

IFSB WORKING PAPER SERIES

WP-14/12/2019

REGULATORY AND SUPERVISORY ISSUES IN SHARĪAH-COMPLIANT HEDGING INSTRUMENTS

December 2019



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Technical and Research Department

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NAFIS ALAM

December 2019

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Corresponding email: research@ifsb.org

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2, Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia

Email: ifsb_sec@ifsb.org; research@ifsb.org

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ABOUT THE ISLAMIC FINANCIAL SERVICES BOARD (IFSB)

The IFSB is an international standard-setting organisation which was officially inaugurated on 3 November 2002 and started operations on 10 March 2003. The organisation promotes and enhances the soundness and stability of the Islamic financial services industry by issuing global prudential standards and guiding principles for the industry, broadly defined to include banking, capital markets and insurance sectors. The standards prepared by the IFSB follow a lengthy due process as outlined in its Guidelines and Procedures for the Preparation of Standards/Guidelines, which includes holding several Working Group meetings, issuing exposure drafts, and organising public hearings/webinars and reviews by the IFBS's Sharī'ah Board and Technical Committee. The IFSB also conducts research and coordinates initiatives on industry-related issues, and organises roundtables, seminars and conferences for regulators and industry stakeholders. Towards this end, the IFSB works closely with relevant international, regional and national organisations, research/educational institutions and market players.

For more information about the IFSB, please visit **www.ifsb.org**.

ABBREVIATIONS

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
DAB	Dallah al-Baraka
FX	Foreign exchange
HF	Hedge fund
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IF	Islamic finance
IFI	Islamic financial institution
IFRS	International Financial Reporting Standards
IFSB	Islamic Financial Services Board
IFSI	Islamic financial services industry
IIFM	International Islamic Financial Market
IIFS	Institutions offering Islamic financial services
IT	Information technology
KYC	Know your customer
LIBOR	London Inter-Bank Offer Rate
MFRS	Malaysian Financial Reporting Standard
OTC	Over-the-counter
ROR	Rate of return
RSAs	Regulatory and supervisory authorities
SAC-BNM	Sharī'ah Advisory Council of Bank Negara Malaysia
SAC-SC	Sharī'ah Advisory Council of Securities Commission Malaysia

GLOSSARY

<i>Aqd</i>	An agreement between two willing parties to initiate, adjust or terminate a given transaction in a manner binding upon both parties.
<i>Arbun</i>	An amount to be taken during the signing of the contract, and considered part of the price if the contract is executed and as compensation in the event the contract is terminated.
<i>Fiqh</i>	Knowledge of the legal rulings pertaining to conduct, which have been derived from specific evidence.
<i>Muḍārabah</i>	A partnership contract between the capital provider (<i>rabb al-māl</i>) and an entrepreneur (<i>muḍārib</i>) whereby the capital provider would contribute capital to an enterprise or activity that is to be managed by the entrepreneur. Profits generated by that enterprise or activity are shared in accordance with the percentage specified in the contract, while losses are to be borne solely by the capital provider unless they are due to misconduct, negligence or breach of contracted terms.
<i>Murābahah</i>	A sale contract whereby the institution sells to a customer a specified asset, whereby the selling price is the sum of the cost price and an agreed profit margin. The <i>murābahah</i> contract can be preceded by a promise to purchase from the customer.
<i>Maqāṣid al-Sharī'ah</i>	The fundamental principles of Sharī'ah, which aim to promote and protect the interests of all human beings and avert all harm that impairs their interests.
<i>Qarḍ</i>	The payment of money to someone who will benefit from it provided that its equivalent is repaid. The repayment of the money is due at any point in time, even if it is deferred.
<i>Salam</i>	The sale of a specified commodity that is of a known type, quantity and attributes for a known price paid at the time of signing the contract for its delivery in the future in one or several batches.
Sharī'ah	The practical divine law deduced from its legitimate sources: the Qur'ān, Sunnah, consensus (<i>ijmā'</i>), analogy (<i>qiyās</i>) and other approved sources of the Sharī'ah.
<i>Ta'wīḍ</i>	What is paid in compensation for the harm resulting from a violation of a contract.
<i>Wa'd</i>	An undertaking by someone to perform an act in the future related to someone else.

Abstract

Hedging instruments, tools and strategies not only align with the operationalisation of a number of Islamic contracts for the purpose of minimising risks, but also are in sync with one of the essentials of the Sharī'ah, which is to protect wealth. As such, Islamic hedging instruments are being used in a variety of ways in several jurisdictions, essentially as a Shari'ah-compliant alternative to conventional derivative instruments. However, due to the very nature of these transactions, it is important for regulatory and supervisory authorities to fully understand the perception and use of Sharī'ah-compliant hedging instruments by Islamic financial institutions (IFIs) in their risk management strategy. This working paper provides some initial exploratory findings on regulatory and supervisory issues in the practice of using Sharia'h-compliant hedging instruments in the Islamic banking industry. Based on extensive data collected from among member countries of the Islamic Financial Services Board (IFSB), this study broadly aims to investigate the existing practices in relation to the use of Islamic hedging instruments and the regulatory and Sharī'ah compliance concerns raised across IFSB jurisdictions. The findings of the data analysis showed that risk identification and risk assessment contribute to the risk management practices of IFIs. The risk profile of IFIs is not much different from that of the conventional banks, and thus credit risk, liquidity risk and rate-of-return risk were the main risks for Islamic institutions. Asset–liability alignment and *wa'd* emerged as the main hedging tools; however, in general, IFIs were either not using hedging instruments or lacked the motivation to utilise them. Almost half of the IFIs surveyed were aware that specific regulations pertain to the use of Islamic hedging instruments; however, since the regulations were not standardised across the globe, the application of hedging instruments was minimal.

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SECTION 1: INTRODUCTION

1.1 Background

The Islamic finance industry has evolved as one of the fastest-growing sectors of the finance industry. In 2018, the Islamic financial services industry (IFSI) recorded a continuous improvement for the third straight year in terms of its total worth. The combined total worth of the three broad sectors of the IFSI (banking, capital markets and insurance) was estimated at USD 2.19 trillion as at 2Q18, compared to USD 2.05 trillion recorded at the end of 2017.¹ However, Islamic finance (IF) generates distinct operations, with risk profiles and balance sheet structures that differ significantly from those of conventional banks, which will have implications for IF stability. Some of the unique risks faced by Islamic financial institutions (IFIs) include displaced commercial risk, equity investment risk, rate-of-return (ROR) risk, and Sharī'ah non-compliance risk. In addition, some of the traditional risks, such as credit, concentration and liquidity risks, can be amplified, as transactions in financial derivatives to hedge risks and the availability of Sharī'ah-compliant liquidity instruments are limited.

Due to the evolving nature of the financial market and its operation, risk management has become a dominant factor in the global financial markets. To avoid unpredictable losses and to be competitive in the modern business environment, almost every firm pays considerable attention to hedging as part of its risk strategy. With the distinct nature of Islamic finance instruments, the use of hedging instruments in the IFSI is found to be rather limited due to incompatibility of risk management tools under the purview of Sharī'ah.

Hedging instruments, tools and strategies not only align with the operationalisation of a number of Islamic contracts for the purpose of minimising risks, but also are in sync with one of the essentials of the Sharī'ah, which is to protect wealth. As such, Islamic hedging instruments are being used in various forms in several jurisdictions, essentially as a Sharī'ah-compliant alternative to conventional derivative instruments. These instruments include alternatives to profit rate swaps, foreign currency swaps, foreign currency forwards, options, etc. A fundamental difference between conventional derivatives and their Islamic alternatives is that the latter cannot be used, without a genuine underlying real transaction, for the sole aim of generating profits. In this regard, market volatility is minimised and systemic stability is ensured.

¹ IFSB, *Islamic Financial Services Industry [IFSI] Stability Report 2019*.

Furthermore, most such Sharī'ah-compliant hedging transactions are organised over-the-counter (OTC), rather than through an organised exchange, which results in the opaqueness of the market and the unavailability of data. However, due to the very nature of these transactions, it is important for regulatory and supervisory authorities (RSAs) to fully know the nature and size of such transactions being used by institutions offering Islamic financial services (IIFS) in their market, as well as their counterparties and underlying contracts, in order to fully understand the potential risks such transactions pose to systemic stability.

For these reasons, there exists the need for research on the development of innovative Sharī'ah-compliant hedging instruments. Viewed from a macro-finance perspective, the proposed research is envisaged to highlight pertinent regulatory and supervisory issues, as well as to offer policy recommendations relating to Sharī'ah-compliant hedging instruments.

1.2 Objectives

This working paper provides some initial exploratory findings on regulatory and supervisory issues in Sharia'h-compliant hedging instruments practices in the Islamic banking industry. Based on the extensive data collected from among the IFSB's member countries, this study broadly aims to investigate the existing practices in relation to the use of Islamic hedging instruments and the regulatory and Sharī'ah compliance concerns raised across IFSB jurisdictions.

Specifically, the paper focuses on risk perception and risk assessment, particularly the intensity of hedging usage in Islamic banks across jurisdictions. It also focuses on the use of Islamic hedging instruments and their importance in risk management in the Islamic banking industry. The paper is intended to provide policy recommendations for the use of Sharī'ah-compliant hedging instruments, especially and in line with the IFSB and other international standards on risk management in the IFSI.

1.3 Scope of the Paper

This working paper is an exploratory cross-sectional study on the risk perceptions of IFSI, risk management strategy involving the use of Sharī'ah-compliant hedging instruments, and awareness and discernments regarding regulation and supervision of those instruments. It focuses on IFSB members in various jurisdictions, especially market players.

1.4 Structure of the Paper

The paper is divided into seven sections. Section 2 provides a detailed summary of hedging in Islamic finance with a description of available contracts. Section 3 gives a brief description of the methodology. Analysis of the survey report follows. Section 4 focuses on risk perception and risk assessment, particularly the intensity of hedging usage in Islamic banks across jurisdictions. Section 5 focuses on the use of Islamic hedging instruments, and investigates their importance in risk management in the Islamic banking industry. Section 6 discusses IFIs' insights on the regulation and supervision of Islamic hedging and its implications for the Islamic finance industry. Questions have been grouped based on common themes from the literature reviewed. The final section presents the conclusions.

SECTION 2: HEDGING AND ISLAMIC FINANCE

2.1 Hedging and Risk Management

The relationship between risk and return is a fundamental concept in finance. Risk is an uncertain phenomenon that includes the possibility that an investor or trader may lose some or all of its original investment through a decrease in value of investment portfolios or certain assets. Risk management is the process of identification, analysis, and either acceptance or mitigation of uncertainty, in investment decision making.

From a conventional finance perspective, hedging is a financial strategy that limits the risk associated with fluctuations in the price of a commodity, currency or financial instrument. A hedge is accomplished by taking offsetting positions in the ownership of an asset or security through the use of conventional or Islamic derivative securities, such as buying or selling a forward contract, a futures contract, or an option to offset risk exposure in the cash market.

Most businesses across different sectors hedge their risk exposures, although there are wide variations in terms of which risks are hedged and the tools used for hedging. Firms use derivatives instruments to reduce their risk exposure, but the empirical literature suggests that a reduction in risk may not be economically large.² The core issue when trying to decide on a hedging policy is to strike a balance between uncertainty and the risk of opportunity loss.

Derivative instruments are essentially financial instruments that derive their value from the value of an underlying asset. As such, a derivative instrument has little value in and of itself. Its value is entirely dependent on the value of its underlying asset. Though “derivatives” is a widely encompassing term, we restrict our discussion here to the four main instruments – namely, forward contracts, futures contracts, options and swaps.

² W. R. Guay (1999). "The Impact of Derivatives on Firm Risk: An Empirical Examination of New Derivative Users", *Journal of Accounting and Economics*, 26(1–3), 319–51.

Table 1: Types of Derivatives Instruments

Instrument	Description
Forward Contracts	<ul style="list-style-type: none"> • A forward contract, in basic terms, is a contract where two parties undertake to complete a transaction at a future date but at a price determined today. • The contracting process usually involves only the producers and consumers of the goods being traded.
Futures Contracts	<ul style="list-style-type: none"> • In the evolution of derivatives, the next stage is the transformation from forward to futures contracts. • The introduction of futures contracts was a result of the enhanced need to manage risk. Futures contracts have clear benefits over forward contracts, as evidenced by their popularity in the modern world. • A futures contract is essentially a standardised forward contract (standardised with respect to the contract size, maturity, product quality, place of delivery, etc.). Futures contracts are traded on the exchange.
Options	<ul style="list-style-type: none"> • An option gives the holder the right, but not the obligation, to buy (or sell) the underlying asset at a predetermined exercise price at, or any time before, maturity. To acquire this right under an option, payment of a premium is required. Like futures contracts, options are traded on the exchange. • There are two basic types of options: <ul style="list-style-type: none"> – A call option provides the holder with the right to buy. – A put option provides the holder with the right to sell the underlying asset at a predetermined price.
Swaps	<ul style="list-style-type: none"> • Unlike most standardised options and futures contracts, swaps are not exchange-traded instruments. Instead, swaps are customised contracts that are traded in the OTC market between private parties. • Firms and financial institutions dominate the swaps market, with few (if any) individuals ever participating. Because swaps occur on the OTC market, there is always the risk of a counterparty defaulting on the swap.

2.2 Hedging and the Use of Derivatives in Islamic Finance

In the Arabic language, the term “hedging” is known as *tahawwut*, which originates from the word *hata*. The linguistic meaning of the word *hiyatah* includes precaution, protection, attention and/or patronage.³ The technical meaning of the word *tahawwut* in the field of finance is the adoption of processes and arrangements, and the selection of contractual formats, that guarantee the reduction of risks to a minimum while maintaining good possibilities for return on investment.⁴

Hedging has been mentioned in the Quran and Hadith either directly or indirectly. In the Quran, in verses 282–283 of the second chapter *al-Baqarah*, it is stated that *Allah directs human beings to record debts and business dealings and to take witnesses* (Al-Quran; 2:282–283). This prevents the possibility of a party denying his obligation towards another party, which could lead to a loss of capital. The verse also stresses that if the dealing takes place during a journey, Allah allows collateral to be taken for the debt if no record is made. Such actions are suggested so that the debtor is aware of and is responsible for fulfilling his respective obligation.

The concept of hedging has a strong basis in the Hadith. Proof of this can be obtained from the many Hadith that illustrate the importance of managing risks. For example, one Hadith is on a Bedouin Arab who asked the Prophet Muhammad which is better: to leave his camel untied and ask for the protection of Allah for his camel, or to tie it. The Prophet told him to tie his camel first and then have *tawakkal* (trust and dependence) to Allah. The Hadith explains that *tawakkal* that is preceded by effort is compulsory. Although Muslims have been told in verse 23 of *Surah al-Ma'idah* to have *tawakkal* to Allah, the actual concept of *tawakkal* is not to leave things entirely to Allah without making any effort. This is because Islam teaches us to always be ready to face the unexpected.

