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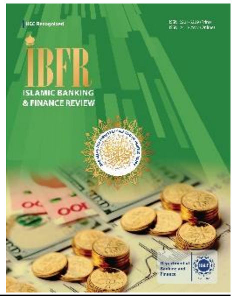

Title: **Risk-Return Analysis of Profit and Loss Sharing Contracts in Islamic Banks (IBs)**

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Risk-Return Analysis of Profit and Loss Sharing Contracts in Islamic Banks (IBs)

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Abstract

The purpose of this paper is to conduct a risk-return analysis (RRA) of contracts offered by Islamic banks to demonstrate the economic and financial utilities of profit and loss sharing (PLS) contracts. In this paper, we have started from the idea that an increase in the weight of PLS contracts is beneficial for both Islamic banks and economy as a whole. Therefore, the selected approach is based on a risk-return analysis to identify the financial causes of non-development of PLS contracts and the possible ways and trends to stimulate this development. From our analysis we concluded that the increase in the weight of sales-based contracts at the expense of PLS contracts is not necessarily the result of good risk and capital management. On the other hand, the low weight of PLS contracts is the result of three reasons firstly, risk management and liquidity instruments deficiency, secondly, a lack of innovation and expertise in risk management and contract design, and lastly, lack of legal and fiscal frameworks adapted by Islamic banks. Therefore, this paper proposes a risk-return approach for increasing the share of PLS contracts which would promote greater optimization of risk-return ratio and greater involvement of Islamic banks in the real economy.

Keywords: investment deposits, liquidity risk, profit and loss sharing contracts, risk management, sales-based contracts,

Introduction

Islamic banks are financial intermediaries that employ deposits in sales-based contracts and profit and loss sharing (PLS) contracts. The former can be considered as fixed income contracts (*murabaḥah*, *ijarah*, *salam,* and *istisna*). The later, mainly *muḍarabah* and *musharakah* are variable income

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contracts and their remuneration depends on the performance of financed project.

Similarly, Islamic banking deposits are of two types overnight deposits (OD) and investment deposits (ID). Overnight deposits are considered interest-free loans with no maturity date. On the other hand, investment deposits are managed by the bank under the *muḍarabah* contract and remunerated by a pre-specified share of the results generated, depending on the amount and duration of each deposit.

Originally, deposits were used to finance all assets through the *muḍarabah* mode of financing (Chapra, 1985). The deposits are both managed and invested in *muḍarabah* (double *muḍarabah*). Thus, Islamic banks played an investment intermediary role, in addition to financial intermediation based on liquidity and maturity transformation. Siddiqi (1998) described the intermediation of double *muḍarabah* as 'pure intermediation' in contrast to that based on sales-based contracts. However, as a result of operational and practical problems, mainly in the use of mobilized resources, a large part of them were devoted to fixed-income contracts (*murabaḥah*, *ijarah*, *salam,* and *istisna*) at the expense of PLS contracts (Iqbal et al., 1998).

Thus, Islamic finance becomes compartmentalized finance. The ODs are invested partly in sales-based contracts and partially kept in liquid form to finance the exchange and payment operations. On the other hand, the IDs should normally be invested in PLS contracts. However, due to certain factors, mainly related to the level of credit risk presented by the latter, the share of IDs invested in PLS contracts has suddenly declined. Thus, after being the main modes used, PLS contracts constituted only less than a quarter of Islamic banks' employment, the rest was largely in the form of *murabaḥah* for about 40% (Kha & Chapra, 2004). For instance, in Kuwait the majority of transactions are in *murabaḥah* form with 46% of the total funding portfolio (Islamic Financial Services Board, 2019). Also, according to Islamic Financial Services Board (IFSB, 2014), Islamic banks continued to consider *murabahah* as the most commercially viable available contract. Therefore, the survey of customers from 117 banks ranked *murabaḥah* contract at the top position with 56% of customers favouring it, followed by *ijarah* at 14%, and *muḍarabah* and *musharakah* contracts both favoured by only 3% of customers.

