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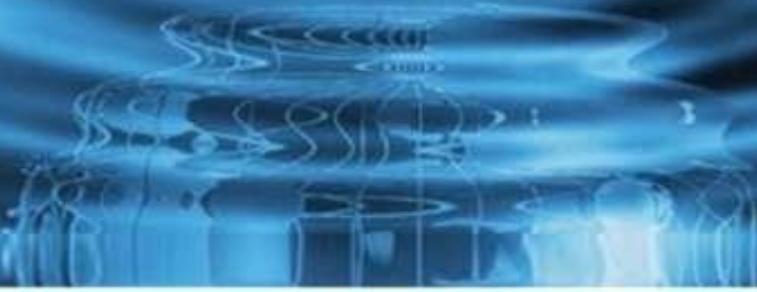
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The article is titled "A Study on Risk and Returns Consideration in Portfolio Management and Investments" and it is published in IIFL.

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ABSTRACT

Portfolio management is a process of encompassing many activities of investing in assets and securities. It is a dynamic and flexible concept and involves regular and systematic analysis, judgement and action. A combination of securities held together will give a beneficial result if they grouped in a manner to secure higher returns after taking into consideration the risk elements.

Key words: Portfolio Management, Return, Risk, Weights, Correlation.

INTRODUCTION

A portfolio is a collection of securities held for speculation. Instead of solitary security, financial experts arrange securities for their funds because they are not willing. Financial experts create a portfolio to spread the risk by not putting every egg into one box. The Board's portfolio period differentiates between the scope of the portfolios for which a particular securities arrangement is designed and the arrival of the securities and the risk of further analysis.

Management portfolio

Portfolio management is a process involving numerous resource and securities investment exercises. It is a dynamic and adaptable idea that integrates continuous and efficient analysis, evaluation and activities.

The management goal is to promote students and financial experts without initiation with the expertise of the Board. The project consists of developing a portfolio based on the reality and objectives of the financial specialist, the imperatives, the risk and return inclinations of the financial specialist and its risk evaluation.

Furthermore, the portfolio is evaluated and always balanced economically.

The changes are made by changing the portfolio securities and category weighting example. Thirdly, in order to meet changing conditions, the monitor must complete an appraisal of portfolio execution as regards risk and return targets and change of portfolio.

The accumulation of information on the trends, objectives and so on of financial experts is the establishment of the Board's portfolio. This gives a sense of direct investment in the selected beneficiary categories and securities that will be collected in accordance with liquidity requirements, time and resource inclination of financial experts etc. These are barriers to portfolio development.

REVIEW OF LITERATURE

A portfolio is a securities collection it is advantageous for people to make a contribution once and forever to the total lonely security funds and to legitimize all portfolio security actions in a portfolio based on normal returns on all the security in the portfolio.

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Portfolio analysis investigates the identification of future dangers and returns that hold various combinations of anticipated returns are typical loads of normal securities resettlement, although short-term portfolio distinctions may occasionally vary from regular, weighted, security variations. Securities mixed portfolios may possibly equal their separate components' overall quality.

Since the regular rates of the portfolio are essential to regular returns, the speculator who requires the best anticipated return should be considered in accordance with its regular return and underlying portfolios as a security speculator;

ELEMENTS

Continuous portfolio management, including:

1. Identification of the objectives and preferences of the financial expert.
2. Speculation policy plans are thus carefully created and maintained.
3. Review and verification of portfolio execution.
4. Finally, the portfolio assessment.

RISK

Wage/capital value vulnerability to both losses. Each company is hazardous. The greater the danger, the greater the arrival. Legitimate risk management involves the appropriate selection of businesses whose risks have in all cases been addressed. If their hazards are mutually balanced, two organizations are fully at risk.

The two most important risks are systemic risks and market risks and non-systemic or organizational risks. Systemic risks include problems relating to the market, access to raw resources, regulations, policy risks and financial risks. Unregulated risks include stupidity, spread of stocks, bad financial policies, poor marketing, etc.

This may decrease explicit organizational risk by extending it across different organizations (unsystemic risk). These may include banks, enterprises, gold, silver, arrivals, land, commons etc., via industrial gatherings, resource collecting and specialized instruments, such as value shares. All industrial bunches are tea, sugar, paper, concrete, steel, electricity, hardware and computer programming. Each has their own distinct characteristics and conjecture relies on the trends of the person. The second kind of risk (efficient hazard) is managed via the use of beta in different organizational operations.

