Islamic Banks in the Global Economy with Special Reference to in CIS Countries

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Abstract: The subject of the article is Islamic banks – a special form of banking business, in which services are provided to customers on an interest-free basis. The article discusses the reasons why Islamic banks emerged and spread, and considers the dynamics and geographical distribution of their assets in the world economy. Particular attention is paid to the theory and practice of Islamic banks performance, their main differences from conventional banks, as well as basic mechanisms of Islamic financing. Problems that make it difficult for Islamic banks to expand in non-Muslim countries have been revealed. The experience of Islamic banks in the post-Soviet space has been analyzed, and the practical experience and success of these financial institutions have been considered.

Keywords: Islamic banks, Islamic Finance, interest-free financing, loan interest.

1. INTRODUCTION

Over the past 50 years, Islamic States have been actively working out their own concept of socioeconomic development. This concept is based on the system of ethical postulates laid down in the Qur'an, which formulates the principles of legal and economic relations that are now used in modern Islamic society.

One of the institutions of Islam's economic system are Islamic banks – a special form of financial business organization, in which services are provided to customers on an interest-free basis. This attitude to bank interest has prompted Islamic financiers to look for ways to implement an alternative to the traditional banking system that would not contradict the ban on the collection of loan interest existing in the Quran.

The reasons for the emergence of Islamic Finance were the following circumstances:

- rising oil prices and a steady flow of petrodollars to the Arab States of the Persian Gulf. The emergence of Islamic financial institutions has become, along with traditional financial institutions, the mechanism of capitalization of accumulated foreign currency;
- a surge of religious consciousness in Islamic society, the so-called "Islamic Renaissance", manifested in public life through the growth of Islam-oriented governments, organizations, laws, social services and educational institutions, as well as banks;

- growth in the number of Muslims in Europe and the United States in recent years, which determines the demand for the services of Islamic credit institutions;
- understanding that Islamic Finance, by virtue of its operating principles (interest-free financing, prohibition of risky transactions), can contribute to strengthening global financial stability (Ashraf D., Ramady M., Albinali A. 2016).

The theoretical and ideological basis on which the activities of Islamic financial institutions are based is the Quran. In Islam there are a number of prohibitions, including financial transactions:

- riba ban on loan interest collection.
- gharar prohibition on excessive risk. Sharia does not disprove risk at all, as risk is an integral part of a commercial transaction. We are talking about excessive risk, which cannot be taken into account when concluding a transaction, and under the asymmetry of market data, can lead to the use by one of the parties of information inaccessible to the counterparty, and, therefore, can contain an element of error or deception (Imam P., Kpodar K. 2010)
- maysir (gambling) ban on the receipt of income as a result of random coincidence. The examples of such transactions are speculative transactions carried out in the financial markets.
- Obligatory attachment of financial transactions to real goods and services. The purpose of economic activity in Islam is to create real added

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Feachure	Islamic banks	Conventional banks
Guaranteed deposit body payments	Yes	Yes
Interest rate on deposits	Not determined, not guaranteed for investment deposits	Determined and guaranteed
Purpose of the loan	The loan is provided for investment purposes only	The loan is not limited by investment purposes
Deposit interest rate determination mechanism	Depends on the profitability of the Bank and return on investment	Does not depend on the profitability of the Bank
Participation of depositors in the Bank's profit and loss	Yes	No
The condition of granting loans	The existence of an investment asset is a prerequisite for concluding an agreement with the Bank	The loan is determined by the assessment of the borrower's financial standing

Table 1: The Main Differences between Islamic and Traditional Banks¹

¹Perfect model of an Islamic Bank is assumed.

value, increasing the mass of goods and services, not the money supply of the owner.

2. PRINCIPLES OF ISLAMIC BANKING

The key point that distinguishes Islamic banks from traditional banks is that they do not use in their activities a reward in the form of bank interest. The main characteristics that distinguish the activities of Islamic banks from traditional ones are presented in the Table **1**.

In accordance with Sharia norms the organization of Islamic financial activities is based on the following principles:

- ban on interest-bearing lending;
- loss sharing with the customers; (see Hasan Z. 2015)
- ban on financing the projects related to certain goods: weapons, tobacco, alcohol and gambling development
- no investment in high-risk derivatives and speculative operations;
- certainty of contract terms in relation to the goods, terms and remuneration.

