmith, before Ili-ippalsam son of Sin-semi, before Sin-iribam, son of Sirama, before Qis-Baba, son of Sin-iribam, before Awil-ili, son of Binnimahum, before Lama-ili, son of Adiia, before Hum-qataia, son of Salum; the seals of witnesses in the second month Addaru of the year he (the King) brought the statue of Kudurmabuk, made of gold into the temple of Sama.

The above mentioned differs from the previous one in that it bears the seals of at least four different witnesses, its bears date of issue and it contains only part of the witnesses names probably due to the obliteration of part of the excavated tablet.

2.1.3 *The formation of sacred traditions*

Sacred lore was also preserved in writing by the Babylonian civilisation. The record of the story of a deity, a religious figure, or an ethic or otherwise coherent unit is incorporated into the ideology that sustains the circle of worshippers. Record of this type are written down for the purpose of maintaining a corpus of traditions, beliefs, and precepts under changing social conditions or under outside pressure

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[3] The word is sometimes spelled "Shekel".

(Oppenheim 1965, 172-82).

Babylonian and Assyrian literatures preserved in the cuneiform inscriptions portray a strong impression of people with a strong religious character and educational system. Most of the cuneiform texts contained legends and myths of the gods, hymns and prayers in which the gods are invoked, reified and their help demanded by the suppliant. In the earliest times hymns were sung on holy days by priests and worshippers, but as time went by the hymns became a means of exorcism and were recited by the priests alone to drive out from a suppliant a devil, a spirit or a disease. Writing, therefore, played an important role in the religious life of the people. Moreover, these people believed in the existence of a Creator who should be known by future generations. Therefore, they felt it was incumbent upon them to preserve their religious traditions for communication to those who would come after them (Budge 1925, 98). Writing, therefore, became more important when people felt the need to communicate their thoughts and beliefs. As Dennett (1906, 71) observes, the Babylonians did this in their cuneiform inscriptions.

The long course of the Babylonian and Assyrian religion, ran parallel to its history, extending over several millennia, in a continuous line of development. The gods worshipped in the latest period of Babylonian history were practically the same as those found in earlier evidence (Budge 1925, 98-119). From the documents which have been excavated, it is understood that organisation of the cult extended its scope, and with this extension, came the steadily increasing power and authority of priests. In the cities, the priestly and secular functions were combined. The ruler of the city or district was regarded as the representative of the deity and he stood in a special relation to the deity acting as a mediator between the latter and the people. Upon his good standing with the god, the general welfare of the people depended (Hilprecht, undated).

Writing then is used here for a reason basically different from that which prompted the formation of laws of the region. It was to preserve a tradition, not to adapt and adjust it to reality. Such written formulations were meant to prevent hypertrophic growth of the corpus under inside pressure, especially to restrain the theologian from reinterpreting the story, elaborating it, embellishing, and thus distorting it.

2.1.4 *The use of writing for annals*

Writing was also used to communicate information at a synchronic level, such as in letters, royal edicts and public announcements. The durable nature of the writing material has enabled the survival to the present time of literally thousands of Mesopotamian letters. Descriptions of a public nature are used for political and legal purposes. They appear on stone stelae of a characteristic shape, from Mesopotamia (King 1898). The ceremonial writings are in evidence also on other levels, for examples, where their perceived magical powers and respectability are reified; the numerous amulet-shaped tablets with cuneiform inscription and the phylacteries meant to assure the well-being of children are examples (Edwards 1960).

As Goodspeed (1903, 33) pointed out:

> Closely connected with the historian's documents is the diplomatic literature. An example of this is so called "Synchronistic history of Assyria" and Babylonia's memorandum of the dealings, diplomatic or otherwise, of the two nations with one another, from before 1450 BC down to 700 BC, in regard to the disputed territory lying between them. To the same category belong royal proclamations, tribute lists, despatches, and an immense mass of letters from officials to the court, correspondence between royal personages or between minor officials. Such correspondence begins with the reign of Hammurabi or Babylon (about 2275 BC [sic]) and is especially abundant under the great Assyrian kings from Sargon to Ashurbanipal.

Letters were also exchanged between the rulers and their officials. For instance, the following letter was sent by King Hammurabi to one of the state officials, ordering

him to clear out a canal (Jastrow 1915, 487).

> To Sin-Idinnam, Hammurabi speaks as follows:
>
> Gather your men who have fields along the Damanum canal to dig the Damanum canal. Within this month, let them complete the digging of the Damanum canal.

Letters were also exchanged, not only between rulers, but also between ordinary people. The following translation by Jastrow (1915, 486) shows a letter from a husband to his wife, telling her to take good care of the house:

> Nabu-zer-ushabshi to Sikki, my wife May Bel and Nabu proclaim good health and long life to my wife! through the protection of th gods I am well, and Bel-iddin also is well. Now I have sent a message to Iddin-Marduk, the son of Ikisha, that he should give thee 10 gur of grain. do not neglect the house. Have a look to things, pray to the gods on my behalf. Let me hear through message what you are thinking.

Another interesting letter is the following, sent by a creditor who requested to be paid, so he might settle a promissory note (Jastrow 1915, 487):

> To Ibi-Nin-shubur speaks as follows: Yaum-iluma May Shamash and Marduk grant you life I am responsible for a note for [the purchase of] a female slave. Now that the time of the payment of that note has arrived the agent is pressing me. Therefore, I am sending Arad-Innanna to thee. give him three shekels of silver due from you and two shekels of your own money to be charged against me and properly attested in Babylon. Be sure to give it to Arad-Innanna and please fix up the transaction with him correctly.

2.1.5 *The use of writing for scholarly purposes*

The use of writing to record what is described today as scholarly data is old in Mesopotamia and was maintained there up to the latest period. The observation of specific features was clearly separated from interpretation, which was based on precedent, either directly or through deductive reasoning.

The traditional cuneiform should not be considered the main or sole product of the creative effort of Mesopotamian civilisation. For its correct evaluation and an appreciation of its achievements and its importance, one has to realise its limitations,

purposes, style and content. These tablets, as stated previously, fall into distinct categories of records and letters. The great majority of the records deal with administrative transactions of all sorts.

The Akkadians developed the complex system of writing invented by the Sumerians. This type of writing was a "mystery" or "secret treasure" which was understood by only the well trained and educated scribes. The majority of Sumerians and Akkadians had recourse to professional scribes when they required something written. Schools were established in old Mesopotamia but they were not like the schools of the present day. They were opened to children of a select few and they formed part of the temple and accepted both boys and girls. Driver (1944, 64) describes them as follows:

> The art of writing was studied in a school called a tablet-house, of which one was attached to each of the most important temples, and in these schools not only boys but presumably girls might learn to read and write, but such a place was as its name suggests, nothing but a writing school, and another type of school called house of wisdom, gave what higher education was required. ...
>
> ... to proceed to such place was to enter the house of wisdom where the wise men who dwell in the house of wisdom were to be found guarding the mysterious. There, presumably, the youthful aspirants for a learned career, seated on benches of stone without backs, studied mathematics and astronomy, medicine, magic, art, and theology, and all the varied branches of learning and the tongue of the Chaldeans.

Budge (1925, 198) believed that schools were established in Babylon to teach students different fields of knowledge and suggested that

> A comparatively small portion of the population of Babylonia learned to read and to write cuneiform, and those who were masters of the art were usually the priests, the high officials, and the scribes who kept the accounts of the palace and the temples, and made copies of the religious and magical works used by the priests. A school or college was attached to each large temple, and both boys and girls or young women, were admitted as pupils. The master's method of teaching was probably the same then as now ... . Among others, the pupil would learn by heart, and copy, lists of objects, countries, cities, rivers, stars, gods, trees, stones, plants, woods, fishes, birds, cattle, cloths, synonyms of words, verbal forms, etc. ...

On the basis of the opinions of Driver (1944) and Bridge (1925) one can conclude that schools were established in Mesopotamia to teach the students the art of writing and also to understand many subjects in preparation for the future. From the preceding discussion, it seems clear that there was present in old Mesopotamia, literature of all kinds: history and chronology, geography and law, private and public correspondence, despatches from generals and proclamations of the kings, astronomy and astrology, theology and the pseudo-science of omens, all found a place on the shelves in the palace and the temples, as poems and purely literary works. It may also be concluded that one of the prerequisites to bookkeeping development was present in ancient Iraq, namely the art of writing which had reached the stage of containing grammatical elements (Saggs 1962, 24).

2.2 CONCLUSION

Writing was an important element of the human communication and education system in ancient Iraq. This chapter has shown examples of writing, representative of main spheres of activity: administration, law, sacred traditions, annals, and scholarly purposes. Thus, it can be concluded that writing was used in the economic, commercial and financial life of the people. Writing provided the medium for the recording of events, deals and contracts. The cuneiform writing of Mesopotamia, which was used for many purposes, including recording financial transactions constituted an important prerequisite for the establishment and development of bookkeeping and accounting.

Overwhelming as the evidence of writing capability and capacity may be in the ancient Mesopotamia, evidence of activities that predate writing suggests that some form of systematic record-keeping (or bookkeeping) might have existed before writing was invented. Lloyd (1978) gave an interesting account of how Mesopotamian

civilisation (including bookkeeping) commenced about 1000 years before writing. According to Jones (1956), ancient Mesopotamians were "obsessive bookkeepers". As Garbutt (1981, 11) suggests, the evidence certainly suggests that accounting preceded writing. In addition, the appearance of language in some civilisations of ancient Mesopotamia and the use to which it was put would support the hypothesis that accounting may be the mother of literacy (Glautier 1983, 57). Regrettably, however, Littleton's (1966, 12) suggestion that the art of writing preceded the emergence of "systematic bookkeeping" disposed of, rather than demand an answer to the crucial question: "Which came first; accounting or writing?". However, as Garbutt (1981, 11) concludes both may originate from a desire to meet the needs of trade.

CHAPTER THREE

EXISTENCE OF MATHEMATICAL KNOWLEDGE IN ANCIENT IRAQ

3.1 INTRODUCTION

About 2500 BC, clay tablets were used for pictographic writing, but the most primitive beginnings of written numbers date back to about 2,000 BC, when writing was invented by the ancient Egyptians and Mesopotamians to record information about transactions between persons and on family and legal matters in Mesopotamian cities. The pictographic tablets and the invention of mathematics can be considered as the points of departure for modern accounting. However, it is necessary first to show that mathematics (computation and use of abstract numbers) in ancient Iraq.

Most of what is known about Mesopotamian mathematics came from two types of cuneiform mathematical texts: the tablets used for multiplication and other purposes and the tablets containing practice problems. Both texts are attested for old Babylonian (in th south of Iraq now), since about 1900 BC. It is argued (Kilmer 1960) that no previous stages of the historical development which led to the old Babylonian texts nor any evidence for continuation of the tradition across the millenniums which separate the two text groups are known except for a small group of mathematical texts described as the "coefficient texts" which serve basically practical purposes such as solving geometrical problems. Some examples of these types of texts will be discussed in this chapter while what is called economic texts, which point to some sort of mathematical knowledge for purposes such as calculating interest and preparing accounts for commerce and business will be discussed in later chapters, especially in Chapter Six.

3.2 THE SCRIBE'S MATHEMATICAL TRAINING

In Chapter Two, it was pointed out that the Mesopotamian scribes learnt, in the early stages of their training, how to read and write. In the later stages of their education, they became more or less specialised in different fields or subjects.

Mathematics was one of these specialised subjects practised by these scribes. It was not the scribes alone who learnt *mathematics*. Some rules and their children also did. For example, the great Ashurbanipal who ruled Assyria (in the south of Iraq) about 668-631 BC, described in one his inscriptions how he learnt to understand complicated reciprocals, the products of multiplication; and to improve his ability to read tablets and other parts of his elaborate education (Goetze 1960, 151/152). However, the scribes received training in multiplication, reciprocals, coefficients, balancing of accounts, bookkeeping for administrative purposes, making all kinds of payments and how to share property (including agricultural lands) and profits (Kramer 1949, 199).

Many of the topics which recurred in the problem-texts were important for the understanding of the teaching of *mathematics* in the scribe schools. However, although these texts did not offer an adequate picture of the intellectual achievement, the Mesopotamian *mathematicians* had every reason to be proud of the elegance of execution and the sophisticated use of tools of ingenious simplicity. The mathematical tables used in Mesopotamia were designed for multiplication, division, cubes, least squares and other pertinent roots and identities. It seems that these tables provided details, such as exponential functions, needed to compute compound interest and they probably gave the basic facts and step by step procedures for solving complex mathematical problems. They also provided a list of problems and answers in maximal condensation process from simple to complex and elaborate relations (Kramer 1949, 199). One might say, however, that the problems which most interested Mesopotamians, such as quadratic functions and related operations, were algebraic in nature although formulated in geometrical terms.

The following problem-text excavated in the 1950s and dated back to the first Dynasty of Babylon (about 2400-2100 BC) shows an example of geometrical principles (Baqir 1950a, 39-54).

Lines

(1) A triangle 10,0, is the length, 1,0,15 is the "long" (the hypotenuse), 45 is the upper width.

(2) 22,0,30 is the total area. From 22,0,30 the total area 8,0,6 is the upper area (the area of the upper triangle).

(3) 5,0,11,2,24 is the next (adjacent) area. 3,0,19,3,56,9,36 is the third area.

(4) and 5,0,53;53,39,50,24 is the lower area.

(5) What is the upper length, the segment "length" [?], the lower length and the perpendicular?

(6) When you perform the operation (lit. in your performing the operation) take the reciprocal of 1,0, the length and multiply it by 45.

(7-8) ; 45 you see (get). Multiply 45 by 2 and 1; 30 you get. Multiply 1,30 by 8,0,6 the upper area and you get 12,0,9. what is the square root of 12, 0, 9? 27 is the square root.

(9) 27 is the width of the upper triangle [?]. Halve 27 and 13;30 13½ you get. Take the reciprocal of 13; 30.

(10) And multiply it by 8,0,6 the upper area, 36 you get [which is] the length opposite to [?] 45, the width.

(11) Come back and subtract 27 the length of the upper triangle from 1,0,15.

(12) 48 is the quantity left. Take the reciprocal of 48 and you get 1;15.

(13) And 45 you get. Multiply 45 by 2 and you get 1,0,11,;2,24.

(14) And 7,0,46;33,36 you get. What is the square root of 7,046;33,36?

(15) 21;36 is the square root. 21;36 is the width of the second triangle.

(16) Halve 21;36 and you get 10;48. Take the reciprocal of 10;48, and by

... (2) ...[4].

This example shows that square roots and Pythagorean theorem were known in the Babylonian time from about 2400 BC to 2100 BC. Babylonians were also aware of cube roots and square roots, and they were also able to calculate the square root of 2 with only minor error (1.414213 instead of 1.414214) as early as the 17th or 18th century BC (Powell 1971, 3/4).

Another mathematical text dealt with two interesting algebraic problems. the text shows that coefficients and quadratic equations were known by Babylonians. It also shows that the sides and the area of trapezoids were calculated by the Babylonians (Baqir 1950b, 130-146).

Problem no. 1

Lines

(1) Suppose that [if] 1,40 [100] is the upper length. Its parallel opposite is unknown [lost], and the upper width

(2) exceeds the lower width by 0,20 [20]. 40 [2400] is the area. What is the length?

(3) You will proceed thus [?]: Place 0,1;30 [1½] and multiply it by half?

(4) ;45 [¾] you get [you see]. Take the reciprocal of ;45 and 0,1;20 [1⅓] you get. Multiply 0,1;20 by 40, the area and

(5-6) 53,20 [3200] you get. Double 53,20 and 1,46,40 [6400] you get. 1,46,40 let your head keep. return both 1,40, the upper length and. 20 by which the upper width exceeds.

(7) The lower width add together, and 2, [120] you get.

---

[4] (0) (the zero) used to indicate the correct place-value of the numbers in the sexagesimal system and the sign ";" to separate integers from fractions. For example, 22,0,30 = 22 x 60 + 30 and 2,0,11;2,24 = 5 x 60 + 11 + (2 ÷ 60) + (24 ÷ 3600).

(8) Halve 2 [120] and square 1,30 [3600] you get. And 1,0 to 1,46,40

(9) And 2,46,40 [10,000] you get. Take the square root of 2,46,40 and 1,46 [100] you get.

(10) Unto 1,40 you get square root, add 1, [60] which you have squared and

(11) 2,40 [160] you get. From 2,40 which you get, subtract 1,40, the upper length.

(12-13) 1, [60], the resultant obtained [?], is the unknown length. Halve 1, and 0,30 [30] you get. Lay down another equal 30, then halve 0,20 [20] by which one width exceeds the other width, and

(14-15) 0,10 [10] you get. Add 0,10 unto the first 0,30 and 0.40 [40] you get. subtract [10] from the second 0,30 and 0,20 you get. 0,20 [20] is the lower width. Such is the procedure.

(16-18) If unto the two-thirds of the sum of the upper width and the lower width I add 0,10 [10] to my hand [?] I form each of the [two] lengths. The upper width exceeds the lower one by 0,5.

(19-20) The area is 2,30 [150]. What is my length?. You will proceed thus: 0,5 which exceeds ,0,10 which you added, ;40, the two-thirds together [?] with my ...? you will operate with.

(21) Take the reciprocal of ;40, the two-thirds and 0,1,30 (1½) you get. Halve 0,1;30 and

(22) ;45 (¾) you get. Multiply ;45 by 2,30, the area, and 3,45 [225] you get.

(23-24) Double 3,45 and 7,30 [450]. 7,30 let your head keep.

Return and take the reciprocal of ;40, the two-thirds and

Reverse

(1-2) 0,1;30 [1½] you get. Halve 0,1;30 and ;45 you get. Multiply it by 0,10 which you added and 0,70;30 [7½] you get. 0,7;30 let your head keep.

(3) Return and take the reciprocal of ;40. 0,1;30 [1½] you get. Halve 0,1;30 [1⅔], and

(4) ;45 you get. Multiply it by 0,10 which you added and 0,7;30 [7½] you get.

(5) Lay down [another] equal 0,7;30 and square it.

(6-8) 0,56;15 [56¼] you get. Add 0,56;15 to 7,30 [450] which your head has kept and 8,26;15 [506¼] you get, extract the square root of 8,26;15. Its square root of 0,22;30 [22½]. From 0,22;30

(9) the square root, subtract 0,7;30 [7½] which is your takiltu[5] and

(10) 0,15 [15] is the value of the unknown [?]. Halve 0,15 and 0,7;30 [7½] you get. Lay down another 0,7;30.

(11) Halve 0,5 by which one exceeds the other and

(12) 0,2;30 [2½] you get. Add 0,2;30 to the first 0,7;30 and the second 0,7;30

(13) 0,10 you get. Subtract it from

(14) 0,10 is the upper width and 0,5 [5] is the lower width.

(15) Return and add 0,10 and 0,5,0;15 you get.

(16) Take two-thirds of 0,15 and 0.10 you get. Add to it 0,10 and

(17) The result [which is] 0,20 is your upper length. Halve 0,15 and 7;30

---

[5] *Takiltu* refers to the ratio of yield of field to its area.

you get.

(18) Multiply 0,7;30 by 0,20 and you get 2,30 [150] which is the area.

(19) Such is the procedure

List of coefficients

(20) 6,40 is coefficient (igigubbum) of the [?] *gubbum*.

(21) 5 of the lifting [?] the mortar [?] (asphalt). 3,45 of the earth-wall.

(22) 7 (4?), 30 of the quy. 4,10 of the bricks (?). 5 of the base (?) (the area ?) of the gish-TI, 30 of the Gan(?)-Ga-SHE (?).

Problem no. 3

Line

(1) If the square (?) of length is not a side square (not perfect square?) You take the reciprocal of 4 and

(2-3) Add it. Halve the given (?) length and multiply it by the total. Four ?? you operate with (?). Take the square root (?) and subtract from the area (the square).

3.3 SCIENTIFIC PROGRESS IN ANCIENT IRAQ

To scientific historians, the most important people of antiquity, in terms of their influence upon progress of mathematics, were the Assyrians and the Babylonians. They provided a core of knowledge which could be applied to the development of many branches of science and the arts, including accountancy. It is believed that the world today owes much to the legacy of the Assyrians and Babylonians who occupied the broad valleys of the Tigris and Euphrates (Mesopotamia). The Mesopotamians reached a higher level of knowledge than had ever existed before (Oppenheim 1965), and this knowledge fostered an interest in commerce and agriculture. They also possessed considerable engineering skills, going by the archaeological revelation of

the system of irrigation that existed in Mesopotamia. It is inconceivable that these skill would have existed without a great deal of mathematical knowledge, and the development of these areas must have been dependant to some extent on a similar development in mathematical knowledge. In their commercial life, the people of ancient Mesopotamia used a system of barter that required the fundamental operation of counting and adding, of weighing and measuring. Land management was evidently in use and this no doubt led to the acquisition of a certain amount of geometrical knowledge (Oppenheim 1965, 305-10).

3.4 MESOPOTAMIAN NUMERATION SYSTEM

The Mesopotamians used two systems of numeration, with different bases. One was the decimal system and the other the sexagesimal system in which the base was *soss* (or 60) (e.g. 32 denotes 3 x 60 + 2 = 182 in the decimal system). The use of the multiple such as the *ner* (600) and the *sar* (3600), shows that the people were highly skilled in calculation and understood place value. In other words, a symbol (say 5) may have different values according to its position in the sequence of symbols. In the decimal system, the number 25, 5 means 5 units, whereas in the number 52, it means 5 tens. It has been suggested (Powell 1971, 3/4) that the principle of positioning in numeration was invented by the Babylonians about 1600 BC. The decimal system was used mainly in connection with computation performed with the abacus, while the sexagesimal system was used in astronomical tables and in tables of weights and measures. There is no evidence that they knew the symbols of zero, because the Babylonians left a gap between numbers to indicate a medial zero. Ancient citizens of Iraq did not use Sumerian numerals but in about 2500 BC they were placing objects or commodities before numbers referring to them. For example, "*mina one*", "*shekel one*", "*goat one*". In the 7th century BC, the numbers were

preceding the objects. They started by being grouped at the left-hand side of the column followed by the objects counted so that it was possible to see at a glance the umber of things counted. There is also evidence that the numbers preceded the commodity counted in Sumerian economic texts. For example, the following text shows an itemised account of bricks delivered at various times (Lutz 1931a, 15/16; Baqir 1950a, 2; Dubisch 1952, 80):

> 5180 bricks for 74 layers and to each layer 70 bricks in front of the temple for work between the temple and the wall from the 12th day of Elul in the 28th year of Nebuchadnezzar, king of Babylon, were laid 270 bricks for 6 layers, along the temple to the street, a repair job, for each layer 45 bricks, on the 29th day of Elul in one double hour of the day were laid. 3600 bricks are all which the temple administrator gave to the Erection brickwork, the 29th of Elul.

It is believed that entries like the above, and presumably many others of this kind in economic texts of ancient Iraq, reflected the use of mathematical knowledge to record economic transactions. Another example shows a record of the number of work, number and provisioning of gangs of workmen, as follows (Lutz 1931a 15/16; Diaknoff 1983, 88):

> 5 teams of 2 workmen: 10 workmen being hired labourers, 15 qa each, the ration thereof is 150 qa per day, 4 teams of 2 workmen: 8 workmen being hired labourers, 15 qa each, the ration thereof is 120 qa. From the mouth of the canal and its territory each is being removed. The second day of the month Sig-gis-ni-subgar, the year after Gimil-sin, the king built the western wall.

The mathematical bases were used to count the number of labourers or the workers, the ration each received, and the total sum of the rations received by all workers. Geometry was also used to calculate the area included in the job.

It is also inferred that numerals were formed according to a regular pattern used since 1500 BC in Iraq. The numerals 1 to 9 were expressed by wedges, thus = 1, = 3, = 7, the sign for 10 was and numbers 11 to 19 were expressed by plus a number of wedges, for instance = 16,

= 19. The numbers 20 to 50 were expressed by repetitions of the signs for 10: thus = 30, = 50. The number 60 was expressed also by a single wedge, the *soss*, , which the Sumerians employed in making their mathematical calculations (Scott 1969).

The numbers 70, and 90 were expressed , and respectively. The sign for 100 was and that for 1000 was , i.e. 10 x 100. When the sign was intended to represent multiples of 60, and multiples of 10, some distinguishing mark was probably added to each. For example, the obelisks the Ashurbanipal (reigned 669-626 BC) carried off from Egypt was said be valued at (2500) talents. Subtraction was expressed by the sign , thus = 30 - 2 = 28. Division was expressed by the sign . Fractions were also known, for example = ½, = ⅓, = ⅔, and = ⅝. These and others were based on the sexagesimal system (Powell 1971).

In Egypt, the daily transactions of trade and government led to a knowledge of the ordinary arithmetical operations and at a very early age these has become common usage. The Egyptian system of counting one stroke stood for one, two strokes for two and so on, the number 10 was denoted by a symbol like capital U inverted; two such symbols stood for 20 and so on up to 90. A sign like a coil rope was used for 100, another lotus flower for 1000, another upright bent finger for 100,000 and so on up to 1,000,000 (Dubisch 1952, 65).

It seems that there was no knowledge of place value for the Egyptian symbols, and so, the system was complicated and the representation of large numbers necessitated the use of large number of symbols. Multiplication and division were known to the Egyptians as well as the fractions which were denoted by writing the denominator and placing a dot or an oval above it (Dubisch 1952, 65).

Babylonian *mathematicians* understood arithmetical and geometrical

progression and the extraction of the square and cube roots. The art of land measuring or geometry was very important and surveyors were able to calculate the areas of fields and estates with considerable accuracy. The next section considers other developments brought Mesopotamian *mathematics* from the level of a practice developed and maintained for administrative and commercial purposes to that of scientific creativity.

3.4 MESOPOTAMIAN ASTRONOMY, MATHEMATICS AND GEOMETRY

The ancient Mesopotamians had made some important advances in scientific knowledge and its application to life, including the development of mathematical science, to which geometry is related. The metrology was accurate and elaborate, and formed the starting point of all other systems of antiquity. All measures of length, area, capacity, and weight were derived from a single hairbreadth standard. The division of the circle into degrees, minutes, and seconds on Sexagesimal basis originates from practices of Mesopotamians about 2500 BC (Baqir 1950a, 2; Dubisch 1952, 80).

The ecliptic instrument was marked off into twelve regions, and signs of Zodiac were designated for each region. The year of 365 and one-fourth days was known, but the common year was divided into twelve months, each of thirty days, and equated with the solar year by intercalating a month at the proper times. Table of the stars and their movements, and of eclipses of the moon and sun were carefully prepared. The year began with the month Nisan (March-April), the day with the rising sun. The month was divided into two weeks of double seven days, the day from one sunrise to the next sunrise into twelve double hours of sixty minutes. The elepysdra and the sun-dial were Babylonian inventions for measuring time.

The Mesopotamians were not the only good *mathematicians* of that age. The

Egyptians also achieved more accurate result for the area of the circle than did any of the other nationalities of antiquity. The following text written in the second half of the second millennium B shows how the area of a circular piece of land was calculated (Chase 1927,35).

> A field round of *khet* 9 [i.e. diameter 9]. What is the amount of its area? Take away thou one-ninth of it namely 1, directs the scribe, remainder is 8. Make thou the multiplication 8 times 8, becomes 64, the amount of it, this is the area.

Another text translated by Petrie (1929, 35) suggests how ancient Mesopotamians determine the capacity of a cylindrical granary of diameter 9 and height 10:

> Being to do the granary round 9, 10 high. Subtract thou the one-ninth from 9, leave 8, multiply the number 8 times making 64, do thou multiply the number 64, 10 times making 640.

Checking the solutions to both problems one can argue that the Egyptians regarded the area of a circle as equivalent to the area of a square whose side was eight-ninths diameter of circle. The result would lead to the value of about 3.164 for the ratio of the circumference of a circle to its diameter. The Egyptians' most amazing achievement was their determination of the value of a truncated prism with square ends. The following text illustrates such an achievement (Petrie 1929,39):

> A truncated pyramid 6 cubits high 4 cubits upon base, 2 cubits upon the top. Do thou this 4 in going making 16 (square of base = 16). Do thou repeat the 4 make 8: multiply the base by side top. Do thou this 2 in going making 4 (square of side of top 2 = 4). do thou add the 16 with 8 with 4 (sum of base, middle and top area) makes 28. do thou one-third of 6 (one-third the height) makes 2. Do thou 28 twice makes 56 (sum of the three areas multiplied by one-third the height). Behold itself 56 found accordingly to thee well.

The result shows that Egyptians as early as the middle of the second millennium BC, were familiar with a method of determining the value of a truncated pyramid with square ends. Egyptians were also acquainted with equation of the second degree. However, as regards astronomy, the Egyptians based their knowledge upon Babylonian astrology. The length of the solar year was determined by observation of helical

rising of the star *Sothis* (the modern Sirius) and the observation showed the year to consist of 365¼ days (Petrie 1929, 35). The contributions of the Mesopotamians to writing and mathematics were hardly less important than those of Egyptian, but while the Egyptians wrote on paper (*papyrus*), the Mesopotamians recorded on clay. These excavated records covered periods of about 2500 years before the dawn of Christianity, as it was suggested in Chapter Two, and as discussions in next four chapters suggests, they indicate some remarkable achievement of the Mesopotamians in mathematics, astronomy, business and bookkeeping.

The Babylonians used multiplication tables, tables of squares roots and reciprocals of numbers. They also applied geometrical series and used fractions, keeping the denominator constant and equal to 60. Babylonians has also acquired considerable skill in solving complicated algebraic problems and there is evidence that they were able to solve problems using equations up to the third degree in very simple cases, but they did not use negative and complex numbers (Kramer 1987, 91-94). They had knowledge of the Pythagorean theorem as early as 2500 BC (Scott 1958), from which the problems relating to the measurement and similarity of triangles were solved which means the some of the Euclidean principles of geometry were known to the Mesopotamian *mathematicians* (Baqir 1950a, Vol. VI, 2). They could find the diagonal of the rectangle and in the case of the circle, they took the area to be one-twelfth of the square of the circumference, which they believed to be equal to three times the diameter. They also knew how to calculate the volume of a number of solid figures including the cylinder and parallel pipe. Exponential functions and coefficients were used to give numbers for practical computation (like the approximate value of 2).

As Roux (1969, 301) suggests

knowledge of Mesopotamian mathematics is derived from two

categories of texts. List of numbers arranged in various ways (increasing and decreasing series, multiplications and division tables, etc.) and [practical applications] problems [and solution manual].

The following two interesting problems show the skills of the Mesopotamian people in problem resolution and calculation (Roux 1964, 301):

Problem no. 1

> I found a stone but did not weigh it, then I added one-seventh and I added one-eleventh. I weighed: one mana. What was the original weight of the stone? The weight of the stone was: 1 mana, 8 shekel and 22½ lines.

Problem no. 2

> If somebody asks you thus: as much as the side of the square which I made I dug deep, and I extracted one musaru [60] and a half of volume of earth. My base (ground) I made a square. How deep did I go?

The explanation of the method for solving such problems reads as follows (Roux 1964, 302):

> You, in your procedure operate with 12. Take the reciprocal of 12 and multiply by 1, 30, 0, 0 which is your volume. 7, 30, 0 you will see. What is the cube root of 7, 30, 0? 30 is the cube root. Multiply 30 by 1, and 30 you see. Multiply 30 by another one, and 30 you see. Multiply 30 by 12 and 6, 0 (360) you see. 30 is the side of your square and 6, 0 (360) is you depth.

There are many texts available from different part of ancient Iraq and from different periods concerning the measurement of land area, volumes, and the weights of articles. From these texts, it can be concluded that the inhabitants of Babylon used the decimal system, as well as the sexagesimal system in astronomy. For instance, the following text shows the application of the decimal system in an account of expenditure on grain for different purposes and to different people (Myhrman 1910, 71/72):

> 8 gur 275 qa corn, 48 gur 12 qa wheat, temple offerings to Gu-du, the baker. 30 qa wheat, food during the festival of Gan-gan-e, 9 gur 100 qa, 2 gur 90 qa feed for young cattle, 60 qa to Ri-ug-ba, 60 qa to Da-a-lim (Talim ?), 30 qa to Utu-ha-ba. Total 21 gur 265 qa of corn, Total 47 gur 152 qa of wheat, E.NUN at the mouth of the river Ib-al, has

> been given out. Month Gan-gan-e, year gimil-Sin, the king, devastated the country of Zabshali.

The decimal system was used for the needs of most occupations including astronomy, survey and commerce. In the above text, it was used to compute the number of grains delivered during a month to several persons a temple. The following text reproduced from Chiera (1914, 35/36) shows a document concerning purchase of a field.

> Three gan of clover-field, from the field of Shuzianna, adjoining the sons of Idin-Dagan, and adjoining the canal Kulil; the field of Dakkum Ninnutum, the sone of Idin-Dagan, and Illushuibnishu, his brother, have bought. For its whole price they have paid ... and one-half shekel of silver. In the future Dakum, and any heir of his, shall make no claim on the three gan field. He has sworn by the king.

From the preceding discussion, it seems reasonable to conclude that astronomy, geometry, normal calculations of length and volume of objects were used for different purposes including economic, commercial and accounting in ancient Iraq.

3.6 APPLICATION OF THE MATHEMATICAL KNOWLEDGE TO ECONOMIC LIFE

The most important people in antiquity were the Mesopotamians and Egyptians who exerted remarkable influence upon the development and progress of writing and mathematics for they alone provided a core of original knowledge that contributed to scientific analysis. Many Mesopotamians, however, were itinerant traders and warriors who were always on caravans travelling from one end of Arabic Gulf to the other and who, as a result, spread their knowledge of mathematics and accounting across their caravan routes. As a result of the flourishing trade between Mesopotamia and Egypt, for many millenniums till about 2nd AD, people from each country who settled in the other country carried with them their tradition, culture, trade knowledge. It is believed that the Mesopotamians had more influence on the Egyptians especially in astronomy and, business, caravan trading and bookkeeping (Dubisch 1952, 81). Although the

transplanted knowledge was somewhat fragmentary, there is evidence that a rudimentary form of mathematics played an important part in the commercial life of both civilisations. As subsequent discussion will reveal, barter in these two civilisations had led to the fundamental arithmetic operations of counting and adding, of weighing and measuring which gradually developed to the type of bookkeeping which were inscribed on many clay tablets found in some temples. Apso, some form of land measurement was evidently in use in both Egypt and ancient Iraq an this, no doubt, led to the creation many records connected to the yields of the land. In addition, to maintain commercial contact with egypt, Mesopotamia also had similar relation with Syria and Persia from which Mesopotamia imported goods such as gold, silver, copper and slaves, all of which were transactions which required detailed writing and bookkeeping (Budge 1925a, 178/179).

3.7 CONCLUSION

From the preceding discussion, one may conclude that Mesopotamians used mathematics for a range of private and professional purposes such as understanding reciprocals, products of multiplication and coefficients; balancing of accounts; administrative accounting; paying allotments, and allocation of properties between two or more persons. Examples were provided, in this chapter, which suggest that Mesopotamians solved problems using sophisticated techniques such as quadratic equations which are algebraic in nature and formulated in geometric terms. This is not to say that the ancient Iraqis has a system of computation equal in its manipulative qualities to modern systems (Powell 1971; Edzard 1980; Diaknoff 1983, 88).

The intention is not to examine this subject thoroughly, but to provide evidence which suggests that ancient Iraqi people (Mesopotamians) used mathematics and geometry for various purposes related to accounting for money and other items, and

that these two disciplines were used as tools to record commercial transactions and to value wealth. The preceding discussion should not be taken to suggest that counting and arithmetic predated accounting in ancient Mesopotamia. Accounting and counting may be responding contemporaneously to a common fundamental need in ancient Mesopotamia. The proposition that accounting may have emerged before, or at least concurrent with, counting is said to be based on two ideas (Swanson 1984, 112):

1 Developments in both rudimentary accounting and counting may be driven by economic need; and

2 The incipient accounting space ordering may be a more primitive expression than the space ordering associated with the emergence of counting.

In support of both of the above ideas, Swanson (1984, 112) quotes Boyer (1968,5):

> It is clear that originally mathematics arose as a part of the everyday life of man, and if there is validity in the biological principle of the "survival of the fittest," the persistence of the human race probably is not unrelated to the development in man of mathematical concepts. At first the primitive notions of number, magnitude and form may have related to contrasts rather than likenesses - the differences between one wolf and many.

Reference to the notions of numbers, magnitudes and form as underlying basis of distinguishing among objects suggests that these concepts predate counting and that most primitive ideas of accounting would include these concepts; thus, accounting may predate counting and arithmetic. Swanson (1984, 113) also quotes Scott's (1969, 1) discussion of the Sumerian's pre-counting needs in support of this argument that rudimentary accounting may have predated arithmetic:

> [T]here is unmistakable evidence that a rudimentary form of mathematics played no small part in their [Sumerians] lives. Barter leads at once to the fundamental operations of counting and adding, of weighing and measuring, and an appreciation of simple geometric forms. ... Moreover, people depending upon the fruits of the earth for their existence had need of some form of calendar to indicate the recurrence of the seasons.

According to Swanson (1984, 113), it is possible that the two [accounting and

arithmetic or counting] developed in such a close relationship that concurrent development would be a better description of their emergence. Perhaps counting was a conceptual system that developed in parallel with the real accounting system. As a result, the suggestion by Littleton (1966) that arithmetic is an antecedent of bookkeeping ignores the fact that counting is a prerequisite of arithmetic. If counting cannot be suggested to predate rudimentary accounting [or bookkeeping] then it follows that arithmetic cannot predate rudimentary bookkeeping. Although sufficient evidence has been produced that arithmetic in its more sophisticated form existed in ancient Mesopotamia, one cannot conclude that it predated accounting in that territory. Archaeological findings are now suggesting that ancient Mesopotamian civilisation occurred before the age of mathematics and some form accounting would have existed to cater for the needs of that society before mathematics of the type described in this chapter was invented.

CHAPTER FOUR

THE EXISTENCE OF CREDIT, CAPITAL, AND PRIVATE OWNERSHIP IN ANCIENT IRAQ

4.1 EXISTENCE OF CREDIT

Mesopotamia was regarded as one of the centres of both local and international trade. Evidence exists to prove that, at several locations along the Arab Gulf and Mediterranean coast, many people were engaged in trading in textiles, wooden items, dates and other goods. Inland trade was also very extensive with traffic in good such as foodstuffs, wool, timber, bricks and metals; this traffic was maintained between all Mesopotamian towns. Trade in money also prospered, as contracts were drawn for lending of silver for various purposes, both agricultural and commercial. The merchant (*tamkaru*) acted as trader, private businessman, and banker lending money and extending credit. Paragraphs 151 and 152 in the Hammurabi code (cited below) clearly indicated the existence of credit as early as 1900 BC (Harper 1904, 52-55).

Paragraph 151

> If a woman, who dwells in the house of a man, make a contract with her husband that a creditor of his may not hold her (for his debts) and compel him to deliver a written agreement; if the man were in debt before he took that woman, his creditor may not hold his wife, and if that woman were in debt before she entered into the house of the man, her creditor may not hold her husband.

Paragraph 152

> If they contract a debt after the woman has entered into the house of the man, both of them shall be answerable to the merchant.

This is an interesting indication of the doctrine that husband and wife were jointly responsible for one another's debts, only if contracted after the marriage.

Secured credit between contracted parties was in existence as shown, for example, by paragraph no. 117 and 119 of Hammurabi code (Harper 1904, 38/39).

Paragraph 117

> If a man be in debt and sell his wife, son or daughter, or bind them over to service, for three years they shall work in the house of their purchaser or master; in the fourth year they shall be given their freedom.

Paragraph 119

> If a man be in debt and he sells his maid servant who has borne him , the owner of the maid servant (i.e. the man in debt) shall repay the money which the merchant paid (him), and he shall ransom his maid servant.

These paragraphs indicate that a debtor is obliged to redeem his debts and may sell or pledge his wife, children or maid servant in this endeavour. Although the family would be set free after three years, to free or ransom a maid servant, the debtor has to redeem his debt.

Many paragraphs of the Hammurabi code indicate relationships between people entailing debt and credit and show not only that lending was practised in that era, but also that such facilities were widely used. Credit could be offered free of charge or it could be offered at interest which could be as high as 33⅓%. Paragraphs of the Hammurabi code placed limits on the level of interest which could be charged. Credit could be secured by mortgage of the debtor's land, his granary, his slaves or servants, or even his wife and children (Harper 1904, 28/29). A couple of examples will suffice.

Paragraph 49

> If a man obtains money from a merchant and gives (as security) to the merchant a field to be planted with grain and sesame [and] say to him: "Cultivate the field, and harvest and take to thyself the grain and sesame which is produced;" if the tenant raised grain and sesame in the field, at the time of harvest, the owner of the field shall receive the grain and sesame which is in the field and he shall give to the merchant grain for the loan which he had obtained from him and for the interest and for the maintenance of the tenant.

Paragraph 50

> If he gives (as security) a field planted with [grain] or a field planted with sesame, the owner of the field shall receive the grain or the sesame which is in the field and shall return the loan and its interest to the merchant.

Borrowed money and credit appear to have been used for various purposes for

investment, or for grain needed for cultivation or even for consumption. If the debtor could not redeem his debt, he could offer his serves in settlement, give his servant or slaves, or sell himself to his creditor. Credit might be created by giving of a loan, or by purchasing goods with the promise of future payment. Both of these categories existed in Ancient Iraq. The following extract from a document which can be found in Dougherty (1922, 28/29) revealed that a loan of silver with interest, contains the name of the creditor, the debtor, the witness, the value of credit, the date of credit and the date of payment. There is evidence that such contracts were frequently made between debtors and creditors (Dougherty 1922).

> 15 shekels of silver of Nabu-zer-lisher, the son of Nadin, to be paid by Marduk-shum-iddin, the son of Marduk-eriba. Up to Adar the interest from the month ..., upon 1 mina 8 shekels of silver upon it shall increase. Witnesses: Nabu-itir, the son of Na'id-Marduk, nabu-shum-ukin, the son of Nadna, and the scribe, Eshir-etir the son of Nabu-shum-ishkum. Erech, the 16th day of Kislev, the 6th year of Nebuchadnezzar.

