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Operational Mechanism of Profit and Loss Sharing (PLS) Banking

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Abstract— In spite of bankers' attention to profit and loss sharing banking method during past half of century since its first implementation as a new banking approach, it is not currently an operational method. Various definitions of usury, appropriate operational, regulatory and management mechanisms of profit and loss sharing banking are factors that adversely affected the operational performance of this type of banking. In the current paper, an operation model of profit and loss (PLS) banking is presented that is able to overcome these problems. In this type of bank, the interest rate of bank debt instruments is determined based on rate of return of real part of economy and bank, as a dealer or agent of depositor, receive the commission, invest the financial resources of client in investment plans, and control on details of executer's activities. Returns induced by investments, whether as profit or loss, will transfer to owners of financial resources, i.e., depositors. In this method, the trustworthy is a unit responsible for regulatory affairs of profit and loss sharing (PLS) process on behalf of bank about accurate implementation of plan, controlling the executive operation compared to the announced programs, resource allocation and their optimum utilization and checking the financial statements. In profit and loss sharing banking, some financial innovations and tools such as partnership certificate for exhaustible plans and subscripted certificate for inexhaustible plans will be used. The secondary exchange market of certificates and designing the portfolio of sharing certificate and various insurance services are very important for activation and enhancing the efficiency of newly established markets. Whole of operation will implement based on compiled instructions. The structure of profit and loss sharing (PLS) banking method is organized and analyzed in necessary committees, units and bureaus.

Index Terms— Banking, Finanace, Financial Tools, Profit and Loss Sharing (PLS), Usury, Non–Usury Banking

1 INTRODUCTION

Various measures have been performed by different countries to establish Islamic banking. Even western countries, in addition to Islamic countries, are interested to examine this type of banking due to its low risk. According to International Monetary Fund reports, Islamic banking have been annually grew up about 10–15% and this level of growing up is predicted for future years. Despite of this growing up rate, although profit and loss sharing banking is widely developed, it frequently confused with usury banking due to its new executive and operational mechanism and its financial tools such as "profit and loss sharing certificate" and or "investment deposit certificate", which have been interested at final years of 90s decade, were forgotten [1–19]. The main reason of unsuccessfulness of this type of banking is generally due to
(a) Different juridical deduction from usury between various Islamic faiths;
(b) Lack of regulatory and management processes on financial and executive operation of borrower.

Lacks of executive processes in operation, supervision and management proportional to demands of profit and loss sharing and incompatibility with infrastructures of banks' organizations are the most important factors in unsuccessfulness of ideal Islamic banking theories, since banks are not organized as a supervisory organization to control the details of investing operations and hence, their organizations are not appropriate for doing this work [20]. Therefore, interest rate is introduced to banking calculations of profit and loss sharing so that although the usury is not clearly observed, the interest rate can be calculated through searching the financial operation [21, 22]. At the other hands, juridical deductions of usury are not the same in various Islamic faiths and it leads in international level to innovating non–usury banking products which were mostly in accordance with traditional usury banking products [23, 25, 26, 28, and 30]. Although the consensus was stronger in Iran, the result was the same and the consensus at the passage time of "non–usury banks operation law" at the early of 60s decade was broken. Hence, the general solution for original Islamic banking was necessitated to analyze and investigate the issue from the first stage [21–31].

The aim of the current study is representing the executive framework for architecture of profit and loss sharing (PLS) banking so that an appropriate approach for implementation of real non–usury banking is presented in addition to providing its modern financial mechanisms and tools based on information technology [32–43]. Certainly, implementing the profit and loss sharing banking leads to improving and stabilizing the market transactions and more justly distribution of incomes induced by investing and reducing the investment risk [44, 45]. At the other hand, the proposed financial tools (partnership and subscripted certificates) can be bought and sold by internet through internet system of bank and everybody will be able to buy and sell these financial properties all around the world by having a bank account with definitions and ID of "interbank information exchange network" [46–57]. In this regard, these tools will act as means to absorb investments into the country due to high return rate and high infla-

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tion [58–90].