Portfolio of Return

Every security in a portfolio adds to its security interest. The anticipated portfolio return is the weighted normal return, which includes all loaded securities that mirror the proportional security offer of an absolute business. Why is a speculator in his portfolio with many securities? Why does ABC's security not improve its return on these securities by adding resources? The answer to his query is that the speculator thinks that there is a liquidity advertising fence to estimate cash loss etc. in connection with businesses and their payment securities. There are various security classifications for all kinds of equipment, etc.

RISK PORTFOLIO:
The risk to a portfolio is only dependent on the risk to each asset. This risk is represented in zero and variations in profitability. Normal profit relies on likelihood of profit and a weighted risk commitment in portfolios. In this specific scenario, there are two proportions of the risk: one is clear and the other standard deviation.

Many financial gurus profit from not putting all their eggs in the bushel. It is not the risk and returns of inventories to separation that matter to them, but the risk and return to the portfolio in general.

RISK-RETURN ANALYSIS:
Every company has significant dangers. Organizational interest has its own hazards or weaknesses. These risks are caused by revenue variations and a vulnerability to thankfulness or energy deterioration via devaluation of offer costs, lack of cash, etc. The risk after a time taxi is shown by the difference in income, while the arrival means capital thank you, as well as payments, split by the cost of the offer.
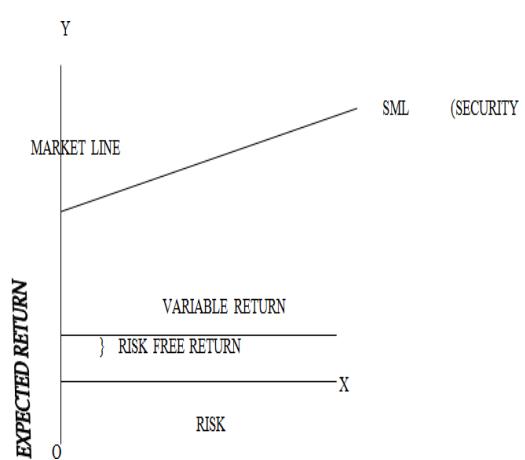
The greater danger is the emergence of a growing financial expert.

In any event, the risk is about 12% lower than the band rate provided by the RBI or afterwards reimbursed on public securities by around 13%, with up to 14%. This reduction in risk refers to lack of returns and no risk of money reimbursement. In each instance, there may still be various dangers, such as cash separation losses of liquidity, etc., as a result of total capital gain.

Risk returns are subject to change, and the objective of the Portfolio Director is to minimize changes by selecting the appropriate portfolio and lowering risks afterwards.

Two kinds of hazards exist, namely:

A) Systemic market risk

B) Risk company or systemic risk company

The discrepancy between the arrangements for the component and the optimum size of approximately 19 shares may reduce the non-systemic risk. These components should be selected to provide a variety of dangers and exceptional modifications in return. When resources are placed in these different material configurations, any risk may be kept to a minimum because some may also be affected by positive and other negative co-fluctuations and by then.

Extension of containers may reduce the unsystematic risk. The Board's portfolio thus has an important role in the growth of speculative entrepreneurship and minimizes risk

The risk problem is critical for portfolio managers. In light of portfolio owners' trends, the portfolio must thus be constructed to ensure that market risk presentation is not reduced Organizational hazards may be avoided with the extensive legal improvement of 19 components in different business and organizational meetings, which would likely reduce organizational risks almost irrelevantly. Optimal expansion may be established to minimize risk and forward returns when the contents covariance is less than 1 or unfavorable.

It is also designed to evaluate the link between two shares. IT shows that the causes are strongly recognized. If the connection coefficient is 0, the securities gains are free. The portfolio risk is when the connection coefficient is 1.

INVESTMENT DEFINITION

"The company may be described, as Fabling says, as the purchase of a speculator, an individual or institutional speculator or an incoming nation or country comparable to risk in future speculation" D.E. Fisher and RJ Acceding from Jordan, "Venture is a commitment to money for a fair rate of return. If the business has been examined appropriately, the arrival is proportional to the risk the speculator accepts."

INVESTMENT CONCEPT

Speculation is used primarily in its financial importance, and this business assigns cash-related assets to resources based on recovery or positive returns over time. Speculation means the dedication of a person's money to infer future payments for the sake of plots, income, leases, premiums, pension benefits or capital.

Any firm may wish to know about the media or the degree of speculation and preserve themselves from the speculation that ensures their safety and stability. A financial expert's stated goal is to identify a sequence of initiatives that match to his choice of risk and expected return. The speculator will choose the portfolio to improve its utility. Another significant idea is the speculator's behavior and brain studies. The development of a portfolio not only ensures the highest anticipated return but also meets the financial expert's requirements.

