



## **OIL & GAS TRADABLE INDEX**

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# Oil & Gas Tradable Index

The Oil & Gas Sector plays vital roles in Pakistan's economy and therefore PSX has developed Oil & Gas Tradable Index which tracks at least 80% free-float market capitalization of the Banking Sector. This index provides Investors and Market Intermediaries with an appropriate benchmark that captures the performance of each segment of the economy.

*\*Oil & gas sector only includes Oil & Gas exploration Sector*

## 1. Introduction to Oil & Gas Tradable Index

The primary objective of the Oil & Gas Tradable Index is to have a benchmark by which the stock price performance of the Oil & Gas Sector can be gauged and compared over a period of time. This index is designed to provide investors with a depiction of the breath of the sector and their performance in Pakistan's equity market.

Globally, the Free-float Methodology of Index construction is considered to be an industry best practice and all major index providers like MSCI, FTSE and S&P have adopted the same. MSCI, a leading global index provider, shifted all its indices to the Free-float Methodology in 2002.

Oil & Gas Tradable index is calculated using the "Free-Float Market Capitalization" methodology. In accordance with methodology, the level of index at any point of time, reflects the free-float market value of top companies in relation to the base period. The free-float methodology refers to an index construction methodology that takes into account only the market capitalization of free-float shares of a company for the purpose of index calculation.

Free-float Methodology improves index flexibility in terms of inclusion any stock from all the listed stocks. This improves market coverage and sector coverage of the index. For example, under a Full-Market Capitalization Methodology, companies with large market capitalization and low free-float can be included in the Index. However, under the Free-float Methodology, since only the free-float market capitalization of each company is considered for index calculation, it becomes difficult to include closely held companies in the index while at the same time preventing their undue influence on the index movement.

Oil & Gas Tradable Index offer unparalleled benefits to Investors who have a portfolio comprising of the respective stocks and intend to hedge their portfolio risks against volatility of the Oil & Gas sector. It will also help those Investors who wish to take a view on the overall movement on the Oil & Gas Sector.

## 2. Objective and Description:

The Free-Float calculation can be used to construct stock indices for better market representation than those constructed on the basis of total market capitalization of companies.

It gives weight for constituent companies as per their actual liquidity in the market and is not unduly influenced by tightly held large-cap companies.

Free-Float can be used by the Exchange for regulatory purposes such as risk management and market surveillance.

### 3. Free - Float Methodology

Free-Float means proportion of total shares issued by a company that are readily available for trading at the Stock Exchange. It generally excludes the shares held by controlling directors / sponsors / promoters, government and other locked-in shares not available for trading in the normal course.

#### 3.1. Objective and Description

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- It gives weight for constituent companies as per their actual liquidity in the market and is not unduly influenced by tightly held large-cap companies.
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| <b>Free-Float Calculation Methodology</b> |   |            |
|---|---|------------|
| <b>Total Outstanding Shares</b>           |   | <b>xxx</b> |
| Less                                      | Government Holdings   | xxx        |
|   | Shares held by Directors / Sponsors / Senior Management Officers and their Associates                     | xxx        |
|   | Shares in Physical Form   | xxx        |
|   | Shares held by Associate Companies / Group Companies (Cross Holdings)                                     | xxx        |
|   | Shares issued under Employees Stock Option Scheme that cannot be sold in the Open market in normal course | xxx        |
|   | Treasury Shares   | xxx        |
|   | Any other category that are barred from selling at the review date  | xxx        |
| <b>Free Float</b>                         |   | <b>xxx</b> |

Notwithstanding to the above calculations, under no circumstances, free-float of a scrip shall exceed its book entry shares, available in the Central Depository System.

Sponsor” has the same meaning as defined in The Companies (Issue of Capital) Rules, 1996

“Senior Management Officer” and “Associate” have the same meaning as defined in the Securities Act, 2015

#### **4. Index Methodology**

This Index is based on the internationally accepted standard of Free Float Market Capitalization weightage. The weightage of each scrip is determined in the based on the 50% Free Float (FF) and 50% Impact Cost (IC).

