

# A study on performance evaluation of mutual funds with reference to Cochin stock exchange Ltd

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## Abstract

This study is an attempt to identify overpriced and underpriced shares chosen. It can be used as a guide for the investors to make a purchase or sell decision for a particular security. The sample of securities of 8 private sector banks were selected and using either anticipation approach to estimate the value of a shares are calculated. As per anticipation approach future price of a share is estimated through trend analysis which will be compared with actual share price on a particular date to find whether the share is underpriced or overpriced.

**Keywords:** Mutual fund, Stock exchange, Bank and Performance evaluation.

## INTRODUCTION

Cochin stock exchange Ltd is one of the premier stock Exchanges in India, established in the year 1978 with just 5 companies listed in 1978-79, and had only 14 members. But today The Cochin Stock Exchange has 508 members and 240 listed companies. In 1980 the Exchange computerized its offices and took various steps including trading in dematerialized shares to cope up with the changing scenario in the capital market. CSE introduced COLT (Cochin Online Trading) to facilitate the computerized trading system. CSE was one of the promoters of the "Interconnected Stock Exchange of India (ISE)". The objective was to consolidate the small, fragmented and less liquid markets into a national level intergraded liquid market and CSE introduced fast track system to its operations. To face the challenges from NSE and BSE, CSE promoted a 100% subsidiary called CSBL (Cochin Stock Brokers Ltd) and started trading in NSE and BSE.

## Objectives

1. To find the methods available for the estimation of future share price.
2. To understand how to arrive at a decision that whether the shares are under priced or over priced.
3. To identify through Anticipation approach, the shares that are overpriced and that are under priced.
4. To find out the intrinsic value of a share and analyze which shares are overpriced and which are under priced.
5. To compare the results of Anticipation approach and intrinsic value approach

6. To make recommendations to buy or sell to investors based on the results of research.
7. To study the effect of over pricing and under pricing

## Limitations of the study

1. An accurate conclusion cannot be arrived at as the results are subject to changing situations.
2. Previous day's price is taken as the day's price on which no transaction was happened.
3. Statistical method may not be tactful to determine the share price of securities since the decision to buy or sell a security at a particular rate depend upon the human psychology.
4. Anticipation approach does not consider the rate of growth of the securities.
5. Effect of random walk theory is ignored. Random walk theory assumes that investors tend to forgot past share prices and hence the projection from the past does not give the accurate results.
6. There is no relevance for the comparison between the methods used for data analysis since Anticipation approach is a traditional method and which is not at all used by the investor recently.
7. Only two methods were found as used by the investors for the projection of future share price.

## OVERVIEW OF LITERATURE

Kaplan and Garrick (1981) demonstrated that risk involves a factor of uncertainty and potential loss that might be incurred. Investors are generally more careful while making investment decision and presence of rationality in every investor demands higher return at minimum risk but when markets are efficient it is not possible to gain abnormal returns.

Bernstein and Peter L. (1996) risk averse behavior of investor reflects the choice of investor to avoid risk or take negligible

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risk that means whenever an individual investor is given option to go for guaranteed return with probability one which are comparatively less than gambling return with probability one which are comparatively less than gambling return with probability less than one, chances are that he may go for guaranteed return.

Lexington, MA. And .Harrison.T (2000) found that majority of investors who invest in MF themselves are not clear with the objective and constraints of their investment but in addition to this most important critical gap that exist in this process is lack of awareness about presence of risk elements in MF investment. The new marketing philosophy and strategies place special emphasis on recognition of customer needs in an effort to provide high level of quality services.

Elmiger and Kim (2003) elucidate risk as the trade-off that every investor has to make between the higher rewards that potentially come with the opportunity and the higher risk that has to be borne as a consequence of the danger.

Laukkanen (2006) explains that varied attributes present in a product or service facilitate customer's achievement of desired end-state and the indicative facts of study show that electronic services create value for customers in service consumption.

