A REPORT ON

TECHNICAL AND COMPANY ANALYSIS OF JK TYRES AND INDUSTRY LTD.

Prepared for-

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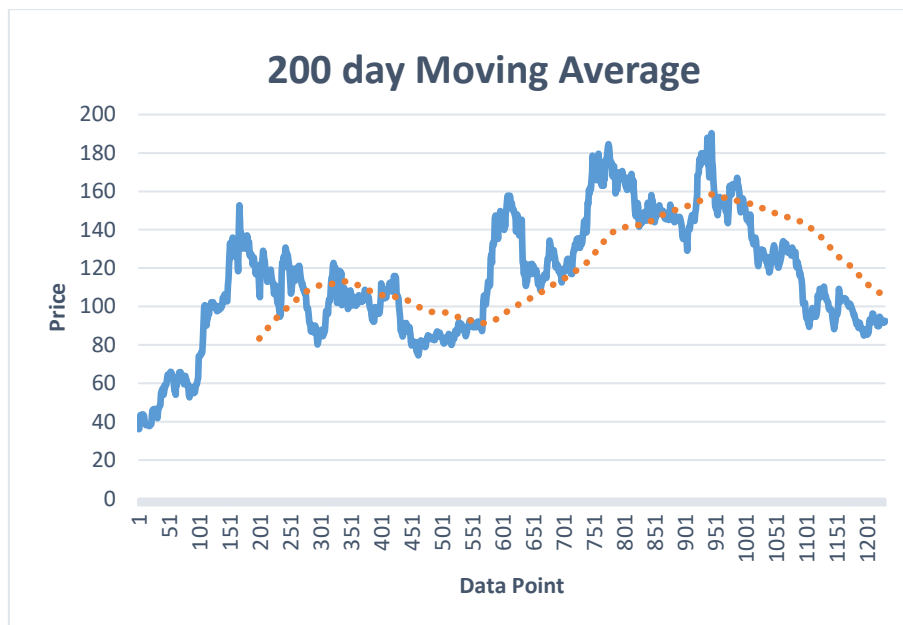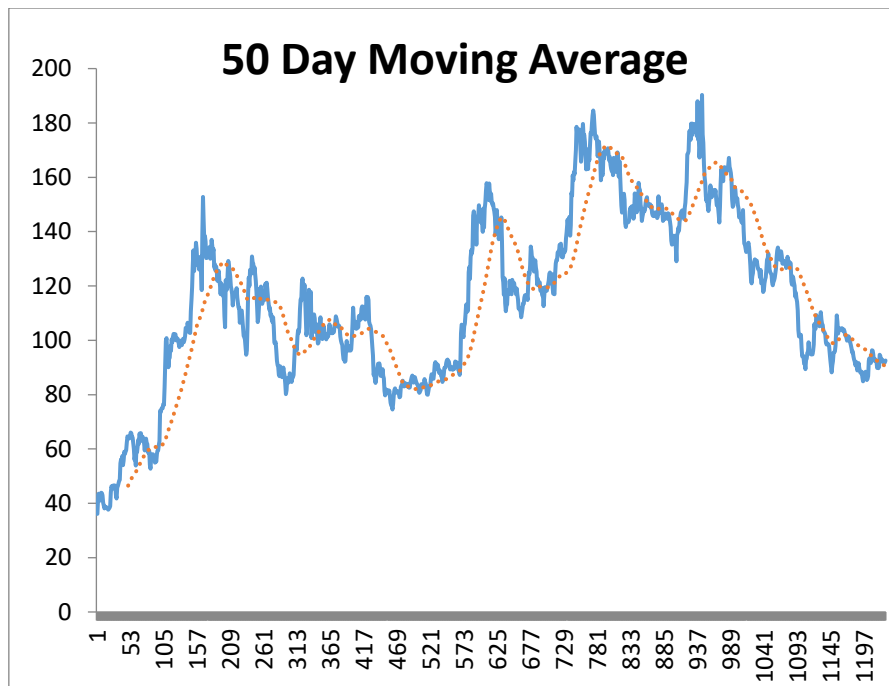- Naman Chokhani   2017B3A70726P
- Siva Sai Reddy   2017B3A70779P

BITS PILANI, PILANI CAMPUS

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TECHNICAL ANALYSIS

1. MOVING AVERAGES

50 Day Moving Average

200 day Moving Average

Moving averages are calculated from last 5 years data of stock prices of JK Tyres Industries.

I. As can be seen from the chart, 200 day moving average line is far above the price line nearly at 105 rupees.

II. Both price line and 50 day moving average line is moving below 200 M.A line which characterizes the bearish trend of the market share prices.

