# **Mudarabah Financial Sharing (MFS)**

Bijan Bidabad<sup>1</sup>

# Abstract

Mudarabah Financial Sharing (MFS) provides an opportunity for depositors to participate in commercial (buy and sell) projects. This method is a financial subsystem of Rastin Profit and Loss Sharing (PLS) banking system and in this connection, the instructions, organizations; working procedures, electronic bases, contracts and related forms are highly similar to Rastin PLS base system. The basis for determining rate of return in this kind of sharing is the yield rate in real sector economy and bank receives commission for providing capital management services for depositors as an agent or attorney, and works as an intermediary of funds to allocate depositor's funds into *Mudarabah* commercial activity of entrepreneur. Bank distributes the outcome of the project to depositors and agent/entrepreneur (*Mudarib*).

MFS uses the financial innovations of "Mudarabah Certificate" and "Periodic Mudarabah Certificate". Depositor receives a Mudarabah Certificate when joins to a special Mudarabah project that can be transacted in Rastin Certificate Market. Profit or loss share is paid to the latest holder of certificate after the end of project. Profit share settlement between the Mudarabah Certificate holder and Mudarib (agent or entrepreneur of the project) will be based upon neoclassic theory of shares of factors of production, and specifically on the Euler theorem of income distribution.

Keywords: Mudarabah, Rastin Banking, PLS Banking, Mudarabah Certificate, Islamic Banking, Usury-free banking

# **Introduction and Objective**

Mudarabah Financial Sharing (MFS) provides the ground for depositors to share in commercial project of entrepreneur. This method is a financial subsystem of Rastin Profit and Loss sharing (PLS) banking system and works under general instructions, organizations, working procedures, electronic software, contracts and related forms of Rastin PLS banking.

Rate of return determination in this kind of sharing – whether bank is private or public- is the rate of return of real economy. Bank receives commission for providing capital management services to depositor as agent or attorney, and works as intermediary of funds to allocate depositor's funds in *Mudarabah* commercial activity of entrepreneur. Bank signs "Joalah contract" with depositor and "*Mudarabah* contract" with *Mudarib* (agent/entrepreneur) to join them in *Mudarabah* sharing project according to their views. In this subsystem, bank offers the deposited funds to those seeking financial credit for *Mudarabah* and the outcome of *Mudarabah* is divided between depositor and *Mudarib* according to instructions. Distribution of profit will be done among depositors and agent and bank receives commission. In the case that bank deposits in a project, of course will receive profit share in proportion to his extra fund depositing. The agent (*Mudarib* or entrepreneur) is a real or legal entity who receives the cash funds of depositor via the bank and according to the contract starts specific *Mudarabah* activity. Depositor will fund the *Mudarib* and *Mudarib* provides acceptable guarantees to bank for certainty of conducting his job properly. Trustee (*Amin*) is a unit of Rastin PLS bank that supervises the implementation of the

<sup>&</sup>lt;sup>1</sup> Dr. Bijan Bidabad is Professor of Economics and Chief Economic Advisor to Bank Melli Iran. <u>bijan@bidabad.com</u> <u>http://www.bidabad.com</u>

project.

# Methodology and Scope

New financial innovations of "*Mudarabah* Certificate" and "Periodic *Mudarabah* Certificate" are used in MFS. *Mudarabah* Certificates are bearer certificates issued by Rastin PLS banks for specified period of the project with nominal price. The owners of these certificates share the profits of *Mudarabah* in proportion to the nominal price of the certificate and the period they had depositing. These certificates are issued digitally over internet to provide web-based digital transactions. The owners of this certificate can transact it on internet or over the counter of PLS bank branches. Therefore, these certificates can be transacted internationally.

"Periodic *Mudarabah* Certificate" is similar to "*Mudarabah* Certificate", but depositor receives his yield after each period and entrepreneur with the fund of depositor can do the job multiple times.

By applying to internet information portal of Rastin Certificate Market, or a PLS bank branch, depositor acquaint with depositing and dispensing through consulting with bank expert and selects the project she desires. By depositing and after signing and registering contract, the system will automatically issue the certificate. At the end of sharing period, the accounting/auditing counter will calculate and pay the profit to certificate holder.