This is a clear indication that loans were made with a stipulated fixed rate of interest and this apparently was common practice of the Babylonian business. Sometimes the loans would be interest free as the following example from Lutz (1931d, 20) shows.

> Ten shekels of silver without interest charges from Sin-abum Shummanum has received. In the month of accounting (?) he shall pay back the money. Should he pass [it] on [to others] it shall bear interest. In the presence of Sin-idinnam, the son of Gimil-Sin; in the presence of Ibi-Adad, the son of Warad-kubi; in the presence of Ibi-Adad, the son of Warad-kubi; in the presence of Ubarrum, the son of Shamaiatum; and Warad-Ishtar, the scribe.

The following example from Goetze (1957, 15-17) suggests that charging interest on goods borrowed was a normal occurrence, with interest often not being specified but referred to as being at the normal rate.

> 12 kur of barley prime normal interest to be added from Ibbi-Shamash, Iddi-Amurru and Hanabatum have taken. In the month Simanin they will measure out the barley [and] its interest. Before Tu..., son of Ea-rabi, Daqqum. Nusku-re-ili. Month Tebetum year E-meslam.

Sometimes the contract made it clear that the loan had been given for a specific purpose and the benefits and repayments are specified at the beginning. The following contract cited from Larsen (1977, 125) shows that loans could also be given for investment purposes.

> In all: 30 minas gold, the naruqqum of Amur-Ishtar. Reckoned from the eponym Susorja has will conduct trade for twelve years. Of the profit he will (lit "eat") one-third. He will be responsible (lit "stand") for one-third. He also receives his money back before the completion of his term must take the silver at the exchange rate 4:1 for gold and silver. He will not receive any of the profit.

Another example, from Myhrman (1910, 56-58), of a promissory note for the repayment of a loan of money indicates that the borrower had agreed to repay the loan with interest at a certain time:

> 1 mana 10 shekels of silver, being a surplus, when the accounts had been made up, from Ur-Luh, Galu-Utu has received. On the 7th day of Shu-kul he shall pay it. Concerning the payment, by the name of the king he swore. In case he does not pay it, it shall be increased. By the name of he king he has sworn, before Lugal-azag-zu, before Lugal-itu-Da, before a-lul-a, before Ur-Ma-mi. In the month of Sig, the document was drawn up; year Gimil=Sin, king of Ur, built the great ship of Enlil and Ninlil.

It seems that it was customary for record to be kept to show when people had incurred debts, whether the debt was with or without interest and when and where the debt is to be settled. Records were also issued to indicate the settlement of debts.

> Two hundred ka of grain of the storehouse, no interest upon it from Iltani, the Shamash priestess, daughter of the king. Sin-abushu, the son of Ibalut, has borrowed. At the time of harvest, the month of accounting he shall return the grain to the storehouse from which it was taken.

Perhaps the most important evidence of the existence of credit is the use of negotiable bills of exchange, which were used as early as 2000 BC to transfer debts from one person to another. In some documents, the negotiable clause is shown clearly. The following document is an example (Pruessner 1928, 92):

> Five shekels of refined silver, at the interest rate of Shamash temple,

Sha from Shamash and Idiniantum, Idin-Adad, the son of Shamash-mutabbil, and Humtani have borrowed. *When seen at the city wall they shall pay the silver and interest to the bearer of their tablet.* The money was loaned out by the Shamash temple in partnership with one Idiniantum. Payment is due on demand to the beare.

Debts borrowed might be repaid in money or money's worth. For example, debt borrowed to buy planting seeds might be repayable in grains from the harvest as evidenced by two tablets said to have been inscribed with the following contracts made about 2000 BC and translated in Pruessner (1928, 99):

Contract no. 1

Two shekels of silver, for the payment of grain, from Nannar-mansum, steward of the palace, with the consent of Ilushu-ibni, agent of the palace, Warad-belti, son of Sin-idinam, has borrowed. At the time of harvest he shall measure out the grain, at the current rate, to the bearer of his note.

Contract no. 2

1 mina of silver for the purchase of barley, from sin-iqisham Taeibum has borrowed. In the month Simanu he will weigh out the corn according to the current rate. Beside his nail-impression (?) he has impressed his seal. Before Nanna ..., before Usiia, before Nanna-mansi, before Hazirum, before Sin-ili, before Aqba-iatum, before Ubar-Shamash: his seal he has impressed. In the month Shabatu of the year the army of Uruk was smitten with weapons. Taribum(?), son of Pi ..., servant of Ilabrat.

In the above illustrative contracts no fixed quantities of corn were mentioned at the time of the loan. The omission indicates that the quantity to be returned to the lender was to be equivalent to the amount of the initial loan, at the price the current. It seems, therefore that the current value principle was applied in Babylon. The documents also indicate that the endorsement of documents by witnesses was a common practice; the names of the witnesses being listed in the document. Many witnesses were used so the at least one of them could be available in the event of disputes. Because incessant exposure to war and raids, and constant caravan travel people cannot guarantee that witnesses would be available as needed so that the more

witnesses to a contract the greater the prospect of finding one to attest to the validity of the contract in disputes. In addition, parties to contracts, would have to attest to the authenticity of the contract by affixing their seals or their nail or thumb impression.

Mesopotamian capitalism had its focus on the royal household, the temple and the family (Labib 1969; Robinson 1973). The private business of the princes was extensive and the state treasury was in reality also the treasury of the princes. If the state accounts and those of the princes were separated, they were separated only in name only. King and princes engaged in ordinary business activities. They borrowed money, sold commodities and took security for payment; as did many other merchants. The temple acted as a bank and financial institution and provided credit to private citizens, traders and rulers. According to Harris (1960, 126-137), the source of the temple's lending fund included the revenue it collected from offerings and sale of land donated by ordinary people, rent from the lease of its landed property, gifts, investment income. Gods who were represented by kings and rulers (cf. divine right of kings) also appeared as creditors and the temple represented the "banks and treasuries" of gods and goddesses (Garbutt 1984, 94).

Essentially, the economics of the Mesopotamian age was the economics of the home or family; be it that of the king, the temple or the individual. The economy of the home included the totality of all its human relationships, the relationships of man to wife, parents to children, lord to servants (slaves), and the carrying out of their duties in the home. Home economy is not formed by the market or oriented toward it but toward the economy of the household and the farm. Trade was necessary and permissible in so far as it served to supplement the self-sufficiency of the home; but in and of itself it may not be concerned with making money (Labib 1969, 95).

Credit could be offered by the owner of the capital or by his or her agent, and

credit might be received by one person or a group of persons, representing a business partnership (Harris 1960). Credit might sometimes be granted for business purposes in exactly the same way as in the present day. The following contract cited from Goetze (1957, 19) illustrates a credit that was given for a purchase on the occasion of a business trip:

> ... 12 kur of barley, prime normal interest to be added, from Ibbi-Shamash Iddin-Amurru and Hunabatum have taken in the month Simanim they measure out barley and interest. Before TU..., son of Ea-rabi. Daqqum, Nuskure'-illi. Month Tebetum year E-meslam.

Credit and some other transactions could be documented at the time of its receipt by the debtor giving a receipt to the creditor. The following document (Goetze 1957, 17) shows a receipt for a loan of silver given to an individual, in which the debtor agreed to repay the debt at harvest time:

> 22/3 shekels and 5 grains of silver received by Sin-ubtam from Utu-lugal-an-ki-a. Before Ilshu-ibbishu, before Shamah-tappeshu, sons of Shamash-rabi. Month festival of Adad; year when the wall of Marad was built.

Another document provided by Clay (1906, 25) and cited below shows how credit was extended in the form grain, from the grain gathered as tax, to some families, who were to repay in the form of grain at harvest. The example also indicates that on the settlement of a debt, the debtor often breaks his or her seal on the debt contract as evidence of payment.

> Fifty guns of grain of the full tax from Belzululi and Irimshu-NINIB out of the Nippur storehouse. Nergal-nadin-ahi, the son of Sinerish has received, and given to families. On the day of harvest he shall gather and shall pay; whereupon his seal he shall break. Names of three witnesses and the date are added, beside Kunukku Nergal-nadin-ahe-gabri duppu. Seal of Negal-nadin-ahe.

A similar document provided by Clay (1906, 26) and cited below also confirms that animals can the basis of loan contracts and that inventory of sheep and goats were rented to an individual. This document also illustrates how barter payments were

documented.

> Forty-seven sheep male, twenty-eight large females, seven suckling lambs male, seven suckling females. Total, eighty-nine sheep. Thirty-four large goats. Sum total, one hundred and sixty-nine kleinvich. For one hundred and sixty-nine shekels of wool (i.e. for one sheep; one shekel forty-four and one-half minas of wool; twenty minas of goat wool, they are at the disposal of raba-sha-Ninib. The total of all his hides he shall weigh; sinews and fat of sheep; two perfect goat hides; one perfect garment, he shall pay.

Babylonian law was very exact and contracts were often drawn up with great care specifically to avoid any future litigation. The following text from Dougherty (1922, 28) stipulates that no complaints shall be made about a debt.

> 1 pi of barley belonging to Bel-na, the son of Banitum-erech, to be paid by Ina-gat-Nabushakin the slave of Agagashu, in the month Iyyar he shall pay. Ina-qat-Naby-Mushezibti and Babunu concerning his claim shall not go to law. Witness: Kidin-Marduk, the son of Nabushum-ukin. Scribe: Anum-ah-iddim, the son of Imbia. Erech, the 17th day of Marcheavan, the 16th year of Nabonidus, king of Babylon.

However, where there were disputes the judges were quick and fair with their rulings as the following translation by Lutz (1931c, 405-412) of a court ruling attests.

> Nimkebela, the son of Bul-...-ia together with Zilihamanna, the son of Pagaku, appeared in court in the presence of the judges. Nimkibela made the following deposition: Another man had taken my share in the partnership, but Zilihamanna in the place of him who broke the contract, associated himself, on his credit for my share in the business. Two emmer of barley, as he, Zilihamanna had promised to give (sell as his own share). The document (that was) with me he removed, and Pagaku, the father of Zilihamanna in witness the proof was entered in my document. Zilihamanna then came to me. He said: "Bring (sell your share). The standard emmer and the correct measure of barley were brought, and I had given (them). One emmer of barley, which is my emmer, Zilihamanna took, one emmer of barley Zilihamanna gave, one emmer of barley and my emmer he withheld." The judges questioned Zilihamanna. Zilihamanna made answer: "Yes, I spoke with Nimkibela. I took his emmer, into the country of Nullumaians it was taken from my hand. The judges addressed Nimkibela: The emmer into the country of the Nullumanna? Nimkibela replied: "I did not tell him to bring the emmer into the country of the Nullumaians. The emmer of Zilihamanna was sent (thither). Nimkibela won the law-suit and the judges (rendered the verdict): "For the one emmer of barley Zilihamanna shall consign to Nimkebela up to one emmer like his emmer in quality. Nimkibela (then) said: "The extent of the wrong

> regarding the one emmer I shall not divulge. Come close to me! Come (with) the correct amount of barley." Iteshshu, Jai'll seal of Tarmibela, seal of Mattenabe (Written by the hand of Adad-fa Itura, Sariaihuia).

Loans can also be granted to a family such as father and son in confirmation of the fact that the Mesopotamian economy is family-based as the following translation of a contract by Poebel (1909, 40) attests:

> 25 gur of grain bearing an interest of 15 shekels of silver, from Ninib-mansi, son of Damiq-ilishu, Habanatum and Damu-..., his son, have received. At the ... of the harvest time they shall pay him the grain and the money.

The creditor may be required to release the proceeds of a loan in separate tranches to a debtor or to different members of a partnership. The text below (Lutz 1931a, 33) is an example of such a contract.

> 1 gur, 1 pi and 4 bar Bur-Adad, the gardener, 3 pi and 3 bar Sin-eribam, for the second time, 3 pi and 2 bar Ilikata ..., for the second time, the son of Naram-Adad, a total of 2 gur, 3 pi and 2 bar of barley without interest charges from Ilishu-nasir, and Nannardim they received. Unto the granary the barley they shall pay back. In the presence of Abumilu; Shamash-nasir, the son of Sin-iqishami Rish-Shamash, the son of Warad-Sin, and Munanum, the scribe. The year when the temple of Ishtar was built.

Finally, the debtor did not always need to repay the loan and the interest at the same time. Interest might be paid before the principal amount of the loan is paid or vice versa. The following document from Lutz (1931b, 126) provides an example.

> ... 5/6 shekels and 18 she of silver, [being] balance of interest recognised by Lu-shag, from the house of records Gu-du-du received. Month Min-ab, the year when the high priest of Innana of Erech was elected.

4.2 CAPITAL AND PRIVATE OWNERSHIP

The terms "merchant" and "creditor" in ancient Iraq were interchangeable, but the merchant did business in the way of ordinary trade. It could be concluded that merchants were traders and sometimes money-lenders and creditors, as discussed previously. The following text (Lutz 1931a, 61) shows a receipt for a loan of silver

with interest, which was common practice in Babylonian business:

> ½ mana of silver, interest 1 shekel for 5 shekels, from Ur-Dun-pa-e, Gir-ili-Shag has received. Month Gan-gan-e, year the high priest of Innnna of Erech appointed.

From the above illustration, it seems that Babylonians invested their capital in money lending and credit business, having as an incentive the interest they obtained. Private business was conducted by individuals who operated entirely on their own, with their own resources, and also by those who took advantage of the lucrative opportunities that service to the state such as tax farming[6] provided. These two types of entrepreneurship can be discerned from the records that individuals kept, and the accounts which they kept for their own reference (Curtis and Hallo (1977, 103-139). Other types of private ownership of business took the form of partnership in which two or more persons combined their resources to trade for many years in copper, silver, livestock, oils, garments and other commodities, financed by private money.

Babylonian law protected the rights of citizens and people observed the right to exchange their money for land in Babylonian cities. The rulers sometimes granted large amounts of land to ordinary people and gave them the right to use it for their own affairs. On the other hand, people might purchase land and present it to the king (John 1904, 283). There is evidence that many enterprises were owned privately in the 17th century BC and that many houses, lands and fields were bought or sold by individuals. Some of these were used for business purposes, as will be seen in some

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[6] Tax farming was essentially a concession by the state, the king, prince, princess, caliph or temple (whichever was ruling the state) to a private or official finance contractor who as a rule had to put up his or her own means as collateral in collecting the revenue (tax) due from citizens on behalf of the state for a fee or commission. These tax farmers understood well how to let collections from taxpayers work for them in their new business undertakings before those the collected tax revenues are due for payment to the government treasury. The tax farmers were active in trade and manufacturing, where they invested their commissions. There are many examples which show how deeply tax farmers and officials penetrated into the economy (Labib 1969, 93).

of the examples discussed later in this chapter. The following citation from Poebel (1909, 4) shows a document relating to the purchase of a privately-owned house:

> One sar 10 gin of built house, in which a door ... is standing, on one side adjoining the house of Silli-NinIB, son of E-lu-ti, and Sineribam, son of Ellil-nishu, the front side towards Silli-NinIB, son of Silli-Ishtar, the exit into the lane of Sin-lidish, son of Azag-NinIB: the house of Imgur-NinIB, son of Ibasharrum, the eldest brother of NinIB-abi and NinIB-gamil, his brother, sons of Lu-ga-tum, and of Monutum, their mother; from Imgur-NinIB, NinIb-abi, NinIB-gamil and Manutum, their mother, Sin-Iiwir, son of Enlil-masi, has bought it. As the complete purchase price he has paid them half a mine. In future Imgur-NinIB, NinIB-abi, NinIb-gamil, Manutum, their mother, and any heirs shall make no claim to the house: by the name of the King they have sworn.

Another document which records the private purchase of a field is also provided by Poebel (1904, 4):

> Six acres of gug-she-field, in the field Till-Sin, the front side (adjoining) the canal Abarri, the other front side the canal Baikum, with the long side adjoining Sin-hazir, the builder: the field of Babbar-andul, son of NinIB-gamil, and of Idatum, son of NinIB-mansi; from Babbaranddul and Idatum, etc.

House were no only built, they were also bought and sold. Trade in houses was an important business in Babylon as the following text from Chiera (1914, 42) shows:

> A house with the long side five and one-half cubits, and the front side five and one-half cubits, the house has two-thirds gin of surrounding property (?), from the house of the Ridu and the house of the overseer of the singers. A house with the long side five and one-half gin of surrounding property (/), from the house of the ... (?), and by the side of the street Lugal-aba, the house for the whole price of which Lugal-melam had paid eight and one-third gin of silver, form Lugal-melam, Daritum and Nin-dingir-azagmum, his wife, have bought (for the same price). In the future no man shall make any claim against the other. They have sworn by the king.

Renting of privately-owned properties seems to be another type of business which flourished in Babylon. The following two illustrations provided by Chiera (1914, 44/45) describe contracts for the rent.

A contract for the rent of a house

> The house of Damn-ribam, from Damu-ribam, Sin-idinnam, the merchant, has rented as dwelling and possession. The yearly rent is

one-third of a shekel of silver.

A contract for the rent of a field

> Three gan of clover-field, from the field Auza, adjoining Nanna-mumu; the field nusku-mansi, from Nusku-mansi Damki-ilishu has rented for the purpose of cultivating at the rate of one-third (of the produce) as yearly rent.

The first contract indicates that the yearly rent of the house was at a fixed amount, while the second contract suggest that the rent of the field was determined according to the return from it, a proportion of which had to be paid to the owner.

There is evidence regarding the many forms of association for business. Two persons might put together their capital for a common business, or they might have a shared house for use as a shop or warehouse. A slave could be in partnership with a freeman. Capital might be accorded to a freeman or to a slave for business purposes. In some conceptual cases, women also entered into business as agents or as contributors of capital (John 1904, 284). As discussed later, the "balanced accounts" which were prepared represented records of merchants' capital in Ur around 111 BC. The merchants traded with both their own capital and borrowed capital (John 1904, 88-91).

Sources of private capital included profits and gains accumulated through buying and selling, emolument and speculations, in addition to the resources of capital which came from good put at the disposal of the trader by private parties. Other sources of capital came from the rent of properties and land lease (Lane 1944,178).

In addition to capital from the state (which is not distinguishable from the king), and the temple, private capital served as stimulus to the flourishing trade of the age. Capital invested in foreign caravan trade between Babylon and India, China, and Egypt. It is also agreed (Oppenheim 1965, 82/83) that the cultivation of lands and irrigation of field were practised also by private business persons as well as by the

temple or the state. In addition, manufacturers of carpets, clothes, linen and food were financed by private individuals (Goodspeed 1903, 353). It is also suggested (Johns 1904, 291) that business partnerships were also formed, which required the partners to furnish the capital jointly and to hand it either to a free man or to a slave to be invested in a business. For example, the following text from John (1904, 291) shows that two partners entrusted their capital to two slaves:

> Five mina and six hundreds and thirty pots of aromatic belong to A and B as partners. The stock is given to C, a slave, and D, another slave, with which to do business. Whatever it makes is A and B's in common. C and D take food and clothing from the profits where they go.

Another example provided by Johns (1904, 291) shows that partners might use their slaves to manage their business:

> Six minas belong to A and B and are given to C the slave of B as capital. A and B share what it [the slave or the business] makes. A will give another slave D to help C.

4.3 CONCLUSION

Trade was practised in ancient Iraq and merchants were an important class of citizens, providing valuable services to Kings and ordinary citizens alike, through trade, money lending and business. In these activities, they might use their own capital, act as agents for others, or use capital borrowed either from individuals, or from temples or state institutions.

Credit was an important element in the life of the ancient Iraqi citizen; it was recognised and regulated especially by Hammurabi code which contained many paragraphs relating to credit and loans between different parties and for many purposes, including business and trade. the main incentive for lending and giving credit was to make profit, especially in the case of owners of private capital, though in some cases, loans were given by temples or state institutions for charitable purposes. Credit could be very costly for the debtor if s/he could not redeem his

debts. He might lose his freedom, his belongings, his wife, children or his slaves.

Credit, capital and private ownership existed in the land of Babylonia since 3,600 BC. (and indeed in the rest of Mesopotamia), albeit in a simpler form and less extensively than today; an individual of that age could borrow when s/he needed to, s/he might use his own capital to do business or lend to others, and s/he could have his own private belongings, housing, stores, business or anything s/he could afford to buy, either with his or her own money or with money borrowed from others.

Some of the commercial activities, which will be discussed in Chapter Six, were undertaken privately and financed by private individuals. The capital invested in business and transactions concerning the wealth of people had to be recorded and measured in order to determine whether the value of such property increased or decreased. The task of determining the value of wealth appreciation would depend tremendously on some kind of bookkeeping and accounting. Therefore, it could be reasonably concluded that in order to present the value of the people's wealth in Mesopotamia correctly, accounting and bookkeeping procedures had to be implemented. The purpose of the private business was to obtain and share profit for which the accounts were arranged and prepared.

Discussion in this chapter has followed the suggested of Littleton (1966) that credit (and by implication money) is an antecedent of bookkeeping. This position however flies in the face of historical and archaeological evidence. Mesopotamian civilisations are recorded as exhibiting strong forms of centralised political power and religious influence. Many of these civilisations operated a temple and family-based economy, which was centrally controlled and used accounting control systems for its purposes. Centralised control of all supplies and dispositions of a military and political nature were essential. Money did not exit for many years but the need to develop accounting systems for control purposes was evidently a paramount need of

the central political authority (Glautier 1983, 57). An essential purpose of accounting in this age was to monitor the performance of management and to ensure that the palace or temple was not defrauded either by its agents or outsiders. According to the Bible, accounts would have to be kept if agents were less than honest not if they were perceived to be honest. For example, in 2 Kings 12:16 it was stated of the building of a temple that

> No accounts were kept with the men to whom the money was paid over to be spent on workmen since they were honest in their dealing.

However, if the principal becomes suspicious of the agent, accounts were often demanded as was true of the parable where the owner heard that his steward was wasting money and the master recorded in Luke 16" to have said:

> What is this I heard about you? Draw me up an account of your stewardship.

Under the conditions of external military threats, measurement of quantities, descriptions and locations of men and supplies were more relevant to the central political power's needs than ever could be monetary measurement. The absence of credit and money did not impede the development of complex and effective control systems, nor did it prevent the evolution of means of making quite intricate forms of mathematical computations described in the previous chapter. As a result, monetary measurement to which modern accounting systems are restricted were of a much later origin and is not necessarily central to the purpose of accounting. In addition the transition to a credit economy was not completed during the Mesopotamian period. In the caravan trade across the region and into the other Oriental countries was supported by a system of production which was not wholly market-oriented. Hence credit and non-credit recording and monetary and non-monetary measurements featured in the dual accounting systems which were prevalent though such accounting records allowed an imperfect view of profitability, credit and capital.

CHAPTER FIVE

DEVELOPMENT OF MONEY IN ANCIENT IRAQ

5.1 INTRODUCTION

While it is not possible to present here a complete history of the use and development of money, it is possible to show that it did exist in the East, even in ancient times, and was used as a means of exchange. It is possible to identify the various kinds of money which were in use 3000 years BC and the purposes for which they were used.

The earliest Babylonians were an agricultural society. Great flocks of sheep and herds of cattle and goats were enumerated in lists of temple property, indicating that domestication of animals, cultivation of land, and the accumulation of power through wealth were important elements in the life of inhabitants of ancient Iraq.

Babylonian inscriptions dating from since 2400 BC show that the inhabitants, in addition to agriculture, practised trade and traders entered into obligations entitling the sellers of goods to receive payment at a future time and in a place other than that to which the goods were delivered. For example, traders used to travel from Babylon to the Island of Bahrain, to Oman and to India, and sold and bought goods such as jewellery there, and paid their debts to the creditors in these regions (Oppenheim 1954, 36 and 64).

The main trade was in domestically produced goods including wool, honey and wax, bitumen and gypsum, dried fish, grain, leather, dates, live stock, oil, reeds and vegetables. These were traded for products including fruit, metals, resins, spices and precious stones. As Foster (1977, 38) suggested

> Cattle and sheep were shipped through Akkad, over 3500 sheep and goats were sent for Umma to Girus, and other sheep and goats were sent from Umma to Urk[7].

The shipments were to cities in the Sumerian state located along a narrow strip of land

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[7] Akkad, Umma, girus and Urk were small states.

extending from approximately the stretch of land along the latitude on which Baghdad is located to the swamps that bordered the shores of the Arabian Gulf.

5.2 DEVELOPMENT OF MONEY

The development of money was an important element in the evolution of Babylonian society, where it was used as a means of valuation. It was realised that an individual who produced his or her income and by his or her own efforts could enjoy only a very narrow range of choice, in that s/he could enjoy what s/he produced or could exchange his or her produce for goods produced by others. However, the use of money in that age permitted far greater specialisation in work, with greater flexibility and more opportunities for increasing wealth because it allowed people to do the jobs they were food at and to spend their income on anything they wanted. The introduction of money offered an alternative to trade by barter, enabled commerce to flourish and helped industries such as craft and pottery making, textile weaving to become more widespread (Green 1930, 31). The barter system had many disadvantages: it required the matching of the needs of one supplier with the needs of another supplier, and presented valuation problems connected with the items to be exchanged. These problems could be overcome by the use of money, which has advantages as a means of payment, unit of account, storing wealth and standard of value. From very early times, people had counted their possessions and had used accounts of them to value their business and wealth; not only to understand whether they had made profit or loss, but, perhaps also, because of a general awareness that increased wealth might enhance their prestige and thus bring greater respect and power. The use of money offered a much earlier way to attain this end.

5.2.1 KINDS OF MONEY USED

Morgan (1965, 34/35) suggests that metal coins were used as a means of payment, standard of payment, unit of account and as a means of storing wealth. The

desire to reduce the burden of finding persons with the goods one needed and who needed the goods one had, in a barter system coupled with need to sell and buy land as and when one needed created the need for money in the Mesopotamian economy where silver was used as a means of payment and as a standard of value. Silver was used for coinage in the Mesopotamia because it was considered the most precious metal after gold. Gold coins were not in common usage in the ancient Mesopotamia because gold was reserved for those things that were considered at that age as more important for ordinary usage and currency. Gold was used in the production of vessels, cups jewellery and statutes of gods and for ornamental purposes; all of which were symbols of opulence and wealth. Gold was not found in abundance in that region and was more expensive than silver whereas silver was imported in large quantities from Asia and Asia minor.

The exchange of coins was practised in Iraq since the first Babylonian dynasty about 2400-2100 BC. However, exchange of coins was not as simple then as it is in the present age because each state and many cities within a state had their own coins (Morgan 1965, 35). The coinage adopted in ancient Iraq was in both silver and gold as well as bronze and copper, but it difficult to determine when coins made from metals other than silver were introduced into ancient Mesopotamia. Until the closing days of Babylonian history, the weight of money was reckoned in *talents*[8] which had been fixed by Dunge of the Dynasty of Ur around 2700 BC. It was then realised that the *talent* was not suitable for monetary purposes because it was too heavy. Therefore the *maneh* was adopted as a standard since it was much lighter. Later, an even lighter weight coin, the *shekel*, was adopted as a means of exchange and valuation. Money-lending, like money itself, probably goes back to the earliest written record, bit it is

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[8] A *talent* was equivalent to 60 pound weight, while a *maneh* (or *mina*, or *mine*) was about one pound weight. A *shekel* is one-sixtieth of a pound.

more probable that borrowing and lending in kind were practised long before the use of money as a means of payment. After coinage was introduced, money-lending became the most lucrative business, which was practised by all classes from the royal families to the lower classes. The lender might charge high rates of interest to prevent a potential borrower with a high risk of defaulting from borrowing and the borrower might (as suggested earlier) pledge his property, children, wife or servant as security against the loan (Sayce 1899, 151). Money-lending is a form of money in itself and debts had always been an alternative to money as a means of holding wealth. A large number of accounts from Babylon have survived on tablets of clay, proving that money-lending was very well established and accepted in the 7th century BC because coins were introduced long before that. The records of deposits and loans kept by temples or by secular money-lenders or scribes, as Martirossian (1983, 128-130) suggests, are records of obligations to the state and records of expenditures kept by public offices. As Budge (1925b, 26) stated:

> There is no reason for thinking that they (the Babylonians and Assyrians) managed their money affairs as we do. There are many contract tablets known, and hundreds of records of commercial transactions, but I know of none of which could be considered as accounts in the modern sense of he word.

However, there is much documentary evidence to support the argument that the Babylonians managed their financial affairs well. For instance, as Powell (1977, 23) stated:

> Turning now to the evidence of the archival records, which exceed in quantity all other types of written material deriving from third millennium, one must bear in mind two fundamental points: (1) The overwhelming majority of all third millennium records derive from the archives of great estates and are done purely from the standpoints of the estate itself. Thus, (2) the private profit or loss of persons doing business with the estate or even employed by it will be reflected in the archival records only when this profit or loss directly affects the income and expenditures of the accounting unit.

Most (1959, 563) and other[9] also discussed the economic prosperity of ancient Iraq. As Most (ibid) argued

> The Sumerians, to go as far back as archaeology will take us, knew such a period of economic prosperity between 4000 and 3000 BC. The clay tablets which have been unearthed at places such as Ur of the Chaldaeas tell us that their commercial institutions were comparable with our own. We have bookkeeping and legal texts, contracts, receipts, business correspondence and their documents, engraved by stylus in the cuneiform character which were part of a recording system extending throughout Asia Minor, and as far as Egypt to the west.

Babylonian money-lenders charged borrowers interest on their loans. The following contract cited by Sauce (1899, 158) which was drawn up in the third year of Nabonidos (the last king of Babylonia 555-539 BC) shows that security was taken for loans.

> One maneh of silver, the property of Nadin-Merodach, the son of Iqisa-bel, the son of Nadin-Sumi, and Bau-edherat, the daughter of Samas-ebus. In the month of Tisri (September) they shall repay the money and the interest upon it. Their upper field, which adjoins the Sum-Yukin, the son of Sa-Nebo-Su, as well as the lower field, which forms the boundary of the hour of the seer, and is planted with palm-trees and grass, in the security of Nadin-Merodach, to which (in case of insolvency) he shall have the first claim. No other creditor shall take possession of it until Nadim-Merodach has received in full the capital and interest. In the month Tisri the dates which are then ripe upon the palms shall be valued, and according to the current price of them at the time in the town of Sakhrin, Nadim-Merodach shall accept them instead of interest at the rate of thirty-six qas (fifty quarts) the shekel. The money is intended to pay the tax for providing the soldiers of the King of Abalone with alms. Witnessed by Nebo-bel-Sunu, the son of Banakhi, the son of Dahik-Nebo-diniebus.

It can be concluded from this contract that lenders held various kinds of property as security for their loans and charged a high rate of interest. In the age of the Babylonian empire, the normal rate of interest could be as high as twenty

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[9] See Jordan (1971), Thomson (1972), Snell (1982) Mahoney (1965), Leemans (1950) and Gurney (1983).

percent[10]. It could also be concluded that the basic concept of current value was known and applied in ancient Iraq because the lenders and their creditors sometimes valued the goods and services they used in settlement of debts at their current prices.

5.4 MONETARY POLICY

The rulers of ancient Iraq might have practised some sort of monetary policy in the form of control over the weight and value of coins, containing the standard of coinage and enforcing the state's prerogative over it. It is argued (Salim 1962) that for coinage to be used as a means of payment it had to be authorised by the ruler of the state, that is, it had to bear the ruler's stamp or that of an authorised person or official and this was done since the first Dynasty of Babylon. It also had to take a specified form or shape such as rings, bars or cylinders (Salim 1962).

Among the many coins in the Rick's collection of antiquities, which reached the British Museum in 1825, were coins, of different periods, which were stamped by the rulers of the state of Babylon (Gadd 1925, 12). Also, the inscription of Senna Cherib (704-681 BC) suggests that the casting of small copper coins represented some type of control over money and showed the state's prerogative to issue money (Gallard 912, 329-48).

5.5 PURPOSES OF MONEY USAGE

Money was used for many purposes. It was used in business, commerce, and in the daily transactions of private individuals. There is evidence that money was used to buy a range of items needed, for personal use, as the following text from Garney

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[10] During the reign of Nebuchadenezzar, king of Abalone (604-562 BC), interest rates varied between 10% to 16⅔%, but the rate during the Assyrian empire interest rate was considerably higher; it was quoted to have reached an average of 33% (Sayce 1899, 158).

(1983, 180) suggests:

> ... the son of the Belpihati ... from the hand of Iqishaya the son of ... and Hanbat his wife, for 53 shekels of silver he bought for its full price. 1 ass for 15 shekels of silver, cloaks 14 shekels of silver, tillu for 12 shekels, 2 kor of corn by the 12 qa measure for 4 shekels of silver, 2 kor of dates by the 4 qa measure for 2 shekels of silver, 3 seah of oil by the same measure for 3 shekels of silver, 1 carcase of an ox 3 shekels of silver.

Another text provided by Chiera (1914, 40) shows that a temple-office was purchased and the price was paid in silver money. Chiera's (1914, 40) translation of the text reads:

> The office of the anointing-priest of the god Nin-Girgilu, Nin-du and Pabilsay, for one month every year, and the office(s) of the purshumu (all of them) which are from the inherited property of Lugal-melam, from Lugal-melam, son of Alia, Lu-Ninib (anointing-priest of Ninib) and son of Eluti, has bought. For their whole price he has paid seven shekels of silver. In the future Lugal-melam, of one month every year, shall make no claim against Lu-Ninib for the office of the anointing-priest of the gods Nin-Girgilu, Nin-du and Pabilsay. He has sworn by the king.

Chiera (1914, 58) suggested that money was used to redeem a house:

> ... and one-half gin of built-house, near the house of NN son of ...-dudu, the house of Enlil-bel-illi, the son of Pakum (?): From Enlil-bel-illi Shamashilum has redeemed the house of his father. For its whole prince he has paid one-third of a mana and three and one-half shekels of silver. In the future Enlil-bel-illi and any heir of his shall make no claim on that house. He has sworn by the king.

Salaries were also paid in money. For example the following text from Clay (1908, 21) illustrates such a case:

> The guarding for the month Marchesvan of But-TAR-ki-shir which Mushhezib-Bel, son of Sin-tabni, together with Mushezib-Bel, his slave, have assigned. At the yearly rate of 1½ shekels of silver for guarding, Mushezib-Bel shall pay to Nabu-shum-ishkum, son of Nabu-nasir, son of Egibi. A month of guarding for NMushezib-Bel is given to Nabu-shum-ishkun.

Money was also used to purchase land, as the following example from Clay (1908, 23) suggests.

> 1 pi seed field, a date plantation palms planted and unplanted in the

> vicinity of the hill in the NINNU-E district of Nabu-zer-ibni, son of Nabu-apal-inddina, son of Reualpe. The upper side borders on the field, the original tract. The lower side borders on the royal district. The upper front side borders on the field of Marduk-nasir, son of Aple, son of the Shamash priest. The lower front side borders on the field, the original tract. For Imina the price with Nabu-ushabshi, son of Marduk-shakim-shum, son of Re-u-aple Hiktum, daughter of Nabu-shum-ukin, son of Baqartum, has named the price, and has bought for its full price. Total 1 mana and 1 shekel of white silver including 1 shekel of silver which was thrown in a baksheesh the price of the 1 pi seed-field, a date plantation, planted and unplanted, in the vicinity of the hill of Nabu-ushabshi, son of Marduch-shakin-shum, son of Re-u-aple, the price of that field that is the full amount he received from Hikkum, daughter of Nabu-shum=ukin, son of Baqartum. The buyer is free, there shall not be a reclamation. They shall not return and complain to one another. The plaintiff of that field shall restore twenty-fold the money which he received.

The above illustration shows that silver money was used to settle deals between buyers and sellers. The field was well specified and the description of the boundaries so detailed that the buyer knew exactly what he was buying and the seller obtained a satisfactory price for what he was offering. The contract made it clear that each party had no right to come back against each other in the future.

Money was also used for other business purposes. It seems that payment of money to and by businesses was a common practice in Babylon. Clay (1908, 24) also an example of the sale of a storehouse.

> A 12 reed storehouse, a finished house having a built-in threshold, a covered house with a door having firm bolt, of the bright storehouse of Ezida; on the upper north side adjoining the storehouse of Bel-epush, son of Aple, son of Mubanni; on the lower south side adjoining the storehouse of Etillu, son of Mardukadishu; on the upper west side along the Tarrabshu road; on the lower eastern side adjoining the storehouse of Nabu-Iddina, son of Arkat-Damqu. Total 12 reeds is the measurement of that storehouse with Bel-uballit, son of Amelia, the riqqu of Marduk, Marduk-Kudurri-usur, son of Irani-Marduk, the TU officer of the house of Marduk, according to 3 minas, 10 shekels of silver for the half of the field, 15¾ shekels, and 2 gerahs of silver and 5 kors of dates which were thrown in the field as his full price. Total 3 minas, 10 shekels of silver and 5 kors of dates, the full price of his storehouse, Bel-uballit, son of Apla, the riqqu officer of Marduk, received from Maduk-Kudurri-usur, son of Irani-Marduk. The buyer has a fee simple, there shall be no recourse. They shall not redeem and complain to one another. Whenever in future days among the

> brothers, children, family, people and relatives of the house of Bel-uballit, son of Amelai, they shall complain or cause a dispute concerning that storehouse, and that storehouse was not sold, and that money was not received, the complainant shall restore twelve-fold the money which he has received.

The price of the storehouse was paid partly in silver and partly in commodity. Conditions were laid down that no complaint should be made in the future regarding the sale of the storehouse. A similar condition existed in most of the sale documents illustrated in this chapter, suggesting that his was a common condition in contracts of sale.

Money was also borrowed to finance business trips such as the illustration given below provided by Goetze (1957, 19) of a contract that was made for the purchase of wool on a business trip.

> 1/6 shekels of silver, the price of wool from Ina-libbum-ershet, the maditum of Shamash, daughter of Ipic-ilishu, Ipqatum, son of Ibbi-Shamash has taken. At the completion of his journey he will repay the silver. Before ana-Shamash-ilisi, son of Annumpisha, before Ipiq-Annunitum, son of Ipiq-ilishu. Month Abum, 3rd day, year when the symbol-weapon, the resplendent object, was dedicated.

5.6 CONCLUSION

This chapter has provided evidence which suggests that the people of ancient Iraq since about the third millennium BC use money in the form of coins made from several precious metals. The population of ancient Iraq has also been shown to have availed itself of the commercial advantage of money, by using it as a means of payment, standard of value, unit of account and for storage of wealth. this undoubtedly entailed the issue of various vouchers on clay tablets to record transactions which eventually led to accounting records. Some of the vouchers which have survived were for raw materials and some for manufactured articles.

The state exercised its prerogative to strike (mint) coins and stamped them to

make them officially acceptable to the people, and also to prevent the issue of unauthorised coins, The rules also practised control over the weight and value of the coins. During the reign of Nebuchadnezzar I about 1140-1123 BC (?), for example, coinage was more advanced and there were shekel pieces, five shekel pieces and the like, implying that coins were issued which represented different fractions of a maneh. People from the lower classes, especially slaves, did not need to use money to any great extent, because they were provided with a place to live, clothes to wear and food, by their masters. The temple had no power to issue money itself or to mint coins except under the authority of the rulers, who were then considered to represent gods and goddess and obtained their legitimacy through belief of the people in the "divine right of kings." The temple undertook additional tasks to the minting of coins: they engaged in commerce, money lending, collecting debts and tax farming for the state.

As in the previous chapters, the contents of this chapter should not lead one to conclude that the emergence of coinage preceded the introduction of accounting in its rudimentary form. The world of antiquity predates the invention of money and as discussed earlier, the need to develop accounting data for an economy without money that is dominated by royalty and temples was essential the central control of supplies and combat readiness in an age often under military threats from neighbours (Glautier 1983, 57).

CHAPTER SIX

COMMERCIAL ACTIVITIES IN ANCIENT IRAQ

6.1 THE ORGANISATION OF TRADE

Iraq was and still is one of the principal trade centres in Middle East. Trade had considerable effect on the economy of ancient Iraq, the accumulation of its capital and the development of its production. The great expense of equipping armies cannot be paid from an empty state treasury or the modest depository of a king or prince. Only a financial stable upper class and temple can satisfy the desire of ancient Iraq for precious stones and jewellery. Four main forms of organised trade that featured in ancient Iraq listed below are respectively discussed.

- The trade practised by independent merchants.
- The commerce practised by the state.
- The trade done by agents.
- The trade done by the temple.

6.1.1 *The Independent merchants*

In the old Babylonian period (3,600-2400 BC), trade was largely carried out by a class known as *tamkarum* (singular, *tamkaru*) This term is commonly translated to mean "merchant", though some scholars believe that the word denoted rather more than this, since the *tamkarum* conducted various activities outside the confines of a mercantile business. Not only did they trade in goods themselves but they were also brokers, merchant bankers, money lenders, and sometimes government agents (Leemans 1950, 6-22). The *tamkaru*, some scholars have suggested, was also a public trustee, who tool appropriate action when anyone brought a business tablet to him, such as accepting pledges, and facilitating transportation by accepting responsibility for the carriage of money and goods. It is also believed by some (e.g. Polanyi 1957, 24) that the *tamkaru* charged small service fees according to some fixed scale. However, some scholars (e.g. Poebel 1909) have argued that the *tamkaru* must have

received fees in return for the services he performed for his clients, whether these were ordinary people, traders, or even government institutions; in other words, the *tamkaru* had two sources of income:

(a) If he was entrusted to look after money then he could invest it and keep the interest.

(b) A fee for services rendered.

As discussed in Chapter Four, in the section under "Capital and Ownership", there is also considerable evidence of the *tamkaru*'s involvement in property transactions, as exemplified by the citation quoted in that section from Poebel (1909, 4).