2 Experiences of Profit and Loss Sharing Banking

Prohibiting usury and sharing in profit and loss have a long time history and based on Torah and historical literatures, it is certainly backed to before Islam. Sharing in profit and loss was improved after Islam and at the present time, it is considered as one of the modern tools for financing. Therefore, profit and loss sharing is considered as one of the successful financial tools. The limited partnership and partnership as two financial tools based on profit and loss sharing are practically removed the constant profit paying from financial operation and shared the investment–induced profit and loss with providers of financial resources.

There are various conceptual definitions of profit and loss sharing (PLS), which the following issues consider a specific aspect of this type of banking:
(a) Profit and loss sharing (PLS) is a method based on a contract between two or more sides of dealing in which the profit and loss resulted from the implementation of the plan is shared with contribution of financial resources for investing to the plan.
(b) Based on PLS paradigm, properties and debts of Islamic bank are integrated so that in fact, borrowers of financial resources share the profit and loss with banks and in turn, banks also share the profit and loss with depositors.
(c) PLS banking leads to more efficient asset allocation since return on capital and its allocation are dependent on return and profitability of plan.

Investigation of Chung and Liu about Islamic banking in Malaysia, as a large market of Islamic banking and insurance, resulted to the following issues:
(a) In spite of importance of profit and loss sharing in Islamic banking, Malaysian Islamic banking was not successful in implementation of PLS and the establishing this paradigm in the properties are slower than in the debts. According to this study, only 5% of properties of Islamic banking and financing in Malaysian Islamic banking is from limited partnership and partnership and the most part of financing dealings in this sector are based on non–PLS banking operation which it is basically usury. In debts, depository based on limited partnership contract (sharing in profit) is about 70% of total depositions based on Islamic banking.
(b) Return rate of of PLS banking deposits in Malaysian banking is lower than this rate in traditional banking so that the return rate of these types of deposits is a function of return rate of traditional banking and not conversely.

Similar problems are encountered in Iran. Implementation of profit and loss sharing (PLS) in Iranian Islamic banking is restricted due to various reasons. By studying the items of balance sheets of Iranian banks in two parts of properties and debts, it was observed that the contribution of sharing products before ordered decrease in profit rate by government is the least compared to other products. In other words, sharing contracts in properties are at least and bartering contracts are of most contribution from facilities of financial resources. At the other hand, return rate of these investments is determined based on expected profit (and not real profit). In debts, depository is paid to depositors based on attorney contract and according to the minimum determined rate by central bank as majority. By introducing private banks in last decade and increase in competition between banks with one or two percents difference in on–account profit, certain profit is paid to depositors. Increasing pressure of government to banks in recent years in order to reduce the interest rate of bartering contracts led to move of Iranian banks toward allocating the resources to partnership contracts to maintain profitability margin for banks. In properties, however, the following reasons lead to some problems for implementing the profit and loss sharing in Iranian banks:
(a) Lack of organizational and technical mechanisms for efficient supervising on investing plans of partnership contracts.
(b) Lack of utilizing information technology in applying integrated Islamic banking systems.
(c) Lack of designing new financial tools and efficient capital market in order to PLS banking financing.

