

MOCK TEST PAPER
FINAL COURSE: GROUP – II
PAPER – 6A: RISK MANAGEMENT

CASE STUDY: 1

1.1 Key features of RBI guidelines on CDS

- ◆ Participants in the CDS market are classified as either users or market makers. User entities are permitted to buy credit protection (buy CDS contracts) only to hedge their underlying credit risk on corporate bonds. Such entities are not permitted to hold credit protection without having eligible underlying as a hedged item. The users cannot buy CDS for amounts higher than the face value of corporate bonds. This is the most important point of difference, as there was no such limitation in United States of America prior to 2008, and hence many Institutional players had taken huge long positions (in CDS) without having any exposure to reference asset.
- ◆ Since the users are envisaged to use the CDS only for hedging their credit risks, assumed due to their investment in corporate bonds, they shall not, at any point of time, maintain naked CDS protection i.e. CDS purchase position without having an eligible underlying bonds held by them and for periods longer than the tenor of corporate bonds held by them.
- ◆ The eligible entities under user's category would be Commercial Banks, PDs, NBFCs, Mutual Funds, Insurance Companies, Housing Finance Companies, Provident Funds, Listed Corporates, Foreign Institutional Investors (FIIs) and any other institution specifically permitted by the Reserve Bank of India.
- ◆ CDS will be allowed only on listed corporate bonds as reference obligations. However, CDS can also be written on unlisted but rated bonds of infrastructure companies. This is another major area of difference between the US markets and RBI guidelines. In United States of America, the CDS were written on various pass through securities like Mortgage Backed Security (MBS), Collateralized Debt Obligation (CDO) etc, whereas as per the RBI guidelines, the CDS are specifically restricted for listed corporate bonds, the obvious reason being that there is no big market of pass through securities in India as it is in US.
- ◆ The credit events specified in the CDS contract may cover: Bankruptcy, Failure to pay, Repudiation/moratorium, Obligation acceleration, Obligation default, Restructuring approved under Board for Industrial and Financial Reconstruction (BIFR) and Corporate Debt Restructuring (CDR) mechanism and corporate bond restructuring.
- ◆ Since, CDS are traded mainly over-the-counter (OTC), the contracting parties therefore have to agree upon the terms and conditions of the CDS individually. In order to facilitate documentation, and to avoid disputes as to whether a credit event had actually occurred and how a contract should best be settled, CDS contracting parties (in the international and US market) generally refer to the International Swaps and Derivatives Association (ISDA) Master Agreement. In India, the RBI guidelines specifically states that Fixed Income Money Market and Derivatives Association of India (FIMMDA) shall devise a Master Agreement for Indian CDS
- ◆ Regarding the Settlement procedures, the RBI Guideline states that the parties to the CDS transaction shall determine upfront, the procedure and method of settlement (cash/physical/auction) to be followed in the event of occurrence of a credit event and document the same in the CDS documentation. However it further adds that for transactions involving users, physical settlement is mandatory. For all other transactions, market-makers have been

permitted to opt for any of the three settlement methods (physical, cash and auction), provided the CDS documentation envisages such settlement

- ◆ Further, the guidelines specifically provide norms for Prevention of mis-selling and market abuse, wherein it requires protection sellers to ensure that CDS transactions shall be undertaken only on obtaining from the counterparty, a copy of a resolution passed by their Board of Directors, authorizing the counterparty to transact in CDS.

RBI has also incorporated certain reporting requirements in the guidelines which would require market makers to report their CDS trades with both users and other market makers on the reporting platform of CDS trade repository within 30 minutes from the deal time. The users would be required to affirm or reject their trade already reported by the market- maker by the end of the day. In addition to these reporting requirements the participants are also required to report to respective regulators (e.g. IRDA for Insurance companies) information as required by them such as risk positions of the participants vis-à-vis their net worth and adherence to risk limits, etc. **(6 Marks)**

1.2 Difference between Credit Insurance and Credit Default Swaps

CDS contracts have obvious similarities with insurance, because the buyer pays a premium and, in return, receives a sum of money if an adverse event occurs.

However, there are also many differences, the most important being that an insurance contract provides an indemnity against the losses actually suffered by the policy holder on an asset in which it holds an insurable interest. By contrast a CDS provides an equal payout to all holders, calculated using an agreed, market-wide method. The holder does not need to own the underlying security and does not even have to suffer a loss from the default event. The CDS can therefore be used to speculate on debt objects.