The decline in the share of PLS contracts as compared to sales-based contracts might have negative consequences not only for Islamic banks themselves but also for the economy as a whole. According to Khan and Chapra (2004), the socio-economic benefits of the Islamic financial system (IFS) might not have been fully realized if the share of the PLS contracts were not large enough. At the level of Islamic banks, the decline in the share of PLS contracts in favour of sales-based contracts might lead to some forms of risk concentration (sales-based contracts), at the asset-level and to an asset-liability mismatch.

If, in the end, we assume that ODs do not allow PLS positions at the asset level, so Islamic banks must at least invest the entire ID in PLS contracts. Swailem (1998) found that investment deposits are underexploited in the case of their allocation to sales-based contracts. Islamic banks can also encourage an increase in the share of IDs in total liabilities to increase the share of PLS contracts at the asset level.

According to Khan and Chapra (2004), the increase in the share of PLS contracts will be enhanced automatically by the growing maturity of the Islamic financial system. This trend is made more possible by the fact that Islamic banks have a level of liquidity well above the regulatory minimum and at the same time, they achieve higher returns than required by the market. Therefore, this financial situation of Islamic banks might, allow them to exploit their excess liquidity and take riskier positions (mostly PLS contracts).

However, the increase in the share of PLS contracts in balance sheet assets automatically leads to an increase in credit risk. The latter could be transferred to liabilities that could cause the risk of ID erosion which could result in the withdrawal of IDs or their transformation into DOs. Therefore, even if some authors such as Marzuki and Worthington (2015) and Azmi et al. (2018) demonstrated that investors in Islamic funds are not very reactive toward their underperformance. Hence, the development of PLS contracts in the balance sheet of Islamic banks must be accompanied by solutions to control the risks and problems generated by the growth of share of PLS contracts (risk reduction and management solutions, the adaptation of the legal, regulatory and fiscal context etc.)

In this research paper, we assumed that increasing the share of PLS contracts is beneficial for both Islamic banks and the economy. Our approach is based on a risk-return analysis to identify the obstacles in the development of PLS contracts and proposed some possible solutions to stimulate this development. In the second section, we analysed the financial causes of the non-development of the PLS contracts. In the third section, we studied the consequences of the low share of PLS contracts both on Islamic banks and on the economy as a whole. In the fourth section, we tried to detect mechanisms of an intrinsic trend toward an increase of the share of PLS contracts and the evolution of the risk and liquidity management tools that accompany it. Therefore, in the fifth section, we proposed some levers to better encourage the development of PLS contracts and the Islamic banking industry as a whole before concluding in the sixth section.

Financial Causes of Non-development of PLS Contracts

The financial causes of the non-development of PLS contracts are mainly related to the high level of risk they present and at the same time, to a favourable context in terms of returns on sales-based contracts.

In terms of risk, PLS contracts are generally riskier than sales-based contracts. This observation, which is true for most types of risk, stems from the very nature of these two financing methods. Indeed, the rate of return on sales-based contracts is stipulated in advance. At maturity, this rate is generally positive, in the absence of certain default events. Thus, these sales-based contracts are comparable with credits in conventional banks where portfolios are granular and defaults are fairly limited and manageable. In addition, these contracts are largely short-term and benefit from a high level of collateralization. Any sale-based contract is backed by a tangible and identifiable underlying asset that could be used to recover funds in the event of a counterparty default. Nevertheless, Islamic banks cannot transfer the risk attached to these contracts through securitization and credit derivatives, which might limit the risk and liquidity management tools.

Compared to sales-based contracts, PLS contracts are overall riskier. The rate of return is not specified in advance and may therefore be positive or negative depending on the final outcome of the operation financed. Thus, neither the principal amount nor the income is guaranteed in the PLS contracts. This high level of risk PLS contracts is a combination of different types of risk, the most important of which is credit risk. According to the survey conducted by Habib and Khan (2001), credit risk is considerably higher for PLS contracts as compared to different sales-based contracts.

