EVALUATION OF STOCK THROUGH FUNDAMENTAL ANALYSIS WITH THE DIVIDEND DISCOUNT MODEL (DDM) APPROACH ON SELECTED PRIVATE SECTOR BANK

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ABSTRACT

The research is conducted on the topic Evaluation of stock through fundamental analysis with the dividend discount model (DDM) approach on selected private sector bank. This analysis is carried out to determine the financial performance of a few selected banks in the Indian banking industry in order to enable a buy or sell option using fundamental analysis and the intrinsic value of the shares and the current market price. The main goal is to inform investors of their potential investment opportunities when purchasing shares of banking firms. The DDM (Dividend Discounted Model) method links the anticipated cash flow from dividends paid by the company on the shares that are owned in order to do fundamental research or company analysis. The intrinsic value of shares is calculated using the Dividend Discounted Model (DDM), which compares the stock's intrinsic value to its market value. This value is determined by projecting upcoming dividend payments.

keywords: Dividend Discounted Model (DDM), Stock Price Appraisal, Investment Decision

I. INTRODUCTION

Fundamental analysis is used to analyse the financial performance of a selected few banks in the Indian banking sector in order to permit a buy or sell option based on the intrinsic value of the shares and the current market price. The main goal is to inform investors of the best investment opportunities when purchasing shares of banking firms. The analysis will give information on current investments made with banking businesses and if it would be prudent to hold or sell the shares. It is believed that the stock market is always changing and that the real value of the shares is equally unstable. A bank's share price is either low or overvalued. The pattern of share price changes will be shown by calculating the intrinsic of the stocks. Depending on how well the banks under consideration are performing, the share value of such institutions may be either cheap or overvalued.

STATEMENT OF THE PROBLEM

The fact that the dividend discount model (DDM) primarily depends on the accuracy of payout estimates presents a possible issue when employing it for fundamental analysis. Based on the current value of anticipated future dividends, the DDM calculates the stock value of a corporation. Although dividends are influenced by a variety of factors, including economic conditions, corporate performance, and management actions, forecasting future payouts with any degree of accuracy can be difficult. Additionally, some businesses might not pay dividends or may have a track record of irregular dividend payments, making it challenging to apply the DDM to those businesses. Alternative models may need to be utilized in these circumstances for fundamental examination.

OBJECTIVE OF THE STUDY

1. To determine the true value of the chosen firms, by using the Dividend Discount Method (DDM) technique.

2. To compare the intrinsic worth of a stock's share with the prevailing market value of a selected company's share.

II. REVIEW OF LITERATURE

Isaac kof (2020) A systematic review of fundamental and technical analysis of stock market predictions as studied that the stock market is a key pivot in every growing and thriving economy, and every investment in the market is aimed at maximizing profit and minimizing associated risk. As a result, numerous studies have been conducted on the stock-market prediction using technical or fundamental analysis through various soft-computing techniques and algorithms.

J.V.V. Meghanath (2018) Fundamental analysis: a study on selected steel companies in India as studied that the study fundamental analysis is nothing but examining the forces that will destroy the well -being of the economy, industry groups, and companies. This system will be utilized will be used to assess the worth of a company's stock. It can additionally make utilized for estimating esteem of any sort of security, like securities or particular cash.

Prof. Namrata acharya (2019) A study on fundamental analysis of Indian telecom companies as studied that it is an industry which has a significant role for the development of the country as it contributes towards an increased GDP of India, earns profit for the Indian government and creates employment opportunities for a great number of people. The Indian telecom industry is very huge consisting of companies that make hardware and also produce software.

Ananth (2017) A study on fundamental analysis of selected it companies listed at NSE article as studied that analysis of capital market can be done either by fundamental analysis or by technical analysis. This paper aims to study on fundamental analysis of selected it companies listed at NSE Fundamental analysis is studied in three parts. Economic analysis deals with fundamental factors like GDP, IIP, fiscal deficit, inflation, current account deficit etc.