There are various types of speculative media or risk channels. Securities from risk-free instruments to highly theoretical offers and liabilities are offered for discretionary speculation.

Every effort is dangerous when the speculator splits his money. A successful speculator can minimize risk and mix benefits by avoiding connections and protecting his interests. Cash and data are the basis and cash or investment money accessibility is the key to speculation. In any case, cash is insufficient, because risk often depends on data from business, industry and economic instruments, but cash and data flow allows managers to speculate.

There are many ways in which speculative channels are characterized. Physical and financial efforts are an important part of this. It is physical, useful or productive if it is physical. Some natural resources, such as furrows, tractors or reapers, are beneficial for use or production. Many valuable physical assets such as vehicles, jeeps and so on are essential in companies. Many physical

resources are not desirable or produce for the customer as high wages, gold, silver, etc. Some of the various efforts are attractive and transferable, while others certainly are not. Attractive resources are open, restricted bids and debentures for organizations, registered trading organizations, public securities bonds, etc. In any event, non-attractive boycott of securities, provisional money and benefits, safeguards, post office shops, national authentication, shops, private limited shares. And so on. And so on. And so on. And so on. And so on. And so on. And so on. And so on.

PROCESS INVESTMENT:

The company can be shown in the following phases:

POLICY Venture: establishes and integrates a primary arrangement before setting single financial enterprises and objectives. There can also be a desire to organize speculative policies. Financial consultants must ensure that they probably create a backup stash, liquidity and rapidly moving assets. This phase can therefore be seen as an ideal time to distinguish resources from many aspects of the company.

SPECULATION ANALYSIS: The next step is an assessment of security accessible to undertakings after a reasonable order or type of undertaking is organized. Speculators must carry out a similar analysis in the industry. The main issue at this stage is the framework assurance about evaluation and inventory conduct, usual returns and associated risks.

VALUATION: Consideration of investment is regarded as important for future speculative beneficiaries. The estimates of these projects must be kept high on the speculator's priority list. The use of anticipated benefits to estimate risk resources, such as inventories, liabilities and bonds and other resources, must be connected to the adequate charging structure. The link between the incentive and the current market pricing enables the wider attractiveness of the benefit to be assessed. Every advantage must be a personal validity incentive.

OBJECTIVES OF STUDY

•Separate portfolio analyses.
• To examine in detail the function of securities.
• Choose the owner and a wide range of others to return

Contemplations.

• Measuring hazard and returns on portfolios using Markowitz Capital Assessment Model and Model.

• Select a large portfolio.

• Knowledge of the performance of the portfolio.

Speculation is an excuse for forgetting certain presents for the unknown future reward. This involves the utilization of several alternatives, such as fund merging, timing, reviews and disinvestments. Moreover, such important leadership should be healthy, not simply persistent. Many companies trade risks and profits. All risk selections are traded in speculation and with individual cuts in view of the uncertain future. With reversible speculation close the interest in assets and risks are liquid, the foundation is developed for anticipated wishes, which may be seen in the future. Speculators of securities will then assess their different risk obligations with fresh information that has altered their objectives and objectives.

Speculative choices or decisions are taken in three distinct but connected groups of components. The first may be shown as factual or educational ideas. Many volumes of information addressing a visible and wide financial expert and the particular characteristics of inventory and business to which he contributes are the actual foundation for speculative choices. The lower average of variables may be provided as anticipatory premises in the selection of companies. Emotional and cognitive goals related to the outcomes of elective speculations, while the environment and financial realities accessible to speculators, and are essential in their structures. These not only restrict the range of guessing, but also the hunt for true outcomes. The third and final kind of components is assessment premises. The structure of subjective preferences is usually estimated for financial experts by the size and consistency of the salary and guarantees and discusses explicit conjectures or mixtures, as they are always informed.

We need to look at the board's portfolio process and the speculative possibilities in the strategy for a programmed that invests funds in different assets or allocates the funds to a competent portfolio.

Study Scope

The study will investigate portfolio management and speculative alternatives and assist the

selection of portfolios. The "Markowitz Model" was excellent for Harry Markowitz in portfolio selections, but portfolio managers return to utilize the Markowitz show because of high scientific estimates.

This goal is to develop a feasible way of creating lucrative portfolios, known as efficient boondocks, using PC innovation. It also generates efficient natural resources for a portfolio of 10 companies.