3 Architecture of Profit and Loss Banking

The profit and loss banking is based on utilizing all involved members in economic activities from efficiency of real part of economy. Therefore, owners of capital, work, services and technology should be utilized proportional to their contribution through mechanisms provided by non–usury bank. In order to implement such mechanism it is possible to provide operational basics of profit and loss sharing banking. To compile the architecture of profit and loss sharing banking, each sides of this type of banking is defined at first. In addition to bank, depositor and executer (executer of work and owner of technology), other organization members should be instituted for operational structure of profit and loss sharing, each of them has a specific role in relation to the identity of related activities with partnership. In new architecture, the foundation of previous units is different from what that is used in traditional banking–even though its name is the same as traditional banking.
Bank: is a unit that allocates the financial resources of depositors to applicants of credit facilities as lawyer of depositor and according to specified contracts, shares the resulted profit or loss between depositor, bank and executer. The regulated contracts between bank and each side can be based on wage and or sharing in profit and loss. Bank as the lawyer of depositor is responsible for maintaining the rights of depositor and in this regard, it must use its technical facilities to maintain the rights and benefits of depositor.
Depositor: is provider of financial resources for investment, which uses the financial resources for buying partnership certificate (specified plan, a package of plans and profit and loss sharing banking) and or buying subscripted certificate (for contributing in construction of inexhaustible–productive plans) based on a promise of reward contract to benefit of banking products of profit and loss sharing proportional to his/her contribution.
Executer: is a legal personality who deals with bank in contribution with the sharing of depositor based on a specified contract according to his/her cash and non–cash properties to

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implement a sharing investing activity.

Trustworthy: is a unit responsible for regulatory affairs of profit and loss sharing (PLS) process on behalf of bank about accurate implementation of plan, controlling the executive operation compared to announced programs, resource allocation and their optimum utilization using key indices and checking the financial statements.

Umpire: the differences between bank, plan executer and depositor which the governing relationship between them is based on profit and loss sharing (PLS) banking is settled by agreement of involved sides through referring judicial mission to individual or individuals approved by both sides (umpire).

Secondary Market: in order to simplifying, booming and making interest for market of partnership and subscripted certificates, making a secondary market is proposed. Bank makes this opportunity for dealing partnership and subscripted certificates through internet in secondary market of buying and selling of certificate.

Consultants: they act in PLS banking as economic, financial and technical assessors. It is inevitable to get advice from professional consultants due to complexity of some plans from technological point of view.

4 Interaction and Type of Communications in PLS Banking

In this plan, ignoring whether the bank is private or governmental, the interest rate of bank debt instruments is determined based on rate of return of real part of economy and bank, as a dealer or agent of depositor, receive the commission and total return induced by investing affairs, both profit and loss, transfer to depositor as owner of financial resources. In this regard, agent banks invest the investing depositories on considered plan or plans based on partnership contracts through general or specified attorney as a contribution and share the resulted returns from investing between depositors.

The represented plans and necessary documents by executers are evaluated economically, financially and technically in order to feasibility study of the plan by evaluation unit. Based on the associated instructions, this is the first operational step in PLS banking. Executer deliver all necessary documents to bank according to the associated instructions including budgeting, time table, necessary resources and resource utilization, plan implementation, phasing, quality control, reporting and completion of plan. If bank is not able to evaluate some plans due to complex or specific technologies which are used in plans, it gets advices from consultants in order to evaluate and supervise such plans. After positively evaluation of executer and investing plan as various products of PLS banking, the plan introduces and proposes to the interested depositors in order to provide the necessary financial resources. Depositor provides his/her financial resources for bank through buying partnership or subscripted certificates to help the implementation of plan. The collected resources gives to executer as a partnership contract by bank and executer starts the plan. The trustworthy unit, on behalf of bank, directly supervises the implementation of plan from the beginning to the completion of construction and or operation and reckoning. It is clear that the reports of trustworthy unit are the base of future pays to executer by bank. At the end of plan and according to associated instructions and formulas, the amount of profit or loss of plan and the wage of bank calculate by accounting/auditing unit and determines the sharing of executer and depositor and settle to their accounts. If trustworthy unit issues the stop report, the amount of loss due to delay determines and calculates.

The products of PLS banking which are designed as partnership and subscripted certificates will issue as regulations for distributing the partnership and subscripted certificates and introduce to depositors by agent bank and by allowance of central bank. Depositors can sell their partnership and subscripted certificates in secondary market of certificate either in buying and selling counter of bank certificates and internet secondary market if they cancel their investing and before reckoning.

The cooperation of insurance companies in order to hedging of certificates is considered.

