

Roman law in the national accounting perspective: *Usus*, *fructus* and *abusus*

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Abstract. Application of accounting discipline to the organization of economic data aids in both collection and interpretation of economic and jurisprudential knowledge, for it highlights gaps in the basic statistics and clarifies interrelations among the parts of the structure. The legal systems of nearly all countries are generally modeled upon four legal systems: Mesopotamian law, Roman law, Islamic law and Anglo-Norman law. The first half of the paper compares the four legal systems in detail. The foundation of any accounting system, including national accounting, is a balance sheet that lists assets and liabilities; assets include both property rights and claims while liabilities are legal responsibilities and obligations. Therefore, special attention is given to the Roman law of things, which has furnished the foundations of much of the modern law of property and obligations in civil law systems. *Usus*, *fructus* and *abusus* have been recognized as pillars of private property since the antiquity. Although the concepts are intrinsic to property rights, they are useful tools to delineate the characteristics of claims and obligations. Some accounting examples are given at the end of the paper.

Keywords: National accounting, Sumerian economy, Mesopotamian law, Roman law, Islamic law, Anglo-Norman law

1. Introduction

The legal system of each country has been shaped by its unique history and so incorporates individual variations; however, the contemporary legal systems are generally stem from four sources: Mesopotamian law, Roman law, Islamic law and Anglo-Norman law. The oldest known contingent liability that takes the form of debt relief scheme is prescribed in the Code of Hammurabi, a collection of Mesopotamian laws, dated to 1754 B.C.; it is said that the debt relief schemes are the origin of insurance. The *Duodecim Tabulae* (Twelve Tables) was a set of laws created in the Roman Republic around 450 B.C.; the laws relating to economic activities consist of two parts: *jus in rem* (property rights) and *jus in personam* (claims and obligations). Islamic

law is a law forming part of the Islamic tradition that has been founded by Muhammad and Khadija, two great entrepreneurs; Islamic economic transactions are supposed to be based on the doctrine of equal footing. Anglo-Norman law, which has developed in England after the Norman Conquest, basically is a tort law; negotiable instruments, such as bills of exchange, have thrived in the legal system without introducing the Roman-law concepts of claims and liabilities.¹ The first half of the paper compares the four legal systems in detail.

The main characteristic of double entry bookkeeping, which is specifically referred to as vertical double entry in national accounting, is that each transaction leads to at least two entries, traditionally known as a credit entry and a debit entry, in the books of an institutional unit.²

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¹Negotiable instruments represent unilateral promises rather than bilateral contracts.

²SNA 2008, 3.113.

Horizontal double entry implies that if unit A provides something to unit B, the accounts of both A and B show the transaction for the same amount.³ The simultaneous application of both the vertical and horizontal double entry bookkeeping results in a quadruple entry bookkeeping, which is the accounting system underlying the present-day national accounting.⁴ The earliest literature on double entry bookkeeping was written by an Italian mathematician Fra Luca Pacioli, however, the idea dates back to the ancient Republic of Rome. The *argentarii rationes*, the accounting books of the first commercial bankers in the world, are considered to be the earliest example of double entry system. Actually, there were four simultaneous entries of the amount of a transfer payment; twice in the banker's ledger, once as a debit and once as a credit, and once each in the payer's and payee's accounts.

A balance sheet, the foundation of any accounting system, is a list of outstanding assets and liabilities at a point of time. In the Roman law terminology, a balance sheet is a list of *jus in rem* and *jus in personam* in one's possession. The three stalwarts of *jus in rem* are: *usus*, *fructus* and *abusus*. *Dominium*, the Roman-law equivalent of ownership, is the exclusive right to use (*usus*), to profit from (*fructus*), and to dispose of (*abusus*) a particular thing. *Jus in rem* and *jus in personam*, the two basic concepts of Roman law, are by no means independent from each other. For example, *locatio conductio rei* (lease agreement), a *jus in personam*, is an agreement in which the owner of a thing agrees to transfer the *usus* to another party for a duration of time; and the counterparty promises to pay rent for it. A problem arises when you record both the *jus in rem* and *jus in personam* that relate to the same thing in your balance sheet as assets. For example, if you own a land and lease it out, you have both *jus in rem* and *jus in personam* in the same land so that if you register both in your balance sheet it is double counting. This is the occasion when the concepts of *usus*, *fructus* and *abusus* are useful. Although *usus*, *fructus*, and *abusus* are intrinsic to *jus in rem*, they are useful tools to delineate the characteristics of *jus in personam*. It is the objective of this paper to explore the possibility of introducing the concepts to fit both *jus in rem* and *jus in personam* into an accounting framework without interfering each other.

2. The history of law and economy

2.1. Mesopotamian law

Full writing systems appear to have been invented in Mesopotamia, where cuneiform has been used, during the mid-fourth millennium B.C. It is also the only writing system which can be traced to its earliest prehistoric origin. This antecedent of the cuneiform script was a system of counting and recording goods with clay tokens.⁵ Sumer was the southernmost region of ancient Mesopotamia (modern-day Iraq and Kuwait), the Fertile Crescent situated between the Tigris and Euphrates rivers.⁶ The Sumerians, which consisted of highly specialized groups of producers, such as grain farmers, vegetable farmers, cattle farmers, wool spinners, ceramists, beekeepers and fishermen, achieved highest productivity and were characteristically mediated by the dominant institution called ziggurat (𒂗𒍪𒍪).⁷ Sumerians established several nation states by early fourth millennium B.C., which were divided by canals and boundary walls and dominated by ziggurats – the tiered, pyramid-like temples dedicated to the fertility goddess Inanna (𒌆𒀭𒊩𒌆).⁸ The Sumerians deposited their surplus products, such as grains, vegetables, butter, honey, and fishes, at a ziggurat as 'offerings', which was recorded in a clay token and in an accounting book consisting of clay tablets;⁹ the tokens were exchanged for other people's 'offerings'. The ziggurat, as well as being a ritual center, was a market where products were exchanged in the name of 'offerings'. The tokens could also be saved for use at a later date. A ziggurat was an elevated building, often a massive pyramid-like structure, that was commonly found in ancient Mesopotamia. They had the form of terraced steps of successively receding stories or levels, usually ranging from two to seven high. The surplus products were dried if necessary and stored inside the ziggurat keeping away from heat. The height of the ziggurat would allow the food reserve to escape floodwaters that regularly inundated the lowlands.¹⁰ According to the cuneiform texts recorded on an immense number of clay tablets, many of them are records of 'offerings', the Sumerians have used *shekel* (𒊩𒌆) as their currency unit, where *she* means wheat and

³SNA 2008, 3.115.

⁴SNA 2008, 3.116.

⁵Clayton [1, p. 9].

⁶Breasted [2, pp. 100–101].

⁷See the first two chapters of Crawford [3].

⁸Beckett [4, pp. 17–21].

⁹Adams [5, pp. 48–50].