Kavitha. R. (2007) analyzed the fund selection behavior of individual investors toward MF in Mumbai city during the period July 2004- December 2004. It was found that there is a fair opportunity to mutual investment in Future.

S Anand and V Murugaiah (2007) in their study 'Analysis of components of investment performance - An Empirical study of Mutual funds in India.' found that investors' satisfaction in case of mutual funds depends upon amount of trust and dependence that an investor places with AMC and in turn the benefits that are actually delivered to them. Although fund managers uses their expertise skills and diligence while investment but still dissatisfaction prevail among the investors and their experiences show that majority of mutual funds have shown underperformance in comparison to risk free return and reported that mutual funds were not able to compensate them for additional risk they have taken by investing in mutual funds.

**METHOD AND MATERIALS**

**Research Design**

The research conducted was of descriptive nature which deals with fact finding. The main purpose of descriptive research is the description of the state of affairs as it exists at present.

**Universe:** The securities listed in NSE

**Sample Size:** Securities of 8 private sector banks out of 17 were selected as per convenience sampling in which samples are selected according to the convenience of the researcher that he thinks that the samples selected can satisfy his study.

**Scrip's Selected**

1. Axis bank private Ltd
2. City union bank private Ltd
3. Dhanalakshmi bank private Ltd
4. Federal bank private Ltd
5. HDFC bank private Ltd
6. ICICI bank private Ltd
7. Indusind bank private Ltd
8. ING Vysya bank private Ltd

**Sources of data collection**

Capitaline Website, NSE quotations of share price, Company profile, Industry profile and bank's profile. All these data are secondary in nature.

**Adjustments**

As some of the securities are not traded on some of the days the previous day's price is deemed to be that day's price.

**Software used for the data analysis:** MS EXCEL

**Statistical methods used for data analysis**

1. Trend analysis
2. Algebraic equations.

**Analysis:** Calculations and interpretations using anticipation approach.

**ANALYSIS USING ANTICIPATION APPROACH**

Table 1. Projection of future share price of AXIS Bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	356.35	-3	-1069.05	9
29.09.06	379.20	-2	- 758.40	4
30.03.07	490.1	-1	- 490.15	1
29.09.07	764.40	0	0	0
31.03.08	789.85	1	789.85	1
30.09.08	720.25	2	1440.50	4
31.03.09	414.95	3	1244.85	9
30.09.09	985.15	4	3924.60	16
Total Σy	4900.30		EXy=5082.2	EX <sup>2</sup> =44
	A= Σy/n	4900.3/8 =612.5375	B= ΣXY/ΣX <sup>2</sup> = 5082.2/4 = 115.505	
Projected MPS on 31.03.2010	A+B(x)	= 612.5375+ 115.505x5 = 612.5375+ 577.525 = 1190.0625		

**Inference:** The security is under priced.The projected Market Price of Axis bank as on 31.03.2010 is 1190.0625, where as the actual MPS as on

the same date is 1168.25. Therefore the share price of Axis bank is under priced since actual MPS < Projected MPS.

Table 2.Projection of future share price of City union bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	11.20	-3	-33.6	9
29.09.06	12.12	-2	-24.24	4
30.03.07	16.15	-1	-16.15	1
29.09.07	22.03	0	0	0
31.03.08	28.03	1	28.30	1
30.09.08	23.25	2	46.50	4
31.03.09	12.20	3	36.60	9
30.09.09	30.80	4	123.20	16
Total $\sum y$	15605		EXy=160.61	EX <sup>2</sup> =44
	A= $\sum v/n$	156.05/8 =19.50625	B= $\sum XY/\sum X^2$ = 160.61/44 = 3.65023	
Projected MPS on 31.03.2010	A+B(x)	= 19.50625+ (8.50625X5) = 19.50625+ 18.25115 = 37.7574		

**Inference:** The security is under priced.The projected Market Price of CITY Union Bank as on 31.03.2010 is 37.7574, where as the actual MPS as on the same date is 28.65. Hence the security is under priced since actual MPS < Projected MPS.

