

# IRTI Working Paper Series

WP# 1435-09

## Enhancing Intra-Trade in OIC Member Countries Through T-SDRs

Mahmoud Sami Nabi, Rami Abdelkafi, Imed Drine, Sami Ibrahim Al-Suwailem

22 Jumada'2 1435H | April 22, 2014



ISLAMIC RESEARCH AND TRAINING INSTITUTE  
A MEMBER OF THE ISLAMIC DEVELOPMENT BANK GROUP



Islamic Economics and Finance Research Division

**Abstract**

The OIC intra-trade reached 17% in 2012 and the member countries have committed to increase it to 20% by 2015. The 5<sup>th</sup> OIC Consultative Group Meeting on enhancing OIC intra-trade recommended the establishment of Trade Finance Support Schemes, as one of the driving factors, to accelerate the dynamic of the OIC intra-trade. Meanwhile, the United Nations World Economic and Social Survey (2012) considered that issuing new SDRs constitutes one of the solutions for the international community to mobilize additional resources for Development Finance. In this paper, we suggest the creation of Trade-based Special Drawing Rights (T-SDRs) among the OIC member countries to be issued by a dedicated regional financial institution on a regular frequency and according to a special mechanism. We discuss the allocation mechanism and its practical implementation among which the option to assign the role of issuance and clearing house to the Islamic Development Bank.

**Keywords:** OIC, intra-trade, Special Drawing Rights.

---

*IRTI Working Paper Series has been created to quickly disseminate the findings of the work in progress and share ideas on the issues related to theoretical and practical development of Islamic economics and finance so as to encourage exchange of thoughts. The presentations of papers in this series may not be fully polished. The papers carry the names of the authors and should be accordingly cited. The views expressed in these papers are those of the authors and do not necessarily reflect the views of the Islamic Research and Training Institute or the Islamic Development Bank or those of the members of its Board of Executive Directors or its member countries.*

Islamic Research and Training Institute  
P.O. Box 9201, Jeddah 21413, Kingdom of Saudi Arabia

# Enhancing Intra-Trade in OIC Member Countries Through T-SDRs

**Mahmoud Sami NABI**

IRTI-Islamic Development Bank  
& Tunisia Polytechnic School

**Rami ABDELKAFI**

CTY- Islamic Development Bank

**Imed DRINE**

ERPD-Islamic Development Bank

**Sami Ibrahim AL-SUWAILEM**

Financial Product Development Center-Islamic Development Bank

## I. INTRODUCTION

Promoting intra-trade at the OIC regional level needs innovating payments arrangements which support cross-borders investment, facilitate trade, and allow better allocation of resources across the region. Lee (2011) shows that the response of the OIC economies to structural shocks are largely asymmetric except for some sub-groups, suggesting that creating a common currency (for example an Islamic Gold Dinar as suggested by the former Prime Minister of Malaysia, Dr. Mahathir Mohamed) is still an unfeasible target and the author recommends the creation of small currency areas in a first stage. To overcome this shortcoming, the OIC countries need a payment system which inspires confidence and boosts their intra-trade. Indeed, progressively enhancing trade integration is the pre-requisite of any tentative of creating common currency (Frankel and Rose, 1998). In this paper we propose the creation of a payment system based on the issuance of OIC Special Drawing Rights (SDRs) that we call Trade based SDRs or T-SDRs.

The needs for additional financial resources for development has renewed the interest in the role of the IMF Special Drawing Rights (SDRs). For example, Joseph Stiglitz suggested that the role of SDRs should be expanded through new issuances and by increasing their use in IMF lending<sup>1</sup>. In this case, IMF member countries would convert their reserves in hard currency into SDRs. This mechanism would give to the IMF the possibility to create more official liquidity to finance its member countries, especially in time of crisis. At the same time, the US dollar would continue to play its role as the main currency for private transactions. The proposal of Stiglitz has been endorsed by other prominent economists and policy makers who also recommended transforming the SDRs into an international currency and to increase their issuance with relatively small scale to avoid inflationary pressure. More recently, the United Nations World Economic and Social Survey (2012) considered that the SDRs issuance could be considered as one of the practical solutions for the international community to mobilize resources for Development Finance. According to this report, the major part of the proposed annual allocations of SDRs 150 billion – 250 billion should go to developing countries. However, the UN report emphasized that a regular

---

<sup>1</sup> " The best alternative to a new global currency", ft.com, March 31st.

issuance would not have a direct link to development finance. It would rather reduce the need for developing countries to have international reserves protecting them from external shocks.

The idea of creating financial assets denominated in the IMF – SDRs was defended by the Governor of the China's Central Bank in Zhou (2009) when he noted that *“the centralized management of its member countries' reserves by the Fund will be an effective measure to promote a greater role of the SDR as a reserve currency. To achieve this, the IMF can set up an open-ended SDR-denominated fund based on the market practice, allowing subscription and redemption in the existing reserve currencies by various investors as desired. This arrangement will not only promote the development of SDR-denominated assets, but will also partially allow management of the liquidity in the form of the existing reserve currencies. It can even lay a foundation for increasing SDR allocation to gradually replace existing reserve currencies with the SDR.”*

Another related experience is the 'Asian Bond Fund - ABF' launched in 2003 by the Executives' Meeting of East Asia and Pacific Central Banks (EMEAP) in order to allow its members to invest in bonds issued by Asian sovereign issuers in EMEAP economies.<sup>2</sup> The IMF report (2010) emphasizes the importance of using SDRs denominated instruments in trade transactions noting that *“promoting invoicing of international trade and finance in SDRs could further enhance its role as a reserve asset. Invoicing commodities, such as oil, could be a useful and visible starting point. Since prices in SDRs are more stable than in the constituent currencies and commodities are used as hedges against dollar depreciation, invoicing in such markets may take root sooner than in other markets.”*

In this paper we propose the creation of a payment system based on the issuance of Trade-Special Drawing Rights (T-SDRs). The T-SDRs would be issued at the OIC regional level by a regional financial institution which could be newly created by the Central Banks of the OIC member countries or by an existing institution like the Islamic Development Bank and the International Islamic Financial Market. It is proposed that the issuance of T-SDRs general allocations takes place each three years and be linked to the evolution of the OIC intra-trade volume. These regional purchase power facility has to be allocated among the OIC countries according to fair and transparent criteria. In this paper we suggest detailed criteria intending to incentivize the contribution of member countries to the enhancement of OIC intra-trade. We also suggest coupling this payment system with the issuance of T-SDRs sovereign sukuk in order to provide investment opportunities to the countries having T-SDRs surpluses.

This proposed system can be implemented first for a small group of countries before its gradual generalization at the OIC level. The T-SDRs payment system will enhance OIC intra-trade by reducing the problems related to the instability and uncertainty of the bilateral exchange rates<sup>3</sup>. In addition, central banks in OIC member countries could hold at least a portion of their foreign exchange reserves in T-SDRs if they are offered sufficiently attractive return. The rest of the paper is organized as follows. Section II discusses the role of trade in the golden age of Muslim world and its resurgence. Section III presents the origin and current situation of the SDRs issued by the IMF. The suggested Trade based Special Drawing Rights (T-SDRs) is presented in section IV. Finally, section V concludes.

