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EIRC NEWS

The Institute of Cost Accountants of India
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Credit Appraisal in Banks



(L-R)- CMA Shaymal Kr. Bhatteerjee, RCM, CMA Bibekananda Mukhopadhyay, Chairman-EIRC, Ms. Sweta Agarwal, Senior Manager, BOI, CMA P. S. Dutta, UBI, CMA C. R. Chattopadhyaya



CMA Bibekananda Mukhopadhyay, Chairman, EIRC presenting memento to CMA P. S. Dutta

Budget Discussion on Direct Tax



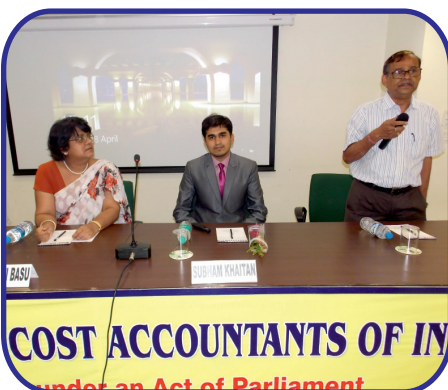
(L-R)- CMA Bibekananda Mukhopadhyay, Chairman-EIRC, CMA Syamalendu Bhattacharya, CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC



RCM CMA Shyamal Kr. Bhattacharjee presenting memento to CMA Syamalendu Bhattacharya



IBC2016: CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC presenting memento to CMA S. S. Sonthalia



CEP on GST: (L-R)- CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CA Subham Khaitan, CMA Arundhati Basu Chairperson-PD Committee-EIRC



Strategic Cost Management: CMAs P. K. Chakraborty, Ashis Banerjee, Dr. Sudipti Banerjee, S. K. Bhattacharjee & Arundhati Basu



GST-Input Tax Credit: (L-R)- Shyamal Kr. Bhattacharyya, RCM, CMA Biswarup Basu, CCM, CMA Bibekananda Mukhopadhyay, Chairman-EIRC, B. M. Sharma, Former President-ICAI, CMA S. P. Padhi, RCM, CMA Arundhati Basu, Chairperson, PD & Seminar Committee

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◆ CHAIRMAN'S COMMUNIQUE ◆



Respected and beloved professional colleagues,

This communiqué is made after a long gap through our journal 'EIRC NEWS'. Owing to some unavoidable reasons we could not publish the journal in time, hence three months issues are clubbed and I seek pardon for the same. But during the last few months we were really busy for the cause of profession. We met many officials and Ministers in different states of eastern region to propagate the functions of CMAs to make them understand how CMAs can help in different projects to lower the cost. At the advent of GST CMAs have plenty of scope to play important role in the field. We are arranging workshops and seminars on GST. Obviously there will be more programs on GST in the coming days to update the members. We have arranged a help-desk to provide solutions to members regarding any doubt about GST. For any GST related query you may send your mail to eircgsthelpdesk@gmail.com to get the solution by mail shortly. By this time you all are aware about the Global Summit organized by our Institute and this the first time to have the President of the country in the Institute's program.

I request all of you to contribute article in the EIRC NEWS whenever and whatever you can contribute. But article must be free from any political colour and related to CMA Profession.

Perhaps this is my last communiqué to you since I am to hand over the charge to my successor within this July and no denying that I feel nostalgic to write this communiqué. Please continue to provide your suggestions and support for the cause of our noble profession.

With best regards,



CMA Bibekananda Mukhopadhyay
Chairman, EIRC of ICAI

◆ SECRETARY'S COMMUNIQUE ◆



My dear members and students,

After March issue this communication is being made as combined issue of April, May and June, 2017.

We have passed a very busy schedule during the month of March. New financial year has started and we are awaiting to welcome Bengali Naba Barsho 1424. I would like to convey "SUBHO NABA BARSHO" to all of you through this page though this issue is coming out late due to some unavoidable reasons.

GST Bill has passed by the Parliament but still some issues are pending, which will be resolved shortly. Now our Economy will start to run towards a new horizon. Through this Tax reform our Law Makers would like to attract investors to invest in "INDIA". This will definitely full-fill the dream of every Indian and in near future India will be one of the leading countries in the world in respect of economic growth.

Under GST regime CMAs will perform a pivotal role to build the nation.

EIRC has conducted several programs for members and students on GST, Income Tax, Banking Industry and so on to keep our members up dated so that they can face any challenge in their professional arena.

After demonetization several changes have been made by the CBDT in direct tax law. From Financial year 2017-18 many amendments have been made particularly in rate of tax and digitization of transactions. Students are therefore advised to have a thorough study in finance, commercial and tax laws.

Institute has organized "GLOBAL SUMMIT 2017" and honourable President of India Shri PRANAB MUKHERJEE has inaugurated the program. Governor of West Bengal Shri Keshri Nath Tripathi and Arjun Ram Meghwal MOS Finance and MCA were also present in the inaugural session. I am thankful to our Central Council for organizing such a Mega Event in Kolkata.

GST has started rolling from 1st July 2017. Hope it will be the game Changer of Indian economy. I would like to request all of my professional colleagues to step forward to handle the matter in a best possible manner. A very big opportunity as well as challenge is present before us. CMAs can be the key players in this field. Any member facing any problem regarding GST can send his query through mail to eircgsthelpdesk@gmail.com for proper solution.

Besides professional programs EIRC has also conducted continuous Carrier Counseling and consequently admission strength has slightly been increased in this year which is a positive sign towards growth of the Institute.

May be this is my last communiqué to you as Secretary 2016-17, because next issue is expected to come under the aegis of new committee.

With warm regards.

CMA Ashis Banerjee
Secretary, EIRC of ICAI

Corporate Governance & Management Accountant

Vitin Kumar, (Amie)

Dy. Engineer, Bharat Heavy Electricals Limited, Allahabad (Up)

MANAGEMENT ACCOUNTANT plays a vital role in entire business dynamics. Being a part of strategic team member, his responsibly starts from very first point of incorporation of company and goes in setting up corporate strategic plans viz. Vision, mission values, in maintenance of business affairs by acting as an Expert, internal auditor, management auditor, operational auditor, cost auditor, member of various corporate committees and significantly visible in process of winding up/liquidation of companies as a company administrator and company liquidator. Recent formation of NCLT/NCLAT presents a new window of opportunities for management accountant to show their expertise and competence in Law related matters by acting as technical member and as legal representative. In short a management accountant may be termed as a friend, guide and philosopher of the corporations. On governance front too, MA's (CMA) role is to be seen as a matter of paramount importance. Before, discussing role of MA in governance and particularly in corporate governance, let understand, what is governance?

Term 'GOVERNANCE' may be defined as a process of establishing policies and procedures and continuous monitoring their implementation by the members of governing body for maintenance of conducive environment for sustainability and prosperity of the entity, whether these are undertaken by government, market forces or family business, through laws, rules, norms, power, language or otherwise. Corporate Governance is ethical conduct in the internal environment. It is framework established by board of directors (trustee of company) to ensure accountability, transparency and fairness in all transactions with its stakeholders. The organization for economic Cooperation and development (OECD) in 1999, published its principles of corporate governance provides a comprehensive definition of corporate governance as "a set of relationships between a company's management, its board, its shareholders and stakeholders. Corporate governance also provides the structure through which the objectives of company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and shareholders, and should facilitate effective monitoring, thereby encouraging firms to use resources more

efficiently"

Corporate governance is essential for sustainability of corporations and generates long term values for stakeholders. Need of corporate governance arises due to divorce of business from its ownership, as business (a separate legal entity) is managed by the empowered BOD on behalf of shareholders. Further, responsibilities of corporations are not limited to shareholders, but extend to their all stakeholders. Notorious collapses and scandals such as ENRON (US), World com (UK) and Parmalat (Italy) have been widely reported and attracted attention on corporate failures internationally. U.S. responded the situation by producing Sarbanes -Oxley Act, 2002 and US foreign corrupt practice act. Development of corporate governance in UK may be searched in Trilogy code: The Cadbury report (1992), The Greenbury report (1995) and The Hempel report (1998). In Germany Works Constitution Act 1972 (for good industrial relations), Co-determination Act 1976 (Employees and shareholder representatives in supervisory board) and Cromme code which was published in 2002 and amended in 2005 are landmark in corporate governance. The Japan revised corporate governance code 2001, published by corporate governance committee emphasized on employees and other stake holders. India's biggest-ever corporate fraud unearthed at Satyam computers services limited in year 2008, which increased concerns about corporate governance phenomenally. Irregularities in business transactions of many corporations viz. Sharada chit fund, NSEL, PSEL, Shaha India, Bank of Baroda, IDBI bank, Syndicate Bank and many others prominently reported by Indian media. India has placed a robust corporate governance system with regulatory and voluntary framework.

Regulatory framework on corporate governance in India:

Indian regulatory framework is also in consonance with the internationally adopted practices of corporate governance. Framework is outcome of Constitution of Kumar Manglam Birla committee (1999), introduction of clause 49 (2000), N.R. Narayan murthy committee report (2003) revision of clause 49 (2006), issue of voluntary guideline on corporate governance by MCA (2009), Companies Act (2013) and SEBI announces new Corporate Governance norms (2014).

Corporate governance mechanism for Indian companies is enumerated in the followings:

- 1 The Companies act 2013
- 2 SEBI guidelines
- 3 Listing agreement of stock exchanges
- 4 Accounting standards (Ind AS) issued by the institute of chartered accountants of India (ICAI)
- 5 Secretarial standards issued by the institute of companies secretaries of India (ICSI)
- 6 Standards on cost auditing (SCA) issued by the institute of cost accountant of India (ICAI) provide significant information to comment upon of product wise performance, operational performance and efficiency and efficacy of corporations is an effective tool for good corporate governance.
- 7 Corporate governance voluntary guidelines-2009, issued by MCA
- 8 Competition Act -2002, it the well establish fact competitive

Companies ACT

- Clause 76 defines related parties and clause 77 of section (2) provides list of relatives.
- Section 125, Investor education and protection fund
- Section 135, corporate social responsibility.
- Section 138 provides certain class of companies to appoint internal auditor.
- Section 139, mandatory rotation of auditors.
- Section 143 (12) auditor to report of fraud to central government, section 144 - auditor not to render certain services, section 147 - punishment for contravention.
- Section 149 - composition of board, cap on number of directors for different type of companies, listed companies to appoint at least 1/3 independent directors, certain class of company to appoint women directors. Schedule IV, Section 149 (8), and code for independent director.
- Section 150- Manner of selection of independent director, maintenance of data bank of independent directors.
- Section 151- appointment of director elected by small shareholders.
- Section 154, 155, 156, 157, 158 - director identification number, prohibition to obtained more than one DIN,
- Section 177 - Audit committee, Establishment of vigil mechanism by certain class of companies.
- Section 178 - Nomination and remuneration committee and stakeholder relationship committee.
- Section 182- prohibition and restriction regarding political contributions.

- Section 184 - disclosure of interest by directors.
- Section 185- loans to director.
- Section 188 -related party transactions
- Restriction to non cash transactions involving directors.
- Section 194- prohibition on forwarding dealings in securities of company by directors or key managerial persons.
- Section 195- prohibition on insider trading of securities.
- Schedule V, Part II section 196, 197, disclosure requirement under 'Corporate Governance' heading by board of directors - all elements of remuneration package, salary, benefits, bonus, stock option, pension etc. of all the directors. Details of fixed component and performance linked incentive along with performance linked criteria. Details of service contract, notice period, severance fees. Details of stock option, whether same has issued at discount including period over which accrued and over which exercisable. Section 197- overall maximum managerial remuneration and managerial remuneration in absence or inadequacy of profit, Section 198- calculation of profit for managerial remunerations.
- Section 200- central government or company to fix limit with regards to remuneration.
- Section 203- appointment of KMP for specified class of companies.
- Section 204- secretarial audit for bigger companies.
- Section 205 of companies act includes in duty of company secretary to assist board in ensuring good corporate governance practices and complying with the corporate governance requirement and best practices.
- Section 211- establishment of serious fraud investigation office.
- Section 277- legal advisor, banker not to disclose certain information.
- 447, define fraud

By SEBI

Clause 49 of the Listing Agreement shall be applicable to all listed companies. As per this clause the companies agrees to comply with the provisions of Clause 49 which shall be implemented in such a manner so as to achieve the central objectives of corporate governance. It further provides that, in case of any ambiguity, the said provisions shall be interpreted and applied in alignment with the principles. Theme of clause may be summarized in the followings:

BOD and committees

- Mandatory stakeholder's relationship and nomination and remuneration committee with an independent chairman.
- Audit committee, mandatory performance evaluation,

succession planning for the board

- Key managerial personals
- At least one woman director on the board

Independent directors

- Nominee directors are not to be considered as independent directors.
- Prohibition on stock options.
- Mandatory performance evolution
- Separate meetings of independent directors
- Number of companies restricted to 7 (3 if serving as whole time director).
- Maximum tenure restricted to 2 terms of 5 years

Miscellaneous

- Prior approval of all material related party transactions from audit committee
- Definition of relative covering Companies Act and

accounting standards

- Compulsory whistle-blowing mechanism.
- Insider trading
- Disclosure of remuneration policy.
- Specifying principles of corporate governance.
- Risk management

Dynamic role of management accountant in corporate governance:

Management accountant being a member of ethically driven profession, while performing on various fronts, can care essence of corporate governance principles. Acting as a Cost auditor he is required to comment on the scope and performance of internal auditor. Cost audit report contains significant information which would help to assess and improve operation efficiency of a concern. This provides valuable inputs to management to ensure optimum utilization of resources.