¹⁰See Chapter 4 of Crawford [3].

kel is a measurement similar to a bushel; hence this currency unit has symbolized a bushel of wheat. Sumerian math was a sexagesimal system, meaning it was based on the number 60. A 59×59 multiplication table is far too large to memorize, so tablets have been used to provide essential look-up tables. Cuneiform numbers are simple to write because each is a combination of only two symbols, those for 1 (1) and 10 (10),¹¹ i.e., Sumerian math has been actually a combination of decimal and sexagesimal systems.¹²

The so-called Code of Ur-Nammu mentioned below is the oldest known law code surviving today. Although there was yet no law code in the early fourth millennium B.C., the law was enforced by the priestesses, the *ninene* (𒊩𒌆𒍪𒍪)¹³ or the sisters of the goddess Inanna.¹⁴ According to Enheduanna (𒂗𒌆𒍪𒍪𒀭𒊩𒌆𒍪), a 23rd-century B.C. priestess who is the earliest known author whose name has been recorded, the *ninene* have made legal decisions citing Sumerian mythology, the *me* (𒌆),¹⁵ described in various hymns.¹⁶ Behind all these *me* there are unwritten rules of practice; obviously, the Sumerian way is based on doing what is right and good – as opposed to what is not admissible. Like in other ancient laws, the early Sumerian law was case-judgement given when problem had risen and kept in memory by the priestesses. Sumerian *di* (𒄩) designated the legal case, the legal decision and the process itself. The early-fourth-millennium B.C. Sumerians put less emphasis on *di*, rather put more emphasis on moral education. They taught *me* in the form of poetry with melody so that even the children could recite them.¹⁷

Male-dominant monarchy replaced female-dominant religious structure in Sumer around 3000 B.C.¹⁸ The Code of Ur-Nammu, which is basically a criminal code, is the oldest known law code consisting of causative

statements ‘if... then...’ surviving today. It was written on tablets in the Sumerian cuneiform texts sometime between 2100 and 2050 B.C. Although some crimes were subject to corporal punishment, such as imprisonment, others were punishable by fine.¹⁹ For example, Article 22 of the Code of Ur-Nammu stipulates that “if a man knocks out a tooth of another man, he shall pay two shekels of silver.” The so-called Code of Hammurabi,²⁰ a collection of 282 rules, is a well-preserved Babylonian code of law of ancient Mesopotamia, dating back to 1754 B.C. Article 200 of the Code of Hammurabi provides that “if a man knocks out the teeth of another man, his teeth shall be knocked out.” The code is often erroneously thought to be a *lex talionis* (law of retribution), however, it is rather a manifestation of *iustitia* (fairness) and of *aequalitas* (equality before the law). It is apparent that there is a huge difference between a payment of two shekels of silver to the poor and to the rich. The oldest known contingent liability that takes the form of debt relief scheme is also prescribed in the Code of Hammurabi. Article 48 mentions that “if anyone owe a debt for a loan,²¹ and a storm prostrates the grain, or the harvest fail, or the grain does not grow for lack of water; in that year he need not give his creditor any grain, he washes his debt-tablet in water and pays no rent for this year.” The law also includes several fair wage clauses: article 257 says that “if anyone hires a field laborer, he shall pay him eight *gur* (𒄩)²² of corn per year.” The Code of Hammurabi was written in Akkadian, the daily language used by the people of Babylon, and inscribed on seven-foot basalt stele; several copies were placed throughout the Kingdom of Babylon for the entire public to see. They believed that the publication of *lex scripta* (written law) was the necessary condition for achieving *aequalitas* (equal access to the law).

2.2. Roman law

From about 1000 B.C., some Latins migrated downstream along the Tiber and Nera Rivers and concentrated to the small region currently known as Rome. The area was an ideal habitat; it was surrounded by so-called *Septem Colles* or Seven Hills of Rome, and the river

¹¹For example, 𒍪 means 3 and so forth. In English, 1 and 10 are known as ‘cone’ and ‘bowl’ respectively; Chrisomalis [6, pp. 247–248].

¹²The Sumerians invented the sundial. They divided a circle into 360 degrees, and a day into 24 hours and an hour into 60 minutes. Later on, the Sumerians had come up with a solar year consisting of 360 days; it consisted of 12 lunar cycles (354 days) which were rounded up to 360, forming 12 months at 30 days. Kelly [7, pp. 18–19]; Barton [8, pp. 1–4].

¹³The plural form of *nin* (𒊩). *Nin* is considered to be the etymological origin of ‘nun’.

¹⁴Kramer [9, pp. 26–29]; Beckett [4, pp. 17–21]; Lopez [10, pp. 10–14].

¹⁵Many of them are love stories.

¹⁶Kramer [9, pp. 18–25]. The hymns are translated in De Shong Meador [11].

¹⁷Beckett [4, pp. 20–21].

¹⁸Kramer [12, pp. 43–44].

¹⁹Roth [13, pp. 13–22].

²⁰Harper [14] includes original cuneiform texts of the entire code.

²¹It is a forward contract in which the seller promises to deliver the harvest to the buyer in exchange for an advance payment at the time of contract.

²²1 *gur* is equivalent of 18 cubic meters or 635 cubic feet.

could be easily crossed on foot. Since most of the Latin migrants were male, semi-nomadic shepherds, they acquired wives from the neighboring Sabin families, who had already been settled the region. According to legend, the Latins and the Sabines agreed that one should appoint a king from the other; however, according to the archeological evidences, they chose the kings from the Etruscans who had migrated to Rome by the eighth century B.C.²³ The Latins and the Sabines elected Etruscans as their kings because they had very good architecture skills. The Etruscans constructed bridges across the Tiber, aqueducts to supply water, and most importantly, sewer system called *Cloaca Maxima* to drain the swamp to keep the city dry and fertile; the reclaimed land was assigned for public grazing.²⁴ The Roman Republic (*Res Publica*) was installed after the Roman Kingdom was abolished in 509 B.C. As the name *Res Publica* indicated, anything other than designated private property (*res propria*) was public property (*res publica*) so that it was subject to *communio* (common ownership) of the *populus Romanus* (people of Rome, collectively). The idea of *communio* also applied to land so that, in the early Republic era, people could freely graze their livestock in the abundant common pastureland.²⁵ Basically, the Romans were self-sufficient; they produced daily necessities such as dairy products and wool garments at home; they had small plots of private land where they could grow crops and vegetables.

The *Leges Duodecim Tabularum* (Twelve Tables) was a set of laws inscribed on 12 bronze tablets created in the Roman Republic around 450 B.C. The original text of the tables is said to have been inscribed on bronze and posted in the Roman Forum but destroyed when the Gauls have sacked and burned Rome in the invasion of 387 B.C. so that we do not know how much of the text is missing and in what order the clauses have been originally arranged.²⁶ The laws relating to economic activities consist of two parts: *jus in rem* (property rights) and *jus in personam* (claims and obligations). *Jus in rem* is the exclusive dominion of a person over *res*. While *res corporales* are physical and tangible objects such as furniture, building, and land, *res incorporales* are intangible abstract things, such as writing, music, and method of manufacture. It is notable that the Twelve Tables clearly distinguishes between *dominium* and *possessio*. *Dominium* is the exclusive right to use, to profit

from, and to dispose of a particular *res*. *Possessio* is the right to possession or occupancy; *possessio* allows the possessor to exclusively use, and to profit from the particular *res*, but does not allow disposing of it. For example, the Twelve Tables, VI:III, stipulates that “a purchaser of *res* does not get *dominium* until full payment is made or another *res* of same value is given as a pledge. The purchaser of *res* gets *possessio* at the time of delivery and may be asserted against a third party, but may not be asserted against the vender until the payment is fulfilled.”²⁷

According to the *Naturalis Historia* (Natural History), XXXIV, an early encyclopedia compiled in the first century A.D., the Romans probably established an official currency unit, the *as* or a pound of bronze, at the beginning of the Republic era around 500 B.C., however, Rome before the end of the fourth century B.C. was a barter economy rather than a monetary economy. The *Lex Aternia Tarpeia* was a Roman law of 454 B.C. that regulated the payment of *multae* (fines),²⁸ which stipulated that the fines must be denominated in the currency unit *as* instead of in the number of cattle. The *Lex Papiria Iulia* was a Roman law of 430 B.C., which provided that the fines must be paid in cattle at its market rate, not at a fixed rate of a sheep for ten *asses* and an ox for one hundred *asses*.²⁹ The Latin word *pecunia*, which is an equivalent of currency in English, has stemmed from *pecus* that means cattle.³⁰ The ideas were highly sophisticated; but the trouble was that Rome at that time of the publication of the Twelve Tables was merely a barter economy; it seems that the ideas have been inspired by the authors’ experiences and observations while studying in Athens.³¹

Although *jus in rem* is considered to be an implicit agreement among the people *en masse*, the duties attached to it are always negative – they merely are duties to forbear or abstain.³² In contrast to this, *jus in personam* is an explicit agreement between specific parties, in which one party is obliged to do or to perform some specific duties on behalf of the other. As for *jus in personam*, the Twelve Tables, III:VII, did not solve but rather created problems because the law legalized

²³Cornell [15, Chapter 6].