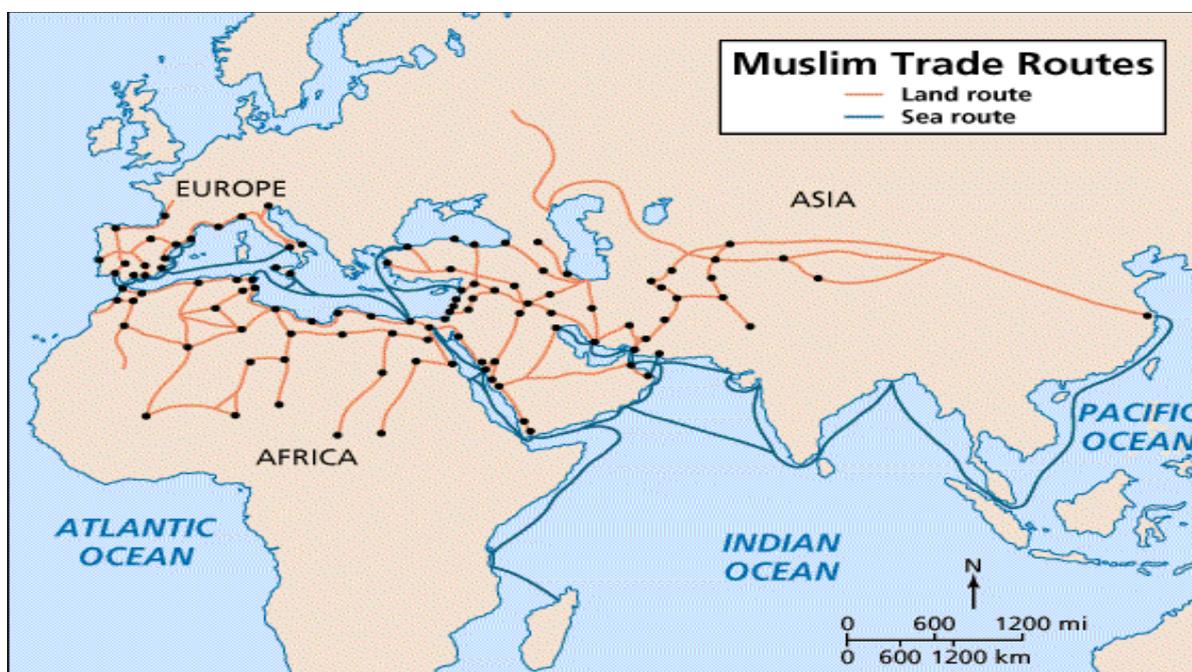
---

<sup>2</sup>The inaugural Asian bond fund was a US\$1 billion issue that was launched in June 2003 and managed by the Bank for International Settlements. The second ABF issue was issued in December 2004 and denominated in member currency funds. For further details see <http://www.emeap.org/aboutemeap.asp>

<sup>3</sup>Indeed, many regional trade integration experiences show that the reduction of transaction and information costs, resulting from currency changes, facilitates the comparison of prices within participating countries and favor their intra-trade. Currently, the majority of the OIC member countries use international currencies (US\$, EURO, etc) in their intra-trade transactions and have to secure the related foreign exchange risk. This represents a serious constraint for the development of intra-regional trade.

## II. ROLE OF TRADE IN THE GOLDEN AGE OF MUSLIM WORLD AND ITS RESURGENCE

While OIC countries differ in terms of resources endowments and economic evolution, they share common history and cultural heritage. To better understand the present and to build the future we need to learn from history (Deepak Nayyar, 2009). It is clear that the economic performance of the Muslim World during the golden age (8<sup>th</sup> -13<sup>th</sup> century) was not simply a coincidence but the result of good management of existing capacities combined with the willingness to seize opportunities offered by the favorable global environment. Trade within the Islamic World played a key role in its development and technological progress as pointed out by Findlay and O'Rourke (2007). The Muslim World has managed to maintain a unique geopolitical significance throughout its history. Stretching across two continents, the Islamic World was a thriving centre of trade. Control over main commercial networks helped to establish Muslim World as the world's leading economic power from the 7th to the 13th centuries. Muslim explorers and traders created a prosperous global economy through a commercial network that stretched from the Atlantic Ocean and the Mediterranean to the Indian Ocean and China Sea. Its cities were integrated with no restrictions on the free flow of people, ideas, techniques, goods, and capital (Findlay and O'Rourke, 2007). As Lombard (1975) notes, the region at that time could be perceived of as a series of urban islands, linked by trade routes with the supply of precious metals lubricating the movement of goods and factors of production along these circuits.

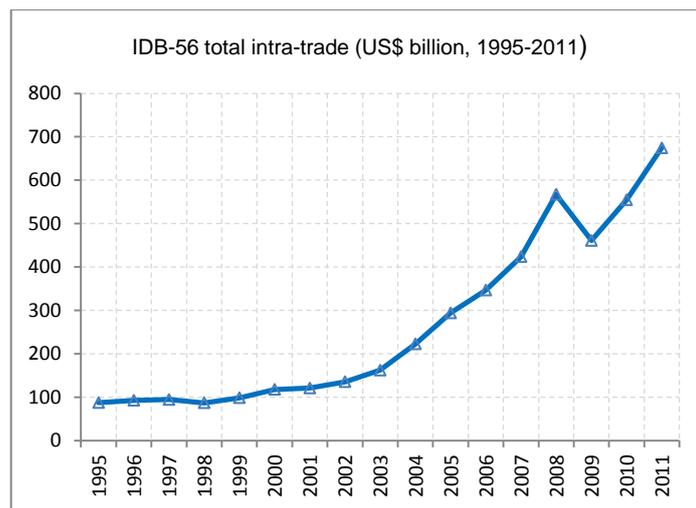


Source: Holt, Rinehart and Winston <http://go.hrw.com>

An early form of market economy flourished between the 8th and 12th century, due mainly to the development of trade. A monetary system based on a strong, stable and high valued currency (the dinar) was created in the 7th century to facilitate the exchange of goods and production factors (Findlay and O'Rourke, 2007). Innovative new business techniques and forms of business management adapted from different civilizations were promoted during this period by economists, merchants and traders. Scientific advances in many fields such as hygiene, sanitation and medicine resulted in a significant increase in urbanization. According to Lombard (1975: 118) "*This prodigious urban expansion was characterized at first by the creation of towns, some of which rapidly became the largest in the world*". A modern system of irrigation, based on the knowledge of complex hydraulic and hydrostatic principles, was introduced early in the 9th century, providing the

foundation for the region’s agricultural revolution (Watson, 1983). The agricultural revolution was based on four key principles: the development of a sophisticated irrigation system, adoption of a scientific approach to improve agricultural techniques, incentives based on a new approach to land ownership that recognized the private property and the introduction of new crops that transformed private farms into enterprises supporting the export industry. Findlay and O’Rourke (2007) argue that industry and mining were also highly developed. In the Nile valley, for example, flax was the cornerstone of the flourishing linen industry. Major capital-intensive industries, using very advanced technology such as in sugar refining and papermaking, were developed in cities like Andalusia (Ashtor, 1992). The fusion of a variety of cultures and knowledge from many civilizations and the integration of diverse economies during the region’s ‘golden age’ gave birth to the earliest forms of capitalism that were adopted and further advanced in medieval Europe from the 13th century onwards (Labib, 1969; Banaji, 2007).

**Figure 1.** Evolution of intra-trade in IDB member countries



Source: data from IDB-56 Trade Profile – ERPD – Chief Economist Complex - IDB

Currently, OIC intraregional trade represents around 17% of total trade. This modest share of intraregional trade is mainly explained by the multiple restrictions on the movement of goods and the lack of dynamic mechanism of cooperation, and this despite the increasing number of trade opportunities. Nevertheless, during the recent two decades, intra-regional trade recorded important and continuous increase. Intra-regional trade in 2011 amounted to US\$ 676.2 billion, compared to less than US\$ 100 Billion in 1995. This promising increase in intra-regional trade is a unique opportunity to boost regional integration and economic development.