Again, Habib and Khan (2001a) argued that the concentration of Islamic banks' assets around the fixed-income employment (sales-based contracts) is largely due to the low level of credit risk posed by the latter. Similarly, the low share of PLS contracts can be explained by the high level of credit risk of these modes which usually results in the non-recovery of funds advanced in a timely volume. For the non-managing *musharik* bank (Joint participant) or *rab al mal* (Provider of funds) in the case of *muḍarabah*, apart from negative return risk related to the poor performance of the project financed, credit risk generally manifests itself in the failure of the contractor client to pay the bank's share when it becomes due. This is the direct result of a high level of moral hazard associated with the fact that the non-managing bank or *rab al mal* does not have sufficient information about the actual performance and profit of the company (mainly for small and medium-sized projects where banks cannot be a manager in all the projects financed). This moral hazard is made even more important by the fact that the bank cannot prove and engage the counterparty's responsibility in the event of loss of return or capital, except in case of proven gross negligence. Also, by nature, Islamic banks cannot require collateral because *musharakah* and *muḍarabah* transactions create partner relationships, not creditor-debtor relationships (Chatti, 2010).

Liquidity risk is also a determining factor in terms of the Islamic bank's choice of assets. Liabilities must be easily funded by available cash flows or the sale of liquid assets at market conditions. However, the assets of Islamic banks, including mainly *musharakah* and *diminishing musharakah*, are considerably illiquid (Habib & Khan, 2001). Although these assets can be securitized through s*ukūk*, the market for these products is not yet well developed. In terms of volume of issues, s*ukūk's* contracts based on *musharakah* and *muḍarabah* in 2018 represented only 2.1% and 2.5% of the total volume respectively. The *musharakah*-based s*ukūk* contracts were only used by Malaysian issuers, while those based on *muḍarabah* were used by issuers from only five countries, including Malaysia, Indonesia, United Arab Emirates, Ireland, and Turkey. In addition to this, Islamic banks suffer from a great lack of global liquidity management instruments in the money market because of which large amounts of liquidity are retained (Islamic Financial Services Board, 2019).

The increase in the share of PLS contracts in total assets can thus significantly increase risk and further affect the asset-liability balance of the Islamic bank. The ID holders share the returns on these deposits with the Islamic bank. Therefore, since the return is not guaranteed on these accounts, the risk of low returns or even depreciation of nominal value of the IDs is quite high, especially if the risk on the asset side is also high. According to Marzuki and Worthington (2015) and Azmi et al. (2018), IDs and Islamic fund investors are relatively less responsive toward poorly performing Islamic funds but react more aggressively to positive returns. Nevertheless, the high level of risk (mainly credit risk) of PLS contracts can result, in normal situations (and not necessarily extreme), in negative returns, and significantly increase the risk of principal erosion of ID on the liability side.

The realization of negative returns and the possibility of principal erosion of the IDs might be difficult to accept, even for a client who seeks to avoid non- *Sharīʿah*-compliant income. At best, he tends to transfer his IDs into ODs or other *Sharīʿah*-compliant contracts or, even worse, withdraw the IDs and place them on other external investment opportunities.

Thus, the transformation of IDs into ODs increases asset-liability risk. The latter may be even more important as most of the Islamic bank's assets are illiquid and Islamic banks do not have stable sources of short-term liquidity. In some extreme cases, depositors may challenge the low rates of return, lose confidence in the Islamic bank, and withdraw their deposits. The default may then be triggered by very tight liquidity conditions.

To avoid the risk of withdrawal or arbitrage of IDs, sometimes, Islamic banks are required to distribute part of the profit, accruing to shareholders, to ID holders. The Islamic banks might, in some cases, draw on its reserves or even its capital to ensure a positive return or limit the loss of return on the IDs. Therefore, this risk, which relates to IDs, would force Islamic banks to hold, in addition to reserve built up over vast years, a fairly high minimum capital compared to market standards. According to Khan and Chapra (2004), Islamic banks require more capital as compared to conventional banks and more market discipline.