²⁴Aicher [16, vol. 1, pp. 79–81].

²⁵Roselaar [17, pp. 20–24].

²⁶Smith (ed.) [18, pp. 1023–1025].

²⁷Scott [19, vol. 1, p. 10].

²⁸The Romans were supposed to pay some fee called *pascua* to graze cattle on public land; failure to do so would have resulted in a fine then called *multae*.

²⁹Not all, but many of the ancient Roman statutes are reproduced in Johnson, Coleman-Norton and Bourne [20].

³⁰Lewis [21, p. 1322].

³¹Smith (ed.) [18, pp. 1023–1025].

³²Austin [22, vol. 1, pp. 381–382].

nexum, a debt bondage contract. We do not know exactly why but a great majority of the common pastures were lost within the first two centuries of the establishment of the republic, though, one apparent reason for the loss was to make room for the construction of the Roman Forum.³³ Since after all the Latins were sheep farmers and semi-nomadic shepherds in their origin, thousands of people lost their livelihood and went into heavy debt. Under the *nexum* contract, a debtor became a *nexus/nexa* (bond slave) if he/she failed to pay the debt before the promised date; he/she was not freed until the debt had been paid off.³⁴ The *Lex Poetelia Papiria* that was enforced in 326 B.C. nullified *nexum* and introduced a new form of contract known as *mutuum*; the law forbade holding debtors in bondage for their debt and required instead that the debtor's property be used as collateral.³⁵ All the people confined under the *nexum* contract were released, and *nexum* as a form of legal contract was forbidden thereafter. Although the debtors generally welcomed the new law, the *Lex Poetelia Papiria* alone did not solve the economic problems because many of the peasants, then known as *plebes*, had little to offer as collateral. As a result, the Republic was obliged to absorb the unemployed, many of them were *liberti* (freedmen), by promoting new industries, namely trade and commerce. Two brand new systems to create jobs for the people with no capital were established: the *argentarii* and the *auctiones*.

In its origin, the *argentarii*, later known as the commercial bankers of Rome, were notaries who were authorized by the Republic to document business transactions. One remarkable feature in Rome was that the banking system emerged around 311 B.C. long before the city minted its own coins.³⁶ The *argentarii* were formally known as *negotiatores stipis argentariae*; the name implied that they were state approved professionals acting as business intermediaries or guarantors.³⁷ They were not in the service of the state, however, they

were authorized by the state and existed only in a limited number; they formed a *collegium*, an equivalent of today's bankers' association, and worked together sharing an office building in the Forum. After the third century B.C. on, the *argentarii* regularly took part in *auctiones*, the symbol of the Roman market economy. An *auctio* was a sort of public auction, either permanent or temporary market, which functioned much more as a present-day wholesale market.³⁸ It was a *praeco* who presided over an *auctio* and awarded the objects to the higher bidders while it was an *argentarius* who kept the register of the sales. The discovery in Pompeii of the wax-covered tablets of Lucius Caecilius Iucundus represent the most illustrative preserved testimony on the daily operations of the *argentarii*.³⁹ According to the archaeological evidences, the *argentarius* recorded the names of the vendor and the vendee in addition to the details and the total value of the sold items into the official register known as *auctionalis*, on which seven witnesses inscribed their names and impressed seals. The record of sale was also written into the *argentarii rationes* (banker's books), namely *adversaria* and *rationes mensae*. While *adversaria*⁴⁰ was a book that recorded all the banking transactions in the order of occurrence, *ratio mensa* was a book that recorded each customer's transactions successively. This practice known as *bilancia* (balanced entry) is considered to be the origin of double entry bookkeeping. Actually, there are four simultaneous entries of the amount of the proceeds; twice in the *adversaria*, once as *debito* and once as *credito*,⁴¹ and once each in the vender's and vendee's *rationes mensae*. In the today's national accounting terminology, the former is known as vertical double entry, and the latter is called horizontal double entry; the combination of the two is referred to as quadruple entry.⁴²

³³Aicher [16, vol. 1, pp. 73–75].

³⁴Smith (ed.) [18, pp. 636–638].

³⁵Von Heusde [23] explores the *Lex Poetelia Papiria* and the relevant stipulations in detail.

³⁶It was around 211 B.C. when the Romans created a coinage system, usually referred to as the Denarius System; however, a significant number of coins started to circulate only after the Coinage Reform of Augustus that took place in 23 B.C. Caesar Augustus, then known as Gaius Octavius, brought considerable amount of precious metal back from Alexandria to Rome in 30 B.C. by defeating Mark Antony and Cleopatra Philopator; he introduced brass *sestertius* that replaced bronze *as* in addition to the gold *aureus* and silver *denarius*. Smith (ed.) [18, pp. 620–621].

³⁷*Ibid.*, p. 81.

³⁸*Ibid.*, p. 114.

³⁹De Petra [24] includes a lot of copies of the wax-covered tablets excavated in Pompeii in the previous year.

⁴⁰*Adversaria* may be either singular or plural. Etymologically, *adversaria* means having been set against.

⁴¹*Debito* is an operation in which the *argentarius* debits the vendee's account; *credito* is an operation in which the *argentarius* credits the vender's account. See Footnote 40 of Tsujimura and Tsujimura [25] for details; the transaction is illustrated in Section 3.1 of Tsujimura and Tsujimura [26].

⁴²The terminology first appeared in Copeland [27, p. 256]; Ruggles [28, pp. 23–27], also elaborated the idea as 'the four aspects of a transaction'. The copy of the book we own, which Ruggles has personally presented to Stone, carries a signature: "To Richard Stone who was responsible for more of this book than I was, Richard Ruggles".

2.3. Islamic law

The Arabian Peninsula is largely arid with volcanic soil, making agriculture difficult except near oases or springs. There were only two prominent cities on the peninsula in the ancient times. Yathrib, present-day Medina, was a large flourishing agricultural settlement, while Mecca was an important trade center for many surrounding tribes. Both the camel caravan routes across the deserts and the ports along the coast of the Arabian Peninsula were parts of a vast trade network connecting Europe with Asia, the Mediterranean with the Indian Ocean. Nonetheless, the trade routes were no longer secure after the second half of the sixth century A.D. because of tribal conflicts. The early Islamic expansion began with Muhammad, who was the founder of Islam, in the first half of the seventh century. Muhammad ibn Abdullah (مُحَمَّدُ بْنُ عَبْدِ اللَّهِ) was born in 570 A.D. in Mecca, on the Western part of Arabian Peninsula some 30 miles inland from the Red Sea coast. His father had died from illness in Yathrib six months before Muhammad was born while coming back from a caravan trip. Muhammad came under the care of his uncle Imran (عمران), who was later known as Abu Talib (أَبُو طَالِبِ بْنِ عَبْدِ الْمُطَّلِبِ), after his grandfather had passed away.⁴³ Imran was a trading merchant, a clan leader, and an officer in charge of assisting visitors to Mecca. In his teens, Muhammad accompanied his uncle on trading journeys, camel caravans, to gain experience in commercial trade; he became a merchant and was involved in trade between the Mediterranean and the Indian Oceans. Since he had little capital, Muhammad became one of the business partners of Khadija bint Khuwaylid (خَدِيجَةُ ابْنَتِ خُوَيْلِدِ), a prominent business woman, who invested in travelling merchants on condition of sharing profits. Khadija was born in 555 A.D. in one of the wealthiest families in the Arabian Peninsula. She succeeded the family business of trade after her first and second marriage ended in tragedy; both of her husbands were killed on their caravan trips.⁴⁴ It was a difficult business for a woman, who herself could not lead the caravan, to trade goods through the primary commerce centers of that time, from Mecca to Gaza and to Aden. Khadija was famous for her honesty in business, and only invested in the most trustworthy men. Her caravan soon became larger than the rest of the caravans combined; her success was heavily depending on the investment schemes she had invented to share both

risks and profits with her caravan leaders and trading partners.⁴⁵ Although Khadija was acclaimed with a reputation of fair-dealing and high-quality goods, she was criticized for not risking her own life as other traders did, traveling the dangerous route leading their own caravans. Khadijah proposed *matrimonium* (marriage)⁴⁶ to Muhammad, whom she trusted most, so that they could merge their businesses and Muhammad could lead the caravan for both.⁴⁷