Corporate Governance

CMA Pratap Chakraborty

Ex-CFO & Co. Secretary, Tata Project, Practicing Management Consultant

With the growth and expansion of business comes the complexity of managing various elements that govern a business. Since the elements are heterogeneous, divergent and functions rapidly in a dynamic marketplace, a need for disciplining and controlling them arises as an important corporate action. This calls for professionalism, ethical conduct & moral behaviour, efficiency, adherence to fundamental & emerging laws and finally fulfilling the expectations of all stakeholders who forms a part of the entire corporate functioning.

Since corporates are managed by people and their actions, judgement and decisions influence and impact corporate performance, the concept of corporate governance has evolved focusing on the actions of the people who run the business and decides how it should be run. The essence, thus, is to uphold the ethos of corporate excellence by practicing a culture where apart from efficiency the expression of good corporate morality together with the adherence to all applicable laws of the land manifests in a satisfactory manner.

Evolution of Corporate Governance in India over time may be summarised as under :-

- 1992 - Establishment of SEBI for protection of investor's interest;
- 1996 - CII Committee formed to develop Corporate Governance Code (CGC).
- 1998 - India's first CGC released by CII
- 2000 - Report by Kumar Mangalam Birla Committee on CGC
- 2001 - Recommendations by RBI's Standing Committee; Enactment of clause 49 by SEBI for listed Companies.
- 2003 - Report by N. R. Narayan Murthy Committee
- 2004 - Amendments to Clause 49 of Listing Agreement
- 2004 - Formation of National Foundation for Corporate Governance (CG)
- 2006 - OECD policy dialogue on CG practices in India
- 2008 - Revision to Clause 49 of the Listing Agreement to increase the number of independent directors to 50%
- 2009 - Introduction of Companies Bill 2009 ; Launch of CG guidelines by MCA

2010 - Regulatory actions formulated by SEBI against non-compliance of CG requirements and Companies asked to offer explanations for non-compliance. Further changes to Listing Agreement with regard to time and extent of disclosure introduced.

The present Companies Act 2013 is a culmination of all these developments over time with regard to Corporate Governance . Various sections and rules framed there under in the Companies Act 2013 candidly articulate this.

Corporate Governance implies creating proper systems and structures in an enterprise for ensuring robust internal controls, well defined risk management practices, enhancing transparency and appropriateness of various disclosure requirements in financial statements and essentially creating a culture of trust, discipline and confidence where management of an enterprise functions in a morally responsible manner upholding the objectives of the enterprise in a manner which is sincere, fair and compliant with all applicable laws.

The above, when practiced over time, ensures sustainability of business operations, effective management of employee relations and safeguarding the interest of all stakeholders, thus, establishing practices that ensures growth, prosperity and well being of the enterprise and the stakeholders associated with the enterprise. The objective is to instil discipline and credibility in respect of every activity an enterprise performs and undertakes.

Though the fundamental principles of good corporate governance remain, by and large, the same - the expectations of shareholders, regulators, and the society at large as to what constitute the best practices of corporate governance may change over time.

While the practices followed in India are aligned with the best global practices, their implementation and effectiveness is a matter of concern. Most companies in India are largely controlled by promoters, hence, the controlling shareholders are able to influence the functioning of the board and board committees and this may defeat the principles of good governance and may not be in the best interest of all the stakeholders. The sufferers are minority shareholders in most cases whose views remain largely sublime despite the

democratic focus of corporate governance. Over time, the rules / principles governing corporate governance have become stricter and more of discipline focused where non-compliance are dealt with penal provisions provided in the regulations that govern the requirements of corporate governance compliance.

Areas where corporate governance, inter alia, focuses are: rights of shareholders, protection of minority shareholders' interest, related party transactions, financial reporting and disclosure requirements thereof, regulation of audit procedures, enhancing effectiveness of board process and ensuring unbiased and professional involvement of board members in the management & decision making process, need for disclosure of various corporate information in the Board's Report & in the Annual Return, role of independent directors, regulation of insider trading, preparedness for meeting potential and emerging business risks, efforts towards increasing investors' value and finally to protect the interest of all stakeholders of an enterprise by creating an atmosphere of trust, confidence and credibility.

In India the requirements of corporate governance and risk management are primarily governed by clause 49 of the Listing Agreement and the guidelines issued by the Ministry of Corporate Affairs which are increasingly aligned with the global best practices. The present Companies Act 2013 and the various rules / regulations issued by SEBI are designed in a way to ensure improvement in the corporate governance

practices in the organisations and establishing a culture of compliance leading to good corporate performance as well.

The pillars on which the principles and practices of corporate governance rest, inter alia, are -

- Integrity & Ethical Behaviour
- Responsibility & Accountability
- Transparency
- Capabilities and Efficiency
- Performance & Results

In essence, to sum up, good corporate governance comes through good conscience. The collective good conscience of all wise people on the board and in the management team of a company is what result in good corporate governance. You cannot mandate your conscious by law. Good conscious has to be practiced and cultivated in one's inner-self and to be monitored continuously with care so that the expression of good governance manifests automatically in all spheres of activity and decision making.

In the days to come, with the growth and expansion of trade & commerce and international trade, we are likely to see more elements in the compliance structure of Corporate Governance. This will ensure that companies are run in a trust worthy and disciplined manner and conform to globally accepted best business practices while managing their corporate affairs. This will ultimately result in the fulfilment of various stake holders' expectations over time.

Cost of Capital

Dr. Subrata Mukherjee

Assistant Professor, Mahadevananda Mahavidyalaya, Barrackpore

The concept of cost of capital is dealt with the different components comprising the capital structure. When we calculate the cost of equity or cost of debt we do it in two different perspectives. The cost of debt is the effective rate of interest that is borne by the firm on the debt capital raised by it. The cost of equity is the expected rate of return of the equity holders on the investments made by the equity holders in the firm.

The cost of capital in absolute term is the interest that the firm has to pay on the amount raised by it and in relative term is the rate of interest that the firm has to bear on the amount raised by it. The product of the principal amount, rate of interest and time gives the amount of simple interest.

$SI = PRT / 100$, SI - Simple Interest, P - Principal, R - Rate, T - Time

Here, R is the nominal rate, $R = (SI \times 100) / (P \times T)$ -----(I)

Cost of Debt

For, calculating the cost of capital we have to calculate the R which is the effective rate of interest. So for calculating the effective rate of interest the SI (Interest amount) will be the same i.e. the amount paid by the firm to the borrower but the value of P (i.e. the face value) will be the amount raised by the firm which is calculated as

$S_v = F + P - D - f$, S_v - Nominal amount raised by the firm, F - Face value of amount raised, P - Premium received by the firm, D - Discount given to the investors, f - floatation cost incurred i.e. the administrative cost incurred by the firm.

So, for calculating Cost of Perpetual debt

$K_i = I / S_v \times 100$ ------(ii)

K_i = cost of debt before tax

S_v = Net amount received by the firm

I = Interest amount paid to borrower

$K_d = K_i (1 - t)$

K_d = Cost of debt after tax

t = tax rate

How to remember the formulae of cost of capital

If we compare the above two equations (i) and (ii)

Equation (I)

R is the nominal rate

SI is the amount of interest paid by the firm

P is the amount raised

T is the time

Equation (ii)

K_i is the effective rate

I is the amount paid by the firm

S_v is the net amount received by the firm

T = 1, so it is removed from the equation

Simple rate or nominal rate is the concept that a student learn in class v. The same representation is made in developing the concept of cost of capital which a student find difficult to remember. Hence, if the formulae of simple rate of interest are remembered the entire formulae of cost of capital will be remembered.

Cost of Redeemable debt

$K_i = [I + (R_v - S_v)/n] / (R_v + S_v) / 2$ -----(iii)

$K_d = K_i (1 - t)$

$K_i = [I(1 - t) + (R_v - S_v)/n] / (R_v + S_v) / 2$ -----(iv)

R_v = Redeemable amount of Debt

n = tenure of debt

In both the above equations the amount that is paid by the firm is taken in the numerator i.e. the interest and the difference of the redeemable amount and the net amount received by the firm. The difference between the above equations is that in equation (iii) it is assumed that there is no corporate taxes and cost of debt before tax is calculated and then the effect of taxation is measured. In Indian context the benefit of taxation is not available on the difference of the redeemable amount and the net amount received by the firm so cost of debt after tax is calculated in equation (iv) by measuring the effect of taxation on the interest component only.

Cost of Equity

Cost of equity is the expected return of the shareholders. So, in calculating the cost of equity the amount paid by the shareholders i.e. the cost of acquisition of the shares at market price is taken into consideration. There are different approaches in measuring cost of equity like Dividend Model, Dividend Growth Model, Earning Model, Earning Growth Model and CAPM are applied to calculate the cost of equity.

Now, the question is which model to be applied in calculating the cost of equity will depend upon the objective of the shareholder. When the shareholder is a short term investor in the equity then his focus will be more on the dividend i.e. the amount received by him and so dividend model will be applied. When the shareholder is a long term investor then his interest will be more on earnings so earning model will be applied to measure cost of equity. To measure the efficiency of the portfolio CAPM will be used in calculating the cost of equity. Now, let us discuss each model separately.

Dividend Model

$$K_e = D_1 / P_0 \times 100, \text{ ----- (v)}$$

K_e = Cost of Equity

D_1 = Dividend at the end of the year

P_0 = Market price at the beginning of the year

Since, cost of equity is the measure of expected return of the shareholders and cost of equity is calculated from shareholders standpoint so the expected dividend at the end of the year is taken into consideration which is denoted by D_1 . Cost of equity is the effective rate of interest that is receivable by the shareholders is calculated. If we compare equation (i) and (v)

Equation (I)

R is the nominal rate

SI is the amount of interest paid by the firm

P is the amount raised

T is the time

Equation (v)

K_e is the effective rate

D_1 is the amount receivable by the shareholders

P_0 is the amount invested by the shareholders i.e. the cost of acquisition of shares at market value.

T = 1, so it is removed from the equation

So, if a student can understand the concept of calculating the rate of interest the concept of calculating the cost of equity can easily be remembered.

Dividend Growth Model

$$K_e = D_1 / P_0 \times 100 + g,$$

g - growth rate

This equation is the extension of the previous equation. If the firm pays the same amount of dividend each year then equation (v) is used to calculate the cost of equity. When the amount of dividend differs each year then the trend is measured with the help of time series analysis where $y = a + bt$, is calculated. 'y' is the amount of dividend distributed by the

firm over the years. The value of 'b' is the growth rate which is measured with the help of time series analysis i.e. the growth of dividend is measured for the years under consideration.

Earning Model

$K_e = E_1 / P_0 \times 100$, E_1 is the expected earnings of the shareholders from the firm at the year end.

This model is used when the shareholders are behaving as an investors then they will be more concerned with the net income or earnings that is available to the equity holders. Earnings is the accrued income of the shareholders and the dividend is the actual income.

Earning Growth Model

$$K_e = E_1 / P_0 \times 100 + g$$

When the earnings of the firm remain constant over the years then earning model is used but if the earnings differs then trend is measured with the help of time series analysis as discussed above.

CAPM

$$K_e = R_f + \beta(R_M - R_f).$$

R_f = Risk free rate of return. (this can be taken as the rate on RBI bond)

β = risk

R_M = Market rate of return

CAPM is used to study the efficiency of the portfolio. CAPM helps to determine the expected return of the shareholders which is then compared with the actual return. If the actual return (actual return is the market return) is more than the expected return as calculated with the help of CAPM then the portfolio is efficient. When the actual return is less than the expected return then the portfolio is inefficient.

β (Beta) gives a measure of the extent of market related risks which are non-diversifiable. When $\beta = 1$, the investment is considered to be of average (normal) risk. The greater the value of beta, the greater would be the risk and vice versa.

$\beta = \text{Cov}(a, m) / \sigma_m^2$ where $\text{Cov}(a, m)$ is the covariance of returns on an individual company's share (A) with returns for market as a whole (M).

σ_m^2 = variance of market return

we know

$$r = \text{Cov}(a, m) / \sigma_a \sigma_m$$

$$\text{or, } \text{Cov}(a, m) = r \sigma_a \sigma_m$$

$$\text{therefore, } \beta = r \sigma_a \sigma_m / \sigma_m^2$$

$$\text{or } \beta = r \sigma_a / \sigma_m$$

Money Market Volatility in India - An Empirical Analysis

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Abstract

Propelled by a vibrant economy, India is at the forefront of developing nations sustaining 8.60% in GDP growth in 2010 and 6.9% in 2013, 5.6% in 2014, 5.46% in 2015 and 5.67% in 2016. At a common playing platform of Global market, Trade liberalization concentrates on capital market competition and commitment of financial target. With the influx of open market economy on 24th July, 1991 money market constitute an important segment in financial system and facilitates an invigorative vibrant financial instruments in capital market. The Indian healthy money market strengthens the overall financial system in providing short-term funds to small entrepreneurs, individuals and to the governments that are required for development of capital market with accessibility, continuous flux of risk, affordable return on investment, withdrawal Facilities and liquidity instruments. There is an invigorative change in the journey and growth of capital market development takes place in terms of corporate funding money market is emerged and associated with cost competitiveness and volatility in stock market. With the influx of cut throat competition an entity have realised that they should look after the financial volatility mitigation as well as funding mechanism. The philosophy of impulsive response of stock market among business and society gives birth to the concept of money market for corporate sustainability in financial system. Even after 66 years of journey, money market in India is in nascent stage and yet to gain importance. The interdependence between the stock market and money market cannot be ignored emanating from supplementary role of mutual funds. Indian money market, with apex body RBI, aims at establishing a long term relationship between the state of economy, short-term funds and corporate funding facilitating economic prosperity. For the purpose of our analysis 30 days money market data and 30 days daily NSE-nifty index have been used from NSE website. The present paper investigates the movement pattern of money market instruments yield rate and NSE-nifty index in Indian context. This paper also examines how the money market instruments

impulses upon NSE-nifty index in India.