Generally, all Islamic scholars agree on the permissibility of hedging activities as long as the activity is not against Sharī'ah (Al-Amine, 2008). In fact, Islam also permits

³ Muhammad ibn Mukarram Ibn al-Manzur, (2005) *Lisan al-ʿArab*. Bayrut : Dar Sadir, 12: 1052.

⁴ Elgari, M.A (2010). “*Hedging Mechanism in Islamic Financial Operations*”. Paper presented to the 7th conference of Shariah Boards of Islamic Financial Institutions – Auditing Unit for Islamic Financial Institutions. Jeddah: King Abdul Aziz University. Retrieved from www.isra.my/media-centre/downloads/view.download/4/182.html

hedging that aims to maintain the possibility of a profit as a result of the permissible investment. Al-Suwailem (2006), in his seminal article, also concurred that hedging can be used for risk management, but noted that the hedging activities should be in line with Maqāṣid al-Sharī'ah.

When it comes to the status of derivatives in Islamic finance, there are two main schools of thought:

- The first school strongly believes that conventional derivatives such as forwards, futures, swaps and options are impermissible in Islamic finance; instead, there is a need to find Islamic alternatives that comply with Sharī'ah. These alternatives are sometimes referred to as "Islamic derivatives".
- The second school of thought, which is the minority view, believes that conventional derivatives are a greatly needed tool to enable IFIs to compete with their conventional counterparts. This school also argues that conventional derivatives are actually not impermissible and should be sanctioned and used in Islamic finance.

Discussion of derivatives and their legality or otherwise under Sharī'ah began in the 1980s when Islamic finance itself began to emerge and develop (Kunhibava, 2010). The following are the main Sharī'ah grounds cited by contemporary scholars in Islamic finance who have objected to derivatives:

1. A futures sale, which comprises deferment of both counter-values, *bay' al-kali bi al-kali* (sale of debt for debt), is forbidden.
2. Both counter-values in future sales – the money and the goods – are non-existent at the time of the contract. Therefore, it is not a genuine sale; rather, it is a mere sale or exchange of promises. A sale can be valid under Sharī'ah if either the price or the delivery is postponed, but not both.
3. Options sales are a mere right to buy or sell; charging fees for this transaction is not permissible.

4. For a sale to be valid, there must be a transfer of ownership of the item sold; if the seller does not own the item, he cannot transfer ownership. The rationale behind the requirement of taking possession is to prevent *gharar* (speculation). This issue is sometimes separated from another legal objection against derivatives: that a futures sale falls short of meeting the requirements of *qabd*, or taking possession of the item prior to resale.
5. Futures and options trading involve speculation and verge on *maysir* (gambling) and *gharar*.

2.3 Key Concepts in Islamic Derivatives Structures

A number of key traditional Islamic products can be used to create the building blocks of Islamic derivatives. These products are: *murābaḥah*, *wa'd*, *arbutun* and *salam*.

Murābaḥah

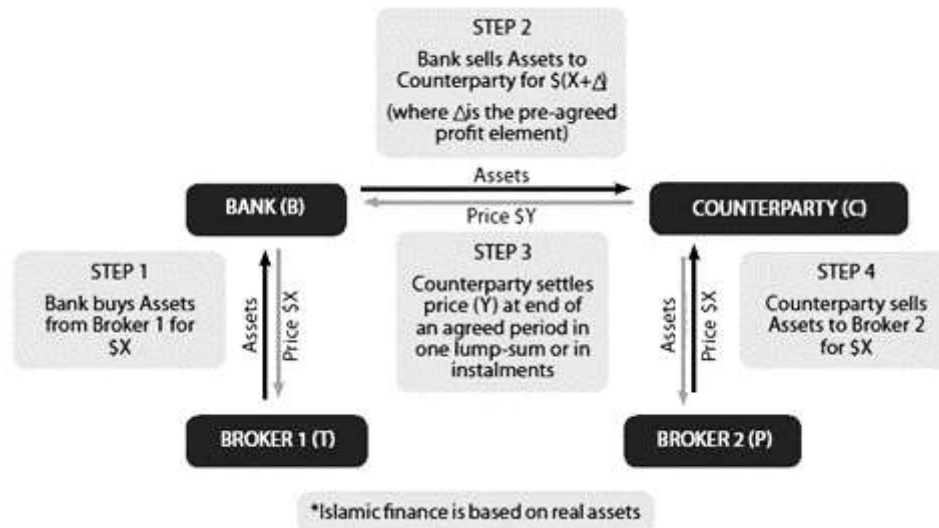
Murābaḥah, which is known as cost-plus financing, is a particular type of Sharī'ah-compliant financing technique that forms the foundation of many Islamic derivative products. For example, under such a structure, typically there are four steps (see figure 1):

- A bank purchases commodities from a third-party broker, Broker 1, at a particular price (X) [Step 1].
- The bank sells these commodities to the counterparty (C) at a price that includes the bank's cost price (X) and some profit/markup (Δ), which the bank discloses to C. Thus, C's cost price is equal to $X + \Delta$ (Y) [Step 2].
- Typically, Y is payable by C in instalments, but it can also be paid as a one-time bullet payment on a specified date in the future (similar to the "sale and deferred payment" model in conventional financing) [Step 3].
- Having purchased the commodities from Bank B, C sells these to another third-party broker, Broker 2, at a price equal to X [Step 4].

The above structure is Sharī'ah-compliant because (a) no interest is being charged by the bank (rather, the bank is making a profit, which is justifiable since it bears the risk, for however short a period, of not being able to sell the commodities to C); and (b) the financial transaction is backed by underlying transactions in tangible goods. It is important to maintain the severance between the following three parts of

murābahah as separate transactions – that is, (i) the purchase of goods by the bank from Broker 1, (ii) the sale of goods by the bank to C; and (iii) the sale of goods by C to Broker 2.

Figure 1: *Murābahah*: Cost-plus Financing Structure



Murābahah is particularly popular as a financing technique in the realms of consumer finance and asset finance. Notably, *murābahah* can also be used in a Sharī'ah-compliant profit-rate swap and/or a cross-currency swap.

Wa'd

In Islamic finance, *wa'd*, or “promise”, refers to an obligation issued by one counterparty, such as a potential purchaser, to another, and whereby the promisor undertakes towards the promisee to proceed with the contract. Since the *wa'd* is a unilateral promise, it does not have to satisfy the requirements of a bilateral contract (*aqd*) under Sharī'ah (i.e. knowledge of the price, and possession or ownership of the subject matter of the contract). This inherent flexibility of the *wa'd* renders it particularly helpful in developing several innovative Sharī'ah-compliant structures, such as a foreign exchange (FX) option or a total return swap.

There is a wide application of *wa'd* in Islamic financial products – for instance, foreign exchange forwards (FX forwards) and Islamic repurchase agreements (Islamic repo). In an Islamic repo agreement, Islamic banks promise bilateral *wa'd* and enter into a repo agreement whereby Bank A sells a security or certificate at an agreed price to

Bank B and then both banks enter into another contract thereon whereby Bank A makes *wa'd* to buy back the security and Bank B makes *wa'd* to sell back the security at a specified future date and agreed price.

Arbun

Arbun, which literally translates into “earnest money contract”, is a conditional purchase contract that is permissible under Sharī'ah. Under an *arbun* contract, the buyer (B) concludes a purchase and makes an advance of some sum (X), which is less than the purchase price (Y), to the seller (S).

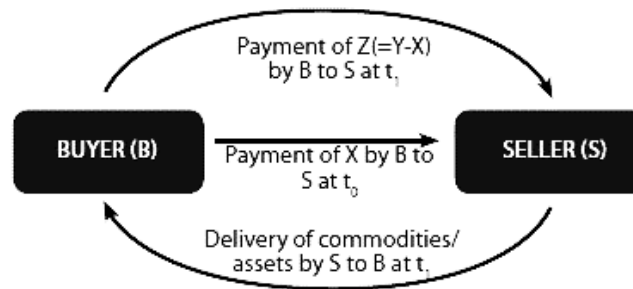
- The contract stipulates that if B decides to proceed with the transaction, he will pay S the purchase price minus the initial deposit (Y minus X = Z).
- If B decides not to proceed with the transaction, he forfeits the deposit in favour of S (see figure 2).

Arbun offers a close analogy to a conventional option, although it cannot be regarded as identical to an option (because, unlike an *arbun* contract, the premium paid under a conventional option is not deducted from the purchase price if the buyer chooses to exercise the option). Several Islamic schools of thought declare *arbun* to be a void contract since it makes a gift (the initial deposit) conditional upon a sale, and therefore allegedly offends the Sharī'ah principle of non-combination of gratuitous contracts with onerous ones. However, the Hanbali School accepts the *arbun* as a valid form of contract, based upon the Hadith. It was reported in the Hadith that Nafi' Ibn al-Harith bought a building to use as a prison from Safwan Ibn Umayyah in consideration for 400 dirham on the condition that the deal would be closed when Umar (R.A.) consented, or the 400 dirham would be retained by Safwan if Umar refused to endorse the deal.⁵ The Fiqh Academy has also endorsed *arbun*, but only if a time limit is specified for exercising the option.

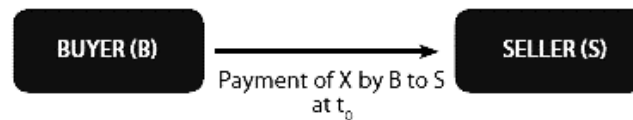
⁵ Whabah, al-Zuhaily (2000). *Bay-al-Arbun*. Syria: Dar al-Maktabi.

Figure 2: *Arbun*: Partial Payment Up-front, with the Option to Conclude the Transaction at a Later Date

(i) If B chooses to proceed with the purchase contract at t_1



(ii) If B chooses not to proceed with the purchase contract at t_1



Notes: 1. t_0 must be earlier in point of time than t_1 .
2. X must be less than Y

Salam

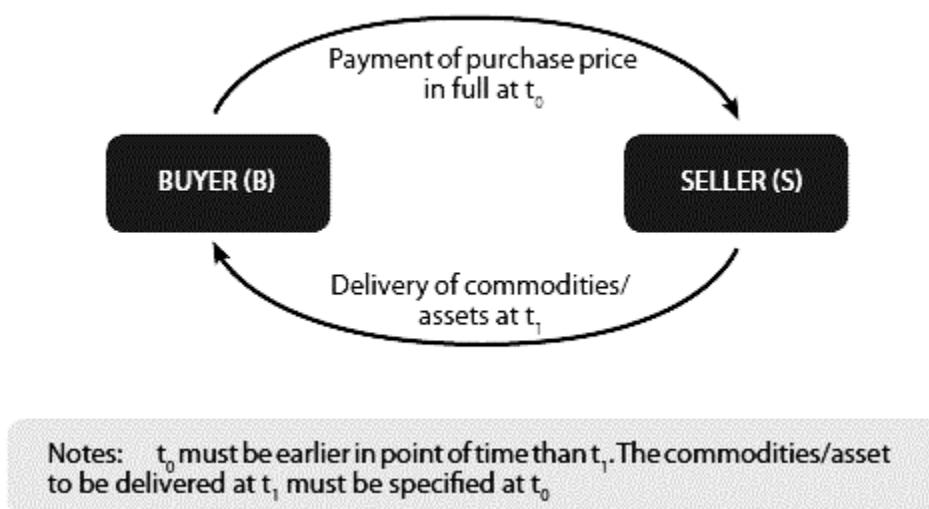
Salam is a form of forward contract whereby the price of an asset is paid up-front at the time of the contract, for the asset to be delivered later (similar to a “deferred delivery” model in conventional finance) (see figure 3). The legitimacy of *salam* is rooted in the Sunnah, whereby the Prophet Muhammad (PBUH) is believed to have observed the practice of people paying in advance the price of dates to be delivered within one, two or three years in Madinah. The sale, however, did not specify the quality, measure or weight of the dates at the start of the contract. The Prophet (PBUH) ordained that: “*Whoever pays money in advance (for fruits) (to be delivered later) should pay it for a known quality, specified measure and weight (of dates or fruit) along with the price and time of delivery*” (reported by Imam Bukhari and others).

Consequently, when using *salam* in structuring today, scholars prescribe several strict conditions, including the following:

1. The seller must undertake to supply a specific asset at a future date in exchange for full spot payment (in advance) at the start of the contract.
2. Before delivery of the asset, the risk lies with the seller; and upon delivery, the risks are transferred to the buyer.

3. The buyer can enter into a similar contract with a third party in a parallel *salam*. This parallel contract would be independent of the first *salam* contract.

Figure 1: *Salam*: Full Payment Up-front and Deferred Delivery



2.4 Hedging Instruments Used in Islamic Finance

2.4.1 Islamic Profit Rate Swap

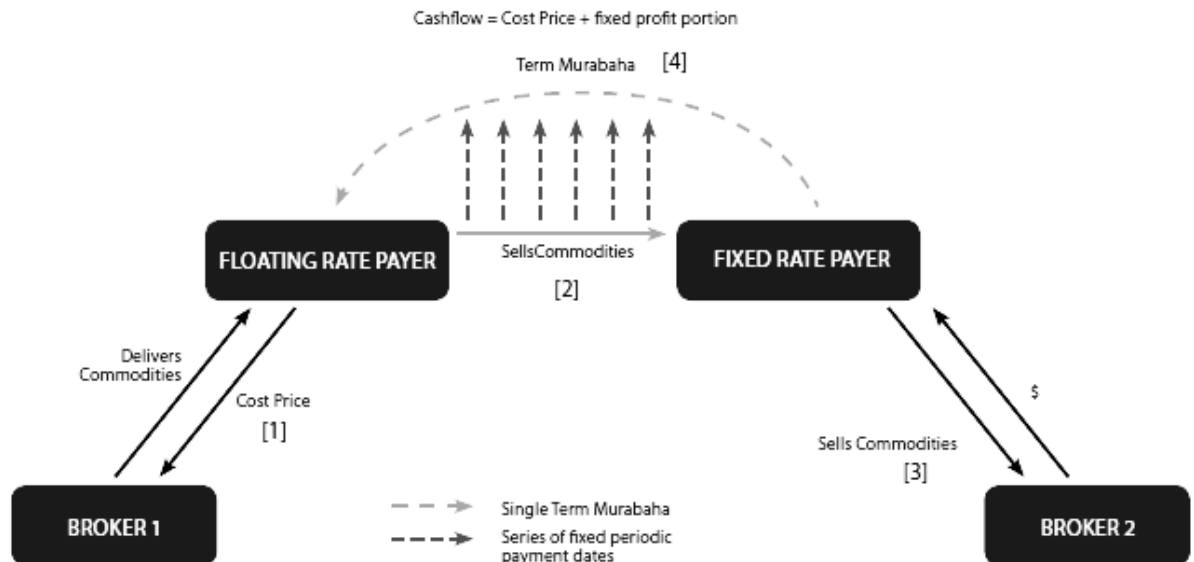
Structure and Cash Flows

A profit rate swap is best analogised to a conventional interest rate swap, under which the parties agree to exchange periodic fixed and floating payments by reference to a pre-agreed notional amount. An interest rate swap is an agreement between two parties to exchange one stream of interest payments for another over a set period of time.