By applying to bank branch, *Mudarib* also offers his *Mudarabah* project proposal to bank. Then, while informing the *Mudarib* (agent) about the conditions and regulations concerning participation through internet information portal of Rastin Certificate Market or information counter of PLS bank branches, the necessary registration fee (according to instruction) with the written proposal, and economic, technical and financial justification of the project will be received from entrepreneur (agent).

The assessment unit of the PLS bank will assess the credibility of the agent on the basis of available historical background of the agent and according to the compiled instructions if the agent possesses necessary technical and other capabilities, will report to project assessment unit. If the assessment report is positive, the necessary guarantees and collaterals will be determined according to instructions. After signing contract with the agent, bank delivers the required fund to agent according to the *Mudarabah* contract. All *Mudarabah* documents according to the contract including detail of *Mudarabah* commodities, budgeting, time-table, fund needed, and the method of consumption of funds and implementing the project, phasing, quality control and reporting and finishing the plan will be given to the trustee unit of bank. The supervision reports of trustee unit will be the basis for *Mudarabah* settlements. At the end of project or specific periods, accounting/auditing unit of the bank will calculate profit or loss and bank commission according to instructions. The share of depositor and agent will be carried to their accounts. If there is a stoppage report provided by the trustee, the resulted losses will be calculated according to instruction.

#### Mudarabah

Terminologically, Mudarabah denotes interaction and cooperation between two sides. In Islamic jurisprudence (Feqh), it is a transaction contract between two persons according to which a person conducts economic activity by the capital of another person, and the derived profit is divided according to pre-agreed ratios. In other words, Mudarabah is a contract between depositor (The owner of capital) and Mudarib (agent) for conducting economic activity by the capital of depositor and dividing the profit by agreed percentages. If the activity ends to profit, it will be divided between them, but if it ends to loss, only depositor bears the loss and agent's loss is his unfruitful efforts, except when it is proved that the loss has been caused by the agent's fault. The condition for Mudarabah is that the depositor should accept probable loss; otherwise, the deal will not be a Mudarabah, but a loan. If it is agreed to transfer all the profit to owner of

capital, again the deal will not be a *Mudarabah*, but *Ibza*<sup>2</sup>. Defining the shares of profit of each party is of important conditions of *Mudarabah*. *Mudarabah* is a two-sided contract and needs the approval of both sides<sup>3</sup>.

Some believe that the capital of *Mudarabah* should be in cash<sup>4</sup> and conducting *Mudarabah* with commodities is not valid<sup>5</sup>. On the other hand, by restricted definition of *Mudarabah* some believe that *Mudarabah* should only be used in commercial activities<sup>6</sup>. Of course, these beliefs do not reject primary rules of contracts; and types of this contract can be made by goods as capital, or be done on other non-commercial activities<sup>7</sup>. On the other hand, there is no reason to limit all contracts to contracts in *feqh* books and narrated contracts; therefore, even if the capital is not cash, and it is not considered as a *Mudarabah* contract, the contract is yet legal. The narration-based reasoning for *Mudarabah* is based on epithet (*laqab*)<sup>8</sup> concept, which is the weakest logic in *feqh* and is not a proof. On the other side, there are narrations that commodity can be regarded as capital of *Mudarabah*<sup>9</sup>.

Some of Sunni jurists admit commodity *Mudarabah* by evaluating the price of commodities and considering the price as *Mudarabah* capital, or if a debt were created by transacting measurable/weighable property, it will be quite similar to money in cash, and the *Mudarib* receives what he is rightful and there will be no guarantee-less profit (*Rebh-e-la'yozman*)<sup>10</sup>. In addition, it is possible for *Mudarib* to give back the original capital (commodity) at the end of *Mudarabah*<sup>11</sup>.