Key Words: money market, NSE-nifty, capital market, volatility, risk and short-term fund

Introduction: Propelled by a vibrant economy, India is at the forefront of developing nations even with an agile economic situation imminent from end of 2007. With the influx of new economic policy, money markets constitute an important imperative to short-term loan market. Money market is an instrument and quick device for ensuring, providing and rearing easy funding arrangement comprising Treasury bill market (T-Bills), Central government securities (Gilt-edged securities), Call money market, Commercial papers, Certificate of deposit market, Commercial bill market, Interbank participation, Term loan, Interest rate swaps, Money market mutual funds and Re-purchase agreement market. With the organised money market and developed call money financing market, India veils herself into a matured and well shaped structured economy over the globe. Indian money market exhale (means transpires or leak out) into an imponderable (without weight) character of stock market consisting of apex regulatory body, organised banking system, existence of developed sub-markets, easy short-term funding, intangible location, developed capital market, transpiring state of economy and wholesale money market in financial system. The basic objective of Indian money markets is to strengthen the overall financial system in providing steady source of funds in addition to deposits allowing alternative financing structures, healthy savings instrument and competitions. Money market, as an aid to capital market, constitutes an important segment in the financial system. Indian money market plays an omnipotent role in providing short-term funds and loans to trade, industry and commerce. Corporate sector and legal entities procures their required amount of fortnight finance, operating exchange and working capital from money market in an easy, affordable risk, volatile interest rate, steadily accessible and transpiring marketable manner.

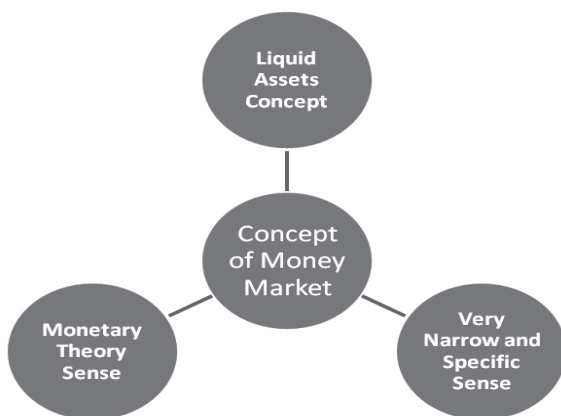
Significance of Money Market: The financial market of a

country is composed of two markets one is money market and the other is capital market. The market for money trading is called money market on the other hand the market for capital is capital market. With the advent of open economy on 24th July, 1991, sub-prime crisis in 2003, economic meltdown at the end of 2007 and crisis in Greece, a small country in south Europe, kept the global economy on tenterhooks for many years along with money market volatility. Money market is a market engaged in short-term lending of funds and borrowing of money involving financial institutions, Reserve Bank of India, State Bank of India and its seven subsidiaries, United Bank of India and its subsidiaries, Scheduled Commercial Bank of India, Non-banking financial institutions, NABARD, Co-operative Banks, Indian Sub-money markets, Industrial Development Bank of India, Small Industries Development Bank of India, Industrial Credit and Investment Corporation of India, Industrial Finance Corporation of India, Industrial Reconstruction Bank of India and Export-Import Bank of India. Basically money market is used for at least three sense to be assessed the significance of money market. The first concept is very narrow and specific concept, secondly highly liquid assets concept and lastly monetary theory concept. These concepts are explained and outlined in brief as follows.

Very Narrow and Specific Sense: The market is meant for trading of money on call with notice or without notice for short-term corporate funding where lenders are mainly commercial banks and borrowers are firms and money brokers.

Liquid Assets Concept: This market is mainly for call money market and certificate of deposit market. The money market refers to money trading for a period of overnight to several months notice in fulfilling short-term requirements of funds by commercial banks and money brokers. In these market commercial banks plays an important role both in supplying funds and borrowing money's for very short periods of maintaining cash reserve ratios.

Monetary Theory Sense: This concept is used occasionally in monetary theory where it may refer only for market of loanable funds.



Call Money Market: The market for money is called money market. It is the constituent part of Indian Sub-money markets. Market in which brokers and dealers borrow money to satisfy their credit needs either to finance their own inventory of securities or to cover their customers' margin account is call money market. The short-term market in which banks, financial institutions, mutual funds, finance companies and government take part in borrowing and lending transactions to meet the very short period liquidity requirements is called call money market. Commercial banks are participated in call money market to maintain the minimum cash balance or cash reserve ratio with changing mechanism of Reserve Bank of India. In call money market, money is being lent for one day is called call money and that is being lent for more than one day is called notice money or money at short notice. Call money is a method by which banks lend to each other to be able to maintain the cash reserve ratio. The interest rate paid on call money is known as the call rate. It is a highly volatile rate that varies from day to day and sometimes even from hour to hour. There is an inverse relationship between call rates and other short-term money market instruments such as certificates of deposit and commercial paper. A rise in call money rates makes other sources of finance, such as commercial paper and certificates of deposit, cheaper in comparison for banks to raise funds from these sources. The lending rates on call money are called call rate or call money rate. It is market driven rates of interest. Call rate is determined by the demand for and supply of money. The interest is fixed for day by day or in intra-day that is hour to hour. Hence the call rate is highly volatile in nature. The call money rate depends on the following market forces.

Accessibility: A money market investment culminates in the return of the principal amount at maturity. This period can be set between one day and thirteen months, which makes them more accessible.

Market Risk Factor: The money markets are in continuous flux. Because risk is lower than investing in stock market shares, it makes use of a money market facility more predictable.

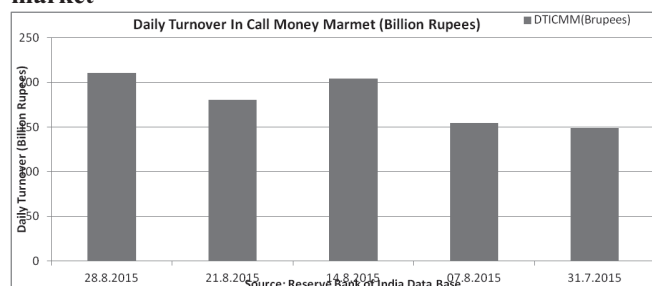
Return on Investment: Better interest rate returns can be obtained than keeping money in a current account. The higher the amount invested, the higher the rate of return.

Withdrawal Facilities: Most money market investments offer the investor some degree of freedom to make withdrawals. Quite often the investor can make between two and five withdrawals during the period of the investment, depending on the length of maturity period.

Market Liquidity: Liquidity is the ease with which an investment can be converted into cash. As such, a money market investment is the closest thing to cash on hand. It can therefore be regarded as the most liquid form of investment.

Liquidity would depend on the terms of the investment, e.g. the maturity period and restrictions on withdrawals.

State of average daily turnover at week end in call money market



The average turnover in daily call money market on 28th August, 2015 rose over 16.79 percent to 210.48 billion rupees. The average turnovers in daily call money market on 21st August, 2015 have slumped by 11.67 percent to 180.30 billion rupees. Similarly, the average turnover in daily call money market on 14th August, 2015 rose over 32.19 percent to 204.12 billion rupees. The average turnover in daily call money market on 7th August, 2015 again rose over 3.69 percent to 154.40 billion rupees.

In Indian financial system, nineteen commercial banks, State bank of India along with seven subsidiary bank namely State Bank of Bikaner and Jaipur, State Bank of Patiala, State Bank of Hyderabad, State Bank of Indore, State Bank of Mysore, State Bank of Saurashtra, State Bank of Travancore, nineteen schedule commercial banks, financial institutions, Discount and Finance House of India (DFHI) operate in the call money market. The Reserve Bank of India, being an apex body, give special permission to Life Insurance Corporation of India, General Insurance corporation of India, Finance corporation of India, Industrial corporation on India to take part in the activities of call money market.

Money Market Volatility In India

Statistic	CALL RATE %	91-DAY-T BILL%	1-YEAR GILT%	5-YEAR GILT%	10-YEAR GILT%
Average(AM)	5.3	7.4	7.5	7.9	7.8
Median	5.7	7.4	7.5	7.9	7.8
Standard Devn	0.730104588	0.046579557	0.071086801	0.040796664	0.191520234
COV%(Mean)	13.6520943	0.628095435	0.947150489	0.515543356	2.450988404
COV%(Median)	12.80885242	0.627756839	0.949089471	0.516086835	2.460118612
CAGR	(-)1%	.01%	(-)1%	.008%	(-)1%

Source: Reserve Bank of India Daily Database For Thirty Days study period

Arithmetic Mean (Average): The average values of money market call rate for 30 days study period is 5.30 percent. Similarly the central values of 91 days T Bill is 7.40 percent. Again, the arithmetic mean of 1 year gilt rate is 7.5 percent and for 5 year gilt rate is 7.9 percent and 10 year gilt rate is 7.8 percent.

Median: The median values of money market call rate is 5.7 percent, 7.4 percent for 91 days Treasury bills, 7.5 percent for 1 year gilt-age bonds, 7.9 percent for 5-year gilt-age bonds

and 7.8 percent for 10 year gilt-age bonds.

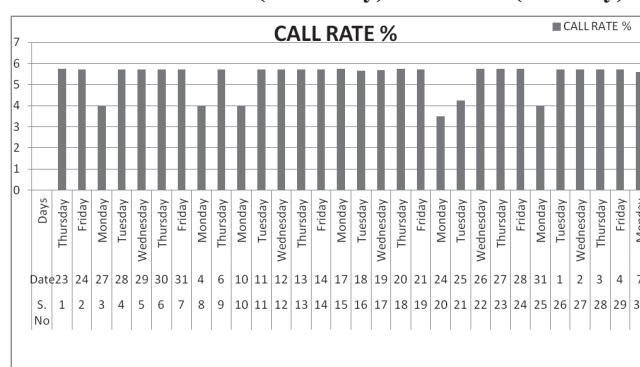
Standard Deviation (SD): The standard deviation values of money market call rate is 0.730104588 percent that of 91-days treasury bill is 0.046579557 percent, 1-year gilt-age bond is 0.071086801 percent, for 5-year gilt-age bond is 0.040796664 percent and lastly for 10-year gilt age bond is 0.191520234 percent.

Mean Centred Money Market Volatility {Risk Factor (Regarding Mean)}: The call money market volatility factor is 13.6520943 percent for thirty days study period, 91-days treasury bill is 0.628095435 percent, 0.947150489 percent for 1-year gilt-age bond, that of 5-year gilt-age bond is 0.515543356 percent and lastly 5-year gilt-age bond volatility is 2.450988404 percent.

Median Centred Money Market Volatility {Risk Factor (Regarding Median)}: The call money market volatility factor is 12.80885242 percent for thirty days study period, 91-days treasury bill is 0.627756839 percent, 0.949089471 percent for 1-year gilt-age bond, that of 5-year gilt-age bond is 0.516086835 percent and lastly 5-year gilt-age bond volatility is 2.460118612 percent.

Growth Rate: The annual growth rate money market call rate is (-) 1 percent. Similarly the annual growth rate of 91-days treasury bill is .01%, 1 year gilt-age bond is (-)1% and 5-year gilt-age bond is .008% percent and lastly 5-year gilt-age bond is (-)1% compounded annual growth rate.

State of thirty days call money rate in money market in India from 23 07.2015 (Thursday) to 7.9.2015 (Monday)



Impulse of Money Market on Stock Market in India

Model Specification: For the purpose of the study, 30 days daily NSE-SENSEX data have been taken and money market yield rate have been used as independent variable.

Research Hypothesis: The paper is based on a hypothesis that stock market and money market is independent.

The Simple Form of Regression Equation

Considering the principal determinants of sales, the growth model for the study takes the following form:

$$Y (\text{NSE-SENSEX})_t = \alpha + \beta_1 \times \text{CALL RATE} + \beta_2 \times 91\text{-DAYS}$$

T BILLS + $\beta_3 \times 1\text{-YEAR GILT}$ + $\beta_4 \times 5\text{-YEAR GILT}$ + $\beta_5 \times 10\text{-YEAR GILT}$

Where,

Y = NSE-SENSEX

X_1 = Money market Call Rate

X_2 = 91 Days Treasury Bill Rate

X_3 = 1 Year Gilt-age Bond

X_4 = 5 Year Gilt-age Bond

X_5 = 10 Year Gilt-age Bond

α = Bureaucratic efficiency level

Observed Regression Equation

Y (NSE-SENSEX) $_t = (-) 1438.604 - 34.15225(\beta_1)\text{CALL RATE} - 2431.157(\beta_2)\text{91-DAYS T BILLS} + 3451.600(\beta_3)\text{1-YEAR GILT} + 407.0411(\beta_4)\text{5-YEAR GILT} - 152.2794(\beta_5)\text{10-YEAR GILT}$

Interpretation And Discussion

Money Market Responsibility: The impact of service responsibility is 69.50 percent.