In addition, the supplementary reserve requirements and a high capital ratio, Islamic banks seek to automatically reduce the risk of low or negative returns by reducing the share of riskier assets, in this case, the share of PLS contracts. Thus, the current situation characterized by a low share of PLS contracts is comfortable for Islamic banks. Indeed, the returns are contextually sufficient, so Islamic banks are not much motivated, for the time being, to take more risks by increasing the share of PLS contracts in their employment, despite a high level of available capital compared to the regulatory requirement. For instance, in 2018, the return on equity (*ROE*) of global Islamic banks was 16.3% higher than those recorded by conventional banks in the *US* and *EU* at 11.9% and 7.2% respectively (Islamic Financial Services Board, 2019). This situation was encouraged by the existence of a large class of customers eager for *sharīʿah*-compliant contracts. These clients are willing to pay a fairly large premium in return for the *sharīʿah*-compliant nature of the contracts. Similarly, for investors in IDs and Islamic funds, Peillex et al. (2019) and Azmi et al. (2018) showed that these Islamic investors did not only consider financial gains but also derive non-financial utility from the *sharīʿah*-compliant nature of their investments.

Consequences of the Low Share of PLS Contracts

In a country where the Islamic finance industry dominates, the low share of PLS contracts would have negative consequences on the overall economy, the Islamic banking sector, and on the balance of Islamic banking itself.

The decline in the share of PLS contracts relative to fixed-payment sales-based contracts (*murabaḥah*, *ijara*, *salam*, *istisna*) has negative consequences on the overall economy. According to Khan and Chapra (2004), the socio-economic benefits of the Islamic financial system might not be fully realized if the share of PLS contracts are not large enough. Conversely, increasing the share of PLS contracts in the financing of Islamic banks would allow them to seize more investment opportunities offered in the market. At the same time, it would encourage equity capital, in parallel with the development of sales-based contracts, for financing productive projects, and meeting the financing needs of the economy.

According to Ben Daoud (2013), 'semi-participatory' intermediation, where deposits are managed according to the *muḍarabah* principle, financing projects through *murabaḥah* or *ijarah* reduces the bank's commitment to real world and encourages it to offer short-term financing. On the contrary, the growth of PLS contracts will further direct the financing of Islamic banks to the real economy. This might have two major consequences. First is the mitigation of excessive credit expansion and leverage, thus mitigating the impact of financial sector shocks on the real economy. The second, consequence is the development of a financial market in parallel with the development of financing for the economy. In addition to *sukūk* that can be backed by *ijarah* contracts, the increase in *musharakah* employment would lead to the development of a liquid market for *musharakah sukūk* which would also be backed and not only based on *musharakah* contracts. For many listed companies, the *musharakah* mode also allows the development of equity market by increasing the free float and liquidity of shares.

At the level of the Islamic banking sector as a whole, the increase in the share of sales-based contracts may lead to a concentration of the financing modes offered by the Islamic banking sector and, in some cases, a concentration of a particular financing mode. According to Khan and Chapra (2004) and Islamic Financial Services Board (2014-2019), more than 40% of Islamic banks' employment is in the form of *murabaḥah*. Thus, in addition to sectoral concentration of risk that might be generated by the concentration of financing modes, other consequences may include deterioration of competitive position of Islamic banking sector as compared to the traditional sector of conventional banks. For countries which have just introduced (or will introduce) Islamic banks, this might also lead to difficulties in penetrating Islamic banks and barriers to entry for financing of some segments of financial sector.

In competitive terms, given the heavy dependence of Islamic banking on sales-based contracts, Islamic banks are not in a position to offer a full range of financing for economic agents. For instance, a good client, would not like to obtain financing from an Islamic bank for certain operations (i.e. sales-based operations) and from conventional banks for other operations (i.e. PLS financing contracts and other financing needs). The competitive position of Islamic banks appears weaker if we take into account the fact that the sales-based contracts offered by Islamic banks are not flexible and comprehensive enough, as compared to the credit offered by conventional banks which is flexible and varied. In addition, the high cost of sales-based contracts marketed by Islamic banks might further deteriorate their competitive position and penetration.