The other differences include:

- ◆ The seller might in principle not be a regulated entity (though in practice most are banks);
- ◆ The seller is not required to maintain reserves to cover the protection sold (this was a principal cause of AIG's financial distress in 2008; it had insufficient reserves to meet the "run" of expected payouts caused by the collapse of the housing bubble);
- ◆ Insurance requires the buyer to disclose all known risks, while CDSs do not (the CDS seller can in many cases still determine potential risk, as the debt instrument being "insured" is a market commodity available for inspection, but in the case of certain instruments like CDOs made up of "slices" of debt packages, it can be difficult to tell exactly what is being insured);
- ◆ Insurers manage risk primarily by setting loss reserves based on the Law of large numbers and actuarial analysis. Dealers in CDSs manage risk primarily by means of hedging with other CDS deals and in the underlying bond markets;
- ◆ CDS contracts are generally subject to mark-to-market accounting, introducing income statement and balance sheet volatility while insurance contracts are not;

To cancel the insurance contract the buyer can typically stop paying premiums, while for CDS the contract needs to be unwound **(6 Marks)**

1.3 Types of Estimation of Probability of Credit Default

1. **Pooling Method:** This method relies on the historical data and assumes that past defaults are a reasonable predictor for future likelihood of losses. Historical Probability Default (PD) is calculated by taking the ratio of the facilities that have defaulted to the total facilities that existed

in the concerned time frame, usually a year. In this method, the facilities are divided into different categories/pools based on their risk drivers.

2. **Statistical Method:** Data on characteristics of retail obligors and corporate obligors can be used to estimate their respective probability of defaults. Various statistical techniques can be employed on the data to estimate PD for defined time horizons. The statistical model specifies the relationship between the inputs and the outcome – PD. The parameters determined depend on the data used to develop the model.

One of the most recommended statistical techniques to estimate PD is logistic regression. This method of regression is applicable when the dependent variable is binary i.e. takes one of the two available values i.e. default & non default. This variable indicates whether or not the loan/debt has gone into default over a certain time horizon, usually a year. Some of the common variable sources used to estimate the PD of a corporate are financial statements, owner's data, type of loan, size of loan, and industry of the company. Similarly, for retail obligors, variable sources could be customer demographics, income statistics, age of loan, and number of late payments etc.

3. **Structural Method:** This method is generally applicable for listed corporate entities wherein structural models are used to calculate the probability of default for a corporate based on the value of its assets and liabilities. This technique is a sophisticated approach and requires valuation models to be applied for firm valuation.

Over a period of time, we propose to collate other statistical relevant inputs to explore possibilities of using statistical method for PD calculation as well as to improve portfolio quality.

(3 Marks)

1.4 (a)

1.5 (b)

1.6 (a)

1.7 (d)

1.8 (c)

(2 x 5 = 10 Marks)

CASE STUDY: 2

- 2.1 (a) Different stakeholders involved and assessment of the impact of Risk upon them:

S. No.	Stakeholders	Nature of Impact
1	Boards & Management	Failure to achieve objectives, Delays, Change management, disruption, financial losses, etc. In the given case, due to further research on product, they can suffer from financial losses.
2	Society	Loss of confidence, health hazards, direct or indirect financial losses, disruption in life style, etc. In the given case, due to the issues created by NGO, society can disregard the launch of new product i.e. chewing gum due to which AFL can lose its credibility and goodwill in society.
3	Consumer	Health, financial losses, loss of confidence, etc. In the given case, due to misgiving about the product by NGO, the customer might believe that it is hazardous to health and avoid purchasing chewing gum.

4	Employee	Life, health, morale, engagement, attrition. In the given case, due to delay in launch of the product, the morale of the employees can get down.
5	Vendor/supplier	Loyalty, relationship, payment terms, attrition. In the given case, if AFL lose its credibility in the market then it might be possible that supplier not respond to AFL's requirements and relationships between supplier or AFL can get spoil.
6	Government, Regulators	Revenue loss, delays in project implementations, loss of public confidence, etc. In the given case, if AFL fails to successfully launch the chewing gum then government can suffer a hefty loss in tax collection from the future income of that product.
7	Investors	Loss of confidence, lower returns, litigation, financial losses, etc. In the given case, if AFL suffers from financial loss then it will also impact the returns of the investors.

