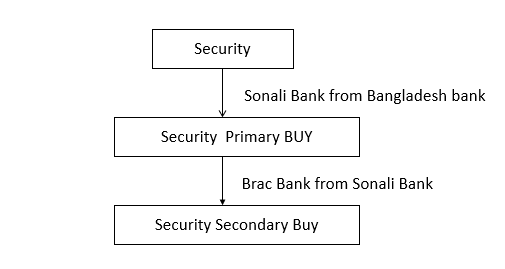
**Fixed Income**

**Security:** Security refer to government bonds and bills that pay a fixed rate of interest (coupon rate and discount) to investors at regular intervals until maturity.

Those Security issues by Bangladesh bank. Any bank can buy those security then this bank creates a security of the circular information.

Treasury Security are issued through regular auctions, and their yields are determined by competitive bidding. Investors submit bids specifying the quantity of T-bills they want to purchase and the yield they are willing to accept. Bangladesh Bank accepts bids starting with the lowest yield and continues until the entire offering amount is allocated.



**Type of Security:**

**T-Bill:** These are short-term securities with maturities ranging from a few days to one year. They are sold at a discount to face value and do not pay periodic interest. Instead, investors earn a return by receiving the face value at maturity, which is higher than the purchase price. Bill is a short-term instrument. (less than 1 Year) T-Bill is Based on discount.

**Characteristic of T-Bill:**

1. **Maturity**: Treasury Bills have very short maturities, typically ranging from a few days to one year. Common maturities for T-bills include 91days, 182days, 364days.
2. **Discounted Pricing: If face value is grater then cost value then it’s called discount when face value is less then cost value then it’s Premium and when face value equally to cost value then it’s at per.**

**Example:**

**face value = 100, cost value = 95 ==== discount**

**Face value = 100, cost value = 105 === premium**

**Face value = 100, cost value = 100 ==== At per**

1. **No Periodic Interest Payments:** T-bills do not make periodic interest payments to investors. Instead, investors earn a return by receiving more than they paid when the T-bill matures.

**T-Bond:** Treasury Bonds are long-term government debt instruments with maturities that typically range from 1 to 30 years. Bond is Long term agreement (greater than 1 year). Bond is based on **coupon**.

**Characteristic of T-Bond:**

**Fixed Interest Payments:** Treasury Bonds pay a fixed rate of interest, known as the coupon rate, to investors every six months until the bond matures. The coupon rate is determined at the time of issuance and remains constant throughout the life of the bond.

**Maturity:** Treasury Bonds have longer maturities compared to Treasury Notes and Treasury Bills. They can have maturities of 2,5 10, 20, or 30 years, providing investors with a longer-term investment option.

**Safety:** Treasury Bonds are considered one of the safest investments available because they are backed by the full faith and credit of Bangladesh Bank.

**2nd Lecture**

**Strategy:**

**HFT** (Held for trade): HFT is intent to sell.

**HTM** (Held to maturity): HTM is not intent to sell.

**Different Between HFT and HTM**: After buy any security if this security sell to other party it’s must be HFT strategy. In case of HTM security It’s can’t sell.

**Re-evaluation**: In the context of fixed income securities, "revaluation" refers to the process of assessing and adjusting the value of these securities. Fixed income securities are financial instruments that promise to pay a fixed amount of interest income and return the principal amount to the investor at a predetermined future date. In process of Re-evaluation we check gain and loss.

If **HFT** then bill and bond will be Re-evaluation.

**Amortization:** In the context of treasury and finance, "amortization" refers to the gradual reduction of a financial obligation or debt over time through regular payments. We can determine how much profit and loss gain by amortization.

IF strategy **HFT** then Bill (Holding period interest calculation)

When Strategy is **HTM** then Bill and Bond both will be amortization.

**Interest Basic:**

Actual/ nActual using in T-BOND.

Actual/ 365 using in T-BILL.

**Yield Method:**   
 XRR using Bill.

Excel using in Bond.

**Yield and Price relationship:** If price is increasing then yield will be decreasing and price is decreasing then yield will be increasing.

**Amount and Quantity Relationship:** Amount = Quantity \* 100

Quantity = Amount / 100;

**Equation of Price:** we will learn later

**3rd Lecture**

**Deal Capture**

**Accrued Interest:** last coupon date to value date. (If Issue date === value date no accrued)

**Bill**: No accrued interest and settlement amount = principal amount

**Bond:** have accrued interest and settlement amount = principal amount + accrued amount.

**Strategy**: Others (NO Revaluation + amortization)

**Repo type:**

1. ALS,
2. Repo,
3. Reverse Repo

**ALS (Assure Liquidity Support):**

This support by Bangladesh bank.