Standardised Risk: The standardised risk of the model is 83.40 percent.

Degree of Responsibility: The degree of responsibility of the model is 62.90 percent.

Bureaucratic Efficiency: Bureaucratic efficiency of the model is (-) 1438.604.

Dependent Variable: NSE-SENSEX

Included observations: 29

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1438.604	9155.917	-0.157123	0.8765
CALLRATE	-34.15225	65.02342	-0.525230	0.6045
TBILL91	-2431.157	857.8058	-2.834157	0.0094
		Page		
YEAR1GILT	3451.600	7643.8930	5.360517	0.0000
YEARGILT5	407.0411	1522.945	0.267272	0.7916
YEARGILT10	-152.2794	192.0262	-0.793014	0.4359
R-squared	0.695478	Mean dependent var	8290.237	
Adjusted R-squared	0.629278	S.D. dependent var	301.9258	
S.E. of regression	183.8334	Akaike info criterion	13.44793	
Sum squared resid	777278.8	Schwarz criterion	13.73082	
Log likelihood	-188.9950	Hannan-Quinn criter.	13.53653	
F-statistic	10.50565	Durbin-Watson stat	0.674324	
Prob(F-statistic)	0.000024			

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.834 ^a	.695	.629	183.833430	.695	10.506	5	23	.000	.790

a. Predictors: (Constant), 10-YEAR GILT%, CALL RATE %, 91-DAY-TBILL%, 1-YEAR GILT%, 5-YEAR GILT%

b. Dependent Variable: NSE-SENSEX

Suggestions For Further Improvements In Indian Money Market : Money market in India is now more vibrant and volatile in nature. It is now being more advanced as it was in 10 years ago. However, in order to improve the money market further and strengthen its structure and smoothening functions the following strategic steps are to be taken.

Improvement in Bill Market: Bill markets have to be expanded with the direct linking and involvement of Reserve Bank of India. Rediscounting facilities are to be increased in a popularised manner giving concentration on the bill as an instrument of finance.

Money Market Product Diversification: The money market products have to be increased and more and more credit instruments should be introduced. In addition to that the number of participants in the call money market and short notice market has to be increased this will improve the functioning of Discounting and Finance House of India Ltd. (DFHI).

Augmenting Money Market Participants: Presently non-banking financial institutions are participating less compared to other banking participants. To improve the money market trading system, participants' diversification is an urgent need of the hour such as Hire-purchase and leasing companies as well as merchant banking companies should be permitted to actively participate in money market.

Restrictions on Cal Money Trading: Commercial banks and primary dealers are to be confined within the purview of call money trading restrictions to improve the money market system ultimately stock market functioning as there exists a close relation between capital market and money market.

Concentration of Rural Banking: Rural India holds eighty percent of Indian population and it lacks banking facilities. So, banking services to be spread in rural areas along with reduction of banking transaction costs.

Non-Performing Assets: Banking over dues is serious concern in today's policy makers. Non-performing assets of banks particularly public sector banks are increased by leaps and bounds. It needs to be controlled. A robust, resilient and sustainable banking policy action has to be implemented.

Market Economy: Because of slump in global crude prices Indian counterpart is no exception and call money market and stocks buckle under pressure and RBI bureaucrats sought to play down fears because market should not be scared of volatility as it would be transient in nature. The money market instruments are also took a hard knock as nervousness continues among local investors. In order to strengthen the movement in banking system, money market intra-day transaction policy has to be regulated and structured.

Conclusion and Recommendations: As the nature of research on money market volatility is difficult to confine in a specific disciplines, we conclude our discussion on some specific issues:

Policy Restructuring: Our prime job is to enhance investment environment and banking policy. Policy experts

are vehemently believed that a more liberal policy regime, slump in crude prices, industrial labour market reforms, and infrastructure investment are needed for economic smooth in the form of money market instruments and capital infusion.

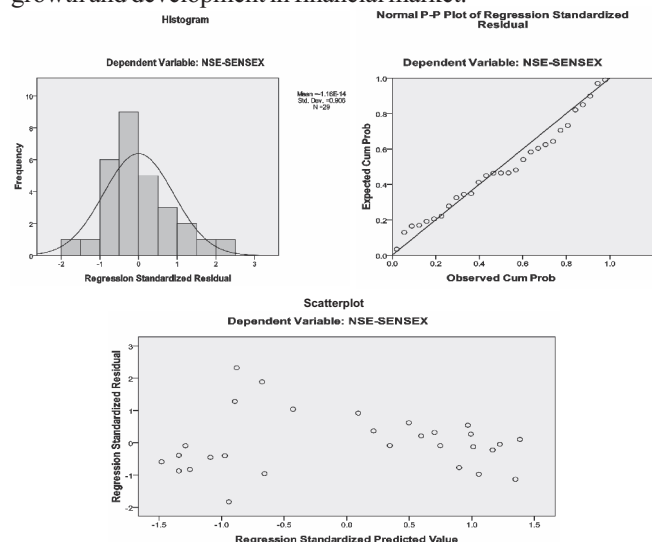
Infrastructure Development: Infrastructure is an imperative to development in financial system especially in third world countries. While infrastructure improvement surely merits a close attention, one is not so sure if the extent of the reforms and the quantum of investment inflow are positively related.

Government Intervention: Interventions by policy makers need selectivity, and strategic intent. Comparative experience seems to clearly favour such a policy stance on financial market.

Market Expansion: Small retailers will not be crowded out, but would strengthen market positions by turning innovative and contemporary product development with the help of modern technology and knowledge to enhance performance of financial markets.

Epilogue: The object of any welfare country is to immune economy, taking continuous structured risk and uncertainty, as money market should not be scared out of volatility as it transient in nature. In order to create an efficient money market environment policy makers prime job is stabilise the financial system in introducing new financial instruments and diversified products with internal peace and external understanding.

In concluding, the study is subject to the following caveats. First, our sample period and accordingly the sample size are somewhat limited due to thirty days daily data. Second, sample data is collected through BSE website which are grouped, compiled and computed for analysis and interpretation. Despite these potential limitations, the analysis and interpretation to some extent augments our understanding on the nature of movement of money market yield rate and its impulse on stock market in India with cross-country capital infusion and global technology transmission across economic regions invigorating growth and development in financial market.



ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1775178.121	5	355035.624	10.506	.000 ^a
Residual	777278.791	23	33794.730		
Total	2552456.912	28			

a. Predictors: (Constant), 10-YEAR GILT%, CALL RATE %, 91-DAY-T BILL%, 1-YEAR GILT%, 5-YEAR GILT%

b. Dependent Variable: NSE-SENSEX

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta				Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	-1438.604	9155.917			-.157	.877	-20379.062	17501.854		
CALL RATE %	-.34152	65.023	-.082		-.525	.604	-168.663	100.359	.537	1.863
91-DAY-T BILL%	-2431.157	857.806	-.368		-	.009	-4205.663	-656.650	.787	1.270
1-YEAR GILT%	3451.600	643.893	.830		5.361	.000	2119.606	4783.594	.553	1.810
5-YEAR GILT%	407.041	1522.945	.054		.267	.792	-2743.411	3557.493	.330	3.028
10-YEAR GILT%	-152.279	192.026	-.098		-.793	.436	-549.516	244.957	.866	1.154

a. Dependent Variable: NSE-SENSEX

Coefficient Correlations^a

Model	10-YEAR GILT%	CALL RATE %	91-DAY-T BILL%	1-YEAR GILT%	5-YEAR GILT%	
1 Correlations	10-YEAR GILT%	1.000	-.074	-.092	-.155	-.115
	CALL RATE %	-.074	1.000	-.253	-.393	.680
	91-DAY-T BILL%	-.092	-.253	1.000	.084	-.378
	1-YEAR GILT%	-.155	-.393	.084	1.000	-.600
	5-YEAR GILT%	-.115	.680	-.378	-.600	1.000
Covariances	10-YEAR GILT%	36874.048	-920.334	-15108.855	-19193.597	-33707.855
	CALL RATE %	-920.334	4228.045	-14135.128	-16464.960	67365.649
	91-DAY-T BILL%	-15108.855	-14135.128	735830.759	46371.642	-493596.278
	1-YEAR GILT%	-19193.597	-16464.960	46371.642	414598.211	-588326.022
	5-YEAR GILT%	-33707.855	67365.649	-493596.278	-588326.022	2319361.235

a. Dependent Variable: NSE-SENSEX

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	CALL RATE %	91-DAY-T BILL%	1-YEAR GILT%	5-YEAR GILT%	10-YEAR GILT%
1	1	5.985	1.000	.00	.00	.00	.00	.00	.00
	2	.015	20.012	.00	.53	.00	.00	.00	.00
	3	.000	117.184	.00	.00	.00	.00	.00	.94
	4	5.576E-5	327.622	.02	.00	.09	.65	.00	.03
	5	1.911E-5	559.570	.25	.01	.85	.04	.03	.01
	6	5.530E-6	1040.282	.72	.46	.05	.31	.97	.01

a. Dependent Variable: NSE-SENSEX

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	7917.45264	8639.00488	8290.23724	251.792015	29
Residual	-335.943329	426.366211	.000000	166.613195	29
Std. Predicted Value	-1.481	1.385	.000	1.000	29
Std. Residual	-1.827	2.319	.000	.906	29

a. Dependent Variable: NSE-SENSEX

GST- AN IMPACT ON SMEs

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Goods and Service Tax (GST), a broad indirect taxation regime has just been implemented from 1st July, 2017 and Small and Medium Enterprises (SME) will be the ones most directly impacted by GST implementation. Its impact will be constructive as well as unfavourable in few areas. It will bring with itself a sea change in the way we file taxes, and also how we conduct business. Many have called it a 'behavioural change' more than a tax change because its successful implementation depends largely on how quickly businesses adapt to the digital format of taxation. SME owners will find the following benefits from GST:

Ease in starting new business: Any business with operations running in different states of the country required VAT registration, Excise Registration, Service Tax Registration, Entry Tax etc beyond threshold limit. There are around 14 taxes in operation in Indirect Tax segment which is now subsumed into one GST. Different taxation rules in different states only increases complications and high procedural fees requirements. Under GST, there will be a State wise registration from where the business is carried out. One state one registration even if the company has more than one branches or manufacturing centres in the same state and it will make doing business simpler, easier and the resulting expansion will be beneficial to SMEs.

Faster logistics and delivery: There will be no entry tax/ octroi (generally charged on goods manufactured or sold) under the GST regime resulting in faster delivery of goods and services through various interstate points and toll check posts. As per an estimate made by CRISIL, the logistics cost of bulk goods manufacturer' will reduce by nearly 20%. Quicker delivery would also result in a boost to Indian e-commerce industries. In India, the 3rd largest cost of a company is Logistics.

Full Coverage: GST would improve demand and competitiveness of 'Made in India' products. It is most likely that the burden of indirect tax will reduce both for the producer of goods and the ultimate end user except in some cases, as the producer or manufacturer of goods will get the advantage of input tax credits (ITC) and the consumer will have to bear only the indirect tax charged by the last retailer or dealer in the supply chain. Reduction in tax burden: As per the existing indirect tax regime, businesses with an annual turnover of over Rs. 5 lakh (Rs. 10 lakh in some states) are required to pay a 'Value Added Tax' (VAT) registration fee.

This basic exemption limit has been increased to Rs. 20 lakh by the Central Government, a 75% relaxation in limit for SMEs. Similarly service provider's threshold limit has been increased from 10 lacs to Rs. 20 lacs p.a.

Inter state purchases will be cheaper: Previously inter state purchases attracted payment of CST which was not available for credit and it was a part of the cost. Under GST all taxes on inputs used for furtherance of business will be available as credit and hence the cost of production would reduce at least by 3 to 5%. No differential duty for non-submission of C Form, H Form etc. There is no form concept under GST.

The greatest advantage of the Society would be the full transparency of all commercial transactions under the GSTN scanner. In other words, evasion of duty through under invoicing of sales and purchases would be greatly reduced and it will help the country to increase its both direct and indirect taxation and there by to improve fiscal health of the country. I am of the opinion that the Country's present fiscal deficit both at the end of Central and State would come down to a great extent through enhanced revenue collection.

However, some concerns for SMEs that need to be highlighted like Compliance: SMEs will have to opt for electronic compliance system, starting from registering to filing online returns. This will primarily cause teething problems and will also increase the cost of compliance.

Higher Interest: Under the Goods and Service Tax system, self-supplies or interstate stock transfer will fall under the scanner of GST. However, this was there under previous tax system for Excise.

Information Technology Hassles: To bring Information Technology systems in line with new processes could be a task. Further companies enjoying excise exemption benefit of Rs. 1.50 crores would now be under GST since threshold limit is now reduced to Rs. 20 lacs p.a. Let us now discuss how compliances are to be made by SMES in the GST regime.

(a) How GST is to be paid by the SME and by which date?

1. GST shall be payable by 20th of next month for which tax is due, electronically through GST portal.
2. The same has to be paid GSTIN Wise by generating online Challan GST PMT 05 through GST portal.
3. All 3 Taxes, i.e. IGST, CGST & SGST shall be paid vide

Single Challan

4. The payment will be made online through Net Banking, Credit or Debit Card.
5. Over The Counter payment is allowed only to the extent of Rs. 10,000/- per challan per tax period by Cash, cheque or DD.