*Could “propinquity” be a driving force to trade integration among Muslim economies?*

For the recent years, we notice a proliferation of regional integration agreements as alternative means to integrate international markets. The current process of globalization tends to strengthen the role of the geographical proximity and the emergence of regional poles with the marginalization of peripheral zones. The failure of North-South integration projects to achieve industrialization and development has revived debate on the South-South integration as an alternative strategy for developing countries to reach higher level of development. In fact, South-South regional agreements in Asia and Latin America have led to considerable growth of intra-regional trade. The OIC member countries lag behind other regions in terms of regional integration. Indeed, despite many favorable conditions and the advantage of geographic and cultural proximity, that give them a comparative advantage in the international markets; the share of OIC intra-regional trade is still low. In addition, many analysts confirm that Muslim world loses in terms of GDP growth is in part

due to slow progress in economic integration process and lack of effective mechanisms of cooperation and coordination. Some analysts confirm that the lack of satisfactory results is due to the fact that current integration projects in the region are driven by political considerations and not by natural process of integration. The natural integration processes is defined as a process fostered by market and for which geographic proximity is considered as an essential factor. However, geographic proximity per se will not have an effect on trade among partners if neighboring countries lack complementarities. Geographic proximity can give additional stimulus to trade between the concerned countries only if the preconditions for dynamic growth exist. In other words, preconditions are needed for a natural process of integration to reinforce growth. It is clear that in order for the OIC member countries to improve their intra-regional trade, a favorable ecosystem should be established. An important characteristic of regionalism, such as in Europe, is that trade dynamics are led by the stability in the value of money. We argue that the emergence of a virtuous circle of trade among OIC countries requires the establishment of an innovative payments arrangements which support cross-borders investment, facilitate trade, and allow better allocation of resources across member countries

### **III. The current market of SDRs**

#### *III.1. Origin and present of the SDRs*

Created by the IMF in 1969, the SDRs served to support the Bretton Woods (1944 – 1971) fixed exchange rate system. The expansion of the world trade and financial transactions created the need for the international community to have another international reserve asset in addition to gold and the US dollar. Although the need for this new reserve asset decreased with the collapse of the Bretton Wood System, the recent events marked by the tremendous impact of the financial crisis on the global economy have revived the relevance of these SDRs in stabilizing the international financial system. In 1978, they became one of the main reserve assets of the international financial system and since then their creation has increased gradually, even if their usage has been more between countries and the IMF than among the countries themselves.

At their first stage, the allocation of SDRs to the IMF member countries was proportional to their quotas in the Fund. However, these allocations have always been a matter of controversies and triggered important discussions among decisions makers and scholars. The general allocations of the SDRs have been made only three times. The first allocation was for a total amount of SDR 9.3 billion, distributed in 1970-72, and the second allocated SDR 12.1 billion, distributed in 1979-81. On August 7, 2009, the Board of Governors of the IMF approved a general allocation of SDRs equivalent to US\$ 250 billion to provide liquidity to the global economic system. In seek of equity; this new allocation took into account the fact that the IMF members which joined the Fund after 1981 have not benefitted from the previous allocations. This new allocation triggered by the 2009 G20 meeting in London was mainly endorsed by China which emphasized through its Central Bank Governor the need of the international system for a new international currency to replace the US dollar which cannot serve as a reserve asset for all countries, while it depends on the objectives of the monetary policy of the United States. As mentioned by Stiglitz (2011), this can lead to global volatility as a result of growing US current account deficits. The objective of having an international reserve asset that assures economic and financial stability may be achieved through the new allocation of the SDRs. Moreover the limitation of the SDRs to official use by the Central Banks and official institutions has limited their expansion. The international community should consider their usage by the private sector in the future.

The recommendations of some countries, leaded by China, to achieve a further increase of the SDRs allocation would have a certain number of benefits. According to Stiglitz (2011), *it would*

*reduce the problem of recessionary bias, by allowing central banks to exchange SDRs for hard currency, such as dollars or euros, and use it to finance higher imports. It would partially replace countries' need to accumulate reserves. Given its relatively small scale, more SDRs would also help to sustain and accelerate recovery of the world economy, without leading to inflationary pressures. And by reducing the need for countries to set aside foreign exchange reserves, it would also facilitate some reduction in global imbalances.*

### III.2. Value of the SDRs

The SDRs is defined as a basket of the following currencies: euro, Japanese yen, pound sterling, and U.S. dollar. The U.S. dollar-equivalent of the SDR (which is posted daily on the IMF's website) is calculated as the sum of specific amounts of the four basket currencies valued in U.S. dollars, on the basis of daily exchange rates. The Executive Board of the IMF reviews the basket composition every five years (or earlier if judged necessary) in order to reflect the relative importance of currencies used in the world's trading and financial systems. According to the IMF (2012), "*in the most recent review (in November 2010), the weights of the currencies in the SDR basket were revised based on the value of the exports of goods and services and the amount of reserves denominated in the respective currencies that were held by other members of the IMF.*" These changes became effective on January 1, 2011 and the next review will take place by 2015.

Zhou (2009) argues that the basket of currencies forming the basis for SDRs valuation should be expanded to include currencies of all major economies, and the GDP may also be included as a weight. The IMF Executive Board discussed in October 2011 possible reform options of the existing criteria for broadening the SDR currency basket, but finally the current criteria for SDR basket selection remained. According to the IMF (2010) both the composition and the rules underlying the review of the SDR basket need to be made transparent, simple, and automatic, in order to enhance the private sector use of SDR-denominated instruments. The report stresses also the necessity for the components of the basket to continue reflecting the importance of its constituting currencies in the world's trading and financial system, while maintaining stability and continuity.

## IV. THE SUGGESTED TRADE BASED SPECIAL DRAWING RIGHTS (T-SDRS)

### IV.1. What are the suggested T-SDRs ?

The T-SDRs represent an amount of purchasing power facility created at the regional level and accepted by the OIC member countries for the settlement of their intra-trade transactions. The creation of T-SDRs takes place through the issuance of general allocation which we suggest that it takes place **each three years** taking in account the evolution of the OIC-intra trade and the evaluation of the degree of utilization of the past issued T-SDRs. The first general allocation could be launched in 2014 with a value:

$$S = 1\% \text{ Value of the total OIC intra-trade in 2013} \quad (1)$$

Let's note that Keynes suggested that the total quotas of the IMF SDRs fund be set at 75% of pre-war world trade (around US\$ 38 billion) (IMF, 2002). Therefore, the amount of this first allocation is small relatively to the scale of the OIC intra-trade. In case of success during the three-year initial period, it could be decided to increase the amount of the subsequent general allocations. The first general allocation based on 1% of OIC intra-trade is approximately equal to ID 4.509 billion (US\$ 6.742 billion) if taking in account the value of total OIC-trade in 2011<sup>4</sup>

<sup>4</sup> In 2011, as proxy for OIC intra-trade the total IDB-56 intra-trade equaled US\$ 674.2 billion (Source: IDB-56 Trade profile, ERPD – Chief Economist Complex).