*Mudarabah* is a definite and revocable contract<sup>12</sup>. The Civil Law prescribes: "*Mudarabah* is a contract according to which one part of the contract provides the capital and specifies that the other part should trade with it and divide the profit between them<sup>13</sup>. The share of each partner in the profit should be specified from the joined ownership such as a quarter, a third or else<sup>14</sup>. These shares should be specified unless it is generally known, and if it is not specified by the partners, it is considered as a prevalent general case<sup>15</sup>. It is mentioned in the Civil Law that the subject of *Mudarabah* can be any general and unconditional commercial activity - if any specific activity is not mentioned in the contract<sup>16</sup>. *Mudarib* works as an *amin* (trustee) and is not guarantor of the capital of depositor, except he has wasted or oppressed it<sup>17</sup>. Specifying the capital is another condition of *Mudarabah*. If someone provides the capital and mentions that all the profit should be returned to him, the other party only receives commission; unless it is proved that, the agent

<sup>&</sup>lt;sup>2</sup> - In *Ibza* the agent works for the owner of capital and earns commission.

<sup>&</sup>lt;sup>3</sup> - Tabatbaee Yazdi, Saied Muhammad Kazem; Orvatol-Vosgha, Qom, Islamic Publication Institute, 1420 Lunar Hijri. Khomeini, Seyyed Rouhul-Allah Musavi; Tahrir-ul-Vasileh, Qom, Islamic Publication Institute, 1420 Lunar Hijri, Vol. 1, pp. 558-567.

Al-Husaini Shirazi, Seyyed Muhammad; Al-Feqh (Vol. *Mudarabah*), Qom, Seyyed-u-Shohada Publication, Pp 5-8. <sup>4</sup> - Civil Law, article No. 547.

<sup>&</sup>lt;sup>5</sup> - Allameh Helli, Al Jame-u-sharaye, ed. by Murvarid, Ali Asghar, Birea: Al Shiah Feqh Institute, 1410 Lunar Hijri.

 <sup>&</sup>lt;sup>6</sup> - Khomeini, Seyyed Rouhul-Allah Musavi; Tahrir-ul-Vasileh, Qom, Islamic Publication Institute, 1420 Lunar Hijri.
 <sup>7</sup> - Article 560, Civil Law: Mudarabah contract follows the conditions and regulations considered between two sides of the contract.

<sup>&</sup>lt;sup>8</sup> - Epithet is discussed in *Feqh* Principles. It is to say that if a title or name is the subject of a commandment, what is not generally covered by this name, is not included in that commandment. Muzaffar, Muhammad Reza, *Osoule Feqh*, vol. 1, *Ismaeelian* publication.

<sup>&</sup>lt;sup>9</sup> - See: Tafreshi, Muhammed Isa, and Jalil Ghanavati Khalafabadi, Foundation of *Mudarabah* contract in Islamic jurisprudence and Iran Civil Law. <u>http://www.ghavanin.ir/PaperDetail.asp?id=839</u>

<sup>&</sup>lt;sup>10</sup> - This is a kind of profit for which the person has no guarantee about it.

<sup>&</sup>lt;sup>11</sup> - Al Fatehul Ghozat, Zakaria Muhammad, Al-Salam val-Mudarabah, Amman, Darul Fekr Lelnashr va Tozie, 1984.

<sup>&</sup>lt;sup>12</sup> - Article 550, Civil Law of Iran.

<sup>&</sup>lt;sup>13</sup> - Article 546, Civil Law of Iran.

<sup>&</sup>lt;sup>14</sup> - Article 548, Civil Law of Iran.

<sup>&</sup>lt;sup>15</sup> - Article 549, Civil Law of Iran.

<sup>&</sup>lt;sup>16</sup> - Article 553, Civil Law of Iran.

<sup>&</sup>lt;sup>17</sup> - Article 556, Civil Law of Iran.

has carried out the task freely<sup>18</sup>. If it is mentioned in the contract that the agent is responsible and guarantor of the *Mudarabah* capital, the contract will be nullified, unless it was mentioned that the *Mudarib* compensates the losses freely from his own wealth<sup>19</sup>.

