

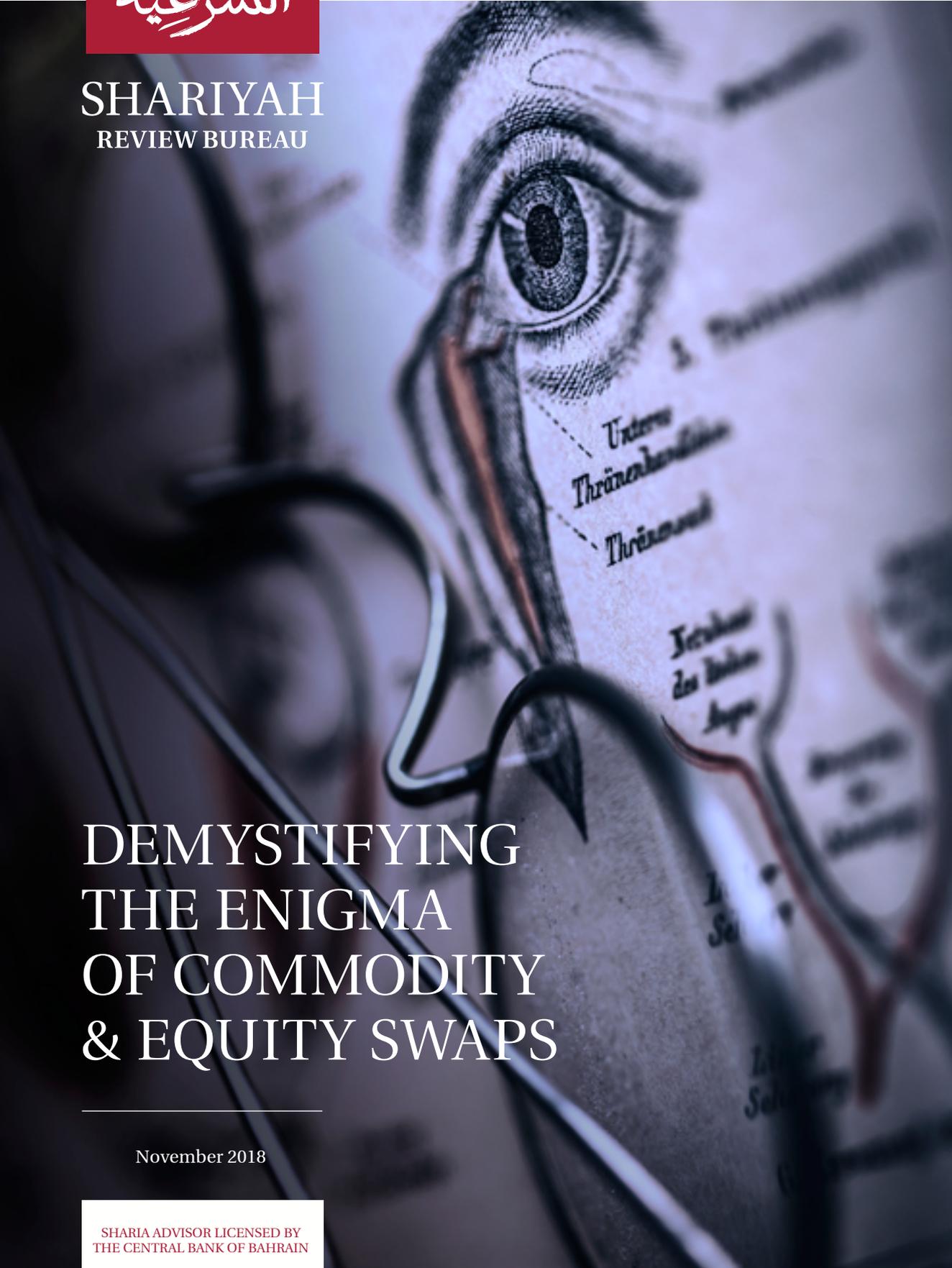
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SHARIYAH
REVIEW BUREAU