An Islamic profit rate swap is an agreement to exchange profit rates between a fixed-rate party and a floating-rate party, or vice versa, implemented through the execution of a series of underlying contracts to trade certain assets. Each party's payment obligation is computed using a different pricing formula. In an Islamic profit rate swap, the notional principal is never exchanged as it is netted off. A term *murābaḥah* is used to generate fixed payments (comprising both a cost price and a fixed profit element), and a series of corresponding reverse *murābaḥah* contracts is used to generate the floating leg payments. (The cost price element under each of these reverse *murābaḥah* contracts is fixed, but the profit element is floating.)

i. Primary Term *Murābahah*

Figure 4: Primary Term *Murābahah*



An agreement by which the floating-rate payer simply agrees to pay a variable amount (linked, for example, to the London Inter-Bank Offer Rate, or LIBOR) to the fixed-rate payer on certain pre-specified dates would not be Sharī'ah-compliant due to the uncertainty (*ghara'*) associated with such a structure. A series of sequential secondary reverse *murābahah* contracts (SRMCs) helps us resolve this problem, as each floating-rate payment is linked to an underlying purchase and sale of commodities.

The process shown in figure 4 is initiated as follows:

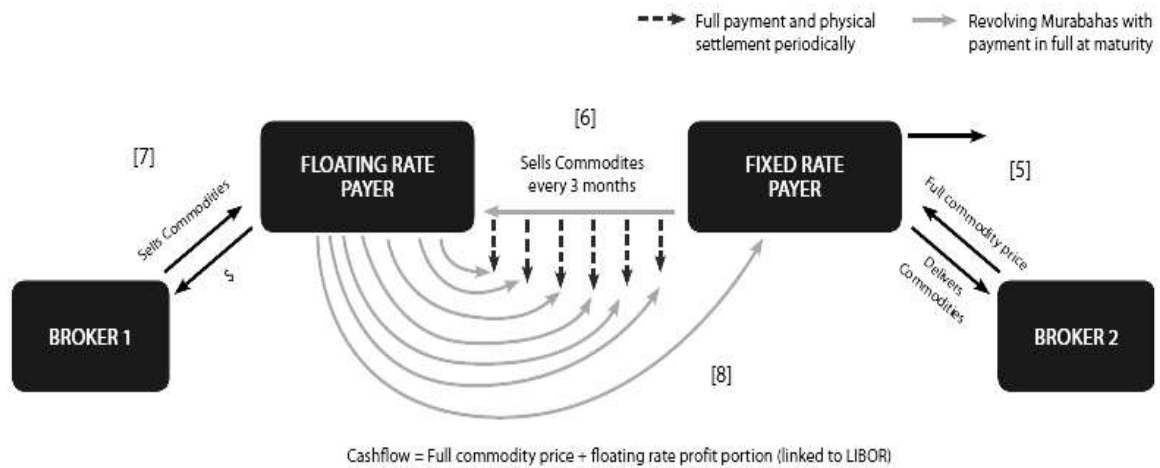
- The floating-rate payer sources commodities from a commodity broker (Broker 1) [Step 1], and sells these commodities to the swap counterparty (the fixed-rate payer) [Step 2]. The value of commodities bought and then sold by the floating-rate payer is the pre-agreed cost price for the transaction, and the commodities are delivered on the date on which the transaction is entered.
- On receipt of the commodities purchased, the fixed-rate payer (or its agent) sells those commodities immediately to a different commodity broker (Broker 2) [Step 3] to generate cash.

- The fixed-rate payer pays for the commodities purchased under the term *murābaḥah* on a deferred basis, in instalments payable on a series of pre-agreed payment dates (each a deferred payment date) [Step 4]. Each instalment comprises both a cost price element (a repayment of a set percentage of the cost price) and a fixed profit portion (paying a portion of the floating-rate payer's profit on the transaction).

ii. Sequential Secondary Reverse *Murābaḥah* Contract (SRMC)

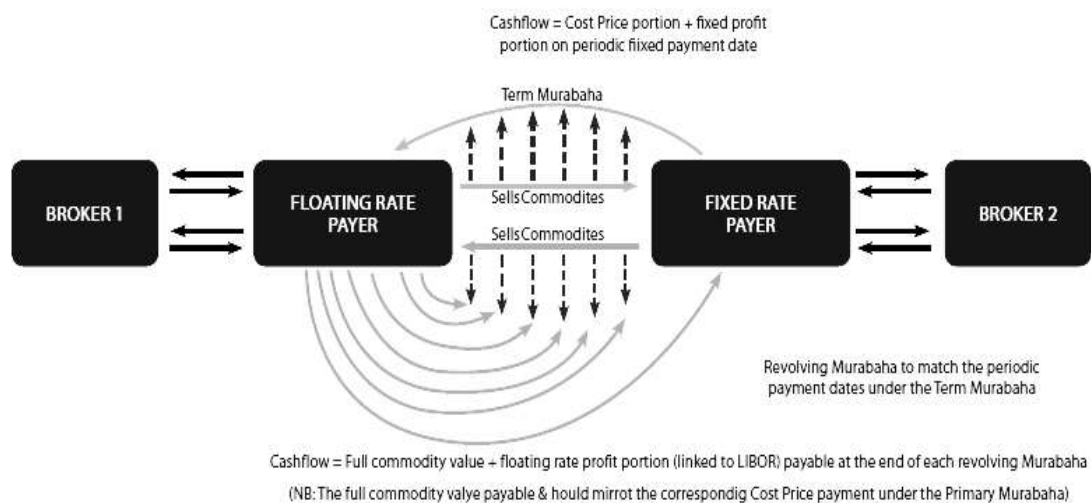
- The first SRMC is entered into on day 1 (i.e. the date of entry into the primary term *murābaḥah*) by the fixed-rate payer utilising an amount equal to the cost price element due to be paid to it by the floating-rate payer on the next due deferred payment date under the primary term *murābaḥah* to purchase commodities from its commodity broker [Step 5] (Note that, consequently, the commodities sold under each SRMC represent only a portion of the value of the commodities purchased under the primary term *murābaḥah*).
- The fixed-rate payer immediately sells these commodities to the floating-rate payer for immediate delivery [Step 6], and the floating-rate payer immediately sells such commodities to Broker 1 [Step 7] to generate cash.
- Payment by the floating-rate payer is on a deferred basis by a single bullet payment comprising (a) the full value of the commodities purchased under the relevant SRMC; plus (b) the fixed-rate payer's profit (such profit is calculated by reference to a floating-rate formula – i.e. linked to LIBOR – and thus generating the floating rate element) [Step 8]. Each SRMC payment is due on the next deferred payment date under the primary term *murābaḥah* (at a frequency of every three months, as shown in figure 5).

Figure 5: Secondary Reverse *Murābahah* Contracts



Consequently, on each date that a payment is made by the fixed-rate payer to the floating-rate payer under the primary term *murābahah*, a corresponding SRMC will generate a reciprocal payment under which the element payable in respect of commodities purchased (the cost price element in the case of the primary term *murābahah* payment, and the full commodity value payable in respect of the relevant SRMC) is identical. However, the profit elements payable will vary. The profit element under the primary *murābahah* will be calculated by reference to a fixed rate, and the profit element under the SRMC by reference to a floating rate, thus generating cash flows that are Sharī'ah-compliant but are similar in nature to the cash flows under a conventional interest rate swap.

Figure 6: Full Profit Swap Structure



2.4.2 Islamic Commodity Swap

Structure and Cash Flows

A basic commodity price swap entails two counterparties exchanging cash flows at various points in time, with specifics agreed in advance. In the standard case, the two counterparties agree to periodically exchange a given quantity of a commodity for a specified period of time. The Islamic commodity swap is becoming popular in recent times, and is being applied to crude palm oil contracts for hedging purposes (particularly in Malaysia). The Sharī'ah principles that can be applied in a crude palm oil swap contract are the principles of *wa'd* and *murābaḥah/musawamah*. A *wa'd*, or promise, is given at the beginning, whereas the *murābaḥah/musawamah* is implemented on the transaction day. If *murābaḥah* is applied, the cost and profit margin is already known to the investor and thus the price can be fixed at the start. However, if *musawamah* is used, the investor does not know with certainty the cost involved from the beginning.

For example, the oil palm plantation Company A produces 1,000 tons of crude palm oil every year. The company wishes to evade the fluctuation of the crude palm oil price in the current market. Therefore, the company enters into the swap market and seals a swap contract with Manufacturer B. Company A agrees to accept fixed payments for each ton of crude palm oil for six years and undertakes to pay the current market price for crude palm oil to Manufacturer B annually. Every year, the plantation company pays the price for 1,000 tons of crude palm oil at the current rate, while Manufacturer B pays the price at the fixed rate. As a result, the company will obtain a certain known price for the next six years, and a series of *murābaḥah* contracts enter into fixed-rate based contracts and floating- or current-rate based contracts (see figure 6).

Illustration

1. On 1 January 2018, the oil palm plantation company, Company A, provides a *wa'd*, or a promise, to execute a few *murābaḥah* transactions, whereby it will sell crude palm oil to Manufacturer B on a series of dates by paying the price based on a floating rate for a certain period. The manufacturer, in turn, undertakes to seal a few *murābaḥah* contracts where the manufacturer will resell the crude palm oil to Company A by paying the price based on a fixed rate for a certain period. To ensure that neither party backs out from the transactions involved, both parties will furnish *wa'd*. Thus, two unilateral and independent *wa'd* that are not connected to each other come into place. If the company wishes to cancel the *wa'd*, it must pay

compensation (*tawidh*) based on the actual amount of losses borne by the manufacturer, if any. Promises given by both parties must be made separately and are not to be bound to each other. This *wa'd* is a promise to sell and buy commodities several times throughout the duration of the contract. For example, if the duration of the contract is six years, with the swap taking place twice a year, each party will then have to furnish their *wa'd* to sell and buy commodities 12 times (Hasan, 2010).

2. On 1 June 2018, the oil palm plantation company, Company A, and the manufacturer will execute *murābaḥah* contracts by buying and selling commodities. Company A sells the crude palm oil to Manufacturer B based on the principle of *murābaḥah* at the price as agreed on 1 January 2018. The manufacturer will make the spot payment on the said date. Manufacturer B will then resell the crude palm oil to the company based on the principle of *murābaḥah* at the price as agreed on 1 January 2018. The company will pay in cash at the said time. This *murābaḥah* contract is performed on a cash basis with no credit term. Consequently, Manufacturer B has to pay a fixed rate to Company A and will, in turn, receive a variable rate from Company A (every six months). This variable rate received will protect the oil palm plantation company from any increase in its operational cost (which is based on variable rate).
3. On 2 June 2018, neither party, (namely, Manufacturer B and Company A) will pay the exact value involved. They will only discharge their respective obligations by *muqassa*, being the settlement of payment based on net worth. The Sharī'ah Advisory Council of Bank Negara Malaysia has resolved that *muqassa*, or the practice of set-off inherent in conventional swap contracts, is acceptable as it does not involve the sale of debt with debt, which is forbidden in Islamic law (Bank Negara Malaysia, 2018).

2.4.3 Islamic Cross-Currency Swap

A conventional cross-currency swap usually consists of three stages: (a) a spot exchange of principal at the outset (Initial Exchange); (b) a continuing exchange of interest payments during the swap's life (essentially, a series of FX forward trades (Interim Amounts); and (c) a re-exchange of principal at the maturity of the contract (normally at the same spot rates as those used at the start) (Final Amount). Clearly, the prohibitions on *riba*, *maysir* and *gharar* would render such a structure untenable under Sharī'ah.

Structure and Cash Flows

The challenge, therefore, is to generate cash flows that are similar to a conventional currency swap but within a Sharī'ah-compliant framework. To this end, one can use reciprocal *murābaḥah* transactions, whereby the parties enter into *murābaḥah* contracts (a primary term *murābaḥah* and a secondary reverse *murābaḥah*) to sell Sharī'ah-compliant assets (often London Metal Exchange-traded metals, such as palladium and aluminium) to each other for immediate delivery but on deferred payment terms.

i. Primary Term *Murābaḥah*

- Under this transaction, the bank sources commodities from a commodity broker (Broker A) at cost price of RM 350 [Step 1 of figure 7].
- The bank then on-sells these commodities to the swap counterparty (the counterparty) at RM 665 [Step 2].
 - The value of commodities both bought and on-sold (in Steps 1 and 2, respectively) is denominated in Currency A (MYR). Payment by the counterparty for the commodities purchased under the primary *murābaḥah* is on a deferred basis, in instalments payable on pre-agreed payment dates (each a deferred payment date).
 - Each instalment represents a portion of the pre-agreed profit element, with the exception of the final instalment, which also includes payment in full of the cost price.
- The commodities are delivered on the date on which the transaction is entered into. On receipt of the commodities, the counterparty (or its agent) promptly sells the commodities to a different commodity broker (Broker B) to generate a Currency B (USD 190) payment [Steps 3 and 4].

ii. Secondary (Reverse) *Murābaḥah*

- To initiate the secondary *murābaḥah*, the counterparty purchases commodities from Broker B and makes payment in Currency B [Step 5], and immediately on-sells these commodities to the bank for immediate delivery [Step 6].
 - The commodities sold under the secondary *murābaḥah* should have the same value as those purchased under the primary *murābaḥah* (the Currency B equivalent of the cost price being the relevant amount, in figure 7).

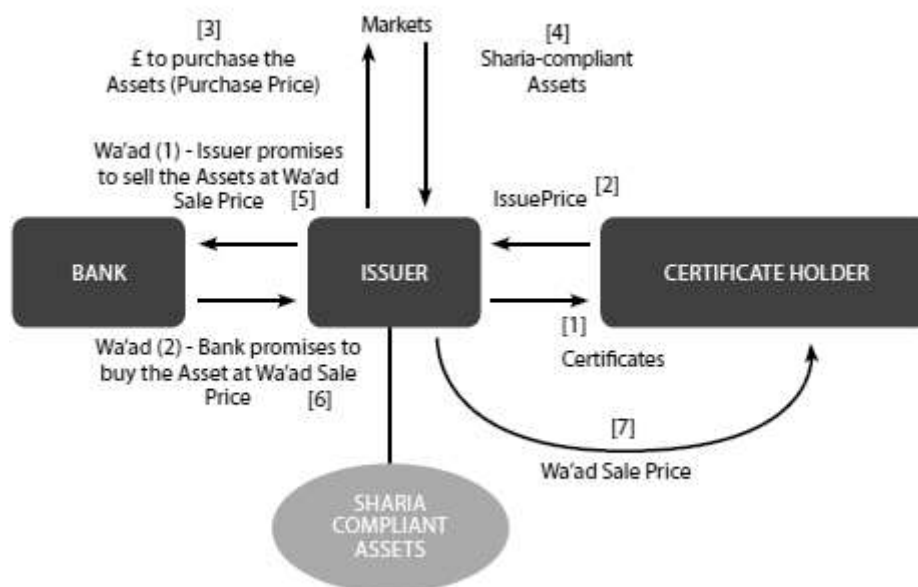
- ### Figure 7: Islamic Cross-Currency Swap (MYR/USD)



The underlying economic reasons for entering into a conventional total return swap are that (a) it allows investors to gain exposure to an asset which it does not necessarily need to hold on its balance sheet; and (b) pay-offs can be structured so that the other party can hedge against the upside or downside related to that particular asset or class

of assets. Under Sharī'ah, a similar economic profile can be generated by using a double *wa'd* structure.