The marriage and the business merger of Muhammad and Khadija were highly successful until death separated them. Khadijah and Uncle Imran, Muhammad's guardian, successively passed away in 619. Muhammad suddenly quit his business, and migrated to Yathrib where he served as the chief arbitrator between the tribes inhabited in the area.⁴⁸ The Khazraj (الْخَزْرَجِ) and Aws (أَوْسِ), two major Arab tribes of Yathrib, were often at war with each other; and the Battle of Buath (مَعْرَكَةُ بَعَاثِ) had completely deprived of their power. The minority Jews were gaining power by lending money to both sides; however, they also were involved in the conflict after the battle. Soon after his arrival, Muhammad drafted a document, commonly known as the Treaty with the Jews, to settle the longstanding grievances between the tribes. The treaty stipulated the rights and duties of all citizens and the relationship between different communities: "the valley of Yathrib shall be sacred and inviolable for all that join this treaty; visitors shall be treated on the same ground as their hosts." The treaty soon came to fruition in 622 as the Charter of Medina (صَحِيفَةُ الْمَدِينَةِ). By the late 620s Muhammad already managed to unify much of Arabia, where tribal conflicts had been a matter of daily life, under the motto of 'live and let live' (عِشْ وَدَعْ غَيْرَكَ يَعِيشْ). His various rulings were collected to be followed as precedents.

All aspects of Islamic concepts are governed by Sharia (شَرِيعَةٌ). Sharia comes from a combination of sources including the Quran (الْقُرْآنِ), which records the

⁴³Lings [29, Chapters 7 and 8].

⁴⁴Haylamaz [30] gives a full account of the life of Khadijah.

⁴⁵This sentence is quoted from Kitab Al-Tabaqat Al-Kabir (كِتَابُ الطَّبَقَاتِ الْكَبِيرِ), VIII:II, authored by Ibn Sa'd (أَبْنُ سَعْدٍ) during the eighth century; Bewley (tr.) [31, p. 10].

⁴⁶In Roman law, *connubium* is a procedure of marriage that qualifies the children born to the married couple the right of inheritance; *matrimonium* is a contract of marriage in which the married couple agree to merge their assets and to engage in business together.

⁴⁷It was Nafisa bint Umayya (نَفِيسَةُ بِنْتُ أُمَيَّةِ), Khadija's best friend, who first approached Muhammad while Khadija was too shy to do so; Haylamaz [30, p. 40].

⁴⁸Watt [32, Chapters IV and VI].

revelations of Muhammad, the Hadith (حديث), which is the verdicts of Muhammad, and the Fatwa (فتوى), which is the rulings of Islamic jurists. *Fiqh* (الفقه) is a term for Islamic law, which is interpreted and implemented by legal experts; an equivalent of jurisprudence in English.⁴⁹ Islamic economic transactions are supposed to be based on the concept of *adl* (عدل),⁵⁰ which can be interpreted as that income, risk and loss must be equally shared by the transactors, such as ‘the seller and the buyer’ and ‘the lender and the borrower’.⁵¹ *Riba* (ربا) means any agreement that involves a fixed-rate interest payment; it is not permissible because such a transaction imposes all the business risks upon the borrower. *Mudaraba* (المضاربة), a popular Islamic investment scheme that is said to have been invented by Khadijah, is an arrangement in which an investor entrusts the capital to an investee, who is to trade with it and then return the original capital plus a previously agreed-upon share of the profits to the investor; any unexpected loss is incurred exclusively by the investor.⁵² Before the modern Islamic banking emerged after the oil crisis of the 1970s, the Islamic merchants conducted commerce on credit; many of the payments were made in *sukuk* (صكوك) or promissory notes, which is the origin of today’s Islamic bonds.⁵³

Waqf (وقف), which is considered to be the origin of present-day trust, has been developed in the medieval Islamic world during the seventh and eighth centuries.⁵⁴ The concept of *waqf* is based on the following passage in the Quran, 16:71: “Allah has trusted some of you above others with wealth and abilities. Those who are preferred shall not give up the gifts but explore their utmost for the benefit of the society.” *Waqf* is an arrangement between a settlor and a trustee, in which the trustee holds the settlor’s property subject to an agreement to use it for the benefit of designated beneficiaries. It should be noted that Islamic concept of *tamlík* (تملك) (ownership) is closely related to that of *waqf*. It is said that the *malik* (مالك) (owner) is a sort of trustee who is endowed by the public with the *mal* (مال) (property), such as land, so that the owner has huge responsibility to make the best use of it. *Dominium*, *tamlík* and

ownership are the exclusive right to use, to profit from, and to dispose of a particular thing; however, there are some differences between their meanings. *Dominium*, in Roman law, allows the *dominus* (owner) to use, to profit from, and to dispose of a particular *res* provided that the conduct does not conflict with the public interest. *Tamlík*, in Islamic law, allows the *malik* to use, to profit from, and to dispose of a particular *mal*; the *malik* is accountable for making the best use of the *mal* for the public benefit. Ownership, in Anglo-Norman law, allows the owner to freely use, to profit from, and to dispose of his/her chattel; any disputes between owners shall be resolved through negotiations and arbitration.⁵⁵ Meanwhile, *res*, *mal* and chattel are by no means synonyms. *Res* has the broadest meaning among the three; *res* includes both *res corporales*, which is further categorized into *res mobiles* (movable things such as furniture) and *res immobiles* (immovable things such as land), and *res incorporales*, abstract things such as writings and music. While *mal* is an equivalent of *res corporales*, chattel is identical to *res mobiles*.

2.4. Anglo-Norman law

Since ancient times, southern Scandinavia was the homeland of the Norsemen (*Norðmenn*) who were usually farmers, fishermen, woodworkers and blacksmiths. They did not constitute one unified nation during the early middle ages, but were organized in small nation states. The Norsemen had their own system of law and order. A dispute was usually settled in *buákviðr* or the court of neighbors.⁵⁶ The neighbors were summoned by the contending parties who also decided where and when the court was to meet. The neighbors were asked to take oaths and decided the case on their own knowledge of the facts, and hence, possessed the functions of witnesses in present-day jury trials as well as of jurors. The number of people composing the neighbors’ court varied from five to nine. The decision was made by majority vote, and if such a vote could not be obtained, the case might be taken to the *þing*⁵⁷ or people’s assembly, which met at specific regular times.⁵⁸ Usually held at a specially chosen field or open space, the community would assemble at the *þing* to settle

⁴⁹ Compo [33, pp. 238–240].

⁵⁰ Quran 16:90.

⁵¹ Çizakça [34, p. 11].

⁵² Ibid., pp. 30–31.

⁵³ A company that requires capital establishes a special purpose vehicle (SPV) that issues bond to purchase some equipment; the SPV leases the equipment to the company, which makes lease payments to the bond holders through the SPV.

⁵⁴ Çizakça [34, Chapter 7].

⁵⁵ As described in the following subsection, Anglo-Norman law is basically a tort law. Richardson [35] compares civil law property with common law property.

⁵⁶ Williams [36, pp. 298–299].

⁵⁷ The word is pronounced like ‘thing’ in English.