Capital allocation in Islamic banking cannot be effective if it is not allocated across sectors, operations, and funding needs. The misallocation of capital leads to a large mismatch in risk-return ratios; very high ratios may be required to compensate for additional concentration risk. However, this is not a big problem at the current stage of the development of Islamic banks and PLS contracts. Indeed, even if capitalization ratios are high, returns on assets are sufficiently large (Islamic Financial Services Board, 2019); first, because the prices of sales-based contracts are more expensive as compared to the contracts of conventional banks, and secondly, because customers agree to pay this price as a reward for the *Sharīʿah*-compliant nature of the contracts. This generous behaviour of customers is not valid for all classes and is also not valid all the time for a given class. The continuous nature and high level of returns demanded by Islamic banks may affect the overall reputation of Islamic finance as ethical finance and create reputational risk for the entire Islamic banking and finance industry.

Therefore, the increase in the share of sales-based contracts could also impact the balance sheet of the Islamic bank itself. A concentrated asset base around fixed-income assets, such as *murabaḥah* and *ijarah*, directly leads to a concentration of some risks associated with these contracts. Thus, contrary to the idea adopted by Islamic banks to develop the share of sales-based contracts, they present less credit risk, which might aggravate credit risk as a result of the concentration of total assets, and/or would limit the diversification benefit.

In addition to *Sharīʿah*-compliance restrictions that reduce the diversity of investment securities, which results in less diversification of the portfolios built (Mokhtar et al., 2006), the concentration impact might not only affect the asset portfolios of Islamic banks but would also lead to an asset-liability mismatch. Although, the asset-liability imbalance of Islamic banks is mainly related to the lack of stable sources of liquidity and the illiquidity of the traded contracts, some liquidity problems may occur as a result of cash flow and maturity mismatches. Conversely, the balanced use of PLS contracts, both on the resource (ID) and employment sides, certainly, creates some asset-liability balance, as employment shocks can be absorbed on the resource side. According to Cihak and Hesse (2008), PLS contracts prevent the deterioration of the Islamic bank's balance sheet in the event of economic difficulties. However, this is conditional on the response of the IDs possible declines in returns, and conditional on the methods of managing and smoothing these returns by the Islamic bank (to avoid transferring or withdrawing the IDs).

Capital and risk allocation might also be impacted in case where the Islamic bank allocates the majority of its assets to over-priced sales-based contracts, forcing towards higher returns per unit of risk to remunerate excess capital that is not exploitable. The performance of Islamic banks should not be dependent on the high rates of return required by sales-based contracts while being in a situation of excess capital for the fear of excessive risk-taking (i.e. by increasing the share of riskier contracts such as PLS contracts). The primary business of a bank is risk management, therefore, Islamic banks are required to find other solutions for optimizing and allocating the capital.

Intrinsic Trend towards Increasing the Share of PLS Contracts and Evolution of Risk and Liquidity Management Tools

With more maturity in the Islamic finance industry, Islamic banks would have to take more risks to gain competitiveness and performance. However, this requires, some support from both the market and the regulators.

Currently, Islamic banks have liquidity levels well above the regulatory minimum; they generally have very high capitalization ratios and mobilize large, stable, and cheap sums in deposit accounts. According to Habib and Khan (2001), Islamic banks even suffered from the phenomenon of excess liquidity; in comparison, conventional banks of the same size have on average 46.5% less liquidity than Islamic financial institutions. Per unit of asset, Islamic banks have a much higher level of liquidity than conventional banks (Berger et al., 2019). Thus, Islamic Financial Services Board (2019) pointed out that an excess liquidity shield is still prevalent in many countries. Therefore, this excess liquidity is not exploited and does not generate income. To compensate for this lack of remuneration, Islamic banks over-price their contracts by applying high margins and were unable to offer competitive rates as compared to conventional banks. This situation is encouraged by the existence of a large class of customers who are eager for *Sharīʿah*-compliant contracts. These clients agree to pay a fairly large premium for the *Sharīʿah*-compliant nature of contracts. Hence, the returns are largely sufficient for the remuneration of the capital and excess liquidity.