(b) What are the returns to be filed and timing of such filing?

1. GSTR 1 - For Supply Outwards - 10th of the Next Month
 - It is the return where one needs to disclose the outward Supplies (i.e. Sales, Inter State Branch Transfers, Advances received, credit notes, debit Notes, etc) and tax on outward Supplies
2. GSTR 2 - For Supply Inwards - 15th of The Next Month
 - It is the return where one needs to disclose the inwards Supplies (i.e. Purchase, Inter State Branch Transfers, credit notes, debit Notes, etc) and tax on inward Supplies. This return is mostly auto populated.
3. GSTR 3 - Consolidated Monthly Return - 20th of The Next Month. This is also mostly auto populated.

It shall be filed by 20th of next month, only after payment of GST due as discussed above. These facilities will be available at common portal of gst- www.gst.gov.in

The Moment GSTR 1 & 2 has been filed, the respective fields will automatically Pop Up in GSTR3.
4. GSTR 3B - This is a One time summary return which the Government will release for filing in the month of August
5. GSTR 9 - Consolidated Annual Return - It shall be filed by 31st December of the next FY -

This will be a consolidated return for the Entire Year

These facilities will be available at common portal of gst-www.gst.gov.in

(c) How returns can be amended and by which time such amendment should be made

Rectifications to various contents of GSTR 1 and 2 (outward supplies and inward supplies) can be done in further returns. This facility will be available at common portal for amending any particulars pertaining to earlier tax period. Say one has to made changes in outward supplies made to registered person of August 2017, this can be done after August by giving reference of details of transaction for the same.

However amendment can be done by September of succeeding financial year or date of filing of annual return, whichever is earlier.

(d) It is said by Revenue Secretary that only one return is to be filed by the small traders. Is it a fact?

As discussed earlier, most of the fields of GSTR 2 & GSTR 3 shall be auto populated. Hence in an ideal

scenario a trader has to FILL only GSTR 1. However he has to FILE 3 returns every month.

(e) What are the various penalties and punishments under GST

Penalties and punishment are based on the frequency of non compliance with law and the amount involved.

However if there are non-compliances The GST Rating for a Dealer will go down and it will be difficult to do business.

(f) How SMEs can be benefitted by GST

In addition to above, under old regime there was threshold limit of Rs 1.5 crores for registration under Central Excise but under GST regime the liability to get registration is turnover of Rs 20 lakhs. This means that majority of SMEs will be covered under GST net.

But this does not mean that SMEs cannot be benefitted when they will be registered under GST. Under GST there will be seamless flow of credit which means one can get back whatever they pay on procurement of goods and services, this will be allowed as input tax credit on outward supplies made by them as under GST input tax credit will be allowed if any goods and services will be used in the course or furtherance of business.

Further today VAT & Service Tax/ Excise Cant be set off against each other which will be possible under GST. For Eg. GST on rent of Shops which traders are paying shall be fully available as credit. Further, CST paid on goods purchased from outside the state is currently not available as input tax credit, but under GST there will no concept of CST or VAT. So any goods procured from within state or outside the state, the GST paid on the purchase of that goods/ raw material will be allowed as input credit during the payment of GST liability on Outward Supplies.

SMEs (only having business within its states) can also opt for Composition scheme under GST with a threshold limit of Rs. 75 lacs p.a.

The benefits of this scheme will be:

- " Easier compliance
- " Needs to file only summarized quarterly returns
- " Simplified GST liability: For manufacturers - 1% of turnover and 0.5% of turnover for other than manufacturers
- " Composite dealer shall be liable to pay fixed percentage of GST based on turnover, so no need to issue Tax invoice to customers or charging GST from them.

However, the main disadvantages of composition scheme is that SMEs would not be able to get input tax credit in respect of its purchases of goods and services. Further although they have to pay some nominal taxes (1-2%) which they cant charge to its customers.

Risk & Return

Pradeep K. Chandra

BSc, AICMA, SACP, AASM, PGDFM

Introduction:

Decisions are often made on the basis of forecasts which themselves depend upon future events whose occurrence cannot be anticipated with absolute certainty because of economic, social, fiscal, political and other reasons. Thus, risk is associated with business decisions. The amount of risk varies from one investment proposal to another. Some investments may not involve any amount of risk e.g., investment in Government securities which assures a fixed rate of return. Some may be less risky, e.g., expansion of the existing business, while the other may be very risky, e.g., taking up a new venture etc.

Risk is present virtually in every decision-whether it may be the decision of starting a project, production, sales, marketing, advertising, financial or any other field. When a production manager selects an equipment or a marketing manager an advertising campaign or a financial manager a portfolio of securities, all of them face uncertain cash flows. Risk is present in every field of business activities. Assessing risks and incorporating the same in the final decision is an integral part of financial analysis.

The objective of making decision is not to eliminate or avoid risk fully, often it may not be feasible or desirable to do so, but to properly assess the degree of risk and determine whether it is worth bearing.

It is very important to a finance manager to remember the following points while judging risk and return of a financial plan:

- (i) Financial assets are expected to generate cash flows and the riskiness of the financial assets is measured in terms of riskiness of its cash flows.
- (ii) The riskiness of an asset may be measured on a stand alone basis or in a portfolio context. An asset may be very risky if held by itself but it will be less risky when it is a part of a large portfolio.
- (iii) In the context of a portfolio, the risk of an asset is divided into two parts-diversifiable risk and market risk. Diversifiable risk arises from company specific factors and hence can be eliminated through proper diversification. Market risk, on the other hand, stems from general market movements and hence cannot be diversified away. For a diversified portfolio, the market

risk should be considered and not the diversifiable risk.

- (iv) In general, investors are risk-averse. So they cannot be compensated for bearing market risk. In well-ordered market, there is a linear relationship between market risk and expected return.

Risk can be divided into two groups' viz., Systematic risk & Unsystematic risk.

Systematic Risk: It arises out of external and uncontrollable factors which are not specific to a security or industry to which such security belongs. Systematic risk affects the price of all the securities in the market. The systematic risk cannot be avoided. It relates to economic trend which affect the whole market.

When the market is bullish, the prices of all the stocks show rising trend whereas in the case of bearish market, the prices of the stocks are in the falling trend. The systematic risk cannot be eliminated by diversification of portfolio because every share is influenced by the general market trend. This type of risk arises due to the following reasons:

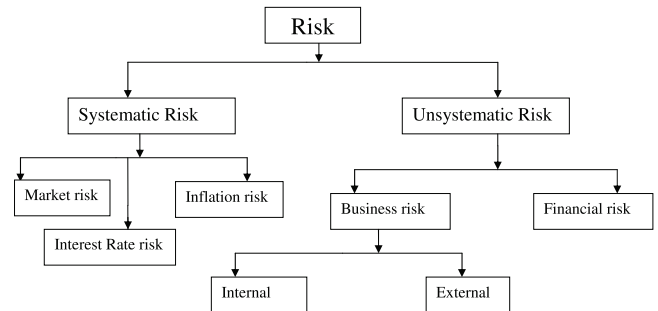
- **Market Risk:** These are the risks that are triggered due to social, political and economic events. These risks arise due to changes in demand and supply, expectations of the investors, flow of information, risk perception of the investors, etc. consequent to the social, political or economic events.
- **Interest Rate Risk:** The uncertainty of future market values and the size of the future incomes, caused by fluctuations in the general level of interest is known as Interest Rate Risk. These risks arise due to fluctuations in the interest rates and cost of corporate debts. Cost of corporate debts depends on the interest rates prevailing in the market, monetary and credit policy of RBI, etc. Generally, price of securities is inversely proportional to the rate of interest i.e, price of securities increase with the decrease in rate of interest and vice-versa.
- **Purchasing Power Risk:** Purchasing power risk is the diminution in the value of money due to the effects of inflation. In stead of purchasing goods and services, if the amount is invested in securities, he will have to pay more in future at the time of purchasing goods and services in case of rise in prices of goods and services due to inflation.

Unsystematic Risk: Unsystematic risk refers to that portion of risk which is caused due to factors unique or related to a firm or industry. The unsystematic risk is the change in the price of stocks due to the factors which are particular to the stocks. For example, if excise duty or customs duty of steel increases, the price of stocks of steel industry declines. The unsystematic risk can be eliminated or reduced by diversification of portfolio. Unsystematic risk arises due to the following reasons:

- **External Business Risk:** It arises due to change in operating conditions (i.e. the volatility in revenues and profits of a particular company) due to its market conditions, product mix, competition, etc. It may arise due to external factors e.g. Government policy regarding that industry, business cycles, etc.
 - **Internal Business Risk:** It is associated with the operational efficiency of the firm. The operational efficiency differs from company to company. The efficiency of operation is reflected on the company's achievement of its goals and fulfillment of the promises to its investors.
1. **Fluctuations in the sales:** The sales level has to be maintained. It is common in business to lose customers abruptly due to high degree of competition. Loss of customers means loss of operating profits. To tide over this problem big corporate bodies build a wide customer base through various distribution channels. Diversified sales force may help to tide over this internal risk.
 2. **Research & Development:** It is common in business that the product may go out of style or become obsolete. This risk of obsolescence can be overcome by concentrating regularly on the in-house research and development programme. For example, if Nokia has to survive in the business world, it has to keep its research and development section active and introduce consumer oriented technological changes in the mobile sector. This can be done by adding new and modern facilities which will attract the customers to go for the new sets.
 3. **Personnel Management:** Frequent strikes and lock-outs result in loss in production and high degree of skilled labour turnover. This reduces the operational efficiency of the firm and increases the operating costs. Management may overcome this risk by encouraging the workers by introducing adequate incentives keeping in mind with increase in labour productivity and reduction in wastage of raw materials.
 4. **Fixed Cost:** When the demand of the company's product is very low or during the period of recession the fixed cost per unit becomes very high as the company cannot reduce the fixed cost, which is almost constant.

Risk Decomposition:

Total risk = Systematic risk + Unsystematic risk



Return: The main objective of investment is to make current income from the investments in the form dividends and interest income. Investments in some blue chip companies pay reasonable income in the form of dividends and interests keeping the prices of the securities relatively stable. The investment should earn reasonable and expected return on the invested amount. Before the selection of a particular investment, the investor should keep in mind that certain investments like Bank deposits, Public deposits, Debentures, Bonds etc. carry fixed rate of return payable periodically without any risk attached to the investment. On investments made in shares of companies, the periodical payments are not secured but it may ensure returns higher than the riskless and fixed returns. But the investor should also keep in mind that these returns carry higher risk than the fixed income investments.

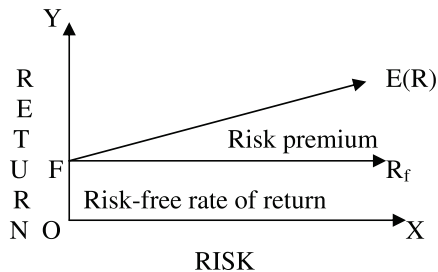
Risk and Expected return:

Investors are, generally, risk averse. Nobody is interested to take risk without a corresponding return. A rational investor would have some degree of risk aversion, he would accept the risk if he is adequately compensated for it. The greater the risk, the greater the compensation one would require. This compensation is in the form of increased rate of return. An investor who invests his amount in high graded bond requires lower expected rate of return due to the existence of low risk compared to investment in the high risky common shares of a new company.

The risk-return trade-off is an important consideration for formulating an investment plan. The amount of expected return one wishes to earn depends on the degree of risk he is to accept from investment. Conversely, in accepting a certain level of risk in designing a portfolio, the level of expected return is also required to be determined. Though it is very difficult to quantify the actual levels of risk to be accepted, an investor would have to think, at least, on a relative basis, i.e. low, medium or high degree of risk.

There is a positive relationship between the degree of risk and the rate of expected return. That is the greater the risk, the greater the expected return and also the larger the chance of substantial loss. One of the most difficult problems for an investor is to estimate the highest level of risk he is able to assume. Any such estimate is essentially subjective, although

attempts to quantify the willingness of an investor to assume various levels of risk can be made, the relationship between the amount of risk assumed in managing a portfolio of securities and the amount of expected return can be shown in the following graph:



Risk is measured along X-axis (the horizontal axis) and increases from left to right. Expected rate of return is measured along the Y-axis (the vertical axis) from bottom to top. The line segment OF measures the risk-free rate of return on riskless investments e.g. rate of return on investment in Government securities and denoted by R_f . The diagonal line $E(R)$ indicates the expected rate of return which increases with the increase in the level of risk. The above graph shows a linear relationship between risk and return but it need be true in all the situations and in all the countries. Most of the theoretical work on portfolio management assumes a linear relationship between risk and return which may be true for an efficiently competitive market in developed economies, but in developing countries like India with administered interest rates and many other restrictive regulations, the linear relationship generally does not hold good.