(b) Available Risk Treatment Options

Sr. No	Risk action	Description
1	Avoid	Exiting the activities giving rise to risk. Risk avoidance may involve exiting a product line, declining expansion to a new geographical market, or selling a division. In the given case, AFL can stop production of 'Nikhar' chewing gum if it don't want any issues with 'NGO' named 'Nasha Mukh' and don't want any further research on it.
2	Reduce/Manage	Action is taken to reduce the risk likelihood or impact, or both. This, typically, involves any of the myriad of everyday business decisions. This is involves addressing the root cause of the risk factor. In the given case, AFL can reduce/manage the risk by taking prior permission of the government or license before starting production of 'Nikhar' chewing gum.
3	Transfer/Share	Reducing the risk likelihood or impact by transferring or, otherwise, sharing a portion of the risk. Common techniques include purchasing insurance cover, outsourcing activities, engaging in hedging transactions. In the given case, AFL can buy an insurance policy for its product and therefore AFL transfer part of its risk to an insurance company.
4	Accept	No action is taken to affect the risk likelihood or impact. This is mainly in cases where the risk implications are lower than the Company's risk appetite levels. In the given case, if the whole project gets fail then portion of expected loss i.e. £ 1 Million as compared with Net worth of AFL i.e. £ 12 Billion is very minor so AFL can accept the risk without doing anything about it.

(c) Since the company's Risk Strategy and Policy is in place and is communicated and also the Risk appetite is defined the Risk Maturity level is 'Risk Managed'.

(d) The various types of political risks which ultimately can affect the profit of the company are as follows:

- (i) *Nationalisation or Expropriation Risk*: This is most common form of risk wherein host country takes over the business of MNCs without or with inadequate compensation.
- (ii) *Exchange Control Risk*: This form of risk prevents the MNCs to get converted their earning from local currency to foreign currency to repatriate the same to home country of MNCs. Due to this restrictions even investors in MNCs business also suffer a lot.
- (iii) *Taxes, Rule and Regulation Risk*: This risk arises mainly due to a sudden or dramatic change in Rule and Regulations governing the host country. These sudden changes can be in any of following type of forms:
 - Unanticipated increase tax rates applicable for MNCs operating in the host country.
 - Compulsion to hire local workforce.
 - Compliances of stricter environmental standards.
- (iv) *Inefficient Legal System*: High level of red tapism and corruption at local and higher level pose a serious risk for MNCs operating in the host country as it leads to uncertainty and high cost of operation.
- (v) *Repudiation of Contracts*: This type of risk arises on account revocation of earlier awarded turnkey projects by the Government of host country without adequate consideration and damages. This risk is also called indirect expropriation risk.

(15 Marks)

2.2. (d)

2.3. (a)

2.4. (a)

2.5. (d)

2.6. (c)

(2 x 5 = 10 Marks)

CASE STUDY: 3

3.1 Scenario-1

Risk Scenario	Current Picture of Start-up System
Brief Description of the current scenario	Despite the failure of Clip to scale up and becoming a takeover target for Share Chat, evidence show that the numbers relating to failure of Start-ups and fresh investments do not give a correct picture. The rapid decline of Clip , and of fresh investments into new content start- ups, illustrates the point.
Impact of the scenario	Since 2017, overall investments into Indian start-ups have increased in value. Since the start of 2018, the number of unicorns as we prefer to call them, or start-ups valued at more than \$ 1 billion, have nearly tripled. This is borne out by the fact that Fund infusion has gone up with VC's mostly targeting well established firms with investments reaching a high of \$ 9.5 billion in first 9 months of current year excluding Flipkart.

Risks involved and how to manage it	From the above, it is clear that, start-ups in order to succeed , need to constantly evolve to meet the ever changing needs of customers. In addition ideas which are new and backed by experienced promoters and ability to sustain alone can attract fresh investment.
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Scenario-2

Risk scenario	Reality Check
Brief description of the current scenario	The decline in the formation of Start –ups and overall deal volume is linked and it is caused by many factors. One obvious reason is the threat posed by large Chinese and American internet firms.
Impact of the Scenario	This is manifested when an established foreign internet firm-Amazon, Uber and Byte Dance are the most prominent examples in this decade – enters a sector, the number of local start-ups shrink. Barring survivors like Flipkart, Ola and Share Chat who continue to thrive, space for others shrink. Entry of majors as mentioned here, spells trouble for Indian Start-ups.
Risks involved and ways to manage it	The risk involved is primarily inability of the start -ups to scale up once a level is reached. They do not have the deep pockets that major players possess. Added to this, the entry of freshers like kids out of college who have no prior experience in running a firm and are easily vulnerable to being taken over once they lose steam as happened in the case of Clip who became a take-over target for Share Chat. This brings us to the most important question of how to mitigate the risk involved, think out of the box and survive. Promoters must have deep pockets, be prepared to constantly evolve and possess some experience of working in a start –up which helps them to bring in fresh perspective and ideas.