Figure 8: Total Return Swap Structure



- Under this structure, a special purpose vehicle issuer issues certificates to investors in return for the issue price *[Steps 1 and 2 in figure 8]*.
- The issuer then uses the issue price to acquire a pool of Sharī'ah-compliant assets from the market *[Steps 3 and 4]*.
 - These Sharī'ah-compliant assets could, for example, be shares listed on the Dow Jones Islamic Market Indices.
 - The investors (holders of the certificates) gain exposure to an underlying index or assets (the underlying) based on two mutually exclusive *wa'd* between the issuer and the bank.
- Under one *wa'd* (*Wa'd 1*), the Issuer promises to sell the Sharī'ah-compliant assets to the bank at a particular price (which is linked to the performance of the underlying) (*Wa'd sale price*) *[Step 5]*; while under the other *wa'd* (*Wa'd 2*), the bank promises to buy the Sharī'ah-compliant assets from the issuer at the *wa'd sale price* *[Step 6]*.
 - Out of these two *wa'd*, only one shall ever be enforced. (Numbers in figure 8 denote chronology of events. Either one of Steps 5 or 6 will occur, but never both, as explained above.)

- At maturity, the bank will calculate how the Shariah-compliant assets have performed relative to the underlying; and (a) if the *wa'd* sale price is greater than the market value of the Sharī'ah-compliant assets, then the Issuer shall enforce *Wa'd 2* (similar to a conventional put option); or (b) if the *wa'd* sale price is less than the market value of the Sharī'ah-compliant assets, then the bank shall enforce *Wa'd 1* (similar to a conventional call option).

The commercial significance of this structure lies in the fact that, similar to a conventional total return swap, it offers Islamic investors the opportunity to potentially swap the returns in one basket (as generated from the Sharī'ah-compliant assets) with the returns in another basket (the *wa'd* sale price, as calculated with reference to the underlying).

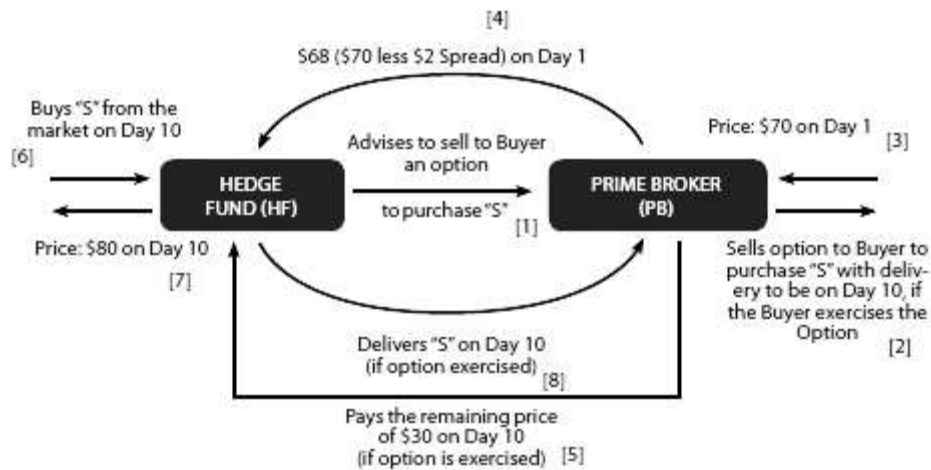
2.4.5 Short-Selling Using *Arbun*

Structure and Cash Flows

- In this structure, a hedge fund (HF) advises the prime broker (PB) to sell an option to purchase shares (S) in a particular entity at a specified price (USD 100), with delivery to take place on a specified date in the future (Day 10) [Step 1].
- PB then sells this option to the buyer and receives an initial payment of USD 70 from the buyer [Steps 2 and 3].
 - In the present example, (a) the buyer takes a “long” position on S – i.e. the buyer expects the market value of S on Day 10 to be greater than USD 70; and (b) HF takes a “short” position on S – i.e. HF expects the market value of S on Day 10 to be less than USD 70.
- Simultaneously with Steps 2 and 3, PB enters into an *arbun* contract with HF, whereby PB pays HF USD 68 (USD 70 minus PB's spread of USD 2), with HF obliged to deliver S on Day 10 [Step 4].
- On Day 10, if the buyer chooses to exercise the option to buy S and proceeds with the transaction, the buyer pays PB the remainder of the purchase price (USD 30) (remainder). The exercise of the option by the buyer triggers the legally binding obligations between the parties. Therefore, following payment of the remainder by the buyer, HF will be under an obligation to purchase the stocks and deliver them to PB, who will pass them on to the buyer. PB, therefore, pays HF USD 30 [Step 5], following which HF purchases S from the market on Day 10 [Steps 6 and 7] and delivers it to PB [Step 8]. PB then passes S on to the buyer.

It should be noted that the higher the initial deposit payment, the lower is the risk for HF since the return is higher (in the event the buyer chooses not to exercise its option). The deposit payment on Day 1 should therefore represent at least a third of the total purchase price (see figure 9).

Figure 9: Short-Selling Using *Arbun*



SECTION 3: METHODOLOGY

The data used in this study were collected via questionnaire surveys addressed to Islamic banks in various jurisdictions covered by the IFSB between May and July 2019. The survey was based on online distribution and comprised mainly closed-ended questions with codes to indicate the appropriate option a respondent wished to select. In some other instances, open-ended questions were also included for the respondents to freely express their opinion on related matters beyond the closed-ended options provided.

The cooperation of the Islamic banks was sought especially in terms of ensuring that the responding officer was the person with the relevant responsibilities to do so, and that the permission of relevant superiors or authorities was obtained where necessary, as the responses provided by an institution would be assumed to reflect its perspectives on the issues raised. The respondents were assured of the confidentiality of the responses obtained. An access link to the online survey was provided in the email invitation, as well as the due date for submitting the completed survey.

Owing to the exploratory nature of the research, data elicited from 74 Islamic banks from 12 countries (shown in Table 2) were subjected to descriptive data analysis only, mainly based on simple percentage, frequency and, in a few instances, weighted mean scores to show relative importance.

Table 2: Respondent Islamic Banks by Region and Country

Region	Countries where respondent Islamic bank is based	Number of respondent Islamic banks
Gulf Cooperation Council and Middle East	Bahrain, Qatar, Saudi Arabia, United Arab Emirates, Jordan	25
South-East Asia	Indonesia, Malaysia, Singapore	25
South Asia	Pakistan	12
Africa	Egypt	1
Europe	Turkey, United Kingdom	10
Others	Others	1
	13 countries	74 Islamic banks

SECTION 4: RISK PERCEPTION AND RISK ASSESSMENT

4.1 Nature of Islamic Banking Operations

The perception and explanation of risk can differ from one party to another, depending on their point of view. This is especially so when it comes to the nature of the Islamic financial institution – that is, whether it is a full-fledged Islamic bank or an Islamic subsidiary of a conventional bank. The product offered and the nature of the service provided will vary with the core banking activities of the full-fledged bank or Islamic window, which will have a bearing on understanding risk issues and, subsequently, risk management activities.

The main types of delivery models for the provision of Islamic finance products, which can also vary depending on the order of decreasing preference from a Sharī'ah perspective, are described below.

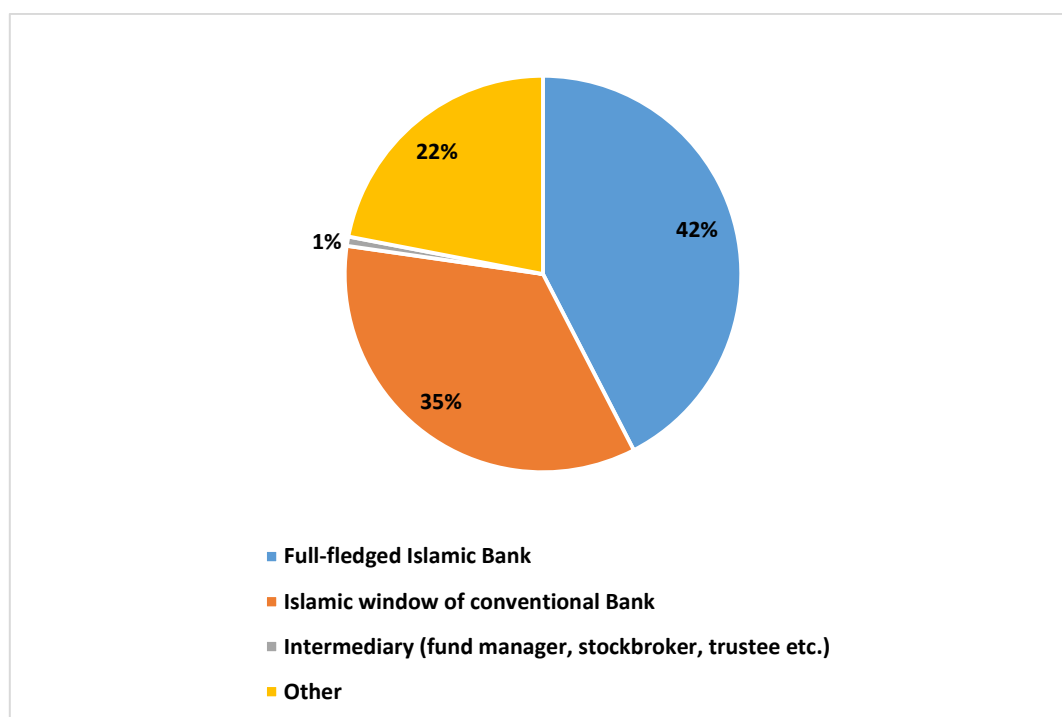
- *Full-fledged Islamic banks:* This term refers to a wholly Islamic banking institution that operates as a stand-alone entity. Full-fledged banks offer only Islamic products and typically have a full range of products compared to an Islamic window of a conventional bank. A full-fledged Islamic bank would be capital funded and set up from Sharī'ah-compliant funds, although it could also have been converted from a conventional bank operation into an Islamic bank. All transactions within a full-fledged Islamic bank would need to be Sharī'ah-compliant (including treasury and risk management operations). Full-fledged Islamic banks are also cropping up from the conversion of Islamic subsidiaries of conventional banks to stand-alone Islamic banks.

- *Islamic window:* This term is used to describe conventional banking institutions that offer Islamic products through their main distribution networks – for example, branches providing both conventional and Islamic banking and financial products. There are Sharī'ah restrictions around co-mingling of funds, so funds, accounts and reporting must be maintained separately. This effectively means the Islamic window operates as a separate entity, but infrastructure, processes and operations are shared. Islamic windows are typically situated at the lower end of the Sharī'ah compliance scale.

Based on the survey report, as shown in figure 10, 42% of the respondents are full-fledged Islamic banks, while 35% are Islamic banking windows. Others included trade

finance, treasury operation, insurance companies, cash management service providers, etc.

Figure 10 Nature of the Financial Institution



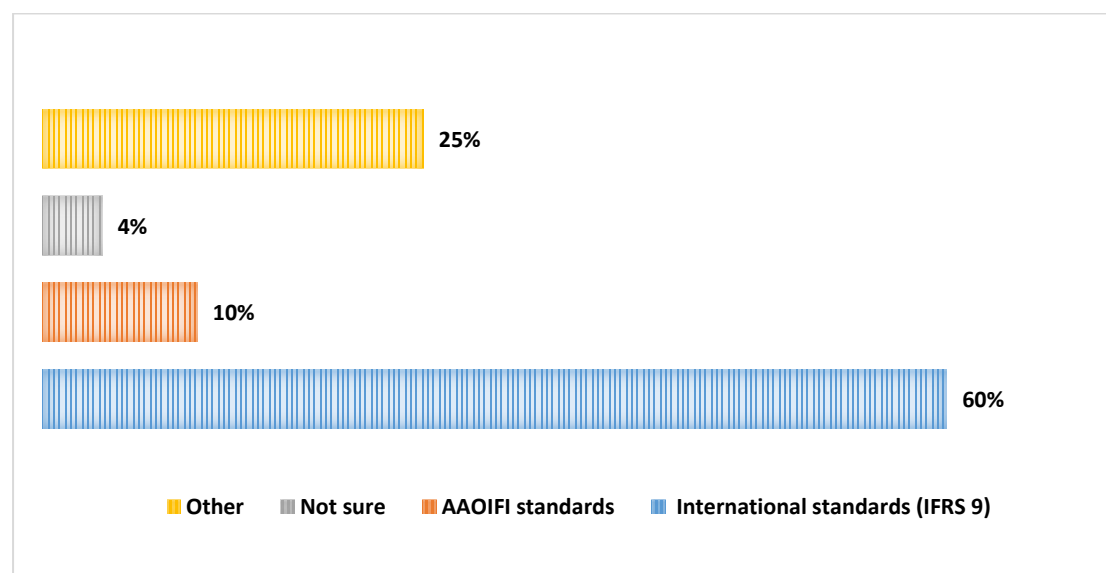
4.2 Accounting Standards for Hedging Practices

Pronouncements of regulatory bodies on “hedge accounting” are aimed at ensuring that price changes of hedging relationships are accounted for concurrently. The International Accounting Standards Board (IASB) has published a new International Financial Reporting Standard 9 (IFRS 9) as an improvement on the existing International Accounting Standard 39 (IAS 39): *Financial Instruments: Recognition and Measurement* by mandating a new method for applying risk metrics to accounting relating to the financial instruments for all banks and insurance entities reporting according to IFRS. IFRS 9 has a direct bearing on the hedging practices of the financial institutions, and it is important to assess if IFIs are adopting and using IFRS 9 standards or any other accounting standards.

IFRS 9 was issued with an effective date of 1 January 2018, with early adoption permitted. The standard was issued in three phases: (1) classification and measurement of financial assets; (2) impairment; and (3) hedging, permitting banks to adopt the new changes in a phased manner. While a majority of the banks adopted all

phases of the standard on its effective date of 1 January 2018, some Islamic banks, especially in the Gulf Cooperation Council/South-East Asia, had adopted phases 1 and 2 on classification and measurement, and impairment requirements, in prior years. IFRS 9 requires financial institutions to move from an incurred loss model to an expected loss model. For the first time, financial institutions will have to recognise not only credit losses that have already occurred, but also losses that are expected in the future. The standard will result in more timely recognition of loan losses and is a single model that is applicable to all financial instruments subject to impairment accounting. IFRS 9 also includes an improved hedge accounting model to better link the economics of risk management with its accounting treatment.