## Mudarabah Financial Sharing (MFS)

The legal basis of *Mudarabah* Financial Sharing (MFS) is the definition referred to in Civil Law. In addition, there are some other regulations and disciplines, which are designed for detailed application. Also in *Mudarabah* Financial Sharing (MFS), one party provides the capital and the other one trades with that capital and the profit is shared. The necessary activities to be carried out by agent (*Mudarib*) should be defined in the contract. Agent can be real person or legal entity. The *Mudarabah* financial sharing activities should be carried out under the general instructions of Rastin PLS banking, unless the deviation from it is mentioned.

In MFS, bank obtains the *Mudarabah* proposal from *Mudarib*. After careful assessing proposal and agent according to compiled instructions, the proposal is introduced to depositors; and by issuing *Mudarabah* Certificates bank will provide necessary fund for *Mudarabah* activity. Bank allocates the fund to entrepreneur and *Mudarabah* starts under the supervision of bank's trustee unit and after the end of *Mudarabah* activity, bank pays the principal capital and profit shares back to depositor and agent, and bank receives his commission. If the activity fails to obtain profit, bank will receive no commission. The issuance and transaction of *Mudarabah* Certificate base on Rastin PLS banking instructions.

Mudarabah subject is in transaction (trade) to be carried out in following fields:

- a- Transaction of goods inside the country (domestic commerce)
- b- Exporting goods for selling abroad (export)
- c- Importing goods to sell in the country (import)
- d- Importing goods to re-export (transit)
- e- Interchanging foreign trade commodities (swap).

The *Mudarabah* capital is defined with acceptable costs (including price of buying goods for *Mudarabah*, insurance, transportation, warehousing, packaging, order registration, custom fee, commercial and banking fees) for a complete transaction (buying and selling) period. Depositing a percent of import value, as a guarantee for letter of credit at central bank, is not regarded as cost, because it will be paid back to agent when customhouse releases the imported commodity. This payment should be carried out by agent.

Other related and unexpected costs are accepted if the bank's trustee unit confirms them; otherwise should be paid by agent. The cash capital of *Mudarabah* is paid to the agent once or in different phases.

If the quest of agent for extra funds is accepted by trustee, because of price increase or increase in some of the above-mentioned accepted costs, this will be financed through complimentary contract according to instruction. If it is necessary, bank will decide about extra collaterals. Financing extra fund will be through issuing new *Mudarabah* Certificates for new depositors.

Contract duration is proportional to a complete period of buying and selling of the *Mudarabah* commodity. Export *Mudarabah* contract duration is defined by considering the maturity of letter of credit (LC) and should be more than that. *Mudarabah* duration can only be extended by providing documents to the trustee unit of bank about the delay according to instructions of PLS banking and trustee approval. Overall, this period cannot be longer than 6 and 9 months for internal and external trade contracts respectively.

All bank supervisions will be carried out buy trustee unit. All the sell receipts will be transferred to specific account of the bank immediately. The agent should promptly inform the

<sup>&</sup>lt;sup>18</sup> - Article 557, Civil Law of Iran.

<sup>&</sup>lt;sup>19</sup> - Article 558, Civil Law of Iran.

trustee about his purchase and trustee will supervise his warehousing and sale. The trustee is obliged to supervise the flow of goods purchased from the supplier to warehouse and details of sell and outgoing from the warehouse. *Mudarib* is obliged to inform the trustee about all physical movement of goods from place of sell to warehouse, loading and delivery of goods and move them by trustee permission. If there is any delay, violation, fault, or any other similar trouble, the trustee will reconsider the competency of the agent to preserve the rights of depositor.

Regarding the nature of *Mudarabah* in which the capital will be in ownership of bank for preserving depositor's rights, after receiving information about stoppage of *Mudarabah* activity, or bankruptcy of agent, bank will promptly provide the list of commodities and confiscates commodity into the hands of bank. Then, by selling commodities under supervision of trustee, bank will settle the claims of depositor. The agent allows the bank with an irrevocable power of attorney for after his death to permit the bank to refer to his firm, warehouse or other places related to the subject of *Mudarabah*, and confiscates the related commodities, and draw depositor claim from his accounts in any bank to perform and settle the obligations of the *Mudarib* if necessary.