Scenario-3

Risk Scenario	The Brighter side
Brief Description of the Current scenario	There has been a churning in the Start-up scenario with early stage firms falling by the way side due to their inability to scale up and sustain eventually becoming targets of takeover by bigger firms or close down. What is witnessed is the new breed of Entrepreneurship with both “Quality” of entrepreneurs and strength of ideas improving. What stands out is- ➤ Increase in the average age of founders. ➤ Many are second time entrepreneurs, people who have worked at start-ups before and are serious. ➤ Ideas that emerge are better thought out.
Impact of the Scenario	The coming of age of Founders and ideas are healthy indicators. As many as 70% of founding teams that go on to receive Series A funding now have prior experience of working at an internet start-up. As employees of older internet

	companies such as Flipkart, Ola and Freshworks leave to start their own firms, their start up experience helps them expand faster and make fewer mistakes. This has meant improvement by leaps and bounds of promoters. Ten years ago, many founding teams came from various sectors like FMCG, financial services etc. Now, almost every founding team has members who have worked before at an internet start-up.
Risks involved and ways to manage it	This brings us to the most important aspect of founding team, its vision and quality that they bring to the table to be able to attract investment. In the early years of start-up, when the deal activity was at its peak, many inexperienced angel investors had poured cash into early stage internet companies by taking big bet and risk only to find that such internet start-ups did not have the ability or idea to scale up and sustain. This is when many of these investors fled the scene not wanting to lose good money after bad ventures. Thus it is imperative, that any idea that wants to germinate and sustain as well as scale up, need to be backed by experienced promoters who have fresh ideas and are keen to put their experience to good use. This alone can attract the handful of institutional investors which invest far more conservatively. This is more so in view of the fact that internet economy in India has become stronger and broader as internet connectivity has improved and the number of internet users have increased.

Scenario-4

Risk Scenario	Way Forward
Brief Description of the current scenario	Investors have figured out that start up game is not for everybody. Hordes of random people had started up and many of them have not gone anywhere. The angels who were throwing money at these firms have also vanished. At the same time, the cash raised by both local and international institutional funds has increased significantly. So, now, it is not as if everybody is starting up or becoming an angel investor. There has been a flight towards quality on both sides.
Impact of the scenario	Upcoming sectors such as fintech and social commerce have led to a broadening of the consumer internet market and increasing adoption of the internet by small and large businesses alike has allowed sectors such as business-to-business (B2B) e-commerce and logistics to become stronger. In 2015, it was only e-commerce, cabs, hotels and hyper local. Now, in addition to these sectors, we have social commerce, fintech, social media, mobility on the consumer side. On the B2B side, there is SaaS (software as a service). A few years ago, there were very few SaaS deals. Now, there are also large investments going into B2B market places, B2B logistics and B2B financial services.
Risks involved and ways to manage it	It is very clear that all is not hunky dory and investors do not put money easily into ventures that do not have clear business

	plans and are backed by experienced promoters who are willing to grind it out. While the deal volume has dropped sharply over the past three years, exits for VCs have touched new highs. In May 2018, Walmart agreed to pay \$16 billion for a majority stake in Flipkart enriching the latter's investors. Secondary share sales between investors, however, have been the main source of start-up exits. But investors said deal volume may continue declining until Indian start-ups can pull off successful initial public offerings (IPOs). But it is easily said than done judging by the poor market debut of Uber in the US and the shelved listing of WeWork. Many Indian Start-ups have pursued a growth at all cost strategy, similar to that of Uber and WeWork and are nowhere near attaining profitability. This makes a big bang IPO by an Indian consumer internet firm an unlikely prospect for the near future. But if the experience of Indian Railway Catering & Tourism Corporation (IRCTC) is anything to go by, all is not lost. However, for these internet start-ups to survive, exits are not easy since margins are bad and they need to go through serious restructuring (to launch IPO). It is clear that going forward, only firms with experienced promoters and willing investors and deep pockets who can weather the storm and hope to succeed.
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(15 Marks)

3.2 (a)

3.3 (a)

3.4 (a)

3.5 (a)

3.6 (c)

(2 x 5 = 10 Marks)

CASE STUDY: 4

4.1 RG and other members of the board should:

- (i) Avoid conflicts of interest arising between independent directors, non-executive directors and executive directors.
- (ii) Establish a regular and transparent communication mechanism to ensure continuous and robust dialogue and information sharing between all the board members.
- (iii) Ensure tapping of the maximum benefit of expertise, skills, experience and perspectives of lead independent director.
- (iv) Set the tone from the top, and seek to effectively inculcate an appropriate risk culture throughout the firm.