However, as the Islamic finance industry matures, competitive pressures might affect the high level of returns. Some of the clients of Islamic banks would seek not only *Sharīʿah*-compliant but also lower-cost financing and, in some cases, seek other sources of lower-cost financing that are not necessarily *Sharīʿah*-compliant. This natural tendency of customers would push Islamic banks to look for and exploit all niches (including PLS employment) that are not fully exploited and whose risk-return ratio is satisfactory. According to Khan and Chapra (2004), it is expected that the maturity of the Islamic financial system will gradually promote more reliance on equity financing and less reliance on debt. Following this observation, *murabaḥah* contracts which constitute the largest share of sales-based contracts in Islamic banks, play only a transitional role pending the use of PLS and other innovative contracts.

The scarcity of *Sharīʿah*-compliant investment opportunities and the inadequacy of traditionally used sales-based contracts would also push Islamic banks to turn to PLS and other innovative contracts (such as *sukūk*) and those which are underused (such as *istisna* for large projects). Therefore, excess liquidity (EL) could be used to protect shareholder returns by increasing the risks that properly recompense. Like conventional banks, Mahdi and Abbes (2017) showed that by accumulating liquid assets, Islamic banks tend to have relatively riskier portfolios. This can have the impact of making excess liquidity more profitable and reducing the cost of equity capital. Islamic banks could then reduce their rates of return to be more competitive or, on the contrary, be comfortably remunerated for the risks taken.

The increase in the share of PLS contracts might also be generated by the inflexible nature of sales-based contracts financing and their lack of standardization. In some cases, quite significant *fiqhic* divergences may curb some uses of sales-based contracts (such as long-term *murabaḥah* or *ijarah* without strict conditions) and push Islamic banks to use PLS financing contracts that are more compatible with the financed employment (such as *diminishing musharakah*, which may replace long-term *murabaḥah* for real estate financing).

This intrinsic trend towards an increase in the share of PLS contracts would lead to parallel evolution of risk and liquidity management tools. Indeed, the increase in the share of PLS contracts in the assets of the balance sheet automatically generates an increase in credit risk. The latter can then be transferred to liability and cause the risk of ID erosion, which could result in the withdrawal of the latter or their transformation into OD. The transformation and withdrawal of IDs increase the asset-liability risk and push banks to automatically reduce the share of riskier employments. In this case, the share of PLS contracts could create a vicious circle that is difficult to manage in the context of a competitive and more mature market. Therefore, the development of PLS contracts in the balance sheet of Islamic banks must be accompanied by risk reduction and management solutions. As noted earlier, the development of PLS contracts carries a lot of credit and liquidity risk. Therefore, the problem to be solved would be about the encouragement of PLS modes through diversification of funding sources and credit risk management.

If Islamic banks can finance themselves flexibly and sufficiently, they will not need to keep any unused cash, which would encourage them to take more risk and thus, invest in PLS and other less liquid and riskier contracts. According to Khan and Bhatti (2008), the lack of *Sharīʿah*-compliant short-term liquidity instruments leads Islamic banks to self-insure and retain more liquidity in order to guarantee depositors and preserve confidence. Islamic Financial Services Board (2019) also pointed out that due to the lack of *Sharīʿah*-compliant liquidity management facilities, the build-up of an excess liquidity quagmire is still prevalent in several countries.

Islamic banks structurally suffer from many liquidity problems as most of the liquidity management instruments are based on interest and risk transfer. In addition, due to the near absence of an Islamic money market, Islamic banks cannot resort to a lender of last resort (because of the interest rate associated with this operation) and cannot either sell the debt (which is similar to the transfer of most sales-based contracts). In this sense, in addition to the need for innovation and development of *sharīʿah*-compliant liquidity management instruments, states must take a great deal of responsibility for innovating and developing a compliant and appropriate money market.