III. Also the wide gap between 200 day M.A and price (15% of current price) further discourages the investing decision.

IV. Currently 50 day M.A line is at 90.1 while price line is at 91.2.

V. Thus 50 day moving average indicates a bullish trend and 200 day moving average indicate a bearish trend.

VI. Price of stock line crossed the 50 day moving average line on march 8.But this crossover need not to be taken seriously as these happened many a times recently.

VII. Each time, after the crossover the prices had fallen dramatically .So there's a risk of investing just by seeing this crossover of 50 day moving average line.

VIII. All the Moving averages (51,020,100,200) shows a strong **sell signal**.

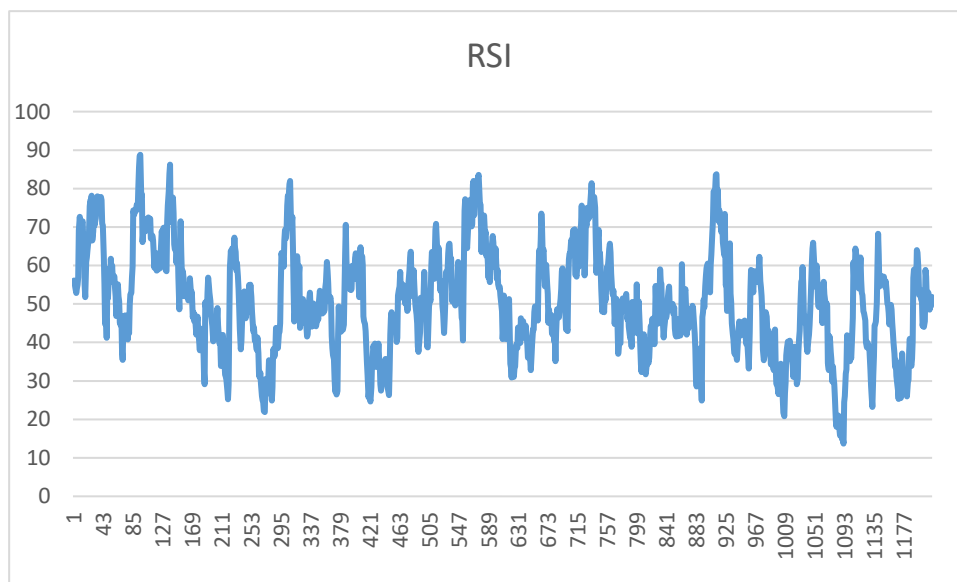## 2. Relative Strength Index(RSI)

The 14-day RSI is calculated in excel sheet.

RSI is calculated using the formula:

RSI=100− 100/[1+Previous average gain∗ 13+Current gain/Average average loss∗ 13+Current loss]

The average RSI of the company is 51.3

As the graph indicating RSI shows the stock reached overbought and oversold condition many times during the last 5 years.

a) The maximum RSI achieved is 83.72 and the minimum being 14.32, six months back.

b) Observing the RSI of last 20 days, it is wavering at 50 and is showing a gradual increase.

c) The stock being overbought in November 2018 (with value 71.2) reached oversold condition by January 2019 with a value of 25.7.This further indicates the volatility of the stock prices.

d)   Currently, the RSI is neutral at 45.

e)   71 .Seeing the trend of last month the RSI is expected to increase above 60 within a span of 3-4 months.

f)   It indicates that investor has to wait for some months before selling. Thus RSI also indicates the **selling signal**, but with a time lag.