DEMYSTIFYING THE ENIGMA OF COMMODITY & EQUITY SWAPS

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SHARIA ADVISOR LICENSED BY
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Introduction

A financial swap takes place when two parties exchange financial instruments. The term financial instrument generally refers to tradable monetary assets that may include cash, contractual right to receive cash, or evidence of ownership of a certain asset. Swaps are essentially a derivative contract in which the value of the contract depends on the assets it represents. These assets are called the underlying assets and their value typically changes, resulting in a change of the value of the derivative itself. A swap between two parties may be based on interest rates, cash flows, derivatives, bonds, or stocks.

However, the assets themselves are not exchanged, but rather their cash flows. Each cash flow is one leg of the swap¹. This paper looks at two common types of swaps known as commodity swaps and equity swaps. Initially, these swaps and their structures are introduced.

Thereafter, they are analysed from a Shariah perspective. The paper comes to an end with proposed Shariah compliant alternatives².

¹ Martin (2016), Equity Swap, Clevertism, Available from: <https://www.cleverism.com/lexicon/equity-swap-definition/>

² Financial Express, Some basic ideas about commodity swaps, Available from: <https://www.financialexpress.com/archive/some-basic-ideas-about-commodity-swaps/201454/>

INTRODUCTION TO COMMODITY SWAPS

In commodity swaps, the cash flows to be exchanged are linked to commodity prices. Commodities are physical assets such as precious metals, base metals, energy stores (such as natural gas or crude oil) and food (including wheat, cattle, etc).

Commodity swaps were first traded in the mid-1970's enabling producers and consumers to hedge commodity prices. Swaps involving oil prices are probably the most common types of swaps in the market. The floating leg of a commodity swap is tied to the price of a commodity or a commodity index, while the fixed leg payments are stipulated in the contract as an interest rate swap. It is common for a commodity swap to be settled in cash. The floating leg is typically held by a commodity consumer, who is willing to pay a fixed rate for a commodity to guarantee its price. The fixed leg is typically held by a commodity producer who agrees to pay a floating rate which is set by the market price of the underlying commodity, thereby hedging against falls in the price of the commodity. In most cases, swap rates are fixed either by commodity futures, or by estimating the commodity forward price³.

No commodities are exchanged during the 'swap trade', cash is exchanged instead, in commodity swaps, exchanged cash flows are dependent on the price (floating/market/spot) of an underlying commodity. It's more or less similar to a fixed-floating interest rate swap, the difference is the floating leg is based on the price of the underlying commodity instead of LIBOR or EURIBOR⁴.

The advantage of being linked with a commodity swap is that the user can secure a maximum price to the commodity and agree to pay a financial institution a fixed amount. In return, he/she gets payments based on the market price of the commodity.



³ Fincad, Commodity Swaps, Available from: <http://www.fincad.com/resources/resource-library/wiki/commodity-swaps>

⁴ Sunshine Profits, Commodity Swap, Available from: <https://www.sunshineprofits.com/gold-silver/dictionary/commodity-swap/>

TYPES OF COMMODITY SWAPS

There are two main types of commodity swaps:

- **Fixed-floating commodity swaps** are similar to the interest rate fixed-floating swaps except that both legs are commodity based.
- **Commodity for interest swaps** are similar to equity swaps, in which a total return on the commodity is exchanged for some money market rate (plus or minus a spread)^{5/6}.

Heavy users of oil, such as airlines will often enter into contracts in which they agree to make a series of fixed payments, say every six months for two years, and receive payments on those same dates as determined by an oil price index. The calculation of the demand is often based on a specific number of tons of oil in order to lock in the price the airline pays for a specific quantity of oil, purchased at regular intervals over the two year-period.

We note that in most interest rate, currency and equity swaps, the variable payment is based on the price or rate on a specific day, whereas in swaps like that of oil, the variable payment is based on the average value of an oil index over a period of time. This eliminates the effect of a volatile day and ensures that the payment will be more accurately represented as a normal value of the index.