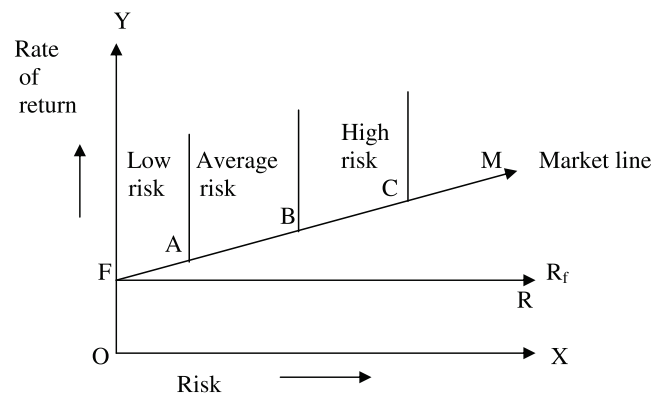
Risk-Return Relationship

The entire scenario of security analysis is built on two concepts of security, viz. risk and return. The risk and return constitutes the frame work for taking investment decisions. Return from equity comprises dividend and capital appreciation. To earn return on investment, that is, to earn dividend and to get capital appreciation, investment has to be made for some period which in turn implies passage of time. Dealing with the return to be achieved requires estimate of the return on investment over the time period. Risk denotes deviation of actual return from the estimated return. The deviation of actual return from expected return may be on either side-both above and below the expected return. Investors are, generally, concerned with downside risk.

The risk in holding security-deviation of return, deviation of dividend and capital appreciation from the expected return may arise due to internal and external forces. The part of the risk which is internal that is unique and related to the firm and industry is called 'unsystematic risk' and the part of the risk which is external and which affects all securities and is large in its effect is called 'systematic risk'.

The investors are not only interested in maximisation of

return, but also minimisation of risk and for this they do not invest their whole amount in a single security though they consider it most profitable. The unsystematic can be eliminated through diversification i.e. investing amount in diversified securities. Systematic risk is also known as non-diversifiable risk and cannot be eliminated by diversification of securities. This is called 'market risk'. Therefore, diversification of securities leads to reduction of risk but to a certain extent.



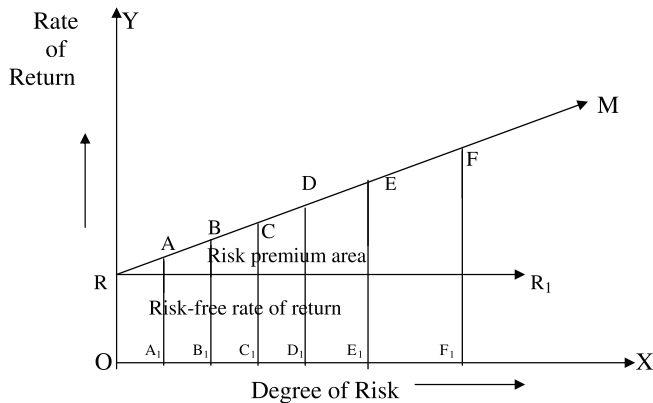
In the above diagram, risk is measured along X-axis and rate of return is measured along Y-axis. OF is the measurement of risk-free rate of return. The risk-free rate of return line is parallel to the X-axis and is denoted by R_f . The angle RFM indicates required return per unit of risk. FM is the market line. FA indicates low risk, FB average risk and FC indicates high risky situations.

Types of Return: There are two types of return from investments in securities:

- Periodic cash receipts:** In case of bonds and debentures, periodic returns are given in the form of interest at the end of each specified period. In case of sufficient amount of after tax profits, cash dividends are paid to the shareholders as decided by the Board of Directors. Sometimes the Board of Directors decides to issue bonus shares to the shareholders instead of distributing cash dividends.
- Capital gain:** Securities are purchased by the investors with the expectation of selling them at a higher price after sometime. The difference between the sale price and the purchase price is known as capital gain (may be short term or long term) in the hands of the investors. There may also be a capital loss if the sale price is less than the purchase price.

The combination of the periodic cash receipts and capital gain made on the investments constitutes the total return on particular investment as shown below:

$$\text{Total return} = \frac{\text{Cash payments received} + \text{Capital gain} - \text{Capital loss}}{\text{Purchase price of the security}} \times 100$$



In the above diagram, degree of risk is shown along the X-axis and rate of return is shown along the Y-axis. Rate of risk-free return is measured by OR along the Y-axis and RR_1 is the risk-free rate of return line parallel to the X-axis. $\angle R_1RM$ is the measurement of risk premium area. The more the angle the more is the risk premium. In the above diagram, the rates of return are the practical examples of following items:

- (i) OR: Rate of return of Government bond (risk-free rate of return);
- (ii) AA_1 : Rate of return of mortgage loan;
- (iii) BB_1 : Rate of return of debenture with floating charge;
- (iv) CC_1 : Rate of return of unsecured loan;

Mathematical Measurement

(a) When Standard Deviation is taken as total risk:

$$\begin{aligned}\sigma_S &= \sigma_S \times r_{SM} + \sigma_S \times (1 - r_{SM}) \\ &= \beta_{SM} \times \sigma_M + \sigma_S \times (1 - r_{SM}) \quad [\text{Since, } \beta_{SM} = r_{SM} \times \frac{\sigma_S}{\sigma_M}] \\ &= \text{Systematic Risk} + \text{Unsystematic Risk}\end{aligned}$$

Where, σ_S = Standard deviation of the returns from security S.

r_{SM} = Correlation co-efficient between Returns from security S and Market Portfolio.

β_{SM} = Beta of security S with reference to Market Returns.

(b) When Variance is taken as total risk:

$$\sigma_S^2 = \beta_S^2 \times \sigma_M^2 + \sigma_S^2 \times (1 - r_{SM}^2)$$

r_{SM}^2 = Square of correlation co-efficient between Returns from security S and Market return.

Note: Unsystematic Risk is computed only as the balancing figure and not as a separate item.

(B) Co-efficient of Variation: It is the measurement of standard deviation per unit of expected or average return.

Measurement of Risk & Return when future is uncertain

$$1. \text{ Expected Return } E(R) = \sum_{i=1}^n P_i \cdot R_i = \bar{R}, \text{ where, } n = \text{Number of states}$$

(v) DD_1 : Rate of return of subordinate loan stock;

(vi) EE_1 : Rate of return of preference shares; and

(vii) FF_1 : Rate of return of ordinary shares.

Required rate of return increases with the increase in risk of the securities. In the above diagram, ordinary shares have the highest required rate of return due to highest risk attached to this compared to other securities.

Example: On 01.06.2010, the price of TATA CO. share is 401. After 1 year the price of TATA share increased to 480 and the company declared a dividend of 35 per share. What is the rate of return?

Solution: Rate of Return =

$$\frac{(P_1 - P_0) + D_1}{P_0} \times 100 = \frac{(480 - 401) + 35}{401} \times 100 = 28.35\%$$

Measurement of Risk:

(A) Standard Deviation: Standard Deviation is a measure of how much possible outcome deviates from the expected value. The higher the value of dispersion (i.e. standard deviation), the higher is the risk associated with the Portfolio and vice-versa. Generally, Standard Deviation of a specified security or portfolio is considered to be the total risk associated with that security or portfolio. It is the average of deviations taken from mean. It measures the risk in absolute terms. It is treated as the total risk of a particular security.

Total Risk = Systematic Risk + Unsystematic Risk

$$2. \text{ Standard Deviation} = \sigma(R) = \sqrt{\sum_{i=1}^n P_i \cdot (R_i - \bar{R})^2}$$

$$3. \text{ Co-efficient of Variation} = \frac{\text{Standard Deviation}}{\text{Expected Return or Mean}} = \frac{\sigma(R)}{E(R)}$$

Practical problems

Problem 1: Please compute the expected return of a stock whose returns with corresponding probabilities are as follows:

Nature of outcome	Return (%)	Probability of occurrence (%)
Good	26	45
Bad	18	35
Worse	14	20

Solution: Expected Return = $E(R) = (0.45 \times 26 + 0.35 \times 18 + 0.20 \times 14)\% = 20.80\%$.

Problem 2: CO. GOOD & VERY GOOD gives you the following information regarding three stocks:

State of Economy	Probability	Rate of Return		
		Stock A	Stock B	Stock C
Boom	25%	14%	15%	33%
Bust	75%	12%	3%	-6%

- (a) Compute the expected return of an equally weighted portfolio of these three stocks.
 (b) What is the variance of a portfolio invested 15% each in stock A & stock B and 70% in stock C?

Solution: (a) Since the weights are equal, their weights i.e. $W_1 = W_2 = W_3 = \frac{1}{3}$

$$E(R) \text{ at Boom} = \frac{1}{3} \times (14 + 15 + 33)\% = 20.67\%$$

$$E(R) \text{ at Bust} = \frac{1}{3} \text{ of } (12 + 3 - 6)\% = 3\%$$

$$\text{Expected Return of the portfolio} = E(R_p) = (0.25 \times 20.67 + 0.75 \times 3)\% = 7.40\%$$

(b) Given, $W_1 = W_2 = 0.15$; $W_3 = 0.70$.

$$E(R) \text{ at Boom} = (0.15 \times 14 + 0.15 \times 15 + 0.70 \times 33)\% = 27.45\%$$

$$E(R) \text{ at Bust} = (0.15 \times 12 + 0.15 \times 3 - 0.70 \times 6)\% = -1.95\%$$

$$E(R_p) = [0.25 \times 27.45 + 0.75 \times (-1.95)]\% = 5.40\%$$

$$\text{Variance of the portfolio} = \sigma_p^2 = 0.25 (0.2745 - 0.0540)^2 + 0.75 (-0.0195 - 0.0540)^2 = 0.01621$$

i.e. 1.621%.

$$\text{Standard deviation} = \sigma_p = + \sqrt{\text{Variance}} = \sqrt{0.01621} = 0.12732 \text{ i.e. } 12.732\%$$

Problem 3: CO. EXCELLENT LTD. gives you the following information on three stocks:

State of Economy	Probability of Occurrence	Rate of return if state occurs		
		Stock A	Stock B	Stock C
Boom	0.2	0.20	0.35	0.60
Normal	0.5	0.15	0.12	0.05
Bust	0.3	0.01	(0.25)	(0.50)

- a) If a portfolio is invested 40% each in A and B and 20% in C, what is the portfolio expected return? Compute the variance and standard deviation.
 b) If the expected T-bill rate is 3.80%, what is the expected risk premium on the portfolio?

Solution: (a) Computation of expected return:

$$E(R) \text{ at Boom} = 0.40 \times 0.20 + 0.40 \times 0.35 + 0.20 \times 0.60 = 0.34 \text{ i.e. } 34\%.$$

$$E(R) \text{ at Normal} = 0.40 \times 0.15 + 0.40 \times 0.12 + 0.20 \times 0.05 = 0.118 \text{ i.e. } 11.80\%.$$

$$E(R) \text{ at Bust} = 0.40 \times 0.01 + 0.40 \times (0.25) + 0.20 \times (0.50) = (0.196) \text{ i.e. } (19.60\%).$$

$$\text{Portfolio expected return} = E(R_p) = 0.2 \times 0.34 + 0.5 \times 0.118 + 0.3 \times (0.196) = 0.0682 \text{ i.e. } 6.82\%.$$

$$\text{Portfolio Variance} = \sigma_p^2 = 0.2 \times (0.34 - 0.0682)^2 + 0.5 \times (0.118 - 0.0682)^2 + 0.3 \times (-0.196 - 0.0682)^2 = 0.036956.$$

$$\text{Portfolio Standard Deviation} = \sigma_p = 0.1922 \text{ i.e. } 19.22\%$$

$$\text{Expected Risk premium} = E(R_p) - R_f = 6.82\% - 3.80\% = 3.02\%.$$

Problem 4: MAHAPRABHU SREECHAITANYA LTD. gives the following information relating to stocks L and M for the past two years:

Years	Rate of Return (%)	
	Stock L	Stock M
2009-10	12	14
2010-11	18	12

- What is the expected return on portfolio made up of 60% of L and 40% of M?
- Calculate the standard deviation of each stock.
- What is the co-variance and co-efficient of variation between stock L and stock M?
- What is the portfolio risk of a portfolio made up of 60% of L and 40% of M?

Solution: (a) Expected rate of return = $E(R) = \frac{\sum R}{n}$, where, R is the rate of return and

n = Number of observations

$$E(R_L) = \frac{12 + 18}{2} = 15,$$

$$E(R_M) = \frac{14 + 12}{2} = 13,$$

$$\text{Expected return of portfolio } E(R_p) = 0.60 \times 15 + 0.40 \times 13 = 14.2.$$

(b) Standard deviation of stock = $\sigma = \sqrt{\frac{\sum [R - E(R)]^2}{n}}$

$$\sigma_L = \sqrt{\frac{(12 - 15)^2 + (18 - 15)^2}{2}} = 3$$

$$\sigma_M = \sqrt{\frac{(14 - 13)^2 + (12 - 13)^2}{2}} = 1$$

(c) Covariance between Stock L and Stock M = $\text{Cov}_{L,M} = \frac{\sum [R_L - E(R_L)] \cdot [R_M - E(R_M)]}{2}$

$$= \frac{(12 - 15)(14 - 13) + (18 - 15)(12 - 13)}{2} = -3.$$

$$\text{Correlation co-efficient} = r_{L,M} = \frac{\text{Cov}_{L,M}}{\sigma_L \cdot \sigma_M} = \frac{-3}{3 \times 1} = -1.$$

$$(d) \text{ Portfolio risk} = \sigma_p = \sqrt{(P_L)^2 \cdot (\sigma_L)^2 + (P_M)^2 \cdot (\sigma_M)^2 + 2 \cdot P_L \cdot P_M \cdot \sigma_L \cdot \sigma_M \cdot r_{L,M}}$$

$$= \sqrt{(0.6)^2 \cdot (3)^2 + (0.4)^2 \cdot (1)^2 + 2 \cdot (0.6)(0.4) \cdot (3) \cdot (1) \cdot (-1)} = 1.4$$

Problem 5: ALPHA CO. & BETA CO.'s stocks show the following expected rates of return and their corresponding probabilities:

Probability of occurrence	Rate of Return	
	ALPHA CO.	BETA CO.
0.05	(2)	(3)
0.20	9	6
0.50	12	8
0.20	15	14
0.05	26	19

- Find out the expected rate of return for scrips of two companies.
- If an investor invests equal proportion on both the scrips, what would be the return?
- If the proportion is changed to 25% & 75% and then to 75% & 25%, what would be the expected rate of return?

