JS MOMENTUM FACTOR INDEX

JSMFI

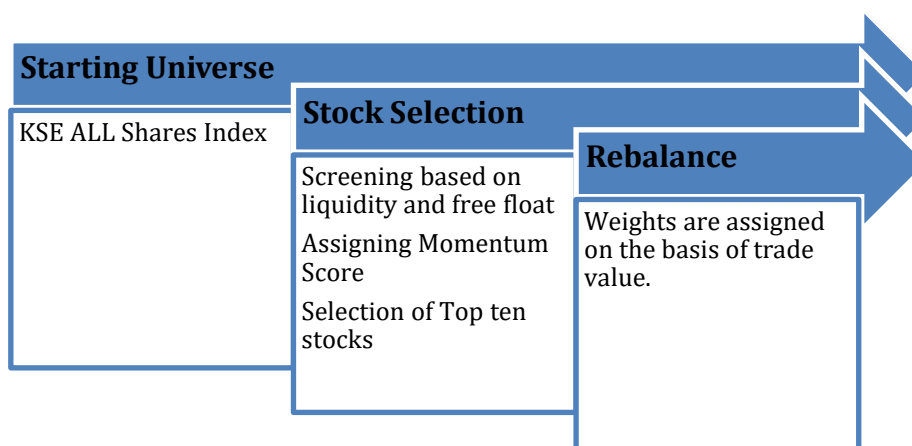| TABLE OF CONTENTS	

The JSMF Index aims to track the performance of listed stocks with positive momentum based upon total return performance and value traded over a 30-day time period.

Universe: Constituents of KSE-ALL Shares Index

1. INDEX METHODOLOGY

- The index's starting point is all stocks in the KSE All Share Index i.e. all stocks listed on Pakistan Stock Exchange.
- Stocks are then screened using certain liquidity and free float criteria as of 31st December and 30th June of each year to determine the short-listed number of stocks.
- Momentum is determined by calculating the total return for specified period of 30 days by using adjusted prices for all of these stocks. Prices are adjusted for bonus, rights and dividends.
- Stocks are selected based on a combined Momentum Score (MS) which incorporates recent total return performance and traded value.
- Top ten stocks based on this formula are used in the JSMF Index. The index, at all times, will have ten stocks with a single stock limit (SSL) of 20%.
- In order to determine the weights assigned to each stock in the index, we used past trade value for each stock and assigned a weight equal to its pro-rata share of the total traded value of all ten stocks. If any stock has a weight above 20%, the excess weight will be re-distributed amongst the remaining stocks in pro-rata fashion.

Starting Universe

KSE ALL Shares Index

Stock Selection

Screening based on liquidity and free float

Assigning Momentum Score

Selection of Top ten stocks

Rebalance

Weights are assigned on the basis of trade value.

2. BASE PERIOD

The base period of JSMF Index is 6-Dec-2021 and the base value is 10,000 index points. This is indicated by the notation 2020 = 10,000. The calculation of JSMF Index involves dividing the free-float market capitalization of selected companies in the Index by a number called the Index Divisor. The Divisor is the only link to the original base period value of the JSMF 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.

3. MAINTENANCE OF JSMF INDEX

The day-to-day maintenance of the Index will be carried out within the Index Policy Framework set by the Pakistan Stock Exchange (PSX) and JS Investment Limited. The Management of PSX will ensure that JSMF Index and all the other PSX indices maintain their benchmark properties by striking a balance between frequent replacements in indices and maintaining their historical continuity.

4. RE-COMPOSITION/ REBALANCING

Index shall be recomposed/rebalanced on a monthly basis

Sr.no	Monthly Re-composition Dates	Notice	Implementation
1	Last working day of January	Notice will be issued on the 4th working day from re-composition date of each month after the market hours	Index will be implemented on the 5th working day from the re-composition date of each month
2	Last working day of February		
12	Last working day of December		

PSX shall inform of any updates and changes in index constituents and weights to JSIL on 4th working day from the re-composition date of each month before issuing the notice

5. ONLINE COMPUTATION OF INDEX

During market hours, prices of the Index constituents at which trades are executed, are automatically used by the trading computer to calculate the JSMF Index and continuously update all trading workstations connected to the PSX trading computers on real time basis.