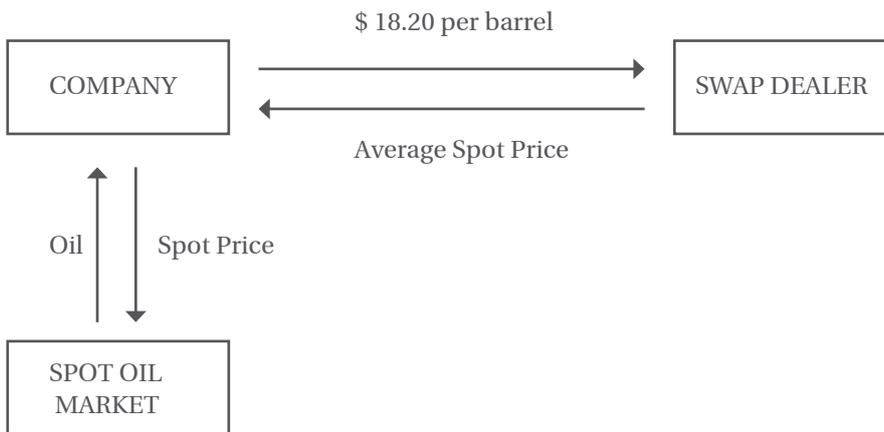


⁵ Fincad, Commodity Swaps, Available from: <http://www.fincad.com/resources/resource-library/wiki/commodity-swaps>

⁶ Vides et al. (n.d.), Swap Pricing, Sweden: Mälardalen University Available from: <http://janroman.dhis.org/stud/AF2%20Swaps.pdf>

COMMODITY SWAP EXAMPLE

A Company has a constant demand for 50,000 barrels of oil per month and is concerned about volatile oil prices. It enters a three-year commodity swap with a swap dealer. The current spot oil price is \$ 18.10 per barrel. The Company agrees to make monthly payments to the swap dealer at a rate of \$ 18.20 per barrel. The notional principal is 50,000 barrels. The swap dealer agrees to pay the company the average daily price for oil during the preceding month. The Company pays to the swap dealer \$ 18.20 per barrel over the life of the contract, and from the swap dealer it receives the last month's average spot price⁷.



⁷ Sunshine Profits, Commodity Swap, Available from:
<https://www.sunshineprofits.com/gold-silver/dictionary/commodity-swap/>

EQUITY SWAP

Equity swaps are exchanges of cash flows in which at least one of the indices is an equity index. An equity index is a measure of the performance of an individual stock or a basket of stocks⁸.

An Equity swap is an agreement to exchange the dividends and capital gains realised on an equity index for either a fixed or a floating rate of interest. The swaps are arranged based on some notional face value at the start of the swap and there is a regular exchange of cash flows based on an agreement term to maturity. Equity swaps (and other equity derivatives) provide synthetic exposure to physical equities.

Equity swaps are conventionally documented under the International Swaps & Derivatives Association (ISDA) Master Agreement and schedules to that agreement.

Under an equity swap, the `Equity Amount Payer' (as defined under ISDA documentation) will pay the economic return on the underlying security. This return is based on a reference price and is paid at a specified reset date or dates. The Floating or Fixed Rate Payer (the other party to the equity swap) pays an amount based on a reference interest rate or a fixed rate. This amount accrues over the term of the swap⁹.

Equity swaps can be used by portfolio managers to convert returns from a fixed or floating investment to the returns from investments in an equity index, or vice versa.