The organizational structure applied in MFS banking, its processing procedures, regulations and instructions and obligations designed for bank, depositor, *Mudarib* and necessary organizational structure work under Rastin PLS banking regulations. Rastin PLS banking organization is defined in chart framework of "PLS Banking Leading Committee", "Reviewing Group for PLS Banking Regulations" and "PLS Department", together with "Legal Unit" and "Assessment Unit" and "Auditing Unit" and "Financial Engineering Management Unit" and "Trustee Unit" and "PLS Branch" with "Information and Consulting Section" and "Cashier Section". The same structure will be used for MFS.

## Distribution of Profit between Depositor and Mudarib

Dividing profit between *Mudarib* and depositor is one of the important problems in *Mudarabah*. Traditionally, this dividing is made by mutual agreement, but it is not possible to leave the decision to bank branches in MFS and it is necessary to compile special regulation for it. Before discussing this subject, we should consider that *Mudarabah* activity is a process, which creates value added in economic concept and in framework of national accounting is considered as production of goods and services.

Different schools of thoughts have different views about value of work along the history and different people believed different sources for creation of value<sup>20</sup>. Their views in different schools of thoughts are so different that some of them believe that labor is not a source of value creation, and others believe that labor is the only source of creation of value.

Physiocrats were the first who discussed the source of "value added" and extended it from transaction to production<sup>21</sup>. They considered value in the framework of material tangible goods with meaning of "use value", not transaction value. Therefore, the concept of value added was just in the form of value of production over the value of goods used to produce the good, which is called "net production", and only exists in agriculture sector. According to Physiocrats' belief, that only shape of materials changes in manufactory and no added value is created in industry and only farmer creates added value<sup>22</sup>.

In Marxian literature, "The theory of value" is described as the amount of used social labor which is equal to the value of good, and labor should produce relative added value in addition to

<sup>&</sup>lt;sup>20</sup> - These topics are discussed in history of economic thoughts.

<sup>&</sup>lt;sup>21</sup> - Physiocarts did not believe to social concept of value and "surplus value" in Marxian literature.

 $<sup>^{22}</sup>$  - Physiocarts believed that this is because of the power of growth in plants, which is seen only in agriculture and not in industry. In their view, the added value is not because of labor, but it is created by the cooperation of land and nature and it is the creativity or fertility power of the land which changes the amount of planted seeds to larger amounts of seeds. Accordingly, the dividend of proprietor or additional value in agriculture is a natural endowment that is because of relationship of human being and land, and not because of his social relations.

good's absolute added value in competitive scene. In order to create relative added value, his personal value of produced good should be less than his social current value of that product. In producing absolute added value, the labor should use capital. Producing absolute added value is material manifestation of capital by labor<sup>23</sup>. If we regard total production process from production viewpoint, production means are the tools by which production takes place according to Marx; and it is only the labor, which is creative. As far as work is a personal process, a labor carries out all the work until the product is made and human being cannot have hegemony on nature by himself solely, and force the nature to produce crops as Physiocrats believed. Therefore, the direct production of a single worker will change into a joint production of labors. According to Marx, the concept of capitalistic production is not just the production of goods, but it has the nature of surplus value. The labor is not producing for himself, but for the owner of capital and increase of his capital, and he is not just producing, but he is also producing surplus value.

In Ricardo view, surplus value is an inherent and inseparable part of capitalistic production. He is not searching for the very reason for existence of surplus value, but is looking for the cause, which defines the amount of this value. Mercantilists believed that the surplus price of a commodity over its production cost is because of transaction and selling it by a price above its original value. John Stewart Mill believed that the origin of profit is the extra production of labor more than his own needs and the reason for creation of profit from capital is because of durability of raw materials and production means more than the time needed for producing them. Therefore, according to this economic school of thought, profit is not caused by transaction, but it is because of productivity power of labor.