Table 3.Projection of future share price of Dhanalakshmi Bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	22.42	-3	-67.26	9
29.09.06	20.65	-2	-41.30	4
30.03.07	42.20	-1	-42.20	1
29.09.07	51.32	0	0	0
31.03.08	62.75	1	62.75	1
30.09.08	71.20	2	142.40	4
31.03.09	50.15	3	150.45	9
30.09.09	172.10	4	688.40	16
Total $\sum y$	492.79		EXy=893.24	EX <sup>2</sup> =44
	A= $\sum v/n$	492.79/8 =61.59875	B= $\sum XY/\sum X^2$ = 893.24/44 = 20.3009	
Projected MPS on 31.03.2010	A+B(x)	= 61.59875+ (20.3009x5 ) = 61.59875+ 101.50+55 = 163.103		

**Inference:** The security is under priced.The projected Market Price of Dhanalakshmi Bank Private Ltd. as on 31.03.2010 is 163.103, where as the actual MPS as on the same date is 133.10. Since the projected MPS < Actual MPS, the security is under priced.

Table 4.Projection of future share price of Federal Bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	153.95	-3	-461.85	9
29.09.06	161.66	-2	-323.32	4
30.03.07	164.56	-1	-164.56	1
29.09.07	284.04	0	0	0
31.03.08	216.60	1	216.60	1
30.09.08	205.50	2	411.00	4
31.03.09	137.90	3	413.70	9
30.09.09	172.10	4	688.40	16
Total $\sum y$	1576.06		EXy=1098.97	EX <sup>2</sup> =44
	A= $\sum v/n$	1576.06/8 =197.0075	B= $\sum XY/\sum X^2$ = 1098.97/44 = 24.976591	
Projected MPS on 31.03.2010	A+B(x)	= 197.0075+ (24.976591x5 ) = 197.0075+ 124.88295 = 321.89		

**Inference:** The security is under priced.The projected MPS of Federal Bank Private Ltd. as on 31.03.2010 is 321.89, where as the actual MPS

as on the same date is 266.85. Since the actual MPS < Projected MPS, the security is under priced.

Table 5. Projection of future share price of HDFC Bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	773.50	-3	-2320.50	9
29.09.06	926.00	-2	-1852.00	4
30.03.07	949.90	-1	-949.90	1
29.09.07	1439.05	0	0	0
31.03.08	1331.25	1	1331.25	1
30.09.08	1229.70	2	2459.40	4
31.03.09	973.40	3	2920.20	9
30.09.09	1650.50	4	6602.00	16
Total $\sum y$	9273.30		$EY=8190.45$	$EX^2=44$
	$A = \sum v/n$	$9273.3/8$ $= 1159.1625$	$B = \sum XY / \sum X^2$ $= 8190.45/44$ $= 186.146591$	
Projected MPS on 31.03.2010	$A+B(x)$	$= 1159.1625 + (186.146591 \times 5)$ $= 1159.1625 + 930.732955$ $= 2089.895$		

**Inference:** The security is under priced. The projected MPS of HDFC Bank Private Ltd. as on 31.03.2010 is 2089.895, where as the actual MPS as on the same date is 1933.50. Since the actual MPS < Projected MPS, the security is under priced.

Table 6. Projection of future share price of ICICI Bank Private Ltd.

Date	Y Share Price(Rs)	X	XY	X <sup>2</sup>
31.03.06	589.25	-3	-1767.75	9
29.09.06	699.05	-2	-139.10	4
30.03.07	853.10	-1	-853.10	1
29.09.07	1063.15	0	0	0
31.03.08	769.40	1	769.40	1
30.09.08	535.55	2	1071.10	4
31.03.09	332.80	3	998.40	9
30.09.09	907.60	4	3630.40	16
Total $\sum y$	5749.90		$EY=2450.35$	$EX^2=44$
	$A = \sum v/n$	$5749.90/8$ $= 718.7375$	$B = \sum XY / \sum X^2$ $= 2450.35/44$ $= 55.689773$	
Projected MPS on 31.03.2010	$A+B(x)$	$= 718.7375 + (55.689773 \times 5)$ $= 718.7375 + 278.449$ $= 997.186$		

**Inference:** The security is under priced. The projected MPS of ICICI Bank Private Ltd. as on 31.03.2010 is 997.186, where as the actual MPS as on the same date is 952.50. Since the actual MPS < Projected MPS, the security is under priced.