⁵⁸ Ibid., pp. 292–298; Sanmark [37, pp. 117–118].

any personal disputes as well as social problems, and enforce these *log* (public decisions). Etymologically speaking, the English word law came directly from Old Norse (Norsemen's language) *log*, an early plural form of *lag*, which means to lay down decisions. The *þing* was the governing assembly of a Norse society, presided over by a *logmaðr*. A *logmaðr*, often translated as lawspeaker, not only presided over the *þing*, but also worked as a judge, and formulated the *log* that had been decided by the people. When a civil case is appealed, the presumed facts of the case were established by a *kviðr*, a panel of twelve jurors; the *logmaðr* then adjudicates the case according to the precedents. There was no clear distinction between civil and criminal cases in the Norse law. A person who lost a case was either asked to make compensation or declared to be an *út-lagi* (outlaw), which was considered to be an extreme penalty, and was banished from the community. Norse law provided *hólmanga* or judicial duel as the only way to vindicate the honor; in many cases, the winner could claim everything the loser owned including the social status.⁵⁹

The common-field system is considered to be as old as the history of England; *commune* or common land is land on which the *communers* have certain traditional rights, such as to allow their livestock to graze upon it, to collect firewood, or to cut turf peat for fuel. In the common-field system, the *commune* existed in the form of numerous, dispersed strips under the control of individual cultivators only during the growing season; after the harvest, the land was at the disposal of the community for grazing by the village livestock and for other purposes.⁶⁰ After William, a descendant of Norsemen from Normandy,⁶¹ launched the conquest of England in 1066, and finally took control of all of England in 1071, almost all former landlords lost their property; King William I confiscated it and gave it to his own followers.⁶² The Norman Conquest changed the legal system

of the country forever. It was during Henry II's reign that the clerics in his court began specializing in legal affairs and acting in a judicial capacity. In 1154, Henry II institutionalized common law by creating a unified court system 'common' to the country through incorporating and elevating local custom to the national level.⁶³ The judges were sent on 'circuits', hearing pleas in the major places they visited and taking over the work of the local courts. Ranulf de Glanvill authored *Tractatus de Legibus et Consuetudinibus Regni Angliae* (Treatise on the Laws and Customs of the Kingdom of England), the earliest treatise on the common laws of England, in 1181 at the request of the king.⁶⁴ Since this highly sophisticated statute was written in Latin, and based on the Anglo-Saxon common field system, it was unpopular among the barons. In 1235, the *Provisiones de Merton* (Statute of Merton), the first English statute included in the Statutes of the Realm, was concluded between Henry III and the barons of England.⁶⁵ Amongst its provisions, the statute allowed a lord of the manor, a tenant-in-chief who hold a capital manor directly from the Crown, to *inclose* common land, and to assert rights over non-arable land, woods and pastures, against the *communers*.

Arable land soon disappeared;⁶⁶ and sheep farming became dominant in England. As the exports of wool from England to the Continental Europe through Antwerp grew, the use of *wissels*, the origin of present-day foreign bill of exchange, became ubiquitous.⁶⁷ While the drawers of the *wissels* were English wool merchants, the drawees were Dutch textile manufacturers in typical cases. Following the example of long-term recognizances for debt, the *wissels* drawn in Antwerp, many of which were industrial bills rather than commercial bills, frequently included a bearer close. These long-term instruments were very actively traded at the Handelsbeurs Antwerpen (Antwerp Bourse), which was established in 1531. Since a *wissel* is redeemed at its face value, the agio, which is the difference between the market price and the face value, is roughly equivalent to

⁵⁹Pulsiano and Wolf (eds.) [38, pp. 289–290].

⁶⁰Scrutton [39, pp. 1–10].

⁶¹The seafaring Norsemen are often referred to as *Vikingar* (Vikings); etymologically speaking, *Vikingar* means 'people of inlets' in Old Norse. Most probably, *Vikingar* originally meant the people from the west coast of Scandinavian Peninsula. According to *sögur* (sagas), Hrólfr, commonly known as Rollo, making himself independent of King Harald I of Norway to whom he was remotely related, sailed off to Scotland, England and then present-day France on his expeditions. After the siege of Chartres in 911, Charles III of Regnum Francorum Occidentalium or West Francia, gifted him lands, currently known as Normandie, which became the first stronghold of Norsemen outside of their homeland. Mallet [40, Chapter 9]; Foote and Wilson [41, pp. 40–43, 79–80].

⁶²Golding [42, pp. 25–39].

⁶³Ibid., pp. 98–101.

⁶⁴Hall (ed.) [43, pp. xi–xviii].

⁶⁵Scrutton [39, pp. 56–58].

⁶⁶The process of *inclosure* was accelerated by the scarcity of tenants after the *Bubonic Plague* (Black Death), the disease spread from Italy to northwest across Europe, striking France, Spain, Portugal and England by 1348. The plague hit England repeatedly, for the second time in 1361 and then in the 1370s and 1380s. Harvests would not have been brought in as the manpower did not exist. Those lords who lost their workmen to the disease, turned to sheep farming as this required less people to work on the land. Scrutton [39, pp. 70–72].

⁶⁷Bogaert et. al. [44, pp. 180–195].

usury. For example, an instrument sold for f.99 and redeemed one year later at the face value of f.100 without interest payment is almost equivalent to an instrument sold at par value and redeemed one year later at the face value of f.100 with an interest payment of f.1. The canonical prohibition against usury⁶⁸ was completely evaded by the use of *agio* as a loophole. Endorsed *wissels* soon started to circulate in England as a means of payment. Although the English courts with their common law basis were firmly opposed to the transfer of letters obligatory, they were disposed to make an exception for *wissels* and to admit the merchants' custom, which provided for the circulation of commercial bills within the closed circle of merchants as a general rule.⁶⁹ The exception made for the *wissels* stimulated little by little the passage from transferability to negotiability; English legal practice based on common law precedent was to confirm this extension of the practice. As a consequence, 'inland bill' or 'domestic bill of exchange' became a handy instrument of credit as well as a medium of payment in the late-sixteenth-century England; the country achieved pure credit economy without having Roman-style banking system.

Anglo-Norman law, which has developed in England after the Norman Conquest, consists of two sets of supplementary laws: common law and equity law. While common law is a body of laws strictly based on legal precedents established by the courts, equity law applies principles of equity or morals to overrule inflexible rules of common law. When King William I decided to invade England, he sought the blessing of Pope Alexander II.⁷⁰ The Normans made use of the church system in the process of conquering of England. Christian noblemen had no way to overturn the common law court decisions after 1215, when the *Constitutiones Concilii Quarti Lateranensis* (Constitutions of the Fourth Lateran Council), XVIII, virtually outlawed any duels including *hólmganga* (judicial duel)⁷¹ so that they turned to the monarch for assistance.⁷² Equity was

the name given to the law which was administered in the Court of Chancery. The Court of Chancery originated, as did the other High Courts, in the Norman king's court, and maintained by the rulers of England from the thirteenth century onwards.⁷³ The Equity Court or the Court of Chancery is a court of Anglo-Norman law that is authorized to apply principles of equity, mainly in the field of contracts and commerce, to overrule inflexible rules of common law. One of the most important contributions of equity was in the domain of the *use*, the predecessor of trust.⁷⁴ Although the English concept of *use* resembles to its Islamic counterpart *waqf*, the fundamental difference is that while, in *waqf*, the trustee usually is one of the beneficiaries, in English *use*, the trustee tends not to be a beneficiary. This is the first occasion in the long history of legislation, in which the claims and obligations that relate to the same *jus in rem* are allowed to belong to two different entities.

3. Roman law in the national accounting context

3.1. Law and accounting

In ancient times, the law of jungle governed everything; nobody could trust anybody so that exchange economy hardly existed. It took ages before the systems of law developed. Roman civil code, the most prominent system, is meant to reconcile economic interests without causing violence. In this system, people can readily go into economic transactions because they know what to expect from the contracts, such as sale and lease, without going into particulars as the law gives the necessary details. The legal system is the backbone of any market economy; however, it has assumed utmost importance in ancient Rome, where there has been no coinage. Roman law was summed up, and codified into the *Leges Duodecim Tabularum* or the Twelve Tables in the middle of the fifth century B.C. The *Corpus Juris Civilis*, the most comprehensive code of Roman law and the basic document of all modern civil law, was compiled by order of Byzantine Emperor Justinian I during the sixth century A.D.⁷⁵ Irenio,⁷⁶ also known

⁶⁸A verse from Vayicra (וַיִּקְרָא), the book of Leviticus, 25:36, which is sacred not only to Judaists but also to Christians and Moslems, is frequently quoted: "you shall not charge your fellow countryman interest on a loan, either by deducting it in advance from the capital sum (*neshekh* (נֶשֶׁךְ)), or by adding it on repayment (*marbit* (מַרְבִּית))". The book, one of the five books of the Torah (תּוֹרָה) or the Pentateuch, is believed to have written in Jerusalem in the late sixth century B.C. immediately after the Babylonian captivity has ended. Baden [45, Chapter 5]; Alter [46, pp. 539–545].