Lack of executive history of this type of banking necessitates the compiling of new regulations and instructions. At the first step, it is necessary to issue the needed upper hand regulations as instructions by central bank and compile and impart in the limitations of laws and regulations of banking instructions so that the financial tools of this type of banking such as partnership and subscripted certificates become legally valuable.

5 Methodology of Operational Processes

To implement profit and loss sharing banking, operational methodologies will be designed and issued as following instructions:

1. Warranties, Trust Deeds and Contributions: Depending on type of executer (green and yellow groups), trust deeds and warranties for good working will be got from executer. The contribution of executer, cash and non–cash, for each type is specified in this instruction.

2. Necessary Documents for Plan Assessment: All necessary documents, financial and non–financial, for plan assessment, licenses of legal and activity are specified in this instruction.

3. Executer Reports: Reports including the necessary information for bank, trustworthy, auditor and or any other controller reference are specified in this instruction.

4. Feasibility Report: The aim of this instruction is systemizing and standardizing of the reports of economical, technical, and financial feasibility so that the associated units can evaluate these reports in a specified framework.

5. Umpire: The condition for referring the differences between various sides of contract (depositor and executer with bank) to approved individual(s) when a difference emerges is determined.

6. Force Major: Happening of unexpected events for stakeholders of PLS banking is specified in this instruction.

7. Instruction for Canceling of Depositor and Early Reckoning: Cancelation of depositor from investing and reckoning through selling partnership or subscripted certificates is specified in this instruction.

8. Change in Timetable and Cost: Conditions for changing the costs of investing induce by faults of executer and calculat-

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ing the effects of inflation on income and cost as well as calculating the contribution of stakeholders in this condition are specified in this instruction.

9. New Partnership: Issuing new partnership or subscripted certificates in order to provide finance of PLS plan will be according to this instruction.

10. Reckoning with Executer: Conditions of reckoning with executer is specified in this instruction.

11. Transforming the Subscripted Certificate: Transforming the subscripted certificate to stocks and its processes and stock valuation are specified in this instruction.

12. Certificate Dealings: Conditions for buying and selling of partnership and subscripted certificates in internet portal, making the secondary market and market making are specified in this instruction.

13. Executer Ability: It is including some points about technical and financial credit and grouping of executers based on plan and trust deeds and warranties of good working and taking responsibilities and contribution of executer and categorizing the executer in three groups of green, yellow and red.

14. Qualification of Trustworthy: Qualifying of trustworthy as supervisor on good working of executer as real or legal personalities are specified in this instruction.

15. Standards and Requirements of Supervising: In this instruction, all requirements and standards needed for supervising processes are specified.

16. General Conditions of Contract: In order to correct draw up a contract and its mandatory issues for both sides in PLS banking, it is necessary to be committed to general conditions of contract which is specified in this instruction.

17. Drawing up the Contracts: Designing the typical contracts between bank and executer, depositor, trustworthy and assessment consultants for each type of PLS banking products, both exhaustible and inexhaustible ones.

18. Accounting and Auditing: Conditions and requirement of auditor, auditing processes, financial statements of company and vouching in order to confirm and validate the operation are specified in this instruction.

19. Bank Receiving: All receiving of bank through all early and detailed assessing processes, supervising services, trustworthy, financial engineering, auditing and other services as well as bank income are specified in this instruction.

6 Infrastructures of Information Technology

Based on the previously performed studies, one of the reasons for unsuccessfulness of profit and loss sharing banking is lack of integrated systems so that it can be possible to connect all producers of information resources and to track and supervise any transaction in the system. Therefore, it is necessary for approaching to ideal case of profit and loss sharing to have integrated systems not only with enterprise resource planning (ERP) characteristics but also including subsystems of customer relation management (CRM), supply chain management (SCM), management executive system (MES), human resource management (HRM), business process re–engineering (BPR) as well as work flow management (WFM) as ideal core banking modulus for PLS banking. As such integrity is not achievable at the present time, it is not possible to utilize integrated methods for profit and loss sharing banking full automatically. The technological solution used at this time is secondary market of buying and selling of partnership or subscripted certificates through internet and online connecting to personal bank accounts. People and or owners of partnership and subscripted certificates can buy and sell these certificates through internet networks and or bank counters and hence this certificate acts as an internationally buyable or sellable property. Making the secondary online market in internet network and ability to buy and sell these products are the interesting of these products.