Table 7. Projection of future share price of Indusind Bank Private Ltd.

Date	Share Price(Rs)	X	Xy	X <sup>2</sup>
31.03.06	46.85	-3	-140.55	9
29.09.06	50.50	-2	-101.00	4
30.03.07	41.95	-1	-41.95	1
29.09.07	74.75	0	0	0
31.03.08	78.65	1	78.65	1
30.09.08	55.45	2	110.90	4
31.03.09	32.10	3	96.30	9
30.09.09	115.60	4	462.40	16
Total $\sum y$	495.85		$EY=464.75$	$EX^2=44$
	$A = \sum v/n$	$495.85/8$ $= 61.98125$	$B = \sum XY / \sum X^2$ $= 464.75/44$ $= 10.5625$	
Projected MPS on 31.03.2010	$A+B(x)$	$= 61.98125 + (10.5625 \times 5)$ $= 61.98125 + 52.8125$ $= 114.79375$		

**Inference:** The security is overpriced. The projected MPS of Indusind Bank Private Ltd. as on 31.03.2010 is 114.79375, where as the actual MPS as on the same date is 170.10. Since the actual MPS > Projected MPS, the security is overpriced.

Table 8. Projection of future share price of ING Vysya Bank Private Ltd.

Date	Y Share Price(Rs)	X	Xy	X <sup>2</sup>
31.03.06	142.90	-3	-428.70	9
29.09.06	139.00	-2	-278.00	4
30.03.07	174.85	-1	-174.85	1
29.09.07	262.40	0	0	0
31.03.08	334.80	1	334.80	1
30.09.08	215.75	2	431.50	4
31.03.09	128.40	3	385.20	9
30.09.09	269.55	4	1078.20	16
Total $\sum y$	1667.65		$E\sum xy = 1348.15$	$E\sum x^2 = 44$
	$A = \sum y/n$	$1667.65/8 = 208.46$	$B = \sum xy / \sum x^2 = 1348.15/44 = 30.64$	
Projected MPS on 31.03.2010	A+B(x)	$= 208.46 + (30.64 \times 5) = 208.46 + 153.20 = 361.66$		

**Inference:** The security is under priced. The projected MPS of ING Vysya Bank Private Ltd. as on 31.03.2010 is 361.66, where as the actual MPS as on the same date is 276.30. Since the actual MPS < Projected MPS, the security is under priced.

Table 9. An over view of inferences drawn as per anticipation approach.

ANTICIPATION APPROACH								Amt in (Rs.)	
BANKS PRIVATE SECTOR									
Sl. No	Name	2006		2007		2008			
		31 <sup>st</sup> March	29 <sup>th</sup> Sept.	31 <sup>st</sup> March	29 <sup>th</sup> Sept.	31 <sup>st</sup> March	30 <sup>th</sup> Sept.		
01	Axis Bank	356.35	379.20	490.15	764.40	789.85	720.25		
02	City Union Bank	11.20	12.12	16.15	22.03	28.30	23.25		
03	Dhanalakshmi Bank	22.42	20.65	42.20	51.32	62.75	71.20		
04	Federal Bank	153.95	161.66	164.56	284.04	216.60	205.50		
05	HDFC Bank	773.50	926.00	949.90	1439.05	1331.25	1229.70		
06	ICICI Bank	589.25	669.05	853.10	1063.15	769.40	535.55		
07	Industrial Bank	46.85	50.50	41.95	74.75	78.65	55.45		
08	ING Vysya Bank	142.90	139.00	174.85	262.40	334.80	215.75		