Using these principles, Islamic banks offer various instruments of Islamic financing, which are currently the basis of their operational and investment activities.

Mudarabah – financing on the basis of equity participation in the total profit received from the implemented investment project. In this type of

contract, the Bank, as the owner of the capital, entrusts its funds to the entrepreneur (*Mudarib*) for the implementation of the investment project. After completion of the project (Hasan Z. 2002), the income received from the invested funds is distributed between the Bank and the entrepreneur in accordance with the original agreement (Al-Jarhi M., Iqbal M. 2001). As a rule, the contract does not specify a specific amount of money, but the proportion in which the profit will be divided. It is significant that in the event of a loss, the owner of the capital bears the financial loss in full, and *Mudarib* does not receive compensation for his efforts. *Mudarabah* is used to Finance short-and medium-term investment projects (for example, in trade) and in securities transactions.

Musharaka (partnership) – a joint investment project of a Bank and an entrepreneur, in which a partnership agreement is concluded, in accordance with which the parties jointly Finance the project. Usually all profits are divided between the parties in predetermined shares. Losses are to be distributed only in proportion to the contribution to capital. Unlike *Mudarabah*, *Musharaka* is a tool in which the management of an investment project can be carried out by both all parties and one of the parties. The contract of *Musharaka* is used for joint investment activities, investments into real estate, agriculture etc.

Murabaha – contract of sale of goods concluded between the Bank and the buyer at a pre-agreed price. The Bank in this case buys the goods at its own expense and in its own name, becoming its owner, and then resells the goods to the buyer, making a profit from the sale of the goods. *Murabaha* is characterized by a low risk, since this method of financing is shortterm. *Murabaha* contract is used to purchase raw materials, equipment, buildings, land, assets from third parties and resell them to the client, but at a higher price previously agreed in the contract.

Salam, or Bai as-Salam – a sale of goods contract with deferred delivery against cash payment and with a pre-agreed value of the goods, which the seller (Bank) undertakes to deliver to the buyer. In essence, the Salam contract is an advance form of financing in which one party (the Bank) acts as the customer and the other party – the contractor (contractor).

Istisna is a banking product created to Finance large-scale and long-term projects. The difference between the *Istisna* contract and the Salam contract is that the supplier of the goods is no longer the client, but the Bank itself, and the payment for the goods is not provided in the form of a lump sum before the buyer receives the goods, but step by step, as the manufacturer of the goods performs the work. *Istisna* is used to finance large industrial projects, the purchase of expensive equipment (ships, aircraft, etc.), as well as in housing construction.

Ijara (leasing) is a contract that is similar to financial leasing in the traditional financial system. Under the terms of this agreement, one party – the Bank (lessor) – acquires and leases the property to the other party (lessee) for a certain period, during which the lessee pays the Bank a fee in the form of payments, the amount of which is agreed in advance (Sundararajan V., Errico L. 2002).

Qard Hasan (interest-free loan). The *Qard Hasan* treaty serves a religious rather than an economic function in the operations of Islamic banks. This form of financing can be considered as financial assistance on a returnable basis, which can be provided to individuals for various purposes. The system of interest-free lending also applies to enterprises to which banks issue short-term loans, which prevents customers from going to ordinary banks.

The principles of Islamic banking are not always used in real life. Today, Islamic banking is largely focused on generating income not from investment activities (*Musharaka*), but on generating income from the sale of goods profits (*Murabaha*). The shift from equity-based financing and profit-and-loss agreements to debt-based financing negates the benefits of other Islamic financing methods, threatening the financial stability and sustainable development of Islamic banks (Rahim A., Rahman A. 2002). This situation can be explained by the lower level of risk associated with non-investment instruments. Figure **1** illustrates this problem: more than 75% of the financing offered by Islamic banks worldwide is in the form of *Murabaha*. The second place takes leasing (Ijara) – about 11%. The shares of profit-sharing contracts (*Musharaka* and *Mudarabah*) are at 4.17% and 1.67% respectively. The share of *Qard Hasan* contracts is only 1.53 %. Overall, Islamic banking products based on profit sharing account for less than 8% of total Islamic financing worldwide (IRTI 2016).