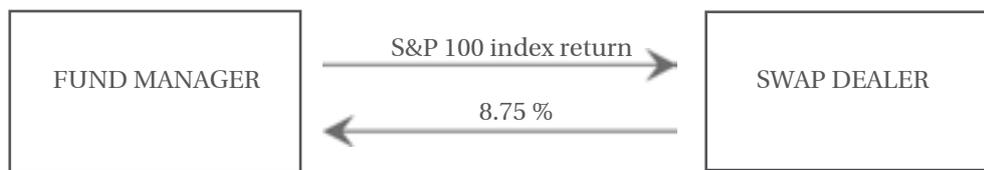
⁸ Sooran, C. (n.d.), Equity Swaps and the Exchange of Cash Flow, Available from: <https://www.finpipe.com/equity-swaps-cash-flows/>

⁹ Hedgeweek, Equity swaps as an alternative to trading in equities, Available from: <https://www.hedgeweek.com/2005/09/08/equity-swaps-alternative-trading-equities>

EQUITY SWAP EXAMPLE

Consider the portfolio of an equity fund the return of which is highly correlated to the S&P 100 stock index. The fund manager is concerned about the risk exposure and decides to enter into an equity swap.

The fund manager agrees to pay the swap dealer the S&P 100 return and receive from the swap dealer a fixed rate of 8.75 percent per annum. These payments are to be made quarterly and the notional principal is fixed at 100 million dollars.



The fund manager can alter the risk exposure of the fund by using an equity swap thereby transferring the risk in return of 8.75 % to the other party.

Each party to an equity swap bears a credit exposure to the other. If the underlying share rises in price, the equity payer is required to make a payment referenced to the increase, and conversely if the underlying share falls, the equity payer is entitled to receive a payment. Thus, when the stock price falls, there is credit risk to the equity payer, and when it rises, the other way. This is mitigated by collateralisation being adjusted in line with price movements in the underlying shares.

Equity swaps are favoured by counterparties such as hedge funds, as the product enables them to achieve the economic benefits of ownership of shares without bearing the cost and expense of the consequences of ownership, such as high custodian fees in each jurisdiction to hold shares in the relevant clearing system, having to maintain records, monitor corporate actions and undertaking regular reconciliations.

To manage these consequences, traditional institutional shareholders have to employ operations staff and run a back office. Swap counterparties avoid these consequences and achieve cost savings through doing so.

In addition, there may be some tax benefits for certain holders of equity swaps in holding a synthetic exposure to shares rather than a direct exposure.

Because the swap contract is an ISDA-documented OTC derivative contract (involving no outright position in the underlying equity), one immediate benefit is that it does not tie up the balance sheet as it would with an outright equity position. Hence, equity swaps are used as a simple and cost-effective way to achieve leverage. Some hedge funds can and do use equity swaps for precisely that purpose. But an equally compelling reason, particularly for those funds that do not employ leverage, is the savings these swaps can offer on the underlying transactional costs. This is especially valuable for funds that run a strategy involving a very high volume of transactions, such as statistical arbitrage or short-term long/short equity trading, where the need to keep transaction costs under control is critical to performance¹⁰.

¹⁰ Hedgeweek, Equity swaps as an alternative to trading in equities, Available from: <https://www.hedgeweek.com/2005/09/08/equity-swaps-alternative-trading-equities>

SHARIAH ANALYSIS OF COMMODITY AND EQUITY SWAPS

Conventional commodity and equity swaps are non-Shariah compliant financial instruments primarily because they have strong characteristics of *Riba* (interest) and the prohibition of bilateral exchange of debts.

1. *Riba*

Commodity and equity swaps are *Riba* transactions. These financial instruments are premised on the exchange of two cash flows. Exchanged cash flows are dependent on the price (floating/market/spot) of an underlying commodity. Unequal payments in homogenous currencies is tantamount to *Riba al-Fadhl*. *Riba al-Fadhl* (known as *Riba* due to surplus and excess) originates when a *Riba* item is exchanged for the same item in an unequal amount. In the case of commodity and equity swaps, the *Riba* item is money.

The exchange of cash flows at different periods results in another type of *Riba* known as *Riba al-Nasi'ah*. This refers to the deferral in an exchange of two homogenous *Riba* items.

The Prophet Muhammad (peace be upon him) said:

“(When) gold is exchanged in lieu of gold, silver is exchanged for silver, wheat is exchanged for wheat, barley is exchanged for barley, dates are exchanged for dates and salt is exchanged for salt; it must be exchanged in equal measure and settled immediately; and if the counter exchanges differ, sell (whichever quantity) as you wish as long as settlement is immediate.”