In addition to the various tools that can be used for credit risk and moral hazard management, s*ukūk* can be the biggest solution for both liquidity risk management and the transfer of some excessive and concentrated risks. In addition to *ijarah sukūk*, the increase in the share of PLS contracts (mainly *musharakah* and *diminishing musharakah* contracts) might bring the development of *sukūk* market. Indeed, the sukūk, above all must be backed and not only based on the underlying contracts. This basic rule, which requires the transfer of ownership of the underlying tangible asset, automatically excludes all standard contracts except *ijarah*, *musharakah,* and *diminishing musharakah*.

Sukūk have not been used as a primary source of financing so far. Despite a strong and continuous development mainly in some countries such as Malaysia, which accounts for 47% of the global volume of *sukūk* in circulation (Islamic Financial Services Board, 2019), the *sukūk* market is not liquid, mainly due to global challenges related to capital markets, and *Sharīʿah*-compliance (Islamic Financial Services Board, 2014). These problems could be addressed, at least partially, by increasing the share of *musharakah* and *diminishing musharakah* contracts in the total assets of Islamic banks and by developing issuance and market liquidity of *sukūk* based on these contracts[1]. This might have a direct impact on the management of liquidity and credit risks related to PLS contracts. The role of public authorities also remain crucial in this regard. Governments should play a more active role in the *sukūk* market by issuing sovereign *sukūk* and adopting a more appropriate tax and legal strategy.

Supporting Islamic Banks and Other Solutions for the Development of PLS Contracts

In addition to risk reduction and management solutions, the development of PLS contracts in the balance sheet of Islamic banks must be accompanied, by the development of the necessary human and technical resources and the adaptation of the legal, regulatory, and fiscal context. Therefore, in this research we would be closely looking at these three proposed solutions:

a. Development of Human and Technical Resources

The technology and software used (which is now a competitive advantage) are not adapted enough for Islamic finance industry, as they are originally designed for conventional banks. Thus, in addition to the lack of qualified personnel and adapted technology, which not only affects the development of PLS contracts but also the entire Islamic finance industry. Therefore, the low share of PLS contracts can also be linked to the lack of an adequate institutional framework and low accumulation of expertise.

[1] Islamic Financial Services Board (2014) points out that despite challenges related to the capital market and *sharīʿah*-compliance, the scope and sophistication of *sukūk* has improved. However, the share of *sukūk* based on *musharakah* remains very low and untapped (2.1%) compared to *sukūk* based on *murabaḥah* (28%) and *ijarah* (25%) (Islamic Financial Services Board, 2019).

According to Hassoune (2010), the lack of sufficiently experienced professionals in Islamic finance is one of the main risks faced by Islamic banks. Thus, for nearly 72% of Islamic banks, the lack of human capital is qualified an important challenge, expertise in asset management and other sectors also remains a challenge (Islamic Financial Services Board, 2014). Grira and Labidi (2021) pointed out that according to several authors; the underperformance of Islamic funds is largely explained by the lack of experience in active management and dynamic market monitoring.

b. Creation of Auxiliary Institutions

In conventional banks, only certain companies with high growth potential in specific sectors are financed by venture capital (Demaria, 2006). The reason for this choice is that the selection of companies to be financed is costly in 'man-time'. This automatically excludes small projects because even if they are successful, they would hardly allow for the amortization of management and monitoring costs (Chatti, 2010). For example, according to Diamond (1984), the denial of financing is attributed to the excessive costs of monitoring required to control contracts and reduce uncertainty in an environment of asymmetric information. Thus, one of the best methods for controlling and managing the risks associated with the *musharakah* mode is participation in the decision-making and management of the firm. This allows the Islamic bank to monitor and control the financed firm at a lower cost. According to Djankov et al. (2007) and Acharya et al. (2011), access to information reduces monitoring expenses, by allowing banks to retain some of their capital reserves, finance more projects, and create more liquidity.

However, there are some limitations at this level for Islamic banks. Indeed, the latter do not have qualified personnel in terms of technical evaluation of projects (Habib & Khan, 2001), especially for the intervention of Islamic banks which not only exceed financial side but also multiple skills. Furthermore, for PLS contracts to fully play their integral role in diversifying assets and financing the economy, the *musharakah* (i.e. PLS) contract could be used by Islamic banks to finance any type of project deemed sufficiently profitable and conducive for the economic and social growth.