#### IV.2. Which value for the T-SDRs?

In order to facilitate the emergence of quick and large acceptance of the idea of the T-SDRs, it is important to avoid the long process of negotiating its value vis-à-vis the currencies of the OIC member countries. In this regards, it is worthwhile to use the existing value of the SDRs issued by the IMF which is also the value of the Islamic Dinar the unit of account of IDB Group<sup>5</sup>.

$$1 \text{ T-SDR} = 1 \text{ SDR of the IMF} \quad (2)$$

#### IV.3. How to allocate the T-SDRs?

First let's recall that the IMF allocates its SDRs to member countries in proportion to their IMF quotas. "Such an allocation provides each member with a costless, unconditional international reserve asset on which interest is neither earned nor paid. However, if a member's SDR holdings rise above its allocation, it earns interest on the excess. Conversely, if it holds fewer SDRs than allocated, it pays interest on the shortfall. The IMF cannot allocate SDRs to itself or to other prescribed holders." (IMF, 2012). **The rule of the T-SDRs allocation should be designed in a manner that incentivizes a member country to enhance its trade within the OIC region.** For the allocation of the T-SDRs we suggest two possible options.

##### IV.3.a. Option I: creation of an OIC regional financial institution responsible of the T-SDRs

We assume that the OIC countries decide the creation of a Regional Clearing House in charge of the issuance of the T-SDRS and management of the OIC intra-trade transactions paid via this new regional payment facility. We suggest that the allocation follows the following rule:

$$S_i = \lambda_i S \quad (3)$$

Where the weight  $\lambda_i$  assigned to country  $i$  represents its average share in the OIC intra-trade during the last three years. For example, if  $S = \$4.5$  billion, and country  $i$  has a share of 5% in intra-trade, then  $S_i = \lambda_i S = .05(\$4.5) = \$0.225$  billion. This rule is different from the one applied for the allocation of the IMF-SDRs and constitutes an original contribution in line with the spirit of the T-SDRs designed to favor the OIC intra-trade.

##### IV.3.b. Option II: assigning to IDB the role of issuing and managing the T-SDRs

In the case that IDB is assigned the role of issuing and managing the payment system based on T-SDRs we suggest that **1/5** of each general allocation to IDB and the remaining **4/5** allocated among the IDB member countries according to the following rule (which could be the basis of further discussion by the countries):

---

<sup>5</sup>This valuation will probably attract defenders of this idea from economists like Joseph Stiglitz. According to the UNCTAD (2009) the Stiglitz commission recalled the UNCTAD Proposal (during the 1960s) to link the issuance of SDRs with the development financing by allowing the IMF to invest some of the funds made available (through the issuance of SDRs) in the bonds of multilateral development banks.

$$S_i = \alpha_i \left( \frac{4}{5} S \right) \quad \text{with} \quad \sum_{IDB-56} \alpha_i = 1 \quad (4)$$

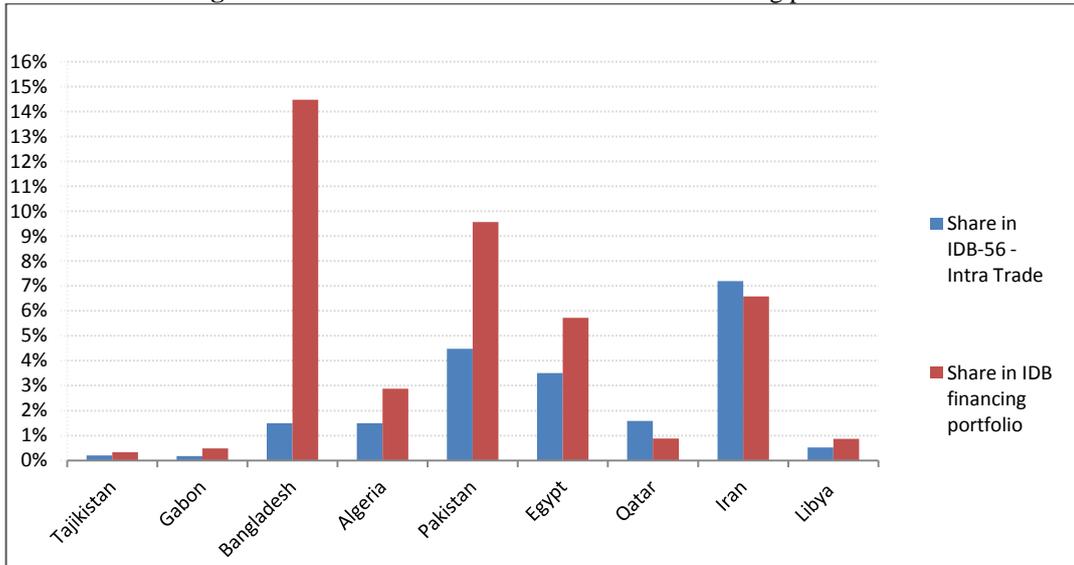
$$\alpha_i = \beta \lambda_i + (1 - \beta) \mu_i \quad (5)$$

$\lambda_i$  = Share of country  $i$  trade with OIC countries in total OIC intra – trade

$\mu_i$  = Share of country  $i$  financing in total financing portfolio of IDB

Where the weight  $\alpha_i$  for country  $i$  depends on its participation in the OIC intra-trade captured by the share  $\lambda_i$  and the importance of the country in the total financing portfolio of IDB captured by  $\mu_i$ . The values of the weights  $\beta$  and  $(1 - \beta)$  reflect the importance given to the country's contribution to intra-trade and its financing needs respectively. Figure 1 and table 1 present the values of the two parameters  $\lambda_i$  and  $\mu_i$  for a set of countries, (we used the IDB-56 intra Trade as a proxy for the OIC intra-trade).

**Figure 1:** Countries' shares in intra-trade and financing portfolio of IDB



**Table 1.** Sample of calculation of the shares  $\lambda_i$  and  $\mu_i$ 

Country	Trade with IDB-56 (Million USD)	Share in IDB-56 - Intra Trade $\lambda_i$	Share in IDB-financing portfolio $\mu_i$
Tajikistan	1,375.12	0.20%	0.33%
Gabon	1,200.26	0.18%	0.49%
Bangladesh	10,077.00	1.49%	14.47%
Algeria	10,056.92	1.49%	2.88%
Pakistan	30,233.09	4.48%	9.56%
Egypt	23,633.88	3.51%	5.72%
Qatar	10,748.45	1.59%	0.88%
Iran	48,563.59	7.20%	6.58%
Libya	3,506.66	0.52%	0.87%
Saudi Arabia	66,263.80	9.83%	5.10%

It is clear that the contribution of a country like Bangladesh in IDB-56 intra-trade is lower than its financial needs. The advantage of the allocation rule (4) and (5) is the balance it offers between the financing needs of the country and its contribution to the IDB-56 intra-trade. This balance is made through the weights  $\beta$  and  $(1 - \beta)$  placed on the two components (contribution to intra-trade and financing needs respectively). Table 2 presents the allocation shares for a set of countries for three different pairs  $(\beta, 1 - \beta) \in \left\{ \left( \frac{1}{2}; \frac{1}{2} \right), \left( \frac{1}{3}; \frac{2}{3} \right), \left( \frac{2}{3}; \frac{1}{3} \right) \right\}$ . The first pair  $\left( \frac{1}{2}; \frac{1}{2} \right)$  signifies that the same importance is given to the contribution to intra-trade and to the financing needs. The second pair  $\left( \frac{1}{3}; \frac{2}{3} \right)$  reflects the choice to give more importance to the financing needs of the country relatively to its contribution to the intra-trade. The symmetric possibility is possible with the last pair  $\left( \frac{2}{3}; \frac{1}{3} \right)$ .