These theories have not the application merit for distributing the outcomes of *Mudarabah*, but the firm theory in neoclassical microeconomics has a vast and deep analytical base<sup>24</sup>. In simple words, according to neoclassic opinion, "firm" is a place, which produces goods by using factors of production of labor and capital. The production function of the firm is a mathematical presentation of relation between labor, capital and product. Now consider the *Mudarabah* procedure in which *Mudarib* uses two variable factors of production: capital of the depositor (K) and labor of *Mudarib* (L) together with his own fixed production factor to produce value added. The value added function of *Mudarabah* (Q) as a mathematical function of variable factors of production (K, L) will be as follows:

Q = f(K, L)

(1)

The above function is defined without fixed factor of production; and the amount of production is defined by variable factors of production K, and L. The production structure is defined for a special period in which the investment does not change and fixed cost does not enter into calculations. The applied technology, technical information of the *Mudarib* about the method of using capital is included in mathematical form of the production function. Often production function is supposed to be a continuous single–valued, non-negative, increasing function in the domain and usually regular strictly quasi-concave. The scope of *Mudarib* and his activity and capital of depositor are defined for a specific period. The period in which the amount of K and L and thereof the *Mudarabah* function are defined has three constrains: Firstly this time should be so short in which *Mudarib* cannot change the fixed factor of production. Secondly, it should be so short that the production function cannot be changed because of *Mudarabah*. The marginal efficiency of factors of production or the capital of depositor and the labor of *Mudarib* are defined as MP<sub>K</sub> and MP<sub>L</sub> respectively:

<sup>&</sup>lt;sup>23</sup> - Marx, Karl, Capital, vol. 1, Penguin, England, pp. 1019-1026.

<sup>&</sup>lt;sup>24</sup> - For more detailed discussions see microeconomics books, specially:

<sup>•</sup> Henderson, R., Quandt, P. (1982), Microeconomic Theory, a Mathematical Approach. Mc-Graw Hill.

<sup>•</sup> Savabi Asl, Farhad; Bidabad, Bijan and Shahrestani, Hamid, 1993. Estimating Aggregate Investment Function of Iran by Considering Various Functions, M.S. dissertation, Islamic Azad University, Tehran.

$$MP_{K} = \frac{\partial Q}{\partial K} = f_{K}(K, L) = f_{K}$$

 $MP_{L} = \frac{\partial Q}{\partial L} = f_{L}(K, L) = f_{L}$ 

The "decreasing marginal productivity of factors of production" law explains that increasing the amount of a variable factor of production will increase its marginal productivity for a while and then decreases the marginal productivity of that factor after diminishing point of return. It means that the more we use that variable production factor, after reaching a point of production; we will achieve a lower amount of extra production<sup>25</sup>. This law has special effects on distribution of *Mudarabah* profit, which can be understood from the forthcoming profit distribution relation.

"Economies of scale" describes the method of proportional increase of all factors of production. If *Mudarabah* is increased proportional to labor and capital increments, the economies of scale in the defined range of their combination is fixed. Increasing return to scale can be seen when the increased use of factors of production leads to more production increase, and it is decreasing when it leads to lower increase in production. "Return to scale" is defined by concept of homogeneity. A homogeneous production function has a degree of "j" if:

$$f(tK, tL) = t^{J} f(K, L)$$

(3)

(2)

By t times increasing depositor capital factor of production and *Mudarib* labor factor of production for amounts of j>1, j=1, 0<j<1, return to scale will be increasing, constant and decreasing respectively. A linear production function can be obtained from a collection of linear simultaneous activities<sup>26</sup>. Linear production functions are homogeneous of degree one and hence, have constant return to scale. The concept of homogeneity in production function will increase (or decrease) all factors of production proportionally, production will increase (or decrease). If production increase was proportional to the increase of factors of production, the production function is homogeneous of degree one. If production increase was less than the increase of factors of production, the homogeneity is less than one. Otherwise will be more than one. In these three cases of homogeneity of degree one, less than and more than one, the return to scale is defined to be constant, decreasing and increasing respectively. This condition in the production function is mathematically understood by equation (3).

