ASSIGNMENT

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Task 1:

Explain various types of Market Risk and the relationship between Zero Coupon bond price and interest rate

There are four major types of market risk which includes:

Figure 1: Types of Market Risk

(Source: Self-created)

Interest Rate Risk: This is the risk where the security value fall as there is an increase in interest rate. This risk covers the volatility which may include the fluctuation of interest rate due to several key factors. Besides, many types of exposure can take place such as:

- *Basic risk:* Banks face this risk when the interest bearing assets and liabilities have identical bases where it move in different rates in different directions.
- *Yield curve risk:* This is presented between short-term and long term interest rates. For example, banks earn profits by borrowing short term money when there is a situation of lower short term rates than the long term (Walter, 2017).
- *Options risk:* This type of risk is seen in the prepayment of mortgage loans when there is changes in interest rates. Herein, falling interest rate may lead many borrowers to repay their loans where bank faces uninvest cash when there is a declined interest rates. On other hand, rising of interest rates cause in repaying mortgage lower in slower way

where the bank will be in a state of prior due to lower interest rates. Thus, this type of loan is difficult to measure and control by the bank (Braun *et al.* 2017).

- *Reprising risk:* This risk is presented in the assets and liabilities which changes its values at different time and rates.

Equity Price Risk: This types of risk is the risk which comes from the volatility seen in the stock prices. When it comes to equity risk it is essential to make a distinction between unsystematic and systematic risk. Lie *et al.* (2017) stated that systematic risk takes place due to general market factors which impact the industry as it cannot be diversified. Besides, unsystematic risk tales place in a particular to a company which emerges due to specific characteristics of the company.

Foreign Exchange Risk: This type of risk takes place due to fluctuation in currency rates. Herein, companies may expose to foreign exchange risk in the business courses due to unhedged position.

Commodity Price Risk: This is unexpected type of risk seen in different commodities like oil, tea, electricity, grains and many more. Herein, commodity risks effects several sections of people like Government, producers, buyers and exporters (Rode and Fischbeck, 2018).

The relationship between zero coupon bond price and interest rates is illogical however, by examining closely there is a relation found in-between them. When bonds move in an opposite direction with the interest rates then it is known as zero-coupon bonds which does not plays the role of paying coupon but with a difference in purchase price and par value it tends to derive its value. When new bonds are issued when generally carry out the coupon rates or tends to close the market interest rates. Shin and Baldick (2018) commented that there is an inverse relationship between interest rates and bond price where if one rises the other declines. Therefore, the investors takes the initiative in comparing the returns on their current investments in the elsewhere in the market. Therefore, when there is changes in interest rates the bond coupon rate tends to be less important to the investors. Therefore, they are in the verge of paying more or less or their bond.

Task 2:

a. State various types of credit risks and the strategies to mitigate the risk

Gilchrist and Mojon (2018) stated that credit risk is the risk where the borrower will default on the meeting the obligations as per the schedule specified in regards to predetermined agreement. Types of credit risk are:

Credit Default Risk: This type of risk comes from the debtors who are not likely in paying their loan in full or takes more than 90 days on any obligation of material credit. Herein, this type of risk may affect the credit related transaction which includes securities, loans and derivatives.

Concentration Risk: This type of risk is encompassed with the type of single exposure who are having the potential in trending with losses which threatens the operations of banks. This risk make take place as a single company or as industry.

Country risk: This type of risk takes place from a state foreign currency payment or when there is a situation of default in the obligations (Ovtchinnikov *et al.* 2017).

Credit risk can be mitigated in the following ways:

Risk based pricing: Here, lenders are charged with high interest rate to the borrowers. Besides, lenders make sure in considering several factors of loan which includes credit rating, loan purpose and loan to value ratio.

Covenants: Herein, the lenders tends to write stipulation on borrowers which is known as covenants which are usually made into loan agreements. These includes:

- Reporting the financial condition in a periodical basis
- When there is a situation where dividends, repurchasing shares are refrained from further borrowings and the voluntary actions which affects the financial position of the company (Jiménez *et al.* 2018).
- By repaying the loan in full amount by the request made by the lenders in events like changes in debt equity ratio or interest coverage ratio.

Deposit insurance: This type of strategy is implemented by the government in terms of guaranteeing the bank deposits of insolvent banks. This type of protection does not allow the customers from withdrawing money at the state of bank insolvency. Thereby, the customers are also able to hold their savings in the bank (Schwaab *et al.* 2017).

Credit insurance and credit derivatives: Herein, the bond hoers and the lenders hedge their credit risk in terms of purchasing credit insurance. This type of contract is effective enough as it enables in transferring risk from the lender to the seller in terms of an exchange in payments. Thus, the most common type of credit derivatives is credit default swap.

Diversification: Sometimes concentration risk is faced by the borrowers at high rate in the form of unsystematic credit risk. Thus, at this stage, effective measures are taken by the lenders in terms of reducing the risk in the form of diversifying the borrower pool (Niklis *et al.* 2018).

Tightening: At this stage, the lenders tends to mitigate the credit risk by minimising the amount of credit extended. This is either done in the form of total or in certain borrowers.

b. Explain various Basel II operational risk event types and explain the internal process risk and external risk faced by the banks

Base II operational risk event may arise in different form which includes:

Internal fraud: This type of fraudulent activity takes place within the organisation that are employee theft, insider trading on the account of employee and bribery.

External fraud: This takes place by the outsiders such as robbery, computer hacking where the outsider can access important data and information and many more.

Employment practice and workplace safety: In a workplace risk takes place in violation of employee health. Besides, due to discrimination the employees are also affected and does not feel safe to work in the organisation (Tattam, 2017).

Business practise: When the organisation or the associate employees of the company tends to misuse the confidential information of the company then it affects the workplace. This type of risk may lower the sustainability and might lose the competitive position in the market place. Besides, in case of money laundering the company also gets affected.

Damage to physical assets: There are situation when the company might lose their physical assets like building and land due to natural disaster which is not under the control. Natural disaster, war or terrorism are uncertain and due to the occurrence of these situation the company tends to lose their assets (Akkizidis and Kalyvas, 2018).

Execution, process and delivery management: When there is a state of money transaction with the clients account and at such time the company does not get any access then it tends to be risk for the company.

Business disruption: In case there is any system failure in hardware and software then the company faces huge risk and loss because such problem brings the company to a situation which becomes difficult to carry out the business operation.

The internal process risk is the loss which results from inattentive execution of processes and procedures while carrying out baking operation. These are:

People risk: This are associated with the employees or any kind of fraudulent activities. The reasons are:

- Due to high staff turnover the company faces frequent changes and have to invest capital in training session.
- Due to poor management practise it affects the organisation structure and builds up risk in the workplace (Eckert and Gatzert, 2017).
- Training of the staffs is important and if it lacks then the work condition also gets disrupts.

System Risk: This are mainly taking place in computer system and other technologies. The reasons are:

- Due to data corruption company may lose their relevant information
- There can be system security problem due to virus and hacking
- Programming error can result inaccurate results
- System sustainability cam provide inappropriate results.

The external risk are uncertain and have significant impact on the operation of bank. The risk can be robberies, natural disaster, political issues and many more. Besides, due to interruption in transport system it causes difficulty for the staffs.

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