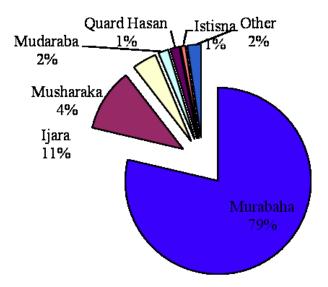


Figure 1: Structure of the portfolio of Islamic banks (IRTI 2016).

3. ISLAMIC BANKS IN THE GLOBAL FINANCIAL SYSTEM

Islamic banking institutions should be regarded as Islamic not by the origin of their capital, but, above all, by the principles of operating and investing activities. They carry out transactions in accordance with the principles of Islam and Islamic law, which can be reduced to the following basic provisions: conducting transactions on the basis of an equal division of risk, profit and loss, the prohibition of the accumulation of funds without commodity coverage and the prohibition of the collection of usurious interest (RIBA). Thus, the system of Islamic banks is very specific, and they themselves act as a separate organism. For this reason, Islamic banks have taken a particular place in the international banking structure.

The creation of the global Islamic Finance industry dates back to the 1960s and 70s, when the first Islamic banks operating on *Sharia* principles were established in several countries of the Middle East and Malaysia,

and the interstate Islamic development Bank was established. Since then, the Islamic financial services sector has grown significantly. If in the mid-1990s, the assets of Islamic banks amounted to \$150 billion, then in 2015 to \$1.88 trillion, and their annual growth rate exceeded 10-15% (ADB 2015). Islamic banking assets in the world are expected to grow at double the rate of traditional banking assets. However, it should be noted that in recent years the average annual growth rate of assets of Islamic banks was lower than in the previous period (10% in 2013-2016 to 17% in 2008-2011), due to such factors as exchange rate depreciation in emerging markets, the slowdown in global economic growth, prolonged low energy prices on world markets and the weakening confidence of investors and consumers to the banking sector (IFSB 2016).

In 2015, there were 363 Islamic credit institutions in the world, of which approximately 69% were fully Islamic "Autonomous" banks, while the remaining 31% were conventional banks offering Islamic services through "Islamic Windows" (IRTI 2016). In recent years, Islamic banks have increased their external expansion outside the Arab world, seeking to expand their spheres of influence in the host countries, and to fit into the modern transnational banking structure, becoming a significant player in the international banking capital market and in the field of international investment flows. The beginning of Islamic banks in Western countries dates back to the 1970s of the last century, when in 1978 the Bank Islamic Banking System (now - Islamic Finance Bank) was opened in Luxembourg, and in 1981 Dar al-Mal al-Islami (now Faisal Private Bank), which is owned by Bahrain's Ithmaar Bank and manages capital of \$ 1 billion (Birjukov E 2008). An important center of Islamic Finance is London, where today there are five Islamic banks, and seventeen British banks and units of foreign banks operating in England have specialized units that provide Islamic financial services (Belouafi A., Chachi A. 2014). There are also two Islamic banks operating in the US, and Islamic banks are planned to open in Italy, Sweden and other Western European countries in the near future. It should be noted that the expansion of the sector of banking services provided on the principles of Islamic law is also coming from major Western banks, such as Goldman Sachs, J. P. Morgan, Citibank, Deutsche Bank, BNP Paribas, Chase Manhattan Bank, which have divisions offering customers Islamic financial services (so-called "Islamic Windows"). The emergence of such services offered by the largest Western banks is due to their desire to cover new

market segments with financial services. Currently, the amount of assets in the "Islamic Windows" of conventional commercial banks even exceeds the total amount of assets in fully Islamic banks.

Despite the rapid growth of assets of Islamic banks, their share in most Islamic countries is still relatively small. For example, their share in relation to the assets of conventional banks in Kuwait is 38.9%, Qatar-26.1%, Yemen-33%, Malaysia-23%. Less than 10% of all banking assets are accounted for by Islamic banks in countries such as Bahrain, Jordan, Pakistan, Egypt, Oman, Turkey, Indonesia, etc. and only in two Islamic countries the share of Islamic banks in the structure of the entire banking system is at the level of 49% (Saudi Arabia) to 100% (Sudan and Iran) (IFSB 2016).