For this reason, Islamic banks have to rely heavily on auxiliary institutions to support and monitor financed companies. According to Ben

Daoud (2013), delegating monitoring to an intermediary reduces the average cost of monitoring, which allows economies of scale, and avoids duplication if everyone were to engage in monitoring. Besides, the role of monitoring projects and funded companies, auxiliary institutions are required to support Islamic banks in finding and exploiting *Sharīʿah*-compliant investment opportunities, compliance monitoring (*Sharīʿah* committees), etc.

c. Increased involvement of public authorities

In addition to the roles that must be played in terms of creating a *Sharīʿah*-compliant liquidity market (central bank financing, sovereign *sukūk*, etc)[2], the public authorities must be associated at different levels in supporting the development of Islamic banks and their involvement in financing the economy.

According to Khan and Chapra (2004), the legal banking framework in several countries is still dominated by the legal and institutional framework of conventional banking system. This system governs the international financial market and is not necessarily conducive to the adoption of PLS contracts. Islamic Financial Services Board (2014) highlighted the slow progress in developing the legal framework that could help the Islamic finance sector. Abdul-Rahman (2014) pointed out that many prudential standards and risk management techniques are simply replicas of conventional finance instruments and standards. According to Habib and Khan (2001), the institutional framework such as tax treatment, accounting and auditing systems, and regulatory texts often do not encourage the use of PLS contracts by banks. In addition, property rights systems are poorly defined and insufficiently protected in Muslim countries, making it impossible to share profits and losses optimally. Islamic Financial Services Board (2014) underlines, in this sense, a real need for capacity building of the staff of regulators involved in the supervision and monitoring of Islamic financial institutions.

Thus, the public authorities need to be proactive in promoting the development of PLS contracts and the Islamic finance industry in general

[2] Islamic Financial Services Board (2014) points out in its recommendations that domestic interbank markets are non-existent or inactive in many Islamic finance jurisdictions and that key asset classes such as sovereign *sukūk* are scarce.

by, among other things, adapting legal and tax rules[3], establishing a *Sharīʿah*-compliant capital market for small and medium-sized companies, and creating other common institutions (which are necessary to reduce overhead costs and increase the profitability of Islamic banks).

Conclusion

Islamic banking industry is still a nascent industry in terms of the expertise developed, the tools used and the degree of innovation of alternative financial contracts, and techniques for quantification and risk management. Indeed, mostly models and software are borrowed directly from the traditional financial industry. However, if these techniques can be partially adaptable, then the nature of balance sheet and the risks of Islamic banks are technically different in several aspects.

In Islamic banks, some of the most severe types of risk might have their origins in the very principles of Islamic finance. However, others might be potentially higher than in conventional banks because of some practices, which lead Islamic banks to risk concentrations and inappropriate retention of a high level of untapped capital. While, for example, compliance risk and investment deposit risk are specific to Islamic banks, the high level of traditional risks (credit risk, operational risk, liquidity risk, etc.) is mainly related to the risk behaviour of Islamic banks and the tools available for their *Sharīʿah*-compliant management. Thus, Islamic banks are concentrating their activities in some standard contracts (mainly sales-based contracts) for more risk control. On the other hand, they are moving away from PLS contracts because of their high level of risk.

The immense increase in share of sales-based contracts to the detriment of PLS contracts is therefore, not the result of good risk and capital management (minimizing risk by avoiding the riskiest PLS contracts) but rather the result of a search for an appropriate level of risk for a fairly comfortable level of return concerning market requirements. This is only possible because of the existence of a client class eager for *Sharīʿah*-compliant contracts. On the other hand, the low share of PLS contracts is the result of a lack of risk management and liquidity instruments, a lack of innovation and expertise in risk management and the structuring of suitable

[3] Tax neutrality, safety net provisions (i.e. *sharīʿah*-compliant deposit insurance) and other aspects are less prevalent (Islamic Financial Services Board, 2014).

contracts, and finally, the result of a lack of legal and fiscal frameworks adapted to Islamic banks in most countries.

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