(4 Marks)

4.2 Governance Risk involved are as follows:

- (a) Proxy advisory firm, XYZ, raised alarms and questioned executive compensation package paid by ABC Limited.
- (b) A small shareholder filed a law suit against Board of Directors misuse of corporate funds.

(4 Marks)

- 4.3 Country Risk is broader concept which covers the adverse impact of host country's economic, financial and political environment. This risk is most important in case of Multinational National Corporations (MNCs) which establishes their business in different countries away from the country where they are registered.

Types of Country Risk

The analysis of Country Risk is not important not only because it impacts the profitability of MNCs but also important for the investors who invest their money through FPI, FDI etc. Let us now discuss the major types of Country Risk.

Political Risk

This risk mainly arises out of the changes in the political scenarios as well as adverse decisions by the ruling Government. The various types of political risk which ultimately affect the profit of the MNCs from the operations in the host country can be described as follows:

- (i) *Nationalisation or Expropriation Risk*: This is most common form of risk wherein host country takes over the business of MNCs without or with inadequate compensation.
- (ii) *Exchange Control Risk*: This form of risk prevents the MNCs to get converted their earning from local currency to foreign currency to repatriate the same to home country of MNCs. Due to this restrictions even investors in MNCs business also suffer a lot.
- (iii) *Taxes, Rule and Regulation Risk*: This risk arises mainly due to a sudden or dramatic change in Rule and Regulations governing the host country. These sudden changes can be in any of following type of forms:
 - Unanticipated increase tax rates applicable for MNCs operating in the host country.
 - Compulsion to hire local workforce.
 - Compliances of stricter environmental standards.
- (iv) *Inefficient Legal System*: High level of red tapism and corruption at local and higher level pose a serious risk for MNCs operating in the host country as it leads to uncertainty and high cost of operation.

Repudiation of Contracts: This type of risk arises on account revocation of earlier awarded turnkey projects by the Government of host country without adequate consideration and damages. This risk is also called indirect expropriation risk.

Financial and Economic Risk

The main risk covered in this category is the Sovereign Risk i.e. default in repayment of borrowing by the Government of host country.

Although Government of host country can easily repay the loan by printing more currency notes but it will depreciate value of its currency. The sovereign risk hamper the reputation of the country severely from investment point of view but it saves a lot of foreign exchange of the Government.

To identify such types of risk well in advance following economic variables can be used:

- Ratio of country's Import to its Official Reserve
- Ratio of Import to its Export
- Balance of Payment Surplus/ Deficit on current account.
- Country's Debt Service Ratio
- Country's external debt to its GDP

(7 Marks)

4.4 (b)

4.5 (c)

4.6 (a)

4.7 (b)

4.8 (d)

(2 x 5 = 10 Marks)

CASE STUDY: 5

5.1 The various risks faced by the ABC Transportation Networks are discussed as below:

Audit Risk - ABC Transportation Networks is facing audit risks as in its limited review report, the statutory auditor has drawn the company's board of directors attention to the "existence of material uncertainty on the company's ability to continue as a going concern" and the "management plan to raise funds."

Financial and Liquidity Risk – As per the definition provided by NASDAQ, Financial Risk is the risk that the cash flow of an issuer will not be adequate to meet its financial obligations. Liquidity risk is the potential inability to meet commitments as they fall due.

In the case under consideration, the company is facing both the financial and liquidity risks as it has been mentioned in the report submitted by a credit rating agency that liquidity will continue to remain stretched due to sizeable near-term debt repayment obligations, high refinancing risk and high dependence on external funding support to project Special Purpose Vehicles (SPVs).

Reputation Risk – The company is facing reputation risk as the credit rating agency has categorically pointed out the following points:

- ◆ Having high debt repayment obligations.
- ◆ High refinancing risk.
- ◆ High dependence on external funding support to project special SPVs.
- ◆ Recent downgrading of credit rating.

(9 Marks)

5.2 The steps which have been taken by the management of ABC Transportation Networks to counter the risks as mentioned above are given as below:

- ◆ Monetization of assets
- ◆ Raising of fresh capital through right issue
- ◆ Refinance of debt in matured annuity projects
- ◆ Other strategic initiatives to address any uncertainty relating to repayment of borrowings in next twelve months
- ◆ To create sustainable cash flows

(6 Marks)

5.3 (d)

5.4 (b)

5.5 (d)

5.6 (d)

5.7 (a)

(2 x 5 = 10 Marks)