Homogeneity of degree one assumption in *Mudarabah* function is quite meaningful and therefore, by this assumption we can obtain the distribution of yield of *Mudarabah* by Euler theorem. In other words, in case of homogeneity of degree one, if all factors increase (or decrease) proportionally, the production will also increase (decrease) proportionally. In this case, because of stability of average productivity of production factors, total productivity will not change. Euler's theorem explains that the following equation is established in homogeneous production function of degree j:

$$L. f_L + K. f_K = j. f(K, L)$$

(4)

By substituting (1) into (4) and assuming the homogeneity of degree one (j=1), the following relation is obtained:

$$L. f_L + K. f_K = Q$$

(5)

By this theorem, we can understand that the total value of *Mudarabah* is equal to the total of multiplication of marginal production of the labor of *Mudarib* ( $f_L$ ) by his labor (L) and marginal production of capital of depositor ( $f_K$ ) by the amount of his capital (K). In other words,

<sup>&</sup>lt;sup>25</sup> - This point is the intersection point of average and marginal productivity curves.

<sup>&</sup>lt;sup>26</sup> - Many production functions are under consideration for various economic and mathematical aspects. See: Eatwell,

J., M. Milgate, P. Newman (1988). The New Palgrave Dictionary of Economics. MacMillan Publication.

if we want to distribute the outcome of Mudarabah according to marginal productivity of labor and capital, the total outcome exhausts. Euler's theorem has a basic role in marginal production theory, and each factor of production will receive its marginal production and Mudarabah outcome is distributed accordingly. It should be mentioned that the homogeneity of degree one causes the Mudarabah function to be homogeneous as well. In other words, let  $\pi$  be profit of Mudarabah, we have:

$$t.\pi = f(tL, tK) - tL - tK$$

(6)

This means that if the amount of labor of *Mudarib* and capital of depositor increase at the same ratio, the *Mudarabah* profit will increase proportionally.

Using this analysis, we can calculate the share of depositor and Mudarib according to the ratio of marginal capital and labor productivities by using the following formula. In the following relation, the capital value is the *Mudarabah* sharing capital; and the marginal labor productivity is Mudarabah profit, and the value added is the selling profit, and the value of commodity sold is the amount of Mudarabah commodity sold. In other words, we have: K+L=O=C+V

That is the total of value added (V) plus cost (C) is equal to Mudarabah value (Q) and is equal to the values of labor (L) and capital (K). This is because:  $\pi = V$ (8)

This means that the value added is equal to Mudarabah profit and the value of goods sold is equal to the total of value added and cost:

C+V=O (9) Therefore, the value of the *Mudarib* labor will be equal to the value of the sold value of commodity minus the capital of depositor:

L=O-K

(10)

(14)

Therefore, the profit share of depositor from the created value added ( $R_{\rm K}$ ) is equal to the ratio of the capital of depositor to the value of the sold goods and the profit share of the Mudarib from the created value added  $(R_L)$  is equal to the ratio of value added to the value of commodities sold. In other words:

$$R_{K} = \frac{K}{Q}$$
(11)  
$$R_{L} = \frac{V}{Q}$$
(12)

The profit share of depositor ( $\pi_{\rm K}$ ) and *Mudarib* ( $\pi_{\rm L}$ ) are obtained by multiplying their profit shares into the value added. Alternatively:

$$\pi_{K} = R_{K} \times V \tag{13}$$

$$\pi_{L} = R_{L} \times V \tag{14}$$

Accordingly, each part of the Mudarabah (depositor and Mudarib) share proportionally to their productivity ratios in creating value added. In other words, if we sum up the above relations, we come to the following relation in which, value added is equal to the total productivity (output) of labor and capital:

$$\pi_{K} + \pi_{L} = V$$
 (15)  
which is compatible with Euler's theorem of distribution of value added among labor and capital

according to the marginal productivity of worker (Mudarib) and owners of capital (depositor). Therefore, the amount received by depositor for the principal and profit of the activity will be:  $P_K = \pi_K + K$ (16)

That is the amount of payment to depositor at end of Mudarabah is equal to the total value of his original capital plus his profit. The amount paid to *Mudarib* will be equal to his profit share:

 $P_L = \pi_L$ (17) Sum of these two relations shows that after the end of *Mudarabah* and distribution of principal capital and *Mudarabah* profit, payment to *Mudarib* and payment to depositor is equal to the total value of depositor capital and profits of depositor and *Mudarib*:

$$P_K + P_L = \pi_K + \pi_L + K \tag{18}$$

On the other hand, the total amount paid to depositor and *Mudarib* is equal to the total value of depositor capital and *Mudarabah* profit:

$$P_K + P_L = \pi + K \tag{19}$$

# Conclusion

Real establishment of Usury-free banking system can solve many important financial and economic problems such as crises at global level. Mudarabah Financial Sharing (MFS) as a financial subsystem of Rastin PLS banking designed to response to financing commercial activities. This subsystem works under Base System of Rastin PLS banking. In practice, MFS showed efficient performances to finance merchant's needs in Bank Melli Iran.

# References

- Abdoh Borougerdi, Muhammad. Civil Law, Tehran, 1950.
- Al Fatehul Ghozat, Zakaria Muhammad, Al-Salam val-*Mudarabah*, Amman, Darul Fekr Lenashr va Tozie, 1984.
- Alhosaini Shirazi, Muhammad; Al-fegh (Mudarabah Vol.), Qom, Seyyed al Shohada Publication.
- Allameh Helli, Jame-u-sharaye, ed.: Murvarid, A. A. Birea: Al-Shiah Feqh Institute, 1410 Lunar Hijri.
- Bidabad, Bijan; Aghabeigi, Jina; Naeimi, Mahasti; Amir Ostovar, Azarang; Salehian Saeid; Nafisi Zobdeh Saraei, Saeid; Chelehbary Mehdizadeh, Alireza; Hojjatullah; Hosainpour, Bijan; Sheikhani, Seyed; Allahyarifard, Mahmoud; Safaeepour, Muhammad; Khalily Valaee, Nadia. Detailed PLS Banking, Planing and Research Department, Bank Melli Iran, 2008.
- Bidabad, Bijan; Aghabeigi, Jina; Naeimi, Mahasti; Amir Ostovar, Azarang; Hazaveh, Abualfadl; Shafiee, Alireza; Nafisi Zobdehsaraee, Saeid; Mehdizadeh, Alireza; Heiat Davoudi, Ali; Hosainpour, Bijan; Hosaini, Seyed Ali; Shali, Akbar; Kashefi, Muhammad; Allahyarifard, Mahmoud; Safaeepour, Muhammad; Kowsari, Ali; Einallahzadeh, Bagher; Naeimi, Mahasti; Khalili Valaee, Nadia. *Mudarib*eh Financial Sharing (MFS), a subsystem of PLS banking, Planning and Research Department, Bank Melli Iran, Tehran, 2010.
- Eatwell, J., M. Milgate, P. Newman. The New Palgrave Dictionary of Economics. 1988, MacMillan.
- Henderson, R., Quandt, P., Microeconomic theory, a mathematical approach. 1982, Mc-Graw Hill.
- Khomeini Mousavi, Seyyed Rouhullah, Tahrir-ul-vasileh, Qom, Islamic Publication Institute, 1420 Lunar Hijri, Vol. 1.
- Marks, Karl, Capital, Vol. 1, Penguin, England.
- Muzaffar, Muhammad Reza, Osoule Feqh, vol. 1, Ismaeelian publication.
- Savabi Asl, Farhad; Bidabad, Bijan and Shahrestani, H., Estimating Aggregate Investment Function of Iran, Considering Various Functions, MS. Dissertation, Islamic Azad University, 1993, Tehran.
- Tabatbai Yazdi, Seyyed Muhammad Kazem; Orvatol-Vosgha, Qom, Islamic Publication Institute, 1420 Lunar Hijri.
- Tafreshi, Muhammad Isa and Ghanavati Khalaf Abadi, Jalil. Principles of *Mudarabah* contract in Islam and Iran Civil Law, 1998. <u>http://www.ghavanin.ir/PaperDetail.asp?id=839</u>