Figure 11 Application of Accounting Standards



In our sample, 60% of the institutions were already applying IFRS 9, while 10% were using Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) guidelines for their accounting treatment (figure 11). Over 25% of the institutions selected the “other” option, indicating perhaps that there are other practices in their jurisdiction not captured in the options provided. A review of the comments provided by respondent Islamic banks offered some other insights. For instance, in Malaysia, most banks use Malaysian Financial Reporting Standard 9 (MFRS 9), which is broadly similar to IFRS 9 guidelines. Some countries such as Indonesia and Egypt use their own national standards, while others indicated they will implement IFRS 9 guidelines at a later stage.

4.3 Risk Assessment of Islamic Financial Institutions

The growth of the Islamic finance industry and its potential impact on the global financial industry have raised public policy issues, relating in particular to IFIs' risk management practices, as Islamic finance generates mixed perceptions on the risks it encounters and how it is managed. Apart from the exposure to risks that are also faced by conventional banks, Islamic banks face additional risks as a result of the Sharī'ah-compliant nature of the business.

The risks are more aligned on the basis of contract types as a result of the special structuring of the contracts in IFIs. The Islamic Financial Services Board (IFSB, 2005) recognises six major types of risks: credit risk, equity investment risk, market risk, liquidity risk, rate-of-return risk, and operational risk.

Some of these key risks faced by Islamic banks and surveyed in the current research are discussed below.

- *Credit risk* is the loss of income arising as a result of the counterparty's delay in making payment on time or in full, as contractually agreed. Such an eventuality can underlie all Islamic modes of finance. The non-performance of the counterparty can be due to external systemic causes or internal financial causes or may be a result of moral hazard.
- *Rate-of-return risk* is attributed to changes in the account holder's expectations of the return on investments. It can also be related to fluctuations in returns due to changes in underlying factors of the contract.
- *Mark-up risk* can be faced by Islamic financial institutions, as they use a benchmark rate to price different financial instruments. For example, in a *murābahah* contract, the mark-up is determined by adding the risk premium to the benchmark rate such as LIBOR. Consequently, if the benchmark rate changes, the mark-up rates on these fixed-income contracts cannot be adjusted. As a result, Islamic banks face risks arising from movements in the market interest rate.
- *Equity risk* is attributed to adverse changes in market value (and liquidity) of equity held for investment purposes. Equity risk covers all equity instruments such as *muḍārabah* and *mushārahah*.
- *Liquidity risk* arises from difficulty in obtaining cash at a reasonable cost from either borrowings or the sale of assets. The liquidity risk arising from both sources is

critical for Islamic banks. For a number of reasons, Islamic banks are prone to facing serious liquidity risks due to the lack of a well-developed interbank Islamic money market.

As per the survey response form as shown in figure 12, it can be seen that IFIs faced credit risk and rate-of-return risk more frequently, followed by liquidity risk and asset–liability mismatch risk; however, when it came to managing the risk, the order was slightly different (figure 13). In terms of risk management, credit risk, liquidity risk and asset–liability mismatch risk took the top three spots. Since Islamic banks are restricted in their dealings with their domestic interbank markets – for example, for conventional overnight funds – liquidity management has always been a challenge for them.

Figure 12 How Frequently Bank Faces Risk

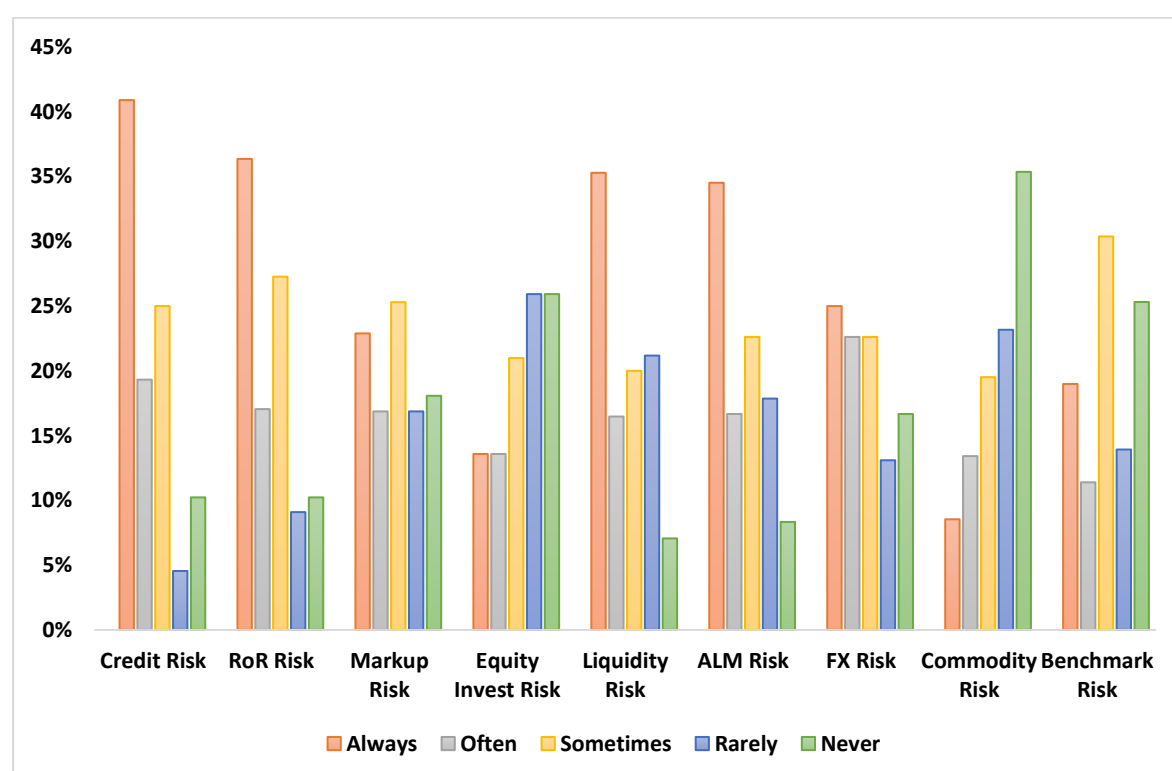
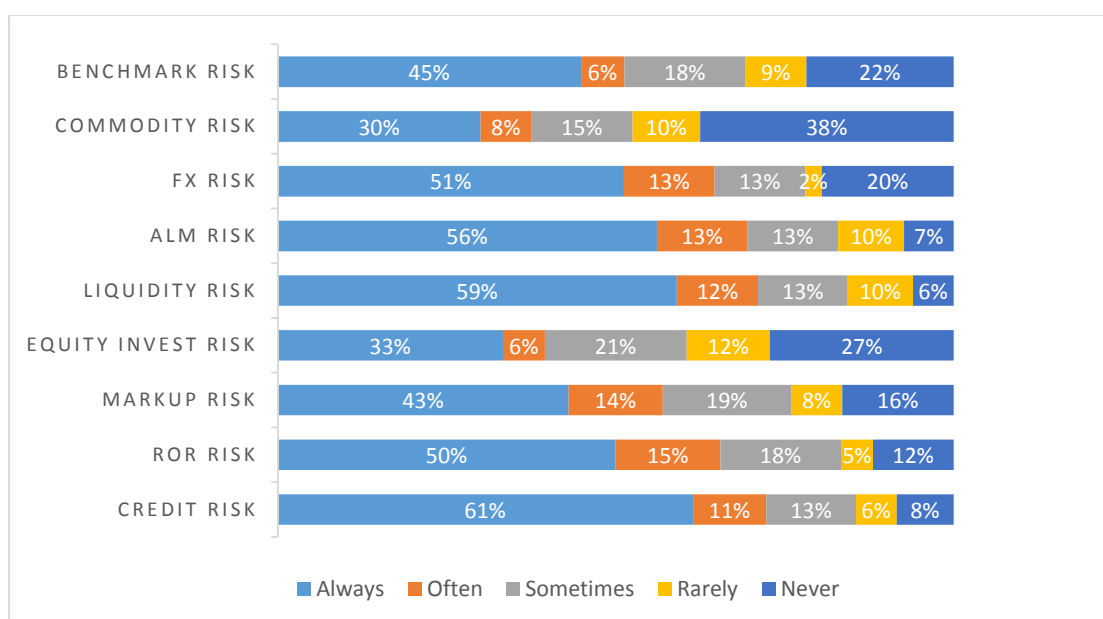
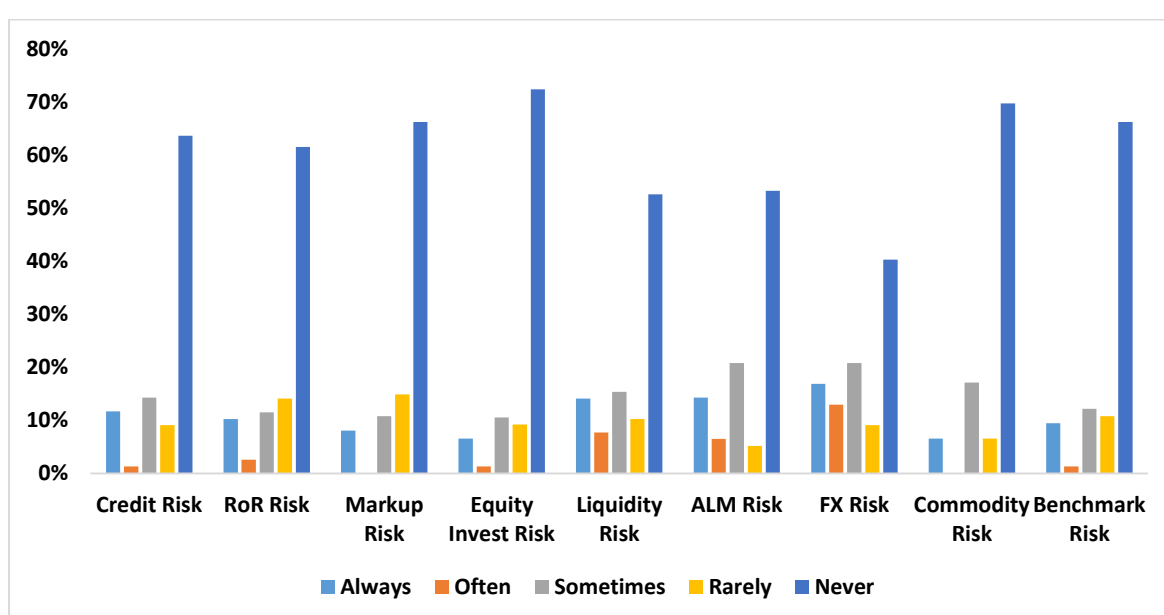


Figure 13 How Frequently Bank Manages Risk



In terms of applying Sharīʿah-compliant hedging instruments, IFIs tend to be more conservative (figure 14). Only 17% and 14% of IFIs were using hedging instruments to manage foreign exchange risk and liquidity risk, respectively. It was surprising to see that IFIs were reluctant to use hedging in most instances, which might be due to the lack of either Sharīʿah-compliant hedging instruments or regulations to manage the hedging practices.

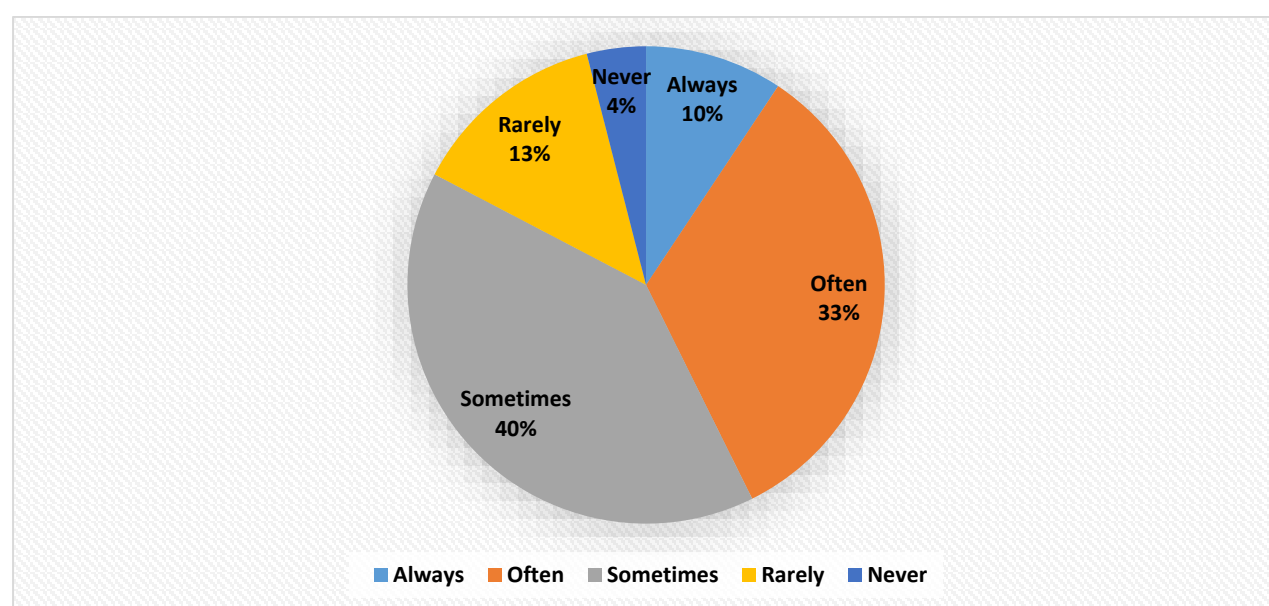
Figure 14 Frequency of Hedging Usage in Risk Management



Many institutions reported that, apart from the traditional risks, they faced emerging forms of information technology (IT) risks, such as cyber-security risk, compliance risk, 'know your customer' (KYC) risk, etc. This can be validated from the fact that Islamic banks are generally perceived to face greater IT challenges than conventional banks, both because of the more traditional origins of many Islamic banks and because of the more specialised nature of their products and transactions. Additionally, they often need a dedicated software to manage unique Islamic finance transactions which may differ from jurisdiction to jurisdiction. As a result, in addition to the usual IT risks, such as security breaches and data losses, Islamic banks face somewhat higher IT risks than their conventional counterparts.

In terms of risk perception, more than four-fifths of the IFIs surveyed believed that IFIs faced more risk than their conventional counterparts, as evidenced by figure 15. One possible reason might be that the Islamic finance industry has not yet achieved the size (compared to its conventional counterpart) to further develop risk management approaches and tools in areas where the fit is inexact. Although the global Islamic finance industry standard-setting bodies such as the IFSB, AAOIFI, and others have made strong progress in developing specific standards, unfortunately, these have not been applied or harmonised across the different jurisdictions. This issue is becoming more important as IFIs develop cross-border products, services and client bases, and is hampering risk management practices.

Figure 15 Perception of Risk among IFIs



At the same time, it is encouraging that the IFIs surveyed considered that they have adequate risk management tools in place to manage any untoward risky situation (figure 16). It was also evident from the survey that IFIs were using Sharī'ah-compliant hedging instruments to manage the prevalent risks, with more than two-thirds of the respondents responding affirmatively in this regard. Islamic versions of various hedging instruments are contributing to lessening the unique risks prevalent in various IF products and services (figure 17).