**Table 2.** Sample of calculation of the allocation's share  $\alpha_i = \beta_1 \lambda_i + (1 - \beta_1) \mu_i$ 

	Case 1 ( $\beta_1 = 1/2$ , $1 - \beta_1 = 1/2$ )	Case 2 ( $\beta_1 = 1/3$ , $1 - \beta_1 = 2/3$ )	Case 3 ( $\beta_1 = 2/3$ , $1 - \beta_1 = 1/3$ )
Tajikistan	0.27%	0.29%	0.24%
Gabon	0.33%	0.38%	0.28%
Bangladesh	7.98%	10.14%	5.82%
Algeria	2.19%	2.42%	1.95%
Pakistan	7.02%	7.87%	6.17%
Egypt	4.61%	4.98%	4.25%
Qatar	1.23%	1.11%	1.35%
Iran	6.89%	6.79%	6.99%
Libya	0.70%	0.75%	0.64%
Saudi Arabia	7.47%	6.68%	8.25%

Table 2 shows that the choice of the weights  $(\beta, 1 - \beta)$  have different level of impact on the share of the countries in the general allocation of T-SDRs. For a country like Bangladesh it is more beneficial to put more importance on the financial needs which is the case with the pair  $(\frac{1}{3}; \frac{2}{3})$ . For a country like Saudi Arabia highly contributing to the intra-trade the pair  $(\frac{2}{3}; \frac{1}{3})$  it is more in line with its interests in terms of benefiting of higher share in the T-SDRs. However, since the T-SDRs will finance OIC intra-trade indirect benefit could also come from the increase of the demand on Saudi exports coming from a country like Bangladesh. Therefore, the choice of the weights  $(\beta, 1 - \beta)$  could be discussed at the level of IDB Governors. Table 3 illustrates the amount of the first general allocation received by a sample of OIC countries using the values of  $\alpha_i = \beta_1 \lambda_i + (1 - \beta_1) \mu_i$  calculated in Table 2 and with the assumption that the first general allocation equals 1% of the value of OIC intra-trade in 2011 or ID 4.509 billion (US\$ 6.742 billion).

**Table 3.** Allocation  $S_i$  (Millions USD) based on the values  $\alpha_i$  of table 2

	Case 1	Case 2	Case 3
Tajikistan	17.98	19.48	16.48
Gabon	22.44	25.87	19.00
Bangladesh	538.02	683.87	392.16
Algeria	147.42	163.07	131.77
Pakistan	473.33	530.43	416.24
Egypt	311.02	335.81	286.23
Qatar	83.11	75.08	91.14
Iran	464.59	457.63	471.54
Libya	46.92	50.87	42.97
Saudi Arabia	503.41	450.29	556.53

Table 4 calculates the ratio of the T-SDRs received by the sample of countries relatively to their intra-OIC trade and show that given the amount of the first general allocation (1% of intra-OIC trade for 2011) it represents at most around 6.8% for Bangladesh and is less than 0.84% for Saudi Arabia. Going back to Table 1, the higher ratio of Bangladesh is due to its importance in IDB financing portfolio rather than its contribution to the OIC-intra trade.

**Table 4.** Allocation in Percentage of the country trade with IDB-56

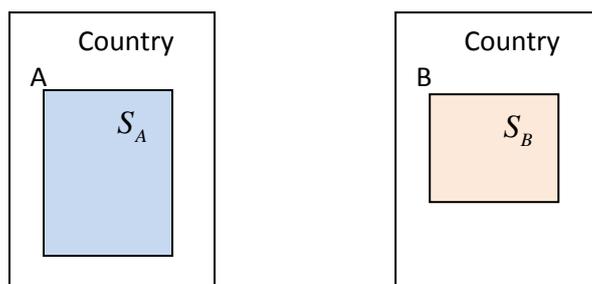
Tajikistan	1.31%	1.42%	1.20%
Gabon	1.87%	2.16%	1.58%
Bangladesh	5.34%	6.79%	3.89%
Algeria	1.47%	1.62%	1.31%
Pakistan	1.57%	1.75%	1.38%
Egypt	1.32%	1.42%	1.21%
Qatar	0.77%	0.70%	0.85%
Iran	0.96%	0.94%	0.97%
Libya	1.34%	1.45%	1.23%
Saudi Arabia	0.76%	0.68%	0.84%

#### IV.4. The T-SDRs in practice

This section is based on the assumption that the IDB Group will host a “T-SDRs Department” which exercises the role of a Clearing House and holds a **T-SDRs account for each OIC country**. The model can be easily adjusted to the case of a Clearing House Institution.

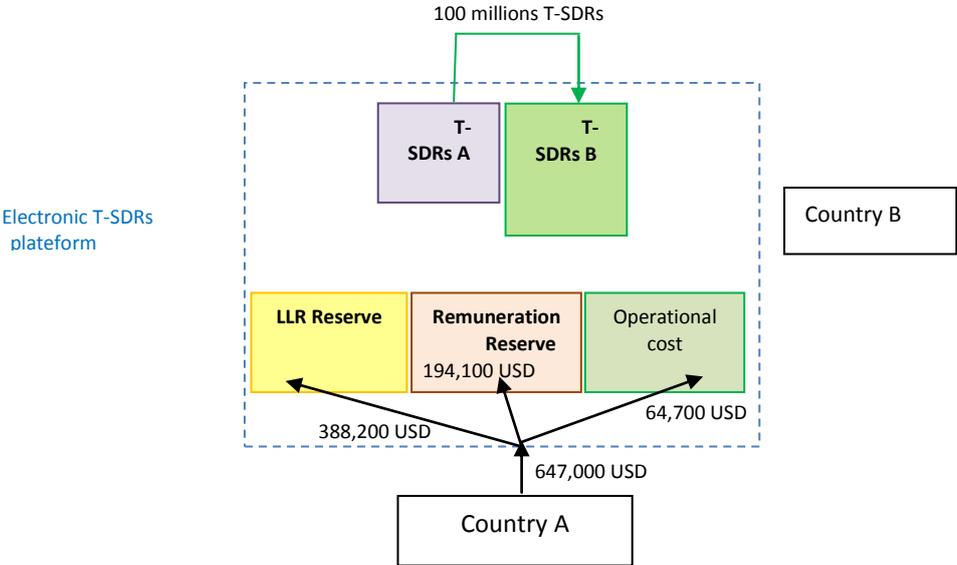
##### IV.4.a) Allocation and transactions mechanisms

- ✓ We suggest that in the initial three-year stage (launching stage), **the use of the T-SDRs could be restricted to national monetary authorities**. In the second stage, it could be extended to selected large financial institutions. In an advanced stage large OIC private sectors firms could handle their international financial transactions directly in T-SDRs.
- ✓ The private sector of the member countries should continue dealing in any international currency in their international transactions. However, we suggest introducing a sort of an incentive mechanism for the private sector to pass through their national central bank for the settlement of an international transaction with another private firm in IDB member countries. This mechanism will rest on the daily announcement of the cost of the transaction between all the member countries and depends on their respective T-SDR balance. If the receiving country has a deficit of T-SDRs than the cost of the transaction through paying central bank should be lower than the normal cost of payment of international transactions and vice-versa
- ✓ In order to facilitate the acceptance of the T-SDRs we think that IDB shall not play the role of Designation mechanism (as it is the case of the IMF) but **voluntary arrangement between countries are acceptable if they want to sell their T-SDRs for international currencies in accordance with the T-SDRs daily rate** (which is the IMF-SDR exchange rate). Let's assume that there are only two OIC countries participating to the T-SDRs payment system arrangement and that the first general allocation  $S$  is allocated between them so that we have  $S = S_A + S_B$ .