The financial expert may learn to put his money in assets with higher income and lower risk.

Research on Methodology

The source of information for portfolio analysis is auxiliary in nature and includes internal and external sources of information. The information was collected from the annual reports and records of the organization. Other information sources include publications such as funds and websites, newspapers, journals, books, etc.

The risk and return analysis was carried out with the objective of understanding the diversification of portfolios using standard deviations and co differences.

CALCULATION METHOD:

Standard deviation and co-fluctuation are calculated in organizations using the Markowitz Model recipe and capital resource estimation.

COMPANY PROFILE

Origin
India Info Ltd. was founded in 1995 by a gathering of individuals with excellent training and professional credentials. Its institutional speculators include Intel Capital, CDC, ICICI, the TDA and Reeshanar.

The Info Line group provides a full range of speculative products including stock brokerage, goods brokerage, reciprocal funds, term deposits, GOI securities relief, postal investment funds and life coverage. India Info Line is the top ICICI private sector corporate expert for Prudential Life Insurance Co. Ltd.

Www.indiainfoline.com was India's top website recognized only by Forbes, both in succession, once and many times in this "Best of the Web" assessment of its global website and... India Info indicates "An essential need for finance experts in

South Asia." Alexia assessed the categorization of business news in Asia as Noël.

The shares and commodities are brokered under the trading name 5paisa. India Info line Commodities put Ltd, an India Info Ltd. wholly-owned business, has both MCX and NCDEX registration.

The first merging of the India Info Line took place in Mumbai in 1995 and No. 11 93797 from 1956, under the Company Act as Probity Research and Private Services Limited. India Info Line has begun functioning as an independent supplier for institutional customers, covering Indian companies, financial markets and the economy, to provide data, analysis and research. On 28 April 2001 India Info Line became a publicly limited company, with Probity Research and Services Limited altering the corporate name. The name of the company was changed to India Infoline.com Limited on 23 May 2001 and later to India Info Limited on 23 March 2002.

T his In 1999 India Infoline.com has recognized the potential of the Internet to envisage a mass retail industry and altered our action plan from institutional retail customer data management. India Info Line relocated to www.indiainfoline.com in May 1999 and started to offer news and market information, autonomous research, business pioneer interview and other information.

· The name of India Info was changed to India Infoline.com Limited in May 2001 to reflect our corporate evolution. India Infoline.com has been a significant supplier of commercial and financial data management in India for a while.

—In 2001, India Info Line growth into value based administrations, mainly for the exchange of web-based bids and securities, and also for the disassembly of financial goods as equity funds, RBI bonds online, as a provider of financial data and analysis. These drills were carried out by our fully equipped backups.

Our safe services, the Indian Info Line Securities Limited and www.5paisa.com, an e-broking entry have been pushed into the Indian Info Line brokerage for internet exchange in July 2001 under the name of 5paisa.com. It encouraged aggressive financial rates and research supported by Internet innovation India Info line also offers constant inventory, advertising news and value charting with different tools for specialist analysis, as well as advisors from a successful research group.

The main objectives of the business

Protests as laid out in their Association Memorandum may be as follows:

A: Linking or adopting web-based and programming, IT management, advance management programmers, web ads space, web consultancy and associated administration including Web planning and support, programming improvement and promotion items, supply management, computer advisory services management and e-commerce management.

To attempt, conduct, conduct, study, pursue, support, support, promote all forms of research, testing, examining, over viewing, training, enterprises, rural, mineral and financial institutions, financial institutions, equity markets for issues identified with key value speculation choices, optional value announcements, debentures, security, adventures, capital expenditures.

The structure of the business

The Info line lot of Indian assets includes India Info line Ltd, which has 5 fully owned support companies, which encompass distinct yet linked firms that together produce the growth of a wide range of products and administrations.

The business structure has been developed to agree on the administrative system characteristics while at the same time providing a faultless contribution to cooperation and flexibility of components in the different companies.

Indian Info line, the main company at www.Indiainfoline.com and at www.5paisa.com claims and monitors websites. It also provides bespoke and off-shelf exploring. Indian Securities Info line Pvt. Ltd. is NSDL BSE, NSE and DP. Their business offers securities brokerage services for portfolio management. India Infoline.com Distribution Co. Ltd, mobility of Mutual Funds and other speculative products, such as stocks, settlement shops etc. India Info line Insurance Services Ltd. is the main expert for ICICI Prudential Life Insurance for the transfer of life insurance, general insurance and medical insurance products. Info line Commodities Pvt. Ltd. is a specialist MCX inscription item for the trading of commodities for the future. India Info line Investment Services Put Ltd. offers their customers NBFC and edge financing,

Info Group Indian Line

The Indian Info Line is supplemented by contributions from equities and stock research firms, shares and subsidies to exchange goods, portfolio management services, mutual funds, life insurance, fixed shops, the IPO and other minor sums. The Indian Info Line includes a holding firm, India Info line Limited and its fully-owned banking institutions.