Figure 16 Perception of Risk Management Tools among IFIs

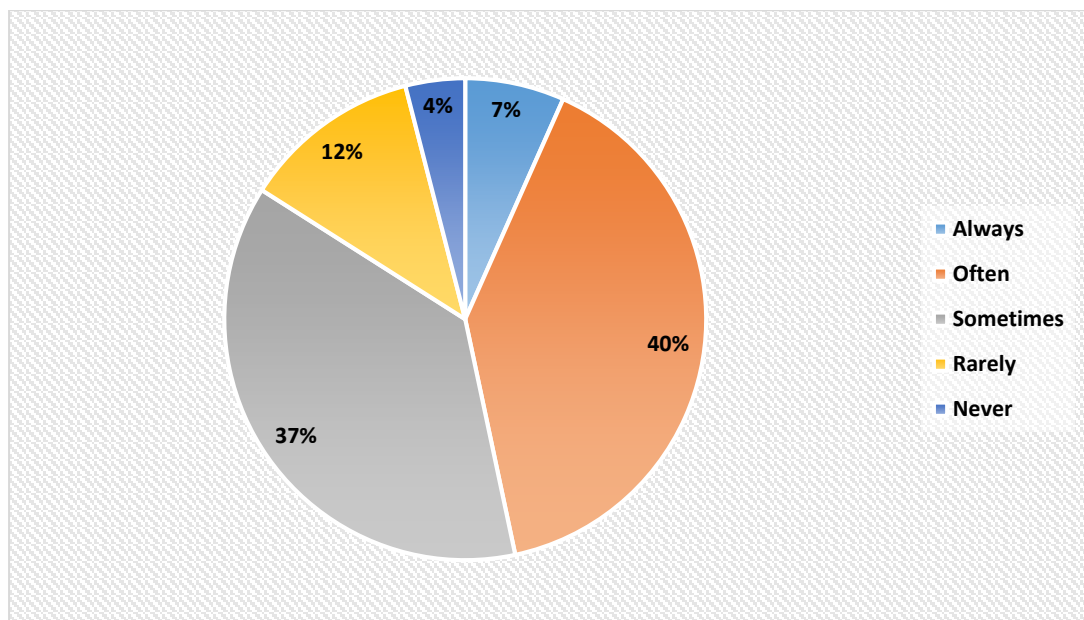
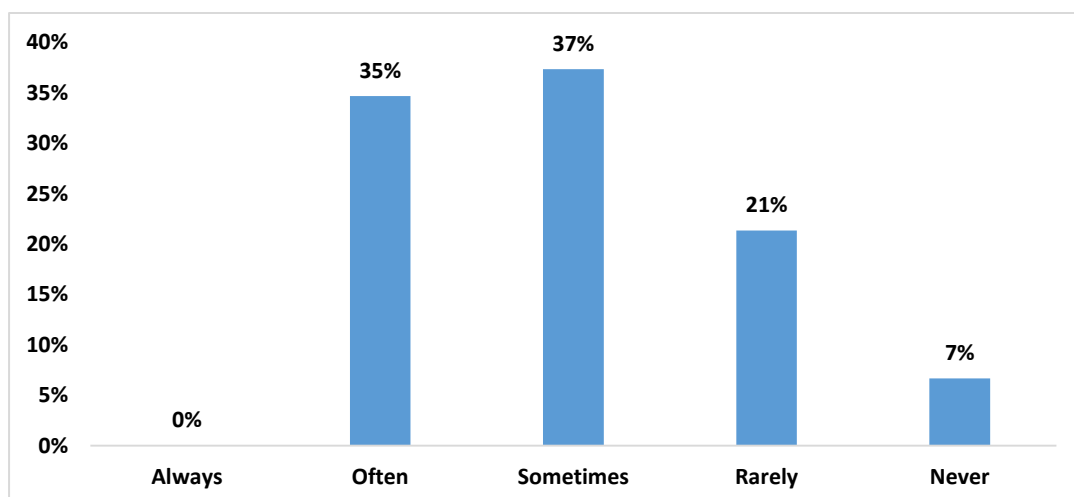
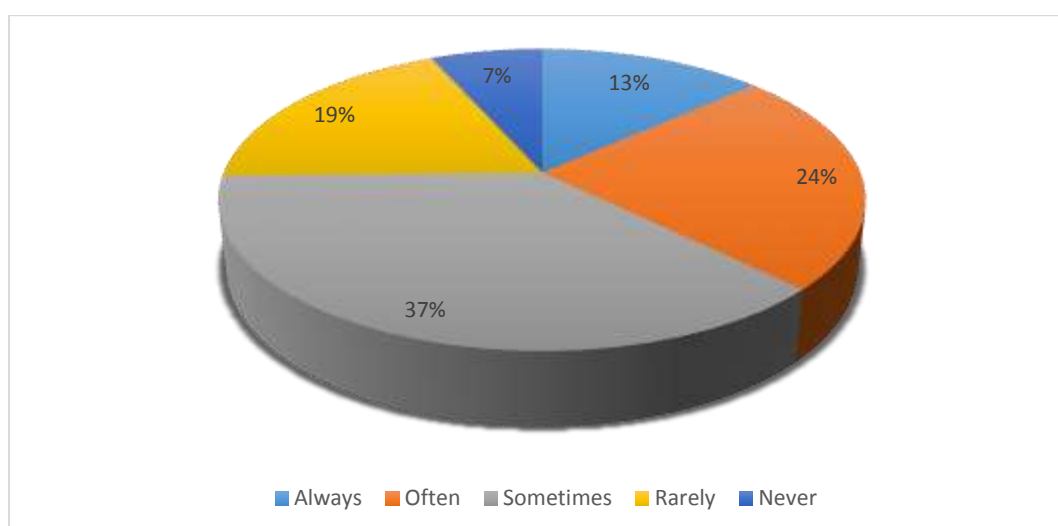


Figure 17 Usage of Hedging Instrument among IFIs



The majority of IFIs agreed that, in order to better manage their risks, compliance with standards issued by Islamic standard-setting bodies such as AAOIFI and the IFSB should be made mandatory for all IFIs (figure 18). Islamic regulatory and advisory bodies are important in ensuring that IFIs align with evolving global regulations as appropriate, and that any specialised rules needed to reflect Islamic banks' unique characteristics are considered, agreed upon, and implemented in a harmonious manner to strengthen the IF industry.

Figure 18 Harmonisation of AAOIFI and IFSB Standards



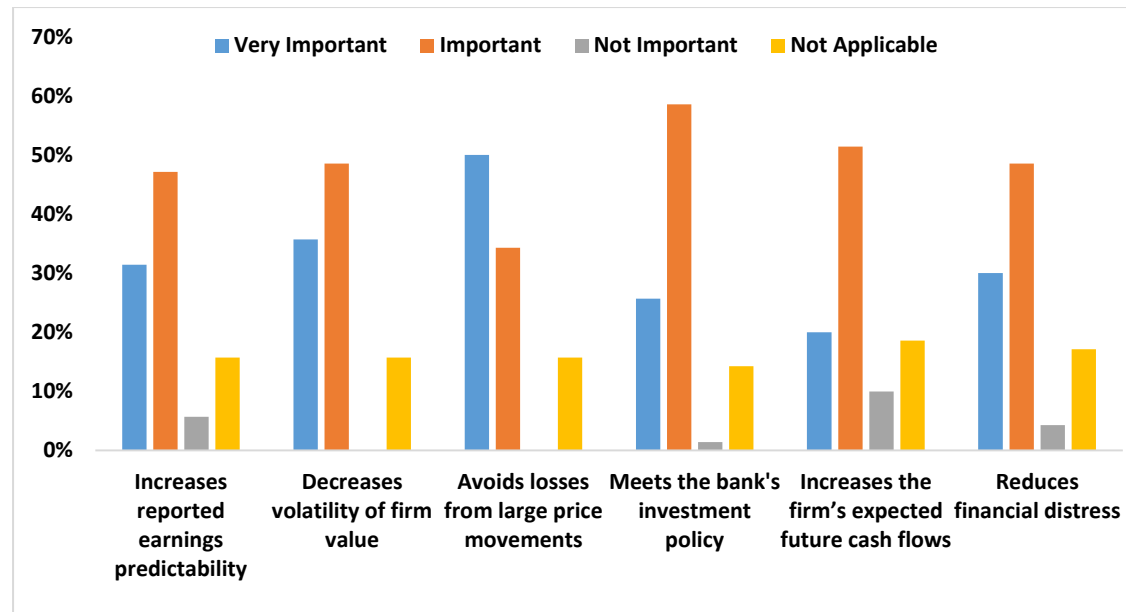
4.4 Benefits of a Hedging Strategy

The activity of hedging is undertaken mainly to shield revenue streams, profitability and balance sheets of companies against adverse price movements and cyclical reversals. In order to gain the most from hedging, it is essential to identify and understand the objectives behind it. A good hedging practice, hence, encompasses efforts on the part of companies to get a clear picture of their own risk profile and risk appetite, and of the benefits of hedging in averting risk.

In the survey, we asked the IFIs about the perceived potential benefits of a hedging strategy. Most of the institutions agreed that hedging increases the predictability of

reporting earnings and at the same time decreases volatility in the firm's value. It is evident from figure 19 that over 80% of the IFIs universally agreed that hedging meets their bank investment policy, increases the firm's expected future cash flows and reduces financial distress.

Figure 19 Potential Benefits of Hedging Strategy



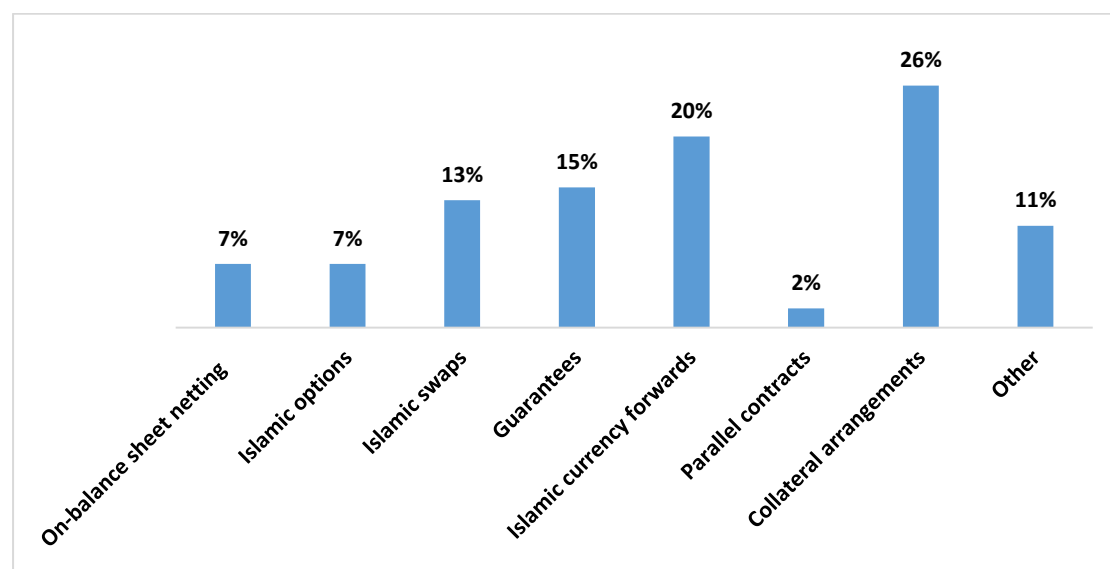
SECTION 5: ISLAMIC HEDGING INSTRUMENTS AND THEIR IMPORTANCE IN RISK MANAGEMENT

5.1 Risk Mitigation Techniques

Hedging products under the Islamic space are still limited and more work needs to be done, but it is an important financial strategy for mitigating risk. There is a perception that few Islamic products are hedged, and that few people are attracted to Islamic hedging, due to the products' low liquidity, thus making these instruments more expensive than conventional hedging instruments (Mohamad et al., 2014). Risk mitigation methods adopted by Islamic banks are no different than those used by conventional banks. Risk is measured by maintaining historical data of the counterparties and evaluating the probability of default. The survey revealed that collateral arrangements, Islamic currency forward contracts and guarantees are the top three preferred risk mitigation techniques used by Islamic banks (Figure 20).

Collateral is one of the most important protections against credit losses. Islamic banks demand or require collateral to protect funding and uses pledges to mitigate their credit risk. Guarantees are also used to improve credit quality. Guarantees are considered a very important tool for controlling credit risk in conventional banks. Some Islamic banks also accept commercial guarantees as a cushion for their credit losses. Most Islamic banks that have a significant exposure to foreign exchange risk use Islamic currency forwards and futures for risk mitigation.

Figure 20 Risk Mitigation Techniques for Islamic Finance Contracts



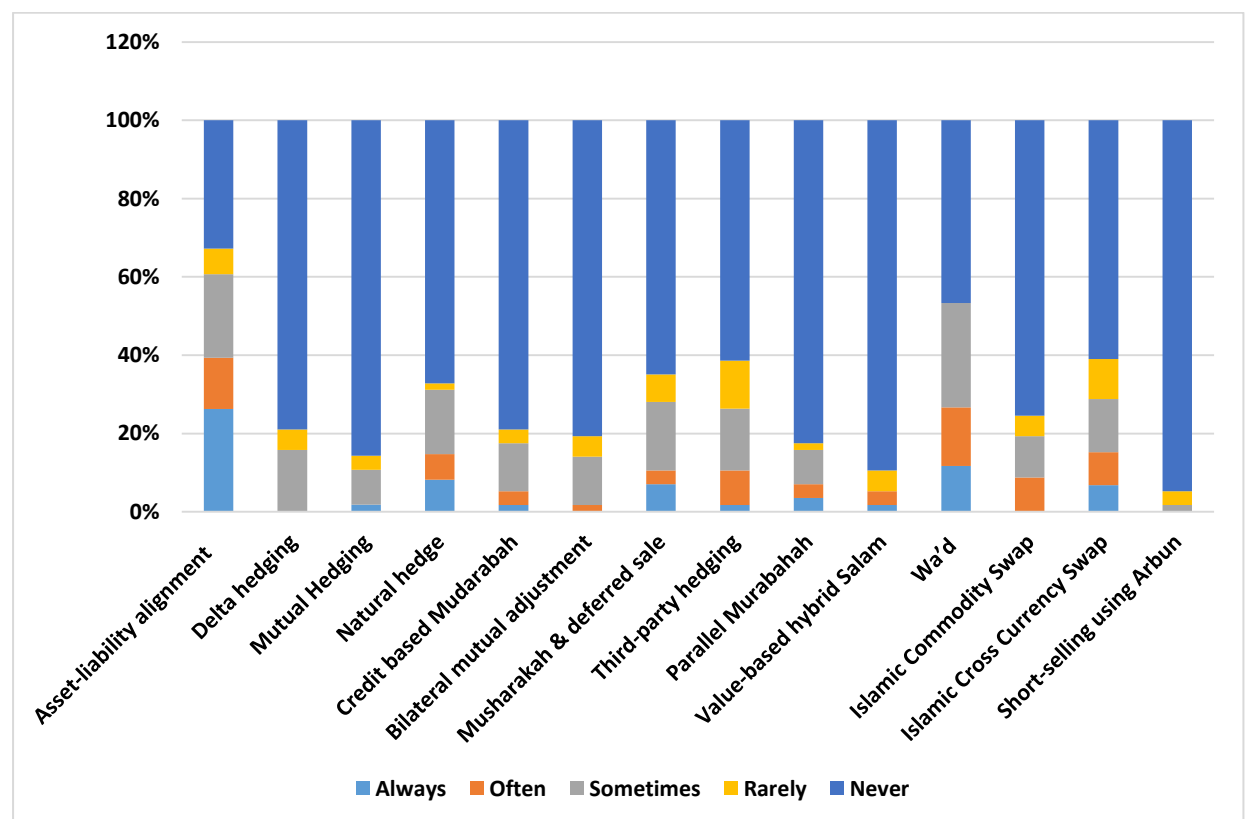
5.2 Use of Islamic Hedging Instruments for Risk Management

The retail products offered by most Islamic financial institutions are fixed rate, which can be an issue in a volatile economic situation. Both institutions and customers are exposed to risks such as currency fluctuations, which may have serious consequences unless adequately addressed. The most compelling reason for Islamic hedging solutions is to help financial institutions manage their risks and become truly competitive.