- ✓ The T-SDRS payment (clearing) system is centralized through an IDB hosted electronic platform. For each financial transaction in T-SDRS between the two countries A and B, IDB should be **ex-ante notified in order to grant automatic authorization for the payment transaction** and debit/credit the T-SDRS accounts when the transaction is electronically validated. **The update of the T-SDRS account of each country should be realized in real time. This will ensure that the balance of the T-SDRS account for each country will remain within a pre-determined range.**
- ✓ **For each transaction in T-SDRS, the initiating country should pay a commission of 1% of the transaction's volume in USD.** For each dollar received as a commission the IDB Group holds 0.6 US\$ in the *Lender of Last Resort (LLR) reserve*, 0.1 US\$ as revenue covering the operational costs and 0.3 US\$ supplies *the remuneration reserve* which is used to **remunerate the surplus of the T-SDRS accounts on a monthly basis** as it will be explained in the next paragraphs. For example assume that country A imported some merchandises from country B

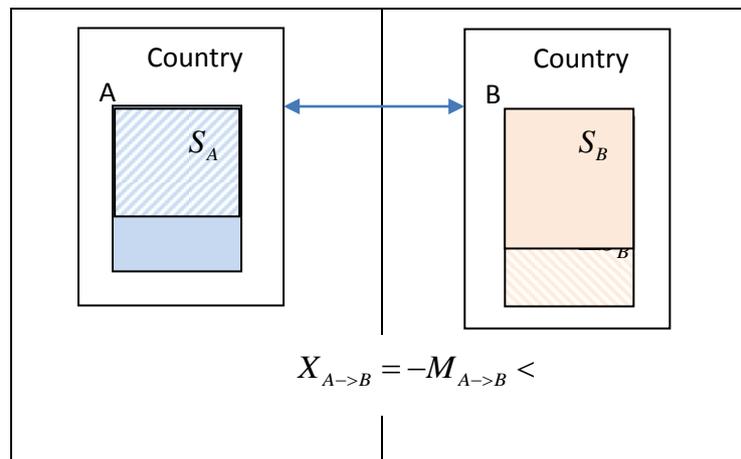
with the value of 100 million T-SDRs to be paid through the T-SDRs payment system. Assume that 1 SDRs = 0.647 USD than the 1% commission which has to be paid initially by country A in relation to this operation is 647,000 USD which will be divided between the LLR reserve (388,200 USD), the operational cost ( 64,700 USD) and the remuneration reserve (194,100 USD).



- ✓ In addition to the general allocation which is renewed each three years, **the IDB issue new partial allocation on a monthly basis.** These partial allocations are backed by the amount of the LLR reserve in US\$. **For each additional dollar in the LLR reserve the IDB Group will create the equivalent in T-SDRS of 1.2 dollars.** The LLR reserve enables the IDB to play the role of Lender of Last Resort when a member country is facing a balance of payment crisis such that if the level of its international reserves decreases below the threshold of 90 days of imports’ bill. In this case, the country could ask to convert its SDR allocation in US\$ and commits to return back this “facility” to the LLR reserve once the situation of its international reserves exceeds 100 days of imports and within three months in all cases.

IV.4.b) How to deal with deficit/surplus T-SDRs accounts : the potential role of T-SDRs sukus

- ✓ **The countries shall not be authorized to overdraft** but those among them with positive IDB-56 intra-trade balance will see the balance of their T-SDRS account increase above the initially allocated amount. The following configuration illustrates a situation where the bilateral trade balance between countries A and B is in favor of the latter. Country B holds more T-SDRs than the amount initially allocated to it where is the opposite holds for country A:



- ✓ **The T-SDRs balance of the countries is allowed to fluctuate for example between 20% and 150% of their initial allocation during the three-year period but each country should end the three-year period with a level equaling the initial allocation.** This mechanism brings flexibility and avoids the free-riding problem consisting in benefiting from chronic trade-balance deficit.
- ✓ **Countries with surplus of T-SDRs (like country B in the above case) should be offered an option to invest this surplus.** Otherwise, they would not be incited to continue trading with OIC-countries on the basis of T-SDRs transactions and would rather prefer classical financial transaction in USD, euro or any other international currency that could generate remuneration when invested in the international currency markets (for example). **One of the mechanisms is to remunerate the surplus of T-SDRs ranging between 100% and 150% with a return on a monthly basis** and which is calculated proportionally to the remuneration reserve and the surpluses of the other countries. **Another possible mechanism to provide remuneration for the surplus countries could be** designed in relation to the project financing by IDB. Let's assume that a country C ask IDB Group for infrastructure financing of an amount in US\$ equivalent to  $(1.5 \times \Delta S_B)$  T-SDRs<sup>6</sup>. Country C should be encouraged to **issue sukuk in T-SDRs which enable it to raise capital in T-SDRs** to finance the purchase of commodities and services (in relation to the project) within IDB-56 countries. IDB itself could finance country C through the purchase of T-SDRs sukuk using its IDB's T-SDRs account. **Although the sukuk are issued in T-SDR the principal is reimbursed in T-SDRs but the "coupons" which benefit to the investors should be paid by country C in USD.**
- ✓ These T-SDRs sukuk will not only reduce the liquidity constraints on IDB Group but also enable the countries with surplus T-SDRs accounts to invest in T-SDRs sukuk. The consequence of this operation is that the T-SDRs account of country C will be credited by the amount of T-SDRs sukuk issuance. This capital will enable the country to finance the operations related to the project backing the sukuk (infrastructure in our case) only in T-SDRs. **This is another multiplicative effect which will enhance trade within OIC region since country C will import services and merchandises which could be paid in T-SDRs.** If the country needs to imports services or merchandises related to the project outside the OIC-region it should find a voluntary member country which purchase the T-SDRs and sells US\$, Euros or any international currency. IDB should stand ready to assist in this regard, in collaboration with say World Bank

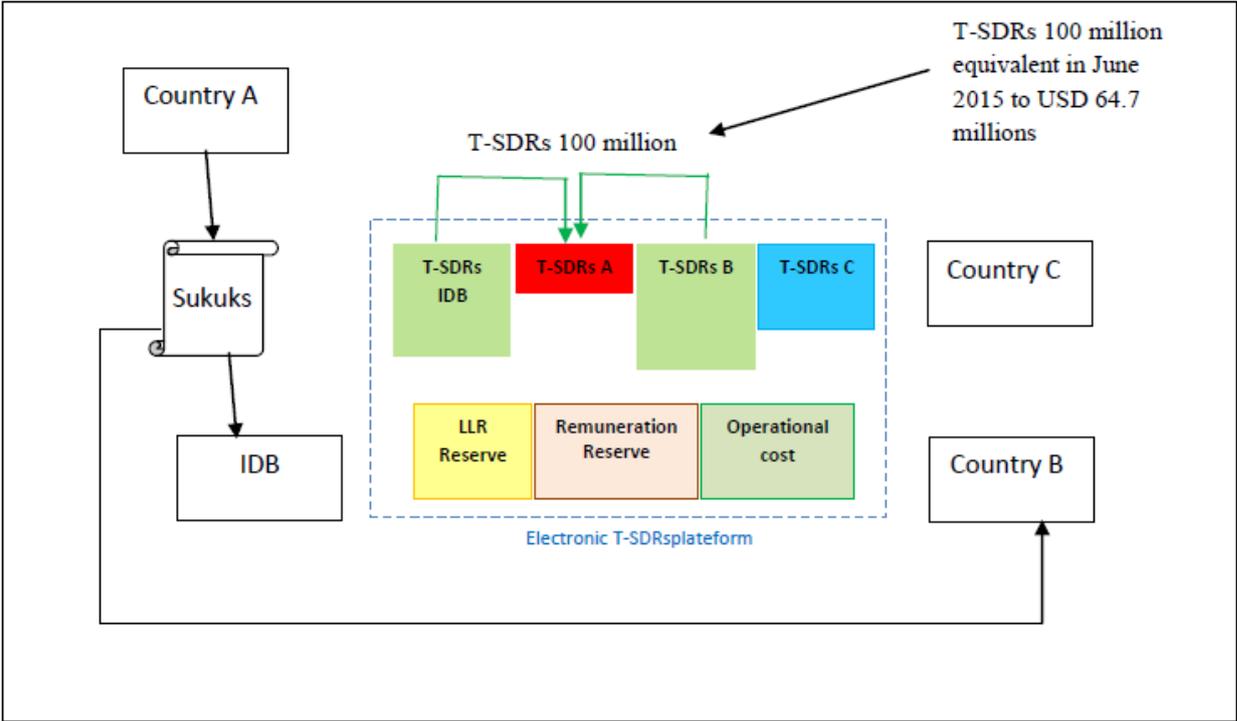
<sup>6</sup>Therefore, the identification of the characteristics of the project and the potential suppliers among the member countries becomes an essential stage in the structuring of the sukuk.