(Sahih Muslim)

In the interpretation of the above hadith, the AAOIFI Sharia Standard No.1 asserts that whenever currencies of the same denomination, the following must be adhered to:

2/1/1 Both parties must take possession of the counter-values before dispersing, such possession being either actual or constructive.

2/1/2 The counter-values of the same currency must be of equal amount, even if one of them is in paper money and the other is in coin of the same country, like a note of one pound for a coin of one pound.

Riba is categorically prohibited in the Qur'an. The Quran says,

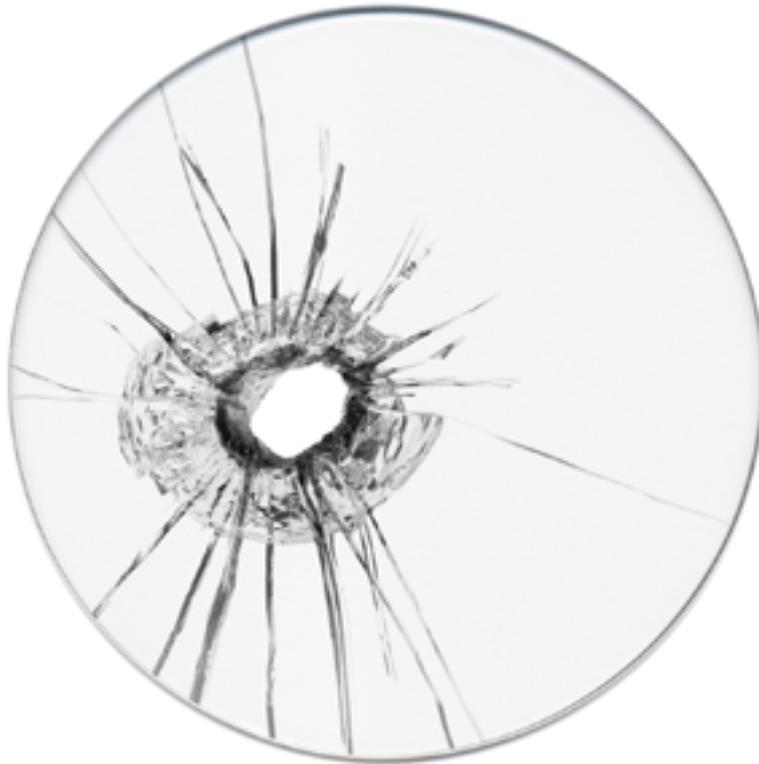
O you who believe! Remain conscious of Allah, and give up all outstanding gains from usury, if you are [truly] believers; for if you do it not, then know that you are at war with Allah and His Messenger. But if you repent, then you shall be entitled to [the return of] your principal. You will do no wrong, and neither will you be wronged.

[Surat Al-Baqarah, 278-279]

Prophet Muhammad (peace be upon him) also said:

“Cursed is the one who takes interest, and the one who pays it, the one who records it, and the two who (accept to be the) witnesses for signing it.”

(Muslim)



2. An exchange of debt for debt

Two parties in a commodity and equity swap lock in a fixed price for a floating price over a defined period. This agreement to exchange two cash flows results in an exchange of two debts owed to one another over the defined period. A contract to exchange two sums of money in the future is known as *Bay' al-Kali` Bil-Kali`* (selling a debt for another debt). *Bay' al-Kali` Bil-Kali`* is prohibited. Ibn Rushd said: "As for sale of debt for debt, Muslim scholars are unanimous regarding its prohibition."



A SHARIAH COMPLIANT ALTERNATIVE

The underlying economic reason for a commodity swap is to lock in a maximum price for a commodity which is required frequently over a long term. For an equity swap, the underlying reason is to lock in a fixed rate of return on an equity portfolio. This economic motive can be attained through Shariah compliant products by either dealing with the commodity supplier directly or by dealing with a Shariah compliant financing institution.