However, the survey indicated that very few IFIs are making use of Islamic hedging instruments to manage their risks. The most common form of hedging used by IFIs was asset–liability alignment, with around 40% of the institutions surveyed having applied this as one of their key hedging strategies (Figure 21).

Given the important role of asset–liability alignment in the banking sector in formulating, implementing, monitoring, and revising strategies related to assets and liabilities, most IFIs use this as their main hedging tool.

Figure 21 Use of Islamic Hedging Instruments

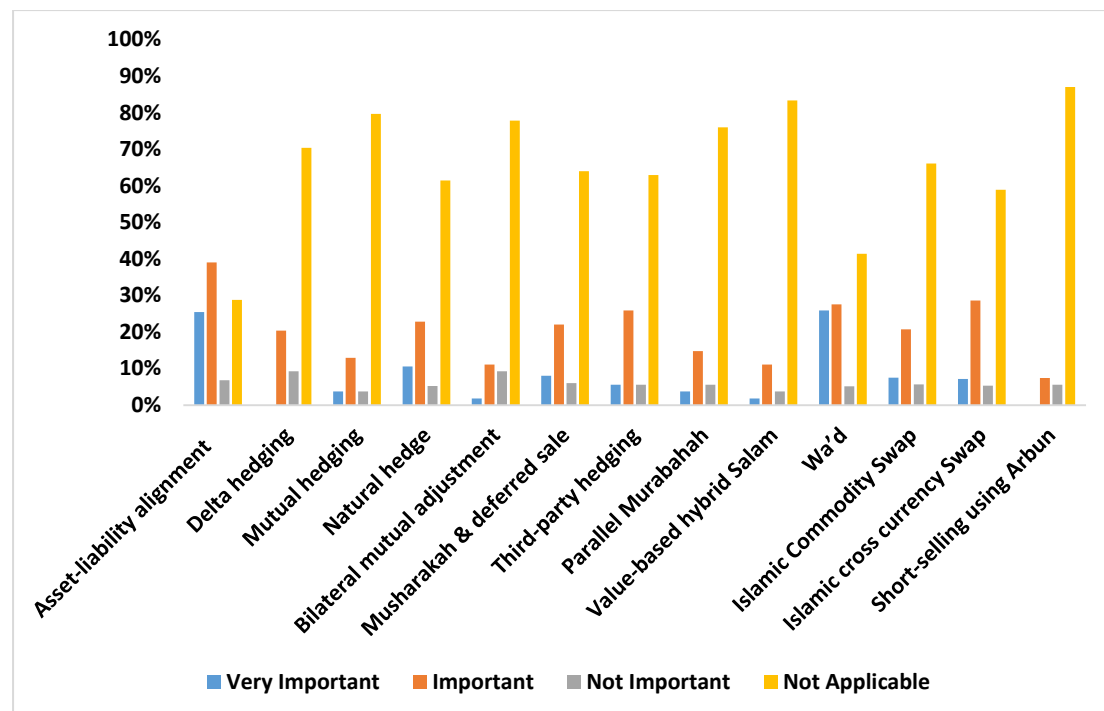


The second most common hedging tool employed by Islamic banks is *wa'd*, which is used for foreign exchange hedging. The other hedging instruments were rarely used or, in some cases, were not used at all. This can be an indication that IFIs are perhaps not well versed in the application of Sharī'ah-compliant hedging instruments. In fact, the survey responses indicated that most IFIs are not using any hedging instruments.

A further breakdown of the analysis on the importance of Islamic hedging instruments reveals a similar story (figure 22). Asset–liability alignment, *wa'd* and the natural hedge were considered to be the top three Islamic hedging instruments, for the reasons highlighted above.

Overall, it can be observed that IFIs are very conservative in their use of Islamic hedging instruments, which might be due to the lack of harmonised hedging instruments, poor awareness of those hedging instruments that are available, or the lack of proper guidelines for or regulations on their use.

Figure 22 Importance of Islamic Hedging Instruments



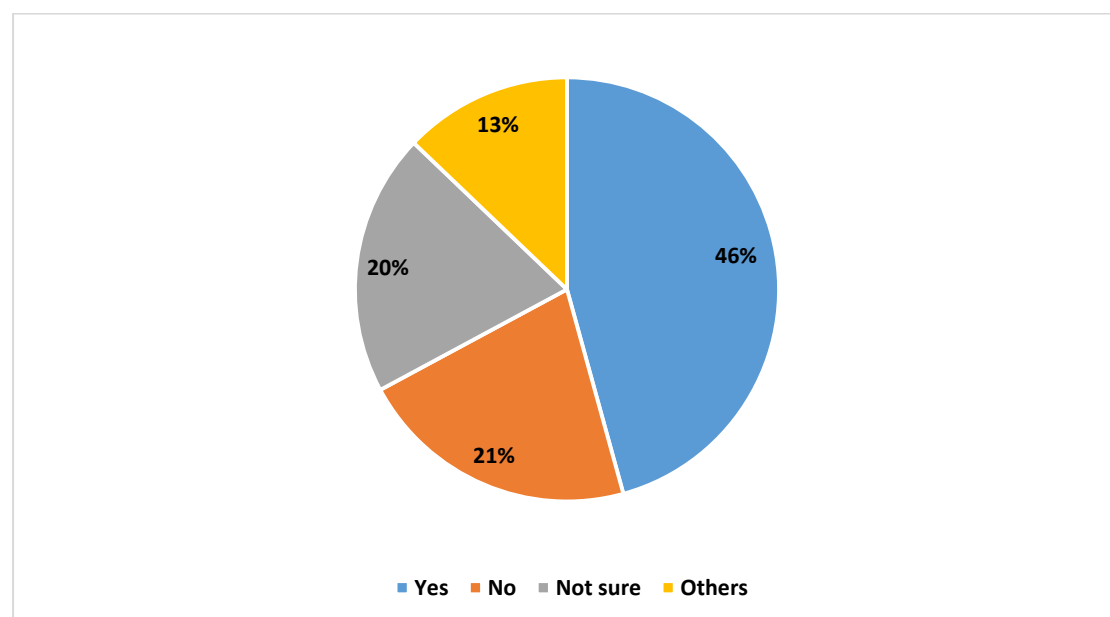
SECTION 6: REGULATION AND SUPERVISION OF ISLAMIC HEDGING

6.1 Awareness of the Regulations

In volatile global market conditions, financial institutions, including IFIs, need to be aware of proper risk management mechanisms such as hedging; more importantly, they need to have access to hedging solutions. Globally, we have diverse guidelines and regulations when it comes to the use of Islamic hedging instruments. Where some countries have taken a firm stand and totally banned the use of hedging instruments due to varying scholarly opinions on the legitimacy of traditional hedging instruments, other countries have allowed their implementation on a limited scale or through complicated structures. Despite their controversial nature in the Islamic finance industry, both scholars and practitioners believe that hedging instruments, including derivatives, are an inevitable component of a sound risk management system.

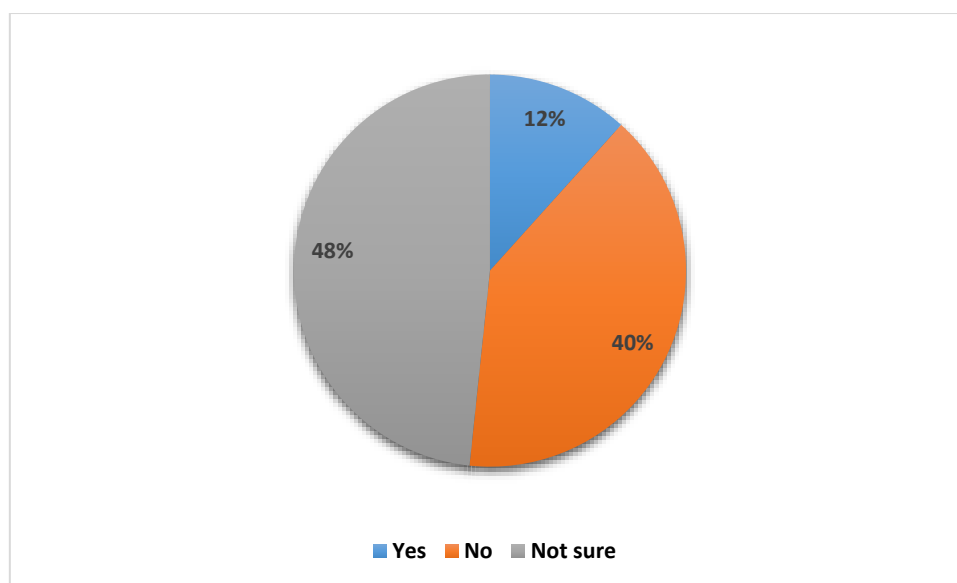
In this regard, we asked the survey respondents if they are aware of specific regulations applicable to Islamic hedging instruments. It is evident from figure 23 that almost half of the IFIs were aware that there are specific regulations pertaining to the use of Islamic hedging instruments, while a similar number were unsure about the issue.

Figure 23 Awareness of Islamic Hedging Instrument Regulations



Interestingly, only 12% of the IFIs surveyed indicated that Islamic finance regulations are standardised globally (figure 24). This shows a lack of harmonisation among the regulations. This is nothing new for the Islamic finance industry, where one of the biggest challenges has been harmonisation and standardisation of its standards and guidelines.

Figure 24 Are Islamic Hedging Regulations Standardized?



6.2 Regulatory Framework, Guidelines and Sharī`ah Standards for Islamic Hedging instruments

In recent years, there has been a proliferation of Islamic hedging instruments in both the Islamic banking and Islamic capital market sectors in many jurisdictions. The instruments, tools and strategies align not only with the operationalisation of a number of Islamic contracts for the purpose of minimising risks but also with one of the essential principles of Sharī`ah, which is to protect wealth. A variety of such Islamic hedging instruments are being used in several jurisdictions, essentially as Sharī`ah-compliant hedging alternatives to conventional derivative instruments. These instruments include alternatives to profit rate swaps, foreign currency swaps, foreign currency forwards, options, etc. Due to the nature of hedge fund transactions, it is important for RSAs to know the exact nature and size of such transactions being used by IFIs in their market, in their counterparties and in underlying contracts, in order to fully understand the potential risk they pose to systemic stability.

In view of the need for hedging, a number of regulatory guidelines and Sharī'ah standards and resolutions have been issued by international Islamic finance regulatory bodies as well as by Sharī'ah standard-setting bodies such as AAOIFI, the International Islamic Financial Market (IIFM), the National Sharia 'h Board – Indonesian Council of Ulama, Dallah al-Baraka (DAB), the Sharī'ah Advisory Council of Bank Negara Malaysia (SAC-BNM) and the Sharī'ah Advisory Council of Securities Commission Malaysia (SAC-SC).

AAOIFI, in its Shariah Standard No. 1,⁶ declares that it is permissible for institutions to hedge against future currency devaluation. The parties concerned could hedge via:

- a. Back-to-back interest-free loans (*qarḍ*) by using different currencies. The conditions for permissibility for this hedging instrument are that: (i) no parties should give or take extra benefit out of these loans, and (ii) the two loans are not contractually connected to each other (AAOIFI, 2010: Article no. 2/4(i)).
- b. A promise (*wa'd*) is another instrument whose use is allowed as a hedge against currency devaluation risk. However, the condition for its permissibility is that the promise should not be a binding bilateral promise to purchase and sell currencies even though it is meant for the purpose of hedging against currency devaluation risk (AAOIFI, 2010: Article 2/9(ii)).
- c. In AAOIFI's Sharī'ah Standard No. 20, Article no. 5/2/3, a Sharī'ah-compliant option in the form of *arbun* is allowed. The standard views that a contract concluded on an ascertained asset is permitted in the Sharī'ah, along with the payment of part of the price as earnest money (*arbun*).

At a meeting of AAOIFI held on 29–30 November 2018 in Bahrain, the board issued a standard on the accounting rules for measurement, recognition and disclosure of *wa'd*, *khiyar* and *tahawwut* transactions that are carried out by IFIs.⁷ This new standard proposes that an IFI may designate a hedging relationship between a *wa'd* or *khiyar* and a hedged item where a *tahawwut* relationship exists.

⁶ <http://aaoifi.com/shariaa-standards/?lang=en>

⁷ <http://aaoifi.com/wp-content/uploads/2018/12/Exposure-draft-F3-2018-Waad-Khiyar-and-Tahawwut-v6.2-Final-For-Issuance.pdf>

Dallah al-Baraka offered a limited endorsement of hedging in its Sixth Symposium for the Islamic Economy on 2–6 March 1990.⁸ Participants in the symposium resolved that hedging, which they defined as an agreement to enter into another contract in the future, is lawful when the subject matter of the contract is lawful. However, the participants also declared option contracts to be unlawful on the basis that they are “speculative contracts in which no actual sale is intended. Furthermore, trading the right [embodied in] an option to buy or sell is not permissible because such a right is not a valid subject matter of a sale [contract]” (Abū Ghuddah, Aḥmad, and al-Tamīmī, 1995, pp. 41–42). One kind of hedging contract that they explicitly endorsed is a forward sale (*salam*) of a commodity, as stated under Fatwa No. 1 in the Second Forum of DAB *Salam* differs from an option, however, in that the price must be delivered upfront in the contract session, and it is a binding contract on both parties.

IIFM guidelines for “Islamic hedging” include, inter alia, the following: (i) the purpose must be a real hedge against unexpected risks to both sides of the transaction; (ii) it should not be used for the purpose of speculation; (iii) a cash settlement without the actual transaction involving delivery and receipt of assets is not permitted; and (iv) delay in receipt and delivery in the case of cross-currency and FX forward transactions causes non-Sharī‘ah compliance.