⁶⁹De Roover [47] narrates the development of negotiability.

⁷⁰Golding [42, pp. 139–141].

⁷¹The provision, known as *Sententiam Sanguinis* (Verdict of Blood), forbade clergymen to participate in the practice of the judicial ordeal, effectively banning its use.

⁷²Budzik, Kerrigan and Phillips [48, pp. 144–145].

⁷³Kerly [49, pp. 23–25]. Carne [50] narrates the complete history of the Court of Chancery in a short essay.

⁷⁴Ramjohn [51, pp. 4–6].

⁷⁵Constantine I officially introduced gold specie standard system by circulating *solidus* coins after moving the capital of the Roman Empire to Constantinople in 330 A.D. so that the *Corpus Juris Civilis* did not presuppose pure credit economy as the *Leges Duodecim Tabularum* and *Lex Poetelia Papiria* did; Bunson [52, p. 99].

⁷⁶Although the details of his life are not known, the most reliable biography is Rota [53].

as Irnerius, who was born in Bologna, began to devote himself to the study of jurisprudence during the 1070s, taking the *Corpus Juris Civilis* as a guide. By the end of the eleventh century, the law books of Justinian came to be studied in northern Italy,⁷⁷ and there began the second life of Roman law, which gave to almost the whole of Europe a common stock of legal ideas, a common grammar of legal thought.⁷⁸ Today, the Roman law concepts of *jus in rem* and *jus in personam* are not only the basis of the civil law that governs many of the Continental European and South American countries,⁷⁹ but also have much influence on the U.K. and U.S. common law systems.⁸⁰ Although the legal system is different from country to country, the Latin terminology of Roman law is the universal language.

It should be noted that accounting was an indispensable part of legal documents already in the Roman Republic era. Marcus Tullius Cicero, a Roman lawyer turned philosopher, successfully used accounting books as documentary evidence in *Pro Quinto Roscio Comodo* (in Defense of Publius Quinctius), III:VI, in 81 B.C. According to his statement, the custom was to jot down each day the items of income and expenditure as they occurred in an accounting book called *adversaria*, and to transfer these once a month to a permanent book called *codex*. The books were always verifiable because all the names of trade partners were identified.⁸¹ Every Roman citizen was obliged by the *ensor* to keep their books for taxation purpose. Especially, bankers' books called *argentarii rationes* enjoyed public confidence (*fides publica*) and had to be presented in trials in which their clients were involved.⁸² An interesting feature of the accounting books of this era is that entries in the receipts column are frequently balanced by the entry or entries next following in the payments column, which may be regarded as a precursor of the modern double entry system.⁸³ Gaius' *Institutes* (161 A.D.), an ancient textbook of Roman law, spends many pages on accounting topics. For example, the author care-

fully distinguishes between *nomina arcaria* and *nomina transcripticia*, both of which have been widely used as legal documents in those days.⁸⁴ While *nomina arcaria* records payments and receipts on the cash basis,⁸⁵ *nomina transcripticia* records claims and obligations on the commitment basis;⁸⁶ both are important as legal documents but do not substitute each other.⁸⁷

At the end of the eleventh century, the emerging city-states of northern Italy were swept up in a commercial explosion sparked by the Crusades. As trade flourished, the northern Italians vigorously explored the methods of improving their bookkeeping techniques to cope with the growing complexity of their business dealings.⁸⁸ *Liber Abaci* (1202), authored by Leonardo Pisano Bigollo who was also known as Fibonacci, brought Hindu-Arabic numerals to Italy so that they finally got arithmetic tools such as the decimal number system and written calculation methods. The bookkeeping system was perfected by the merchants of Venice and became known as *alla Veneziana*, the Venetian method; we know it today as the *partita doppia* or double entry bookkeeping. The man responsible for its codification and preservation – the author of the world's first printed bookkeeping treatise – is Fra Luca Pacioli. In their *quaderni* (ledgers), the Venetian merchants divided debits and credits (*debiti e crediti*) into two columns. As Pacioli says, this is the most important thing to note in Venetian bookkeeping: "All the creditors must appear in the *quaderno* at the right-hand side, and all the debtors at the left. All entries made in the *quaderno* have to be double entries – that is, if you make one creditor, you must make someone debtor."⁸⁹

As Dohr [62] acknowledges, the modern accounting system, notably the double entry, is an accounting system which is based on the Roman law concepts of *jus in rem* and *jus in personam*. The above passage from Pacioli clearly tells that the *quaderno* records the creditor-debtor relationship between two people – a typ-

⁷⁷The institution that is known today as Università di Bologna, the first university in the western world, began to take shape around 1088 when masters of grammar, rhetoric and logic began to devote themselves to the law; Lagerlund (ed.) [54, p. 127].

⁷⁸Nicholas [55, p. 2].

⁷⁹Roman law is also practiced in Russia, China, Japan and many other countries of the world.

⁸⁰See the first chapter of Burdick [56] for details. Although the U.S. is not usually considered to be a Roman law country, the U.S. Uniform Commercial Code is one of the best specimens of its kind.

⁸¹See De Sainte Croix [57] Fig. III, for an example.

⁸²Berger [58, pp. 366–367].

⁸³De Sainte Croix, *Ibid.*

⁸⁴Gaius' *Institutes*, III:CXXXI.

⁸⁵The entries are made at the time of payment.

⁸⁶The entries are made at the time of conclusion of the contract.

⁸⁷Hunter [59, pp. 466–471], and Jolowicz [60, pp. 292–297], discuss the relationship between Roman law and accounting practice in detail.

⁸⁸The earliest known surviving Italian account is a fragment from the *quadernos* of a Florentine bank dated 1211. Most accounting historians agree that the first surviving accounts kept in double entry date to around 1300: the accounts of the Florentine merchants Rinieri Fini e Fratelli (1296–1305) and those of Giovanni Farolfi e Compagni. See Lee [61] for details.

⁸⁹Pacioli (1494) *Summa de Arithmetica, Geometria, Proportioni et Proportionalità*, IX:XI:XXXVI.

ical example of *jus in personam*. He also tells that the possession of jewels etc., which exemplifies *jus in rem*, must be also recorded in the *quaderno*.⁹⁰ It was no coincidence that the accounting system took huge strides in the northern Italy between the eleventh and fifteenth century after Roman law concepts of *jus in rem* and *jus in personam* had been reintroduced. It should also be noted that the above passage from Pacioli implies both double entries: within the personal account and between the accounts of two people. National accounting refers to the former as vertical double entry and the latter as horizontal double entry; that makes quadruple entry.⁹¹

A national accounting system is by no means a mere tool of national income measurement; it consists of a coherent, consistent and integrated set of macroeconomic accounts based on uniform concepts, definitions, classifications and accounting rules.⁹² The first such attempt was *Nationale Boekhouding* or National Book-keeping compiled by Van Cleeff [63,64] for the Dutch economy of 1938. His intention was to demonstrate that, in principle, national accounting could be compiled in exact analogy with the accounting system of Fra Luca Pacioli. The national accounting system consists of four economic sectors: (1) service industry including commerce, banking and insurance; (2) other corporate business including public corporations; (3) households as consumers; and (4) the general government that provides education in addition to general administration services. The system has four main tables: (i) *nationaal journaal* (national cash flow statement), (ii) *nationaal grootboek* (ledger), (iii) *samenvattend jaaroverzicht* (national income and outlay account) and (iv) *nationale balans* (national balance sheet). While *nationaal journaal* is an equivalent of *giornale* in the Pacioli's system; *nationaal grootboek* is an equivalent of *quaderno*; and *samenvattend jaaroverzicht*, which is a summary table of *nationaal grootboek*, is an equivalent of *pro a danno* so that the last table can be obtained by rearranging the first. Since the debit and credit columns are balanced within a sector, it is a system of vertical double entry. Since each row is balanced across the sectors, it is a system of horizontal double entry. This apparently is the origin of today's system of national accounts that is based on the quadruple entry system.