To date, the dominant "players" in this sphere are the Gulf States and Iran. South and South-East Asia region ranks second in the world of Islamic banking with a 15% market share. The region includes Malaysia - the second largest Islamic economy (in terms of Sharia-compliant financial services), and Indonesia, the country with the world's largest Muslim population. Despite the fact that Pakistan and Bangladesh are among the most populous States in the region, their share in the global market of Islamic financial services does not exceed 2% (IRTI 2016). In General, given the growth rate of population and income in Islamic countries, there is a great potential for the development of Islamic banking. This is especially true of a fairly large number of Islamic countries with less developed Islamic banking sectors, but which have a significant Muslim population.

Most Islamic banks are relatively small. Eleven per cent of existing Islamic banks have assets in excess of \$20 billion, 11% - \$10 to \$20 billion. 12% of banks have assets between \$5 and \$10 billion, 27% have assets ranging from \$1 to \$5 billion, and the remaining 40 percent have assets of less than \$1 billion (IRTI 2016). Despite the small size of assets, Islamic banks are generally well capitalized and liquid, although the degree of liquidity varies depending on the region and their market share.

The capital adequacy ratio for Islamic banks is usually much higher than the regulatory requirements and corresponds to the first level. In 2014, Islamic banks in the UK, Turkey, Africa, the Gulf States and Iran met the highest capital adequacy requirements, For example, in 2014, the capital adequacy ratios for Islamic banks in these were 33, 32, 26 and 19% respectively, well above the minimum requirement of 8% for Bank capital adequacy under the Basel III agreement (IRTI 2016).

In terms of profitability, the return on assets of Islamic banks is also positive: banks operating in Africa, the Gulf States, Iran and Asia are more profitable than their counterparts in other regions. One possible reason is that some banks in these regions are state-owned banks and mainly provide financing for state-owned enterprises and government projects at preferential rates.

The majority of Islamic banks' assets (77%) are concentrated in the Middle East and North Africa region, followed by Asia (18%), Europe (3.73%) and sub-Saharan Africa (less than 1%). The same distribution is typical for the number of Islamic banks distributed across the regions of the world – 50% of Islamic banks are located in the Middle East and North Africa, 30% in Asia and 15% in sub-Saharan Africa, despite the fact that they have less than 1% of total assets. In the Middle East and North Africa region, where most Islamic banking assets are concentrated, more than half of the assets are owned by Iranian banks (\$451 billion). The largest seven banks account for 80% of the Iranian market, amounting to more than \$20 billion (Figure 2) (IRTI 2016).

Interest in Islamic financial institutions is expected to grow in the future, while the trend towards an increase in the number of non-Muslim clients will continue.

4. ISLAMIC BANKS IN CIS COUNTRIES

Today, Islamic banks are actively penetrating the economic sphere of developing countries that have serious needs for financing from external sources. This trend is especially true in countries where banking services were previously poorly developed. This trend is also typical for the activities of Islamic banks in nonMuslim countries, but on the way of their economic expansion in these countries there are objective difficulties, which can be attributed to the following circumstances:

- uncertainty of the status of Islamic banks in the banking legislation of non-Muslim countries, which is due to the existing differences between the Islamic and traditional banking systems, principles and methods of banking operations;
- the difficulty in expanding investment activities in the credit markets of non-Muslim countries, which is due to strong interbank competition in these markets, especially from transnational banks;
- the complexity of the official registration of Islamic banks in the credit markets of developing countries, which is due to the inconsistency of the principles of Islamic banking national legislation of the host countries;
- due to the specifics of Islamic banks, consisting in the need to distribute profits and losses, they impose more stringent requirements to the system of monitoring the borrower.

In those CIS countries where Islam is the dominant religion, the development of Islamic banks is constrained by the underdevelopment of financial infrastructure, low level of economic culture and poor understanding of Islamic financial services. The majority of the population still does not trust banks, and people with average incomes prefer not to use banking services at all.