The *tamkaru* also dealt with the purchase and/or lease of land, the granting of credit and loans, organised trade in such commodities as food stuffs, wool, timber, garments and textiles, grain, metals, building materials (e.g. reeds and bricks), cattle and horses. Many excavated tablets on which letters had been written refer to the trade activities practised by the *tamkaru*. The following letter cited from Chiera (1914) is an example:

> 2 shekels of silver, received by Ekursag-tabbani and Sin-muballit, when they went for buying sesame oil, paid out by Itti-Sin-milki.

Leemans (1960, 149) provides another example

> 3 minas of silver; 8 shekels of gold, its rate (1 shekel equals 4 shekels of silver), its value ½ mina 2 shekels; 5 shekels of gold, it rate (1 shekel equals 3 shekels of silver), its value 15 shekels; 4 kur 1 sutu of sesame oil, its rate 1 sutu 8 qa, its value 1 mina 7 1/6 shekels (10 Se); 1 pi 1 qa of oil of first quality, its rate 5 shekels 10 Se, its value 12 1/6 shekels 6 Se; 1 sutu of aromatic, its rate 3 qa (for a shekel), it value 3½ shekels; 10 minas of cedar- resin, 10 mina of zabalum-resin, 10 minas of cypress-resin, 10 minas of white cedar-resin, it value 12 minas (for a shekel), its value 3⅓ shekels; 4 sutu 2 qa mixed perfumes, its rate 1 pi (for a shekel), its value ⅔ shekel (each), their value ⅓ mina 6⅔ shekels' 67 rams, their rate ½ shekel (each), their value ½ mina 3½ shekels; 9 rams without wool, their rate ⅓ shekel (each), their value 3 shekels; 59 ewes, their rate ½ shekel (each), their value ⅔ mina and 9½ shekels; 10 ewes without wool, their rate ¼ shekel (each), their value 2½ shekels; 16 lambs, their rate ⅓ shekel (each), their value 5 ⅓ shekels; 34 she-goats, their rate ⅓ (each), their value 11 ⅓ shekels;

> together 7½ minas 5 ⅓ shekels 22 Se of silver, delivered by Iui-Sin-milki; ... of the king in the month Sabatu, received by Ili-idinnam.

A translation of another tablet by Leemans (1960, 105-152) provides further illustration of the *tumkaru*'s activities.

> 1 talent 30 minas of cypress-resin, 30 minas of ..., which [are in] the house of Abu-uaqar, 1 talent of cedar-resin, 30 minas of white cedar-resin, 30 minas of white cedar-resin, 30 minas of myrtle-resin, 30 minas of "sweet reed" resin, 30 minas of ..., 30 minas of baluhhu (essence of gal-banum), 30 minas of ..., nikitu, pulukku (essence of storax), 3 sutu of kukru (fir essence), zabalum-resin, 1 sutu of turu (fir-gum), 3 sutu of burasu (juniper essence), kanaktu, 1 pi of sweet oil of first quality; for the correctness vouches ..., received by Ikin-pi-Adad.

Thus, there is ample evidence that the *tamkarum* traded in many different commodities at that time.

6.1.2 *The commerce practised by the state*

Many scholars (e.g. Golb 1969, 146) emphasise the importance of the economic activities of the state in ancient Iraq; pointing out the way in which the state dominated various means of production and exchange. State departments were active in commerce and enjoyed the advantage of considerable resources. The main commodities which were used in commerce were silver and grain, but silver was also used as money in the usual sense of the word; therefore, commodities were often priced in silver coins for the purpose of commercial record-keeping. Livestock, donkeys and asses, cows, oxen, and all kinds of food were traded by the state (Diakonoff 1973, 47).

The ancient Iraqi state was a great capitalist institution which needed to employ a number of officials to manage its trading and financial affairs. Some of these activities were carried out by the *tamkarum* acting as its agents. As Powell (1977, 23-29) suggests, the state employed a number of individuals to act as its agents in acquiring goods which were not available locally (Powell 1977, 23-29). Merchants

acted as state agents in return of wages or salaries (Powell 1977, 23-29). The state also employed its own officials to carry out extensive commercial activities (Jarstow 1971, 318). In cities remote from the palace of the ruler, the state traded with consumers who, in general, seemed to have dealt with the representatives of local government, i.e. the city governor or the temple authority, as well as with other people (Snell 1977, 46). It is reasonable to conclude, therefore, that the state conducted commercial activities in different ways with different groups of customers and that the *tamkarum* were professional people who sometimes provided services and acted for to the state.

6.1.3 *The commerce carried on by agents*

In addition to serving as agents of the state, the *tamkarum* also serves as agents of private individuals and the temple. The *tamkaru* regularly rendered his or her accounts to his or her principal, whether this principal was a private individual, a temple, or the state. S/he travelled from one place to another to find a market for his or her good and to make purchases, which could be profitably sold at home. The principal paid no salary, but received in addition to his or her capital (in money or goods), an agreed interest or a share of the profit resulting from the trade to which the capital is put.

According to Oppenheim (1973, 237), archaeologist of the ancient Iraq are quick to distinguish between the *tamkaru* who is a general-purpose merchant and the specialist trader in goods needed by state, a type of commercial agent called *ga-rashor-ga-esh* who acquired commodities required by the state. The *ga-rashor-ga-esh* dealt more often with exchanging Mesopotamian commodities such as garments, wool, silver, perfumed oil and leather for foreign commodities such as copper, ivory, beads and semi-precious stones.

When the business of the *tamkaru* increased beyond a certain level, s/he no longer travelled to buy and sell goods in person, but usually employed agents whom s/he supplied with money. Much evidence exists from Babylonian times to show the existence of business contracts between the *tamkaru* and his or her agent and many paragraphs of Hammurabi's code were concerned with formalising the relationships between the two parties. It was usual for the agent (*shamallum*) to go on a journey (*harranum*) and in caravans on behalf of the *tamkaru* who furnished him or her with money to manage the *tamkaru*'s commercial affairs (Leemans 1950, 25). Therefore, the *shamallum* (agent) was obliged to return the capital in full to the merchant, even if he (the *shamallum*) suffered loss. The following translation (by Leemans 1950, 25) of a Babylonian contract may give an idea of the deal between the two parties:

> If a tamkaru has given to a shamallum silver to be a tadmiqtum [an investment] and he (the samallum), where he has gone, loss has seen, then he shall return the principal sum to the tamkaru.

It was, therefore the *shamallum*'s responsibility to return to the *tamkaru* the principal in full.

6.1.4 *Commerce practised by the temple*

Because ancient Iraq was principally a temple economy, the temple played an important role, not only in religion, but also in finance, and it had greater control over the economy than the state, because the religious organisation had existed prior to the emergence of the state (Leemans 1950, 25). The temple acted as financial institutions, lending money and produce, investing in real estate, selling property and making labour contracts of all kinds (Martirossian 1983, 128), as well as dealing in slave trade. The temples profited from commerce and became powerful commercial organisations which wielded great influence throughout the land. It is now generally assumed that they accounted for a large proportion of the total commercial activity

(Martirossian 1983, 130). They were prepared, for example, to make contracts for garment-making, for property to be tilled and improved and for necessary repairs. The main feature of the temple organisation in both Babylonia and Assyria was the gradual increase in their land holding, and accumulation of large resources (Garbutt 1984, 84), which with the help of the priests themselves, became important factors in the commercial activities of ancient Iraq. As Martirossian 91983, 128) suggests, temples in the large centres were engaged in renting out lands and houses and also using all manner of barter and exchange (Makkay 1983, 3), in lending large and small sums for interest, and in participating in customary commercial enterprises. Harris (1960, 126-128) has argued that at certain periods of time the temples assumed the role of a type of national bank. The rate of interest in temple transactions was presumably lower than the interest charged by the private institutions (Johns 1904, 209-217). The temple also controlled the surplus stored in granaries, either separate from or sited within the temple (Makkay 1983, 4).

6.2 LAW AND COMMERCE

Ancient Iraq was governed by what is believed to have been the oldest comprehensive set of laws in the world. The most prominent of all was the code of Hammurabi which was inscribed as an *obelisk* about 1750 BC and found in the course of excavations in 1901. The monument was set up in the temple of Marduk of Babylon, known as "the lofty house". The Hammurabi law put statutes together in a systematic manner, and covered every aspect of life, including regulations for business and commerce, whether conducted privately, by the government or by the temple.

Many sections of the laws of Hammurabi throw light on the activities of the *tamkaru* class. The *tamkaru*'s trading was not just confined to the homeland, but he also practised foreign trade and engaged in slave trade abroad. The laws of

Hammurabi made provision, for example, for the case of a native Babylonian, captured on royal service, falling into the hands of the *tamkarum*. Hammurabi's laws also codify the relationship between the *tamkaru* and the people he dealt with. For example, paragraph 106 shows the liability of an agent convicted of fraudulent intent (Harper 1904, 35/36).

> If an agent obtains money from a merchant and has a dispute with the merchant (i.e. denies the fact), that merchant shall call the agent to account in presence of god and witnesses for the money obtained and the agent shall give to the merchant threefold the amount which he obtained.

The agent was responsible for keeping detailed accounts, and in particular, accounting for the amount of interest earned on the business. The law required that an agent selling goods for a merchant should give the merchant a sealed memorandum quoting the price. If this was not done, the contested agreement was legally unenforceable. It was customary for every business transaction, even the smallest, to be put in writing, signed by the contracting parties and witnessed. Therefore, the duty of the agent was not only to put business transactions in writing but also to see that legal provisions were complied with in drawing up commercial agreements. The contracting parties would go to a public scribe to inform him of their commitment and explain to him the nature of their transaction and then the scribe would record their agreement on a small lump of moist clay, enumerating the names of the parties, the items paid or receive, promises made, and any other pertinent details. Paragraph 100 of the Hammurabi code stipulates the procedure:

> ... [the agent] shall write down the interest on the money, as much as he has obtained, and he shall reckon its days and he shall make returns to his merchant.

All of the risk and responsibility lay with the agent, except in case of robbery, but the agent had to swear on oath that a robbery had occurred. As Paragraph 103 of Hammurabi code stated:

> If, when [the agent] goes on a journey, an enemy robs him of whatever he was carrying, the agent shall take an oath in the name of god and go free.

Paragraph 101 of Hammurabi's law decreed that the agent was responsible for earning a return on any money entrusted to him (Harper 1904, 101):

> If [the agent] does not meet with success where he goes, the agent shall double the amount of money obtained and he shall pay it to the merchant.

Not only did the laws of Hammurabi protect the merchant against dishonesty on the part of his agent, but they also protected the agent from misconduct or exploitation by the merchant. For instance, paragraph 104 protected the agent against any improper advantage being taken by the merchant.

> If a merchant gives an agent grain, wool, oil or goods of any kind with which to trade, the agent shall write down the value and return (the money) to the merchant. The agent shall take a sealed receipt for the money which he gives to the merchant

The agent always kept written records of what he took in commission; grain, wool, oil or anything else, and always obtained a receipt duly sealed in the presence of witnesses, for the money which he returned to the merchant (Harper 1904, 104). Failure to obtain such a receipt did not mean that the agent had to pay the amount again, provided he could prove that payment was made. Paragraph 105 of Hammurabi code is said (Harper 1904, 105) to stipulate that:

> If the agent be careless and does not take a receipt for the money which he has given to the merchant, the money not receipted for shall not be placed to his account.

The law also stipulated that if the merchant was fraudulent, he must pay to the agent compensation equal to six times the amount paid by the agent. Paragraph 107 is reported (Harper 1904, 36.37) to pronounce that:

> If a merchant lends to an agent and the agent returns to the merchant whatever the merchant had given him; and if the merchant denies (receiving) what the agent has given him, that agent shall call the merchant to account in the presence of god and witnesses and the

> merchant, because he has had a dispute with his agent, shall give to him sixfold the amount which he obtained.

Sometimes the agent need not make the money at his own risk, but could receive it from the merchant as a favour. In this case, the agent was not liable, if the business failed; he only had to return the principal amount, but not the interest. As paragraph 102 of Hammurabi code is said (Harper 1904, 34.35) to stipulate:

> If a merchant gives money to an agent as a favour, and the latter meet with a reverse where he goes, he shall return the principal of the money to the merchant.

The laws also offered protection to debtors and their families against abuses practised by creditors. Earlier discussion has suggested that a member of the debtor's household could be seized as a hostage by the creditor and kept as a prisoner in the latter's house till the settlement was made; of the creditor might seize the debtor's slave or his son. However, the laws of hammurabi protected the interest of each party against the other. For example, paragraph 115 of the Hammurabi code is recounted (Harper 1904, 38/39) to read:

> If a man hods a debt of grain or money against a man, and he seized him for debt, and the one seized dies in the house of him who seized him, that case has no penalty.

According to this paragraph 115, if the person who had been a member of the debtor's family died through natural causes while being held prisoner in the house of the creditor, there was no charge to be brought against the creditor. However, if it could be shown that the person seized for a man's debt died through inhuman treatment, then the creditor was liable; if the debtor's son was the victim, the son of the creditor would be put to death, and if it was a slave, then one third mina of silver was imposed as a fine and the debt was forfeited. In this respect, as paragraph 116 stipulated (Harper 1904, 39-41):

> If the one seized dies of abuse or neglect in the house of him who seized him, the owner of the one seized shall call the merchant to

> account; and if it be a man's son that he seized they shall put his son to death; if it be a man's servant that he seized he shall pay one-third mina of silver and he shall forfeit whatever amount he had lost.

The debtor's interest was protected against fraud by the merchant. If a creditor, who was due to receive grain or money from someone, reimbursed himself out of that debtor's granary without the debtor's consent, the creditor was called to account, to return what he had taken, and, because of his greed, forfeited the total amount of his debt. As paragraph 113 of the translated Hammurabi code (Harper 1904, 38/39) stipulated:

> If a man holds a debt of grain or money against a man, and if he takes grain without the consent of the owner from the heap or the granary, they shall call that man to account for taking the grain without the consent of the owner from the heap or the granary, and he shall return as much grain as he took, and he shall forfeit all that he has lent, whatever it be.

Deposits of gold, silver, or anything else made by any person to his agent or trader had to be recorded in writing and in the presence of witnesses. The claim for a deposit repayment would not be accepted unless there was a written document, signed by witnesses showing that the amount had actually ben given. If these conditions were fulfilled, and the one with whom the deposit had been made, disputed the claim, he was fined double the amount imposed on the fraudulent trustee. Paragraph 122 of the Hammurabi code (Harper 1904, 38/39) may explain the situation.

> If a man gives to another silver, gold or anything else on deposit, whatever he gives he shall show to witnesses and he shall arrange the contracts and then he shall make the deposit.

The Hammurabi code also stipulated that the trustee was responsible for what he received on deposit, and if through his negligence, it was stolen or otherwise moved, he had to restore the full loss to the original owner, but could reimburse himself if he succeeded in regaining the lost property. Paragraph 125 is reported (Harper 1904, 42-45) to provide support for this conclusion.

> If a man gives anything of his on deposit, and at the place of deposit either by burglary or pillage he suffers loss in common with the owner of the house, the owner of the house who has been negligent and has lost what was given to him on deposit shall make good the loss and restore it to the owner of the goods; the owner of the house shall institute a search for what has been lost and take it from the thief.

Paragraph 126 of Hammurabi's laws tried to protect people against false claims by imposing a fine of double the amount of the claim on the person making such a claim (Harper 1904, 42-45):

> If a man has not lost anything, but says that he has lost something, or if he files a claim for loss when nothing has been lost then he shall declare his alleged loss in the present of god, and he shall double and pay for the alleged loss the amount for which he had claimed.

The Hammurabi code, therefore, took care a lot of cases of fraud and in several respects sought to prevent corruption in commercial transactions as was expected of many other civilisations of that age. In the history of the ancient Egyptians, Hebrews, Indians, Chinese, Greeks and Romans, as was true the Mesopotamians' history, corruption surfaced as a problem. For example, Hammurabi instructed a provincial governor to investigate a charge of bribery (Driver and Miles 1952, Vol. 1, 69). Shamash, an Assyrian king (c. 200 BC) punished a judge who accepted bribe (Driver and Miles 1952 Vol. 1, 69). Also, Hammurabi code punished certain forms of corruption by public officials with death (Driver and Miles 1952, Vol. 2, 23 and 25). Samuel, the Biblical prophet of the 11th century BC, who was a religious judge of the Israeli community, invited the closest examination of his conduct, exclaiming "of whose hand have I received any bribes to blind mine eyes therewith?" (1 Samuel). Amos, another Old Testament prophet of the 8th century BC, denounced the rule of the king, Jeroboam II, for taking bribes (Amos 5:12). Again, the Old Testament Book of Exodus (23: 8) (earlier than 1200 BC) expressly condemned bribery and other injustices: "Beware of accepting bribes; they blind even the prudent, and disturb the judgement even of just men."

6.3 THE DOCTRINE OF RESPONSIBILITY

An extremely important feature was the concept of responsibility in respect of objects sold, which differed from the modern situation where the seller tends to divest himself of such responsibility. For example, modern shipping or railway companies, whether publicly or privately owned, tend to disclaim any responsibility to their passengers. In Mesopotamia, however, the protection of the law was extended at all periods to the buyer of an object or a service. Some paragraphs of the Hammurabi code covered injuries caused by doctors, surgeons and veterinarians and those accidents caused by shipping and building workers whose profession came under the category of skilled labour. Accidents and damages to or by oxen, farm hands, shepherds, hired labourers and slaves who were generally described as being caused by unskilled labourers are also covered by the Hammurabi code.

The following paragraphs from the code show the liabilities of doctors for injury caused by their negligence, and illustrate the wide difference in the value placed upon a freeman and a slave (Harper 1904, 78/79).

> If a physician operates on a man for a severe wound with a bronze lancet and causes the man's death; or open an abscess in the eye of a man with a bronze lancet and destroys the man's eye, they shall cut off his fingers.

This punishment would, of course, destroy the physician's ability to operate in the future and thus terminate his professional life and severely affect his earning capacity. Paragraph 219 also specified the liability of professionals for inflicting a damage on slaves (Harper 1904, 78/79).

> If a physician operates on a slave of a freeman for a severe wound with a bronze lancet and causes his death, he shall restore a slave of equal value.

The physician has to compensate an injured party for his professional negligence financially or by replacement in order to continue in practice as a physician. The

veterinarian's liability according to paragraph 225 was similar though the compensation for errors was less severe (Harper 1904, 80/81):

> ... if [a veterinarian] operates on an ox or an ass for a severe wound and causes its death, he shall give to the owner of the ox or ass one-fourth of its value.

The code of Hammurabi also stipulated the compensation for loss or injury caused through the negligence of a builder. Paragraph 29-233 illustrate such liabilities (Harper 1904, 80/81).

> if a builder builds a house for a man and does not make its construction firm, and the house which he has built collapses and causes the death of the owner of the house, that builder shall be put death.

Paragraphs 230-232 concentrated on the responsibility of the builder toward the owner of the property and clearly specified the penalty for each misdemeanour (Harper 1904, 80-83) as shown below:

> *Paragraph 230*
>
> If it [the house] causes the death of a son of the owner of the house, they shall put to death a son of that builder.
>
> *Paragraph 231*
>
> If it [the house] causes the death of a slave of the owner of the house, he [the builder] shall give to the owner of the house a slave of equal value.
>
> *Paragraph 232*
>
> If it [the house] destroys property, he [the builder] shall restore whatever it destroyed, and because he [the builder] did not make the house which he built firm and it collapsed, he shall rebuild the house which collapsed from his own property [i.e. at his own expense].

In similar manner, paragraph 233 of the Hammurabi code provided for the reconstruction of a collapsed part of a house that arose from a builder's poor workmanship (Harper 1904, 80-83).

> If a builder builds a house for a man and does not make its construction meet the requirements and a wall falls in, that builder shall

strengthen that wall at his own expense.

Similarly, the code of Hammurabi contained clauses regarding the liabilities of boat-builders, and the type of compensation in the event of loss or accident arising from poor construction of the boat.

Paragraph 235

If a boatman builds a boat for a man and he does not make its construction seaworthy and that boat meets with a disaster in the same year in which it was put into commission the boatman shall reconstruct that boat and he shall strengthen it at his own expense and he shall give the boat when strengthened to the owner of the boat.

Paragraph 236

If a man hires his boat to a boatman and the boatman be careless and he sinks or wrecks the boat, the boatman shall replace the boat to the owner of the boat.

Paragraph 237

If a man hires a boatman and a boat and freights it with grain, wool, dates or any other kind of freight, and that boatman be careless and he sinks the boat or wrecks its cargo, the boatman shall replace the boat which he sank and what ever portion of the cargo he wrecked.

Paragraph 238

If a boatman sinks a man's boat and refloats it, he shall give silver to the extent of one-half its value.

Paragraph 240

If a boat under way strikes a ferryboat (or a boat at anchor) and sinks it, the owner of the boat whose boat was sunk shall make declaration in the presence of god [and witnesses] of everything that was lost in his boat and the owner of the vessel under way which sank the ferryboat shall replace his boat and whatever was lost.

6.4 COMMERCE AND PARTNERSHIPS

Merchants in ancient Iraq established relationships amounting to partnership agreements, with colleagues, friends and members of their families. These relationships could be organised by contracts, though partnership contracts were quite

simple in form. The following document from Babylonia (Strassmaier 1889, No. 199) illustrates such an agreement:

> One mina of silver Itti-Marduk-balatu, son of Nabu-akhe-iddin, son of Egibis and Marduk-shapik-zer, son of Nabu-shum-iddin, son of Nadin-sheim have invested in common. Whatever transactions they engage in they share as partners. Witnesses: Nabu-zer-ikisha, son of Belslum, son of the surveyor, Bel-Udakhkhid, son of Shapik-Zer, son of the surveyor, and the scribe Marduk-shum-iddin, son of Apla, son of Bel-etir. Babylon, month of warakhshamna, third day, fifth year of Nebonnedus, king of Babylon.

Partnerships could also take the form of an investment of a sum of money and of merchandise which would then be managed for the partners by a third person as agent. However, in this case, the agreement had to be more explicit, as for example, in the following (Strassmaier 1889, No. 199):

> Five mina silver iItti-Marduk-balatu, son of Nabu-akhe-Iddin, son of Egibi, and Marduk-shapit-Zer, son of Nabu-shum-iddin, son of Nadin-sheim, dur from kurbat-nabu-sabit (?), agent of Nabu-akhe-iddim and Nabu-din-epush, agent of Marduk-shapik-Zer, for current business. Whatever in the city or outside they acquire with it, is to shared by Itti-Marduk-balatu and Marduk-shapik-Zer. Kurbat-Nabu-sabit (?) and (/) and Nabu-din-epush while engaged n this commission shall receive from it (i.e. from the sum entrusted to them) food and clothing beside the use of the house at their disposal.

The relationships and responsibilities involved in agency and partnerships were extensive. For the duration of a partnership, members of the partnership were responsible for one another's debts. Partnerships were dissolved either naturally by death of one partner or by mutual consent. The partners appeared before a tribunal to render an account swear on oath that everything had been divided fairly and proportionately, and then formally released from further obligation towards one another. A procedure similar to the "charge and discharge" type of accounting that survived until 19th century AD.

The partnerships entered into in ancient Iraq might have entailed mutual agency in three main areas:

1. The partners could appear in court on behalf of each other;

2. They could also collect debts outstanding to each other; and

3. They could make deposits of various kinds with each other.

Evidence from the reign of Nebuchadnezzar II in the 7th century BC reads (Larsen 1977, 128):

> Business agreement (?) of Nabu-kin-apal and Nabu-bel-shunu, his son, and Sula, son of Zer-ukin, son of Mashezib-bel, the Shutapi official under which they carried on business from the eight year of Nabopolassar, king of Babylon, to the eighteenth year of Nebuchanezzar, king of Babylonia. They have rendered an account of their transactions before Judges. Fifty shekels of silver are still due from Nabu-bel-shunu and Nabu-kin-apal, his father. There will be no revocation or further claim among them. The partnership is dissolved, each one will go his own way. In the name of the people (?) and of the gods, each one has sworn. Their account with one another has been settled. The former documents in their names have been destroyed.

The above agreement shows that commercial contracts recorded partnership memoranda and their dissolutions and that the partners could represent each other in any dealing connected with the business. When the accounts were settled, the tablets were broken and destroyed, thereby ending the agreement.

There is sufficient evidence to suggest that partnerships were common, though commercial companies were unknown. The great banking and money lending firm which was known in Babylonia under the name of its founder, Egibi, was founded in the 6th century BC and from many of contract tablets that survived, such businesses were founded on the principles of partnership. It seems that partnerships in Babylonia were originally founded for the sake of foreign trade. The earliest partners in trade would have been the members of a caravan, who came together to travel and to trade in foreign lands as a group in order to defend themselves from the peril of the journey. Partnerships also allowed one or more of the partners to be represented by agents, who often were slaves, while sometime the wife the of a partner took the place

of her husband or other relation during his absence. This is illustrated by a deed dated in the second year of Negar-sharezer (c. 559 BC) which reads as follows (Sayce 1899, 190):

> As long as Pani-Nebo-dhemi, the brother of Ili-qanua, does not return from his travels, Burasu, the wife of Ili-qanua, shall share in the business of Ili-qanua in the place of Pani-Nebo-dhemi. When Pani-Nebo=dhemi returns she shall leave Illi-qanua and hand over.

One witness to the above was a "minister of the king" who bore the Syrian name Salmammanu, or Solomon, the son of Baal-tammuh. It is possible that Pani=Nebo-dhemi was a Syrian merchant whose business obliged him to reside in Iraq.

6.5 THE PRICES OF THE BASIC PRODUCTS USED IN COMMERCE

The basic commodities traded within Mesopotamia were agricultural produce, but the main products for foreign trade were products such as grain, wine and oil, and manufactured goods such as textiles and shoes which were exported and imported, along with metals such as copper, tin, silver and gold. The price of agricultural products were mainly dependent on local conditions and is possible to get some idea of the relative value of various products and to understand their scarcity or surplus.

Curtis and Hallo (1959, 103-139) suggested that prices in Ur III around 2050-1950 BC could be arranged into five-fold price tables, i.e. by weight only, by weight and volume, by volume only, by volume and unit, and by unit only, but Heltzer (1978) designed his own tables illustrating prices in the second millennium BC in Ugarit and in the neighbouring countries, for goods and moveable properties. Heltzer (1958) then compared them with prices of goods in the neighbouring countries such as Egypt, Alalah and with the states within ancient Iraq's boundaries.

The prices of some of the important food products, such as dates, barley, garlic, sesame, and grapevine, have not been included in the list probably because it

has not been possible to gather the relevant information. However, the comparative prices of the goods included give some idea of the range of prices. The study of price levels and comparative prices and the amount of trade was one of the important activities of the people of that period. It is unlikely that such a sophisticated system of trade could have existed without the support of some well-established record-keeping.

6.6 FOREIGN TRADE

Two types of foreign trade, as well as inter-city trade, can be distinguished: First, the export of manufactured goods which in Mesopotamia were produced by the temple or the palace to create the means of exchange needed for importing metals (Heltzer 1977, 203), stones, lumber, spices and perfumes. Second, the trade between foreign cities, trading outposts, which required provision of security for trade caravans. The caravans provided a link between the civilized parts of Mesopotamia and the fertile Crescent, carrying as well as their own produce, goods in transit from India, East Africa and the Far East on the one hand, and from all over the Mediterranean world on the other. Unless some more powerful nations provided the caravans with military escort, marauders took all that through the territory under their control.

Both types of trade have existed around the Arabic Gulf and asia Minor as well as along the Euphrates route into Mediterranean, before and after 2700 BC (Lewy 1950, 89-101). There might be other regions in which similar types of trade were carried on. Some scholars (e.g. Snell 1977, 48) have argued that the inventories of traders (*tamkarum*) provide evidence of the importing of a great variety of luxury goods and essential raw materials, apparently for the court of the king and the temple of the gods, but there is never a direct mention of export activities. as Leemans (1950) has argued, trade seemed to have been conducted on two levels: administrative

and private; and the tendency to seek profit was openly admitted. In the old Babylonian period that followed, the role of he *tamkaru* clearly became more complex in the south, the range of his activities increased. Traders in royal service were allowed to grow rich because they were given permission to trade with most of neighbouring countries and traded with most precious goods that palaces wanted (Leemans 1950). Some scholars (e.g. Lewy 1958) have provided evidence which suggest that in the early Old Babylonian period importers of goods from beyond Arabic Gulf transacted their business by pooling their funds and sharing the risks, the responsibilities and profits. The consensus of academic opinions (Lewy 1958) was that merchants had many roles: for example, they handled the export of textiles, woven in or traded through the towns of Assur and Babylon,and acted as intermediaries between trading centres and distributing goods within the area surrounding Iraq. The palace's *tamkarum* had freedom of movement, the security of communication without reference to any military protection, the large returns in silver and gold which their activities yielded, and above all, their social status and ethical standards were high (Leemans 1950, 40-48).

Additional international trade are reported in tablets (Leemans 1950) excavated between Mesopotamia and Mari and dated to about 2400-2100 BC during the first Dynasty of Babylon, which linked the arabic Gulf with its island emporium Telmun (Bahrain), via the Euphrates, Aleppo and to the Mediterranean. Mari seems, furthermore, to have been a station on the tin trade route, between inner Asia and the Mediterranean, which somewhat earlier had been in the hands of Assyrian merchants (Heltzer 1978, 73-84). Tin was, of course, essential for the manufacture of bronze, and it could be obtained in quantity only from sources outside Mesopotamia, passing through many intermediaries before reaching there. Mari's trade with the state inside the boundaries of ancient Iraq was apparently operated on a different level from that

of Ur and Kanis; caravans enjoyed royal protection and brought foreign merchants from court to court, granting them something similar to present-day diplomatic status (Leemans 1950, 42/43 and 123). As Gadd (1954, 179) confirms, foreign traders served as royal emissaries; carrying precious gifts from one ruler to another and were expressly called *Samandatti*; i.e. on the pay-roll of the palace. Treaties existed to guarantee their royal protection and to limit their activities, which could apparently be combined with private initiatives.

Whilst voyages from Sumer to Somaliland or Aden in the late protoliterate (Jemdet Nasr) period (2800 BC) have no known documentary support, trading voyages are known to have been made two or three centuries later from Sumer to distant places via the Arabic Gulf. Kramer (1963, 274-287) has argued that there were many trading stations in the Arabic Gulf. The earliest known records, referring to Tilmun (Bahrain), are administrative documents of 2500-2400 BC, and these show that regular trade existed at that time between Sumer and Tilmun. The most normal exports from the latter being dates, grain and sesame. It had also been shown (Kramer 1963) that certain plants and animals later commonly found in babylon first reached the country by being imported through Tilmun.

Many scholars (e.g. Kramer 1963) have suggested that texts from the late third and early second millennia list as imports from Tilmun, goods which were not products or the island itself, but which must have originated in other countries. The goods in question were mainly copper, precious stones and ivory, and specimens of all of these have been found in excavations of Bronze Age sites in Babylon. The imports from Tilmun also included manufactured objects, lapis, pearls and certain kinds of wood and the principal exports from ancient Iraq to other countries were garments and oil, provided by private capital (Kramer 1963, 283). Contracts were drawn up, giving the value of goods in terms of silver and stating the agreed silver

value for copper to be brought back by the trader. A typical document of this type, which also gives a comparative value of copper and silver at that time was provided by Oppenheim (1954, 8):

> 2 minas of silver (the value of) 5 gur of oil (and of 30 garments), Lu-Meshlam-tae and Nig-si-sa-nabsa have borrowed (as the) capital for a partnership from Ur-Ninmar-ka, for an expedition to Tilmun to buy copper (there). After safe termination of the voyage he (the creditor) will not recognise (any responsibility for) commercial losses (incurred by the debtors), they (the debtors) have agreed to satisfy Ur-Ninmar-ka with 4 minas of copper for each shekel of silver as a just (price).

There may have been colonies of merchants from Mesopotamia in Asia Minor before the end of the third millennium. From 1900 BC onwards, the matter is put beyond all doubt by the archives of a colony of Assyrian traders at Kultepe (ancient Kanesh). These archives provide evidence of the existence of merchants' colonies at Kanesh and Asher, and as Lewy (1958) suggests the surviving documents have enabled scholars to establish some of the details of the commercial and economic system.

Trade was generally by donkey caravans, which might have consisted of up to two hundred beasts, travelling perhaps twelve to fifteen miles a day. However, between certain towns in Asia Minor it might have been by wagons indicating the existence of some form of trans-national road system. The caravans leaders were given allowance for expenses on setting out on their journey and kept diaries recording their expenses, rendering an account to the principal at the end of the journey. The chief export from Asia Minor to Babylon was copper, but the goods sent from Assyria were chiefly textiles and lead or lead ores, containing a high proportion of silver, was found in Assyria near the source of the Great Zab and the Judi Dagh rivers. The suggestion has been made (Heltzer 1977, 203-211) that the metals were exported for smelting to Asia Minor, where a plentiful supply of fuel was available. Other consignments to Asia Minor contained olive, hides, fleeces and wool (Polanyi

1957, 257-266).

Security on trade journeys was the responsibility of the trades who were frequently exposed to misadventure of various kinds, but the laws of Hammurabi recognised some of them such as loss by attack from marauding tribesmen or act of God that are usually exempt (snell 1977, 45-50). Sometimes the ruler gave certain men immunity form all transit dues for their asses. Later Hittite, hebrew and Greek laws made special provisions for the protection of the foreign trader in the community, and this practice probably existed informally much earlier (Lemans 1977, 1-10).

6.7 THE ATTACHMENT OF SEALS ON DOCUMENTS

The attachment of seal(s) to documents was customary from early periods onwards. In the case of deeds of sale, it was the seller who attached his seal; in the case of a lease, the lessor; in the case of a loan, the creditor, in the case of a work contract, the contractor; in the case of the selling of a house, the person(s) disposing of the property. In general, therefore, the person who was giving up to a claim, or was taking an obligation upon himself, affixed his or their seal(s). When both parties took obligation upon themselves, both affixed their seals[11]. It seems therefore, that seals served the following purposes:

1. To guarantee the validity of the document on the part of the person(s) who yielded certain rights or who took obligations upon themselves;
2. To serve as protection against any attempt to alter or to add to a document since they were rolled over the document; and
3. The witnesses's seals were used as proof that others were aware of the existence of the contractual agreement in the case of a dispute between the

[11] These seals were of cylindrical, circular, bar or square shape.

contractual parties.

6.8 CONCLUSION

The literature on the documentations from the first dynasty about 3700 BC and later periods is very extensive, covering all kinds of loans, sales of houses, field and orchards; mercantile transactions in produce, live stock and goods; leases of houses and fields, commission brokerages, hire of boats, animals and workmen; partnerships, surety and guarantees and slave trade, representing many of he commercial activities of Babylonia and Assyria. Loans were made free of interest or for interest which fluctuated from 5½ to 25% or more. It is interesting to note that both men and women often engaged in business and appear as creditors and debtors. Also large number of priestesses engaged in money-lending and other mercantile transactions. Business activities took the forms of loans, sales or leases, and there is evidence that these commercial activities were practised in ancient Iraq by private individuals among themselves, between them and the state, between them and the temple, and between the temple and the state. There is also ample evidence of the existence of agricultural trade. Trade in oxen, sheep, horses, donkeys, wool, gold, tin, copper, stones and minerals, timber, and textiles existed too. Therefore, it could be concluded that trade and commerce played a considerable role in the civilisation of ancient Iraq. Since commerce was known to the people, it could be argued that there must have been some kind of accounting. The keeping of accounting was required in the code of Hammurabi that covered many aspects of business life. This included elements such as fraud, corruption, the duty and responsibility of workers and principals, builders, doctors and other professionals. It is likely that individuals and business persons would have kept records of some kind to check on the progress of their transactions. Records of private commerce were kept, as well as for commerce practised by both

the state and the temple. Also it will be argued later that the balanced account (the Mesopotamian equivalent of double entry) was familiar and widely used in Mesopotamian cities.

CHAPTER SEVEN

ACCOUNTING RECORDS IN ANCIENT IRAQ

7.1 INTRODUCTION

The large scale trading which flourished in ancient Iraq could not have been carried on without a rather elaborate accompanying record-keeping system. To date, most accounting historians have concentrated their research on post-Bacilli developments in 1494 AD and neglected the fact that accounting was almost certainly widely used more than 6000 year ago in the Mesopotamian valley between the Tigris and the Euphrates rivers, when the Assyrian, Chaldean, Babylonian an Sumerian civilisations flourished.

A large number of business records have survived dealing with sales, purchases, letting, hiring, money-lending, partnerships, income and expenditure. Some texts deal with the delivery of raw materials to establishments; others show the finished products delivered from them. These records were prepared on clay by scribes, who were indispensable to commerce and public administration. They were forerunners of today's accountants. Their functions were similar to those of the bookkeepers of today, and the scribes were described as bookkeepers. As Keister (1965, 29) argued the duties of the scribes included the recording of business transactions and ensuring that commercial agreements were drawn up in accordance with the law. They also took and recorded inventories and a variety of receipts and disbursements, wage payments, rental income, interest on loans, and real estate transactions. The scribes also prepared travel expense accounts in a form equivalent to the present day expense accounts. However, surviving evidence illustrates that the record of receipts, disbursements, partnership formations and dissolutions, guarantees, and the balanced accounts, which existed thousands of years ago, did not bear much resemblance to modern accounting records (Ali et al. 1989, 35-42). For example, they contained information such as the names of the contracting parties, the subject matter, value date of commencement and end of the contract.

Around 3,300 BC, city-states appeared in Mesopotamia and the need for accounting for administrative purposes developed. The first city-state emerged in Sumeria, present-day Iraq, around 3100 BC. The accompanying political system required citizens to deliver contributions in kind to the temple, where the goods were stored and from where they were distributed to those in need. The increased volume of accounting involved in registering receipts and disbursements of temple warehouses, necessitated the art of writing and surviving clay tablets provide the first evidence of abstract accounting. On the basis of this interpretation ancient accounting had to predate writing, trade and money and banking. Examples of appropriate tablets recording transactions and accounts will be used to illustrate the argument in the chapter and to describe the type of accounting records kept by the people of ancient Iraq. Whenever money and goods are received or disposed of, receipt tablets were prepared. This procedure applied to the transactions of the temple, the palace and private individuals. It should be noted, however, the roles of creditor gods, priestesses, temple agents and temple industry were overwhelming. Mesopotamian societies were monarchical and everyone depended on the fiats of the "ordained" monarch or caliph. For example, the Ensi agency or management on behalf of "the gods" in egypt controlled agriculture, and industries of every sort. Detailed accounts were kept of all these activities by a corps of scribes. The Ensi's wife managed the temple and estate of the divine spouse of the city god. To discover the will of the gods on matters like war and piece, augury or incubation might be practised.

A functional rather than a chronological and episodic approach will be used in presenting the discussion of the records and accounts for two reasons. First, the intention is to place emphasis on the type of accounting records found in ancient Iraq for the period between 3300 BC until Islamic ideology appeared, around 542 AD. Second, there are missing links in the history of the region. The period lasting from

the entry of the Roman empire into the Mesopotamia in about 2nd century BC through the fall of the Rome until the dawn of Islam was the darkest, most corrupt and unsettled period with little effect on the local accounting, culture and religion. The Roman occupation was domineering that records of accounting during their that period were thought to have moved with the receding army to Rome or to have been destroyed by the invading armies.

7.2 **Record of receipts**

The most numerous commercial records prepared by the inhabitants of ancient Iraq were receipts. The following translation of a receipt tablet illustrates the standard format which appeared to have been widely adopted (Leemans 1954, 52).

> 1 talent 5 minas of wool in the first place, 1 talent 7 minas in the second place. 2 talents 12 minas of wool received by Lamalum: 13 minas storage. 14 minas under the offer of Sin-mu-pabbir, 27 minas; 2 tablets 30 minas of wool received by Lamalum, 21st month, 4th ki, 21st day year after, by the exalted weapon of Anu and Enlil, he took Isin.

The translation shows that the standard receipt tablet contained the following information:

(1) The amount and the kind of money, goods etc. received;

(2) The name of the person from whom they came;

(3) The name of the recipient, and

(4) The date of the transaction.

The interesting point which could be seen here is that money was used in ancient Iraq to value the objects being traded. In the case of the records of debts, the tablets contained information such as:

(1) The amount and nature of the commodity or the money loaned;

(2) The rate of interest, if any;

(3) The name of the debtor;

(4) The name of the creditor;

(5) The time of repayment;

(6) The method of return;

(7) The witnesses; and

(8) The date of the transaction.

Receipts for money received for work done were a common type of record in Babylon (Lutz 1931, 21):

> 50 shekels of silver for work on the linen of the nasabbu ... of the mistress of life, Bel-ibni, the son of Kina, received. The 24th day of Sebat, the 5th year of Nebuchadnezzar, king of Babylon.

The following text shows a loan deed for a debt of goods, repayable without interest (Chiera 1914, 45/46):

> ... of dates, without interest, for the purposes of ..., from Nma-gugal, the great Kaln-Ku-NinIB, the son of Lugal-shuba, has received. It is in the month of Siwan that he shall give them back.

Although it will fell into disrepute in the Islamic period, loans of money with interest were well known in ancient Iraq. The following two texts (Chiera 1914, 48) show records of loans of money:

> ... shekels of money, the interest of one-fourth of a shekel for every shekel pay from Sin-daian the son of Bunnanum, ... the son of ... has received.

> One and one-half shekels of silver, with the interest of thirty shekels, from Abba-kalla, Ilimidi, the son of Nabar..., has received in the day of harvest he shall pay the money and the interest.

The following text shows a loan made to an individual and his servant from the town granary by the order of another (Clay 1906, 25):

> Five gur of ashanna grain, at interest, out of the full tax from the store-house of the town Karziban, from the hand of Martuku, son of Iluiqisha, by order of Nushku-risoqa, sone of Ridi-NinIB-ahu=iddina, son of Miluti and Nusku-dinanni, his servant, has received. On the day

of harvest they shall measure.

The above translation indicates the necessity for the scribes, when many people could not even sign their names. Receipts were sometimes given as an acknowledgement of payment of taxes in kind (Clay 1906, 7).