3.2. *Usus, Fructus and Abusus*

Roman law classifies the social phenomena into as

few categories as possible and to give no more than basic principles. This process of abstraction is important not merely for the simplicity of formulation which it makes possible, but also because principles, unlike rules, are fertile; by combining two or more principles, it is possible to create new principles that can apply to new phenomena, which are not known when the legislation has been put into practice.⁹³ As mentioned earlier, *res* includes both *res corporales*, which is further categorized into *res mobiles* (movable things, such as furniture) and *res immobiles* (immovable things, such as land), and *res incorporales*, abstract things such as writings and music. In Latin, *res* may be either singular or plural. *Jus in rem* is the rightful and exclusive dominion of a person over *res*. *Dominium* is the exclusive right to use (*usus*), to profit from (*fructus*), and to dispose of (*abusus*) a particular *res*. *Usus*, *fructus*, and *abusus* have been recognized as pillars of private property since the antiquity.⁹⁴ Since *dominium* combines all three, it is described as absolute dominion over a *res*. In contrast to this, *possessio* is the right to possession or occupancy; *possessio* allows the possessor to exclusively use, and to profit from a particular *res*, but does not allow disposing of it. In other words, the possessor has *usus* and *fructus* of the *res*, but lacks *abusus*; it is why *possessio* is referred to as *usufructus* in the *Justiniani Institutionum*,⁹⁵ II:IV, the Justinian elementary textbook. The concepts are essential because *usus*, *fructus*, and *abusus* that relate to the same *res* may belong to different persons. For example, if you rent out your house, the *fructus* and *abusus* of the house still belong to you; however, you lose the *usus*, which now belongs to your tenant.⁹⁶ This example shows that although *usus*, *fructus*, and *abusus* are intrinsic to *jus in rem*, they are useful tools to delineate the characteristics of *jus in personam*.

Jus in personam is an explicit agreement between specific parties, in which one party is obliged to do or to perform some specific duties on behalf of the other. While some types of *jus in personam* arise from some specific act (i.e., delivery of *res*), all other types of *jus in personam* arise when mutual agreement is reached before any action is taken. The former is referred to as *obligatio re contracta* (real contract), while the latter is as *contractus consensu* (consensual contract). In the original Latin usage, real contracts refer to the con-

⁹⁰Ibid., IX:XV.

⁹¹See Footnote 42 above.

⁹²SNA1993, 1.1.

⁹³Nicholas [55, p. 1].

⁹⁴*Justiniani Institutionum*, II:IV.

⁹⁵The original spelling of the title is *Institvionvm*. English translation is available: Moyle (tr.) [65].

⁹⁶See next section for details.

tracts that arise from receiving *res*.⁹⁷ The general idea is that *res* received without payment must be returned unless otherwise agreed.⁹⁸ The *Justiniani Institutionum*, III:XIV, divides real contracts into four categories: *depositum* (custody), *commodatum* (loan for use), *mutuum* (loan for consumption) and *pignus* (pledge). In *depositum*, the *res* must be kept safe and should not be used or consumed so that *depositum* does not involve transfer of *possessio*; it is referred to as *possessio per alium* (i.e. *possessio* through an agent). In *commodatum*, the recipient of the *res* is allowed to use it, but is bound to return it afterwards; the *usus* is temporarily transferred either on a gratuitous basis or on a pay-for-use basis. In *mutuum*,⁹⁹ the recipient of *res* is allowed to use and to profit from it and also to consume it or to sell it to another, but is bound to return the equivalent of the original *res*; the *usus*, *fructus*, and *abusus* are temporarily transferred from the lender to the borrower. *Pignus* is an agreement in which the borrower put up some *res* of equal value as collateral to secure a *mutuum* loan; if the borrower fails to repay the loan, the lender can seize the collateral or sell it to a third party to have his/her own claims paid, but cannot seek out the borrower for any further compensation, even if the collateral does not cover the full value of the defaulted amount.¹⁰⁰ In *pignus*, the *usus* and *fructus* are transferred from the pledger to the pledgee at the time of delivery. If the loan is paid, the pledgee must return the *pignus* to the pledger; otherwise, the pledgee acquires the *abusus* of the *pignus*.

In contrast to real contracts, consensual contracts are formed solely by consent between two parties. According to the *Justiniani Institutionum*, consensual contracts are exemplified by but not limited to *emptio venditio* (sale/purchase), *locatio conductio* (lease), *societas* (partnership) and *mandatum* (agency); these four are referred to as *contracti nominati* (nominate con-

tracts).¹⁰¹ *Emptio venditio* arises from a mutual consent between two parties in which one party agrees to transfer some specific *res* to the other party, and the counterparty agrees to make payment in return.¹⁰² In most cases, the *dominium* of the *res* is bought or sold, however, it is possible to sell or to buy either or a combination of the *usus*, *fructus* and *abusus* in the *res*. *Locatio conductio rei* is a mutual consent between two parties in which one party agrees to transfer the *usus* and *fructus* in a *res* to the other, for a duration of time, for an agreed purpose; and the counterparty promises to pay rent for it.¹⁰³ *Locatio conductio rei* resembles to *commodatum*, however, while *commodatum* allows either party to terminate the contract at any time or with a short notice period, *locatio conductio rei* does not allow either party to do so. Instead, in *locatio conductio rei*, both the lessor and the lessee are free to transfer the leasehold to third parties. *Societas* and *mandatum* are little to do with the concepts of *usus*, *fructus* and *abusus*. *Societas* is a collective contract in which participants contribute some assets and use the pooled assets for some agreed purpose; the contributions from the participants and the profit from it are subject to *communio* (common ownership).¹⁰⁴ *Mandatum* arises from a mutual consent between two parties in which one party requests the other party to perform some specific act on behalf of the former, and the counterparty agrees to do so.

The concepts of *usus*, *fructus* and *abusus* are useful not only to describe the Roman law concepts but also non-Roman law concepts such as English land law. The origins of the present-day principles of English land law date back to the Norman Conquest of 1066. The Crown still is the only absolute owner of land in England and Wales; all others have estates in land.¹⁰⁵ The Law of Property Act 1925 is a statute, which is intended to

⁹⁷*Justiniani Institutionum*, III:XIV.

⁹⁸If there is no intention to receive the *res* but it is delivered by mistake etc., the deliverer can still ask for the return of the *res* but with some reservations. In such a case, it does not constitute *obligatio re contracta*; it is referred to as claim of *restituere ad locupletandum*, which is an equivalent of the equitable concept of 'restitution for unjust enrichment'.

⁹⁹*Mutuum* (literally means reciprocal agreement) as stipulated in the *Lex Poetelia Papiria* consisted of two pairs of *jus in personam*: the *obligatio* and the *obligare*. In today's terminology, which is based on the *Corpus Juris Civilis*, only the first part of the contract, the *obligatio*, is referred to as *mutuum*; the latter part, the *obligare*, is referred to as *pignus*.

¹⁰⁰The practice is referred to as *non recursus pecuniae creditae* (non-recourse loan).

¹⁰¹The parties are free to determine the provisions of contents and to enter into contracts; the principle is referred to as *libertatem contractus* (freedom of contract). The contracts other than *contracti nominati* are referred to as *contracti innominati* (innominate contracts).