The following are alternatives to swap products, especially commodity swap:

1. Dealing with the commodity supplier

If the company deals with the commodity supplier, it can use the following Shariah instruments:

- a. *Salam*
- b. *Wa'd and Murabahah*
- c. *Wa'dan* (double *Wa'd*)

a. Salam

If the commodity is not yet in existence or not in the ownership of the provider, a *Salam* contract is ideal. *Salam* is similar to a conventional forward contract whereby the price of an asset is paid upfront at the time of the contract for the asset to be delivered later (similar to a 'deferred delivery' model in conventional finance). The legitimacy of *Salam* is rooted in the Sunnah, whereby the Prophet Muhammad (peace be upon him) observed the practice of people paying in advance the price of dates to be delivered within two or three years. The sale, however, did not specify the quality, measure or weight of the dates at the start of the contract. The Prophet Muhammad (peace be upon him) ordained that: "Whoever pays money in advance (for fruits) (to be delivered later) should pay it for a known quality, specified measure and weight along with the price and time of delivery" (reported by Imam Bukhari and others) Consequently, when using *Salam*, there are a number of conditions the counterparties must adhere to, including the following:

- (a) 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;
- (b) before delivery, the risks on the asset lies with the seller and upon delivery, the risks are transferred to the buyer.

In a *Salam* structure, the company would have to pay the funds upfront for a period of supply. Liquidity and low cash flow might be an issue for companies to make full payment on spot. Therefore, another option is the *Wa'd and Murabahah* product.

b. Wa'd and Murabahah

The use of *Wa'd and Murabahah* is another possible product to source the commodity at a fixed rate for a company. The company can take an undertaking to purchase x amount of commodity for x price. The price can incorporate a mark-up in favour of the seller.

However, the problem with this structure is that the commodity has to be in existence and in the ownership and possession of the seller at the time of contract. This might not be possible with all products. To mitigate this, a double-*Wa'd* product may be used.

c. Wa'dan

Another possible structure is the use of two independent *Wa'd*. The company desiring the commodity can make a *Wa'd* to purchase a defined amount of commodity on specified dates. The counter-party can undertake to supply the commodity for an X price. This will be part of a master agreement. Sale contracts will transpire on the specified dates. Since the *Wa'd* is a unilateral promise, it does not have to satisfy the requirements of a bilateral contract (aqd) under Shariah such as the (i) knowledge of the price and (ii) possession or ownership of the subject matter of the contract.



2. Dealing with a financier

If a company wants to finance the commodity, the following products can be considered:

- a. Murabahah to the purchase orderer
- b. Islamic Commodity Price Swap

a. Murabahah to the purchase orderer

In this structure, the financier will purchase the commodity upon the request of the company from a third-party seller and resell it to a customer on a deferred basis. The financier will not resell the asset/commodity unless title has been transferred from the seller to the financier.

b. Islamic Commodity Price Swap

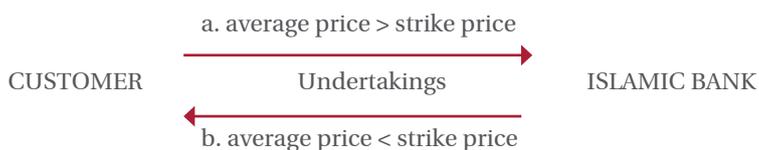
Commodity hedging allows clients to manage their exposure to movements in commodity prices. The Islamic Commodity Price Swap (ICPS) is used to hedge commodity prices: it allows the customer to lock in the future price of a commodity.

The ICPS works in the following way:

The Islamic bank and customer exchange an independent unilateral undertaking, whereby each party promises to buy a separate commodity for cost plus profit. The profit in this transaction represents the difference in the price of the commodity from the pre-agreed strike price.