and other international agencies. Otherwise, the country will use its foreign currency reserves. In all cases, this financing mechanism would reduce the burden on the foreign currency reserves.

IV.4.c) Example

- ✓ Let's illustrate the practical steps for the functioning of the T-SDRs payment system coupled with the issuance of T-SDRs sukus by one of the participating countries. Assume that three countries denoted A, B, and C are participating to this system in addition to IDB. Country A which is initially (let's assume that the first general allocation will take place in December 2014) provided with an allocation of T-SDRs 300 million. In June 2015 the T-SDRs account of country A decreases to the minimum accepted level of T-SDRs 60 million (20% of the allocation).
- ✓ In June 2015, the country needs financing of T-SDRs 100 million to build a road. The road will be realized in two years by a private contractor Ct from country C<sup>7</sup>. The finalization of the first part of the road is expected by June 2016 and the contractor asks to be paid (the equivalent in its national currency CUR according to the spot exchange rate of June 2016) a first installment of USD 30 million at this date. The second and final payment of (the equivalent in its national currency CUR according to the spot exchange rate of June 2017) USD 30 million is to be paid upon the completion of the project expected by June 2017.
- ✓ In June 2015 country A decides to issue *Istisnaa* sukus with a principal amount of T-SDRs 100 million and a markup of 150bps (30% to the benefit of the investors, 60% to the LLR reserve account, and 10% to cover the operational cost of IDB). The sukus have to mature before the next general allocation (December 2017) and the semi-annuities have to be paid according to the following schedule : December 2015, June 2016, December 2016, June 2017, and December 2017. IDB and country B purchase the sukus issued by country A.

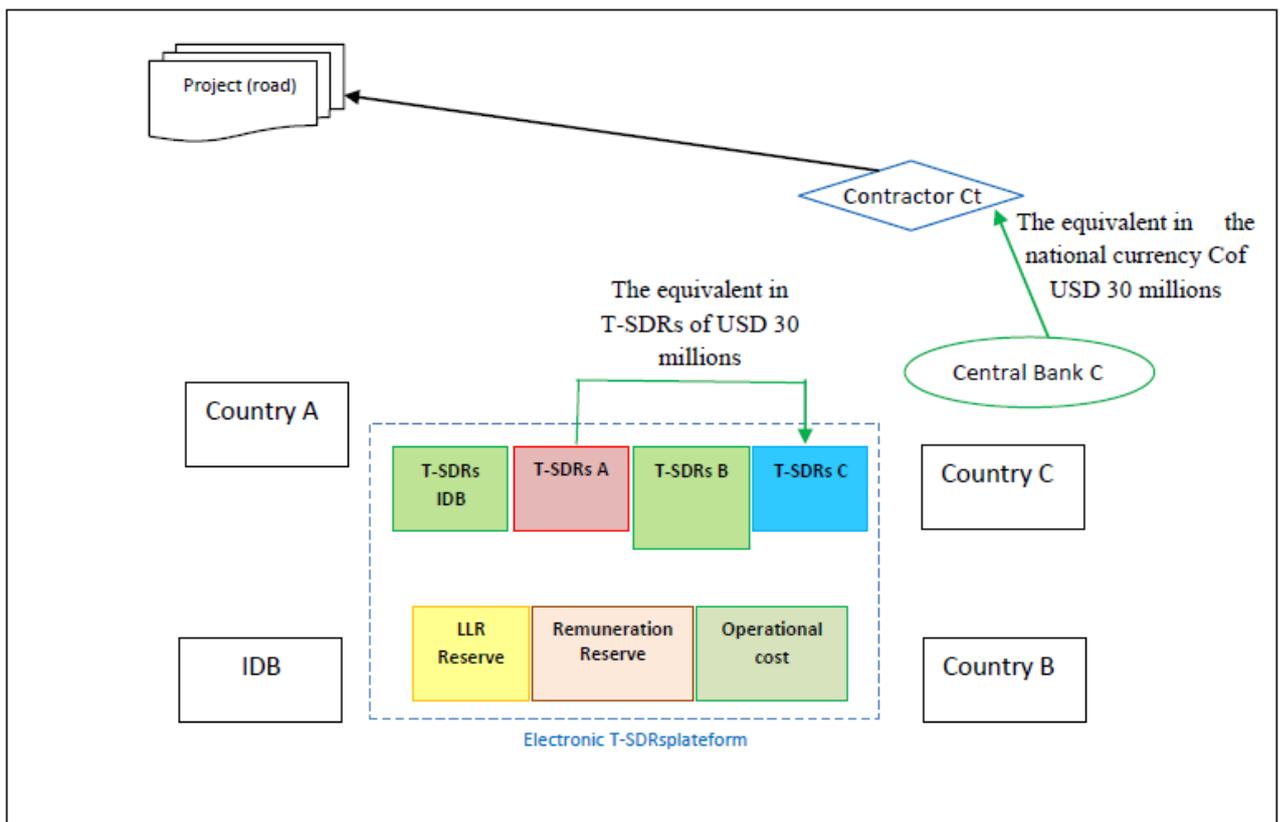
**June 2015. Issuance of T-SDRs sukus by Country A purchased by IDB and Country B**



<sup>7</sup> Since the country looks to finance the project through T-SDRs, than the selection of the contractor should be in line with IDB procedures.