Kazakhstan was the first CIS country to introduce legislation in the field of Islamic Finance. Despite this, Islamic banking in the country is still at an early stage of development. The share of Islamic banking assets is less than 1% (only 0.08%) of the total assets of the

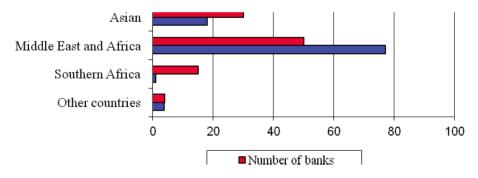


Figure 2: Regional structure of assets and number of Islamic banks (IRTI; IFSB).

banking sector. However, according to the concept of development of the financial sector of the Republic of Kazakhstan until 2030, this figure should reach 3-5% in 2020 (MIS 2016). To date, Kazakhstan's Islamic banking sector is represented by only one Islamic Bank Al Hilal Islamic Bank, which was registered in 2010 with the financial participation of the head office of the Bank in Abu Dhabi. The total assets of this Islamic Bank in 2015 amounted to \$77.77 million. The Bank's clients are predominantly state-owned and large companies, but it aims to also focus on the retail market with plans to offer a full range of retail Islamic products. In Kazakhstan, there is a "Road map for the development of Islamic Finance until 2020", which sets out the development and implementation of Islamic Finance in the country, which will create conditions for their activities.

In Kyrgyzstan, there are currently 16 regulations governing activities Islamic the of banks. "EcolslamicBank" has worked in the country since 2008 JSC, operating on Islamic principles of financing. Its characteristic feature, however, as well as other Islamic banks, is the presence in it of a special collegial governing body - the Sharia Council, the purpose of which is "participation in the creation of legal conditions for the Bank to carry out operations on Islamic principles of financing in accordance with Sharia norms.

In Azerbaijan, Islamic banks are represented only by individual branches, and many types of operations were carried out in the form of traditional operations of Islamic banks to the extent permitted by law. The legislation of Azerbaijan allows Islamic banking services only for trading with precious stones, precious metals and securities, which imposes certain restrictions on the implementation of Islamic banking operations (Alivev S. 2012). In 2008, the state-owned Azerbaijan investment company and a member of the Islamic Development Bank group, the Islamic Corporation for private sector development, founded the Caspian international investment company, which operates on the principles of Islamic Finance. The main goal of the company is to attract foreign investment in the development of non-resource sectors of the economy . In addition, in 1988, Kovsar Bank was established in the country, which carries out banking operations in accordance with the rules of Sharia. In 2012, the international Bank of Azerbaijan, the country's leading Bank, decided to set up an Islamic banking department to offer clients such Islamic banking products as Murabaha, Mudarabah, Ijara and

Quard Hasan. However, due to the change in the economic situation in Azerbaijan and the decline of oil prices, the IBA management decided to close the Islamic banking Department, despite the fact that the IBA's portfolio of Islamic Finance amounted to 526 million dollars.

In Russia, there are three known attempts to create Islamic banks, and all of them were unsuccessful. Thus, Islamic banks opened in 1992 in Kemerovo and in 1996 in Makhachkala ceased to exist. A more successful attempt was made in Russia under the organization of the Islamic Bank "Badr Bank" in 1997. It was the only Russian Bank that tried to work on the principles of Islamic financing, but in 2006 the Central Bank of Russia revoked its license for banking operations. To date, the development of Islamic Finance in Russia is hampered by the lack of special regulation of their activities at the legislative and tax level. In accordance with the Civil Code of the Russian Federation, the agreement between the borrower and the Bank is considered exclusively as an interest rate, and the Federal law "On banks and banking activities" also provides only for the principle of interest payments when paying for a loan. Based on this, the activity of Islamic banks within the framework of Russian legislation seems impossible.

The idea to legalize Islamic banking in Russia was expressed by the Association of Russian banks after the Western countries imposed sanctions against Moscow that cut off large Russian companies from Western loans. In August 2014, the Association proposed to adopt a Federal law on Islamic banking that would regulate the activities of foreign credit organizations in Russia. It was also proposed to organize a Committee within the Central Bank of Russia that would regulate the activities of Islamic banking institutions in Russia and their compliance with Sharia law. As of today, several Islamic banks have announced their intention to open branches in Russia. Among them are Al Baraka (Bahrain), Al Shamal (Sudan), AI Hilal (UAE), as well as leading banks in Malaysia . Despite this, the emergence of full-fledged Islamic banks in Russia is most likely a matter of the future, which will come after the realization of the benefits that Russia can get from the development of Islamic banking products.