PURPOSE OF THE STUDY

The aim of the study is to identify the percentage of investments between two companies depending on each asset's risk and return.
These percentages help to allocate investment finance depending on risky portfolios.

Implementation of the study

10 assets or shares of the sense market are selected for the closing price of the month we use the following calculation to understand the risk of inventory or safety.

$$\text{Standard Deviation} = \text{Variance}$$

$$\text{Variance} = \frac{1}{n-1} \sum_{t=1}^{} (R-\bar{R})^2$$

Where

$(R-\bar{R})^2$ = Squares of difference between sample and mean

N = number of sample observation

DATA ANALYSIS AND INTERPRETATION

After that, we need compare the stocks or securities of two companies with each other by using the formula of correlation coefficient a given below.

FORMULA:

$$\text{Co-variance (COV AB)} \frac{\overset{n}{(RA-RA)\ (RB-RB)}}{t=n}$$

$$\text{Correlation Coefficient (PAB)} = \frac{COA\ AB}{(Std.A)(Std.B)}$$

Where

(RA-RA)(RB-RB)	=	combined deviation of A&B
(Std.A)(Std.B)	=	standard deviation of A&B
COV AB	=	covariace between of A&B
n	=	number of observations

The next step would be to create the best portfolio by merging two securities and stocks on the basis of what investment percentage is invested, that is to calculate two portfolio assets using the following minimum waiver equation: The third and last phase is to calculate the portfolio risk which shows how much the combination of two stocks or securities reduces the risk.

$$Xa = \frac{\sigma^2 b - pab\ \sigma_a\ \sigma_b}{\sigma^2 a + \sigma_b - 2\ pab\ \sigma_a\ \sigma_b}$$

CALCULATED STANDARD DEVIATION AND AVERAGE

Company Name	Average	Standard Deviation
Rel.communication.	192.73	33.47
Bharti Airtel	639.20	34.60
Matrix Laboratories Ltd.	79.02	8.21
Dr. Reddy's	457.45	19.13
Taj GVK	46.65	2.676
Hotel Leela	19.13	1.42
GMR Infrastructure Ltd.	75.57	4.76
IVRCL	119.96	23.19
Ambuja Cement Ltd.	104.90	43.11
Kakatiya Cement	60.126	2.33
Total	**1794.736**	**199.89**

CALCULATED STANDARD DEVIATION AND AVERAGE

Company Name	Correlation Co-efficient	Portfolio Risk(%)
Rel.Communication&Bharthi Airtel	7.469	47.48%
Matrix Ltd .&Dr.Reddy's	0.366	11.95%
Taj GVK& Hotel Leela	3.104	3.01%
GMR Infrastucture&IVRCL	0.531	6.28%
Ambuja Cement .&Kakatiya Cement	-0.012	39.57%

CONCLUSION

When securities or stocks are consummately created, the risk may be minimized to a base point. If unfavorable securities materialize, the risk may decrease to zero (a risk organization), but the risk is the same for the securities or portfolio stock.

When the portfolio happens, the managers are often productive in contrast to the respective resources. In this relationship coefficient, however, it is because the connection between Taj&GVK and HOTEL LEELA, which shows that these portfolios are mixed, is strong for the future. Speculators may spend a long period using their money to profit

TWO ASSETS PORTFOLIO HEIGHTS

1. Rel.Communication : 0.51
   Bhathi Airtel : 0.49

   1.00
   ----

2. Matrix : 0.34
   Dr.Reddy's : 0.66

   1.00
   ----

3. Taj& GVR Hotels : 0.70
   Hotel Leela : 0.30

   1.00
   ----

4. Ambuja Ltd . : 0.29
   Kakatiya Cement . : 0.71

....

1.00

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5. GMR Infrastructure Ltd .   :   0.87

    IVRCL   :   0.13

1.00

FINDINGS FOR TWO ASSET'S PORTFOLIO'S

BHARTHI AIRTEL AND COMPANY.