The selection criteria give 50% weightage to the FF and 50% to IC of each stock. The lowest IC and highest FF are given top marks. Companies are selected based on total marks (in descending order) until at least 80% FF market cap of the given sector (Oil & Gas) has been included. Once a minimum 80% FF market cap has been achieved, no more companies shall be added to the index

#### **5. Pre - Requisites for Inclusion in Index**

The Company which is on the Defaulters’ Counter and/or its trading is suspended, declared Non-Tradable (i.e. NT) in preceding 6 months from the date of re-composition or which is in the process of de-listing or is on the non-compliant segment shall not be considered for inclusion in Banking Tradable index

The Company will be eligible for Oil & Gas Tradable index if its securities are available in the Central Depository System

The Company should have a formal listing history of at least six months on PSX;

The company must have an operational track record of at least one financial year and it should not be in default(s) of the Listing Regulations;

The Company should have minimum free-float shares of 10% of total outstanding shares or 30 million free-float shares;

#### **6. Selection Criteria**

The companies which qualify the pre-requisites will be selected on the basis of highest marks obtained as per the following criteria:

##### **6.1 Free Float Market Capitalization**

The scrip should include in the Top Companies, ranked on the basis of free-float market capitalization. Free-Float means proportion of total shares issued by a company that are readily available for trading at the Stock Exchange. It generally excludes the shares held by controlling directors / sponsors / promoters, government and other locked-in shares not available for trading in the normal course. The free-float market capitalization for each company is calculated by multiplying its total outstanding free-float shares with the closing market price on the day of composition / re-composition.

## **6.2 Liquidity**

The Company will be eligible for Oil & Gas Tradable index if its securities are traded for 75% of the total trading days.

The scrips included in the top companies should also be characterized by adequate liquidity i.e. transaction cost and one of the practical, realistic and accurate measures of market liquidity is Impact Cost. It is defined as the cost of executing a transaction in a given stock for a specific predefined order size of fixed rupee amount (currently set to Rs. 500,000). The transaction cost referred here is not the fixed cost typically incurred in terms of transaction charges or cost arising through CDC, rather it is the cost attributable to the market liquidity, which comes from buyers and sellers in the market. Average of the best bid price and the best offer price of a scrip at any time, called ideal price, is considered as the best price to trade in that particular scrip at that time. However, every buyer/seller suffers a cost in excess of this ideal price while actually executing a transaction (buy or sell). This price movement from the ideal price is known as the transaction cost and when measured as the percentage of ideal price is called Impact Cost.

Under impact cost analysis high liquidity is represented by low impact cost. A stock with high market capitalization cannot be assumed to be liquid just because of its sheer size. Some large market capitalization stocks are in reality very illiquid. Similarly, high trading volumes, in themselves, are not enough to confirm consistent liquidity of a stock

Impact cost analysis looks at the order book of each stock throughout the whole trading day and based on the bids and offers calculates impact costs in terms of percentages for each instance of the order book.

The Impact Cost of each security is calculated as described hereunder:

First the impact cost is calculated separately for the buy and the sell-side in each order book for past six months.

The buy-side impact cost (or the sell-side impact cost) is the simple average of the buy-side impact cost (or the sell-side impact cost) computed in the last six months.

Impact Cost reckoned for the purpose of all computation is the mean of such buy-side impact cost and sell-side impact cost.

## **6.3 Final Rank**

The scrip should be included in the top companies on the basis of final ranking. The final rank is arrived by assigning the following weightages of the respective elements:

| Parameters                                 | Weight      |
|--|-------------|
| Impact Cost (lower IC means higher weight) | 50%         |
| Free Float                                 | 50%         |
| <b>Total</b>                               | <b>100%</b> |

The security having highest overall weight will be given a higher rank compared to lower overall weight scrip.

#### **6.4 Companies Selection for Inclusion**

The companies selected for inclusion in the Oil & Gas Tradable index is determined on the basis of "Free-Float Market Capitalization" methodology. As per this methodology, the level of Index at any point of time reflects combined weightages of the two key components of the stocks relative to a base period.

#### **7. Base Period**

The base Oil & Gas Tradable Index level is the opening Oil & Gas Sector Index (from All-Shares Index) value as on 1st November 2011. The calculation of Oil & Gas index adds up the respective weights of the two elements of each stock marks in order to get the Index. The Divisor is the only link to the original base period value of the Oil & Gas Tradable index. It will keep the Index comparable over a period of time and will also be the adjustment point for all future corporate actions, replacement of scrips etc.

#### **8. Review Period / Re-composition**

The first Oil & Gas Tradable Index values are based on the price and free-float data as on 1st November 2011. Subsequent index re-compositions shall be on semi-annual basis as specified below.

| Basis                     | Revision                  |
|---------------------------|---------------------------|
| 30 <sup>th</sup> June     | 15 <sup>th</sup> August   |
| 31 <sup>th</sup> December | 15 <sup>th</sup> February |

#### **9. Maintenance of Oil & Gas Tradable Index**

The day-to-day maintenance of the Index will be carried out within the Broad Index Policy Framework set by the Exchange. The Management will ensure that Oil & Gas Tradable index and maintain their benchmark properties by striking a balance between frequent replacements in indices and maintaining their historical continuity.

## **10. Online Computation of the Index**

During market hours prices of the Index scrips at which trades are executed, are automatically used by the trading computer to calculate the Oil & Gas Tradable Index and continuously make updates on all trading workstations connected to the PSX trading computers on real time basis.