7.3 RECORDS OF LOANS

Many of the surviving texts relate to records of loans kept by the state, temples or private persons. These loans were in the form of money, dates wool or other commodities. Although some of these loans were interest-free, and others were with interest, there does not appear to have been strict rules about the type of loans that were treated in either way. Examples of such loans were reproduced in Chapter Four dealing with credit.

7.3.1 *Negotiable documents*

It has been commonly thought that the concept of negotiability did not exist before 1100 AD. However, texts now available from various sites in ancient Iraq prove that this concept was known as early as 2090 BC (Pruessner 1928, 92). The following text, from Pruessner (ibid) presents a standard example of an early negotiable instruments.

> Five shekels of refined silver, at the interest rate of Shamash temple, Sa from Shamash and idiniatun. Idin-Adad, the son of Shamash-mutabbil, and Bumtani have borrowed. When seen at the city wall they shall pay the silver and interest to the bearer of their tablet not. The money was loaned out by the Shamash temple in partnership with one Idiniantum. Payment is due on demand to the bearer of this note.

Loans can be for short term and long term. Records of short-term loans were also kept. The following text (Lutz 1931a, 30) shows that a loan of four minas of silver extended over a period of only thirty days and was interest free.

> Four minas of silver without interest from Bur-Sin-Awil-ilu, the son of Burnunu in the month when the grain loans become due, received. On the third day he shall pay the money. The year when the king's daughter was taken to (married off to) Rabikum.

It could perhaps be case that it was customary for short-tem debts to be interest free, but there is insufficient evidence to reach this conclusion.

The concept of negotiability facilitated the practice of commerce between people, since the indebtedness could be passed from one person to another, using the document as a surrogate for money as is done in the present day. Although the negotiable instruments used did not have the same form as those in current use, the detailed information provided was very similar and it could therefore be said that the concept of negotiability was known in Babylon at a period earlier than had been commonly believed (Pruessner 1928, 90).

7.4 PURCHASE RECORDS

In ancient Mesopotamia, tablets were prepared to record purchases and sales. Bookkeeping was used by the people as an instrument for recording purchases and sales concurrently. The contents of such tablets included information such as a description and the location of the goods purchased, the name of both the purchaser and the seller, the amount paid by reference to the value of the article purchased, an agreement regarding future claims concerning the purchased object, the names of witnesses and the date of the transaction. The following translation by Lutz (1931a, 17 & 19) provides a detailed example of such a purchase record.

> Twelfth gan of field in Uanu-..., adjoining the field of Sakum, the son of Taridum, and bordering on the field of Abum-halum, the son of Aba-banum, from Erib-Sin, the son of Ilueris, its owner, Enlil-abum, the son of Nabi-Enlil, has bought. From its total price he has paid the money. His heart is satisfied. The negotiation concerning it is completed. In the future they will not come back to it against each other. In the name of Ishtar and Iddusha, the king, they have sworn. Against him who shall sue at law for vindication concerning the field

> Erib-Sin shall come forward. In the presence of Irra-..., of Ishme-...; in the presence of Ibiq-... of Ishme-...: in the presence of Amurru-nashir, the son of Ili-...; in the presence of Sin-magir, the son of Eribam; in the presence of Imguia; the son of Buria; in the presence of Agsata the magistrate, son of Igmil-Ishtar; .... In the presence of Nannar-..., the son of ...-inddina, in the presence of ...-tatum,the son of Sin-...; in the presence of Sin-magir, the son of Shamash-reu. Month ..., ... year when ... .

The most important purchases were those of property. The following text is an example of an agreement to purchase a house (Chiera 1914, 34 & 35):

> Seven and one-half sar of build-house, adjoining the house of ali-ahati, with the long side to the street; the house of IM-rabi, the son of Ur-Innanna, from IM-rabi, son of Ur-Innanna, Apil-Sin the son of Bulalum, has bought. For its whole price he has paid two and one-half shekels and fifteen she of silver. In the future IM-rabi shall make no claim on the house. He has sworn by the king.

The following text from Chiera (1914, 38/39) shows details of a garden purchased at the price of five shekels of silver.

> ... of garden, adjoining Enlil-izzu and Rim-IM, six sar adjoining the field of Lugula, the kalu-priest with the front to the garden of Lu-shagga; a garden taken from the field Nanga and which is the property of Ninlil-zimu, son of Damu-azu from Ninlil-zimu Nanna-mansi,son of Lu-NinIb, has bought. For its whole price he has paid five shekels of silver. In the future Ninlil-zimu and any heir of his shall have no claim on that field. He has sworn by the king.

It is interesting to note that the garden here is more expensive than the house mentioned in the previous text. The reason might be that the garden could perhaps yield more income than the house, if it was planted with trees or date palms. Or it could be that the garden was in a better location than the house or it could be the purchase prices reflected the market prices at different times.

Slave trade was well established in ancient Iraq and records were kept which reveal that slaves were treated like any other tools. Lutz (1931, 8/9) provides a fitting example:

> One slave, Illi-tukutu bu name, a slave owned by Mashqum, the sone of Ubarrum from Mashuqum, the sone of Ubarrum, his owner, Ilushu-Nashir, the som of Bur-sin has bought. The money for his total price

> he has paid. His heart is satisfied. The negotiation concerning him is completed. In the future they will not come back to it against each other. By the name of Ishtar and I-ba-al-pi-el the king, they have sworn. He who shall sue at law for vindication shall pay 2 minas of refined silver and his tongue shall be torn out. In the presence of Sin-mubalit, the prefect; Igmil-Sin, the son of Shamaia; Warad-Shamash, the son of Silli-Sin; Irsitum-rabium, the son of Bel-shun; sin-Iqisam, the son of Ibiq-Bunini, the son of Illurum; Ana-ili-lisi, the son of A-da-su-rum, and Munanum, the scribe. Seal of Igmil-Sin, Seal of Mashqum.

The record indicates that severe penalties were available if any of the parties were to seek redress in court for such a deal that has excluded litigation.

7.5 RENTALS AND LEASE RECORDS

Excavated tablets have shown that rentals and leases are common forms of contract in ancient Mesopotamia. The contents of such tablets included a description of the property, the name of both lessor and lessee, the amount payable, the period of the rent or lease, the names of the witnesses and the date of the transaction. The following text shows the lease of a house containing the requirement that the lessor shall keep the house in good repair (Lutz 1931a, 34):

> A coated house owned by Nergal-ahe-iddina, son of Pattazu, is given for house rent for a year at 36 shekels of ginnu silver to Iddina-Bel, son of Shamash-shum-lish, son of Nazua, the father of Nergal-ahe-iddina. The bareness of the walls he shall alter, the cracks he shall remove. In Nisan, Tammuz and Kislev he shall plaster the roof. From the 15th of Marchesvan the house is at his disposal. Monthly the house rent he shall pay. According to the document ... at their disposal. One document they take.

The following document shows another example of a house lease, running for two years, with part payment in advance (Clay 1908, 25):

> The house of Sillu-Ezida, son of Nabupshuzubuanni, son of Shita-... and Bu'itum, the riqqu officer, for rent is at the disposal of Nidintum, son of Bazuzu, son of Rab-enzu. For two years Nidintum shall pay 4½ shekels of pure silver. Bu'itum has received from Nidintum. One document they take.

7.6 EXPENDITURE RECORDS

Expenditure tablets are simple lists of money or goods disbursed and were prepared when money was used to pay for some goods and services, when foods were issued as payment for a labourer's services, when animals were given for sacrifice, or when any loss occurred. The following text shows a list of disbursements of flour for baking and money as payment to a number of persons believed to be workmen (Clay 1908, 26):

> 1 p. pea-flour in the 1st place for baking, 3 s. 6 qa pea-flour in the 2nd place for baking, 3 qa pea-flour in the 3rd place for baking, 1 s. 7 qa of fine flour, 6 qa of leaven, 1 qa for the sikkatu-vessel, 1 qa for the burtum-vessel, 1 qa for the baker's trough, 2 p, 5 qa; 1 qa to Taribum 1½ qa to Puhabili, 1½ qa to Adad-rimanni, 1½ to Gimil Shamash, 1½ qa to Sin-rimanni, 1½ qa to Nanna-mansi, 1½ qa Sin-nishu, 1½ qa to Rim-Sin-Ili, 1 qa to Sin-turram, 1 qa to Ili-idinnam, together 1 p. 1 s. (?) 9 qa; 1 qa to Shiria-abi, 1½ qa to Itti-Sin-balasu, 1 qa to Iluzalum, 1 qa to Ana-Shamash-taklaku, 1 qa to Ana-Sin-taklaku, 1½qa to Shumman-la-Ishtar, 1½ qa to Kinuni-habil, 1½ qa to Libur-silli, 1 qa to Sin-rabi, 1 qa to Sili-Ishtar, 1 qa to Iribam-Sin, 2 s. 3½ qa; together 2 p. 2 s. 8½ qa. In the month Dumuzi, 26th day.

Wages were paid both in cash and in kind. The following texts are examples of both forms of payment (Leemans 1954, 71-77).

> 6 qa for victuals, 1 qa to Amirtum, 1 qa to Belissunu, I qa to Bazutum, 1 qa to Sin-rimanni, 1½ qa to Rim-sin-ili, 1 qa for preparing onions, 1 qa for groats, 1 s. 3½ qa, labourers (?), wage for 1 day (?), under the orders of Silli-Ishtar. In the month Eluui, 28th day.

> 2 p. of dates which have come from Al-Rabum, Shep-Shamash acting 2 p, capital sum, out of which 1 s. 5 qa to Nana-lamassi, 1 s. 5 qa to Ashshumia-sille, 1 s. to Papnumundu-taiiarat, 1 s. 5 qa to Ashshumia-sille, 1 s. 5 qa to Urash-iatum, 1 s. 5 qa to Urash-turrim, 1 s. 5 qa to Analdi-sit-nibishu, 1 s. 5 qa to Nana-ummi, and Papnumun-tukulti, 1 p. 5 s., barley wages for female servants. 9th month, 5th ki, 1st day of the 2nd year after, by the exalted weapon of Anu and Enlil, he took Isin 2.

The above documents also indicate that both coins and cash crops (such as dates and barley) were used as means of paying wages. Lutz (1931, 38) provides an illustration of a tablet that gave a very detailed record of expenditure on the cost incurred in

collecting wool from a flock of sheep, treating and delivering the wool and ending with the balance of wool remaining.

> 27 talents of wool among the wool which has been plucked of the sheep of Awilimm, 1 talent 10 minas of treated wool, for the clothing of the girls, together 28 talents 10 minas of wool, capital sum, out of which: 14 5/6 minas of treated wool, gift to the girls 14 talents 5/6 of wool in the storehouse, 20 talents 4 5/6 minas of wool in the storehouse at Al-Warad-Sin; 3 talents which have been left at Al-me-Kubi, 20 minas of wool to Pi-Kittum, 7 minas to Apil-sin, ... 6 minas and 5 minas wages for hired labourers who from Al-Me-Kubi have carried it to Al-Mehbu, 2 minas wages for hired labourers who went to Elam; 40 minas to Sin-muballit on behalf of the princes; 3 talents 58 minas of wool have been issued altogether. 28 talents 2⅔ minas of wool have been delivered and deducted; 7 minas 10 shekels is the balance. In the month Addaru, 20th day of the 26th year after he took Isin.

The text below shows an account of a month's expenditure of corn and flour of the type commonly kept (Leemans 1954, 53/54).

> Barley and flour expenditure month Abu. Year 4, 20f Meli-Shipak the king, 1 seah of mashatu flour for the temples of the gods; day 1, 3 qa of barley for the builders; day 2, account of Shar-ilani-sin. ... qa of flour and barley for the men; day 3, account of Si ..., 2 seah of large loafs for Mar-Banlulu, account of ...-Shamash, 2 seah of flour food for the journey of the man of Man-Banulu who with Arad-... will cross over the river; day 12, account of Lil ... to Uruk ... (Lacuna) ... and large loafs for Mar-Banulu; month Elulu day 1, account of Sin-shakin-shuni, 1 seah of mashau flour: day 15, for the temples of the gods ... thick fact ... for the house of the high priestess, account of Sin-shakin-shumi ... .

The fact that the items are referring to different destinations, such as the temple and named recipients, suggest that individual debtors' accounts were also maintained. Accounts also ran for more than one month especially in the case of caravan travels and continuous production such as the refinement of oil. An interesting account for a three months' expenditure relating to expenditure on oil is supplied by Gurneu (1983, 173/174).

> Oil rations expenditure on charge to Iqishu, from the month Tebeiu to the month Addaru, year 7 of Kudum-Enlil, 1 seah 4 qa for the hourse-herdsman, 1 seah for Mar-Innabada, 1 qa of jumper seeds for the house of the city Kar ..., 1 qa of pressed out oil on charge to Ittina-Ea.

Here again, expenditure was charged in the first instance to Igishu who must then account for the disbursement of the oil, presumably keeping a separate record for each receipt.

7.7 INCOME RECORDS

Records of income and production were also kept containing information such as what was received as income, from whom it was received, the reason for its receipt and the date of the record. The following text shows income of a fixed nature; in this case, a measure of dates due for the use of a field (Gurney 1983, 189):

> Out of the import for the accession year of Camyses, king of babylon and countries, on a field which is at the disposal of NINIB-etir, son of Sharigtu, by the order from the owner has received 20 kurs of dates from the hand of NINIB-etir, son of Nergal-iddina.

Several texts providing evidence that the ancient Iraqis made records of incomes from different sources can be found in Leemans (1954) and Clay (1906). Records were made whenever income is earned and received from sources such as tax revenues, sales of agricultural products or properties. Some tablets found in Mesopotamia reveal records that are similar to modern day cost records containing information such as how much food was used to feed people or their animals, how much seed was used to sow a field, etc. An example provided below shows that the direct costs of cultivation of a field included the costs of labour and seeds (Gurney 1983, 160/161).

> 725 sar of land, the labour cost of tilling; for 20 sar wages of slaves 1 gur 246 qa, the wages 30 gur 6 qa, 15 gin for slaves per day, the grain 217½ qa. 100 sar land cultivated: for 6 sar the wages 10 gur 6⅔ qa, for slaves per day, the grain is 90, Lagab-sig the son- son of A-a-bi, 225 sar land cultivated for 6 sar the wages 40 gur 60⅔ qa, for slaves per day, the grain is 201. 125 sar land cultivated; for 10 sar the wages 10 gur for slaves per day, the grain 60. ... 200 sar land cultivated: for sar the wages 30 gur 3⅓ qa for slaves per day the grain ... land cultivated of field ... year Gimil-Sin, the king,devastated the country of Zabshali.

7.8 BALANCED ACCOUNTS

The most interesting tablets kept by the people of ancient Iraq were in the form of "balanced accounts" representing the Sumerian form of double-entry bookkeeping. The accounts report the opening balance, the receipts (revenue) and expenditures for a given period of time and the closing balance of the account. Three main groups of balanced accounts can be distinguished (Myhrman 1910, 68/69):

1. Those which deal only with commodities and do not mention the names of officials;
2. Those which cover the operations of a month or longer period of time; and
3. Those concerned with the business of a single day or series of days.

Synder (1961, 240) gave an illustration of a balanced account:

> 3 p. of groats, Sin-nisu acting, 1 kur 2 p. barley in the 2nd place Nanna-mansi acting 2 kur, received by Nanna-mansi, 1 kur to Belissunu 3 kur ..., tilled by Sin-magir, 8th month 3rd ki 1st day, by name the month Abu, 1st day, of the 2nd year after, by the exalted weapon of Anu, Entil and Enkiq.

This was a two month account of inventory movements which indicated that accounts were prepared for periods shorter than a year. Accounts could, therefore, be for varying periods of time depending on the nature of the business and the need for such account to be drawn up. Another tablet recording incoming and distributions is provided by Leemand (1954, 42/43):

> 1 p. barley for food for the house, 1 s. for the goats, 1 p. 1 s., food for 6 day, 4 s. for kam-food (?) 1 ban 5 sila a-na bappiru, 3 s. groats, 3 s. flour, 1 s. barley for sustenance, 3 p. 1 s. 5 qa barley, among a quantity of 7 kur 1 p. barley, have been issued. 6th month 4 th ki, 3rd day, of the 2nd year after, by th exalted weapon of Anu, Enlil and enki he took Isin.

The following text shows an ordinary type of balanced account. it contains information on the opening balance of the account (line 1), the time period for which the account was made, receipts (revenue) during the time concerned (lines 2-11), lines 12 which

separates the receipts (revenue) from the expenditures (lines 13-30), the closing balance corresponding to the balance to be carried forward to the next period), the name of person concerned with the account, and the date on which the account was prepared. The text from Leehams(1954, 76/77) reads:

> 1 kur 2 s. 5 qa, balance of the account of the 12th month 3rd ki, 1st day, ... barley in the 1st place, among 5 kur barley of the stock, ... p. 2s. in the 3rd place, 4 (?) p, under the order of Shamash-tukulti, 1 (?) kur 1 p. 2 s. in the storehouse; 1 s. barley of Sin-apil-mudum, 2 s. 3 qa of Sin-imgaranni, 3 kur 2 p. 1 s. 8 qa of barley capital sum, out of which: 2 kur 1 p. 9 qa o barley from which 2 s. 1 qa for 7 days have been subtracted. 2 s. 5 qa for Ili-awilam, ..., of the sheep which Awilim (?) ..., ...s. ...qa for the tailor, ..., for drinks, ..., Shamash-tukulti, ..., 1 s. 5 qa of barley, ..., Lamalum ... s.(?) qa for the tailor 6 (?) qa of beer to shamash-tukulti, 1 p. ... for the slave girls, food for the 15th month 3rd ki, 1st day, received goods (?), 1 s. 5 qa at the storehouse 2 kur 4 p. 3 or 4 s. 7 qa have been issued and deducted. Balance 1 p. 3 s. 1 qa of barley, owed by Lamalum. In the 14th month, 3rd ki, 1st day, of the 2nd year after, by the exalted weapon of Anu and Enlil, he took Isin.

Many other types of records have been found in Iraq, related to ancient Mesopotamia. The following tablet cited from Lutz (1931b, 120) is unique with regard to both its form and content.

7 date palms at	1 gur each
2 trees	240 qar each
12 trees	180 qar each
16 trees	150 qar each
24 trees	120 qar each
21 trees	90 qar each
22 trees	80 qar each
27 trees	60 qar each
5 trees	50 qar each
5 trees	40 qar each
22 trees	30 qar each
20 trees	25 qua each
22 trees	20 qar each
14 trees	10 qar each

> 40 date palms, the date palms taken away. Total: 190 date palms harvested. Total: 40 date palms plundered. Total: 44 gur 180 qa of dates. Month Su-kul, day ...th Year the country of Zabshali was devastated.

It is an account of the results of the harvest of a palm grove which provided the

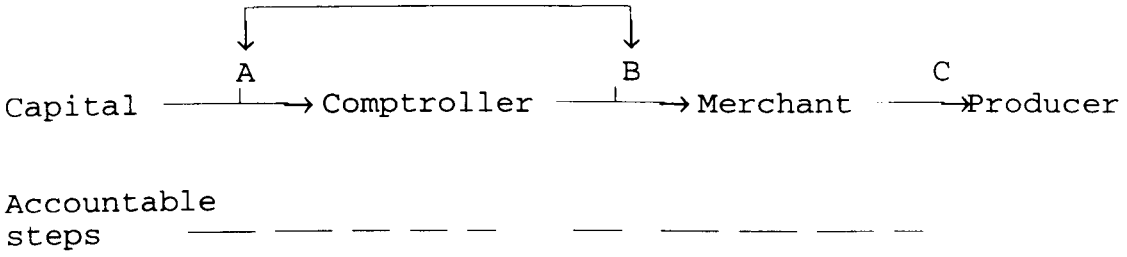
following information:

1. The number of date palms with the yield from them in detail;
2. Number of date palms from which the dates had already been taken away or plundered;
3. Total number of date palms, from which date had been gathered; and
4. The date of the harvest.

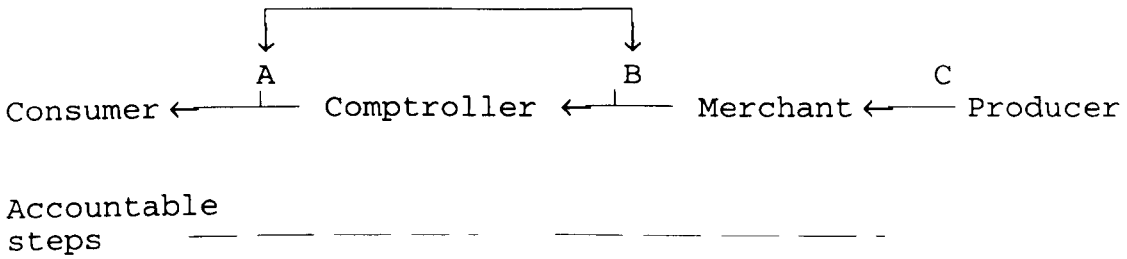
The tablets whose contents are illustrated above provide examples of typical balanced accounts used in Babylon where the opening balance is normally expressed in silver value. Commodities representing an inventory of goods on hand were usually shown as products or raw material in hand. The account then lists debits or withdrawals from the receipt or the revenue and gives a closing balance and he date of the closing balance was derived. The existence of these balanced accounts reflected the movement of capital and acquired goods according to the trading practices of the time. The typical system can be described as a logical flow of goods and records; The merchant used silver to acquire goods. The capital moved form producer of capital good to the comptroller and then to the merchant. Meanwhile, the record also traced the movement of the disbursed goods from the producer and then to the merchant, comptroller, and finally to the consumer. The diagram below illustrates the movement of capital goods and acquired goods. It has been suggested that the goods which came to the merchant through the comptroller generally came from the office of the city governor (Myhrman 1910, 65/66). As a result, a merchandise relationship could have existed between both the merchant and the city governor and both of them could have kept their own record of transactions. This means that the concept of duality of entries must have existed in that era. Many scholars (e.g. Snell 1970) have suggested that balanced accounts were made up annually, but according to the evidence produced in the early part of this thesis, the accounts were made up on

several time bases. From the system of balanced accounts practised in the ancient Mesopotamia it seems that the concept of duality which is one of the underlying principles of modern accounting originated from the ancient times although in a slightly different form.

Capital Flows



Flow of Goods



Adapted from Snell (1977).

7.9 CONCLUSION

It is reasonable to believe that accountancy was practised in ancient Iraq by individuals, the state, and the temples which had treasure-houses for silver and gold, granaries and storehouses. This is because the several types of commercial transactions revealed by archaeologists could bot have occurred without some manner of accounting. Merchants used money in the form of pieces of silver and gold and also used credit and drafts drawn upon one place and payable in another. Records of loans, negotiable instruments purchases, rentals and leases, expenditure, income and other accounts were kept. The discovery of such evidence in Iraq has certainly shed

some light on the early history of accounting. These discoveries may lead one to suggest that some of the foundations of accounting were laid when the Mesopotamians produced their earlier (ancient) records of transactions and events such as sales and purchases, investment and debt, production and other transfers.

It could also be suggested that some form of balance sheet was produced in the period when merchants saved their documents in receptacles or envelopes of clay, which were equivalent to modern form of balance sheet in that they contained accounts receivable and evidence of owners' equity. There is no doubt that the inhabitants of ancient Iraq had a record keeping system for transactions which may have contributed, in a way, to some of the real logical bases of modern double-entry system. The examination of the texts discussed earlier may provide significant evidence of the existence of double-entry bookkeeping for money lenders, temples, and the state treasuries in ancient Iraq. The double-entry system of ancient Iraq (and Mesopotamia at large), may be one of the precursors of the Italian double-entry bookkeeping which has been altered over the centuries to produce the accounting systems familiar today. Therefore, accounting as known today has a link with the earlier record-keeping in ancient Iraq.

Discussion in this and preceding chapters suggests that some of the historical roots of money, trade, capital, accounting and other related subjects can be traced the practices which developed in ancient Mesopotamia (including ancient Iraq) around 3600 BC (Gnaimah 1924, 54-56). These practices developed steadily up till the time of Nebuchadnezzar II (c. 1122-1117 BC) when several invasions of the area stopped their growth because of the preference of the invaders for their own systems. The Mesopotamian practices were still used in the temples and at several homes but no longer in state governments except where princes and princesses were recognised by the invading armies and governments. In short the Mesopotamian practices were not

superseded, they were merely suppressed in official places. Several improvements to the local systems took place because of the influence of foreign practices brought back by itinerant Mesopotamian traders travelling abroad. The numbering system of the Mesopotamian learnt a lot from India and the Arabic numerals that developed was a merger of the Mesopotamian numbering system and the Indian system. The Arabian language also assimilated Greek, latin and other foreign words even before Islam became the religion of the people of this area. In short, accounting practices in the Mesopotamian did not change so much before the Islam overwhelmed the region and introduced new customs and beliefs in accordance with the Islamic law (*Shari'a*).

The formation of cities in lower Iraq was a revolution in the history of mankind. It led to a new order of cultural and artistic achievement: the invention of writing, the creation of great works, and flourishing trade. One of the forces which contributed toward the formation of Mesopotamian civilisation in period (3600-2400 BC) was the building of empires which was encouraged by kings, temples and some educational establishments.

The Sumerians believed that the land they inhabited was the property of their god, and that their primary duty was the construction of great temples to worship the forces of the universe and to develop all aspects of human life. The priests who presided over the worships were important class of people and they were judges and important political and economic figures. Moreover, the temple were necessary economic institutions as well as religious centres of the small cities of that age. The construction of the great temples required contributions of labour and the organisation of masses of workers. As the construction and management of temples grew in complexity, it required specialists in administration and a professionalisation which would entail a certain amount of record keeping. from Sargon to Hammurabi, who was called the great law-giver in 1750 BC, Mesopotamian empires rose and fell, but

each one reinforced some economic institutions such as lending houses and the temples, which acted as representatives of god represented by the king.

Merchants became entrepreneurs working with their own capital or as agents acting on behalf of others, such as temples or kings or the ordinary people. Craftsmen began to work for the market and sometimes for the temple or the royal palace. A market economy emerged to facilitate exchanges among independent producers and consumers and progressively supplanted the older forms of household redistribution economy. The spread of money and the introduction of money in the 7th century BC, as a medium of exchange transformed the economic structure of the ancient world. Imperial law regulated the distribution of property, economic exchange, and relations between the strong and the weak. The empires were not only political agencies, but also provided cultural, religious, and legal bases of society. The history of Arab region, including Iraq, was governed by tension between the settled and the pastoral zones from about 1000 BC until about 300 AD. Life then started to become more settled and the inhabitants practised agriculture, crafts, and commerce, which brought with it the flourishing trade between many states in the region and brought economic and political development.

Trading with Mesopotamia was an essential ingredient without which civilisation could bot have been spread to some of the neighbouring countries. A trading network existed and goods were exchanged by barter as well as by coinage. Copper, bronze, silver and gold coins were used as standards for valuation in accounting and as the media of exchange (Gnaimah 1924, 54-46). Two types of trade were observed, i.e., internal and foreign trade. Internal trade was practised within the city as well as that between the city and other cities or the surrounding countryside. The law codes of the second millennium were, to a great extent concerned with this kind of trade and the role of the merchants and his relationship to other parties and

clients were defined in such codes, as seen in the code of Hammurabi. Products such as wines, dyes, perfumes and finished objects were imported. Traders, farmers and craftsmen received credit from "banks" and private money lenders which they repaid after selling their commodities in the case of the traders; after the harvest in the case of farmers; or after receiving their income in the case of craftsmen. This indicates that records were kept to document those events and to prove the credibility of the parties.

Overland trade was of two kinds: the first, which was exemplified by finished goods were produced and exported from Mesopotamia in order to enable the import of certain essential materials or luxury objects. The second was concerned with the transportation of goods bought in one locality and sold in another. The traders had important problems in both types of trade, connected with the mechanics and the administration of such commercial transactions. It was explained earlier that some trade was exploited by the rulers and high ranking officials, because individuals could hardly participate in any form of overland trade without enjoying what could now be called diplomatic status. Also, the capital needed to support large scale trade ventures, or even to share in them, could hardly have been amassed except under the protection of the government organisation. The rulers had their own chief merchant at their palaces. The traders of the second type might have had collaboration or protection of the rulers who influenced the regions between the cities with which these rulers had trade.

The traders did their records sometimes for long period of time, and in some other cases they did them for one big commercial operation or short period of time depending on the scale or the size of the business they were in. A certain measure of control over commerce, supported by the threat of confiscation of the goods, supplied the state with a more reliable income than a complete organisational

subjection of commerce to the palace. An attempt at such subjection would only lead to a shifting of the commercial bases to places outside the bounds of the empire. It is suggested (Limet 1972, 3-35) that there was direct trade between Babylon and some other countries such as India via Bahrain in the era from the 3rd millennium BC and up to the creation of the Islamic religion to the middle of the 7th century AD.

From *Sargonic* to *Hammurabi*, middle Eastern empires were restricted to Mesopotamia, but later empires brought Mesopotamia, Anatolia, and Iran into a common network. In the empire of Assyria until 612 BC, economic life reached certain level of economic standard but in the *Acheminid* empire (550-226 BC), nothing changed in the economic situation (Goetze 1965). The *Acheminid* empire was destroyed by *Sasanian* empire (234 BC - 634 AD) after which the Islamic state was founded. Economic life continued to be agricultural and both internal and external commerce flourished between the countries in the region, but bookkeeping procedures continued to be very much the same (Jankowska 1965) as later discussion will reveal.

There is comparatively little evidence available for the period between the ancient Mesopotamian and Islamic era, though there is proof that trade, money-minting, money-lending and bookkeeping were practised in Iraqi cities and that they appear to have been carried out in much the same way as in ancient times. Some scholars (e.g. Lapidus 1988, 6) have suggested that financial activities and banking were widely practised. These activities attracted merchants from other middle Eastern countries. It is also argued (Lapidus 1988, 6) that centres of political and commercial activity grew up in some Iraqi cities such as kufah, Basrah and Hearah, which founded the pattern of such activities for many surrounding provinces. Financial establishments in these cities were important in economic life in both the pre-Islamic and Islamic periods. It is generally agreed (e.g. Gnaimah 1963, 93/94) that many persons invested their resources in business. Such businesses included banking,

money-lending by individuals, commercial transaction such as buying and selling.

Scholars (see Al-Mosawy 1982, 94) seem to agree that the advent of Islam brought major changes in every area of life as the Islamic law (*Shari'a*) which will be discussed in more detail in the next part of this thesis, governed all activities, including commercial and financial dealings. Islamic principles, particularly the prohibition of interest, led to the introduction of new kinds of business dealings. Because of he widespread nature of these changes (Al-Ali 1969, 233) they deserve special consideration and will therefore, be examined in the second part of this thesis.

CHAPTER EIGHT

SOME ASPECTS OF ISLAMIC LAW

8.1. BACKGROUND

Islamic economic law can be defined as the knowledge and application of the injunctions and rules of the *Shar'ia* (general Islamic law) which prevents injustice in the acquisition and disposal of material resources in order to provide satisfaction for human beings and enable them to perform their obligations to Allah and society.

The early Muslims opted to finance their business activities, in particular trade ventures, by a form of commercial partnership already in existence in pre-Islamic Arabia. Businessmen entered into *musharaka*, a partnership in banking, trading or other kinds of business in which the partners jointly contributed to the capital of a company or of a particular project, and received an agreed percentage of the expected profit. They also bore any loss in proportion to their contribution to the total capital of the financial venture. The share of every partner in profit must be settled as proportion or percentage. However, no fixed amount could be settled by the parties. Loss was also distributed in proportion to the invested capital and borne by the owners of the capita. Therefore, at the time of the settlement of accounts, the original capital had to be recovered first. Any amount left after that was deemed to be profit, or in case of a shortfall, loss.

In respect to religious and social pressures, an early distinction was made between lawful interest and unlawful usury. Such a distinction might well be accepted in a certain place and at a certain time, but sooner or later, and with inevitable change of circumstances, there is every prospect that it would be considered arbitrary. Nevertheless, there has been admirable persistence on the part of secular and spiritual leaders in trying to measure and regulate the very elusive question of lawful interest.

Compound interest was forbidden by the code of Hammurabi in ancient Iraq, except among the ancient Romans who charged high interest, with the peculiarity that capital and interest were secured over the person of the debtor, so that if such a debtor

was unable to repay what was due, he became the creditor's slave. As far as the Jews were concerned, interest was forbidden by their religious law. As for the Christians, the matter of usurious interest was dealt with by the Church, because the Gospels do not condemn the charging of interest at market rate. In fact, the parable of the talents told by Christ seems to consider interest generated on capital not only a normal practice but also a commendable one.

At the time of prophet Muhammad's call (peace be upon him) in 610 AD, the city of Mecca was involved in business and trade to no less an extent than its prosperous counterparts of the west and the east. Meccans entered enthusiastically into such activities which were not confined to the import, export and transit of goods. However, businessmen were reluctant to leave their capital unproductive while awaiting the departure or arrival of caravans and so they involved themselves in lending for interest, speculations and trade transactions. However, this required some kind of bookkeeping to record the deals made and resolve disputes between people. The Bible makes this point in Ecclesiastics 4: 1-2 where it states:

> These are things you should not be ashamed of - keeping strict accounts with a travelling companion.

Iraq, of course, was not excluded from these activities, because it was an active Islamic state like Mecca and Medina by this period, a thriving centre of trade and commerce and one of the most prosperous countries in Mesopotamia.

Against this background, which left little place for humanitarian consideration, the Q'uran proscribed the charging of interest on monetary loans. The wording of the Q'uranic prohibition, as will later be seen in more detail, developed gradually. During the Meccan period, there was merely a strong recommendation against taking interest. The outright condemnation came later in Medina, the city of the prophet Muhammad (peace on him).

The reason for Islamic prohibition of *riba* (usurious interest) is that it was probably the outcome of a desire to protect the weak against exploitation and at the same time to encourage investors and labourers to combine their resources in joint ventures such as *mudarabah* (investment agreements), or *shirkah* (partnerships), which were well known to the prophet himself, instead of employing them in usurious loans, immoral for the lender and, therefore, unlawful under *shar'ia* (Islamic law) teaching.

Some scholars (e.g. Saleh 1986, 37) believe that times have changed and that interest may be lawful if a loan was made to provide capital for investment or business, but most classical and contemporary Muslim scholars believe that borrowing is no different now from what existed during the time of prophet Muhammad (peace on him), because the prophet said that: "every loan entailing benefit is usury."

The prophet did not differentiate between situations where borrowed capital had relieved the borrower's distress or been invested in some productive enterprise.

There are several schools of thought regarding what should be repaid to the lender on the due date (Saleh 1986, 37/38). The first was founded by Emam Ja'afer Al-Sadiq in the middle of the 8th century AD and the others in the following century. Some believe that the borrower should repay like with like (*almithl*). Therefore, the borrowed object should have an equivalent which should be measurable, or weighable, or accountable by number both at the time of lending and when it is returned. If the borrowed article was a monetary item or of monetary value, then the borrower was liable to give back the same sum, no more no less - i.e. there was no concept of purchasing power parity. Others believe that where identical repayment was not possible, for instance, if the borrowing took place in one country and the loan was repaid in some other country, then the equivalent value of the loaned article should be repaid.

In the view of some other scholars (e.g. Saleh 1986, 39), the borrowers might

have chosen either to repay the like of the object borrowed or to give back the value of it. However, this view was more flexible and allowed the borrowers to choose the most convenient way to pay.

Many Muslim scholars (e.g. Al-Kasani 1910, Vol.III, 135) are unanimously in the belief that a lender is forbidden from profiting from his loan because in Islam, lending is alms-giving. If, for example, a stipulation is made in the contract between two parties which compels the borrower to give an increase to the lender, or to give the lender an advantage, such as the right to stay in the borrower's premises or the right to buy a property which belongs to the borrower, this would make the contract unlawful. It is also argued (Ebn Qudama 1347 A.H., 345-346) that even a stipulation in the loan contract that the borrower shall present a gift to the lender would render the contract unlawful because this would make the borrower part with a part of the money which he needed.

Many scholars (e.g. Al-Jawziyya 1970, 357-61) suggested that Islamic law realised that one party to the transaction could be stronger than the other, or perhaps cleverer, or more experienced and so the disadvantaged party is in need of some kind of protection and guidance before an agreement is concluded. Therefore, Islamic law commanded that transactions should be devoid of uncertainty and speculation and the parties to the contract should have perfect knowledge of the price and the quality of the object to be exchanged. Islamic law, for instance, forbade sales which might take place outside the market, to prevent townsmen from exploiting tribesmen with little knowledge of market prices. Islamic scholars (e.g. Al-Qarafy 1344-46 A.H., 265/6) also agreed that transactions in which the subject matter or the price or both were not pre-determined were void and illegal. This old concept of predetermination of contract details still applies to today's contracts relating to insurance, risk and the stock market because those contracts according to Islamic scholars, are uncontrollable

like the birds in the air or the fish in the water and are similar to the rules which were applied during the time of Emam Ja'far Al-Sadiq.

The price of the object should be known at the time of the sale, otherwise, the contract is void. If this price was property (as in trade by barter) and not currency, then the above was applied. But when the price was connected with currency, conditions such as its price and quantum should be specified, and the currency should also be in circulation and must be examined in more detail before entering into any credit sale (Al-Nawawy 1344-45 A.H., 329). It has been suggested (Ebn Jawzy 1973, 297) that credit also existed during the whole period of the Islamic state in Iraq. A contract of sale in which credit was given for the whole or part of the price of the object sold, required the details of the deal to be recorded by some one who had some ability to do bookkeeping. In the case of the sale of property, possession and control of the subject matter passed at once to the buyer and seller was only a creditor. However, the creditor was not allowed in any way to secure some advantage for himself.

8.2. PARTNERSHIP AND INVESTMENT CONTRACTS

Various forms of agriculture, trade, art, craft and industry were in existence during the early period of Islamic control in Iraq; but usury, gambling, fraud and coercing were prohibited and business contracts based on mutual agreement of the parties concerned were enjoined in the Q'uran itself which ordered Muslims to present their deal in writing which should be witnessed by at least two men. Control of the various forms of injury (*darar*), the prohibition of such uncertainties and vagueness as might lead to quarrels, the prohibition against selling goods not in the possession of the seller and the illegalization of such contracts as might nullify the gains of parties, are all based upon *hadith* (the traditions of the prophet). The jurists of Islam

considered the *masalih* (or just interest) which must be ensured by the *Shar'ia* and determined the *mafasid* (or evils to be avoided). The Shar'ia tried to secure just interest and avoid evils in all other matters also, and sanctioned those methods of business that were found to be in accordance with just interest and free from evil. Some different forms of partnerships promoted by the prophet, as substitutes for existing forms of business relations which encouraged the use of interest, are described below.

Shirkah (partnership) means a participation by two or more persons in a certain business with defined amounts of capital, whereby they contract to jointly carry on the business and to share profits and losses in specified proportions. *Mudarabah* (investment contract) is another form of partnership in which one party provides capital and the other party utilises it for the business. Profits are also shared according to a specified proportion. The treatment of losses is discussed in the next section. The party that provides the capital and the party applying the capital to business may each comprise one or many persons, i.e. the capital might be provided by several persons and the business may be carried out by several persons (Al-Khalif 1962, 65). Under the partnership agreement (shirkah), every party has the right to participate in running the business, although in practice he might choose not to exercise it (Al-Khalif 1962, 42-44). By mutual agreement, it is possible for capital to be provided by a few persons and the business carried out by one or more persons, or for capital to be provided by one person and business carried out by many persons jointly, including the person providing the capital. All these forms are legitimate according to Islamic law (Ahmad 1976, 45/46).

8.3. DISTRIBUTION OF PROFIT AND LIABILITY FOR LOSSES

If a profit is made, this is distributed among the parties in the business in the

proportions agreed by them in advance. According to Islamic law, specification of a fixed amount is not legal. After calculation of the overall balance, each partner's share of the profit should be worked out and paid. In the case of loss, the partner who provided the capital must be notified that the capital has been debited by the amount of his share of the loss and accordingly decreased; then the partnership agreement may be renewed and the business continued. The account of every financial year should be separately recorded and dividends already distributed are non-recoverable (Siddiqi 1984, 16/17). The accounts had to be prepared by a person who had good writing ability and knowledge of bookkeeping and calculation.

Loss may be referred to as that part of the capital which is destroyed and is therefore borne in proportion to the investment of capital, as explained above, by the owner of that capital. The supplier of the capital is liable for the loss on his proportion of the total capital and any party who has not invested capital is not liable for any loss as in the case of an agreement that the capital is provided by one party and the business is run by another whose contribution is in the form of his effort and expertise.

Partners may enter into agreements with other partners to join other partnerships and supply more capital to do business with other parties, however, this agreement must be in writing and must be witnessed by at least two men as it was mentioned earlier. A party who runs the business but has not contributed capital should have the general or express permission of the capital owner to enter into other partnerships. He might also obtain additional capital from other persons. He might take a decision to use capital from the business for another partnership, but under the law of Islam, this can not be done without the partner's permission. Similarly, no partner may borrow any amount from other people to be used in the business without such permission (Siddiqi 1983, 16-18). The partner who is running the business of

the partnership or any other person conducting the business should have the authority of the other partners for credit sales and credit purchase of goods or services (Siddiqi 1983, ibid).

In ancient Iraq, as an important part of the Islamic state, two kinds of partnerships were used:

(1) Property partnership (*shirkah mulk*) which amounted, broadly speaking, to the joint ownership of a property without its joint exploitation, such as the joint ownership of a house transmitted by devolution to the heirs of a deceased person.

(2) Contractual partnership (*shirkah aqd*) where the emphasis is on the joint exploitation of capital and the joint participation in profits and losses and where joint ownership was a consequence of, and not a prerequisite for, the formation of the partnership (Saleh 1986, 37).

Islamic jurisprudence (*figh*) made no distinction between commercial and non-commercial partnership. The rules and principles it established apply to both categories.