3. Moving Average Convergence Divergence (MACD)

MACD(12,26,9) is computed in excel sheet using 12-day M.A,26-day M.A,9-day M.A and EMA multipliers.
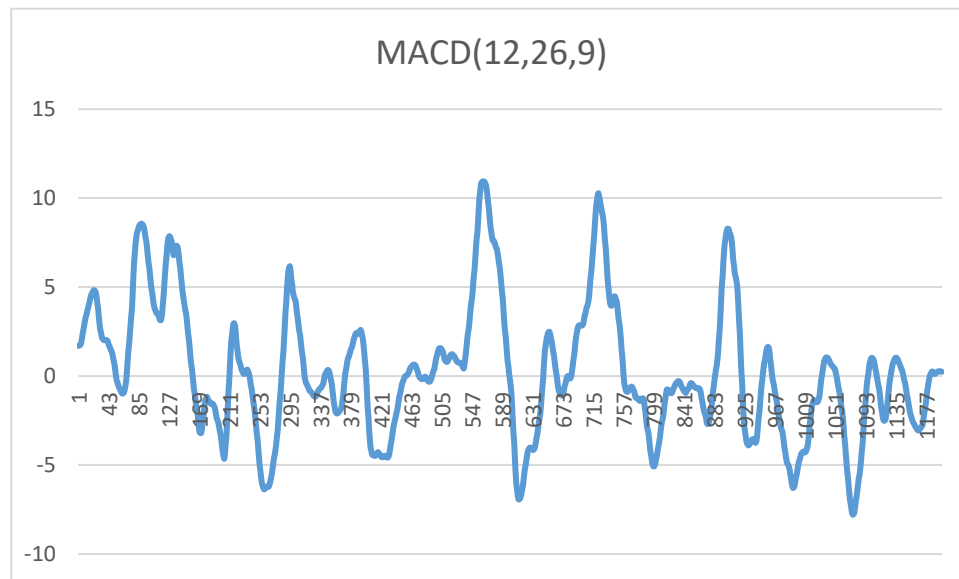
a)   MACD is above signal line for last 12 days.

b)   On 16th April the MACD value was 0.34 while MACD signal line is at 0.32 which is a bullish indicator.

c)   Observing the MACD graph, we can conclude that JK tyres had shown a fairly bullish market before last year.

d)   MACD of 2018 indicates highly bearish trend in the stock prices.

e)   On weekly basis also MACD(-4.9) is above 9 day signal line(-6.22).

f)   But in the last month, the MACD(-10.29) is far below signal line(-4.2) which shows a strong bearish signal.

g)   An overage over last 90 days also affirms the bearish trend of the stock.

h)   Thus MACD also indicates a **selling signal** but **not immediately** as it shows bullish trend the last few days.

COMPANY ANALYSIS

1. Dividend Discount Model

Detailed analysis of DDM model is provided in excel sheet.

a) Beta of the stock is calculated through regression with Y as Stock return and X as Market return.

b) **Required Return is calculated using the formula** : $E(R) = RFR + \beta(R_M - RFR).(.1789)$

c) Sustainable growth rate is found using $g = RoE * b$ (.1469)

d) **Expected dividend of next year is estimated assuming constant growth rate and using the formula**
$D_1 = D_0(1+g)$.(1.72)

e) Intrinsic value is calculated using the formula : $I.V = \dfrac{D_1}{(r-g)}$ (55.204)

Some important values are shown in the following table.

Sr.	Variable	Value
1	RFR	7.39%
2	Beta of stock	1.4060
3	Required Rate of Return	.1781
4	Sustainable Growth Rate	14.69%
5	Dividend per share(2018)	1.5
6	Expected Dividend per share(2019)	1.72035
7	Intrinsic value	55.204

❖ As the Intrinsic value(55.204) is less than the current price of the stock(92.15),it shows that the stock is over-valued.

❖ Thus, DDM gives a **selling signal** to the investor.

2. Discounted Free Cash Flow Model

a) CAPEX(Capital Expenditure) is calculated using the formula : $CAPEX = \Delta PPE + Depreciation$ (400.6 crores)

b) New debt is calculated using the formula

$New\_debt = \Delta shortLiabilities + \Delta longLiabilities - \Delta cashEquivalents$ (82.23 crores)

c) Free Cash Flow Equity is calculated using the formula $FCFE = FCOA - CAPEX + NEWDEBT$ (177.78 crores)

d) Values of r and g are taken from the calculations of DDM model.

e) Intrinsic value is calculated using the formula Intrinsic Value = $\dfrac{FCFE_0(1+g)}{(r-g)}$ (288.46 rupees)

Some of the important values regarding DFCFE model is as following.

Sr.	Variable	Value
1	Net Cash-Flow From Operating Activities(crores)	495.15
2	CAPEX(crores)	400.6
3	NEW DEBT ISSUED(crores)	83.23
4	FCFE(FCOA-CAPEX+NEWDEBT)(crores)	177.78
5	NUMBER OF SHARES	22,68,13,480
6	FCFE PER SHARE	7.838158473
7	NUMBER OF SHARES(IN CRORE)	22.681348
8	Required return	0.178065889
9	Sustained growth rate	0.146902454
10	Intrinsic value	288.4663769

f) As intrinsic value(288.46) is greater than current stock price(92.15) it is a **buying** signal

➤ *Contradiction in the analysis:* All technical analysis indicators and DDM model is showing a selling signal while DFCFE model is showing the buying signal

➤ **Conclusion**: Going by the technical indicators and DDM , the investor is expected to sell the stock of JK Tyres and Industries Ltd.