Each promise is independent and is exercised on different conditions. For example, the bank promises to pay the difference if the average price for the commodity over a specified period is more than its pre-agreed strike price. At the same time, the customer promises to pay the difference if the average price of the commodity over a specified period is less than its pre-agreed strike price. This ensures that the price of the commodity is hedged to the pre-agreed strike price. The difference to be paid by the Islamic bank or the customer is done through a commodity *Murabahah* transaction¹¹.

1. Start date

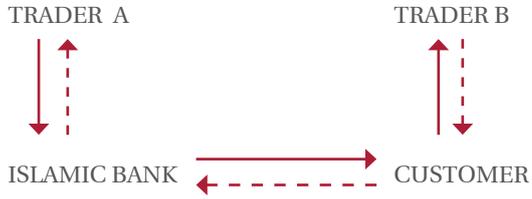


a. The first unilateral promise: if the average price of the reference commodity (during a specified period) is greater than the pre-agreed strike price, the bank promises to pay the difference through a commodity *Murabahah* transaction (using different Shariah compliant commodities).

b. the second unilateral promise. If the average price is less than the strike price, the customer promises to pay the difference. Again, using a commodity *Murabahah* transaction.

¹¹ JISRA (2015), Islamic Capital Markets Principles and Practices, Kuala Lumpur: ISRA

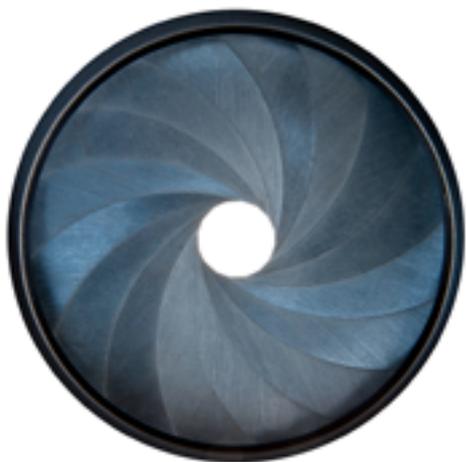
2. Maturity date



Commodity flow —→

Cash flow - - ->

At the maturity date, a commodity *Murabahah* takes place. Either the bank or the customer will pay the difference to each other, depending on the average price of the commodity during the specified period.



Conclusion

Commodity swaps and equity swaps are financial derivatives. In commodity swaps, exchanged cash flows are dependent on the price (floating/market/spot) of an underlying commodity. A commodity swap allows a customer to secure a maximum price for a commodity in lieu of a fixed amount. In return, he/she gets payments based on the market price of the commodity. Fixed-floating and commodity-for-interest are the two types of commodity swaps commonly seen. Equity swaps (and other equity derivatives) provide synthetic exposure to physical equities. In an equity swap, the return on the underlying share is exchanged for a return based on a reference interest rate or yield. Commodity and equity swaps are non-Shariah compliant. These swaps are *Riba* based transactions. These financial instruments are premised on the exchange of two cash flows of unequal amounts and at staggered intervals which tantamount to *Riba al-Fadhl* and *Riba al-Nasi'ah*. There are a number of ways to realise the economic objective of such swaps through Shariah compliant products such as *Salam*, *Wa'd*, *Murabahah* and the double-*Wa'd* products. Similarly, an Islamic commodity price swap can be structured to help clients manage their exposure to movements in commodity prices.

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We've been preparing our clients for a new world in which Sharia Advisory rapidly becomes the currency of choice. From faster Certification programs, to direct Sharia Supervisory access, and perhaps most critically, navigating through the economic structures of clients offerings within a matter of days. We've have been working hard to help clients like you capitalize on opportunities in global Islamic financial markets.

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The future of Sharia Advisory and Audit is exciting and we are very lucky to be a part of this business!

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Disclaimer

This is a preliminary Shariah research and is by no means a definitive conclusion or fatwa on the aforementioned subject. This paper was written to develop knowledge and research on this complex subject from a Shariah perspective. We hope that this paper will prompt and engage global Islamic finance bodies, Shariah scholars and Muslim economists to analyze, comment and build upon the arguments expressed.

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