Sl. No	Name	2009		2010		PA Difference	Conclusion
		31 <sup>st</sup> March	29 <sup>th</sup> Sept.	31 <sup>st</sup> March	29 <sup>th</sup> Sept.		
01	Axis Bank	414.95	985.15	1190.0625	1168.25	21.8125	Under priced
02	City Union Bank	12.20	30.80	37.7574	28.65	9.1074	Under priced
03	Dhanalakshmi Bank	50.15	172.10	163.10	133.10	30.0000	Under priced
04	Federal Bank	137.90	251.85	321.89	266.85	55.04	Under priced
05	HDFC Bank	973.40	1650.50	2089.895	1933.50	156.40	Under priced
06	ICICI Bank	332.80	907.60	997.186	952.50	44.69	Under priced
07	Industrial Bank	32.10	115.60	114.79	170.10	-55.31	Over priced
08	ING Vysya Bank	128.40	269.55	361.66	276.30	8536	Under priced

Summary of the inferences drawn as per anticipation approach

<b>Under priced 7/8</b>	<b>Over priced 1/8</b>
87.5%	12.5%

**ANTICIPATED APPROACH**



Fig 1.Graphical representation of inferences.

Table 10.Growth rate of equities as per intrinsic approach.

BANK	GROWTH RATE	FINDING
Axis Bank	13.23	Over priced
City Union Bank	75.61	Over priced
Dhanalakshmi Bank	12.01	Over priced
Federal bank	11.35	Over priced
HDFC Bank	14.53	Over priced
ICICI Bank	06.74	Over priced
Indusind Bank	05.061	Over priced
ING Vysya Bank	08.86	Under priced

**Effects of Overpricing and Under pricing  
Overpricing**

When shares are found as overpriced, then more investors try to sell their shares which will make them to earn a capital appreciation from their sales. And of course it will affect the inflation, where the money value of price is increasing. But when it is understood from the public that they trend to stop their dealings, the sellers will be forced to sell their shares at a lower price. That is the reason why the sensex shows a bearish market recently.

**Under pricing**

When shares are found as underpriced, investors will have a trend to purchase more number of shares to be sold at a higher price later. For instance the past trend shows that during inflation the share price of securities will decrease, and it makes the investor to buy more. But the same circumstances does not prolong for a time and the inflation too, because the Government will order and declare certain rules and regulations which will create an inverse situation. For instance, RBI declared a higher rate of REPO and ordered the commercial banks to increase their interest charges on loans and advances to reduce the inflation rate in such a way that it will curtail the ready cash available in their hands and it can increase the money value.

In brief if a share is overpriced investors come backward, while sellers try to boost up their sales. But in case of underpricing the play will be vice versa. And ofcourse these two states will affect the boom and recession in the NSE Sensex and BSE Index. If the share prices are keeping on increasing the stock market can be termed as Bullish market and if it is keeping in decreasing, then the share market can be termed as Bearish market.

**FINDINGS AND CONCLUSION**

**Findings**

1. 75% of shares show inverse result. i.e. if a share is found as underpriced as per any method, then it is found to be overpriced under the other method and vice versa.
2. Under anticipation approach, 1 share (Indusind Bank) is overpriced and rest of the shares are under priced.
3. Under Intrinsic approach, 1 share (ING vysya Bank) is underpriced and rest of the share are overpriced.

4. Share of INDUSIND Bank and ING Vysya Bank show the same result under both methods.
5. Share of City Union Bank shows the highest growth rate (15.61) where as that of Indusind Bank show the lowest growth rate (5.061).

**CONCLUSION**

According to this study, it would be better to sell the show of ICICI Bank and Indusind Bank which are overpriced and having a low growth rate. Though the shares of City Union Bank, HDFC Bank, Axis Bank, Dhanalakshmy Bank and Federal Bank are overpriced, the investors are recommended to wait for some time before selling, because they can make the benefit of substantial short term growth, since the shares show increasing growth rate. The shares of ING Vysya Bank which is underpriced and having moderate growth rate can be purchased for making investment.

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