6. ADJUSTMENT IN THE JSMFI INDEX FOR CORPORATE ACTIONS

JSMFI Index shall be calculated on total return basis and corporate actions (dividends, bonuses and rights) adjustments shall be made in order to maintain the index continuity. 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 JSMFI Index value.

The determination of ex-price of a security is mentioned in Rule 10.6 of the 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*".

As a result of any corporate action, a new divisor shall be calculated 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:

6.1 ADJUSTMENT FOR CASH DIVIDEND

JSMFI Index is a total return index; therefore, adjustment of cash dividend will be made.

If company declared a 10% cash dividend:

JSMFI Index = 1,120 points

JSMFI Index market capitalization = Rs. 13,950,000,000

Divisor = 12,455,357

Constituents	Share Price	Free Float Shares	Free Float Market Capitalization (RS)
Stock A	22.50	50,000,000	1,125,000,000
Stock B	41.00	150,000,000	6,150,000,000
Stock C	44.50	150,000,000	6,675,000,000
Total Free Float Market Capitalization			13,950,000,000

Step-1

Determine the ex-dividend price of the stock A to calculate the revised market capitalization and a new divisor for the next day

Stock A

Par value: Rs.10 per share

Closing Price: Rs. 22.50 per share

Cash Dividend 10 % of par value

i) Cash dividend amount per share = par value x dividend% = Rs 10 x 10% = Rs.1

ii) Ex-dividend price = closing price – cash dividend amount = Rs.22.50 – Rs.1 = Rs.21.50

Step-2

Illustration, Revision in the Market Capitalization and Divisor

Share price of stock A shall be adjusted after the close of day to calculate the New Divisor for the next day

Constituents	Share Price	Free Float Shares	Free Float Market Capitalization (Rs)
Stock A	21.50	50,000,000	1,075,000,000
Stock B	41.00	150,000,000	6,150,000,000
Stock C	44.50	150,000,000	6,675,000,000
Revised Free Float Market Capitalization			13,900,000,000

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New Divisor =   Revised Market Cap. / Index points

       13,900,000,000 / 1120 = 12,410,714

6.2 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 stock A has declared a 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

JSMFI Index   = 1,120 points

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

Examples below calculate 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 X 10 %) = 110 shares

- Cost of stock-lot size 100 shares x closing price of stock A: 100 x 22.50= Rs. 2,250

    Ex-Bonus Price: 2250/110 = 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
Revised Free Float Market Capitalization			**13,949,750,000**

*New Divisor =   Revised Market Cap. / Index points

                 13,949,750,000 / 1120 = 12,455,134

Divisor changed as stock prices are reported in two decimal places

6.3 ADJUSTMENT FOR RIGHT SHARES

Closing price of stock is adjusted with right issue (Face Value / Premium/ Discount) and free float of stock will be increased as per the right Ratio.

Right issue at Par

If Stock A has issued 10 % right shares at par value

JSMFI Index   = 1,120 Points

JSMFI Index Market Capitalization   = Rs 13,950,000,000

Divisor _____ = 12,455,357

Step:1

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

Closing price of Stock A: Rs 22.50

Right: 10 %

For simplicity, 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 shares + (100 shares x 10 % Right) = 110 shares

ii. Cost of a lot (100 shares)

100 shares x closing price of stock A + 10 right shares x par value

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

= Rs 2,350

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

= Rs 21.36

Step 2

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	**Right Issue**	**Total Free Float shares**
50,000,000	10%	55,000,000

Constituents	Share Price	Free Float Shares	Free Float Market Capitalization
Stock A	21.36	55,000,000	1,174,800,000
Stock B	41.00	150,000,000	6,150,000,000
Stock C	44.50	150,000,000	6,675,000,000
Revised Free Float Market Capitalization			**13,999,800,000**

New Divisor = Revised Market Cap/ Index points

New Divisor = 13,999,800,000/1,120= 12,499,821

Policy of ready stock price adjustment in case of Dividend, Bonus and Right combinations are available on PSX website for your reference.

https://www.psx.com.pk/psx/themes/psx/uploads/priceCalMethod.pdf