7 PLS Banking Products and Services

The designed products and services in profit and loss sharing (PLS) banking are categorized into two groups if exhaustible and inexhaustible. In all these products, bank gets wage through selling reliability, supervising, financial engineering and project control as well as clearing in real sharing.

Contributing in Exhaustible Plans: In this group of profit and loss sharing products, the profit or loss resulted from the partnership between depositor, executer and bank is distributed at the end of financial year and or after operation time and selling the investing plan depend on type of partnership as profit and loss sharing of bank and or investing in plans and according to associated instructions and final reckoning is implemented. The products related to partnership in plans also can include contribution in a special plan and or a package of plans. The utilized financial tool in this group is partnership certificate so that as depositor invest in a product of exhaustible plans, partnership certificate give to him/her.

Contributing in Inexhaustible Plans: Bank sells subscripted stocks as subscripted certificate to provide the required investment for executer. The subscripted certificate is of the same characteristics as partnership certificate and can be bought and sold in the secondary market. After completion of construction and at the time of operation, subscripted certificate transform to stocks. All steps of subscription and transforming subscripted certificate to stocks perform under supervision of bank and the final ownership of plan transfer to depositors through transforming the subscripted certificates to stocks and hence, depositors transform to stockholders.

Bank can perform the process of transferring the ownership situation of owners of subscripted certificates to stocks through instituting a new company at the time of operation. In addition, bank can pay the contribution of owners of partnership certificate after reducing the contribution of executer and bank through a tender of plan at the time of operation.

8 Characteristics of Partnership and Subscripted Certificates

Being unknown, can be transferred to other, can be bought and sold in internet secondary market and exchange market, having profit for bank (0.0005 from both sides), determining the price in terms of supply and demand mechanism in internet secondary market, absolute reckoning with last owner of certificate are among common characteristics of both partner-

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ship and subscripted certificates. The difference between partnership and subscripted certificates is that the reckoning with owner of partnership certificate is after operation and completing the tender of plan and its selling and or for owner of partnership certificate, the PLS branch will reckon at the end of financial year and immediately after completion of financial statements of the branch. However, bank is responsible for transforming the owner of subscripted certificate to stockholder of investing plan and it has not any responsibility about paying the original investment and its profit through selling and finally, after completion of this process, the responsibility of bank terminates.

9 Customers Groups in PLS Banking

In the framework of this type of banking, customers groups can be divided into depositors and executers of investing plans.

(a) Depositors: In this type of banking, depositors can be real and legal personalities from private or governmental sectors.

(b) Executers: In this type of banking, executers must be legal personalities from private or governmental sectors. The necessity of having legal personality for executers is due to the necessity of existence of transactions, documents and audited financial statements in order to calculate profit and loss OD investing plans.

10 Results and Discussion

Based on a promise of reward contract, bank draw up a contract with depositor to contribute his/her financial resources in one of the PLS banking products of profit and loss and at the other hand, draw up a civil partnership contract with executer(s) and through these contracts, bank will act as a unit to provide appropriate conditions for allocating depository resources to invest in a plan between depositor (who acts as provider of financial resources for investment) and executer (who is responsible for implementation of plan) and to transfer the profit and loss resulted from investing in terms of the framework of contract to resource provider, i.e., depositor, by giving a wage. The existence of peace contract in addition to a promise of reward contract with depositor in order to buy and sell of partnership and subscripted certificates in internet secondary market and signature of depositor is necessary. Bank has some income through representing such services as a percent of profit (or loss) resulted from investing plan.