## **11. Adjustment in the Oil & Gas Tradable Index for corporate actions**

The arithmetic calculation involved in calculating Oil & Gas Tradable index is simple, however the issue arises when one of the component stocks pays a bonus or issues rights shares. If no adjustments were made, a discontinuity would arise between the current value of the index and its previous value despite the non-occurrence of any economic activity of substance. At the Exchange, the base value will be adjusted, which is used to alter market capitalization of the component stocks to arrive at the Oil & Gas Tradable index value. In line with the international practices the adjustment for corporate actions will be made as given under:

The determination of Ex price of a security is mentioned in Rule 10.6 of PSX Rule Book that: “If the Books of a Security are closed for determining any entitlement for its shareholders by the Company, the Exchange shall determine the ex-price based on the mechanism prescribed by the Exchange, as an opening price for the Trading Day falling on two Settlement Day before its Books Closure starting date”.

New Divisor shall be calculated due to corporate action at the end of T-3 days of its Book Closure starting date. E.g. Starting day of Book Closure = Friday, new divisor shall be calculated at day end of Tuesday.

The adjustment for corporate actions will be made as given under:

### **11.1 Adjustment for Cash Dividend**

No adjustment of cash dividend will be made contrary to the practice applicable in KSE-100 Index as it is a price return Index

### **11.2 Adjustment for Bonus Shares**

Declaration of Bonus requires adjustment in the free float capitalization and within the Index Divisor itself. The following process illustrates the process for a situation whereby a stock A has declared 10% bonus in terms of shares. Following steps are recommended to be followed in order to determine the price of Ex-Bonus of Stock A to calculate the revised free-float market capitalizations and new divisor for the next day.

#### **Step-1**

OGTI Index = 1,120 points

OGTI Index Free-float market capitalization = Rs. 13,950,000,000

Divisor= 12,455,357

Closing Price of Stock A: Rs. 22.50



Bonus: 10 %

Stock lot size= 100 Shares

Given below example, calculates the Ex-bonus price on the basis of a stock lot size of 100 shares by observing following steps.

- Total free-float shares after the Bonus issue:  $100 + (100 \times 10\%) = 110$  shares
- Cost of stock-lot size 100 shares x closing price of stock A:  $100 \times 22.50 = \text{Rs. } 2,250$

Ex-Bonus Price:  $2,250/110 = \text{RS } 20.45$

## Step-2

### Illustration, Revision in the Market Capitalization and Divisor

Share price and free-float shares of stock A shall be adjusted after the close of day to calculate the New Divisor for the next day

| Stock A           |       |                         |
|-------------------|-------|-------------------------|
| Free Float shares | Bonus | Total free float shares |
| 50,000,000        | 10%   | 55,000,000              |

| Constituents                                    | Share Price | Free Float Shares | Free Float Market Capitalization |
|---|-------------|-------------------|----------------------------------|
| Stock A   | 20.45       | 55,000,000        | 1,124,750,000                    |
| Stock B   | 41.00       | 150,000,000       | 6,150,000,000                    |
| Stock C   | 44.50       | 150,000,000       | 6,675,000,000                    |
| <b>Revised Free Float Market Capitalization</b> |             |                   | <b>13,949,750,000</b>            |

\*New Divisor = Revised Market Cap. / Index points

$$13,949,750,000 / 1,120 = 12,455,134$$

*\*Divisor changed as stock prices are reported in two decimal places*

### 11.3 Adjustment for Right Shares

The Right issues of the companies which constitute the OGTI Index are adjusted in two stages. At first stage the Ex-Right price is adjusted and at the second stage the capital (free-float shares) are adjusted. A brief detail about the right issues is mentioned below:

The company which declares Right shares has to close its books (shareholders register) to determine entitlement within 30 days of its declaration.

At the date of book closure, the Ex-Right price is ascertained and if the company belongs to the OGTI Index then the Divisor is adjusted due to the Ex-Right price of the company.

When the company informs the Exchange that it has dispatched Letter of Rights Offer to the shareholders, the trading in the Letter of Rights Offer (Un- paid) are commenced. A separate block of capital, Un-Paid-Right, is formed equal to amount of right issue and the trading continues till next 30 days or till the last date of payment.

After the last date of payment the trading in Un-Paid-Right (Letter of Rights Offer) is discontinued.

By the end of 30th day of the last date of payment or earlier, the company informs that shares certificates are ready for exchange with Right Allotment Letter (RAL) or credited in the CDS, the capital of the RAL is merged with the company. At this stage the Divisor of the OGTI Index is adjusted for the increase in the number of shares of the company.