Standards are jointly published in association with x International Swaps and Derivatives Association, Inc (ISDA).⁹ The standards are not only based on existing market practices but also have an element of innovation. To date, seven standards related to Islamic hedging have been published:

- Tahawwut (Hedging) Master Agreement (TMA)
- Islamic Profit Rate Swap (IPRS) – Single Sale structure
- Islamic Profit Rate Swap (IPRS) – Two Sale structure
- Islamic Cross-Currency Swap (ICRCS)
- Islamic Foreign Exchange Forward (IFX Forward) – Single Binding *Wa’d*-based
- Islamic Foreign Exchange Forward (IFX Forward) – Two Unilateral and Independent *Wa’d*-based standard
- Islamic Credit Support Deed for Cash Collateral (VM).

⁸ <http://www.dallah.com/>

⁹ <http://www.iifm.net/sites/default/files/Session%20%20-%20ISDA-IIFM%20Islamic%20Hedging%20Standards%20by%20Habib%20Motani%20and%20Ijlal%20Ahmed%20Alvi.pdf>

In 2015, the National Shari'ah Board – Indonesian Council of Ulama issued a fatwa (NO:96/DSN-MUI/IV/2015)¹⁰ permitting hedging in a foreign currency exchange by use of a bilateral promise (*muwa'adah*), subject to the following restrictions and conditions:

- a. It is not to be used for the purpose of speculation.
- b. The usage is based on real need.
- c. The right under a bilateral promise is not tradable.
- d. Hedging can only be used to reduce the risk exposure due to the volatility of foreign currency as well as liabilities created due to foreign currency contractual obligations.
- e. The users of hedging consist of certain institutions identified in the DSN-MUI fatwa.
- f. The rate for the currency exchange must be mutually agreed to by the parties at the time of entering into the bilateral promise.
- g. The hedging arrangement must be settled in full at the point of maturity. Netting is only allowed in the event of rollover, roll-back, or termination due to change of the hedging subject matter.

The SAC-SC and SAC-BNM have also issued a number of Shari'ah resolutions permitting Islamic hedging products. Examples of the Councils' Shari'ah resolutions are as follows:

1. The SAC-BNM (2007), in its 49th meeting, held on 28 April 2005,¹¹ resolved that an Islamic banking institution is allowed to enter into a forward foreign currency transaction based on a unilateral binding promise (binding only on the promisor – *wa'd mulzim*) and that if the promisor breaches the promise, he is bound to remit compensation for the breach. However, this permissibility is only applicable to currency hedging. This hedging transaction may be arranged between an Islamic banking institution and (a) its customer, or (b) another Islamic banking institution, or (c) a conventional banking institution.

¹⁰ <https://dsnemui.or.id/kategori/fatwa/page/3/>

¹¹ https://www.sacbnm.org/?page_id=3316

The SAC-BNM also approved at its special meeting on 13 April 2007¹² forward foreign currency exchange by using *bay' mu'ajjal* (deferred payment sale) and *bay' ṣarf* (sale of currency) as an alternative to using *wa'd*.

2. Besides approving the forward foreign currency transaction, the SAC-BNM also approved the foreign currency option.

3. With regards to swaps, the SAC-BNM (2007) resolved in their 44th meeting, dated 24 June 2004,¹³ that the arrangement of an Islamic profit rate swap through the contract of *bai al-Inah* conducted among financial institutions or between an Islamic financial institution and another counterparty is permissible.

4. The SAC-SC (2006) also took a similar stance towards hedging products. In its 11th meeting, on 26 November 1997,¹⁴ the SACSC resolved that the crude palm oil futures contract (a commodity futures contract where parties sell and purchase crude palm oil at an agreed price and future date of delivery) is permissible, as it is free from any element of *gharar* (uncertainty) and *maysir* (gambling).

5. In addition to approving the legality of the crude palm oil futures contract, the SAC-SC in its 13th meeting, on 19 March 1998, resolved that the composite (stock) index futures contract (a type of financial futures contract) does not contravene Sharī'ah principles.

It can be seen from the above that there are some key regulations and Sharī'ah guidelines for Islamic hedging which need to be kept in perspective by any IFI dealing with Islamic hedging instruments, such as: (a) the hedging contract and its underlying assets must be Sharī'ah-compliant; (b) the hedging mechanism must not be used for speculation or gambling; (c) the hedging transaction must be entered based on a real underlying risk arising from a real investment that adds value to the real economy; and (d) the strategy or technique involved in risk hedging must not sever the risk from its underlying assets.

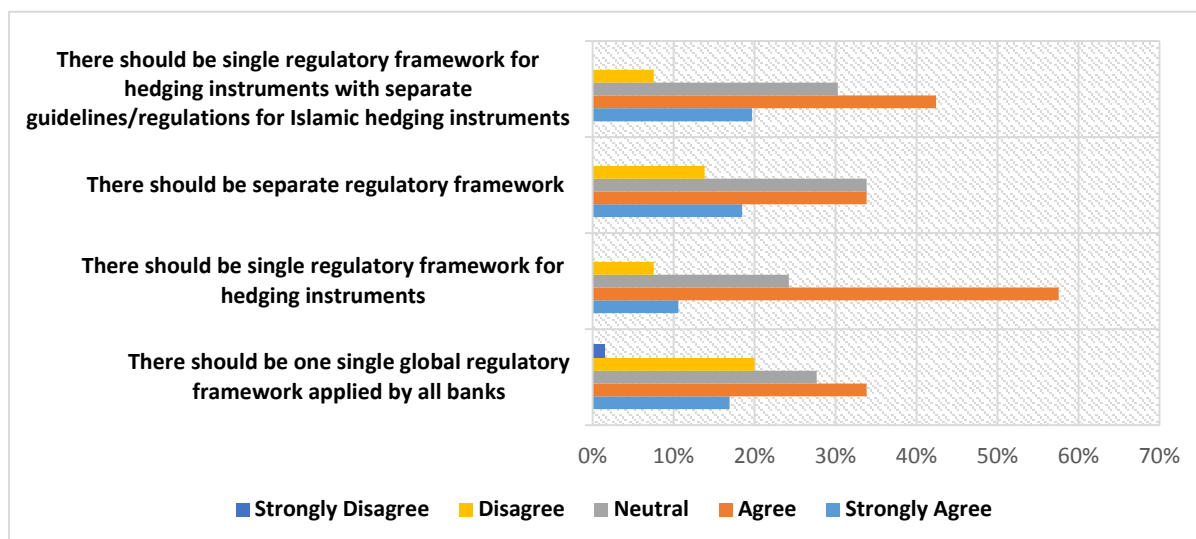
Keeping the above in perspective, we surveyed the IFIs to evaluate their opinions on the applicability of regulations for hedging instruments. Around two-thirds of the institutions agreed that there should be a single global regulatory framework for Islamic hedging instruments (figure 25).

¹² www.bnm.gov.my/microsite/fs/sac/shariah_resolutions_2nd_edition_EN.pdf

¹³ www.bnm.gov.my/microsite/fs/sac/shariah_resolutions_2nd_edition_EN.pdf

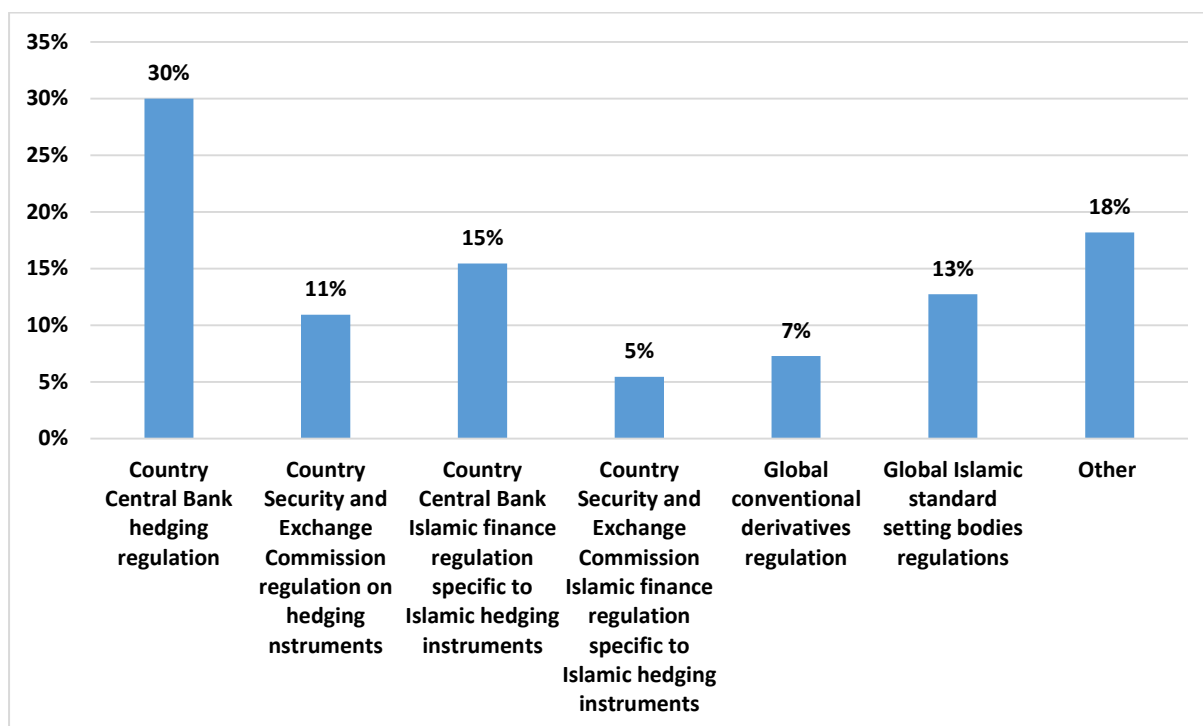
¹⁴ <https://www.sc.com.my/api/documentms/download.ashx?id=5f0c31dc-daa9-43c1-80ac-e7ecf70c8e44>

Figure 25 Regulatory Framework for Islamic Hedging instruments



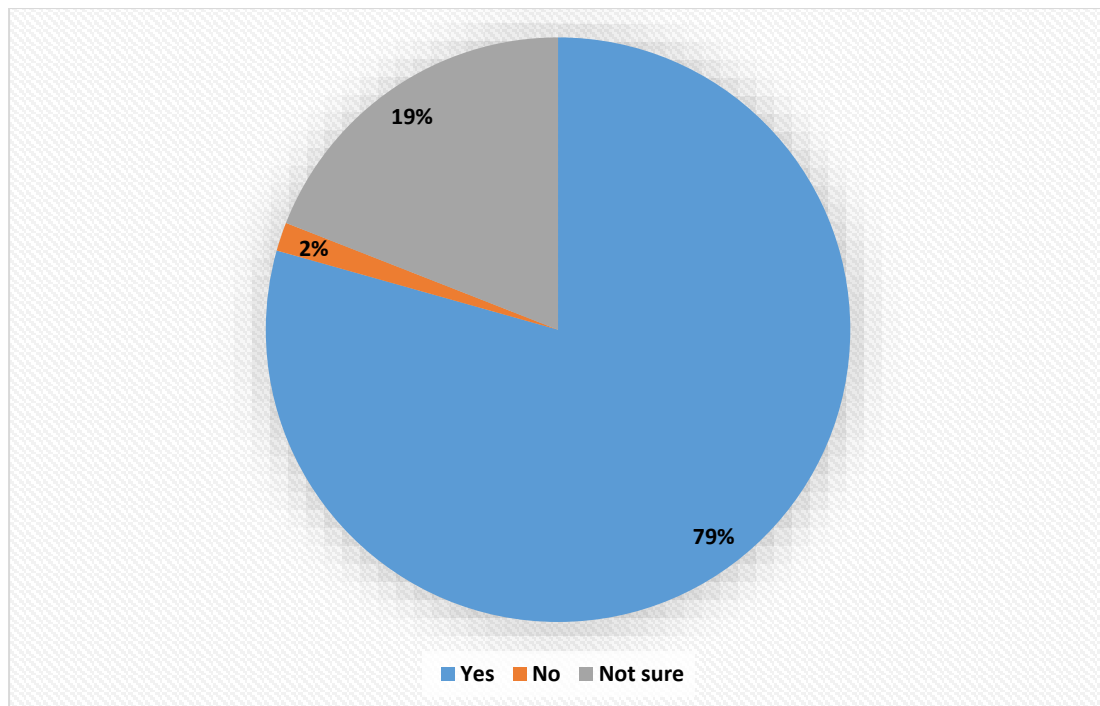
In terms of the current practices among the IFIs surveyed, the survey revealed that around one-third of the institutions are using their respective central bank guidelines on hedging practices, while 15% are following central bank guidelines on Islamic finance that have a reference to hedging practices for IFIs (figure 26).

Figure 26 Regulations Applicable to Islamic Hedging Instruments



A majority of the IFIs (79%) thought that Islamic finance standard-setting bodies such as the IFSB, IIFM and AAOIFI should develop standardised regulations on Islamic hedging instruments which should be applicable to all IFIs globally, irrespective of their jurisdiction, to clarify how the instruments are to be utilised and to enhance cross-border transactions (figure 27).

Figure 27 Are Islamic Hedging Regulations Standardized Globally



SECTION 7: CONCLUSION

This study focuses on risk perceptions, risk assessment and, in particular, the intensity of hedging usage among IFIs across jurisdictions. The research used the survey method to get an overview of the usage of Islamic hedging instruments and its importance in risk management by the IFIs. The study also shed light on the existing regulation and supervision of Islamic hedging instruments, and on the implications and considerations for IFIs in the future.

The findings of the data analysis showed that risk identification and risk assessment are among the risk management practices of IFIs. The risk profile of IFIs is not much different from that of conventional banks and thus credit risk, liquidity risk and rate-of-return risk were considered to be the main risks for Islamic institutions. But, surprisingly, in most instances, IFIs seem reluctant to use hedging instruments to manage their risk, which might be due to the standardisation of Sharī'ah-compliant hedging instruments or the lack of regulation to manage hedging practices. The survey also revealed that over 80% of the IFIs agreed that hedging is important for meeting their banks' investment policy, for increasing their expected future cash flows and for reducing financial distress. However, apart from using asset–liability alignment and *wa'd* as the main hedging tools, in most instances IFIs were either not using hedging instruments or lacked the motivation to utilise them.

In terms of the regulation of hedging instruments, almost half of the respondent IFIs indicated they were aware that there are specific regulations pertaining to the use of Islamic hedging instruments, but it was discouraging to find that regulations are not standardised across the globe, which hinders their application. Most of the IFIs were using their country's central bank directives specifically on Islamic hedging instruments, or sometimes applied regulations pertaining to Islamic finance activities. It was encouraging to see that a vast majority of the institutions agreed that there should be standardised, globally accepted regulations issued by global standard setters such as the IFSB, IIFM or AAOIFI.

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