¹⁰²*Justiniani Institutionum*, III:XXIII.

¹⁰³*Ibid.*, III:XXIV.

¹⁰⁴*Communio* is a *jus in rem*, which is shared by two or more parties, to use, to profit from, and to dispose of a particular *res*; each coowner may use and profit from the entire property in proportion to its share, however, no coowner may dispose of or make any alteration to the *res* without the consent of the other coowners.

¹⁰⁵Those people who directly supported William I in the conquest were appointed the *tenant-in-capite* (tenants-in-chief; barons), who held their grants of land directly from the Crown. The *tenant-in-capite* would create smaller tenancies out of his large estate, and grant them to people who were prepared to accept obligations towards him (i.e.,

modernize the English land law.¹⁰⁶ The term ‘land’ includes not only the ground, but also any buildings, parts of buildings, or similar structures affixed onto it. Estates in land can be divided into three basic categories: freehold estate, life estate and leasehold estate.¹⁰⁷ A freehold estate is an interest in land, in which the property may be freely transferred, sold, or bequeathed in perpetuity. Although freehold estate is by no means a synonym for *dominium*, the estate holder still has *usus*, *fructus* and *abusus* in the property. A life estate is an interest in land that ends at death when the legal title may revert to the original owner; the life tenant cannot sell, give or bequeath the property indefinitely. In that sense, the estate holder retains *usus* and *fructus*, but lacks *abusus*. A leasehold estate is a form of land tenure where one party acquires the right to occupy land for a given length of time; as lease is a legal estate, leasehold estate can be bought and sold on the open market. Thus, the estate holder has *usus*, *fructus* and *abusus* during the period of lease.

Since Islamic law of succession stipulates that all the children of the deceased have right to inheritance,¹⁰⁸ the family wealth tends to fragment. If a wealthy Muslim wants to preserve the wealth for generations to come, he could transform his wealth into a family *waqf*,¹⁰⁹ and put his most trustworthy and able offspring in charge of this *waqf* as the trustee. The settler can appoint other members of the family as beneficiaries and instruct the trustee to pay them annually a certain percentage of the revenue generated by the *waqf* property. In this case, both the *usus* and *abusus* in the trusted property may belong to the trustee, but the *fructus* are shared by all the children of the settlor.

4. Concluding remarks

A balance sheet, the foundation of any accounting system, is a list of outstanding assets and liabilities at a point of time. In the Roman law context, while assets refer both to the owned *jus in rem* and *jus in personam*, liabilities are owed *jus in personam*. A problem arises

when you record both the *jus in rem* and *jus in personam* that relate to the same *res* in your balance sheet as assets. For example, if you own a land and lease it out, you have both *jus in rem* and *jus in personam* in the same land so that if you register both in your balance sheet it is double counting. This is an occasion when the concepts of *usus*, *fructus* and *abusus* are useful.

In concluding this paper, we will show you the accounting formulae that depict some of the examples mentioned in the previous section. A case of collateral loan that comes under Roman-law *mutuum/pignus* is delineated in Fig. 1. The letters *u*, *f* and *a* stand for *usus*, *fructus* and *abusus* respectively. The bracketed entries in the balance sheets are *jus in personam*, while items without brackets are *jus in rem*. The lender has loaned his/her funds¹¹⁰ to the borrower; the lender no longer has it at hand but has claim on the funds currently held by the borrower. Since it is a *mutuum* agreement, all the three of *usus*, *fructus* and *abusus* have changed hands. Meanwhile the borrower delivers collateral to the lender. Although the borrower, the pledger, retains the *abusus*, the *usus* and *fructus* are transferred to the lender or the pledgee. If the borrower fails to pay on or before the promised date, the lender acquires the *abusus*; otherwise, the pledgee must return the collateral to the pledger.

Figure 2 depicts a case of leasehold estate, which is a common practice in England and Wales but found worldwide. While the lessee gets the *usus*, the lessor retains the *fructus* and *abusus*. If the lessee sublets the property, he/she earns the margin between the sublet and leasehold rents. In that sense, the lessee also has a share of *fructus* denoted by % in the figure. Another example of non-Roman law practice is a family *waqf*; family trusts are popular nowadays in many countries of the world. Figure 3 is a simple case that involves only three types of participants: the settler, the trustee/beneficiary and the other beneficiaries. Although the property is handed to the trustee, it is usual that the settler has the right of rescission so that he/she retains the *abusus* in the property; the trustee/beneficiary has the *usus* and his/her portion of *fructus*. Other benefi-

paying rent in today’s sense). These sub-tenants could then create their own sub-sub-tenancies, and so on; this process of subinfeudation is characteristic of the English land system. Golding [42, pp. 54–68]; Dixon [66, pp. 3–6].

¹⁰⁶Some changes have taken place since the commencement of the Land Registration Act 2002.

¹⁰⁷Dixon [66, pp. 7–10].

¹⁰⁸Quran 4:11.

¹⁰⁹Layish [67, pp. 352–354].

¹¹⁰Funds, which takes the form of bank deposit, is the sole currency in the pure credit economy we live in today. *Uacua pecunia*, a Latin phrase literally meaning ‘virtual currency’, is considered to be the origin of ‘funds’ as we refer to it today. See Section 3.1 of Tsujimura and Tsujimura [26] for accounting interpretation of funds; Section 3 of Tsujimura and Tsujimura [25] discusses the history of funds from the legal perspective; Tsujimura and Tsujimura [68] explores flow-of-funds based national accounting.

Lender			Borrower	
Assets	Liabilities		Assets	Liabilities
[Funds u, f, a]		<i>Mutuum</i>	Funds u, f, a	[Funds u, f, a]
Collateral u, f		<i>Pignus</i>	Collateral a	
	[Collateral u, f]		[Collateral u, f]	

Fig. 1. Collateral loan (Roman law).

Lessor			Lessee	
Assets	Liabilities		Assets	Liabilities
Land $\%f, a$			Land $u, \%f$	
[Land $u, \%f$]				[Land $u, \%f$]

Fig. 2. Leasehold estate (Anglo-Norman law).

Settlor		Trustee/Beneficiary		Other Beneficiaries	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Property a		Property $u, \%f$		Property $\%f$	
[Property u, f]		[Property $u, \%f$]		[Property $\%f$]	

Fig. 3. Family waqf (Islamic law).

ciaries acquire their share in the *fructus*, however, they might lose it if the agreement is nullified.

Application of accounting discipline to the organization of economic data aids in both collection and interpretation of economic and jurisprudential knowledge, for it highlights gaps in the basic statistics and clarifies interrelations among the parts of the structure. One of the distinguishing features of Roman civil law is to be found in its rational and philosophical character. It was the strength of the Roman lawyers that they not only had the ability to construct and manipulate these abstractions on a scale and with a complexity previously unknown, but had also a clear sense of the needs of social and commercial life, an eye for the simplest method of achieving a desired practical result.¹¹¹

Roman law took its shape originally as a result of customs. *Dominium*, without doubt, played a central role in *jus in rem* in all periods of Roman society. From its early development, however, the Roman jurists separated from this same *dominium* certain entitlements to use and enjoyment, which they classified as *usus* and *fructus*. On one side, the original bundle of powers of the owner was hived off to constitute the *usufructus*, which coincided with what we might refer to as the ‘ordinary enjoyment’ of the object.¹¹² On the other side, the owner who has lost the *usufructus*, still retains some right called *abusus*. After the turn of the fourth and third centuries B.C., it became commonplace that *usus*,

fructus and *abusus* were ‘bought and sold’ and ‘lent and borrowed’ separately. The above accounting examples clearly show that the concepts of *usus*, *fructus* and *abusus* apply not only to the Roman-law transactions but also to practically any business arrangements. The Romans made law a thoroughly scientific subject, an elaborately articulated system of principles abstracted from the detailed concepts that constitute the raw material; it is the strength of Roman law, which other legal systems lack.

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¹¹¹Nicholas [55, p. 1].

¹¹²Colognesi [69, p. 524].

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