

Frequently Ask Questions (FAQ) on Domestic Debt Restructuring Program

Accounting Treatment: Determination of Discount Rate

Q: What is the discount rate?

A: The discount rate is the interest rate used to calculate the present value of a future cash flow. In the context of treasury bonds, the discount rate is used to determine the fair value of the bond.

Q: How is the discount rate determined?

A: The discount rate is typically determined by considering the market yield of similar bonds. In the case of treasury bonds, the market yield is published by the Central Bank of Sri Lanka (CBSL).

Q: Why is the discount rate important in determining the fair value of treasury bonds?

A: The discount rate is used to calculate the present value of the future cash flows from the bond. The higher the discount rate, the lower the fair value of the bond. This is because a higher discount rate means that investors require a higher return on their investment. Consequently, when the coupon rate is fixed, in order to meet the target of higher return the investors offer a lower price for the bond.

Q: What discount rate should be considered in determining the fair value of treasury bonds?

A: The discount rate to be considered in determining the fair value of treasury bonds as of a particular date, should be the market yield published by the Central Bank of Sri Lanka (CBSL) based on the secondary market transactions on that date. The fair value of a treasury bond is the price that would be received to sell the bond in an orderly transaction between market participants at the measurement date. The market yield published by the CBSL is a good estimate of the discount rate to be used because it is based on actual transactions in the secondary market.

Q: What are the principles of SLFRS 13 Fair Value Measurement?

A: SLFRS 13 Fair Value Measurement provides guidance on how to measure the fair value of assets including financial assets and liabilities. It requires measuring fair values of assets using inputs based on a hierarchical model consisting three levels: Level 1, Level 2 and Level 3, of which the most appropriate set of inputs may be used.

Q: What are the different levels of the fair value hierarchy?

A: The fair value hierarchy is a classification system that prioritizes the inputs used to measure fair value. As per SLFRS 13, paragraph 72, there are three levels of inputs in the fair value hierarchy:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities. This is the highest level of the fair value hierarchy and provides the most reliable measure of fair value.
- Level 2: Inputs other than quoted prices included within level 1 that are observable for the assets or liability, either directly or indirectly. This level includes inputs such as interest rates, yield curves, and credit spreads.
- Level 3: Inputs are unobservable inputs for the asset or liability. This level includes inputs such as management's estimates of future cash flows or discount rates.

Q: How to apply the fair value hierarchy in determining the Fair Value of Treasury Bonds?

A: The fair value hierarchy should be applied starting from Level 1 and proceeding to Level 3 if necessary. For example, if there are quoted prices for identical Treasury Bonds in an active market, then those inputs which are considered Level 1 should be used. If there are no quoted prices, but there are observable market data for similar Treasury Bonds, then those inputs are considered as Level 2 inputs and should be used. If there are no observable market data, then other appropriate inputs that would be considered as Level 3 inputs should be used based on the best available information.

Q: What are the disclosures required for fair value measurements of treasury bonds?

A: SLFRS 13 requires entities to disclose the following information for fair value measurements of treasury bonds:

- The fair value measurement of each class of financial asset or liability.
- The level of the fair value hierarchy within which each fair value measurement is categorized.
- The inputs used to measure fair value, and how those inputs were determined
- The valuation techniques used to measure fair value, and the assumptions used in those techniques.
- Any significant changes in the fair value of financial assets or liabilities from the previous period.

Q: Why may existing market yields not meet the definition of an active market?

A: An active market is one in which there are sufficient buyers and sellers so that prices are not unduly influenced by the actions of any individual buyer or seller. If there are only a limited number of transactions in a particular market, then it may not be considered active. This is because the prices of the securities traded in that market may be more volatile and less reliable as a measure of fair value.

Q: Why may a potential long-term bond not find prices that are listed of an identical asset?

A: This is because the proposed bond may not include characteristics of credit risk, liquidity risk, and inflation premiums which are embedded in the existing market yields. Credit risk is the risk that the issuer of the bond will default on its payments. Liquidity risk is the risk that the bond cannot be easily sold in the market. Inflation premium is the additional yield that investors demand to compensate for the expected rise in prices.

Q: What are adjusted bond yields?

A: Adjusted bond yields are bond yields that have been adjusted to reflect the specific characteristics of the bond being valued. This is done by adding or subtracting factors for credit risk, liquidity risk, and inflation premiums. The adjusted bond yield is then used to determine the fair value of the bond.

Q: Why must preparers determine adjusted bond yields when determining the fair value of such instruments?

A: The fair value of an asset is the price that would be received to sell the asset in an orderly transaction between market participants at the measurement date. In the absence of an active market for the asset, the fair value must be estimated using the best available information. Adjusted bond yields are one way to estimate the fair value of a bond when there is no active market for that bond.

Q: What are the different methods used to arrive at adjusted bond yields?