According to computation and study, the communication with Reliance is 0.51 and the standard deviation between the two businesses is 33.47 and 34.60, with a very low risk ratio at Bharthi Airtel of 0.49. In this combination, the risk of Bharthi Airtel is less than Reliance, i.e. 14.726<17.26. This allows investors to invest in Bharhi Airtel.

MATRIX AND LABORETORY REDDY

This combination may also allow investment firms to invest 0.34 in Matrix Laboratories and 0.66 in Dr. REDDY'S, because both businesses have variances in their 8.21 and 19.13 standards. This implies that Dr.REDDY'S is more exposed than the Matrix Laboratory.

It is thus recommended that if an investor wishes to invest in this portfolio, it should spend significantly on matrix laboratories and Dr. REDDY'S.

LEELA HOTEL TAJ &GVK HOTELS.

This combination means that the investment weight or percentage of Taj and GVK hotels is 0.70, while Hotel Leela is 0.30. In this regard, investors may invest more money in Hotel Leela or less in Taj&GVK, since the standard difference between hotels in Taj & GVK is 2.676 which are larger than that in the Hotel Leela.

INFRASTRUCTION AND IVRCL GMR

The total weight or percentage of GMR I infrastructure for IVRCL and 4,076 IVRCL and 23, 19 for standard deviation infrastructure for GMR is 0.87 and 0.13. This indicates that the risk of IVRCL is higher than GMR I.

As a consequence, investors may spend more in GMR infrastructure because of decreased risk.

CEMENT AMBUJE and CAKATIYA CEMENT

Investors have an additional choice of 0.29 and 0.71 respectively for Ambuja Cement and Kakatiya Cement. The investment ratio of these two securities is 43.11 and 2.33, respectively.

Unlike the standard deviation, Ambuja cement is significantly more at risk than Kakatiya cement. It is thus recommended that investor foundations should be invested not in Ambuja cement but in Kakatiya cement.

Date	Rel.com m	Bharth i Airtel	Matri x	Dr.Reddy' s	Taj GV K	Hotel Leel a	GM R	IVRC L	Ambuj a Cement	Kakatiy a Cement
1-1-20	246.75	719.75	92.70	466.5	48.80	19.65	77.45	149.8	70.55	61.95
2-1-20	252.19	705.65	94.50	468.7	50.25	20.55	85.00	190.35	69.5	60.05
5-1-20	262.45	685.4	92.60	470	51.20	21.05	82.75	192	70.05	61.00
6-1-20	249.10	657.4	90.70	489.95	50.00	22	81.60	199	77.3	66.70
7-1-20	206.19	648.85	75.00	461	46.55	20.05	72.50	121.45	72.35	61.00
9-1-20	196.85	638	68.90	457	47.30	19.25	66.85	114.4	72.9	60.20

12-1-20	179.40	621.6	70.05	469.95	45.85	19.3	76.00	117.5	69.5	60.10
13-1-20	198.30	608	71.45	453	48.25	19.4	71.40	119	71.65	58.70
14-1-20	199.35	623.5	71.50	487	46.30	19.2	77.00	119.5	71.8	60.35
17-1-20	174.35	606.9	74.00	446	47.05	19.95	71.10	119.55	69	60.70
19-1-20	191.65	639.20	75.05	449.95	48.30	19.19	72.35	111	71	59.30
19-1-20	193.45	645.25	72.80	456	49.00	19	76.20	112.8	73.95	62.00
20-1-20	176.30	614	73.65	466	46.60	19.9	74.80	111.25	69.05	59.80
21-1-20	170.19	576.9	75.00	442.05	44.50	19	75.50	108	70.9	59.00
22-1-20	197.30	620	75.60	430.5	42.50	17.75	77.19	94.25	69.35	59.95
23-1-20	190.20	614.5	78.00	432	43.25	17.8	72.75	90.3	67.4	59.00
27-1-20	171.20	646.85	85.00	441	43.20	17.7	75.00	97.4	69.3	56.50
28-1-20	196.00	657.5	79.00	455	45.00	17.8	76.80	100.2	70.8	57.10
30-1-20	170.85	623.2	86.00	449.95	42.55	19.19	73.65	110.5	70.6	59.00