### **A) Right issue without premium**

If Company A has issued 10 % right shares

OGTI Index = 1,120

OGTI Index Free Float Market Capitalization = 13,950,000,000

Divisor = 12,455,357

#### **First Stage**

##### **Step 1**

Determine the Ex-Right price of the stock A to calculate the revised free-float market capitalization and a new divisor for the next day.

Stock A price Rs 22.50

Right: 10 %

For simplicity in working, we will calculate the Ex-Right price on the basis of a lot of 100 shares.

i. Total free-float shares after the Right issue

$100 \text{ shares} + (100 \text{ shares} \times 10 \% \text{ Right}) = 110 \text{ shares}$

ii. Cost of a lot (100 shares)

$100 \text{ shares} \times \text{market price of A} + 10 \text{ right shares} \times \text{par value}$

$= 100 \times 22.50 + 10 \times 10$

$= \text{Rs. } 2,350$

iii. Ex- Right price per share  $= 2,350/110$

$= \text{Rs. } 21.36$

##### **Step 2**

Share price of A is adjusted after the close of day to calculate the New Divisor for the next day.

| Stock   | Shares Price (Rs) | No of Free Float Shares | Market Value (Rs)     |
|---|-------------------|-------------------------|-----------------------|
| A   | 21.36             | 50,000,000              | 1,068,000,000         |
| B   | 41                | 150,000,000             | 6,150,000,000         |
| C   | 44.5              | 150,000,000             | 6,675,000,000         |
| <b>Revised Free Float Market Capitalization</b> |                   |                         | <b>13,893,000,000</b> |

New Divisor = Revised Free Float Market Capitalization/ Index points

$$=13,893,000,000/1,120 = 12,404,464$$

### Second Stage

After 15 days of the last date of payment the company confirm the subscription amount, accordingly the capital of RAL is merged with the company and the Divisor is adjusted for the increase in number of free-float shares.

#### Step 1

Free-float shares of Stock A shall be adjusted after the close of Day to calculate the New Divisor for the next day.

| Stock A           |             |                         |
|-------------------|-------------|-------------------------|
| Free Float shares | Right Issue | Total Free Float shares |
| 50,000,000        | 10%         | 55,000,000              |

| Stock   | Shares Price (Rs) | No of Free Float Shares | Market Value (Rs)     |
|---|-------------------|-------------------------|-----------------------|
| A   | 22                | 55,000,000              | 1,210,000,000         |
| B   | 41                | 150,000,000             | 6,150,000,000         |
| C   | 44.5              | 150,000,000             | 6,675,000,000         |
| <b>Revised Free Float Market Capitalization</b> |                   |                         | <b>14,035,000,000</b> |

New Divisor = Revised Free Float Market Capitalization/ Index Points

$$\text{New Divisor} = 14,035,000,000/1,120 = 12,531,250$$

### 10.4 Bonus & Right Issue Adjustment (Simultaneously)

If Company A has announced;

Bonus: 10%

Right: 10% at a Premium of Rs 10 per share

OGTI Index = 1,120

OGTI Index Market Capitalization = 13,950,000,000

Divisor = 12,454,357

### **Step 1**

Calculate the Ex-Bonus and Ex- Right price of the stock A:

For simplicity we will calculate its price on the basis of a lot of 100 shares.

i) Total shares after the Right issue and Bonus

100 shares + (100 shares x 10 % Right) + (100 shares x 10% Bonus)

100+ 10 +10

= 120 shares

ii) Cost of a lot (100 shares)

100 shares x market price of A + {10 right shares x (par value + premium)}

= 100 x 22.50+ 10 x (10+10)

= Rs 2,450

iii) Ex-Bonus and Ex- Right price per share = 2,450/120

= Rs 20.42

### **Step 2**

Calculate the total number of free-float shares after the Bonus issue.

| Stock A           |             |                         |
|-------------------|-------------|-------------------------|
| Free Float shares | Bonus Issue | Total Free Float shares |
| 50,000,000        | 10%         | 55,000,000              |

### **Step 3**

Share price and the total number of free-float shares of A shall be adjusted after the close of Day to calculate the New Divisor for the next day

| Stock   | Shares Price (Rs) | No of Free Float Shares | Market Value (Rs)     |
|---|-------------------|-------------------------|-----------------------|
| A   | 20.42             | 55,000,000              | 1,123,100,000         |
| B   | 41                | 150,000,000             | 6,150,000,000         |
| C   | 44.5              | 150,000,000             | 6,675,000,000         |
| <b>Revised Free Float Market Capitalization</b> |                   |                         | <b>13,948,100,000</b> |

New Divisor = Revised Free Float Market Capitalization/ Index points

New Divisor =  $13,948,100,000/1,120 = 12,453,661$

## **12. Updation of Free Float**

Listed companies submit quarterly free float to the Exchange. In line with PSX trading system free float of scrips in Index will also be updated.