5. CONCLUSION

For almost half a century since the establishment of the Islamic banking sector, estimates of its contribution

to the socio-economic development of Islamic countries remain ambiguous - from positive to negative. On the one hand, the efficiency of Islamic banking has far exceeded the initial expectations of its founders. Islamic banks have become an important segment of the Bank deposits and financing market in the Gulf States and Malaysia. Leading Islamic banks have turned into multinational companies whose growth has far exceeded their domestic market. Islamic banks have also been established in major international financial centers, particularly in London, which has drawn attention to their business model. On the other hand, much of their funding is related to trade rather than development projects. Despite the consistent expansion of the Islamic financial sector, poverty in some Islamic countries has not decreased. And in those Islamic States where we see economic growth and prosperity, they were caused by circumstances that have nothing to do with Islamic Finance.

The benefits of Islamic banking can only be achieved if its true nature and purpose are matched by existing practice. This is due to the fact that the financial products of Islamic banking, based on the principle of profit and loss sharing, often declared as the main ethical advantage of Islamic Finance, are not always used in reality. Despite the ethical nature of Islamic banking, it does not contribute to poverty reduction in Muslim countries. As practice shows, the benefits of Islamic Finance are mainly received by large clients, while the majority of the population with low incomes simply do not use their services (Wilson R. 2014). This, of course, makes it difficult to create a healthy socio-economic environment that is close to the ideal of Islam. Therefore, the litmus test of the usefulness of Islamic banking will be its ability to stimulate economic growth and reduce poverty through its main features - interest-free lending, risk-sharing and profit-sharing.

REFERENCES

- ADB (2015), Islamic Finance for Asia: Development, Prospects, and Inclusive Growth. Asian Development Bank, p.7.
- Al-Jarhi M., Iqbal M. (2001), Islamic Banking: Answers some frequently asked questions, Islamic Research and Training Institute, Occasional Paper No.4. p.10-23.
- Aliyev S. (2012), Azerbaijan becoming regional center of Islamic banking, http://www.azernews.az/business/44544.html.
- Ashraf D., Ramady M., Albinali A. (2016) Are Islamic Banks Any Different in Financial Stability? An Empirical Investigation. Islamic Research and Training Institute, Working Paper No.10, pp. 4-40. https://doi.org/10.2139/ssrn.3022446
- Belouafi A., Chachi A. (2014), Islamic Finance in the United Kingdom: Factors Behind its Development and Growth, Islamic Economic Studies Vol. 22, No. 1, p.53 https://doi.org/10.12816/0004130
- Birjukov E. (2008), *The new trends in the activities of Islamic banks* [Novye tendencii v dejatel'nosti islamskih bankov]. *Mirovaya ekonomika i mezhdunarodnye otnosheniya*, No.7, p.87.
- Imam P., Kpodar K. (2010) Islamic Banking: How Has it Diffused? , IMF Working Paper, August, p.4. https://doi.org/10.5089/9781455205257.001
- IFSB (2016), Islamic Financial Services Industry Stability Report, Islamic Financial Services Board, p.8.
- IRTI (2016) Islamic Finance: A Catalyst for Shared Prosperity? Global Report on Islamic Finance, Islamic Research and Training Institute, p.57.
- Hasan, Zubair (2015): Risk sharing versus risk transfer in Islamic Finance: A Critical Appraisal, ISRA International Journal of Islamic Finance, Kuala Lumpur Vol. 7, Issue 1, June. <u>https://doi.org/10.12816/0021394</u>
- Hasan, Zubair (2002): "Mudarabah as a Mode of Financing in Islamic Banking: Theory, Practice and Problems" Middle East Business and Economic Review Vol. 14, No. 2, Sydney, Australia, December pp. 41-53
- MIS, (2016). A New Frontier for Islamic Finance. Kazakhstan Islamic Finance, Mutual Insurance Society "Takaful" Halal Insurance, pp.41-45.
- Rahim A., Rahman A. (2000) *Islamic Banking and Finance: between Ideals and Realities,* IIUM Journal of Economics and Management, No. 2, p.214.
- Sundararajan V., Errico L. (2002), Islamic Financial Institutions and Products in the Global Financial System: Key Issues in Risk Management and Challenges Ahead, IMF Working Paper, No.02/192, November 1. https://doi.org/10.5089/9781451859775.001

Wilson R (2014) Islamic Finance and Economic Development: Lessons Learnt. Islamic Research and Training Institute , 2014. p.17.

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