Solution: (a) $E(R) = \bar{R} = \sum_{i=1}^n P_i \cdot R_i$

$$E(R_A) = [0.05 \times (2) + 0.20 \times 9 + 0.50 \times 12 + 0.20 \times 15 + 0.05 \times 26]\% = 12\%$$

$$E(R_B) = [0.05 \times (3) + 0.20 \times 6 + 0.50 \times 8 + 0.20 \times 14 + 0.05 \times 19]\% = 10.3\%$$

(b) Expected return = $[0.5 \times 12 + 0.5 \times 10.3]\% = 11.15\%$

(c) (i) Expected return = $0.25 \times 12 + 0.75 \times 10.3 = 10.725\%$

(ii) Expected return = $0.75 \times 12 + 0.25 \times 10.3 = 11.575\%$

Problem 6: Stocks X & Stocks Y display the following returns over the past three years:

Year	Rate of Return	
	Stock X	Stock Y
2008-09	15	12
2009-10	16	18
2010-11	20	15

- What is the expected return on portfolio made up of 40% of stock X and 60% of stock Y?
- What is the standard deviation of each stock?
- Determine the correlation co-efficient of stock X and stock Y.
- What is the portfolio risk of a portfolio made up of 40% of stock X and 60% of stock Y?

Solution: $E(R_X) = (15 + 16 + 20) \div 3 = 17\%$

$$E(R_Y) = (12 + 18 + 15) \div 3 = 15\%$$

(a) Expected return of portfolio = $E(R_p) = (0.40) \cdot (17) + (0.60) \cdot (15) = 15.8\%$.

(b) Standard deviation = $\sigma = \sqrt{\frac{\sum [R - E(R)]^2}{n}}$

$$\sigma_X = \sqrt{\frac{(15 - 17)^2 + (16 - 17)^2 + (20 - 17)^2}{3}} = 2.16$$

$$\sigma_Y = \sqrt{\frac{(12 - 15)^2 + (18 - 15)^2 + (15 - 15)^2}{3}} = 2.45$$

$$\text{COV}_{X,Y} = \frac{\sum (R_X - \bar{R}_X)(R_Y - \bar{R}_Y)}{n} = \frac{(15-17)(12-15) + (16-17)(18-15) + (20-17)(15-15)}{3} = 1$$

(c) Covariance between X and Y is

$$\text{COV}_{X,Y} = \frac{\sum (R_X - \bar{R}_X)(R_Y - \bar{R}_Y)}{n} = \frac{(15-17)(12-15) + (16-17)(18-15) + (20-17)(15-15)}{3} = 1$$

$$\text{Correlation co-efficient} = \frac{\text{COV}_{X,Y}}{\sigma_X \cdot \sigma_Y} = \frac{1}{(2.16) \cdot (2.45)} = 0.19 \text{ (approx.)}$$

$$\begin{aligned} \text{(d) Portfolio risk} = \sigma_P &= \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} \\ &= \sqrt{(0.40)^2 \cdot (2.16)^2 + (0.60)^2 \cdot (2.45)^2 + 2 \cdot (0.40)(0.60)(2.16)(2.45)(0.19)} = 1.84 \end{aligned}$$

Problem 7: MR. PKC, a financial analyst is analyzing two investment alternatives of A & B. The estimated rate of return and their chance of occurrence for the next year are given in the table below:

Probability of occurrence	Rate of Return	
	A	B
0.20	22	5
0.60	14	15
0.20	(4)	25

- Determine each alternative's expected rate of return, variance and standard deviation.
- Is B comparatively riskless?
- If the financial analyst wishes to invest half in A and another half in B, would it reduce risk? Please explain the reason for it.

$$\text{Solution: (a) } E(R_A) = \bar{R}_A = \sum_{i=1}^n P_i \cdot R_i = 0.20 \times 22 + 0.60 \times 14 + 0.20 \times (4) = 12\%$$

$$E(R_B) = 0.20 \times 5 + 0.60 \times 15 + 0.20 \times 25 = 15\%$$

$$\sigma_A^2 = (22 - 12)^2 \times 0.20 + (14 - 12)^2 \times 0.60 + (-4 - 12)^2 \times 0.20 = 73.6$$

$$\sigma_B^2 = (5 - 15)^2 \times 0.20 + (15 - 15)^2 \times 0.60 + (25 - 15)^2 \times 0.20 = 40$$

$$\sigma_A = + \sqrt{73.6} = + 8.6$$

$$\sigma_B = + \sqrt{40} = + 6.32$$

(b) Since the variance and standard deviation of security A are less than security B, security B is comparatively less risky.

$$\text{(c) } \text{COV}_{A,B} = 0.2 \times (22 - 12)(5 - 15) + 0.6 \times (14 - 12)(15 - 15) + 0.2 \times (-4 - 12)(25 - 15) = 12$$

$$\text{Correlation co-efficient} = r_{AB} = \frac{12}{8.6 \times 6.32} = 0.22.$$

$$\sigma_P^2 = (0.5)^2 \cdot 73.6 + (0.5)^2 \cdot 40 + 2(0.5)(0.5)(8.6)(6.32)(0.22) = 34.38$$

$$\sigma_P = + \sqrt{34.38} = + 5.86$$

Reason: As the securities have lesser degree of positive correlation co-efficient, the combination of A & B reduces risk.

Problem 8: SKY & BIRD CORPORATION has the following risk and return inputs for the following year:

$$R_A = 15\%; \sigma_A^2 = 16\%$$

$$R_B = 18\%; \sigma_B^2 = 25\%; r_{AB} = 0.6.$$

The portfolio risk (standard deviation) for a portfolio of 50% in each asset is 4.00.

- (a) Determine the correlation co-efficient that will be necessary to reduce the level of portfolio risk by 75%.
 (b) What is the expected return of the equally weighted portfolio?

$$\text{Solution: (a) Portfolio risk} = \sigma_P = \sqrt{(P_A)^2 \cdot (\sigma_A)^2 + (P_B)^2 \cdot (\sigma_B)^2 + 2 \cdot P_A \cdot P_B \cdot \sigma_A \cdot \sigma_B \cdot r_{A,B}}$$

$$25\% \text{ of } 4 = \sqrt{(0.5)^2 \cdot (16) + (0.5)^2 \cdot (25) + 2(0.5)(0.5)(4)(5) \cdot r_{A,B}}$$

$$\text{Or, } 1 = 4 + 6.25 + 10 \times r_{A,B}$$

$$\text{Or, } r_{A,B} = -0.925$$

$$\text{(b) } E(R_p) = (0.5 \times 15 + 0.5 \times 18) = 16.5\%.$$

Problem 9: The following details are given for stocks of CO. X and CO. Y and the Mumbai sensx for a period of 1 year.

- a) Please compute the Systematic risk and Unsystematic risk for the stocks of two companies.
 b) If equal amount of money is invested in the above two stocks, what would be the portfolio risk?

	Stock X	Stock Y	Sensex
Average Return	0.15	0.25	0.06
Variance of Return	6.30	5.86	2.25
Beta (β)	0.71	0.27	
Correlation Co-efficient	0.424		
Co-efficient of Determination = r^2	0.18		

Solution: The co-efficient of determination (r^2) gives the percentage of the variation in the securities return that is explained by the variation of the market index return. In the return of Stock X, 18% of the variation is explained by the variation of the index and 82% is not explained by the index.

$$\text{Explained by the index} = \text{Variance of security return} \times \text{Co-efficient of determination}$$

$$= 6.3 \times 0.18 = 1.134.$$

$$\text{Unexplained by the index} = \text{Variance of security return} \times (1 - r^2)$$

$$= 6.3 \times (1 - 0.18) = 5.166$$

Note: (a) According to Sharpe, the variance explained by the index is the measurement of systematic risk. The unexplained variance or the residual variance is the unsystematic risk.

	CO. X	CO. Y
Systematic Risk = $\beta^2 \cdot \sigma^2$	$(0.71)^2 \times 2.25 = 1.134$	$(0.27)^2 \times 2.25 = 0.1640$
Unsystematic Risk	$6.30 - 1.134 = 5.166$	$5.86 - 0.1640 = 5.696$

$$\text{(b) } \sigma_P = \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}}$$

$$= \sqrt{(0.5)^2 \times 6.30 + (0.5)^2 \times 5.86 + 2 \times 0.5 \times 0.5 \times 2.51 \times 2.4207 \times 0.424} = 2.08 \text{ (approx.)}$$

Alternative approach :

$$\sigma_P^2 = \left(\sum_{i=1}^n x_i \cdot \beta_i \right)^2 \cdot \sigma_M^2 + \sum_{i=1}^n x_i^2 \cdot e_i^2$$

$$= [(0.5 \times 0.71 + 0.5 \times 0.27)^2 \times 2.25] + [(0.5)^2 \cdot 5.166 + (0.5)^2 \cdot 5.696] = 3.256.$$

$$\therefore \sigma_P = 1.8044 \text{ (approx.)}$$

Problem 10: MEGHNAAD is interested to construct a portfolio of securities X & Y. He has collected the following information about the proposed investment:

	Stock X	Stock Y
Expected Return	15%	20%
Standard Deviation (σ)	12%	16%

Co-efficient of correlation (r_{XY}) = 0.14.

MEGHNAAD wants to constitute only five portfolios of X & Y as follows:

- All funds invested in X.
- 50% of funds in each X & Y.
- 75% of funds in X & 25% in Y.
- 25% of funds in X & 75% in Y.
- All funds invested in Y.

You are requested to calculate the following:

- Expected return under different portfolios.
- Risk factor associated with these portfolios.
- Which portfolio is best from the view point of risk?
- Which portfolio is best from the point of view of return?

Solution:

$$(a) E(R) = P_X \cdot R_X + P_Y \cdot R_Y$$

- $1 \times 15\% = 15\%$;
- $0.50 \cdot (15) + 0.50 \cdot (20) = 17.50\%$
- $0.75 \cdot (15) + 0.25 \cdot (20) = 16.25\%$;
- $0.25 \cdot (15) + 0.75 \cdot (20) = 18.75\%$
- $1 \cdot (20) = 20\%$

$$(b) \sigma_P = \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}}$$

- $\sigma_P = \sigma_X = 12\%$
- $\sqrt{(0.5)^2 (12)^2 + (0.5)^2 (16)^2 + 2 \cdot (0.5)(0.5)(12)(16)(0.14)} = 10.65\%$
- $\sqrt{(0.75)^2 (12)^2 + (0.25)^2 (16)^2 + 2 \cdot (0.75)(0.25)(12)(16)(0.14)} = 10.35\%$
- $\sqrt{(0.25)^2 (12)^2 + (0.75)^2 (16)^2 + 2 \cdot (0.25)(0.75)(12)(16)(0.14)} = 12.77\%$
- $\sigma_P = \sigma_Y = 16\%$

- Portfolio (iii) is best from the point of view of risk, as it has the lowest degree of risk (10.35%).
- Portfolio (iv) is best as it has the highest rate of return.

Problem 11: JOHNY LEVER, an investor holds two equity shares X & Y in equal proportion with the following risk and return characteristics:

	Stock X	Stock Y
Expected Return	26%	20%
Standard Deviation (σ)	28%	23%

The returns of these securities have a positive correlation of 0.8.

- You are requested to calculate the portfolio return and risk.
- The investor wants to reduce the portfolio risk to 15%. How much should the correlation co-efficient be to bring the portfolio risk to the desired level?

Solution: (a) Portfolio return = $(0.50)(26) + (0.5)(20) = 23\%$.

$$\begin{aligned} \text{Portfolio risk} = \sigma_p &= \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} \\ &= \sqrt{(0.5)^2 (28)^2 + (0.5)^2 (23)^2 + 2(0.5)(0.5)(28)(23)(0.8)} = 24.20\%. \end{aligned}$$

(b) Given, $\sigma_p = 15$

$$\therefore \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} = 15$$

$$\square (0.5)^2 (28)^2 + (0.5)^2 (23)^2 + 2 \cdot (0.5)(0.5)(28)(23) \cdot r = 225$$

$$\square 322 \cdot r = 225 - 196 - 132.25$$

$$\text{i.e. } r = \frac{-103.25}{322} = -0.321 \text{ (approx.)}$$

Problem 12: A portfolio consists of three securities P, Q and R with the following parameters:

	P	Q	R
Expected return (%)	28	24	22
Standard deviation (%)	30	26	24

Correlation co-efficient: PQ = 0.50; QR = 0.40; PR = 0.60.

If the securities are equally weighted, how much is the risk and return of the portfolio of these three securities?