Piyush kumar (2016) Fundamental analysis of a selected stock in capital goods industry as studied that other way if we have already stocks in our demat account and if our prediction says that it will grow in future then we generally decide to hold that stock till its bestselling price but if our prediction says it will fall in future then we generally decide to sell that stock. Before buying or selling any stock, value investor should first try to know whether the stock is overvalued undervalued3 or correctly valued in the market.

Dr. B. Charumathi and Suraj. E. S. (2016) Comparing stock valuation models for Indian bank stocks as studied the aim of investors of bank stocks is to earn reasonable returns. This study is also trying to compare the performance of different valuation models in determining bank stocks price. The methodology used is based on the implications of the theory of financial markets and fundamental analysis. The results show that adjusted r-squares of Ohlson model and p/b model are higher than adjusted r-squares of other valuation models such as capm model, DDM model, p/e model and excess return model.

Xiaoquan jiang (john) (2018) An empirical test of the accounting-based residual income model and the traditional dividend discount model dividend discount model (DDM) to explain volatile, dynamic stock price movements, test the empirical validity of an alternative model, the accounting-based residual income model (rim), and compare the two models' performance. The rim seems attractive to finance researchers in that it incorporates both the book-to-market ratio and the earing-to-price ratio, which have been shown to have predictive ability for expected stock returns, in a systematic manner by way of a present value model.

Roy Bornilla Gacus and Jennifer E Hinlo (2018) The reliability of constant growth dividend discount model (DDM) in valuation of Philippine common stocks as studied the constant growth dividend discount model (DDM) is said to be the simplest and most popular valuation method to estimate the intrinsic value of the company's stocks. This study is aimed to test the reliability of the constant growth DDM in valuation of the selected common stock listed companies in the Philippine stock exchange (PSE). The accuracy of constant growth DDM to predict the value of common stocks was compared from the actual values using the symmetric median absolute percentage error (SMDAPE), and then tested whether the median difference between the predicted and actual values of the selected common stock.

Undavia M (2018) An analysis of financial performance of selected public and private sector banks-a special reference to profitability as studied in the financial viability of banks largely depends on the adequacy of profitability. The main aim of the study is to identify the determinants of profitability of selected public and private sector banks in India through ratio and percentages analysis. Data collected for study purpose is purely secondary in nature and collected mainly from accounting data of selected banks, which were collected from balance sheet and profit and loss account extracted from annual reports of concerned banks.

Chairil afandy (2021) Stock valuation through dividend discounted model (DDM) as studied this study aims to find out the intrinsic value of each share of regional development banks listed on the IDX. This study also aims to find out the stock market price (closing price) is below or above the intrinsic value of its shares. Finally, this study aims to find out which bank shares are the best to choose as investment options. This research was conducted in a one-year period, 2017. This type of research is descriptive research with quantitative methods. Descriptive research is research that seeks to describe or describe data that has been collected as it is.

III. DATA AND METHODOLOGY

3. RESERCH DESIGN

In Private Banking Sector Five companies were selected to conduct a detail study. Fundamental analysis involves finding the intrinsic value of the selected banking shares. It provides additional strength to the investor in choosing the option of buy / sell strategy.

3.1 Type of Research: Empirical.

3.2 Study duration: The variables are studied over 5 years from 2013-14 to 2022-22.

3.3 Data collection: The study's information was collected from secondary sources. Data is gathered from websites, company websites, including a 10-year financial report.

3.4 Companies Selected for the Analysis:

1. Axis Bank Ltd

2. HDFC Bank Ltd

3. Federal Bank Ltd

4. IndusInd Bank ltd

5. Kotak Mahindra Bank

3.5 Analysis Tools: Ratios, DDM model approach.

3.6 The Process for fundamental analysis using DDM:

A. Analysis of the financial performance of the company measured using financial ratios. The financial ratios used are as follows:

- **Return on Equity (ROE):** ROE= Net profit / Share capital * 100%

- **Earnings per Share (EPS):** EPS = Net Profit / Number of Outstanding Shares.