As discussed earlier, profits were distributed among the partners in a business in proportions agreed on in advance by the interested parties; fixed amounts were not acceptable in Islamic law. It has been suggested (Al-Kasani 1910, Vol VI, 59) that as far as *mudarabah*is concerned, the proportions in which profits are distributed could be settled by mutual agreement. Therefore, the proportion would depend on the number of partners in the business and the amount of capital each contributed; for instance, if there were four partners and each contributed the same amount of capital and put the same effort into the business, they would share the profits equally (Al-Dardir 1340 A.H., 157).

Profit differs from loss in that profit is the joint product of capital invested and successful business effort which is attributable to both; whereas loss, though the joint product of capital and unsuccessful business effort, is considered attributable only to capital. Loss is simply the fact that no addition to capital has been possible in spite of business effort which implies that the capital has been depleted indirectly because the person running the business has no capital at risk but has to be rewarded for his or her effort during the trading period. This is reflected in the *mudarabah* contract made under Islamic law, whereby the working party shares any profit but is not liable for any loss; the idea is that if he fails to produce profit, his penalty is loss of income and wasted effort (Siddiqi 1983, 23). Thus, according to Islamic law, loss is not considered as a consequence of business effort, or as its fruit or result, but as diminution of capital.

It has been suggested (Ebn Qudama 1347 A.H., 165) that the partner working with capital acquired on an investment contract (not the provider of capital) may not receive a share of profit until the original capital has been fully repaid. Therefore, he is not entitled to any profit as long as the original capital has not been returned. Where there is both profit and loss in a business, loss is to be made good out of profit. Remember that this is not a continuous project, it is very much like a partnership for a joint venture (regarding the specific investment) and usually for a short duration.

8.4. FINANCIAL LIABILITIES OF PARTNERS

In the simple forms of partnership (*shirkah*) or investment contract (*mudarabah*), i.e. where no partner makes any transaction such as adding his own personal capital or borrowed capital to the joint business, or purchasing in excess of the capital resources of the business, the total financial liability of the business

enterprise can not exceed its total capital. It is not possible that, at the close of business, there should be any amount due which can not be met from the capital stock of the enterprise. In such a situation, no problem of financial liability arises. A problem would arise only when a loan is taken by the joint enterprise or a credit purchase has been made, or some services have been contracted with a promise to pay in future and, following loss or bankruptcy, the amount outstanding at the close of business can not be met from the capital of the enterprise. It should be clearly known and determined in advance, who in such a situation shall clear the residual financial liabilities.

8.4.1. *Principle of financial liability*

Under a partnership agreement, no partner is responsible for the financial liabilities of other partners, unless that responsibility has been undertaken with the permission of other partners on behalf of the joint enterprise. Some scholars (e.g. Al-Khafif 1962, 49) have argued that under an investment contract, the financial liability of the capital owner or investor would be limited to the extent of his capital investment, except when he has permitted the working partner to borrow or to purchase on credit, thereby adding to his liability. Any partner could become an agent of all the other partners for all sorts of business of the enterprise, but only within the limits of the conditions of the contract or on matters agreed to by all other parties. No partner is financially liable for transactions made personally by other partners.

As suggested by Al-Khafif (1962, 49), if any party transgresses the limits set by the partnership contract, he will be treated as a stranger by the other partners and the defaulting transaction will be considered as the partner's personal transaction. Many Islamic schools of thought have made it clear that under a partnership contract, no partner is a guarantor for other partners (Al-Kasani 1910, Vol VI, 72). However,

no one partner is liable for any transactions of other partners which fall outside the limits of the joint enterprise. Therefore, the capital shares of the partners can not be touched in order to meet the personal loans of a partner or for credit purchases made by him in his personal capacity. Similar arguments exist elsewhere - e.g. the Partnership Act 1890 of the UK and Vedic Partnership Rules in Thelia of the 5th to the 8th centuries AD (Choudhury 1983, 133). Similarly, in the Jewish law in the 1st century AD displayed aversion to risks of agency by exempting partners from unauthorised acts of co-partners leading to a loss. If such acts resulted in a profit, all partners were entitled to share in it (Derrett 1977, 14). As for the financial liabilities of the joint enterprise itself, it is clear that in general these will be within the limits of the capital of the joint enterprise, and if the partners increase their liabilities at their own discretion, all of them will be equally responsible for meeting these responsibilities. In Islamic law, the financial liabilities of the capital owner may exceed the limitations of the capital invested, only when he has permitted the working partner to expand the business by borrowing or purchasing on credit. If the working partner enters into a business transaction that leads to an increase in financial liabilities beyond the limits of the invested capital, s/he alone will be responsible for it. Likewise, if a certain financial liability has fallen upon the working partner on account of his or her personal dealing, it will have nothing to do with the *mudarabah* business.

In the case of capital given to a third party, with the permission of the capital owner, on the basis of *mudarabah* or *shirkah*, the financial liabilities of the business remain within the bounds of the invested capital; but if in this new business, expansion is effected in part by borrowing capital or by credit purchase, it will definitely increase the financial liabilities of the former business. As a matter of principle, it is necessary that this new expansion of business be not undertaken without

the agreement of the investors of capital in that business, a part of whose capital is being put at risk.

8.5. TERMINATING THE PARTNERSHIP AND INVESTMENT CONTRACTS

There are three ways of terminating the contract, whether a partnership contract or an investment contract. These are:

(1) Free choice termination;

(2) After the expiry of the term of the contract determined at the outset of the contract;

(3) After the death of any party to the contract.

8.5.1. Free Choice Termination

Any party to the contract is free to enter into a partnership or investment contract and, by the same token, any party may terminate the agreement at any time. However, it has been agreed by some scholars (e.g. Al-Kasani 1910, Vol. VI, 77) that if there are more than two partners, the remaining partners may continue in the partnership under a new agreement if they wish to do so. Therefore, partial disagreements arise only on the point that when a partner opts out, there may remain with the enterprise saleable goods that have not been sold off. Therefore, the termination of the contract would take place after sale of these goods has been completed. In the case of *mudarabah*, the capital owner and the working partner, each has the right to terminate the contract, provided that the other partner is informed of the decision (Al-Kasani 1910 Vol. VI, 109). The partner who wishes to terminate the contract must give the other party sufficient notice to allow him/her to sell any goods and turn them into cash. If the working partner is absent on a journey or business trip, the agreement will be terminated on his return to the normal place of business

(Al-Dardir 1340 A.H., 235).

8.5.2. *Termination on the expiry of the agreed term*

Both *shirkah* and *mudarabah* contracts can be made for a certain period of time, which implies that after this period of time the contract automatically expires. All Islamic schools of thought agree that the contract ceases after the expiry of the period of time fixed at the outset. Even when the term of the contract is fixed, partners still have the right to withdraw from the contract before the expiry of the agreed term, in the manner discussed above.

Scholars are divided on whether the *mudarabah* should operate for a minimum time period. Some suggest that the *mudarabah* contract should operate for a minimum of one year; others argue that this minimum threshold is inequitable because if the owner of the capital sets a period of time for the *mudarabah* contract, it is possible that the business may not be completed within the period and there will be no gain from the agreement. Those who agree to a fixed minimum term do so on the basis that *mudarabah* is equivalent to engaging an agent and it is valid to appoint an agent for at least a minimum term (Al-Kasani 1910 Vol. VI, 99). It is also suggested that this could also be applied to the *shirkah* (Al-Kasani 1910 Vol. VI, 57). Those who favour the fixing of a minimum period of one year for the *mudarabah* believe it is valid when written in the following wording:

> I have made a contract with you for so many Disarms for a period of one year and so when this period comes to a close, [I can determine the contract] (Ebn Qudama 1347 A.H., 186).

This minimum period principle is applicable to both *shirkah* and *mudarabah*, though as we have seen, some may suggest that a fixed period of time is only appropriate in the case of *shirkah* (Al-Khafif 1962, 52). However, it can be argued that no one loses the right to terminate the contract, even if a fixed period of time has

been set out for it (Ebn Qudafa 1347 A.H., 180).

The owner of the capital always has the right to forbid the working partner to purchase more goods, and a period can be fixed in advance for this purpose, but the working partner can not be stopped from selling his goods and, therefore, no time limit can be fixed for this (Gazaly 1317 A.H., 222). Therefore, fixing a period of time for *mudarabah* can not render it invalid.

8.5.3. *Termination of agreement on the death of a party*

All Islamic schools of thought are agreed that when a partner dies, his share goes to his heirs, and therefore, the contract made by the deceased is nullified. However, as in the UK Partnership Act of 1890, where a partnership subsisted more than two persons, the death of one of the partners might not terminate the partnership if the remaining partners agreed to continue in the business (Al-Khafif 1962, 103). However, as Al-Kasani (1910, 78) has suggested, the death of any of the partners would terminate the contract because the capacity to own and transact business in partnership would end with that death, irrespective of whether or not the co-partner knew of the death and agreed to continue. The continued business would, by implication, be a new partnership. This principle also applies to *mudarabah* because *mudarabah* entails agency and agency ends with the death of either party, i.e., the agent or the agent's principal, irrespective of whether or not the working partner is aware of the death of the owner of the capital, as its legality does not depend on knowledge and information.

Nevertheless, if the capital is in the form of merchandise, the agent has a right to sell it off so that it takes the form of cash (Al-Kasani 1910, 112). It could be concluded that even in the event of death, the interest of the business or of the settlement of its accounts demands that before closure of business and final settlement,

some time is allowed to the other party. If a person dies in possession of goods taken on *mudarabah*, then if the goods are found in his inheritance, they will be taken back, but if they are not found intact, other assets of similar value or the value of the goods given shall be taken from his inheritance (Al-Dardir 1340 A.H., 256).

In the case of *mudarabah*, if the capital owner dies, his heir has the right to demand the sale of the goods, and if the wealth is in the form of cash, he has a right to renew the contract (Al-Gazaly 1317 A.H., Vol. V, 134). If one of the two partners dies leaving behind a competent heir, the heir will have the right to continue the contract and the partner will allow him to make transactions; he will also have the right to demand a division of assets in order to terminate the business (Ebn Qudama 1347 A.H., 134). Most Islamic scholars agree that the contract would also be terminated to the extent of the share of one partner in some cases other than death of any of the partners, such as insanity, or lack of discretion, necessitating legal restrictions on appropriation (Ebn Qudama 1347 A.H., 134).

Having described how the coming of Islam has changed the basis of commercial activity, introducing profit-sharing as a substitute for interest, interest is now turned to a close examination of some specific applications of *Shar'ia* principles in particular areas of activity, and the demands these created for trained and experienced personnel. Accordingly, in the next chapter, the banking system will be examined.

It could be concluded that the investment, profit and loss calculation, liability of the partners and deciding on how much capital is left for the partners, in the case of termination of partnership, could not be done without some kind of accounting records and business could not have flourished in Iraq, during Islamic state under consideration, without some one who could keep the records.

CHAPTER NINE

THE BANKING SYSTEM IN THE ISLAM

IN IRAQ

9.1 THE KINDS OF BANKS

Two kinds of banks existed in the ancient Islamic state of Iraq. There was the central bank, which conducted state business, and a number of private banks. The roles of each will be examined separately.

9.1.1. *Central Bank*

The central bank was called Bait-Al-Mal. It was regarded as the general treasury of the state, was located in Baghdad, the capital of the state, and was connected with local treasuries in various regions of the Islamic state. The main responsibility of the central bank was to control the state's finance by determining income and expenditure and preparing budgets for these two items. Moreover, all regional treasuries had to submit to it, monthly and yearly reports of their own income and expenditure.

The resources of the central bank came from taxes and other levies on various regions, subject to the economic and financial circumstances of the state (Zaidan 1926, Vol.I, 195). There is evidence that a source of funds was sometimes abolished for one reason or another and sometimes a new source might be created, depending on the economic circumstances of the state and the availability of funds in the treasury. For example, in 809 AD, the total amount of tax collected was 530,312,000 Dirhams (Al-Jehsheyary 1938, 288), in 813 AD, the amount was 396,155,000 Dirhams (Ebn-Keldoon 1405, 74), in 833 AD, it was 388,291,350 Dirhams (Al-Katib 1981, 182-184), but the largest amount received by Bait-Al-Mal (the central bank) was more than 600,000,000 Dirhams in 918 AD (Zaidan 1926, 107).

The banking services which were provided by the central bank are discussed below.

9.1.1.1. Accepting Deposits

The deposits which were accepted were of two kinds depending on the class of person to whom they belonged. The first category consisted of the possessions of orphans and people who had disappeared and whose funds were given for charitable purposes. Deposits of this kind are known to have existed in the second half of the 8th century, and rules from that period have been found for the management of these deposits, e.g. arranging books to record income and expenditure in the Bait-Al-Mal (Al-Kindy 1908, 390). These possessions were kept in the central bank and looked after by a bank official who required bookkeeping ability. This official had to prepare accounts for the possessions in the bank, and he held the keys of the *Bait-Al-Mal* (the treasury), which he could not give to any unauthorised person (Al-Kindy 1908, 244 & 405). Therefore he occupied a position of great responsibility and trust.

The second category of deposits were those of ordinary people, similar to those held by banks today, but the amounts of these deposits were small compared to the amounts held by the private banks, as discussed below. There is evidence, for example, that Emam Abu Hanifah, an Islamic cleric, deposited 30,000 Dirhams in the central bank in the 8th century AD (Al-Temeemy 1970, 118). In the 8th century AD, when the state encouraged people to put their money in the central bank in order to protect their money from theft and loss, the total amount received by the bank as deposits was 800,000,000 Dirhams, for which special books called *sejillat alkubood* (deposit books) were kept (Al-Yegooby 1959, 387 & 394).

In the second half of the 9th century AD, caliph Al-Mansur ordered the confiscated possessions of some deposed officials to be placed in the bank, but then asked his son to consider these possessions as deposit accounts and pay profit on them after his death, when those possessions had to be returned to their owners (Al-Tereby 1967, Vol. 8, 81). This was a departure from the practice established by Ummer Ebn

Al-Kettab, the second caliph of the Rashidum caliphate in the 7th century AD, who used to confiscate 50% of the wealth of corrupt officials (Abu-Ubaid 1975, 342).

9.1.1.2. Offering Credit

The central bank was a lending institution which provided an important service for both the state and ordinary persons. It supported projects of the fledgling Islamic state of Iraq by lending money for use in productive activities (Al-A'ademy 1966/1967, Vol. 14, 269-281). Credit was given by the central bank for many reasons, some of the most important ones are discussed below.

(a) For investment in commerce and agriculture.

There is no specific evidence of borrowing for investment in commerce in Iraq during the middle of the 8th century AD, but two earlier cases related by Al-Darketny (1943 Vol. 3, 63) suggest that borrowing for such purposes occurred in the Islamic state of Iraq. The first case was in the 7th century AD when Abdulah and Ubaidulah, sons of Ummer Bn Al-Kettab (R), the second caliph of the Rashidum caliphate, borrowed money from the Bait-Al-Mal (central bank) in Basrah and invested it in trade. The second case was that of a lady who in 643 AD borrowed 4,000 Dinars, also to invest in trade. These two cases indicate that borrowing from the central bank for commercial purposes could also have occurred in the later period of the Islamic state of Iraq.

Al-Serkesy (1924, 18) has argued, with a great deal of evidence to support his contention that borrowing for investment in agriculture (a type of transaction offered by banks today) existed at various times in the ancient Islamic state of Iraq. For instance, 1,000,000 Dirhams was borrowed by farmers in the 7th century AD. It has been agreed (Al-A'ademy 1978, 129/30) that the rulers of the Islamic state of Iraq had

encouraged investment in agriculture in order to provide food for the people of the state. For example, caliph Ummer Abdul-Aziz in the 8th century AD regularly instructed his provincial governors to encourage the farmers to borrow from the bank to stimulate agricultural activities. Some literature is available (e.g. Al-Jehsheyary 1938, 92/93) indicating that a farmer in the second half of the 8th century AD borrowed 200,000 Dirhams to invest in his own land, while in the 9th century AD, another farmer in the city of Mosul borrowed 10,000 Dinars for a similar purpose (Al-Tenooky 1971-73, Vol.8, 117/118). There is also indication that in the same century, a loan of 10,000 Dinars was borrowed collectively by a group of farmers who used it to cultivate their lands and develop their farms (Al-Tenooky 1971-73, Vol.8, 154/155).

Regarding the repayment of loans, there is no firm evidence of the period of time after which these loans had to be paid back, but there is the suggestion (Al-Serkesy 1924, 18) that these loans were considered as *Mudarabah* (profit sharing transaction) in which the borrowers had to pay part of their profit to the lender. This could sometimes reach 50% of the total return of the loan.

(b) <u>For investment in building</u>

Some scholars (e.g. Miskewaih 1914, 380) have concluded that loans for this purpose existed in the 10th century AD, when the central bank extended credit to people to build their own houses and other buildings in Baghdad after the civil disturbances of 977, in which many buildings were destroyed and had to be rebuilt. The rulers ordered that loans be given to people who were in financial difficulties and were not able to rebuild their homes from their own resources. If the owner of the property was not available, his agent could apply for the loan. These loans played an important role in the rebuilding of Baghdad (Miskewaih 1914,405).

(c) Personal loans

The central bank also provided loans to state officials and to the public. For example, Abu Bakr (R) the first caliph[12] of the Rashidum caliphate, borrowed 6,000 Dinars on provision of the necessary security, in the first quarter of the 7th century AD (Abu-Ubaid 1975, 204). In the same century, the caliph Ummer bn Al-Kettab (R) also borrowed money from time to time and paid it back from his own salary (Ebn Sa'ad 1958-60, Vol.3, 276). The consensus of opinion by some scholars (e.g. Al-Tebery 1967, 208) suggest that central banks frequently offered loans to officials such as ministers, governors and army commanders and even to ordinary citizens.

If a borrower was a state official, s/he had to repay the loan from his/her salary, as Ummer bn Al-Kettab did and as many soldiers did (Ebn Al-Zubair 1959, 224). If repayments were not made on the due date, the bank might levy a fine which could reach 50% of the original loan. This provided a strong incentive to repay debts on time (Al-Yegooby 1959, 137).

9.1.1.3. Controlling The Amount Of Money In Circulation.

One of the most important duties of the central bank was to control the amount of money in circulation, as modern central banks do today. The bank established minting houses to mint coins under the supervision of the caliph or his deputy. The weight of the valuable metal was fixed by the central bank according to the orders of the high commission appointed by the caliph, subject to the monetary policy of the state.

It has been argued (Al-Belathy 1971, Vol.1 469) that after the unification of the Arabic Islamic currencies in the 11th century, the central bank supervised the

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[12] A caliph is a ruler in a Muslim state who often combined secular duties with spiritual ones after the death of Mohammed.

introduction of the new currency, exchanged it, prevented the use of old currency, and withdrew old coins. For example, in 1006 AD, when there were complaints of the existence of large amounts of bad currencies, the central bank issued an announcement that the use of bad coins was illegal and those who had such coins in their possession had to return them to the nearest minting house (Al-Migreezy 1940, 55). Also, the central bank fixed the weight of coins to be collected for tax purposes. It also set the rate of exchange between the new Islamic currencies and foreign currency, which sometimes depended on the supply and demand mechanism.

9.1.1.4. The Documents Used In The Bank.

The central bank used cheques, bills of exchange and many drafts in its transactions. The bank accepted these documents whether they were issued by its branches or by the private banks. These documents will be discussed in detail later in this chapter.

The central bank accepted payments by instalments of debts owed to it. These instalments were deducted weekly from the wages of the officials, or monthly from those who received their income every month. The bank adjusted the accounts of the clients regularly to reflect the payment of each instalment. In the 10th century AD, Al-Kewarismy (1923, 43) suggested,

> A certain amount of money has to be deducted from the income of the official in order to settle his loan which was borrowed from the Bait-Al-Mal.

9.2. THE PRIVATE BANKS

Private banks also existed in Iraq during the Islamic state. They were owned by temples and rich people who invested their money in lending, accepted deposits, exchanged currencies and issued the documents needed for commercial activities.

Early banking in ancient Babylon was characterised by its relationship with the sacred temples, which was highly regarded and respected as the most appropriate institutions for performing this role because of its vast properties, and resources not least of which was the perception of its sanctification and reverence. Babylonians were willing to keep their money and assets in the temples not only because it would protect them from theft but also because of their confidence that the temple would not use them and would render to them accurate and complete account of their deposits. Funds were principally deposited in the temples not for investment but for safe-keeping only.

One of the best known private banks between the 5th and 8th centuries AD, owned by Al-Zubair bn Al-Awwam, had capital of about 52 million Dirhams. This bank was established in Medinah Hejaz (now Saudi Arabia) and had its branches in Basrah and Kufah in Iraq, and Alexandria in Egypt (Ebn-Sa'ad 1958-1960, 108-110).

As Ebn Sa'ad (1958-1960, 108-110) suggested, Ebn Al-Zubair's bank is known to have accepted deposits amounting to 2,200,000 Dirhams. This bank provided its services to people who had their accounts in the main branch in Medinah and in the other branches in Iraq and Egypt. Some scholars (e.g. Al-Ali 1969, 292) argued that the wealth of one rich client at the end of the 7th century AD was more than 3 million Dirhams, most of which was invested in Ebn Al-Zubair's bank in Medinah and Basrah.

There were other private banks established by some rich people who worked in both banking business and commerce, and avoided legal punishment by taking profit, rather than taking interest, which is forbidden in Islam (Ebn Al-Mu'atez 1903, 164). Therefore, these personal banks specialised in both banking and commercial transactions and used profit sharing *Mudarabah* to legalise their return. The loans that the banks offered could be repaid in full after the agreed period of time or they could be paid by instalment, depending on the original agreement between the parties.

Some scholars (Al-Asfehany 1955-1973, 212) agreed that the first lending ever made in the Islamic state of Iraq by a private bank was in the 7th century AD to Umro bn Uthman bn Affan, son of the third Rashidum caliph. He obtained two loans of 8,000 Dirhams from a bank owned by a businessman and used both for banking and commercial purposes. However, many small banks owned by some rich businessmen offered their services to the ordinary people, receiving 10% of their profit as a return on these loans (Al-Jahid 1976, 137-141). The amounts of the loans in the same century varied from a few up to thousands of Dinars.

The owners of the private banks had their own associations and had daily and weekly meetings to discuss their problems, their banking services, their transactions with their clients, the development of their services, the amounts that they offered to their clients, and the conditions and terms of lending. These banks played an important part in economic activities in the Iraqi cities, especially in Baghdad, and in return they accumulated a lot of money. For example, in the 9th century, a partner in a banking business received 100,000 Dinars as a return on his contributed capital (Al-Asfehany 1955-1973, 209/210).

Fischel (1933, 569) suggested that *Jahbeds* represented the bank of the state, but there is also evidence that other privately owned banks were managed by the *Jahbeds*. However, banks engaged in many activities such as lending, accepting deposits, arranging documents, drawing drafts and performing various other transactions. One of the duties of the banks was to offer credit to the state, which could be paid back by bills of exchange issued by any of the state's departments in Baghdad or any other city. A bank owned by a rich man called Ebn Kudameh had special dealings with ministers and the provincial governors during the Abbasid state. In addition, Ebn Kudameh acted as adviser to the state in financial matters (Miskewaih 1914, 231). Depending on liquidity, the bank acted as guarantor and intermediary to

the state to help deposed governors and ministers and pay the penalties inflicted upon them. For instance, *Ebn Kudameh* paid to the state a sum of 600,000 Dinars for the penalty inflicted on a deposed minister in 933 AD, and 102,000 Dinars for the penalty of another minister in 934 AD (Miskewaih 1914, Vol.1, 247). These two amounts were considered as loans which had to be repaid at a later date at a charge of one Dirham on each Dinar (Miskewaih 1914, 213 & 240), i.e., the return was equal to 10% of the original loan, as the Dinar equalled 10 Dirhams at that time (Miskewaih 1914, 231).

The most active, biggest, widest and most organised banks were those which were managed by the *Jehbeds* who had management, organisation and banking experience. They became organised and powerful banking institutions in Baghdad and other cities in Iraq in the 9th century AD. These banks established branches in many places in the Islamic regions and employed many clerks and bookkeepers (Goitein 1967, 230). They helped business to grow and diversify and helped entrepreneurs to expand their commercial activities. When an entrepreneur decided on a transaction, he had to discuss it with his banker to obtain credit, just as is done today. Goitein (1967, 231) recounted how two traders who decided to enter into a transaction to buy a quantity of linen, went to their bankers for advice about the price of the transaction, whereupon the bankers valued the transaction for the client and paid the price to the seller. It could be concluded that banks played an important role in providing financial and commercial help for their clients. However, they sometimes required security for loans, or demanded evidence that the client had sufficient possessions to repay them.

In order to be able to provide services and sufficient funds for the public, banking partnerships could be formed by groups of banks to enable sufficient capital to be accumulated. Thus, the banking partnership (a form of modern syndication) was

another development in the Islamic banking system in Iraq in the 10th century AD.

9.2.1. *The Financial Activities Of The Bank*

Private sector banks were active in providing three categories of financial services (administration, supply and remittance of funds) to the public; each of which is discussed below.

9.2.1.1. Administration Of Funds

Entrusting possessions to the safe-keeping of another was a common practice among the citizens in Iraq. There were a number of reasons for people to entrust their money and jewels to others. Some of these reasons may be categorised as follows:

(a) Politicians and high ranking officials might entrust their possessions to those they trusted, to ensure that their possessions were both safe and not visible, in the event of the official being deposed and the ruler deciding to confiscate his visible possessions. Al-Asfehany (1973, Vol. 20, 308/309) suggested that some ministers feared that their possessions might be confiscated in this way, and entrusted them to relatives and friends. For example, in the 9th century AD, the wealth of a minister (9,000,000,000 Dinars cash and some very valuable jewels) was entrusted to his friends and relatives when he realised that the ruler was about to confiscate his wealth. Another scholar (Miskewaih 1914, 99) recounted how another minister was deposed, imprisoned and his wealth confiscated many times. Although the minister tried to hide what he possessed from the ruler, the ruler discovered part of it, worth 500,000 Dinars, and confiscated it. Therefore, people believed that if their possessions were entrusted to several people, including banks, some could be saved from confiscation.

(b) The second reason for people to secure their valuables was to ensure the future of the family. For example, an orphan became very rich after his father's death when he received from his father's friend, to whom 5,000 Dinars had been entrusted, the proceeds of the funds invested by the trustee (Al-Jehsheyary 1938, 199/200).

Miskewaih (1914, 66/67) recounted how deposits were made either with *Jehbeds*, traders or with some financial institutions. For example, a minister deposited 7,000 Dinars with one businessman and 10,000 Dinars with another. Deposits were also left with the businessman's agent; for example, 50,000 Dinars were entrusted with an agent of another businessman (Al-Kutuby 1979, 144).

However, the consensus of opinion (Al-Asfehany 1973, 308/309; Al-Tenooky 1971-1973, 28/29; Miskewaih 1914, 416) is that deposits were not always safely returned to their owners. Therefore, some deposits were lost because they were entrusted to those who mismanaged them or those who betrayed their trust by informing the rulers intent on confiscating the assets of people who defrauded the state that some of the possessions of those people were put in their trust. Some people claimed they were unable to return the deposits or assets concerned to their owners, in which case an agreement could be reached between the two parties for return of the assets or their equivalent value by instalments. There was also the difficulty of an heir proving his claim to the satisfaction of the trustee, which might need written evidence of the original transaction (Miskwaih 1914, Vol.2, 187/188).

Considering the risk that was associated with entrusting money to others, people thought that they could overcome this difficulty by burying their money and other belongings. Many scholars (Miskewaih 1914 Vol.1, 102 and Ebn Al-Zubair 1959, 231) have suggested that such cases existed in Baghdad. For example, in 940 AD, a rich person was said to have buried 36,000 Dinars on one occasion and

1,200,000 Dinars on another.

9.2.1.2. The Supply Of Funds

Funds were supplied in the Islamic state of Iraq by loans of two kinds. The first type of loan was granted (with no right to a return of profit) as a favour which deserved thanks, even if made for commercial purposes. The second kind of loan was offered to buy goods and services and for commercial transactions, and was made for a return of profit, but not for interest, as this is forbidden in Islamic law. Al-Tenooky (1971, Vol.8, 41) argued that these two transactions existed in the market of Baghdad. However, some of the first kind of loans were made for commercial purposes; such loans were given to official institutions when the central bank was unable to provide funds. Businessmen found it important and necessary to obtain the second kind of loans to invest in new projects which brought a good return. Also, investors in agriculture used the second kind of loan to increase their production. The general public also benefited from the availability of such facilities in various circumstances.

Some well known traders could be relied on to play a part in stimulating the sale of commodities to the public. There is evidence that the services of the traders could be categorised into two kinds, i.e., lending to the state and lending to the public.

Regarding the first category, there is ample evidence that the state was often in financial difficulties (e.g. to pay wages and salaries of officials and war expenses) and sought help from various sources. For instance, in 817 AD, when the ruler of Iraqi state needed financial support, Al-Asfehany (1973 Vol.22, 466) recounted that the agent of the state contacted many wealthy traders and businessmen for help. The state again sought help from traders and businessmen in the turn of the 9th century (Al-Shabishty 1951, 271) and again in 934 AD from the people of Mosul, from whom 400.000 Dinars loan was procured (Miskewaih 1914, Vol. 1, 326).

Inter-bank transactions existed in the Islamic state of Iraq. For example, in one case at the end of the 9th century, one banker borrowed 40,000 Dinars from another (Al-Doory 1974, 130). Women were also involved in money-lending activities. For example, a rich lady frequently offered loans to those who needed help, in Kufah in the 9th century AD (Al-Asfehany 1973, 130).

Regarding the terms and conditions of loans, many scholars (e.g. Al-Asfehany 1973, 379; Al-Jahid 1948, 6; Al-Shaibany 1930, 26-32) have suggested, with great deal of evidence, that the tenure (duration) of loans varied from one month to many years. Some of the loans had to be paid back in instalments, the amount and the terms of each being determined at the time of the agreement between the parties. For example, a loan of 40,000 Dinars had to be re-paid over 10 years, at 4,000 Dinars per year. There is evidence that in all of these cases, the loans had to be recorded and the record kept up-to-date, invariably by persons with reasonable knowledge of bookkeeping.

With regard to the security for loans, the lender might require some kind of guarantee. This might take the form of a pledge of the borrower's property or a guarantee made by a guarantor who became responsible if the borrower failed to fulfil his obligations. Some scholars (e.g. Al-Tenooky 1971-1973 Vol.3, 62; Al-Asfehany 1973 Vol.15, 327) believe that some of the loans were made without guarantee, though very rarely during the Islamic period, because according to Islamic ideology, every loan has to be confirmed in writing with the signature of at least two witnesses.[13] If the borrower failed to repay the loan, the object left with his creditor

[13] The use of witness predates written documentation but as in today's contracts witnesses can be called upon to attest to the circumstances of the contract in the event of disputes. However, the records of themselves, when properly authenticated (that is witnessed), can be used to enforce partly completed executory contracts (e.g. payments made but job not delivered), as evidence for tax paying ability or against a criminal or unethical behaviours.

as a security had to be sold, but with written confirmation from the borrower (Al-Tenooky 1971-73, Vol. 3, 64). In the case of failure to repay debts, if no arrangement could be reached to settle differences, the case could be taken to the palace or temple court (Al-Tenooky 1971-73, Vol.1, 260). In order to prove the transaction between parties, the lender might ask the borrower to write his name and the amount in the lender's book at the time when the parties agreed on the deals (Al-Hemedany undated, 395).

9.2.1.3. Remittance of funds

Currency problems and the recurrent decline in the value of coins forced a search for safer forms of payments, particularly in ancient Mesopotamia. The desire to develop a traffic in money independent of the many problems of coinage experienced at that age characterises the history of fund management in the Islamic era, particularly regarding large private, temple and state (government) transactions. One result of this endeavour was the development of cheques, letters of credit and bills of exchange. Banks in the Islamic state of Iraq transmitted clients' money, as needed, to various Islamic regions. To facilitate trade, the banks used three media of transfer (Cheques, Letters of credit and Bills of exchange) discussed below.

9.2.1.3.1. Cheques.

A cheque in the ancient Mesopotamia allowed a person resident in a town to draw money while in another town and does not need to come in person to the money changer because the latter recognises the genuineness of the written order from the signature appearing thereon. This took place in the middle of the 4th century AD, i.e., more than one thousand years ago in the Middle East and in Egypt but Europe did not know such written orders until the beginning of the 13th century AD. Prior to that,

orders were made by verbal instructions by the interested person with a stipulation of acceptance by the other party and the presence of witnesses.

Cheques are first known to have been used in the Islamic state of Iraq at the time of Ummer bn Al-Kettab (R) the second caliph of the Rashidum caliphate in the first half of the 7th century. They were used as proof that the bearer had the right to receive some benefit from the bank or state (Ebn Al-Atheer 1963-1965 Vol.4, 81) and contained information such as the declaration of obligation, the name of the drawer, the date of issue, the amount of the cheque, and the signature of the authorised person (Al-Hemedany 1989, 107/108). When cheques were first used in the Islamic state of Iraq, payment could be to a group of people as well as to individuals, with the information detailed as above (Al-Kewarismy 1923, 38).

The Islamic state adopted the same form of cheque used at the time of Ummer bn Al-Kettab to pay state benefits. There is evidence that in the middle of the 9th century, many people received payments by cheque from the Bait-Al-Mal for this purpose (Al-Saby 1958, 22). Cheques drawn up to pay people's benefits from the state could apparently be either in an individual name or in the names of all the members of a group (Al-Jahid 1905, 8). Evidence exists to prove that the army was usually paid by a cheque representing the salaries of various soldiers whose names were contained on a list attached to the cheque (Al-Tenooky 1978 Vol.3, 295/296). For example, 120,000 Dinars was paid by two cheques in the 9th century for this purpose (Al-Saby 1958, 257). In the 10th century, a cheque for 3,000 Dinars per month was drawn to pay the salaries of the palace staff (Al-Tebery 1967 Vol.9, 156/157).

Cheques were also used for the payment of state expenditure. For instance, a sum of 800,000 Dirhams was paid by cheque to the governor of Kufah in 715 AD (Al-Tebery 1967, Vol.6, 524). A cheque of 5,000 Dinars was issued by the state to

pay for the piece of land on which the city of Samara was built in 834 (Al-Tebery 1967 Vol.9, 17).

Steps were taken by the state to control the payments made by cheque through the Bait-Al-Mal which had to oversee all cheques made by the offices of the state. Also cheques had to bear a special or motto to distinguish the various cheques issued by the many offices in the state. The ministers had to oversee the cheques drawn up in their offices and make sure that they were issued for the right beneficiary and signed by an authorised person (Al-Katib 1981, 36).

Cheques issued by any office had to be signed and stamped. Very large amounts of money had to be authorised by the ruler who had to write the word "Yes" on the cheque followed by his signature in order to be paid by the concerned department. Many cheques followed this procedure at the beginning of the 9th century. For example, in about 834 AD, some cheques had to be issued and authorised by the caliph in order to buy the piece of land on which to build the city of Samara (Abu Dihiah 1946, 48).

There were some cases in which the payment of an amount by cheque could be made at a later date, similar to present-day post-dated cheques. A cheque could even be cancelled if it was realised that it was false or if the state was in financial difficulty and unable to honour the cheque. For example, the head of the Bait-Al-Mal refused to pay the expenses of a governor because the cheque was not supported by sufficient documentation (Al-Tebery 1967, 523). In the case of another cheque, issued by Abd Al-Melik (685-705), one of the Benu Umeyya caliphs, who died before the cheque could be paid, the next caliph, Ummer bn Abd Al-Aziz (717-720), refused to honour the cheque because he claimed it was not legal as the previous caliph had no right to make payments from the Islamic treasury. Cheques, the new caliph said, cannot be issued just because a caliph wanted to; there must be good reason to pay

from the treasury. However, the payee was able to receive the amount after Ummer's death, when Yazid, the son of Abd Al-Melik became caliph (720-724) (Ebn Abd Al-Hekeem 1967, 58/59).

The accounting officials of the Bait-Al-Mal were responsible for administering payments by cheque and recording the transactions in their books. They also recorded incoming cheques (Al-Jehsheyary 1938, 220). The books of accounts were regularly checked by the Bait-Al-Mal auditing officials, and the accounting officials were accountable for any mistakes they might make. The officials had to prepare a list of the cheques received, as well as a list of those passed to others from their offices.

Some cheques were made by private institutions for business and commercial purposes. In these cases, the stipulated conditions and rules had to be strictly followed to guarantee payment. Therefore, private cheques had to contain information regarding the amount of the cheque, the date of the cheque, the method of payment, i.e. whether the amount should be paid in full or by instalments, and the number of instalments in which the amount should be paid. Additional information on the cheque would include the name of the agent to whom the bearer or his representative should go to receive the amount of the cheque (Al-Serkesy 1924 Vol.18,18). The drawer also had to specify the value of half of the amount of the cheque, or even a quarter of the amount, e.g. saying that half of the amount was 500 Dinars or a quarter of the amount was 250 Dinars, if the amount of the cheque was 1,000 Dinars. This was done in order to prevent forgery or deception or alteration of the cheque (Al-Hemewy undated, 538).

Sometimes cheques were issued to two named persons. In this case, if one person died, the other would act as the representative of the dead person or his heirs (Al-Serkesy 1924 Vol.20, 37/38). Islamic commercial rules required that the cheque bear the signatures of the guarantor and two witnesses (Al-Serkesy 1924 Vol.18, 9/10).

The duty of the witness was not just to sign the cheque, but also to check its form and make sure that no spaces were left between the words which could later be filled in by forgers (Wekee'a 1947 Vol.2, 369/370). Cheques had to be dated and signed by an authorised person in the issuing office (Abu Al-Muhelleb 1970, 116). They were prepared carefully, within the Islamic legal framework, and recorded in the books by a scribe with experience in bookkeeping and financial matters (Al-Sema'any 1962-1977 Vol. 8, 81). If the cheque was paid it had to be withdrawn from the bearer and obliterated or stamped with the mark of the payer to prevent reuse (Ebn Hebib 1941, 469/470) and the payer discharged (Abu Al-Muhellab 1970, 115/116).

The disadvantage of using cheques was that people might give cheques without enough money in the bank to cover them, as happens today. This happened many times in the first half of the 10th century. For example, a cheque for 40,000 Dinars was issued in 927 AD, but the person who issued it had not enough money to cover the amount of the cheque (Abu Al-Muhellab 1970, 72/73).

The above discussion supports the contention that cheques were very familiar to the people of the Islamic state of Iraq and were used by both the state and private business. The state used cheques to pay its expenses and benefits to the people. Cheques were also used by private banks and tradesmen to settle deals among themselves. The cheque was an important means of payment and particularly trusted when it was endorsed by honourable witnesses or by the court and stamped by the payer.

9.2.1.3.2 Letters of Credit.

Letters of credit, *seftejeh*, were used to ease financial and monetary transactions in several ways. For instance, a person might wish to give some money or any of his possessions to another in one location or the latter might wish to pay the

former in another location. Letters of credit avoided the necessity to transport goods or money and thus minimised the risk of losing them. Sometimes, a businessman or trades man might transfer money using a letter of credit to his agent in another city or region in the ancient Iraq. For example, by the end of the 10th century AD, a letter of credit issued by a trader who was living in Kufah (in the middle of Iraq) ordered his agent in Basrah to pay 30,000 Dinar to another person (Al-Jehsheyary 1938, 109/110). If a debtor incurred a debt in one place, but had money in some other city where his creditor needed funds, the debtor could authorise his creditor to receive money from his agent or family in that other city. A creditor could obtain money in any place he wanted within the Iraqi state (and sometimes outside the state) without being exposed to the risk of losing the money by theft or any other means during his journey while the debtor also was able to carry out transactions away from home. This was not a new phenomenon because Iraqis were familiar with letters of credit and even negotiable promissory notes, as early as the 11th century BC, as discussed earlier in the first part of this thesis.

Letters of credit were widely used by the state as well as by ordinary business as a way of settling financial matters between central government and the governors of the other Islamic regions and among the regions themselves. For instance in the 8th century BC, the Bait-Al-Mal in Basraah received revenues from different Islamic regions by this means of payment (Al-Jehsheyary 1938, 98: Al-Khalid and Al-Khalid 1956, 145/146). In 911 AD, many letters of credit were received by the Bait-Al-Mal in Baghdad. Also in 916 Ad, the head of the Bait-Al-Mal in Baghdad received some of these letters of credit and the amounts were used for the expenses of the state (Al-Saby 1958, 286). The Baghdad Bait-Al-Mal also sent letters to other Islamic regions of Iraq in order to finance or assist with provincial affairs. For instance in 925 AD, the sum of 147000 Dinas was sent by a letter of credit to cover some expenses in

Egypt (Miskewaih 1914, 146). Thus the Islamic state of Iraq used letters of credit in the settlement of financial transactions between the capital (Baghdad) and the other regions.

The state also used these letters of credit to solve temporary financial problems by writing letters promising payment at a later date. There is some literature (e.g. Al-Tenooky 1971-1973, Vol. 8, 41) indicating that in the beginning of the 10th century AD, the Iraqi state was unable to pay the wages and the salaries of its employees, therefore, the only way to solve this problem was by borrowing from traders and issuing letters of credit to be paid in the future. The state also frequently borrowed from tradesmen and promised to repay at a later date when financial situation improved. For example, Al-Tenooky (1971-1973, Vol. 8, 41) and Al-Kefaji (1952, 156) argued that in 936AD, when the state was in financial difficulty, the state borrowed some money from private banks and promised to repay later when its finances improved.

The letters of credit were also used widely in commercial transactions to settle deals between tradesmen. There is evidence that letters of credit were used as documents between contracting parties, to prove they had mutual obligations showing that they had an agreement to exchange goods and services and would settle the deal at a later date (Al Kefaji 1952, 156). Some of these letters of credit were drawn up for loans borrowed for investment purposes. This procedure suited the borrowers, who could invest now and pay later, and also suited the lenders, because they would be sure that their money would be safe and could be received when and where they wanted it (Al-Bajy 1912, 149). For example, in about 990 AD, a letter of credit worth 30,000 Dinar was drawn up in Kufah and sent to the agent of the trader to be paid in Basrah (Al-Jehsheyary 1938, 109/110). Another letter of credit was said to have been sent from Baghdad to Wasit in the south of Iraq for payment in cash in 991 AD (Abn-

Shuja'a 1916, 198). There is also evidence that in the 10th century AD, the governor of Spain sent 5000 Dinars by a letter of credit to a family in Baghdad (Al-Serraj 1956, 17-19).