[Ans.: E(R) = 24.66%; Risk = $\sigma_p = 17.48\%$]

Problem 13: PKC. LTD. has standard deviation of 20%, whereas RRC LTD. has a standard deviation of 28%. The correlation co-efficient between their returns is 0.50. Please advise:

- Is investing in PKC LTD. better than investing in RRC LTD. purely in terms of total risk?
- What is the portfolio risk if investment is 30% in PKC LTD. and 70% in RRC LTD.?
- What happens to the portfolio risk if correlation co-efficient between them is perfectly positive?
- What happens to the portfolio risk if correlation co-efficient is perfectly negative?

Solution: (a) Yes, investing in PKC. LTD. is better than investing in RRC. LTD. as PKC LTD. carries lower risk measured in terms of standard deviation.

$$\begin{aligned} \text{(b) Portfolio risk} = \sigma_p &= \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} \\ &= \sqrt{(0.30)^2 \cdot (20)^2 + (0.70)^2 \cdot (28)^2 + 2 \cdot (0.30)(0.70)(20)(28)(0.50)} = 23.19\%. \end{aligned}$$

$$\begin{aligned} \text{(c) } \sigma_p &= \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} \\ &= \sqrt{(0.30)^2 \cdot (20)^2 + (0.70)^2 \cdot (28)^2 + 2 \cdot (0.30)(0.70)(20)(28)(1)} = 25.60\%. \end{aligned}$$

$$\begin{aligned} \text{(d) } \sigma_p &= \sqrt{(P_X)^2 \cdot (\sigma_X)^2 + (P_Y)^2 \cdot (\sigma_Y)^2 + 2 \cdot P_X \cdot P_Y \cdot \sigma_X \cdot \sigma_Y \cdot r_{X,Y}} \\ &= \sqrt{(0.30)^2 \cdot (20)^2 + (0.70)^2 \cdot (28)^2 + 2 \cdot (0.30)(0.70)(20)(28)(-1)} = 13.6\%. \end{aligned}$$

Problem 14: MANGO-TREE LTD. has been specially formed to undertake two investment opportunities. The risk and return characteristics of the two projects are shown below:

	A	B
Expected return	12%	20%
Risk	3%	7%

The company plans to invest 80% of its available funds in project A and 20% in B. The directors believe that the correlation co-efficient between the returns of the projects is +1.0.

Required:

- Calculate the returns from the proposed portfolio of projects A and B.
- Calculate the risk of the portfolio.
- Suppose the correlation co-efficient between A and B was -1 . How should the company invest its funds in order to obtain zero risk portfolio.

Solution: (a) $E(R) = P_A \cdot R_A + P_B \cdot R_B$
 $= (0.80)(12) + (0.20)(20) = 13.6\%$.

(b) Portfolio risk = $\sigma_p = \sqrt{(P_A)^2 \cdot (\sigma_A)^2 + (P_B)^2 \cdot (\sigma_B)^2 + 2 \cdot P_A \cdot P_B \cdot \sigma_A \cdot \sigma_B \cdot r_{A,B}}$
 $\sqrt{(0.8)^2 (3)^2 + (0.2)^2 (7)^2 + 2 \cdot (0.8)(0.2)(3)(7) \cdot (-1)} = 1$

(c) Given, $\sqrt{(P_A)^2 \cdot (\sigma_A)^2 + (P_B)^2 \cdot (\sigma_B)^2 + 2 \cdot P_A \cdot P_B \cdot \sigma_A \cdot \sigma_B \cdot r_{A,B}} = 0$

- $(P_A)^2 \cdot (9) + (1 - P_A)^2 \cdot (49) + 2 \cdot (P_A)(1 - P_A) \cdot (3)(7)(-1) = 0$
- $9 \cdot P_A^2 + 49 - 98 \cdot P_A + 49 \cdot P_A^2 - 42 \cdot P_A + 42 \cdot P_A^2 = 0$
- $100 \cdot P_A^2 - 140 \cdot P_A + 49 = 0$
- $(10 \cdot P_A - 7)^2 = 0$
- $10 \cdot P_A = 7$
- $P_A = 0.7$ and $P_B = 0.3$

◆ STUDENT'S SECTION ◆



Quiz Master Page

CMA Ajay Deep Wadhwa, *Former Chairman, EIRC of ICAI*

1. Why Damon Bachrel Restaurant in USA is famous?
2. Expand "GIFT" city?
3. Who is the M.D of FabIndia?
4. What is "Premjiinvest"?
5. Expand "UPI"
6. Which is the biggest two wheeler market of the world?
7. Expand "UDAN" in the context of regional air connectivity.
8. Which is the most business friendly place on earth as per Forbes' annual survey'2017?
9. What is the rank of India in above survey?
10. What is the date of implementation of GST in India?

- Answers:**
1. Because it has a waiting period of over 10 years for a seat.
 2. Gujarat International Finance Tech-City
 3. William Nanda Bissell
 4. Family office of WIPRO founder, Azim Premji.
 5. Unified Payment Interface
 6. India
 7. Ude Desh Ka Aam Nagrik
 8. Sweden
 9. 85th.
 10. 1st July 2017

EIRC Activities

CEP on APPRAISAL IN BANKS:

Two days Seminar was held at EIRC on "Overview of Credit Appraisal In Banks-Role of CMAs" on 8th & 9th April, 2017. Ms. Sweta Agarwal Senior Manager Bank of India, CMA P.S. Dutta DGM-Corporate Accounts (Retired) UBI, CMA Ratan Bhattacharjee AGM- Investment & Fund Management (Retired) UBI & CMA C.R.Chottopadhaya former Chairman-EIRC were the resource persons. CMA Bibekananda Mukhopadhyay, Chairman-EIRC, CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya RCM also were present. The programme was very interactive.

CEP on Budget Discussion on Direct Tax:

On 13th April, 2017 EIRC organized another CEP on "Budget Discussion on Direct Tax-Sectionwise" at EIRC Seminar hall. CMA Syamalendu Bhattacharya Additional Assistant Director of Income Tax (Retired) was the Speaker. CMA Bibekananda Mukhopadhyay, Chairman-EIRC, CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya RCM were also present. The programme was very lively.

Insolvency & Bankruptcy Code-2016:

EIRC organized one day Seminar on "Insolvency & Bankruptcy Code-2016-Practical Aspects of Limited Insolvency Examination" on 20th April, 2017 at EIRC premises. CMA S.S. Sonthalia Insolvency Professional & former Chairman-EIRC was the resource person. CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya- RCM were also present in the programme. The interactive session was very good.

CEP on GST:

The another CEP on "Brief Overview & Framework of GST with special focus on levy of GST- Supply & the Composition Scheme under GST" on 28th April, 2017 at EIRC Auditorium organized by EIRC. CA Subham Khaitan Partner, Tax & Regulatory, S.Khaitan & Associates was the speaker. CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya RCM were also present in the programme. The gathering members were very good.

CEP Strategic Cost Management:

On 12th May, 2017 EIRC arranged a CEP STRATEGIC COST MANAGEMENT WITH SPECIAL FOCUS ON ACTIVITY BASED COSTING programme at EIRC Auditorium. CMA (Prof.) Sudipti Banerjee Dpr. Of Commerce (Former)-CU & CMA Viender Sharma CCM-ICAI was the resource person. CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Ashish Banerjee Secretary-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya RCM were present the programme.

CEP on GST- Input Tax Credit :

EIRC organized a Seminar on GST- Tax Credit on 28th May, 2017 at EIRC Seminar Hall. CMA B.M. Sharma former President-ICAI was the guest speaker. CMA Bibekananda Mukhopadhyay, Chairman-EIRC, CMA Biswarup Basu-CCM, CMA S.P.Padhi-former Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Shyamal Kr. Bhattacharyya RCM were also present in the programme. Member appreciated the value addition and requested to conduct more program on GST time to time.

To commemorate the foundation day of the Institute which is on 28th May EIRC organised some programs relating to students and members. As a part of the same on 24th May, 2017 EIRC organized a Quiz Contest and debate at EIRC Auditorium for the students. CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, Sri Prabir Banerjee PD & Education officer, Sri Trilochan Ghosh Education officer-IT, conducted the quiz and debate. Smt. Poulomi Moitra, Sri Mainak Biswas and Ms Sohini Rakshit also extended their support to conduct the program successfully. A good number of students participated in the events.

EIRC organized a Blood Donation Camp on 25th May, 2017. CMA Bibekananda Mukhopadhyay, Chairman-EIRC, CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Ashish Banerjee Secretary-EIRC were also present in the Camp. Chairman, Employees, Students and some employees of SBI donated Blood. All the employees worked actively to organise the blood donation Camp. Central Blood Bank was entrusted to collect blood.

On 28th May morning EIRC arranged a Road Rally from HQ to EIRC where Chairman, employees and members and Students participated.

CEP on CAS & CAAS

On 6th June 2017 EIRC organized a CEP on “Cost Accounting Standards with special focus on Ind AS & Cost Auditing Standards” at EIRC Seminar hall. CMA Balwinder Singh, CCM & Chairman - CASB and CMA P. Raju Iyer CCM & Chairman - CAASB were the resource persons. CMA B. Mohanty, ROC, WB & CMA D. Chowdhury Dy. ROC, WB were Chief guest and Guest of Honour respectively. CMA Pranab Kr. Chakraborty Vice-Chairman-EIRC, CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee, CMA Biswarup Basu CCM were also present in the programme. The programme was very lively.

CEP on ICDS

On 16th June 2017 EIRC organized a CEP on “INCOME COMPUTATION & DISCLOSURE STANDARDS (ICDS)” at EIRC Seminar hall. CMA (CA) Barun Ghosh, Partner, RAY & RAY and CA Sanjay Bhattacharya, Proprietor, Sukumar Bhattacharya & Co. were the resource persons. CMA Arundhati Basu, RCM & Chairperson, PD & Seminar Committee was present in the programme. The programme was very interactive.

Chapter Activities

Bhubaneswar Chapter

A series of 5 days evening talk on “Goods and Services Tax (GST)” from 15.05.2017 to 20.05.2017

This Chapter has organized a series of 5 days evening talk on Goods and Services Tax (GST) during 15th May to 20th May, 2017 6:00 PM to 9:00 PM at its Conference hall at CMA Bhawan, Nayapalli, Bhubaneswar.

The following dignitaries were deliberated to the Participants on the said occasion:

1. **15.05.2017 : CMA Shiba Prasad Padhi**, Practicing CMA, Past Chairman of Bhubaneswar Chapter, Past Chairman & present Regional Council Member of ICAI-EIRC, was the guest speaker on the occasion and deliberated on “Overview & Introduction: Constitutional provisions regarding taxation in India, Need for GST, GST Council, GST in Global context, Benefits and impact of GST, HSN, GSTIN, GSTN”.
2. **16.05.2017: Shri Anand Satapathy**, Addl. Commissioner of Commercial Tax, Govt. of Odisha was the guest speaker on the occasion and deliberated on “**Structure:** CGST, SGST and IGST – Definition of key words, Administration, Migration, Registration, Transition provisions, Time of supply”
3. **18.05.2017: CA Tarun Agrawalla**, Practicing CA was the guest speaker on the occasion and deliberated on “**Tax Incidence – IGST – Basic model, Place of Supply, Composition scheme**”
4. **19.05.2017: CMA Niranjana Swain**, Sr. GM (Finance), OPGC Ltd. was the guest speaker on the occasion and deliberated on “**Valuation under GST Law**”
5. **20.05.2017: CMA Niranjana Swain**, Sr. GM (Finance), OPGC Ltd. was the guest speaker on the occasion and deliberated on “**Input Tax Credit – Job Work, ISD, Recovery and adjustments, Payment of Tax, Interest and Penalty, Filing of Returns**”.

In the above 5 days evening talk on GST CMA Siba Prasad kar, Chairman of Chapter delivered the welcome address, invited guests & Key note address. CMA Damodar Mishra, Secretary of the Chapter extended formal vote of thanks. CMA Bibhuti Bhusan Nayak, Chairman, PD Committee organized the whole 5 days evening talk.

The program was attended by more than 120 members & Managing Committee Members & Invitees every day. The session was quite interactive and lively.



Members and employees of EIRC deeply mourn the sad demise of CMA B. D. Bose, former Chairman (1979-80) of EIRC and also former President (1993-94) of parent Institute, ICAI who left for his heavenly abode on 3rd July, 2017. May his departed soul rest in peace.



Quiz Contest and debate



GST- Input Tax Credit : Cross



Blood Donation Camp



Blood Donation Camp



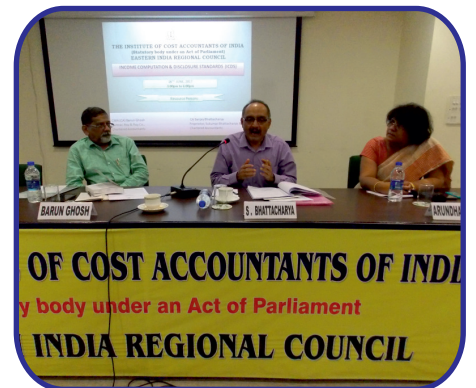
Road Rally on 28th May - CMA Bibekananda Mukhopadhyay, Chairman-EIRC, Employees, Members & Students are seen



Students



CEP on Cost Accounting Standards with special focus on Ind AS & Cost Auditing Standards on 6th June, 2017. CMA Pranab Kr Chakraborty, VC, EIRC, presenting memento to ROC, Shri B Mohanty



CEP on ICDS at EIRC on 16th June, 2017. CMA (CA), Barun Ghosh, CA Sanjoy Bhattacharya & CMA Arundhati Basu are seen on the dais.

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