CALCULATION OF STANDARD DEVIATION OF RELIANCE COMMUNICATION

Date	R Share price	Ř Average	R-Ř Deviation	(R-Ř) Sq.Dev.
1-1-20	246.75	192.73	54.02	2919
2-1-20	252.19	192.73	59.42	3530.7
5-1-20	262.45	192.73	69.72	4860.8
6-1-20	249.10	192.73	56.37	3177.5
7-1-20	206.19	192.73	19.42	190
9-1-20	196.85	192.73	-5.88	34.57
12-1-20	179.40	192.73	-19.33	177.68
13-1-20	198.30	192.73	-24.43	596.82
14-1-20	199.35	192.73	-3.38	11.14
17-1-20	174.35	192.73	-19.38	337.8
19-1-20	191.65	192.73	-11	121
19-1-20	193.45	192.73	-9.28	86.1
20-1-20	176.30	192.73	-19.43	269.94
21-1-20	170.19	192.73	-22.58	510.8
22-1-20	197.30	192.73	-25.43	646.6
23-1-20	190.20	192.73	-32.53	1058.2
27-1-20	171.20	192.73	-21.53	463.5
28-1-20	196.00	192.73	-26.73	714.49
30-1-20	170.85	192.73	-21.88	478.7
	∑R=3661.95			∑(R-Ř)= 20173.34

$$\text{Average }(\check{R}) = \frac{\sum R}{N} = \frac{3661.95}{19} = 192.73$$

$$\text{Variance} = \frac{1}{n-1} \sum_{t=1}^{n} (R - \bar{R})^2 = \frac{1}{19-1}(20173.34)$$

$$= 1120.74$$

$$\text{Standard Deviation} = \sqrt{\text{variation}} = \sqrt{1120.74}$$

$$= 33.47$$

CORRELATION BETWEEN REL.COMMUNICATION & BHARTHI AIRTEL

Date	Dev.of(RA-ṘA)	Dev.of(RB-ṘB)	Combined deviation (RA-ṘA)(RB-ṘB)
1-1-20	54.02	77.55	4199.251
2-1-20	59.42	66.45	3948.459
5-1-20	69.72	46.2	3221.064
6-1-20	56.37	19.2	1025.934
7-1-20	19.42	9.65	129.503
9-1-20	-5.88	-1.2	7.056
12-1-20	-19.33	-17.6	234.608
13-1-20	-24.43	-31.2	762.261
14-1-20	-3.38	-19.7	53.066
17-1-20	-19.38	-32.3	593.674
19-1-20	-11	-4.55	50.05
19-1-20	-9.28	6.05	-56.144
20-1-20	-19.43	-25.2	414.036
21-1-20	-22.58	-59.3	1938.994
22-1-20	-25.43	-19.2	488.256
23-1-20	-32.53	-21.7	705.901
27-1-20	-21.53	7.65	-202.9545
28-1-20	-26.73	21.3	-466.044
30-1-20	-21.88	-19	288.44
			(RA-ṘA)(RB-ṘB)=19436.9255

$$\text{Variance} = \frac{1}{n} \sum_{t=1}^{n} (RA - \overline{RA})(RB - \overline{RB})$$

$$\text{Co-variance(cov AB)} = \frac{1}{19}(19436.9255) = 8650.5$$

$$\text{Correlation Co.efficient (PAB)} = \frac{COV\ AB}{(Std.A)(Std.B)}$$

$$\frac{8650.5}{(33.47)\ (34.60)} = \frac{8650.5}{1198.062} = 7.469$$

PORTFOLIC WEIGHTS

1. Reliance communication& Bharthi Airtel Formula

$$Xa = \frac{\sigma^2 b - pab\ \sigma a\sigma b}{\sigma^2 a - \sigma^2 b\ 2\ pab\ \sigma a\sigma b}$$

Where

Xa =Propotion of investment Reliance Communication.

Xb = Propotion of investment in Bharthi Airtel.

$$= \frac{(33.47)^2 - (7.489)(34.60)(33.47)}{(84.60)^2 + (33.47)^2 - 2(7.489)(33.60)(33.47)}$$

$$\frac{1120.2410 - 8672.7263}{1197.19 + 1120.2410 - 19844.1989}$$

$$\frac{-7552.5214}{14526.774}$$

xa =0.51

xb =10-0.51

xb =0.49

2.Matrix &Dr.Reddy's

Formua:- $$Xa = \frac{\sigma^2 b - pab\ \sigma a\sigma b}{\sigma^2 a - \sigma^2 b\ 2\ pab\ \sigma a\sigma b}$$

Where

Xa =Propotion of investment Matrix.