Many scholars have suggested that these letters of credit were also used as travellers cheques by the end of the 10th century AD. For instance, Al-The'aliby (1974, 244) recounted that a traveller from Iran, travelling to Baghdad, carried letters of credit worth 5000 Dinars, to be cashed there. Another example of traveller from Egypt travelling to Baghdad carried letters of credit worth 2000 Dinars was provided by Al-Tenooky (1971-1973, Vol. 4, 215) while Al-Saby (1958, 106) related the story of another person travelling to Basrah, that held a letter of credit drawn from the Ebn Al-Zubair bank.

There is evidence suggesting that some of the letters of credit payable to the state were organised by tradesmen setting the agents for the state, who also cashed letters coming from the state (Al-Saby 1958, 106). Al-Tenooky (1971-1973, Vol. 4, 222) suggested that jobs such as organisation, receiving and cashing letters of credit payable to the state were performed by *Jahbed* and by the financial institutions representing the state's financial affairs in their regions. The letters of credit drawn up for commercial and business purposes were drawn by tradesmen, businessmen private banks and financial institutions, by whom they were cashed and recorded. For example, Al-Serkesy (1924, Vol. 14, 37) provided sufficient evidence suggesting that Al-Zubair bank was one of the most active institutions in receiving and cashing client's letters of credit in Mecca and issuing letters of credit to be cashed in its branches in Busrah and Kufah.

There is also evidence that the large private banks in Baghdad and Cairo exchanged letters of credit among themselves. Therefore, in the 10th century AD, tradesmen who have money with these banks might draw money on them and send

their letters of credit to be cashed from their accounts so as to finance their on-going or new investment projects. When used in commercial transactions, a letter of credit (like a cheque) would contain information such as the amount of the letter, any other obligation towards the payee or bearer, and the date on which the letter should be cashed (Al-Tenooky 1971-1973, Vol, 4, and Vol. 8, 22). It was possible for the letter of credit to be paid at an earlier time; however, in this case, the bearer might either cash it in full (Al-Tenooky 1971-1973 Vol.3, 270/271), or be paid less than its face value (i.e. the value agreed by the originating parties). There is some indication that in the 10th century AD, the discount rate was about 1.5% (Al-Tenooky 1971-1973, Vol. 4, 41).

It could be concluded, therefore that the letters of credit was an important document used in the ancient Islamic state of Iraq. It was issued to ensure the settlement of the accounts between parties whether they were in the private or public sector. It could also be concluded that the *Jahabedah* played an important role in issuing, recording, discounting and honouring letters of credit.

9.2.1.3.3 Bills of Exchange.

Bills of exchange were used in the Islamic state of Iraq and were a well-known means of transferring debt from one place to another, as were letters of credit, but they differed from the letters of credit in that money transferred by a letter of credit had to be paid in the currency of the place where the letter was cashed, while money transferred by bills of exchange was received in the currency specified when the bill was drawn up (Ebn Hijjah Al-Hewery 1943, Vol. 2, 156).

Bills of exchange were used for the same purposes as were letters of credit. They were used by the state's offices and for various reasons. For example, the Bait-Al-Mal used them in connection with the state's income and expenditure (Al-Teber

1967, Vol. 9 399) and for such activities as the receipt of tax from various provisional regions in the Islamic state of Iraq (Al-Sabyi 1898, 137/138).

Some bills of exchange were made to fulfil personal promises. For instance, an individual might promise his family, friends or relatives that he would transfer money form the place where he lived, or rulers might transfer money to poets or others under their patronage in distant location (Al-Asfeyany 1973, Vol. 1, 65/66). Bills of exchange were also used under in commercial transactions such as selling and buying goods and services (Al-Tenooky 1971-1973, Vol. 4, 352) and to pay and settle accounts between people and to fulfil financial obligations in other regions. They were also used as a method of financial exchange between tradesmen who had accounts in various banks. For instance, any person could transfer money from Baghdad to any other Iraqi city which had a branch of the bank with which he had an account (Gointein 1967, 61). There is evidence from the 11th century AD, indicating that any amount of money could be transferred from Baghdad to any other city within the boundaries of the Islamic state (Gointein 1904, 315-337). Other evidence shows that a Moroccan company used bills of exchange in the 11th century AD to make regular transfers from Morocco to its branch in Baghdad (Gointein 1967, 61).

This chapter has considered the various types of activities conducted by banks in the Islamic state and the range of documents associated with these activities. It has also provided evidence of the existence in Iraq of many of the intricate transactions that still afflict accounting in the present and modern world such as financial instruments (especially bills of exchange). The next chapter will look more closely at the actual money used in Iraq during this period.

CHAPTER TEN

AVAILABILITY OF MONEY IN IRAQ DURING THE ISLAMIC PERIOD

10.1. MONEY USED IN IRAQ BETWEEN THE MIDDLE SEVENTH CENTURY AND THE TWELFTH CENTURY

A different kind of money was used in Iraq after its transformation to an Islamic state in the second half of the 7th century BC than was used before that era as described in Chapter Three. Although, like the erstwhile money, it was used in exchange for goods and services and the commercial and financial transactions on which the state's economic policies depended, it had a wider role and was more self-contained than its predecessor. As a result, there were less roles for money exchangers and the export and custom collector. There were three kinds of currency in use during that era:

1 Golden Dinar

2 Silver Dirham

3 Copper Fills.

10.1.1. *The Golden Dinar*

The Dinar was a foreign currency, i.e. Roman Byzantine, which was used during early Islamic times in the second half of the 7th century BC because its value was stable and it was widely accepted. There is no complete agreement as to when the first Arabic Islamic Dinar was minted, but it is believed that it was around the second half of the 7th century in Syria and it was called *Al-Musaifah* because it bore the image of a statue (located in Syria) holding a sword (Al-Migreezy 1930, 62). Others (e.g. Al-Belathy 1866, 68; Al-Askery 1902, 205/206; Al-Seyoty 1904, 191 and 1950, 46; Al-Siktewary 1882, 99; Grierson 1960, 244; Lane-Poole 1875, 1) believe that the Dinar was first struck in Iraq in 689-696 BC. The following details from the Catalogue of Oriental Coins in the British Museum (Vol.1 1975, 1) show an example of inscriptions on a coin which was introduced in 696 AD.

Obverse of the coin

"There is no God but Allah. He is the only God who has no partner".

Margin

"Muhammad is apostle of God who had sent him with guidance and the religion of truth, to proclaim it over all religion".

Reverse

"Allah is one. He is the only God, the eternal, absolute. He begetteth not, nor is he begotten".

Margin

"In the name of Allah this Dinar has been minted in seventy seven A.H.".

The coin was pure gold and bore Islamic engraving and Arabic writing and its weight was 4.27 grams. The inscriptions to Allah were in words (not effigy) because the Arabic language in which they were written can be easily understood and related to than effigies that are only culturally specific and may not convey any meaning in several mosques, places and markets from Spain to Indonesia in which they were to be used.

As Defter (1978 Vol.9, 122) observed, the design of the Iraqi Dinar evolved over time. Many changes were made to the Dinar, both in the engraved design and the kind of writing used. The first Iraqi Dinar minted in 691 AD was called Demeshky, after (Demeshk or Damascus) where it was minted. The official weight of the Dinar was set at 4.25 grams of gold and it remained in use for a considerable time before it was superseded (Grierson 1960, 253/254).

The following inscriptions on the Dinar minted about 750 AD revealed some changes to that described above. (Underlining indicates specific changes) (Catalogue of Oriental Coins in the British Museum Vol.1 1975, 1).

Obverse

"There is no God but Allah. He is the only God with no partner".

Margin

"The Muhammad is the apostle of Allah who had sent him with guidance and the religion of truth to proclaim it over all religion".

Reverse

"Muhammad is the apostle of Allah". [totally different from the earlier one]

Margin

"In the name of Allah this Dinar has been minted in 132 A.H.".

The Dinar found in the British Museum weighs only 4.23 grams. This small discrepancy is believed to be due to wear and tear. The quantity of gold contained in the Islamic Dinar was gradually reduced and replaced by a cheaper metal until the end of the 10th century AD when the state abandoned the old standard altogether and replaced it with a pure gold coin and a new standard. This remarkable reduction in the weight of the gold in the coin was observed not only in Iraq, but also in Syria and Egypt since these two countries were also controlled by the same government, the Islamic State. However, this was perhaps the adoption of the face value principle first used in the Islamic world (Ehrenkrewtz 1964 Vol.VII, 186/187). Many names were given to the Dinar from its introduction until the 12th century. For example, *Al-Roba'eiat* (Al-Tebary 1967, Vol.8, 389), *Al-Musaifah* (Ebn Al-Zubair 1959), *Al-Radiah* (Al-Mekdesy 1906, 204) and *Al-Ebreeziah* (Ebn Al-Atheer 1963,14) which were pure gold. However, the first, third and the last coins got their names from the person who had minted them while the second was according to the sign of the two swords it had on its face. The last became the best known Dinar, and was considered a trusted and reliable currency in the Muslim world until 941.

10.1.1.1. Parts and Multiples of the Dinar

In order to facilitate exchange in the market place, divisions of the Dinar were created. A half Dinar coin was widely used (Abu-Ubaid 1838, 308), weighing 2.13-2.60 grams. The inscriptions on the ½ and ⅓ Dinar which were minted in about 710 and 713 AD respectively are shown below.

First coin (½ Dinar)

Obverse:

"There is no God, but Allah, he is the only God".

Margin:

"Muhammad is the apostle of God who had sent him with guidance and the religion of truth".

Reverse:

"In the name of God the merciful, the compassionate".

Margin:

"This half Dinar has been minted in 91 A.H.".

Second coin (⅓ Dinar)

Obverse:

"There is no God, but Allah".

Margin:

"Muhammad is the apostle of God who had sent him with guidance and the religion of truth".

Reverse:

"In the name of Allah, the merciful, the compassionate".

Margin:

"This one third Dinar has been minted in 914 A.H.".

It could be concluded, therefore that ½ Dinar and ⅓ Dinar and presumably other fractions of the Dinar were used in daily transaction in the Islamic state (Al-Nekshebendy 1953, 16-27). Some scholars (e.g. The'aleb 1956, 22) believe that in addition to the above, ¼ Dinar was also used but this researcher could not find example of such money. Not only were coins which were fractions of a Dinar in use, coins which bore greater value than one Dinar were also used. The two-Dinar piece was made as late as the 12th century AD (Al-Nekshebendy 1953, 16), but again this researcher could not find an example of a coin with higher than one Dinar value.

Inscriptions on fraction of Dinar coins minted from about 786 AD were standardised but less detailed than the previous examples (Al-Nekshebendy 1953, 63 and 86) with only the year minting changing.

Obverse:

"Year 170 A.H.".

Reverse:

"Muhammad is the apostle of Allah".

In the 12th century AD, some more Dinars were minted which had different weight depending on the availability of the gold at that time. Dinars minted from about 1172 in Baghdad bore the name of the contemporary ruler and weighed more in gold than the value of previous Dinar. Two illustrations of the inscriptions on the Dinar minted in 1172 (weighing 27.2 grams and in 1186 weighing 38.1 grams are produced below from the Catalogue of Oriental Coins in the British Museum (1975, 162/163).

1172 Coin - Obverse:

There is no God, but Allah alone who has no partner. Al-Mustadee be-amr Allah [14]*, commander of the faith.*

Reverse:

Muhammad is the apostle of God upon whom Allah's blessing.

1186 Coin - Obverse:

There is no God, but Allah who is alone with no partner. En-Nasir Ledeen Allah [15] *commander of the faith.*

Reverse:

Muhammad is the apostle of God upon whom Allah's blessing.

10.1.2. The Silver Dirham

The Arabic Islamic silver Dirham was a pure silver Dirham used in market exchange. It was based on the Dirham used by *Umar bn Al-Kettab (R)*, the second caliph of the Rashidum dynasty 634-644, who decided that the unit of exchange between all Muslims should be the Dirham, which should also be used by the *Bait Al-Mal* (the Islamic central bank and treasury), and should bear the Islamic symbol and stamp.

Dirhams used in Iraq from the date of the establishment of the Islamic state in the 7th century up to the 12th century AD differed in weight and in the purity of the silver. they had different names, such as *Al-bejlia, Al-Jewas, Al-Joraky, Al-Tebery* and *Al-Kewarizmy* (Ebn Al-Fekeeh 1884, 307; Al-Kewarizmy 1924, 74; Ebn Al-Ukwa Al-Kureshy 1937, 82 and Ebn Al-Refa'a 1980, 59). The first three coins were named

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[14] El-Mustadee be-Amr Allah was the ruler who ordered the Dinar to be minted.

[15] En-Nasir Ledeen Allah was the ruler who wanted the Dinar to be minted.

according to the place where they were minted, while the others were named after the person who minted them.

The most important date for coinage in Iraq was 705 AD when a uniform silver coin was introduced for all countries under Islamic control. After this time, other currencies were considered illegal because of the variation in the weight of the valuable metal they contained and legislation was enacted to prevent people using them. The availability of foreign money which had different weights and different standards of silver, which sometimes tended to confuse people and the global shortage of silver at that time which could have led the *Bait Al-Mal* of each country to mint silver coins with less precious metal and high purchasing power could have provoked the standardisation of silver coins (Al-Ali 1969, 240-284). The introduction of the new uniform coin may also have been linked to the establishment of new administrative and economic systems for the whole Islamic world, to meet the needs of economic development such as the establishment of banks, lending organisations and other credit institutions. There were many reasons for these changes, such as political and ideological confrontation with the Romans who objected to some Qura'nic phrasing on Islamic coins and threatened to use instead words offending the prophet Muhammad (peace be on him). There were also some other reasons relating to the shortage of precious metals in the *Bait Al-Mal*; the small differences between the price of silver ingot and its price as coin, which encouraged people sometimes to melt the coins and use them in jewellery; the desire of the state to nationalise its currency and to establish an Islamic economic system and set up a financial base in accordance with Islamic culture and belief (Al-Kubaisy 1983, 258-61). There were many foreign currencies such as Persian and Roman coins which had their own sign and symbols. Therefore, the government required traders and businessmen to bring their own silver to be minted into the new money, which had a new shape (mostly

circular), wording, symbols and stamp (Al-Migreezy 1930, 55; 1940, 36). The traders and businessmen had to bear the cost of minting, which was set at one Dirham in every 100. However, the Dirhams which were minted for traders from their own silver were the same as those minted for the government.

The following details from Lane-Poole (1897, 11), of the inscriptions on the silver coin which had a circular shape and was minted about 698 AD, reveal a striking similarity to those on gold Dinar coins.

Obverse

There is no God, but Allah who is alone with no partner.

Margin

In the name of God this Dirham is minted in 79 A.H.

Reverse

God is the one and the only God, the eternal, Absolute, begetteth not, nor is he begotten, and nobody is like him.

Margin

Muhammad is the apostle of God who had sent him with guidance and the religion of truth to proclaim it over all religion although the infidels dislike.

The Islamic coins differed from those being used in the pre-Islam age in that they contained some Qura'nic verses and words praising the prophet Muhammad, while the pre-Islamic coins usually contained the portrait of the ruler, a Roman or Greek god. The weight of the coin depended on the availability of precious metal and it was from 2.10 to 4.16 grams (Walker 1966, 1). Silver coins were minted in the capital, and some other important cities such as Kufa and Basrah. The coins minted in cities other than the capital, bore the names of the cities where they were minted in the margin on the obverse of the coin (Walker 1966, 1; Lane-Poole 1987, 32).

However, for silver coins minted in Baghdad, the place of minting was often

inscribed on reverse. The following inscription on the reverse of a silver Dirham minted in Baghdad about 801 AD is from the catalogue of Oriental Coins in the British Museum (1975, 80).

Reverse

In Medeenet-es-selam[16] *in 175 A.H. Muhammad is the apostle of God. This coin was minted by the order of Muhammad the son of Ja'afar, commander of the faith.*

Few changes were made to the Islamic coins until the 12th century AD and the Dirham continuously contained some Qura'nic verses in praise of the prophet Muhammad.

Another minting of new Dirhams containing less silver than the earlier ones and connected with social, political and economic changes (Al-Migreezy 1930, 59) was made towards the end of the eighth century. This may have been due on the one hand, to a shortage of silver, or the officials perception that the old Dirhams, at 2.70 - 2.90 grams, were over-weight (Fehmy 1957, 33). On the other hand, the state may merely have wished to increase the circulation of Dirhams; therefore, the coins had a face value higher than the value of the base metal contained in the coin.

10.1.2.1. Part and Multiples of the Dirham

Commercial transactions sometimes require lower value coins to facilitate dealing in the market for small purchases. Accordingly, like the gold Dinars, silver Dirham coins worth a half or a quarter of a Dirham were minted (Al-Jahud 1976, 203). In addition, silver coins with face values higher than one Dirham were minted. For example, 3 and 10 Dirham coins were first introduced in the 8th century AD (Ebn

[16] Medeenet-es-selam (city of peace) was the old name of Baghdad.

Al-Zubair 1959, 39).

10.1.3. The Copper Fills

The fills was a small copper coin minted for use as a means of exchange for cheap commodities. this first Muslim fills was minted in the middle of the 7th century AD (Fehmy 1956, 404/405). It was introduced partly as a result of the shortage of silver and gold, and also because of increasing demand for goods and services in small quantities brought about by increased employment, combined with the need for a coin that can be used only for local transactions. The fills, like the Dirham and Dinar, had been in use before the Islamic period in some areas, but the Islamic period saw the creation of a new fills with new signs and Arabic writing which continued in use until the fall of the Abassid government in the 13th century AD. The early copper coinage used in Islamic state in the 7th century AD was Byzantine in nature and contained both Arabic and Byzantine writing. The following is an example of a fills from that era:

Obverse

Heraclivs facing, throned, holding sceptre, and orb.

At left: *In the name of God*

At right: ? ? ?

Reverse

M surmounted by cross.

At left: *MI*

At right: *CH[C]*

Beneath: *Tayeb (good)*

Another coin (Lane-Poole 1897, 109) contained the following details:

Obverse

Emperor and son, standing, facing, each holding sceptre.

Between them: *Muhammad is the apostle of God.*

Margin

There is no God, but Allah, alone with no partner.

Reverse

A cross on three steps, between stars.

The following is the detail of an example of a copper coin with formulas of faith:

Obverse

There is no God, but only Allah.

Reverse

Muhammad is the apostle of God.

Another Islamic copper coin (Lane-Poole 1897, 111) contained the following details:

Obverse

There is no God, but Allah, alone with no partner.

Margin

Muhammad is the apostle of God, who had sent him with guidance and the religion of truth.

Reverse

Muhammad is the apostle of God who had sent him with guidance and religion of truth.

It may seem unusual that both the margin and the reverse have the same inscription, but this was what was found in the reference which looks different, but the core is the same.

The following details (Lane-Poole 1897, 112) show another example which included the year (about 737 AD) and the place of minting (City of Wasit in the south of Iraq):

Obverse

There is no God, but Allah who is alone with no partner.

Reverse

Muhammad is the apostle of God.

Margin

In the name of God this fills minted in Wasit in 116 A.H.

Since this fills was an Islamic one with no foreign sign or writing, it could be concluded that coins for local use were liberated from foreign influences at that time.

During the 8th century, many fills in use had different weights of metal. Some of the fills weighed 2.4 grams (Al-Kezzaz 1980 Vol.11, 30/31) while others weighed 4.71 grams (Shema 1976, 107). Some fills now on view in the Islamic Art Museum in Egypt, dating from the Abbasid time, weigh from 1.800 to 7.530 grams (Fehmy 1965, 763-783).

The following are details of a coin (Lane-Poole 1897, 118) which was minted in Mosul in 754 AD. It specified the name of the prince who ordered the production of the coin.

Obverse

There is no God, but Allah.

Margin

This fills was minted in Mosul.

Reverse

There is no power, but with great God.

Margin

By the order of prince Ja'far bin al-Mansur this fills was minted by Uthman bin Ishag.

The writing on the fills described below (Lane-Poole 1897, 118), which was minted in the middle of the 8th century AD, is slightly different from the fills discussed earlier.

Obverse

There is no God, but Allah, alone with no partner.

Margin

In the name of God this fills was minted in Baghdad in 157 A.H.

Reverse

Muhammad is the apostle of God.

The weight of earlier fills was 5.80 grams, but the weight of the 8th century fills was 3.53 grams. There is no explanation given for this discrepancy in the weight of these coins, but the later fills was minted in 774 AD.

Coins minted in both Basrah and Kufa contained similar details, for example, the following are the inscriptions of a fills minted in Basrah in about 777 A.D (Catalogue of Oriental Coins in the British Museum 1975, 195).

Obverse

There is no God, but Allah who is alone with no partner.

Margin

In the name of God this fills was minted in 139 A.H.

Reverse

Muhammad is the apostle of God.

Margin

God had sent him with guidance and the religion of truth to proclaim it over

all religion.

The above examples indicate that there were few changes in the coins minted in Iraq before nearly the end of the 12th century AD. This can be seen by comparing, for instance, the two gold Dinars which were minted in 696 AD, and described earlier, and the one that was minted in 1187 AD. The two coins nearly had similar details except the names of the rulers who ordered the minting of the coins. Therefore, it could be concluded that little change in the details of the coins was made till the 12th century AD.

Although some people used the fills, it was not popular and at times its use was compelled by the state to try to increase its circulation (Al-Seyoty 1942, 334). The fills had the following disadvantages (Rashad 1976, 19):

1 The metal of the coin could easily become oxidized and so are prone to loss of aesthetics and shine.

2 It was difficult to store the coin because it corroded easily and lost value.

Despite these disadvantages, the fills was used as a division of the Dirham and used for small value settlement; for example, if someone wanted to pay five and a half Dirhams, he would pay the five Dirhams, but the half Dirhams could be paid in fills (Fehmy 1957, 41). It could be argued then, that the usage of the fills was very much connected to the prices of commodities in the market, because ordinary people buying ordinary day-to-day things could have the choice of using ½ Dirham or fills. There was some indication that a person could buy oil for one, two or three fills in the city of Basrah in the 9th century AD, but there was no indication about how much oil could be bought for such few fills (Al-Jahud 1976, 124 & 127).

The fills, like the other coins, had its divisions and multiples. There was a half fills as well as a two fills coin (Fehmy 1965, 37).

In addition to the Dinar, Dirham and fills, there were other types of coins of

various weights used in different cities in Iraq, such as Basrah and Mosul. Examples include the *mithkal, danack, kerat, habba and teswej* (Al-Belathy 1892, 466; Al-Migreezy 1940, 57; Al-Jahud 1976, 122/123; Al-Bozjany 1971, Vol.1; Al-Tenooky 1978, 285/286; Al-Mekdesy 1906, 121). However, these coins appeared at different times and were disbanded later at the will of the rulers ; these coins were only temporarily introduced for some local necessity.

Because the coins used had different weights and varied in the amount of the valuable metal they contained, it was common practice in financial and commercial transactions to weigh coins which were of equal purity. Often, the coins were not accepted in exchange until they had been weighed, because they might have lost part of their value due to corrosion, chipping or defacing. Thus, the practice of weighing coins was to ensure that correct value for money was obtained (Al-Shaibany 1938, 22). Often, the weight, rather than the number or face value of coins, was specified in indicating the price of a commodity. For instance, the rent for a house for a period of one month was paid for in such a manner as to ensure that the proper value of money was received (Al-Tenooky 1971, 129). Another example is the story of a rich man who paid 300 Dinars by weight for new clothes, related by Ebn Al-Jewzy (1969, 206 & 239). Abu-Shuja'a 1916, 45 also told of the purchase price of a house being paid in weight, indicating that many transactions in fills, Dirhams or Dinars could be measured by weight (Al-Tebery 1967, 74).

10.2 GOOD AND BAD MONEY

Legal coins were those minted by the government minting house and stamped by the governor or those possessing the hallmark of a standard coin as specified by government (Ebn Keldon 1405, 155). For a coin to be honoured, it had to conform to the weight, shape, stamp, design and wording on the face of the standard coin. If

a coin varied from the standard, it would be considered fake (Al-Katib 1981, 60). A good standard coin was one which contained a high percentage of the valuable metal, i.e. silver and gold for Dirham and Dinar respectively. The good Dirham was called *Al-Nekra*, which means "the perfect quality or pure silver" (Al-Sherashy 1969, 141).

Following Gresham rule, coins of good value were obviously in demand and more frequently used. People preferred newly-minted coins to old one. New coins were nicknamed "the white ones", because they were shiny and clean (Ebn Taifor 1968, 163/164). Sometimes the validity of a coin was attested by certain words stamped on the face, such as *tayib* (fine), *mo'ateber* (respected), *shera'ey* (legal) (Gnaima 1953, 124; Lane-Poole 1889, 14-55 & 89-96). When these "good" Dirhams or Dinars were used in transactions, notes were written down in the receipt books, such as "free of deceit", "correct", "minted according to the government standard" etc (Lane-Poole 1889, 89-96).

In addition to good coins, there were also some bad ones which contained a high proportion of the alloy. These bad coins were minted by forgers, and did not have the standard value of the good coins. They were not supposed to be circulated, and were rejected in all official and private transactions within Islamic state boundaries (Al-Shaibany 1954, 326; Al-Tewheedy 1964, 85; Al-Serkesy 1324, 13-15). There were some cases when base-metal coins were minted by the government as a temporary measure; for instance, when the state was faced with a temporary shortage of the precious metal (Al-Gezaly 1111, 68/69). In such cases, they were regarded as common money and could be used in exchange and in the settlement of transactions.

Coins were also considered bad if their weight was less than the standard. However, variations in the weight of coins and in the percentage content of valuable etal could occur for various reasons, all of which were not bad.

1 Monetary policy;

2 Foreign influences;

3 The continuous usage of the coin;

4 Fraud.

These reasons are now discussed.

10.2.1. Monetary Policy

The government's monetary policy allowed caliphs, ministers, local governors and some other important persons to have their own Dirhams and Dinars minted, but they had to comply with the standard determined for the official money. For example, at the end of the tenth century, a philanthropist had a Dinar struck, equal to 1½ times the weight of the ordinary Dinar, to be given as charity to the poor. Minting houses were established in many regions, and the coins they minted could differ in value and design, depending on the standard used by the state and the availability of the precious metal, but they still had to comply with the official standards (Ebn Al-Jewsy 1948, 397).

A government had the power to determine the weight of coins, depending on the prevailing economic, financial and political circumstances. For example, in 724 AD, a decision was made by the caliph to increase the weight of the Dirham minted by private individuals in order to increase tax revenue to the state, and at the same time avoid the civil disturbance which might have been caused by an unpopular decision to increase taxes directly (Al-Kindy 961, 73/74). Since the Dirham contained more silver than before, the state received greater value from the same number of coins. However, this meant that the government had the disadvantage of increasing state expenses and expenditures. To overcome this shortcoming, the government would usually melt down the Dirham minted by private individuals to create a new

Dirham of reduced weight. It might also calculate tax receipts by counting the number of overweight coins. But for its own payments, the coins were weighed rather than counted (Al-Kindy 961, 73/74). Similarly, the state might reduce the weight of the coins for financial or economic reasons. Though this would decrease government resources, presumably it could then reverse the actions mentioned above, i.e., pay bills by counting the number of coins, but weigh receipts of coins. Such a decision could be taken if there was not enough gold or silver to mint the coins needed for circulation. Such a policy might be applied to a particular area of the Islamic state, depending on the economic situation in each region, but in the case of the transfer of money from one area to another, adjustments had to be made in order to transfer the correct value. Therefore, the quantity of coins was adjusted depending on whether the weight was increased or decreased (Al-Baiheky 1906, 130).

Some coins were made for a temporary or special purpose; but if they continued to be used in exchange, they had to be valued by experts or bankers (Al-Kubaisy 1979, 245). Sometimes heavy coins were minted for commercial, economic or charitable purposes. These could equal up to 100 times the ordinary weight of the coin, especially after the Islamic state of Iraq gained control of a wide area of the Middle East. This was necessary to facilitate large transactions, in the same way as national central banks now issue money of different denominations according to market needs.

10.2.2. Foreign Influence

Foreign countries had a great effect on the weight, kind and value of money in Iraq, especially when Iraq was ruled by foreign governors. For example, the Turks had a great effect on the kind of money in circulation in Iraq, especially when they held the top official positions during the 11th century AD when they were sometimes

appointed by foreign governors and given responsibilities for minting some coins. These governors minted coins of a lower weight than normal and used the excess precious metal for their own purposes. Their activities had a great impact on the financial and economic life of the Islamic state of Iraq (Al-Migreezy 1939, 50). They emptied the treasury of gold and silver, forcing them to mint and circulate bad coins in order to increase the money supply and to make people believe that resources were available for state investment and expenditure (Al-Mes'oody 1966, 245). These circumstances encouraged some dealers who had no option but to trade in the bad coins which had a damaging effect on the economy (Al-Sawly 1979, 231). As a result, the precious metal content of coins by the end of the 10th century AD was 89-97% and by the 11th century it had dropped to 50% (Ehrenkrentz 1959, 145), making traders reluctant to accept such money. As an alternative, they bartered their goods with other traders and accepted only gold, silver and old reliable coins from their customers (Al-Doory 1974, 219/220).

10.2.3. The Continual Usage of Coins

Because of the softness of the coins (Ehrenkrentz 1964, 72), prolonged use led to loss of value, which had a damaging effect on circulation and purchasing power. Records survive of a situation in the eighth century when payment of 118 Dinars for tax was received but when the money was checked, it was found that due to weight loss, it was only worth 108 Dinars. However, the records do not tell us how the difference was recovered (Grierson 1960, 254).

10.2.4. Fraud

Two kinds of fraud were common. One was to cut or file some of the metal from bona fide coins and collect these pieces and use them in jewellery (Al-Mawerdy

1958, 155; Al-Bajy 1912, Vol.4, 264). Coins which have been treated in this way may be seen in the Iraqi museum and a damaged Dirham minted in the eighth century can be seen in the British Museum (Hemeed 1978, 333). This kind of act had an adverse effect on the purchasing power of the coins which were not always accepted as a result. The second kind of fraud was to forge coins with a lower proportion of valuable metal. Some professional forgers used to strike coins from copper and cover them with gold or silver. The counterfeit coins were identical in weight, inscription, shape and design to the good coins which were struck by the authorised minting institutions. Some of these coins, dating back to the eighth and eleventh centuries, can be seen in the Iraqi museum and in the museum of Islamic arts in Egypt (Hemeed 1978, 322-324; Fehmy 1965, 575), while the British Museum has a Dirham which was minted in the tenth century and was made of copper but covered with silver (Hemeed 1978, 327-333).

10.3. STEPS TAKEN TO PROTECT THE COINS

It was important, politically and economically, to protect the good coins and to be able to distinguish them from the bad. The coins symbolised prestige and power. The law of Islam determined the authority to mint standards and purity. One of the measures used to protect money from fraud was the establishment of a minting house which had the sole authority to mint coins and this was first established in the 8th century in Hijas (now Saudi Arabia) (Al-Belathy 1866, 468/469). The minting house used certain shapes and signs which had to be struck on the faces of the coins to act as a guarantee from the authority that they would be accepted in transactions.

Those who had worked in the minting house were identified by special dyes (or stamps) on their hands to distinguish them from those who were not authorised to deal with the minting of coins. Regular checks were made as to how much gold was

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received, how much had been used for minting, and how much was left (Al-Nabulsy 1961, 52). Employees of the minting house required honesty loyalty, religious zeal, professional knowledge in commerce and the ability to distinguish the good money from the bad, and they probably had training in money testing. However, all employees must have had all these requirements, otherwise, they would not be employed in such a post. Knowledge about the quality and description of the metal was another important requirement for those who worked there (Al-Hekeem 1960, 52). Another deterrent against counterfeiting and illegal melting of coins was the type of punishment meted out to those found guilty. The punishment could be as severe as the cutting off of the hand of the culprit, whether employed by the minting houses or not (Al-Belathy 1866, 469/470).

It can be seen that the Islamic state of Iraq had a reasonable system of coinage of various values, which could be manipulated to meet changes in economic circumstances. Protection of the currency and detection of good and bad coins required the existence of skilled and experienced staff for both minting and bookkeeping which was so important to control the quantity and the quality of the money used in transactions. It could also be inferred that the availability of money during the period of time covered by the current research, had an important connection with the development of economic activities, which will be discussed later in detail, and can not have existed without some kind of accounting procedures. However, many difficulties existed in relation to monetary exchange, because of the extensive commerce in the region, the number of different minting houses, and variations in the value of coins which were susceptible to damage, or could be forged. These difficulties, and the range of regulations pertaining to financial matters implemented to address them, will form the subject of the next chapter.

CHAPTER ELEVEN

MONEY EXCHANGE IN THE ISLAMIC STATE OF IRAQ

11.1 A SHORT HISTORY OF MONEY IN IRAQ

Al-Sayrefa (banking) in the Arabic language means preference of some coins to others depending on the purity of the valuable metal in the coins (Ebn Mendoor 1311), but the professional meaning of the word, according to some scholars (e.g. Al-Baiyroony 1935, 242), is derived from the determination of the money exchangers' work, which includes exchange between currencies, whether in coins or notes. Therefore, Al-Sayrefy (money exchanger, or banker to some other scholars) was a person who sold currencies, determined their weights and purity, recognized the types of such currencies, defined the rate of exchange between them, and dealt with money lending, commerce, and record-keeping (Ebn-Elatheer 1936, 53 & 66). Other scholars (e.g. Al-Sefa 1957, 282) believe that the *Sayrefa* valued goods and property and was also connected with valuation of currencies. Ebn Al-Atheer (1949, 208) produced a great deal of evidence to support his contention that the *Sayrefa* was involved in administration and accounting matters such as receiving money on behalf of the state and dealing with its expenditure, bookkeeping, choosing projects in which to invest money, managing incomes and keeping them in the Bait-Al-Mal (the treasury/central bank).

11.1.1 *The Roots of Money Exchange in The History of Iraq*

The first part of this thesis discussed the money, banking business, and the basic system of bookkeeping practised in ancient Iraq. Also, it was noticed that gold, silver and copper coins were used to settle transactions and to denote the value of objects around 3000 years BC. It was also suggested that there were some financial institutions which conducted financial business, such as Egibi and Murasho banks, which were discussed in the first part of this research. During the Islamic control of the region, banking business continued in the same direction, but subject to Islamic

law which forbids usury. Therefore it could be argued that banking during the Islamic period had its roots deep in the Babylonian, Assyrian and Sumerian banking systems which had used gold and silver shekels as money in lending and borrowing.

Banking was practised to facilitate the commercial activities which affected economic life as a whole. Law also played an important role in commercial affairs and Hammurabi code laid down in the 17th century BC specified the bases and the instruments which people should follow in their daily commercial transactions. There is evidence that commercial activities, loans and credits were available around the middle of the second century BC (Al-Nejefy 1981, 29 & 43) and that these activities were not limited to Iraq, but extended to some other neighbouring countries. The Assyrians established a commercial centre in Anatolia at the beginning of the second century BC and there is evidence from many surviving tablets that banking documents such as promissory notes, credit drafts, and some other commercial documents were exchanged between that centre and Assyria during the same period (Baker 1955, 436).

The Egibi house of banking and commerce operated for about four centuries and some of its documents have survived, including details of loans, credit and promissory notes exchanged between citizens of many cities in Iraq (Gnaimah 1924, 54-56). Banking activities in Iraq, from about the sixth century BC onward, continued to develop in quantity, geographically and in the type of the services provided, until just prior to the advent of Islam. These activities flourished in *Al-Hearah*, where many commercial and banking centres were established to provide credit and loans facilitating trade [17] (Gnaimah 1936, 93/94).

Soon after the foundation of both Basrah and Kufah in the middle of the seventh century, in the Islamic state of Iraq, they became important political,

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[17] Al-Hearah was one of the most important commercial and educational centres in the south west of Baghdad.

educational and commercial centres. This was especially true of Kufah, which subsequently became the capital of the Islamic state for some time in the seventh century AD. The two cities received the taxes collected from many provinces, i.e. Kufah received the tax from the western provinces while Basrah received those from the eastern provinces, stimulating economic activity and increasing the need for financial institutions to provide banking services, because these two cities became important educational and commercial centres which attracted many migrants (Al-Ali 1969, 233; Al-Mosemy 1982, 94). Many business people invested their money in banks which provided loans, accepted deposits, organised transactions and prepared their documents. Such activities subsequently extended to other Arabic and Islamic countries (Al-Ali 1969, 279 & 290).

Banking became important. The flourishing economic conditions in Iraq attracted businessmen from Yemen and Egypt to migrate to the Iraqi cities and invest their funds in Iraqi projects. Sometimes they set up their own businesses there and encouraged people to learn more about these types of business (Al-Zubaidy 1970, 171). Banking reached its highest level in Baghdad when Baghdad became the capital of the Islamic state and a centre for education, science, politics and the economy, and attracted people from all around the world, in the ninth century AD. This migration brought about a considerable increase in the population of Baghdad, which in turn led to a great increase in the volume of local and foreign currencies being circulated. This created a need for more banking services (Al-Urainy 1950, 160).

Banking continued to develop till the middle of the tenth century and banks adopted most of the types of documents used in our banks today. The most important development, however, was the use of cheques, credit drafts and promissory notes to complement coins as a means of exchange (Al-Tenooky 1971-73, Vol.3, 253).

This economic prosperity, however, was relatively short-lived and after the end

of the twelfth century, some businessmen started to emigrate from Baghdad to establish businesses in Egypt and Spain. They took their expertise and professional knowledge to these new places, which in turn became important centres in their regions, and eventually spread banking business around the Islamic state as a whole (Fishel 1933, 591).

11.2 THE DUTIES OF THE MONEY EXCHANGERS

The money exchanger played an important role in the economic life in the Islamic state. The lack of separation between banking and commercial operations caused the early money-changers to be both bankers and traders and made banking operations dependent on commercial operations. Banking operations as a result remained wrapped with the skin of commercial operations, thus prospering or lapsing with them; consequently they remained inextricably tied and bound for many centuries and were unable to survive independently.

According to Naser Khasro Alawi (1945, 69) in his book entitled *Safarnama*, there was an active market in money changing between the years 437-444 A.H. in Basrah:

> A market is set up in three locations in Basrah every day: in the morning, exchange is carried out in Khaza's market, at noon, in Othman market and at sunset in Qaddahin market; the work in a market is as follows: every person who has money gives it to the money changer and takes in return a cheque and then buys all his needs and pays for them by the money changer's cheque; a purchaser uses no other than the cheque of the money changer so long as he is resident in the city.

A few of the most important duties of the money changers are described below.

11.2.1 *Money Valuation*

The duties of the money exchangers who were employed by the banks included differentiating between good and bad money, checking the purity of the money and deciding on the purchasing power of the coins (Al-Asfehany). The bankers were highly experienced in ways of selecting the correct coins in their dealings and distinguishing good money from bad.

Methods of testing and differentiating between good and bad coins might be simple or complex. For example, the banker might test a Dinar by bringing it close to his hair and observing whether or not the coin stuck to it. If it stuck, then the Dinar was proved to be good and could be trusted; if not, it was rejected (Al-Jahud 1976, 11). Another method was to break the coin or file it to enable the banker to see the real metal in the coin. Also, the coin might be bitten with the teeth; if it was soft and bent easily, it was a good coin; if not, it was bad (Al-Alsulusy 901, 24). Another method was to warm the Dinar; if it was adulterated with silver or copper, its colour would change to black or grey respectively (Al-Demeshky 1977, 24).

Many writers believe that the best way to test the gold Dinar was to put the coins in a vase, together with salty water. The mixture was warmed for about 20 hours. If the coin was shiny on being taken out of the liquid, this proved that it was genuine (Al-Demeshky 1977, 24/25). These methods indicate that those who worked in the banks had some skill in detecting counterfeit coins; an important requirement for the job, because it seems that every transaction needed one or more of these methods to be applied in order to make sure that the money received is genuine and could be trusted.

The silver Dirham was also open to adulteration by professional counterfeiters. Therefore, it was the duty of the banker to check whether any cash received was genuine or not. Again, there were many ways of doing this. For example, a coin

could be tasted. If it was bitter, then the coin was bad (Al-Jahud 1976, 11). Another method was to warm the coin. If it was black, then the coin was a counterfeit (Al-Demeshky 1977, 25). Al-Kasiny (1155, 87/88) has suggested that there were more complex tests used to determine the purity of the metal in the coins. For example, the specific density of the metal was calculated by weighing it in a sphere and then in water. From the relationship between the two weights, it was possible to determine whether the coin was of gold, silver or a mixture of both.

11.2.2 *Money Exchanging*

This was one of the most basic and important jobs of the money exchanger in a city like Baghdad, the capital of the whole of the Islamic state at that time. There were many local and foreign coins used, which necessitated the availability of banking services and experienced bankers and accountants to deal with the financial and commercial affairs of both native citizens and foreigners. The main work of the banker was to exchange currencies; for example, exchanging Islamic Dinars for foreign money, changing Dinars to Dirhams or vice versa, according to the customers' needs (Ebn-Abdoon 1028, 58). The work of the bankers depended on the following two factors:

a The number of available currencies.

b The rates of exchange.

11.2.2.1 <u>The Number of Available Currencies</u>

There is evidence that different Dirhams and Dinars were used in various regions of the Islamic state (Al-Ye'agooby 1926, 59/60). These coins came into Iraq in various ways (some of which are described below), because Baghdad was the capital of the whole of the Islamic state.

(a) As tax was collected from different regions under Islamic administration, therefore, gold Dinars and silver Dirhams paid as taxes varied in weights and in the purity of the valuable metals. This was especially true at the end of the 10th century AD. However, Zaidan (1926, 59/60) argued that the weight of coins varied from place to place depending on the weight prescribed in the minting rules for the local market.