Mark as Lien

Not sell able

Not repo

Revelation and amortization will.

**Repo**: A repurchase agreement is a short-term loan where both parties agree to the sale and future repurchase of assets within a specified contract period. The seller sells a security with a promise to buy it back at a specific date and at a price that includes an interest payment.

Repurchase agreements are typically short-term transactions, often literally overnight. However, some contracts are open and have no set maturity date, but the reverse transaction usually occurs within a year.

Repurchase agreement. form of short-term borrowing for dealers in government securities. a dealer sells government securities to investors, usually on an overnight basis, and buys them back the following day at a slightly higher price.

Sonali bank <-------------------🡪 Brac Bank

Here for sonali bank is repo and for brac bank is reverse repo.

**Reverse Repo:**

A reverse repurchase agreement is an act of selling securities with the intention of buying those same assets back in the future at a profit. This process is the opposite side of the coin to the repurchase agreement. To the party selling the security with the agreement to buy it back, it is a reverse repurchase agreement. To the party buying the security and agreeing to sell it back, it is a repurchase agreement.

In a reverse repurchase agreement, a dealer sells securities to a counterparty with the agreement to buy them back at a higher price at a later date. The transaction is completed with a repo agreement. That is, the counterparty will buy the securities back from the dealer as agreed

Difference Between Repo and ALS:

|  |  |  |
| --- | --- | --- |
|  | Market REPO | ALS |
|  | Market value wise | Face value with margin |
|  | Have to Security hand over | Have not to Security hand over |

**ARR (Asset revaluation revenue):**

**Book Value:** set after revelation.

**Market Price:** Current date price. Change every day.

**Accounting**

Suppose, Market price =98.5, Book value= 98.5, Quantity=1000

**BUY:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM | 98500 |  |
| Cash/BB principle |  | 98500 |

**SELL:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM |  | 98500 |
| Cash/BB principle | 98500 |  |

**For Gain Suppose**, Market price =98.5, Book value= 98, Quantity=1000

**SELL:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM |  | 98000 |
| Cash/BB principle | 98500 |  |
| Gain/ income |  | 500 |

**For Loss Suppose**, Market price =98, Book value= 98.5, Quantity=1000

**SELL:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM |  | 98500 |
| Cash/BB principle | 98000 |  |
| Loss | 500 |  |

**ARR**

Suppose, Market price =98, Book value= 98.5, Quantity=1000, Arr=2.5

**SELL:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM |  | 98500 |
| Cash/BB principle | 98000 |  |
| loss | 500 |  |
| Arr | 250 |  |
| Gain |  | 250 |

**Repo**

Market price =98.5, Book value= 98, Quantity=1000

**1st leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM |  | 98000 |
| Cash/BB principle | 98500 |  |
| Gain/ income |  | 500 |

**2nd leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM | 98500 |  |
| Cash/BB principle |  | 98500 |
| Interest paid | 500 |  |
| BB principle |  | 500 |

**Reverse Repo**

Market price =98.5, Book value= 98, Quantity=1000

**1st leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM | 98500 |  |
| Cash/BB principle |  | 98500 |

**2nd leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| HTF/HTM | 98500 |  |
| Cash/BB principle |  | 98500 |
| Interest income |  | 500 |
| BB principle | 500 |  |

**ALS**

Amount = 50000, interest = 500

**1st leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| Borrowing |  | 50000 |
| Cash/BB principle | 50000 |  |

**2nd leg:**

|  |  |  |
| --- | --- | --- |
| Name of GL | DR | Cr |
| Borrowing | 50000 |  |
| Cash/BB principle |  | 50000 |
| Interest paid | 500 |  |
| BB principle |  | 500 |

**4th Lecture**

**Re-evaluation**: In the context of fixed income securities, "revaluation" refers to the process of assessing and adjusting the value of these securities. Fixed income securities are financial instruments that promise to pay a fixed amount of interest income and return the principal amount to the investor at a predetermined future date. In process of Re-evaluation we check gain and loss.

If **HFT** then bill and bond will be Re-evaluation.

**Amortization:** In the context of treasury and finance, "amortization" refers to the gradual reduction of a financial obligation or debt over time through regular payments. We can determine how much profit and loss gain by amortization.

IF strategy **HFT** then Bill.

When Strategy is **HTM** then Bill and Bond both will be amortization