- A: There are three main methods used to arrive at adjusted bond yields:
- a. Adjusted Yield Method (Top-down approach)
 - b. The Damodaran Model
 - c. The Adjusted Policy Rate (Bottom-up approach)

Q: What is the adjusted yield method?

A: The adjusted yield method is a way to calculate the risk-adjusted yield of a bond. It does this by removing the credit risk, liquidity risk, and other factors that may have affected the current yield of bonds available in the market. The resulting yield is a more accurate reflection of the expected yield on the bond under normal circumstances, hence reflecting the true value of the bond.

Q: How is the adjusted yield calculated?

A: The adjusted yield is calculated by subtracting the credit risk premium, liquidity risk premium, and other relevant factors from the market yield of the bond. The credit risk premium is the additional yield that investors demand for holding a bond that is not investment grade. The liquidity risk premium is the additional yield that investors demand for holding a bond that is difficult to sell. Other factors that may be considered include the term of the bond, the currency in which it is denominated.

$$\text{Risk Adjusted Yield} = \text{Market Yield (Gross)} - \text{Credit Risk} - \text{Liquidity Risk}$$

The Risk adjusted yield determined for terms which includes reasonable data shall be extrapolated to establish the risk adjusted yield curve to cover “n” number of years. Nelson-Siegel Svensson Method (NSS) could be considered as a widely used method to extrapolate yield curves.

Q: What are the benefits of using the adjusted yield method?

A: The adjusted yield method provides a more accurate reflection of the true value of a bond. This is because it removes the factors that can distort the market yield. As a result, the adjusted yield can be used to make more informed investment decisions.

Q: What is the Damodaran Model?

A: The Damodaran Model is a method for estimating the cost of equity capital for a company. It is named after Aswath Damodaran, a professor of finance at New York University's Stern School of Business.

The Damodaran Model uses a variety of factors to estimate the cost of financial instruments, including the risk-free rate, the market risk premium, and the company's beta coefficient. The risk-free rate is the return that an investor can expect to receive on a risk-free investment, such as a Treasury bill. The market risk premium is the additional return that investors demand for investing over risk-free investments. The company's beta coefficient is a measure of the company's volatility relative to the market.

The Damodaran Model can be used to estimate the cost of a financial instrument. However, it is important to adjust the model for the country's specific economic

conditions. For example, if a country is experiencing a financial crisis, the default risk premium for companies in that country will be higher than normal. This means that the cost of equity for companies in that country will also be higher.

Q: How is the risk-free rate adjusted for the economic conditions in Sri Lanka?

A: The risk-free rate is adjusted for the economic conditions in Sri Lanka by adjusting the differential between the current default spread and the pre-default spread to the current market yield.

The differential between the current default spread and the pre-default spread is a measure of the additional risk that investors are demanding for investing in Sri Lankan government bonds. This additional risk is due to the economic crisis in Sri Lanka.

By adjusting the differential between the current default spread and the pre-default spread to the current market yield, we can estimate the risk-free rate for Sri Lanka. This risk-free rate can then be used to estimate the cost of the financial instruments.

Q: What is an adjusted policy rate?

A: An adjusted policy rate is a risk-free interest rate that is derived from the central bank's policy rate by adjusting for factors such as the tenure, coupon, and frequency of interest payments of the instrument. The adjustment is made based on the principle of the yield curve, which is a graphical representation of the relationship between the yield on an asset and its maturity.

Q: Why is the adjusted policy rate used?

A: In stable economic conditions, the policy rates are supposed to be the benchmark of risk-free rate of the country. The adjusted policy rate is used because it provides a more accurate measure of the risk-free rate of return than the existing central bank's policy rates due to the unstable economic condition. The rate needs to be adjusted for variables such as tenure, coupon, and the frequency of interest payments of the instrument based on principle of yield curve.

Q: How is the adjusted policy rate calculated?

A: The policy rate required to be adjusted for variables such as tenure, coupon and the frequency of interest payments of the instrument based on principle of yield curve. Accordingly, historical data may be analysed to establish the relationship between policy rates and the yield curve which may be extrapolated to derive the applicable risk-free rate.

Q: How can the adjusted policy rate be used?

A: The adjusted policy rate can be used by investors to compare the returns on different assets. It can also be used by central banks to set interest rates in a way that is consistent with their monetary policy goals.

Q: what is the best method that can be used to determine the discount rate?

A: The best method for determining the discount rate depends on the specific situation and it should be chosen after careful consideration. The goal is to select a rate that accurately reflects the risk and expected return of the investment or project.

Here are some additional factors to consider when choosing a discount rate:

- The type of asset or project being valued.
- The riskiness of the investment.
- The length of time over which the investment will generate cash flows.
- The expected rate of inflation.
- The tax implications of the investment.

It is important to note that the discount rate is just one factor that is used to determine the value of an investment or project. Other factors, such as the expected cash flows and the riskiness of the investment, also play a role.

(Further clarifications: Contact CA Sri Lanka -Technical Division 0112 353 000, Ext 1455)