The state employed many people in the Bait-Al-Mal, who acted as its own agent, bankers and accounting officials. They calculated the salaries of other employees and other expenditures and then deducted these items from the local tax they had collected. Al-Kutuby (1970, 75) explained that, in the 10th century AD, the state paid the salaries of the army out of the money collected from Egyptian tax payers, by the state agents. The money and the other resources available in the Bait-Al-Mal were managed by the Jahabedah (the accountants or treasurers), but when the money was dealt with in the market place, this was done by the bankers.

(b) Foreign businessmen who came to Iraq brought with them their local coins. These increased the supply of money in Baghdad and other Iraqi cities. Many scholars (e.g. Al-Tenooky 1971 - 1973, 234; Al-Tenooky 1978, 219/221; Gointein 1967, 61; Al-Nesfy 1311, 136) have argued that businessmen migrating from all the neighbouring eastern countries to Iraq brought large amounts of money to invest in Baghdad. This apparently was due to the flourishing economy and the availability of banking services which opened the opportunity for investment.

(c) Another way money came to Iraq was via the poets, scholars, scientists, and the poor who were given money as gifts and charity which were coming from all around the Islamic state. Even though this might have represented only a

small proportion of the total, it played a part in the many kinds of currencies available in the markets of Baghdad and other Iraqi cities. This provides evidence that the money exchangers played an important role in facilitating the banking services, e.g. dealing with the transformation of private money. Al-Hunbely (1278, 157) recounts another instance of a philanthropist from Egypt who sent about 1.2 million gold Dinars to Baghdad between 868 and 883 to be spent on the poor, jurisprudence and science, thus contributing significantly to the money supply in Iraq. The money received by the banks had to be recorded and the depositor had to get a receipt for it. The receipt had also to be kept in a safe place to be used by the holder as proof of ownership of the money deposited.

It could be concluded then that changing and transferring money were the most important activities of the money exchangers and accountants in Iraq, involving as it did, valuation and recognition of the weight differences between the various coins used. It could also be concluded that changing and transferring of money was done according to the price and the value of the goods and services, determined by supply and demand, and also according to the supply of gold and silver which were used in minting money. Political circumstances had some effect on the value of the coins, as was shown in the section concerning money, earlier.

11.2.2.2 The Rate of Exchange

The rate of exchange between currencies varied. For example, the value of the Dinar varied between 10 and 300 Dirhams for the period between the second half of the 6th century and the 11th century. The following factors could have accounted for such great variation in the value of the coins:

(a) Economic and political factors relating to the expansion of trade within the

Arabic Islamic state, and the resulting need for fair exchange of many kinds of currency and for the valuation of the different currencies in circulation, were important factors. In addition, gold and silver were extracted in various regions of the state. For example, several scholars (Al-Mekdesy 1906, 231; Al-Ye'agooby 1891, 335/336; Al-Bairoony 1935, 247; Ebn Rista 1801, 113) have suggested that the best gold could be extracted from Sudan, Egypt and Yemen. Silver could be extracted from Yemen, Morocco, Asfahan, Kerman and Kurasan (Al-Bairoony 1935, 268; Al-Mekdesy 1906, 231; Ebn Riska 1801, 156). The flow of these two metals from these regions was affected by political circumstances. Any political disturbance could adversely affect the supply of gold and silver, which of course would affect the rate of exchange, especially since some of these regions paid tax in gold.

(b) The purchasing power of money was sometimes fixed according to the prevailing general conditions of the market place, which was linked to the commercial circumstances of the region. This might be affected by many factors, such as, population density, the amount of money in circulation, and the quantity of the goods and services available for exchange, which could sometimes lead to money inflation.

(c) The purchasing power of money sometimes depended on the strength or weakness of the economy and state's financial and commercial relationship with other countries, because these factors could (i) affect the amount of gold obtained from the foreign traders who came to Iraq from different parts of the world, and (ii) could lead to loss of gold to other countries, since commercial transactions had to be settled in gold. The maintenance of a good economic and financial relationship between the Islamic state and its neighbours depended on the safety of the commercial routes between these countries; for

example, the problems which the caravans could face had an adverse effect on the supply of gold in circulation.

(d) The monetary policy of the state aimed to fix the standard, weight, type (gold or silver), and amount of coins to be minted. Sometimes it was decided to increase or decrease the weight and standard of the valuable metal used in the coins, which affected the rates of exchange. There was a strong connection between the quantity of coins minted by the state and the rates of exchange of the Dinar and Dirham, which also affected the purchasing power of coins in circulation. To overcome the economic problems which were caused by the shortage of coins, it is reported (Al-Tebery 1976, Vol.8, 446; Al-Mesoody 1966, Vol.4, 103) that the state sometimes decided to collect and melt down gold and silver vessels to be minted as coins, as happened in the 9th and 10th centuries AD.

(e) The purity of the gold and silver coins also affected the rate of exchange. There were some Dinars with a high standard of purity, while others were of a very low standard, due to the high proportion of base metal in them. It is now generally agreed (Bacharah 1968, 310) that there were many Dirhams in circulation, but the Nicra (the pure silver Dirham) was preferred because of its stable rate of exchange with the Dinar. For instance, it was found at the end of the 11th century that the pure gold Dinar was equal to 13⅓ Dirhams (Nicra) while when the purity of the Dirham dropped to 66⅔%, the same Dinar was equal to 20 Dirhams.

(f) The nature of the coin itself (whether it was damaged or a counterfeit) might have affected the rate of exchange. Al-Bozjany (1971, 339/340) reported how in the 9th century AD, the Dinar exchanged for 13⅓ Dirhams that were considered as Nicra, and for 18 Dirhams that were damaged.

It is interesting that there were some cases of unofficial exchange transactions where the rate of exchange was determined by agreement between the parties concerned. For example, evidence exists of a commercial transaction settled between two parties in the 9th century AD by an agreement on the rate of exchange, ignoring the prevailing rate of exchange in the money market (Ebn Mendoor 1956, 417).

(g) Some scholars (e.g. Al-Doory 1974, 213/214) believe that the value of the Dinar in Iraq also depended on the value of other currencies in the neighbouring countries, based on movement of the gold and silver coins in and out of Iraq and commercial activities between these countries and Iraq. In some cases, the government fixed the value of the currencies in order to control the rate of exchange. For instance, at the end of the tenth century AD, the value of the Dinar was fixed at 15 Dirhams (Al-Migreezy 1967, 122 & 146).

(h) The rate of exchange was continuously changing and this could happen within days, as sometimes happens in international markets in the present day. For example, Goitein (1967, 369) reported that one day at the turn of eleventh century AD, the price of the Dinar was about 37.7 Dirhams; after two weeks the price changed to 28.9. Goitein (1967) gave no reason for this fluctuation in the rate of exchange, but it could have been due to civil disturbance, or the availability of the precious metal, or because of the effect of the demand and supply of the money.

(i) The rate of exchange could be fixed by dishonest bankers who exploited the ignorance of some people as to the true price of foreign coins in the market (Amamuddin 1961, 19).

Although the above discussion was related to the rate of exchange between the

Dirham and Dinar, the same was true of the rate of exchange between the Dirham and the fills. It is agreed by many scholars that the exchange rate between these two coins fluctuated wildly and the Dirham was valued at 20.48 fills to 96 fills, depending on the purity of the Dirham itself for the same period (Al-Tebery 1976, 655; Ebn Al-Fekeeh 1977, 39/40; Al-Baghdady 1070, 69/70; Al-Bozjany 1971, 174).

11.3 ACCEPTANCE OF DEPOSITS

Deposits which the bankers received took the forms of coins, jewellery, and precious stones. They stored and dealt in these assets. There is no doubt that these deposits were the most important resources in facilitating of financial transactions. They provided important liquidity which enabled banks at that time to provide loans and credit. They were also the means of supplying the bank with different scarce coins. Some of these deposits were made by foreign businessmen who came to do business in Basrah, Kufah and Baghdad during the 11^{th} and the following centuries (Kasrow undated, 145/146). The banks derived many advantages from the different deposits, such as liquidity for investment, accumulation of different kinds of coins for commercial purposes, availability of large quantities of valuable metals to mint coins needed for circulation, and important resources for more investment.

Withdrawals from these deposits were mostly by cheques issued by account holders. Abdullah (1308, 22/23) argued that many people who had accounts in the banks used cheques to draw their money. For example, in the ninth century AD, one man withdrew 30,000 Dinars and another withdrew 500 Dinars by cheque from their bank in Baghdad (Al-Baihehy 1906, 191; Al-Tenooky 1978, Vol.2, 192).

There is also evidence (Al-Tenooky 1978, Vol.8, 270/271; Miskewayh 1915 Vol.1, 247/248) indicating that some money was given to the bank as a short term deposit. An example of this was a cheque for poll tax written to the government and

then deposited in a bank in the 9th century. Another example was a loan payment made by cheque for 20,000 Dinars, deposited in another bank in the first half of the tenth century. It was the responsibility of the banker to do all he could to take care of all money in his custody. He had to keep records of the accounts and the names of his clients and the amounts of their assets entrusted with him, and to keep other records of the cheques paid in and their amounts, so that he would know the balance of each account to enable him to close it or clear it altogether if necessary. The clients, especially businessmen, had to keep their own accounts, which was sometimes done by a special accountant. Some of the bankers used symbols which were not easily understood by the uninitiated, to protect the confidentiality of their accounts and to guard against fraud (Miskewayh 1915, Vol.2, 187/188).

11.4 MONEY LENDING

The amount of money lent depended on its purpose and special circumstances. Money could be lent for commercial purposes; for example, a trader might borrow money to expand an existing business (Labib 1959, 234). Evidence exists of a rich businessman who had an account with a bank which provided him with credit when he needed to expand his business (Al-Tenooky 1978, 133). Money was also borrowed for many other different reasons. For example, one of the rulers in Baghdad borrowed money from a bank to reward descendants of the Prophet Mohammed (peace on him) for the land which was taken away from the Prophet's daughter Al-Zehra'a (r) in the seventh century AD (Ebn Abdrebeh 1966, 74), because there were insufficient funds in the Bait-Al-Mal at that time.

11.5 CONTROLLING THE WORK OF MONEY EXCHANGERS

The Arabic Islamic state took care of their people's affairs and livelihood and punished all those who inflicted damage on the public. Therefore, the state controlled the bankers, observed their work and laid down the bases for their jobs, and fixed punishment for any dishonesty. Controls included confiscating counterfeit money, monitoring the scales used for weighing money, punishing acts of usury.

As discussed earlier, some of the coins were counterfeited very cleverly and could not easily be distinguished from good ones by ordinary people, but the bankers could do so due to their experience and training, and they were forbidden to circulate, exchange, or lend any counterfeit coins. The circulation of any Dinar or Dirham of which the proportions of gold and silver were unknown was completely forbidden (Gezaly 1111, Vol.2, 68/69).

The money changers were also not allowed to deal in coins of a lower weight than the standard. They could not buy or sell bad coins. They were under constant supervision by the state to make sure that they did not deal in coins which were not minted in the state minting houses. For example, their coins were regularly checked to make sure that they were minted in the government minting houses and they were not fakes (Al-Hekeem 1960, 56). The weights that the bankers used were also strictly controlled by state governors. Supervision was also necessary to prevent them from engaging in usurious transactions, which were contrary to the Islamic ideology and to ensure that all transactions were carried out legally (Ebn Abdoon 1028, 58). The government employed many inspectors (*Muhtesibeen*) to fulfil the control function (Ebn-Al-rifta'a 1980, 46), one of which was chosen to supervise their work, sometimes secretly by pretending they were buyers or sellers of coins to make sure that all was done in accordance to the law (Al-Tenooky 1978, Vol.3, 60).

The state inflicted severe punishments on those who contravened the law.

These included censure, imprisonment, fines, or even exclusion from carrying out such employment. According to Islam, a person who practised banking was expected to be jurisprudent, trusted, faithful, truthful, knowledgeable about what is or is not legal with regard to the profession, and an expert in his job (Ebn Abdoon 1028, 58). Not only Muslims practised banking. Jews, Christians and people from other religions also did (Al-Mekdesy 1906, 183).

11.6 THE RELATIONSHIP BETWEEN MONEY CHANGERS AND TRADE

11.6.1 *Money Changers Funds*

Scholars have said that many bankers were very rich (Abu Yousif 1935, 123), the richest group in Iraq, and enjoyed a luxurious lifestyle. This is evident from some scholars' reports (e.g. Ebn Addrebeh 1965, Vol. 5, 74) on the life of the rich and the amount of assets they accumulated in practising their business. For example, one person had amassed a considerable fortune and was able to lend out 100,000 Dirhams. Most money changers were wealthy because they worked in this important sector. The consensus of opinion (e.g. Al-Jahud 1925, Vol.4, 434; Al-Tenooky 1973, Vol.9, 90; Ebn Al-Footy 1932, 68) suggests that the main resources of the money changers were their own funds and assets and some of them practised their own trade in Baghdad, Basrah, and Nejef, trading in jewellery, clothes, sugar, timber, food, or in real estate. The nature of their work, which prevented them taking usurious interest, forced them to enter the trading sector, which helped them to escape legal punishment by investing their money in business that would return profit rather than just lending for usurious interest. Many steps were taken to make transactions comply with Islamic law (Shari'a); for example, the religious leaders gave their opinions on speculation, transfer of money, hire purchase, instalment payment of delayed loans,

and the transfer f a debt to another person (promissory notes (Al-Jahud 1925, 434; Al-Tenooky 1973, Vol.7, 90; Ebn Al-Footy 1932, 68).

Some bankers were employed by the government as ministers, high-ranking military officers, and financial advisers and received payment from government (Al-Anbarry 1977, 373). By receiving large salaries from the government and from banking, the bankers accumulated great wealth and high financial liquidity which was invested in many types of projects. They charged 1 - 10% of the value of each transaction for their services, while they charged 4 - 10% on entrusted properties and deposited assets. The bankers also charged their clients up to one Dirham on each Dinar when they came to cash their cheques (Al-Tenooky 1978, Vol.2, 192/193).

11.6.2 *The Role of the Money Changers in Supporting Trade*

Banks are normally established to facilitate monetary services and circulate coins which are needed in daily transactions in the markets. Banks under Islamic government were no different. Their responsibility was to make the coins minted by state available for circulation and they played a considerable role in carrying out monetary reforms during the whole period of the Islamic state. For instance, they withdrew old coins from the markets and then sent them to the state minting houses in order to be reminted (Al-Ali 1969, 297). They also played an important role in the Iraqi markets, which used to have many kinds of Dirhams and Dinars of different weights and purity. Much evidence (e.g. Goitein 1967, 239) exists to show that Baghdad, between the ninth and eleventh centuries, had very large markets with many traders from many countries doing business in many kinds of goods and services. There was a market for every city or community of the Islamic state, to which the traders from those parts came and did business; for example, a merchant went to market in Baghdad which dealt with his part of the world to buy the goods and coins

he needed and to sell what he wanted to sell. The duty of the bankers was to fix the prices and the exchange rates of the currencies according to the supply and demand mechanism in the market, not according to the standard fixed by the state.

When the state realised the importance of banking to business, orders were made to encourage the establishment of banks in each market, to provide citizens and outsiders with banking facilities. In Wasit city, in the south of Iraq, the markets were organised according to the kind of trade carried on, and no other trade could do business there. Therefore, each trade had its own market-place, separated from the others. In Basrah, there were many active banks which had many kinds of currencies poured into them from different parts of the Islamic state and this gave them the opportunity to expand their business and services. For example, they had considerable power in fixing the prices or exchange rates of foreign coins, determining the degree of purity of the valuable metal in the coins they had received and suggesting the floated prices of gold and silver. However, banking services reached their highest level at the end of the 10th century (Al-Ali 1969, 295/296).

It could be concluded that banking business played an important role in the economic life of the inhabitants by serving as depositories for their savings and facilitating their economic transactions with foreigners who came through the port of Basrah, and who used cheques in settlement of transactions made. The bankers met every day with their clients to discuss their commercial problems and to find ways of solving them (Al-Doory 1974, 166).

In addition to the banks founded in each market, there were also special markets for the banks themselves, as for any other business or trade, in many cities like Baghdad, Basrah, Wasit, Kufah, and Samara (Al-Tenooky 1973, Vol.2, 192/193). The availability of banks was important for both the seller and the buyer because they both came to them when they had agreed among themselves upon commercial

transactions, to make sure of the purity and weight of the coins (Al-Kubaisy 1983, 245). Therefore, some businessmen employed agents to organise their financial affairs and undertake their business transactions for them (Al-Tenooky 1978, Vol.4, 251).

Bankers also formed business partnerships which affected the extent of trade. Al-Mudarebah, a kind of corporation established by private individuals also existed. One party provided capital to be utilised for business purposes by another under the agreement that profit from the business would be shared in agreed proportions. The Mudarebah established between bankers and others were of two kinds. In the first, the bankers used their expertise and knowledge of commerce, but the capital was provided by depositors. In the second, the bankers provided the capital and the other party used it in business (Miskewayh 1915, Vol.1, 257). Bankers also established some companies among themselves, with large amounts of capital, and they financed the commercial caravans which travelled all around the large cities and the Arabian Gulf, bringing gold and precious stones from the neighbouring countries. This was an important way by which the state obtained the valuable metals and encouraged the small banks to come together to establish bigger banks, which carried out all kinds of business in the big cities. This shows a high level of understanding of how important the banks were and the important role they played in the Iraqi economic life.

11.6.3. *The Risks that the Money Changers Faced*

Like any other business connected with money, banking was not always profitable, but involved some element of risk, since capital was tied up with loans which could be at risk of bad debts, and in Mudarebah or partnership, which also carried the risk of loss. Banks could face bankruptcy at any time, therefore, they had to be prepared to face such problems. However, they received about 50% of the total value of the capital they had as a buffer against such risks (Al-Zeyat 1937, Vol.2,

136/137).

Another risk involved in banking was connected with the kind of coins that the banks had. It has been stated earlier that sometimes the state might mint money containing a very low percentage of valuable metal for one reason or another. There might be problems for banks carrying large amounts of such coins when circumstances changed and people became reluctant to accept them in the settlement of transactions. The reduction in the purchasing power of some coins which could be created by the state's decision to fix the rate of exchange is another risk that banks might face. An example of this happened at the end of the 10th century, when the state fixed the value of the Dinar at 150 Dirhams, compared to 20 Dirhams for the old Dinars (virtually depreciating Dirhams enormously), which caused a lot of social disturbance and inflicted great harm on the banks in turn (Al-Migreezy 1940, 64/65).

This chapter and the preceding ones have given an indication of the range, sophistication and complexity of commercial activities in the Islamic state. This complexity, together with the risks and responsibilities involved, obviously necessitated accurate record-keeping and the existence of a body of people with special knowledge of financial dealings, who can be described as the fore-runners of today's accountants. Their role will be discussed in the next chapter.

CHAPTER TWELVE

ACCOUNTING AVAILABILITY DURING THE ISLAMIC PERIOD

12.1 INTRODUCTION

Accountancy was practised in the Islamic state, especially in the 8th century AD by the *Jahbed*[18] Ebn Mematy (1943, 297 & 309) argued with a great deal of evidence that a *Jahbed* also specialised in accountancy techniques which were much in demand in the state's managerial and financial organisations. He was a clerk who supervised the receipt of funds coming into the establishment and was accountable for what he received and disbursed on behalf of the state (Ebn Mematy 1943, 297 & 307). The financial transactions practised by the *Jahbed* varied in nature according to the post he held. Some scholars believe that the *Jahbed* was simply a consultant who distinguished good money from bad (Al-Bustany 1931, 135). Others regarded him as the palace whiz-kid (encyclopedia) to whom transactions were referred so that a decision could be made as to their legality (Al-Zeyat 1937, 133). Still others believed that the *Jahbed* combined the consultancy roles of a bookkeeper, a banker, a financial agent, a tax collector, a money exchanger, a cashier, and a decision maker in regard to tax spending and management of the state treasury.

Thus the *Jahbed* is an all-purpose person engaged in accountancy and the use of financial techniques to solve many of the administrative problems in the Islamic state. Many scholars (e.g. Bosworth 1969, 122; Cointein 1963, 295; Amedroz 1908, 432) have suggested that the *Jahbed* was a consultant, banker, treasurer, tax collector and cashier. As a government official, the *Jahbed* was connected with receiving income which came to the state for various reasons, auditing the accounts which were required by the state budget, exchanging money, and preparing the necessary

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[18] A general term denoting a professional person, but used particularly of one specialising in financial accounting and banking affairs. The word was connected with gold and silver testing and valuation and the *Jahbed* was the consultant in money dealing (Al-Semaiary 1166,434; Al-Zabaidy 1970, 558). In short, a *Jahbed* was an all-purpose business adviser who includes accountancy in his/her portfolio of services.

documents and processing payments and expenditures. All these jobs required a person with professional knowledge of money testing and valuation, book-keeping, and management. Some scholars (e.g. Al-Doory 1974, 157) have distinguished between a money changer and the *Jahbed* in that the job of the former was restricted to market activities, commerce and banking. Some money changers were businessmen, while others dealt with banking and investment. The *Jahbed*, in contrast, was a banker and money changer who was a consultant to the state or a company ad often dealt with a specified office of the state or company. The title *Jahabedah* (the plural of *Jahbed*) reflected the superior knowledge and intelligence needed to perform their professional duties. The Jahbed was not employed by the state, but he also did jobs for private people and was sometimes self-employed (7).

12.2 THE DUTIES OF THE *JAHABEDAH*

Early discussion (in Chapter Eleven) described the *Jahbed* as a professional who practised banking, financial administration and consultancy in all financial and monetary matters, management, and book-keeping. Abu-Ubaid (1975, 345) opined that the state was usually anxious to employ people with the knowledge of the *Jahbed* to facilitate the determination and collection of tax and to allocate expenditure to its services to the people. Modern accountants have to be familiar with law and finance, as well as accountancy, and scholars suggest that the same applied to the *Jahabedah* of the Islamic state of Iraq (Abu-Ubaid 1975, 345). The state employed such people from the outset of the Islamic era. For example, Ali bn Abi Talib (R), the fourth Rashidum caliph, employed experts to manage the financial affairs of the state (Ebn Abdul-Hekeem 1967, 169; Al-Uzdy 1967, 214/215).

The *Jahabedah* carried out tasks in the following areas:

- Managerial and financial duties;

- Financial control;
- Banking.

12.2.1 *Managerial and financial duties*

The duties of the *Jahbed* can be understood by looking at the areas where he was employed which required knowledge of accounting and finance such as book-keeping and auditing. As part of his managerial and financial activities, the *Jahbed* might operate in the following specialised areas:

12.2.1.1 Tax Office

The total amount of tax to be collected was determined in advance by reference to the amount needed to cover the cost of the state's plans and for unforeseen expenditures, projects and services. Therefore, it was important to employ some people with the estimation ability. The *Jahabedah* were experienced in such tasks, having extensive knowledge of Islamic tax law, considerable mathematical ability and integrity. There is little evidence regarding how the *Jahbed* acquired this knowledge and skill, but there is some indication that some people had special education in the *Kuttab* (some old private schools) which taught many subjects starting with Reading and Writing, up to specialization in any field of knowledge such as Languages, Religion, History, Law, Medicine, Mathematics, Astronomy, Finance and Commercial Arithmetic (Ebn Mematy 1973, 71). Ebn Mematy (1973, 297-307) argued, with a great deal of evidence to support his argument, that the *Jahbed's* job was connected with bookkeeping, cashing money, budget drawing and account preparation. The *Jahbed* fulfilled an important role in the tax office management and some of his duties were:

(a) Calculation of the total amount of taxation to be paid by land owners and

landlords (Al-Mawerdy 1978, 207). To do this, the *Jahbed* had to know the area of the land, and its estimated produce. Sometimes the tax was in cash, while in some other cases it was levied in kind. Land tax was for fixed rate which reached 10% of the yield of the land (Al-Boozjany 1971, 278/279).

(b) Preparation of daily, monthly and annual accounts and other statements for submission to his superior, either in the public or private sector. The daily accounts prepared were similar to those which are prepared by accountants today, with separate sides for income and expenses.

The following are examples of how some transactions were recorded (Goinein 1966, 36/38):

First example:

line

1 - Sunday, 19 Muharram[19]

2 - Abu Yahya credit, a purse of 11d. exactly

3 - From Ibrahim

4 - Monday, 20 Muharram

5 - Abu Yahya (lost) from

6 - Ishaq in the house of exchange

7 - Exchange 11⅛d. ½q[20]

8 - Wednesday, 22 Muharram

9 - Abu Yahya cr. from Abu'l-Khayr by rate 20 d. exactly

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[19] Muharram is the first month in the Islamic year

[20] d. denotes the golden Dinar while q. denotes qirat which is 1/24 of the Dinar.

Second example

Line

1 - Barhom cr. from Ben Marasseh

2 - 10½ ¼d.

3 - Total in gold

4 - 54 (in Arabic characters:) less ⅛

Third example

Line

1 - Thabit debit, a purse of Ishaq

2 - 11⅛d. ½q

3 - Dr. rate to Ishaq 12⅔d. ½q

4 - Dr. to Ibrahim a purse

5 - To Ibrahim 11d. exactly

6 - Dr. a purse to Ibrahim 8d. exactly

7 - Total 42½d. ⅓q

Fourth example

Line

1 - Debit, Thursday 23 Muharram

2 - Note to Ab'l-Khayr 20d.

3 - Dr. a purse to Abraham 5 1/6d. 1q

4 - Dr. a purse to Al-Ansary 3d. exactly

5 - Cr. on the same day 400 Dirhams exactly

6 - Friday, 24 Muharram

7 - 300 Dirhams

Fifth example

1 - (In Arabic characters) Debit. Then encircled and crossed out

2,3 - Abraham: Debit 25d. and 1h[21]. Credit 17¼ less ¼ cr. 47¼

4 - My belongings: with Yafi 2 1/6d

5 - Width Zikri 3⅓ ⅛d.

6 - With Ishaq in the exchange 2d. 1q

7 - In my purse ½d. and ⅛d.

8 - total in gold 8 1/6 ⅛d.

Statements were prepared, giving details of income and expenses for the whole month, which also included a balance for the month (Ebn Mewaty 1943, 307). Annual reports included the total amount of tax received, the total amount of expenditure, and the balance due to the *Bait-Al-Mal* for the year (Boswrth 1966, 122).

c) Book-keeping was also performed by the *Jahbed*. It was important to audit and control the records which were sent to the main office and to make sure that these were properly kept. A discharging book was kept, which contained information such as the names of the tax payers, the amounts and date of the tax payment to date, and details of witnesses (Al-Kewarismy 1926, 37). Evidence, dating back to 772 AD, in the museum of the Louvre, shows the name of a person paying tax for cultivated land, the name of the person who received it, and the name of the witness (David 1971, 12/13).

Payments were recorded in a separate book containing information such as the name of the clients who should pay tax, the amounts to be paid, the amounts

[21] h denotes habba which is 1/72 of the golden Dinar

already paid, and the balances due (Cahen undated, 249).

d) The *Jahbed* was also responsible for the forwarding of the balance of the fund collected from tax payers to the Bait-Al-Mal. It was not necessary for the balance to be paid in cash; it could be paid by cheque? (first known in the Islamic state in the seventh century) or by any other negotiable instrument which could easily be converted to cash.

12.2.1.2 The *Bait-Al-Mal* (The Central Bank or The Treasury office)

If a person's knowledge of a range of financial affairs, has reached the level of that expected of a *Jahbed*, he might be transferred to a post in the state's treasury office, where he would help organize and classify the treasury's income and expenditure. This work was important as the income which was collected in Dirhams and Dinars might need to be exchanged local currencies because they may be paid in foreign coins. The job, therefore, needed someone who had experience in and knowledge of the value and purity of such coins. The *Bail-Al Mal* used the services of the *Jahbed* from the establishment of the Islamic state in the sixth century. For example, the fourth caliph of the Rashidum caliphate employed many *Jahabedah* to deal with the financial affairs of the state (Abu-Ubaid 1975, 345). Income were usually received in coins; for instance, records show the receipts of 40,000 Dirhams from the city of Mosul in the north of Iraq by a *Jahbed* of the treasury in Baghdad in the eighth century (Al-Tenooky 1971-1973, 72/73). Receipts might also be in the form of bills of exchange, which the *Jahbed* would exchange for cash (Fishel 1933, 577).

There is evidence (Al-Askery 1966, 205) that *Jahabedah* acted as agents for their employers in the payment of expenses. In one instance, 10,000 Dirhams were paid out of the *Bait-Al-Mal* by a *Jahbed*, on the order of a caliph. The *Jahbed*, had

to keep books in which he recorded all the transactions which came to him to be settled. He signed receipts for the funds coming in, recorded the details of the transactions, and then prepared the financial statements which had to be stored in the *Bait-Al Mal* for checking. Evidence survives to prove that the *Jahabedah* who gained great knowledge and experience in financial and accounting matters could be promoted to the post of head of the *Bait-Al-Mal* (Al-Tenooky 1971, Vol. 3, 217-320).

12.2.1.3 Expenditure Office

The *Jahabedah* who were in charge of the financial affairs in the expenditure office worked on one or more of a series of committees formed to perform various functions:

(a) Building committee which was responsible for building and repairing state buildings (Al-Katib 1981, 34).

(b) Wages and salaries committee, which was responsible for the payment of the wages and salaries of state employees (Al-Saby 1958, 15-37).

(c) Palace staff expenditures committee, which dealt with matters connected with the salaries and wages of staff working in the palace (Al-Samarayee 1971, 233).

(d) Animals and pets committee, which was responsible for dealing with the expenses necessary to feed the animals in the palace and the payment of their keepers (Al-Katib 1981, 34).

(e) Emergency committee, which dealt with matters such as offering presents and gifts from the ruler and his ministers to the people, prizes and emergency aid in times of disaster (Al-Samarayee 1971, 237).

The *Jahbed* in charge of each committee had to prepare financial statements and reports detailing the total amounts spent by the committee and then compare the

amounts with the budgeted amounts. No discrepancy between the reports and the accounts was allowed and the statements were sent on a monthly and annual basis to the *Bait-Al-Mal*, to be checked and compared with the amounts of the cheques received by the *Jahbed* and with spending orders made by the *Bait-Al-Mal* to these committees.

12.2.1.4 The State's Support Office

This office was first established in the Islamic state in 916 AD. Its main duty was to receive special presents and donations from the people from different regions controlled by the Islamic state (Al-Saby 1958, 15-37). This office was probably set up because the amount received from people as donations was so large that its administration needed to be well organised. The *Jahbed* covering this office had to prepare a daily statement detailing how these donations were used. For example, in 916 AD the *Jahbed* covering of such an office prepared an account showing that 1,000 Dinars had been given to the ruler, 300 Dinars to the ruler's mother, and 200 Dinars shared equally between the two sons of the ruler to cover the daily expenses of the ruler and his family (Miskewaih 1914, Vol. 1, 14). He also had to prepare a monthly report for the total amounts paid to the ruler and his family, which totalled 45,000 Dinars and had to draw up a statement of what was received from foreign countries. For example, Miskewaih (1914 Vol. 1, 14) reports that a total amount of 1,200,000 Dinars was received from Egypt.

12.2.1.5 The Endowment Office

Endowments were possessions donated for charitable purposes, and an office was established to deal with spending from this source. Like any other office, it needed individuals with knowledge of accounting and financial matters to organise and

control incoming funds and expenses. During 913 - 916 AD the state employed the *Jahbed* Isa Al-Nakid, because of his good reputation, to manage the endowment office. Historical evidence (Al-Saby 1958, 216; Al-Hemawy 1936, 14) suggests that Al-Nakid had considerable knowledge of accounting and financial affairs. In one of the four years Al-Nakid was employed, the income to his office was about 93,000 Dinars. The *Jahbed* covering this office had to classify many groups of expenses and he had to keep records and to arrange for the monthly statements detailing authorised expenditure from the fund. For example, in 966 AD, an order was made to spend 10,000 Dinars on charity and for monthly payments of 2 Dinars to be made to poor persons (Al-Tenooky 1978, 218).

12.2.1.6 The Military Office

The duty of this office was to manage the affairs of the military personnel in the Islamic state. There is no evidence of when this office was first established or first employed the *Jahabedah* to manage its financial affairs. There seem to be consensus in the belief that the creation of a military resource would probably have coincided with the establishment of the Islamic state in the sixth century. The main duty of the *Jahbed* covering this office was to arrange for the payment of military personnel and to prepare periodic financial reports for submission to his superiors. These reports included the names of the personnel to whom payment was made. The reports included information such as the amounts paid, the amounts still to be paid, the names of people who had, for some reason, not received their money and any deductions made from the payments, such as the repayment of loans given to the soldiers. These statements were made monthly and submitted to the *Jahbed*'s superiors to be checked and filed for future reference. The *Jahbed* sometimes had to travel with the soldiers when they were on a campaign, to supply them with financial

services (Al-Tenooky 1978, 138).

12.2.1.7 Land Revenue Office

This office was established in 982 AD to administer the revenue from the land tax which was imposed by the Islamic state at that time. The duties of the *Jahabedah* were similar to those of the *Jahabedah* in other offices and the office was abolished in 989 AD when the land tax was abolished.

12.3 FINANCIAL CONTROL

The Islamic state of Iraq also employed the *Jahabedah* to audit the state's accounts within some managerial organisations specialising in this field. Some of these organisations audited the work of the offices previously discussed. Their main duty was to preserve the income and expenditure which represented part of the *Bait-Al-Mal*. Two of these organisations are listed below and discussed in that order.

(1) The council of the *Jahabedah*; and

(2) *Jahabedah* (Accounting) committees.

12.3.1. *The Council of The Jahabedah*

The duty of this council was to audit and control the work of the tax offices, whether in the capital city or in the other provinces of the Iraqi state. The office specialised in financial matters, and its work was carried out by eight boards, each of which specialised in certain tasks. The most important of these were the Board of Accounting and the Board of Auditing (Al-Samarayee 1971, 196/197). Taxes were sometimes received in cash and sometimes in kind and it was the responsibility of the Board of Accounting to administer those taxes which were received in kind and to calculate the amounts due, classified according to type. The responsibility of the

Board of Auditing was to check the information collected by the Board of Accounting and study the lists of the tax to be collected or already collected for each kind of tax and the accounts prepared in accordance with them. It was also responsible for the control and safekeeping of the funds and assets in the treasury.

12.3.2 *Jahabedah Committees*

These organisations were part of the *Bait-Al-Mal* and employed managerial and bookkeeping personnel who studied the financial affairs connected with the income and expenditure of the *Bait-Al-Mal.* There is no evidence as to when these committees were established, but they were first mentioned in 928 AD. They represented the tax office, and their main duty was to determine the amount of tax to be paid by the private sector and by non-Muslims who lived in the state (Al-Samarayee 1971, 252). The responsibility of any committee was to make sure that the tax was fixed correctly and fairly. This was done by checking the reports and accounts made by the tax officials, which were supposed to be made according to the Islamic law. Monthly and yearly reports had to be sent to the *Bait-Al-Mal* by the head of the *Jahabedah* Committee. These reports contained information such as the total amount of the tax accounts drawn up by the committee, the total amount to be collected during a given period of time, and the actual amounts already collected. The office audited tax transactions with the treasury office, and also maintained the job of the head of the treasury office and supervised the daily and weekly reports sent to the minister of finance. The committee also checked the daily income and expenditure accounts which had to be reported directly to the minister. The head of the committee was eventually second in importance to the minister of finance and was responsible for supervising all the ledger accounts prepared by the head of the *Bait-Al-Mal* and reporting weekly to the minister. Therefore, this committee became the body which

supervised and audited the accounts of the *Bait-Al-Mal.*

12.3.3 *The Banking Services of the Jahbed*

The *Jahbed* carried out some banking services, which are described as:

12.3.3.1 Keeping and Managing Wealth

The wealth which was entrusted to the *Jahbed* was of three types. Firstly, wealth which was confiscated from corrupt officials as punishment for abuse of office. As discussed earlier, such practices were widespread in the tenth century, and involved many top-ranking officials. In some cases, the minister himself and his deputies and surrounding officials were dismissed for misconduct and mismanagement of public money. There is evidence of large amounts being confiscated from some officials. For instance, in the tenth century, 8,040,000 Dinars were said to have been taken away from a few of them (Al-Saby 1958, 245-248). The duty of the *Jahbed*, in this respect, was to record these amounts in the ledger accounts. Some such fines were received in monthly instalments. For example, of a confiscated amount of 700,000 Dinars, only 250,000 Dinars was paid immediately, and the rest had to be paid within 24 months (Al-Saby 1958, 248). Therefore, the *Jahbed* had to keep records of how much had been received, how much was still outstanding, and how much should be paid each month.

Secondly, the *Jahbed* also received the support fund, described earlier from the state's support office. There is evidence that this fund amounted to 1,200,000 dinars in the tenth century (Al-Saby 1958, 38). This amount was paid by cheques or drafts, for which the *Jahbed* had to keep records.

Thirdly, the *Jahbed* had to administer the private wealth of officials such as ministers and other high-ranking officers as well as the ordinary people and merchants,

who entrusted their possessions to the *Jahbed* to invest for them[22]. For example, in the tenth century, a minister entrusted 700.000 Dinars to his *Jahbed* for investment (Al-Kutuby 1979, 69). Another *Jahbed* administered a client's land and other possessions, yielding a return of 250,000 Dinars a year (Al-Saby 1958, 248). Some of the *Jahabedah* had a trade relationship with some of the businessmen. For example, they accepted deposits from them and did business on their behalf. The fees which they received in return for their services depended on the income from the possessions they had under their control and management. The fees received from the first and the second categories of wealth was small, because they were kept for only a short time, but the *Jahabedah* received a high fees for their services in commercial and banking transactions, reaching 12½ - 15½ per cent of the income from each transaction made.

The following extract from Gointein (1966, 39-42) illustrate some of the accounts which were prepared by a *Jahbed* in the Islamic state by the end of the tenth century AD:

First extract

Line	
1	Balance to the debit of my lord, the elder Abu'l-Khayr, after
2	We have made our account: 516⅔d. and 1q.
3	Premium for the exchange of 145 concentric Damascus d. 1½d.
4	For 14⅓ Tripoli (Lebanon) d. 12½ ⅛ less 1h.
5	Premium for the exchange of 100 lined d. 19½q,
6	For 75¼ Tripoli d. and 1 danag in two sales
7	65⅓ less 1h.
8	for 3d. 13½q. of Tripoli 3d. 2q. 1h.

[22] The practice of entrusting one's property to others for profitable use predated the emergence of Islamic religion. For example, Jesus Christ was reported in the Bible (Luke 19: 11-26) to have related the "parable of the ten minas" describing the story of a master who left the same amount of wealth (ten minas each) with ten of his servants and asked each of them to put the money to work until his return. A similar story was related in the Bible (Mathew 25: 14-30) in respect of the p"parable of teh talents" where a master entrusted each of his three servants with varying talents of money and on return, teh master asked each servant to account.

Line	
9	For 23 less 2q. Misr[23]d. 23d. 10q.
10	For 50¼ Tripoli d. 44 less 1½q.
11	Total 667⅛ less 1h.
12	Against this, credit to him
13	Cr. same 1d,. in waraq silver
14	Paid by him to the packer ½d.
15	Paid to me ½d.
16	Cr. a purse 3½d.
17	Cr. a purse of "(the house) the blessing" 20d.
18	Cr. a purse with his seal 9⅔d. and 11.
19	13⅓d., some broken
20	Cr. a purse with his 50d.
21	Cr. a purse of "the blessing" 9d.
22	Cr. a purse with his seal 10d.
23	Cr. a purse of Al-Ansary 15d. 1q.
24	Cr. a purse of Musa 6d. ½q. ¼h.
25	Cr. a purse of Muhammad b Ali 11d 2q.
26	Cr. a purse of Abu Nasr in the Rice-house 11¼d
27	Cr. a purse with the seal of the treasury 66⅔d.
28	Cr. a purse with the seal ...d.
29	Cr. a purse with the seal of ... 10d.
30	Cr. a purse with the seal of the Treasure 50d.
31	Cr. 2⅔d 1q.
32	Cr. a purse of Ben Darraj 8½ ¼d

Apparently, this extract revealed a cash account, prepared by a bank *Jahbed* which shows that the clients of the bank included ordinary people and some departments of the state. This could be noticed in lines 27 and 30 for evidence of transactions with the *Bait-Al-Mal* (the treasury or the central bank). From the word *waraq* (paper or paper note) mentioned in line 13, it could be inferred that banks might have used notes in transactions.

Second extract

Line	
1	Cr. a purse of Salim 11d. ½ ¼d.
2	Cr. a purse of abd'al-Masih 4¼ ⅛d.
3	Cr. for waraq ⅔ ⅛d.
4	Cr. paid by him to the packer ⅔d. and 1q.
5	Cr. a purse with his seal 11d. less 1/6.
6	Cr. a purse with seal of his neighbour 10d and ...

[23] Misr in Arabic means Egypt

7 Cr. for the price of Atfihi flax through the stranger 31d. less ...
8 Cr. also paid to the packer ⅔d. 1q.
9 Cr. a purse with his seal 24d. some broken
10 For 5 waraq Dirhams ⅛d. 1h.
11 (Total) 1½d. 1q. 1h.
12 Cr. also a purse with his seal 24d. exactly
13 Cr. a purse from Musa 5⅓ ¼d.
14 Cr. a purse of Abu Salih 5d. less ⅛
15 Total (of the 3 last lines) 38⅓ ⅛d.
16 The two totals 449d. 1h.
17 Balance to his debt 218d. 2q. 1h.
18 Debit after this: Damascus ...d. 155½d. 1q., including 16 Misr d.
19 Dr. balance of a purse 3d. less 1/6
20 Dr. 5d. less 1q.
21 Dr. also 48½ ⅛d ½q.
22 Total 211⅔d., except the agio for him
23 (Grand total 439⅔ ⅛d. less one daniq
24 Cr. through a rate to Abu Turab 41d. some broken
25 Cr. a purse with his seal 9d. exactly
26 Cr. a purse 8d.
27 Cr. waraq silver ½d.
28 Total: 28d. ⅔ some broken
29-33 Right side (Cr. ½ ¼) ⅔ ¼, Cr. total 59d. (⅓) ½ (¼)
Left side: Dr. agio for 100 Damascus d. and 16 Misr d.: 1½ ¼. Dr promissory note Abu Zikri b. Sighmar 41 ½ ¼, to be added to his debit, which is 439⅓ ⅛d. less 1 daniq.