In profit and loss sharing banking, new financial tools such as partnership and subscripted certificates will be used. Bank has a critical role in activation and improving the efficiency of financial and monetary markets through issuing and representing partnership and subscripted certificates and making the secondary market for dealing the partnership and subscripted certificates and designing the package of partnership certificate. Implementing the above issues necessitates the clear familiarity of all internal and external customers with the process of implementation and contributing with this type of banking with necessary information. Other financial tools can be considered in two parts of making partnership certificate package and utilizing insurance products in order to cover and manage the risks.

The relationship between the amount of risk and efficiency in investing and financial activities and at the other hand, the necessity of covering the demands of all groups of customers from risk acceptance point of view leads to inevitably categorizing the products and PLS banking services from risk point of view. Therefore, the products and PLS banking services can be categorized into the following package to reduce risk:

(a) Package of partnership certificate with minimum risk and minimum efficiency.

(b) Package of partnership certificate with medium risk and medium efficiency.

(c) Package of partnership certificate with high risk and high efficiency.

With insurance supporting from capital owners as well as reducing various risks such as moral hazard risk, adverse selection risk and asymmetric information risk, bank can institutes a unit to perform supporting measures. In order to protect against moral hazard of capital owners, it is necessary that a part of original capital of customers support by insurance. The insurance cover amount is proposed as 50% of capital. This insurance is optional and bank or other insurance companies can represent it and depositor is free to buy it or not.

The organization and structure of profit and loss sharing banking is defined regarding the above definitions as "strategic committee for profit and loss sharing (PLS) banking", "technical group for interpretation and review of regulations and processes of profit and loss sharing banking" and "PLS office" with "legal unit" and "assessment of plans unit" and "audition unit" and "management of financial engineering unit" and "trustworthy unit" and "branch of profit and loss sharing (PLS)" with "noticing and representing consultancy services office" and "cash desk office".

11 Conclusion

In plan of profit and loss sharing (PLS), ignoring whether the bank is private or governmental, the interest rate of bank debt instruments is determined based on rate of return of real part of economy and bank, as a dealer or agent of depositor, receive the commission and total return induced by investing affairs, both profit and loss, transfer to depositor and executer as owners of financial resources. At the other hand, agent banks invest the investing depositories on considered exhaustible and inexhaustible plan or plans based on partnership contracts and in recognition of depositor (in first and second products) and or in their recognition (in third product) through general or specified attorney as a contribution and share the resulted returns from investing between depositors. In this regard, bank transfer the profits induced by investment to owners of financial resources, i.e., depositors, after reducing their wage as attorney and or agent in terms of their financial dealer responsibility.

Executer proposes to banks for partnership. Conditions and regulations of partnership noticed to customers through internet portal of secondary market for partnership and subscripted certificates or information counters in banks and by getting the price for proposal (according to the related instruction), the associated information for the proposed plan including plan proposal, economical, technical and financial feasibility of plan and etc. will be received from executer.

After assessing the proposal, it introduces to depositors. Depositor will deposit for contributing in his/her considered plan through buying partnership and subscripted certificates.

In this method, the trustworthy is a unit responsible for regulatory affairs of profit and loss sharing (PLS) process on behalf of bank about accurate implementation of plan, controlling the executive operation compared to the announced programs, resource allocation and their optimum utilization and checking the financial statements.

In profit and loss sharing banking, new financial tools such as partnership certificate for exhaustible plans and subscripted certificates for inexhaustible plans will be used and the secondary market for dealing the certificates and designing the package of partnership certificate are of critical role in activation and improving the efficiency of financial and monetary markets. All operations will be implemented based on the compiled instructions. The structure and organization of profit and loss sharing (PLS) banking are analyzed and organized as necessary committees, units and offices.

Firstly, this type of banking can examine by instituting a company into the national bank as the unit for implementing it and or it can be started from a new instituted branch of profit and loss sharing banking. In first case, activities of profit and loss sharing banking will be parallel to activities of conventional branch but all financial, accounting, organizational, and structural operations will be separated, legally, and will be followed the newly instituted financial unit.

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