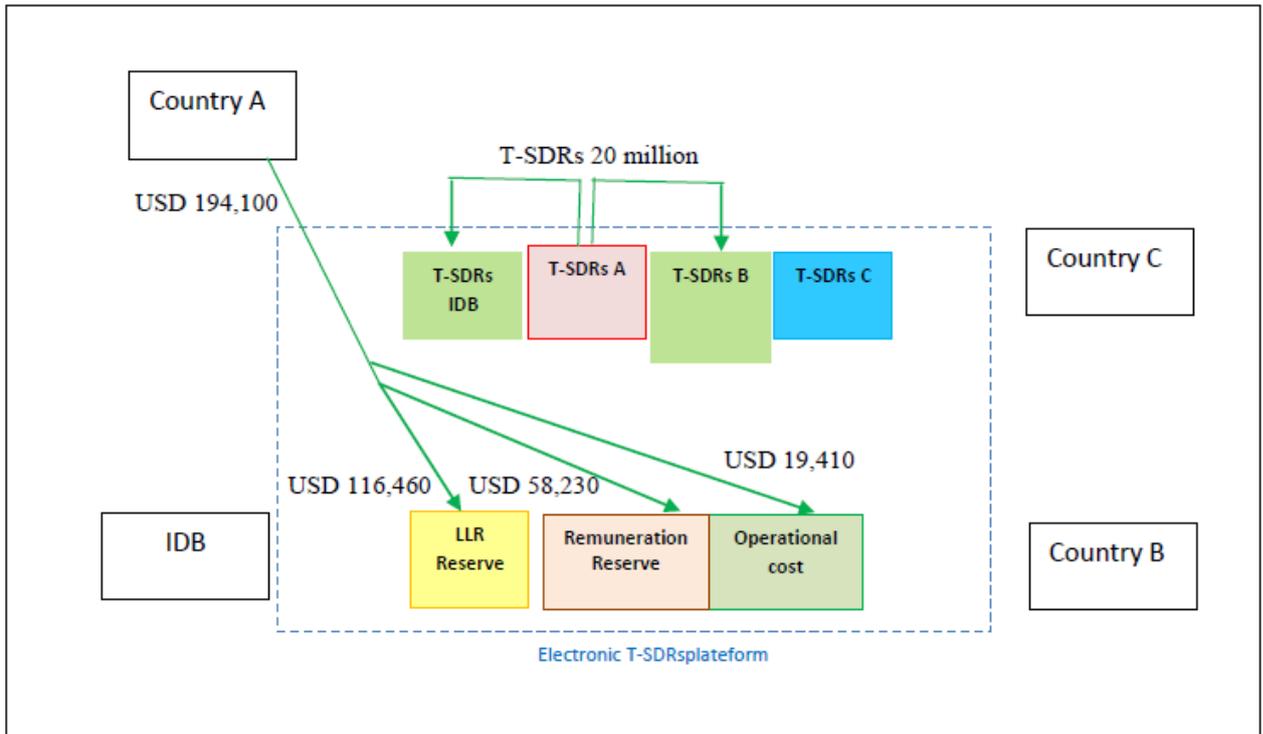
- ✓ In June 2016 and June 2017, the T-SDRs account of country A is debited of the equivalent in T-SDRs of USD 30 millions and that of country C is credited by the same amounts. Meanwhile, the central bank of country C transfers to its national contractor Ct the equivalent of the USD 30 million USD in its national currency CUR. The thresholds TH1 and TH2 of minimum T-SDRs available in the account of country A ensures that any eventual appreciation of the USD against the T-SDRs will be absorbed by the account of country A.
- ✓ During the period of completion of the two stages of the road project (June 2015-June 2016) and (June 2016-June 2017) the T-SDRs account of country A is not authorized to fell below the respective following thresholds TH1 = 20% normal threshold (for A T-SDRs 60 million) plus T-SDRs 100 millions (project total financing) = T-SDRs 160 millions and TH2 = T-SDRs 60 million + T-SDRs 50 millions (second part of the principal amount).

**June 2016 and June 2017. Country A's T-SDRs account is debited by the equivalent of USD 30 millions. The T-SDRs account of country C is credited by these amounts. The contractor Ct from country C is paid by its central bank the equivalent of USD 30 millions in local currency.**



- ✓ For each of the five semi-annuities, country A has to ensure that its account can be debited by T-SDRs 20 millions. In addition the markup calculated in USD according to the initial T-SDRs/USD rate (assumed to be 0.647 in June 2015) equaling  $T\text{-SDRs } 1.5 \text{ million} \times 0.647 = \text{USD } 970,500$  has to be transferred in five installment (USD 194,100) to at the above mentioned dates to the remuneration account (USD 58,230), the LLR account (USD 116,460) and the operational cost account (USD 19,410).
- ✓ The LLR reserve account covers any default of the country A in terms of transferring to the remuneration and operational cost accounts the mark-up coupons in USD.

**Payment of the semi-annuities  
December 2015, June 2016, December 2016, June 2017, and December 2017**



## V. CONCLUSION

The 5<sup>th</sup> OIC consultative group meeting on enhancing OIC intra-trade recommended the establishment of Trade Finance Support Schemes, as one of the driving factors, to accelerate the dynamic of the OIC intra trade. In this paper we suggested a possible schema of trade financial support. Indeed, we defended the idea of creating an OIC payment system for intra-trade transactions through the issuance of Trade-based Special Drawing Rights (T-SDRs) inspired from the SDRs of the IMF. We began by discussing the role of trade in the golden age of Muslim world and its resurgence. Then we presented the origin and current situation of the SDRs issued by the IMF. A special session is dedicated to describe the design, the allocation and the management of the Trade based Special Drawing Rights (T-SDRs).

## REFERENCES

- Ashtor, E. (1992) "Technology, Industry and Trade: The Levant versus Europe 1250-1500," Aldershot: Variorum.
- Banaji, J. (2007) "Islam, the Mediterranean and the Rise of Capitalism," *Historical Materialism*, 15 (1), pp. 47–74.
- Boughton, J.-M. (2002) "Why White, Not Keynes? Inventing the Post-War International Monetary System," IMF Working Papers 02/52, International Monetary Fund.
- Chinn, M. D. and Frankel, J. A. (2008) "The Euro May Over the Next 15 Years Surpass the Dollar as Leading International Currency," NBER Working Papers 13909, National Bureau of Economic Research, Inc.
- Findlay, R. and K. H. O'Rourke (2007) "Power and Plenty: Trade, War, and the World Economy in the Second Millennium," Princeton University Press.
- Frankel, J.A., and A. Rose (1998) "The endogeneity of the Optimum Currency Area criteria," *The Economic Journal* 108 (449), 1009–1025.
- IMF (2012) "Special Drawing Rights (SDRs)," Factsheet, International Monetary Fund.
- IMF (2010) "Reserve Accumulation and International Monetary Stability," Policy Paper, Strategy, Policy and Review Department, International Monetary Fund.
- Labib, S. Y. (1969) "Capitalism in Medieval Islam," *The Journal of Economic History*, 29 (1), pp. 79–96.
- Lee, G.-H.Y. (2011) "Gold dinar for the Islamic countries?," *Economic Modelling*, Elsevier, vol. 28(4), pages 1573-1586, July.
- Lombard, M. (1975) "The Golden Age of Islam," Amsterdam: North-Holland.
- Nayyar, D. (2009) "Developing Countries in the World Economy : The Future in the Past?," WIDER Annual Lecture 12. Helsinki: UNU-WIDER.
- Pomerleao, M. (2011) "The SDR solution," A commentary in the VoxEU Debate, <http://www.voxeu.org/debates/commentaries/sdr-solution>
- Stiglitz, J. (2011) "The best alternative to a new global currency," March 31, 2011, [www.ft.com](http://www.ft.com)
- UN (2012) "United Nations World Economic and Social Survey : In Search of New Development Finance," Department of Economic and Social Affairs, United Nations, <http://www.un.org/en/development/desa/publications/wess2012.html>
- Watson, A. M. (1974), "The Arab Agricultural Revolution and Its Diffusion, 700–1100," *The Journal of Economic History*, 34 (1), pp. 8–35
- Zhou, X. (2009) "Reform the International Monetary System," [www.bis.org/review/r090402c.pdf](http://www.bis.org/review/r090402c.pdf)