(*Written upside down from lines 29 to 32 between the two half columns "Total 481d 13q. less 1 daniq"*)

(*Written on the right margin from lines 30 to 32 "Cr. 59½d. Balance debit 422d. 1q. less 1 daniq"*)

Third extract

Line

1 Balance to his debit from this account
2 422d (less two q.) 2½h.
3 Dr. 5 Dinars in Dirhams which he (later) paid to Abu
4 Al-Bishr Total 427d (less 2q) 2½h.
5 Cr. ½d. waraq. Cr. a purse of Al-Baghdadi 66⅓d
6 and 3 purses 10d. (less)
7 (And eight and 1q. and ⅛) Cr. 1d. in Dirhams
8 Cr. paid to salih the packer on order 1d.
9 Cr. paid to Zighmar ½d.
10 *Paid to Isma'il* ½d. in Dirhams
11 *Cr. paid to me 1½d. in Dirhams*
12 *Cr. paid on order to Ben al-Manqudi 1d. 11q.*
13 Waraq to me 13q. *he sent with ben Manqur 26d. less (10) 1q., some* broken
14 Cr. paid to Ben Al-Kufi 6d.

15 Cr. 30d. total 200½ ⅛d. ½q. ...
16 (He paid to the order Abu Sulayman Da'ud 200d)
17 Balance to his dr. 200 (...)
18 26d. 13q. except the agio and the 5d in Dirhams
19 He sent a purse with 200 assayed Dinars
20 Balance dr. 26d. 13q. Total: 226d. 13q.

12.3.3.2. Provision of State Credit

The *Jahabedah* also helped to provide the state with funds and credit, either from the fund in their care or by other means, such as borrowing from others. They sometimes acted as agents for the state in levying the various taxes which were calculated by themselves and collected in advance of the date, in order to supply the state with funds to support its projects and meet urgent spending requirements. This was a very important role, especially when the state was in financial difficulty. For example, in the 10th century AD when the state was in a bad financial situation, the ruler called in two of the most notable and wealthy the *Jahabedah* in the state, explained the matter to them, and asked them to lend the state 150,000 Dirhams at the beginning of each month, to be repaid at a later date when the situation would have changed (Al-Tenooky 1978 Vol. 8, 41/42).

The deals which the *Jahabedah* made with the state caused them to win the trust and admiration of the people, which in turn increased the demand for their services, and hence their personal income. The *Jahabedah* supplied funds for businessmen and credit for other people. Rich private *Jahabedah* became well-known citizens, so that if, sometimes, they lacked the necessary resources, they could obtain help from other rich clients, and so were able to provide the state with credit.

12.3.3.3 Settlement of payments:

Many of the ministers, provincial governors and rich businessmen employed their own *Jahabedah* as bankers, bookkeepers, and agents to run their businesses and

invest their money in various projects. One of the *Jahbed*'s duties was to settle payments, because most payments and withdrawals were made by cheque. For example, in the 10th century AD, a minister of state issued cheques worth a total of 1,000,000 Dirhams for transactions with his *Jahbed* (Al-Baineky 1906, 159). Another minister was reported to have ordered his *Jahbed* to pay 500 Dinars to someone to fulfil his part of an agreement (Al-Sefedy 1969, 97). Yet another minister and his son were said to have ordered their *Jahbed*, to pay someone 3,000 Dinars from the income from their possessions. Other examples included a businessman who ordered his agent to pay 5,000 Dirhams to another person who had lost his house in a fire, and a rich person who wrote a cheque for his poor relative (Al-Tenooky 1973 Vol. 1, 157/158).

The *Jahabedah* settled accounts between and on behalf of different people in different regions and adjusted the accounts of their clients accordingly. There is evidence that the *Jahabedah* obtained receipts as proof of the payments they made. For example, in one case, a *Jahbed* had a receipt for 1,470,500 Dinars for one transaction, and another for 180,000 Dinars. Such receipts had to be recorded and the accounts of the clients adjusted accordingly (Al-Saby 1958, 91).

The *Jahbed* had to record all the amounts received and any amounts paid, to keep his clients' accounts up to date, and to be able to ascertain the balance of any account at any time. It was the *Jahbed*'s responsibility to protect his client's interest by checking the authenticity of payment orders or cheques. Al-Tenooky (1978, 218) gave an example of a *Jahbed* who refused to honour the cheque drawn in favour of and presented by a lady for 200 Dinars by one of his clients, and of another *Jahbed* who refused to cash a cheque made out to a poet until he had checked with his client and satisfied himself that the cheque was not forged.

12.4 THE RIGHTS AND LIABILITIES OF THE JAHABEDAH

The work of the *Jahbed* was equally important for both the state and the citizens. Therefore, he had to give some guarantees and assurances that he would perform his duties correctly, faithfully and within the law. He had to be honest and trusted, because he was representing other people's interests. He was entrusted with considerable amounts of money and other assets belonging to the state and the people. Therefore, there was competition among the *Jahabedah* within and between the regions to win the trust of the people, and hence to obtain more business. The state levied tax on the fees of the *Jahbed* at an approximate rate of 2½ per cent of his gross earnings (Al-Boozjany 1971, 279 & 295). If any of the coins he paid to the treasury were false, he had to make up the shortfall. The *Jahbed* also had to pay all the expenses of the caravans from his region, which carried all kinds of goods, to the *Bait-Al-Mal* in Baghdad. Thus, the fees earned by the *Jahbed* was related to the services he supplied to the state and to the people. In some locations, this was a considerable amount, depending on the amount of tax received and the commercial activity of the region of operation.

12.5 CONTROL AND AUDIT OF THE WORK OF THE JAHABEDAH

The work of the *Jahbed* had to be accurate, organised and had to be carried out within the law, because of its connection with the public interest. Therefore, the state exercised control over the work of the *Jahabedah* who were held accountable to the state and were punished for misconduct or poor management.

In many provinces, the general public selected a supervisor who checked the *Jahabedah*'s work. The supervisor checked items such as the amount of money received by the *Jahbed*, the details of the receipts and checked the details of the statements, which should at all times agree with the records. The authorities, such as

the auditing offices, had to oversee and control the work of the *Jahabedah* in this way, because some the *Jahabedah* abused their posts in order to become rich. For instance, some had been known to receive bribes in return for allowing people to pay their tax later than the due date, or to have threatened legal action in order to enforce payment. It was also known that some of them levied excessive tax or over-charged for their services. It could also be arranged for a wealthy client to pay less tax than was due. Often times, corrupt *Jahabedah* would make an agreement with the tax collectors to charge people excessively, so that when the taxes had been collected, they (the *Jahabedah* and tax collectors) would share the surplus (Gointein 1966, 294).

To try to prevent such abuses, the *Jahbed* was required to record everything he received and spent. His accounts and statements were subject to audit by the head office. The accounts had to agree with the statements and any discrepancy found and proved to be caused by intentional deception was punishable.

The *Bait-Al-Mal* had a committee which was responsible for auditing all accounts, whether they were in the state's offices or in the private sector, and checking them against the cheques received and the spending orders. The amounts of the cheques in the accounts had to agree with the total amounts of the cheques received and filed. If this was not the case, the matter would be investigated by a special committee formed by the minister concerned. An example occurred in 927 AD, when a minister borrowed some money. When he returned the money, the *Jahbed* mistakenly did not record it, creating a discrepancy of 15,000 Dinars in the account. The *Jahbed* also had to be very careful when he paid any amount through a cheque, because some of the cheques were false. There is evidence that in 966 AD a *Jahbed* was jailed for paying a false cheque (Al-Tenooky 1978 Vol. 8, 39-41). Because the *Jahbed* dealt with different kinds of people and different kinds of resources, he was under scrutiny from various sources, and his work was checked and

audited regularly. Even so, some of the *Jahabedah*'s books were either poorly organised, or the accounts mis-presented, or parts of the records were missing. However, investigative committees were usually formed to check such accounts whenever there was reason. Sometimes a *Jahbed* was imprisoned or punished in some other way because the minister who employed him was sacked or punished and both were found guilty of financial misconduct (Al-Tenooky 1978 Vol. 8, 100).

It could thus be concluded that accounting as practised in Baghdad during the Islamic state was an important profession. There were separate markets for each area of commerce, e.g. the market for commodities, for precious metals and for the exchange of coins and many others. In all these markets, the *Jahbed* had an important role to play. Therefore, ancient accounting dealt with various financial affairs, as is the case today. It was a risky job which could cost the *Jahbed* his wealth or his life, as happened in 940 AD when the possessions of an *Jahbed* were confiscated and he was executed because his client, a minister, had been sacked and received the death penalty (Al-Saby 1979, 147 & 149).

CHAPTER THIRTEEN

SUMMARY AND CONCLUSION

SUMMARY AND CONCLUSION

As suggested in the Introduction, accounting is a progressive science which develops as it is passed on from one generation to the next. Since knowledge of our past helps us to understand our present and forecast the future, this thesis has reported on a study which sought to add to the understanding of the historical development of the subject by focusing on the origins of accounting in ancient Iraq.

Ancient Mesopotamia (now Iraq) was the cradle of civilization and there is evidence that the recording of financial data was practised there from about 3600 BC, while in the Islamic state from the beginning of the 7th century AD, the scope of accounting activities widened to include auditing and control of business. However, as yet, there has been no systematic and comprehensive account of early accounting activity in the region. This study has therefore attempted to fill this important gap by drawing together evidence from various sources and in various languages. The first part of the study had recourse to scattered references in works with historical, cultural, educational and economic themes, in English and American literature, material from the British museum and translation from European languages and Arabic. Material on the Islamic state was derived from Islamic literature on finance, business, education, law and history.

Littleton (1966) had suggested seven significant antecedents of double-entry bookkeeping, as follows:

1 The art of writing
2 Arithmetic
3 Private property
4 Money (i.e. a money economy)
5 Credit (i.e. uncompleted transactions)
6 Commerce
7 Capital

In Part I of this thesis, successive chapters explored the existence of each of these antecedents in ancient Iraq, more than 4,000 years ago. In Chapter two, it was

shown that much evidence survives, of the existence and extensive use of writing, for both private and official purposes (in the prehistoric days). Writings have been found in several languages, e.g. Sumerian, Akkadian, Hurranian and Ugaritic - their survival being due to the uniquely durable material, the clay tablet, used for cuneiform script. Writings on papyrus, parchment, leather or wood have survived mainly by chance. Many of these clay tablets, covering the period from 2,500 BC to the first century AD, can still be seen in museums and collections throughout the world.

Although writing has been used for many purposes, for the purpose of this thesis, focus was on various aspects of data-recording, as this use of writing is particularly well-attested and relevant to the theme of this thesis. The first aspect examined was the use of writing for administrative purposes. The movement of personnel and goods through a bureaucracy, under official supervision, gave rise to the use of writing to record salaries, disbursements, requisitions etc. Taxes, tributes and the yields of royal or priestly domains also had to be recorded. Several tablets were cited to illustrate the use of writing to record administrative transactions.

The thesis then turned to the use of writing to record legal codes and incidents. It was suggested that at the turn of the third millennium BC, a number of written codifications of law existed, and even that each city-state may have had its own such collection. These collections were written to supersede oral tradition and to update the law in accordance with changing social, economic or political conditions. One of the best known legal collections of this kind is the code of Hammurabi, king of Babylon at the time of Abraham. These ordinances covered such matters as wages, professional fees and responsibilities, family property and inheritance, offenses against property, assault and personal injury etc. Several examples were quoted of laws relating to the rights and responsibilities of merchants and their agents. Records of legal actions (property deeds, and the record of a dispute relating to a partnership)

were also presented.

A third use of writing was in the formulation of sacred tradition. In this case, writing served to preserve a corpus of traditions, beliefs and precepts over time and to protect them from internal and external pressures. Evidence remains of the recording of myths and legends, hymns and payers, so that knowledge of the deity could be passed on to future generations, and so that religious lore would not be distorted by re-interpretation or embellishment.

Writing was also used for annals, as shown by the letters, royal edicts and proclamations which have survived in tablet form. This was illustrated by citing a letter from Hammurabi in which he gave instructions to one of his officials. Private letters have also survived and two examples, from husband to wife and from creditor to debtor, were presented.

Finally, the use of writing for scholarly purposes was considered. Writing was used to record observed facts and to interpret facts by reference to precedent and by deductive reasoning. Although most ordinary people would probably be unable to read and write and would use professional scribes, thee were schools attached to the temples where literacy was taught and in the "House of Wisdom", aspiring scholars and professionals learned mathematics, astronomy, medicine, theology etc. Literature on these and other subjects existed in ancient Iraq, as did poetic and other purely literary works.

Thus, there is ample evidence that the inhabitants of ancient Iraq had a well-developed written language which was extensively used for a variety of purposes. It can therefore be concluded that an important prerequisite for bookkeeping did indeed exist at the time in question.

However, the argument that writing should predate accounting is flawed in the case of ancient Mesopotamia, where clay tokens of various shapes representing

specific commodities (and dated to about 8500 BC) were found loose in most sites. These clay token were suggested to be part of a recording system commonly used prior to writing in ancient Mesopotamia (Schmandt-Besserat 1980, 360/361). The transition from clay tokens to the invention of writing of writing was described by Schmandt-Besserat (1980, 385) as follows:

> About 200 spherical clay envelopes (including fragments) have been recovered in an area extending from Palestine to Iran, including Saudi Arabia. The seals impressed upon their surface indicate their formal character, and it seems clear that the tokens they contained stood for goods and stated liabilities. The envelopes would have remained of esoteric interest but for the discovery of their relationship to the invention of writing. Indeed, their evolution illustrates no less than the transition between an archaic abacus and writing according to the following sequence:
>
> (1) the invention of envelopes to hold tokens of specific transactions;
>
> (2) the impression of markings on the surface of the envelopes to indicate the shape and number of tokens included inside;
>
> (3) the collapse of the envelopes into clay balls or tablets bearing impressed signs; and
>
> (4) the elaboration of the impressed signs into incised pictographs.
>
> The development of writing has often been traced from the pictographs to the cuneiform writing to which modern language is often traced. As a result, one can conclude that accounting is fundamental to the advancement of human race.

In Chapter Three, attention was turned to the question of whether the inhabitants of ancient Iraq had mathematical knowledge. It began by considering the stage of knowledge-development in general. It is now recognised that the Assyrians and Babylonians had attained a relatively high level of knowledge which spread over a wide area and indeed still influences some of our concepts today. A system of commerce based on barter existed which indicates the use of basic techniques of counting, adding, weighing and measuring. Interest in agriculture brought the need

for land measurement, suggesting some level of geometric knowledge, while the engineering skills demonstrated in irrigation systems must have involved some mathematical understanding.

That such a level of understanding did indeed exist, was shown through a more detailed discussion of specific areas of knowledge, using evidence derived from lists of numbers arranged in various ways (series, multiplication tables etc.) and problem-texts which have been preserved on the clay tablets.

Such evidence shows that two numeration systems were in use, with different bases: the decimal system (using base 10) and sexagesimal system (using base 60). Evidence shows that around 1600 BC, the Babylonians used multiples and had an understanding of place value. From about 1500 BC, numerals were formed according to a regular pattern. Signs existed to express subtraction and division and fractions were known. A text was presented which indicates understanding of Pythagorean theorem and of the square root, while a lengthy problem text related to the calculation of side measurements and area of a trapezoid revealed knowledge of coefficients and quadratic equations which were algebraic in nature, though geometric in form.

Mathematical knowledge was shown to have been applied in many areas of daily life. For example, length was measured according to a common standard, the handbreadth. The year was divided into twelve months of thirty days (though the year at 365¼ days was also known) and time was reckoned in hours of 60 minutes. Geometric knowledge was used to calculate area, and formulae for calculating the volume of various solids were also applied. Mathematical calculations were also used in astronomy, the positions and movement of the stars were determined, and dates of eclipses worked out.

The chapter also produced evidence of the use of the decimal system in records of everyday commercial transactions, for example using the receipts of grain and

computing the amount of grain received. It was thus shown that although the people of ancient Iraq did not possess mathematical notations equal in manipulative power to that of the modern world, they had a sound grasp of many mathematical concepts which had numerous applications in daily life, as evidenced by the written records of calculable activities which have come down to us.

As in the case of writing, one cannot conclude that arithmetic and counting predated accounting in its rudimentary form. Prior to the invention of writing pictographs were the means by which accounting are recorded; symbols were used as accounting devices, by which different objects and the numbers of each is represented. The symbols preceded the numbers and with these symbols people in the ancient Mesopotamia were able to communicate with one another and to evolve the civilisations that we now study is utter amazement.

In Chapter Four, evidence for the existence in Ancient Mesopotamia of credit, capital and private ownership was provided. Mesopotamia was an important centre of local and international trade. Along the Gulf and Mediterranean coast, trade was conducted in textiles, wooden items, dates and other goods, while inland trade in foodstuffs, wool, timber, bricks and metals flourished.

Given the extent of commercial activity, it is not surprising that credit transactions were relatively common. That this was so, is known from references in the legal codes. An extract from the Hammurabi code, relating to the liability of husband and wife for each other's debts, was cited as an example.

Credit could be obtained from various sources. The *Tamkaru*, a merchant, as well as trading organisation, acted as a banker, providing loans and extending credit. Credit could also be extended by the temple or by the king. It might take the form of money, or of purchase of goods with deferred payment.

Borrowing was undertaken for a number of purposes. Grain might be needed

for immediate consumption or for cultivation, or money might be borrowed for investment. Sometimes, these loans might be extended free of charge for charity purposes. At other times, however, interest was charged which might be as high as 33⅓%. Thus, the profit motive was important reason for giving credit. Sometimes, security was offered for the loan. The debtor might mortgage his land, slaves or servants, or even a member of his family.

Evidence of all these aspects of credit activity was presented, quoting from various tablets. These showed that contracts were drawn up carefully to avoid future disputes and that records were kept of debts, indicating payment dates and whether or not interest was payable. Some familiar concepts used in modern financial dealings were found, such as the negotiable bill of exchange and application of the principle of current value, the latter as early as 2000 BC.

These intensive credit activities could hardly have existed without the use of capital and the existence of private ownership. Individuals were allowed to own property, land, servants etc., and ownership was protected by law. Texts relating to the private purchase of a house and of a field were cited as evidence. Land and property could also be granted by the ruler. Such property was then completely at the disposal of the recipient. Those who owned property could use it themselves, sell it or rent it to others.

Evidence was given of private ownership of business enterprise in the seventeenth century BC. Individuals might also combine in partnerships to engage in business financed by private money. Women could also engage in business, either as agents or as contributors of capital. Sources of capital for a business venture might include income from rent and leases, goods put at the disposal of the merchant or businessman, trading profits, emoluments and gains from speculation, as well as the individual's personal wealth.

Thus, it was apparent that private ownership and capital existed in Mesopotamia, that wealth was sometimes used to extend credit for charitable or profit-making purposes and that written records were kept of these activities.

The early inhabitants of Mesopotamia had traded in various goods on the barter system. However, this system had its disadvantages. It required the coincidence of supply and demand and presented problems of valuation. How these problems were overcome as early as the third millennium BC by the development of money, was discussed in Chapter Five. This was an important element in the evolution of Babylonian society, as it allowed greater specialisation in work, greater flexibility, freedom of choice and enhanced opportunities for increasing wealth.

The first medium of exchange (money) was fashioned from precious metals. Gold was sometimes used in offerings to the gods or to royalty or for making decorative objects and symbols of wealth and power, but silver was commonly used as the standard of valuation for the money system. Originally, the value of money depended on the weight of precious metal. The first standard was the *talent*, but as this was excessively heavy, it was later replaced by the mine, and later by the shekel. Coins representing various multiples and fractions were struck. However, the system was complicated by the fact that each state had its own coins; indeed many cities had their own minting factories.

In a culture that believed in the divine right of kings, rulers controlled (without challenge) the weight and value of coins, which had to take a specified shape and be struck with stamp of the ruler or an authorised official. The minting of coins was the prerogative of the state. Even the temple, which engaged extensively in commercial activities, could not strike its own coins.

Money was used for various purposes. It was not much needed by slaves and servants, as they were provided with food, shelter and clothes. For others, however,

money was used to buy goods, land and property (including slaves), to pay salaries, to finance business, for taxes etc., either alone or in conjunction with other commodities. Money-lending, often at high rates of interest, was a lucrative business.

Several ancient texts were quoted in evidence of the existence, forms and uses of money. These texts show that people took careful account of their own wealth and of their financial dealings with others. Nevertheless, this should not make one to conclude that there was no accounting before the advent of money or its equivalent. Before money, there existed trade by barter and even in the earlier years of money as a medium of exchange some cash crops (like grains) were used as store of value and media of exchange and also formed the basis of record-keeping and accounting.

Chapter Six examined various aspects of the extensive trade activities carried on in ancient Mesopotamia. It was shown that several classes of people engaged in trade. In the old Babylonia period, around 3600-2400 BC, the tamkaru (or merchant), who acted as trader, broker, banker and money-lender, was a significant figure. He derived his income from fees for services rendered and returns on investment of money entrusted to him. Evidence was quoted of the tamkaru's involvement in trading in land, property, foodstuffs and building materials.

State departments also engaged in commerce, particularly in respect of silver and grain. They could either employ their own officials or pay fees to merchants to act for them.

A particularly powerful financial institution was the Temple, which lent money and goods, invested in real estate, was involved in labour contracts and took part in many other kinds of commercial activities. Evidence from Babylonia and Assyria reveals the increase in land-holding of the temple and the accumulation of vast resources.

Both state and temple often employed members of the tamkarum class to act

as agents. When the tamkaru's business extended beyond a certain level, he would employ agents to travel and transact business on his behalf. The Hammurabi code contains a number of clauses formalising the relationship between the merchant and his agent and setting out their rights and responsibilities.

Indeed, evidence exists of the extensive legal provision relating to commerce. The Hammurabi code of 1750 BC, codified the relationship between the tamkaru and those with whom he dealt, including such matters as liability in case of fraud. The agent had to keep detailed accounts of his dealings and even the smallest transaction was recorded. Laws protected both parties to the transaction from negligence, abuse or exploitation.

An interesting aspect of the law relating to trade is the doctrine of responsibility. Severe penalties were imposed on those whose professional negligence or incompetence caused loss or injury to others. A boat-builder, for instance, would be held accountable for the sea-worthiness and safety of the vessel he built and sold.

Trade was carried on, not only by individuals, but also by partnerships and even commercial organisations. Partnership agreements might be made between colleagues, friends or family members. Sometimes, partners would simply invest capital to be managed by a third party. Detailed contracts were drawn up between parties. The partnership was usually established for a specified number of years, during which time the partners could act on each other's behalf (e.g. one partner could appear in court for another) and were responsible for each other's debts. Partnership could be dissolved on expiry of the specified term, by death of one of the partners, or by mutual consent, when the property of the partnership would be equitably divided.

The discovery of records relating to investments by traders suggests the existence of extensive foreign trade. Both luxury goods and raw materials were

imported and it was suggested that goods produced by the state and temple were exported to provide the necessary means of exchange. The Island of Tilmun (now Bahrain), was a trading emporium through which many of the plants and animals, later found in Babylonia, first arrived. Merchants banded together and pooled resources to trade beyond the Gulf, sharing the risks and the profits, with the donkey caravans the normal means of travel. The Hammurabi code legislated for various kinds of misadventure which might beset the merchants on their journey. Moreover, many rulers offered protection to the caravans and it is thought that caravans of merchants trading from court to court enjoyed a status similar to modern-day diplomatic immunity.

Prices of goods could be presented in five ways: by weight; weight or volume; volume; volume or unit; and unit. Such a sophisticated pricing system could probably not have existed without well-established record-keeping systems.

Finally, the chapter looked at the use of the seal on documents. In general, a seal was affixed to a document by the party who gave up a right or incurred an obligation. Sealing was intended to prove the validity of the document, protect against subsequent alteration, and prove the completion of the transaction.

A picture is beginning to emerge of a society with extensive, relatively sophisticated commercial activity, legally codified, and formally documented.

The first part of the thesis was concluded by Chapter Seven, which looked in detail at the types of accounting records prepared on clay tablets by the scribes, one of whose functions was that of bookkeeping.

The most common records prepared were the receipts which recorded private transactions, payment of taxes in kind etc. They stated that amount and the kind of goods or money concerned, the names of the giver and recipient and the date of the transaction. In the case of payment of a debt, details of interest, if any, and the names

of witnesses were also added.

Loans made by the state, the temple, or private persons were also recorded. These might take the form of money or of commodities such as grain. Some of the texts quoted revealed that the concept of negotiability existed as early as 2090 BC.

Purchase records were prepared which described the goods and stated the location, the name of buyer and seller, the amount paid, witnesses and date. It was also usual to insert a clause relating to future claims and severe penalties were imposed on those who made malicious, false or irresponsible claims in respect of a purchase. The most important purchases recorded were those of property.

As stated earlier, rent and lease agreements were well known. Examples of records of such transactions, stating the amount payable and the term of the lease, were cited. Again, such documents were witnessed.

Expenditure records took the form of simple lists of money or goods disbursed. They were prepared when paying for goods or services, paying wages to labourers, giving animals for sacrifice, or when loss occurred. One tablet quoted showed wages in kind and the use of dates and barley as standards of payment. Records might be kept of household expenditure, or of the expenses incurred in a business activity.

When income was received, a record was made, stating from whom the goods or money were received and for what reason. Examples cited included tax revenue, compensation to workers for loss of a perquisite, and a detailed breakdown of the cost of cultivation of a field including seed and labour costs.

Perhaps the most interesting and important records to have survived from ancient Mesopotamia are the balanced accounts which may be seen as a Sumerian precursor of double-entry bookkeeping. Such accounts stated the opening balance, gave details of revenue and expenditure for a given period and a closing balance. They might take the form of official records or of household inventories and were

prepared for varying periods of time. The existence of these records has made it possible to trace the movement of capital and goods and gives us important insights into economic activities of this period.

This part of the thesis shed new light on the early history of accounting and suggests that some of the foundation of accounting as we know it today was laid in ancient Mesopotamia. The development of trade and the movement from barter to a money economy led to the keeping of many kinds of records similar in content, though not in form, to those used today, and the texts quoted suggested that several modern concepts may have had their roots in Ancient Mesopotamia.

Record-keeping of the kind described here remained relatively consistent until the middle of the seventh century AD when the advent of Islam brought about new attitudes which had an impact on every aspect of daily life. The second part of the thesis examined the development of economic activities and record-keeping in the early period of the Islamic state in Iraq from the seventh to the twelfth century AD.

By way of introduction to detailed discussion of financial arrangements prevailing in the Islamic state, Chapter Eight outlined some relevant aspects of Islamic law. The *Shari'a* aimed to prevent injustice in the acquisition and disposal of material resources and so provide satisfaction for people and enable them to fulfil their obligations to Allah and society.

At the time of Muhammad's (peace be upon him) call, in 610 AD, the area was involved in many kinds of business and trade, including speculations and the lending of money at an interest, rather than leaving capital unproductive. During the Meccan period, there was a strong recommendation against usury, which later in Mecca became an outright prohibition. It is suggested that the reasons for this were to protect the weak against exploitation and to encourage people to combine in productive joint ventures. A lender should not exact interest, because lending was

viewed as alms-giving. Any stipulation in a contract which gave an advantage to the lender would be unlawful. Profit-sharing replaced interest as the motivation and reward for financial activity.

Further protection was given by the stipulation that contracts must be free from uncertainty; all details must be known at the outset.

Two main kinds of business partnership were recognised. In *Shirkah* (partnership), two or more persons engaged to carry on a business venture with defined capital, agreeing to carry on the business jointly, and to share profit and loss in agreed proportion. In *Mudarabah* (investment contract), one party provided capital which another utilized for profit. A party to such a contract might be an individual or a group of persons.

Distribution of profit and liability for loss were carefully regulated. In the case of profit, this was shared in ratios clearly agreed in advance. Loss was shared in proportion of capital. In other words, a partner who had not supplied capital would share profit, but would not be liable for loss, their penalty being loss of income from the business and wasted effort. Accounts had to be recorded for each financial year separately and in the event of loss, contributors of capital would have to be informed that their capital had been reduced and by what amount.

In a simple partnership or investment agreement, financial liability presented no problem, as liability could not exceed capital. If a loan was taken by a partner, a credit purchase made, or some such circumstance, the situation became more problematic. No partner was held liable for liabilities of the others unless such liability was taken on with express permission of the other partners on behalf of the joint enterprise. If the enterprise as a whole took on an obligation, the partners would be jointly liable. However, if one partner exceeded the limits set by the partnership (e.g. taking a loan not agreed by the other partners), his action, and his liability would

be seen as personal. Such liability could not be met from the capital shares.

A contract might be terminated in one of three ways. The first was voluntary termination. Any partner had the right to withdraw from the partnership at any time. In the case of an agreement involving more than two partners, the remaining partners might continue in business under a new agreement if they wished. If the business was closed, any remaining goods would be sold off before termination of the contract, so that profit or liability could be fairly apportioned.

A contract might also be made for a fixed period of time, after which it would automatically expire. However, the specification of a term for the contract would not remove the right of partners to withdraw earlier, if they so wished. When a partner died, his share would go to his heirs, so the contract, as made between the original parties, would be nullified, though again, the remaining partners might continue under a new agreement. A contract might also be terminated in the case of insanity or indiscretion so severe as to warrant legal intervention.

This does not purport to be more than a general outline of the main principles of financial and business activities in Islam. Some areas are more complex in practice and conflicting opinions have been expressed on certain issues. However, the outline given here is enough to show that business activity could not be carried out in accordance with Islamic law without careful and detailed record-keeping. Parties to a contract must have full knowledge at the outset of all relevant details such as sources and amount of capital, the term of the contract and the proportions in which profit and loss will be apportioned. The financial position of the business at any time must be clear, for the terms of the contract to be fulfilled and fairness maintained to all partners during the contract of the business and in the event of termination. *Shari'a* thus brought important implications for bookkeeping and accounting activity.

Chapter Nine examined the role of the two kinds of bank operating in the

Islamic state: the central bank and the private banks. The central bank, or *Bait-Al-Mal* in Baghdad was regarded as the general treasury of the state; it budgeted and controlled all state income and expenditure, using records provided by the regional treasuries. Its resources came from taxes and other levies.

The *Bait-Al-Mal* accepted two kinds of deposits: it administered (1) the possessions of orphans or missing persons, and funds donated for charitable purposes and (2) deposits from ordinary individuals. Sometimes it held possessions confiscated from deposed officials. These deposits were carefully recorded. An important role of the bank was as a lending institution. Loans were made for investment in commerce and agriculture; for investment in buildings and personal loans.

Like modern banks, the *Bait-Al-Mal* controlled the amount of money in circulation, overseeing the introduction of a new, unified currency, regulating the quality of legal coins, and setting the rate of exchange between the Islamic and foreign currencies.

Different types of documents were used by the bank: cheques, letters of credit, bills of exchange including promissory notes which were accepted, whether they were issued by its branches or the private banks.

The private banks were owned by rich individuals who invested their money in lending, accepted deposits, exchanged currencies and issued the documents needed for commercial activities. These banks used profit-sharing to legalise their returns. Their owners formed associations which met regularly to discuss their problems, services and terms.

Three categories of services were provided for the public:

(1) Administration of funds: A bank might hold in trust resources deposited by an individual to secure the future of his family; or the possession of an official entrusted to it as a safeguard against confiscation.

(2) Supply of funds: Loans were made to the state either as a favour or for commercial profit. Funds were also invested in commercial venture.

(3) Remittance of funds: To facilitate business transactions within and between Islamic states the banks used cheques, letters of credit and bills of exchange as media of fund transfer.

Cheques were first used in the first half of the seventh century AD to prove that the bearer had the right to receive some benefit from the state. Evidence exists for example, of the army being paid by cheque in the ninth century. Cheques were overseen by the *Bait-Al-Mal* and had to bear a special mark to distinguish the various cheques issued by the many offices in the state and very large amount sometimes had to be authorized by the ruler. Cheques were prepared carefully within the Islamic legal framework and recorded by an official with experience in bookkeeping. The cheque was an important means of payment, particularly trusted when endorsed by reputable witnesses or by the court and stamped by the payer.

Letters of credit were used to eliminate the risk of loss incurred in transporting money or goods. They were widely used by the state as well as by ordinary people and tradesmen. As well as using them to conduct business between the state capital and the regions, the state used letters of credit to ease temporary financial difficulties by writing letters promising payment at a later date. Evidence also exists of such letters being used between contracting parties to prove that they had mutual obligations which would be honoured at a later date. It has also been suggested that at the end of the 10th century AD, letters of credit were used as travellers' cheques. The *Jahbed* (business consultant and bookkeeper) played an important role in issuing, recording, discounting and honouring these letters of credit.

Bills of exchange differed from letters of credit in that money transferred by the latter had to be paid in the currency of the place where the letter was cashed,

while bills of exchange were paid in the currency specified when the bill was drawn up. The uses of the two documents were similar.

After the establishment of the Islamic state, a new kind of money was used in exchange for goods and services. As discussed in Chapter Ten, the types of coins in use were the golden Dinar, the silver Dirham and the copper Fills.

The Dinar was a foreign currency adopted because of its stable value and wide acceptability. It was made of pure gold and bore Islamic engraving and Arabic inscriptions which differed in different periods. Gradually, the quantity of gold contained in the Islamic Dinar was reduced until at the end of the 10th century AD, when the old standard was abandoned and a new pure gold coin minted. To facilitate exchange in the market place, coins representing fractions and multiples of the Dinar were minted.

The pure silver Dirham was based on that used by Umar bn Al-Kattab, the second Rashidum caliph, who introduced it as the unit of exchange between all Muslims, and required its use in the *Bait-Al-Mal.* As with the Dinar, fractions and multiples were also used.

A particularly important development was the introduction in 705 AD of a uniform currency for all countries under Islamic control. This may have been to remove the confusion created by the existence of a variety of currencies of different weight and standards of silver; or because of a shortage of silver in the *Bait-Al-Mal.* It may also have been linked to the establishment of new administrative and economic systems for the Islamic world. Later, coins were introduced which had a face value rather than a value based on the weight of precious metal it contained.

Partly as a result of shortage of silver and gold and partly because of the increased demand for goods and services, a small copper coin, the Fills, was minted as a means of exchange for cheaper commodities. Some areas had used the fills

before the Islamic period, but the Islamic state created a new fills which continued to be in use until the fall of the Abbasid dynasty in the thirteenth century AD. However, the fills was not popular, because it corroded easily and lost value. Therefore, at times, its use had to be enforced by the state.

Because coins differed in weight and in the amount of valuable metal they contained, it was common practice to weigh coins, and often the weight, rather than the number of coins, was specified when indicating price.

Coins were minted by the government minting house and stamped by the government and only such coins were accepted as legal tender. However, variations in the weight and metal-content of coins could occur for various reasons. The government might, for example, increase the weight of the coins as an indirect way of increasing tax revenues, avoiding increasing its own expenditure at the same time by weighing rather than counting the coins.

Foreign influence also affected the coinage. For instance, during the 10^{th} century AD, Turkish governors minted coins below the normal weight, using the excess precious metal for their own purposes. Eventually, the value of the coins was so much reduced that traders preferred to barter goods or accept only gold, silver or old coins. Prolonged use of the coins reduced their value due to the wearing away of the soft metal.

Fraud was also common. One trick was to file precious metal from coins in order to use it in jewellery. Another was to forge coins, using a lower proportion of valuable metal than the official standard.

To protect the legal currency, official minting houses were established whose workers were identified by special dye-stamps on the hand. Those found guilty of fraud were severely punished.

Protection of the currency and detection of good and bad coins required the

existence of skilled and experienced staff for both minting and bookkeeping. However, the extent of commerce, the number of minting houses, and variations in the value of coins, whether as a matter of policy or because of fraud, created problems of exchange. These and the regulations implemented to address them were discussed in Chapter Eleven. The chapter also discussed the role of the *Sayrefy* (banker, money-changer) who sold currencies, determined their weights and purity, and defined the rate of exchange between them, dealing with money-lending, commerce and record-keeping.

The banking activities described earlier developed further under the Islamic state and there was an increased need for financial institutions as cities such as Kufa and Basrah became important political, educational and commercial centres. As Iraq flourished economically, businessmen from Yeman and Egypt established themselves there, introducing new types of business. When Baghdad became the capital of the Islamic state, people were attracted from all over the world, increasing the volume of local and foreign currencies circulated and creating a need for more banking services.

By the middle of the tenth century, Iraqi banks had adopted most of the types of documents used today - most significantly the cheque, letters of credit and bills of exchange. Later, as prosperity declined, businessmen emigrated from Baghdad, taking their experience to Egypt and Spain and thus spreading banking around the Islamic state as a whole.

An important duty of the money changers employed by the banks was money valuation: differentiating between good and bad coins, checking the purity of coins and deciding on their purchasing power. Coins could be tested by tasting, biting, warming, immersion in salt water or even calculating the specific density of the metal.

The main work of the banker was to exchange currencies. Various currencies came to Baghdad as tax payments from other regions, through the influx of foreign

businessmen, or from gifts and charitable donations. The rates of exchange within a country and between countries for coins bearing different metals and weights varied for a number of reasons: political disturbance might affect the supply of gold and silver; purchasing power might be affected by factors such as population density and the availability of goods and services; the state's relationship with other states could affect the amount of gold coming into or leaving the country; a change might be decreed by the state as a matter of money policy; coins varied in purity and condition.

The banks also received, stored and dealt in deposits of money, jewellery and precious stones, which provided the liquidity for banks to offer loans and credit. The bankers were accountable for the deposits they accepted and so kept careful records of each account. Their clients, especially businessmen, kept their own accounts, often using the services of a bookkeeper who preserved confidentiality by using special symbols.

Money was lent by the banks for commercial, personal and charitable purposes. Islamic concern with justice and fairness led to state control of banks. They monitored the scales used for weighing money, punished usury and dishonesty, and confiscated counterfeit coins. The penalties for contravening the law included severe imprisonment, fines, or suspension or exclusion from practice.

In order to make a profit without usury, many bankers entered the trading sector. Some received salaries as government ministers or advisers.

Like bankers today, those in the Islamic state facilitated monetary services and circulated the coins needed for daily transactions in the markets. When the state realised the importance of banking to business, orders were made to encourage the establishment of banks in each market. There were also special markets for the banks themselves, like those for other kinds of business in many cities.

Naturally, banking involved an element of risk. Capital tied up in loans could

be lost through bad debt, while investment in business partnerships carried the risk of loss.

The state's power to determine the rate of exchange could also cause problems; for example, if banks carried large stocks of coins with a low percentage of valuable metal which subsequently ceased to be accepted.

It can be seen that the range, sophistication and complexity of commercial activities in the Islamic state and the risks and responsibilities involved necessitated accurate record-keeping and the existence of a body of people with special knowledge of financial dealings. These were the forerunners of today's accountants and their role was discussed in Chapter Twelve.

The practitioner of accounting in the Islamic state was the *Jahbed*, a general term indicating a professional person, but used particularly of one specialising in this area. The *Jahabedah* carried out a range of managerial and financial duties and exercised financial control. Among the specialised areas which might be supervised by the *Jahbed* were:

(1) The tax office: The *Jahbed* had to estimate the amount of tax required to meet the state's needs, calculate the amount due from land-owners and landlords according to the area and estimated yield of their land; keep books, prepare accounts for his superior and forward them to the *Bait-Al-Mal*.

(2) The *Bait-Al-Mal*: The *Jahabedah* at this office organised and classified the treasury's income and expenditure in cash or by cheque and acted as state agents in receiving or expending money. All transactions were recorded and financial statements kept.

(3) Expenditure office: The *Jahabedah* worked on various committees to administer expenditure related to state building, wages, expenses on animals, and emergency aid. Their statements had to be sent both monthly and

annually to the *Bait-Al-Mal.*

(4) State's support office: This office had to prepare daily statements regarding the use of gifts and donations together with monthly reports.

(5) The endowment office: Endowments were resources donated for charitable purposes. Income and expenditure were classified and controlled by the *Jahabedah*, who kept records and prepared monthly statements.

(6) The military office: The main duty of the *Jahbed* here was to arrange payment of military personnel. Again, regular financial reports were made, checked and kept for future reference.

(7) Land revenue office: This office administered the revenue from land tax and was abolished in 989 AD when that tax was abolished.

The state also employed the *Jahabedah* to audit the work of these offices. Two organisations specialising in such work, the Council of the *Jahabedah* and the *Jahabedah* Committee, were described. The latter became the body responsible for supervising and auditing the central treasury office accounts and its head was second in importance to the Minister of Finance.

The *Jahabedah* carried out a number of banking services, e.g. keeping and managing wealth confiscated from corrupt officials, or given to the state support fund, or wealth entrusted to them by officials or by private individuals and families for investment. They helped to provide the state with credit and settled payments on behalf of their employers. Records were kept and clients' accounts adjusted accordingly. The *Jahabedah* also checked the authenticity of payment orders and cheques, refusing to pay on doubtful documents.

The importance of the *Jahbed*'s work, for both state and people, required reliability and integrity as well as professional knowledge. He was accountable for his dealings and if it was found that he had passed counterfeit coins, he had to make

up the shortfall himself. The *Jahabedah* were controlled by the state and punished for misconduct or poor management. Often, supervisors were elected to oversee the *Jahabedah*. The detailed record-keeping required of the *Jahbed* was a protection against the abuse of his position. Moreover, the *Bait-Al-Mal* had a committee for auditing all records, whether of the state or the private sector.

Thus, it was shown that the *Jahbed* had an important role in all the markets of the Islamic state. Like today, the position of the *Jahbed* in ancient Iraq carries a great responsibility.

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