Xb = Propotion of investment in Dr. Reddy's

$$= \frac{(19.19)^2 - (0.366)(67.405)(19.19)}{(67.405)^2 + (19.19)^2 - 2(0.366)(67.405)(19.19)}$$

$$\frac{266.1769 - 397.930}{4543.434 + 2601769 - 795.861}$$

$$\frac{-197.7531}{4007.6589} \quad \begin{array}{l} xa = 0.34 \\ xb = 10-0.34 \\ xb = 0.66 \end{array}$$

3. Taj GVK Hotels & Hotel Leela

Formula :-

$$Xa = \frac{\Box^2 b - pab \,\Box a \Box b}{\Box^2 a - \Box^2 b \; 2 \, pab \,\Box a \Box b}$$

Where

Xa = Propotion of investment in Taj GVK Hotels

Xb = Propotion of investment in Hotel Leela

$$= \frac{(1.42)^2 - (3.104)(2.676)(1.42)}{(2.762)^2 + (1.42)^2 - 2(3.104)(2.767)(1.42)}$$

$$= \frac{(2.0194) - (11.794)}{(7.6286) + (2.0194) - 23.5899}$$

$$\frac{-9.7776}{-19.9449} \quad \begin{array}{ll} Xa & =0.70 \\ Xb & =1-0.70 \\ Xb & =0.30 \end{array}$$

4 Ambuja Ltd. & Kakatiya Cement.

Formula:-

$$\frac{\Box^2 b - pab \,\Box a \Box b}{\Box^2 a - \Box^2 b \; 2 \, pab \,\Box a \Box b}$$

Where

Xa = Propotion of investment in Ambuja Ltd.

Xb = Propotion of investment in Andhra Cement.

$$= \frac{(2.33)^2 - (-0.012)(43.11)(2.33)}{(43.11)^2 + (2.33)^2 - 2(0.012)(43.11)(2.33)}$$

$$= \frac{}{(1958.4721) + (5.4289) + (2.4107)}$$

$$\frac{54287.7947}{1966.3117} \quad \begin{array}{l} xa = 0.29 \\ xb = 1-0.29 \\ xb = 0.71\% \end{array}$$

5 GMR Infrastructure Ltd. (IVRCL)

Formula:-

$$\frac{\Box^2 b - pab \,\Box a \Box b}{\Box^2 a - \Box^2 b \; 2 \, pab \,\Box a \Box b}$$

Where

Xa = Propotion of investment in GMR Infrastructure Ltd.

Xb = Propotion of investment in IVRCL.

$$= \frac{(23.19)^2 - (0.531)(4.76)(23.19)}{(4.76)^2 + (23.19)^2 - 2(0.531)(4.76)(23.19)}$$

$$= \frac{(537.7761) - (58.6141)}{(22.6576) + (537.7761) - (117.2282)}$$

479.192

$$\frac{}{117.2282} = \quad xa = 0.87$$
$$xb = 1\text{-}0.87$$
$$xb = 0.19$$

FINDINGS

In a situation in which a financial expert may vote on a final portfolio, the realistic identification of the portfolio is considered to be productive and it is only one professional portfolio from the viewpoint of oz and rx. X is Y and z is a wide portfolio.

When the external objectives of a competent portfolio are connected, a shell is framed or a cracked egg is formed, the shell is described as an accessible, feasible, or practicable set since every available market speculation is to be opened up, for example on the perimeter.

The correlation of Reliance according to the survey and the research is 0.51; whereas the greatest risk dependence of Bharthi Airtel is 0.49, both companies have a standard deviation of 33.47 and 34.60.

In this combination, the risk of Bharthi Airtel is lower than the confidence correspondence, i.e. 14,726<17.26. Bharhi Airtel's financial experts may invest their money.

SUGGESTIONS

A. BSE, NSE and NSDL DP individuals Securities pltd Indian Data Line. The company includes securities related with polio change management.

B. It is established by the organisation that risks (precise risk) may be minimized by development of many organizations with various industrial meetings

C. Furthermore, the organization extends these branch areas

D. The concept of the benefits of Port Polio's executive structure is not as vague as speculations. The organization has trained port folio managers how to offer financial specialists the best advice.

E. There was a danger that the port polio might reach the board and the speculating

F.Obtains the confirmation sum of the organization.

G. The misfortune support organization is more advantageous to the speculator.

CONCLUSION

If there are large securities or equities, the hazard may be reduced to a minimum. In the event of contradictory securities, the risk may be reduced to zero, but the risk is equivalent to the security or portfolio stock.

The Board often receives negative portfolio resources. However, the relationship between Taj&GVK and HOTEL LEELA indicates that both portfolios use the energy saving mix on the basis of the aforementioned linkage coefficient. Financial experts may invest their money to earn more in the long run.

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