- **Dividend Pay-out Ratio (DPR)**: DPR= DPS /EPS *100%

B. Analysis of stock prices: The following uses of DDM with a constant growth model approach can be known through the following steps:

Dividend Growth Rate: g = ROE (1 − DPR)

- **Estimated Expected Dividend**: DT = D0 (1 + g)

- **Required Rate of Return**: K= $\frac{D_0}{p}$+g

- **Intrinsic Value of Stocks**: P0 = $\frac{D_t}{(k-g)}$

Information:

g: dividend growth rate

ROE: return on equity

DPR: dividend payout ratio

DT: estimated dividend

D0: actual dividend

K: expected rate of return

P: stock market price.

3.7 HYPOTHESIS TESTING

H0: There is no significant difference between the calculated intrinsic value (DDM method) and market value.

H1: There is significant difference between the calculated intrinsic value and market value.

3.7 LIMITATIONS

☐ The Study includes only those companies which distributes Dividend regularly Basis.

 The Analysis is based on secondary data obtained from website of the company and Screener website.

 The Study will be conducted to only 5 companies from private Banking sector, the Banks which are listed in stock exchange.

IV. DATA ANALYSIS AND FINDINGS

Stock valuation using the Dividend Discount Model (DDM) method requires data on the company's financial performance, namely the value of ROE, DPR, and DPS.

Table No 4.1: Table Showing Financial Ratio Analysis of Axis Bank Ltd From 2013-2022

Year	Return on Equity (ROE)	EPS	Dividend Payout Ratio
2013	16%	26.86	15%
2014	17%	31.42	15%
2015	16%	35.04	14%
2016	7%	16.51	30%
2017	1%	1.78	78%
2018	7%	19.59	5%
2019	4%	6.57	7%
2020	7%	23.49	4%
2021	12%	46.00	2%
2022	4%	35.16	6%

** Source: data processing (2023)

After knowing the financial data to calculate stock valuations using the Dividend Discount Model (DDM) method, an analysis of intrinsic stock prices is then carried out. The intrinsic value of the shares that have been obtained will be used to compare with the stock market value whose data is taken from the closing price of each company. Here are the stages of calculation:

Table No 4.2: Table Showing Results of Stock valuation calculation Using the DDM method of Axis Bank from 2013-2022.

Year	Dividend Growth Rate	Estimated Expected Dividend	Required Rate of Return	Intrinsic Value of Stocks	Stock Market Value	Stock Valuation
2013	0.14	1071.11	3.36	332.96	292.10	Undervalued
2014	0.14	1244.66	2.09	639.43	560.20	Undervalued
2015	0.13	1350.66	2.82	503.51	444.15	Undervalued
2016	0.05	1256.05	2.49	514.79	490.80	Undervalued
2017	0.00	357.44	0.70	511.29	510.50	Fair
2018	0.07	275.29	0.40	832.06	777.25	Undervalued
2019	0.04	270.72	0.73	393.12	379.00	Undervalued
2020	0.07	322.42	0.50	743.86	697.45	Undervalued
2021	0.12	342.83	0.52	850.05	761.15	Undervalued
2022	0.00	204.29	0.24	859.72	858.50	Fair

**Data processing (2023)

Interpretation: Axis Bank Ltd experienced an undervalued trend because the stock's intrinsic value was higher than its market value. Buying shares of these companies before the market price of these stocks rises is the investment choice for potential investors. In the meantime, assuming the stock price will rise in the future, investors who already own shares in these companies ought to hold those shares and increase their ownership. Axis bank also have Distributed the fair dividend.

V. CONCLUSION

The approach can be useful for evaluating the intrinsic value of private banks. However, remember the DDM has limitations and should be used with other analytical techniques. Due to regulatory obligations and the consistency of their revenues, private banks maintain a constant dividend distribution strategy. As a result, the DDM strategy is more appropriate because it implies a consistent dividend growth rate. The DDM expects that dividends will continue to rise at the same pace in the future. When applying the concept to private banks, it is critical to evaluate the bank's capacity to maintain and raise dividends over time. Profitability, capital adequacy, and economic conditions should all be evaluated.

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