An upgrade or downgrade-

- may change market's perception of credit risk
- may lead to a change in the security's price

SECURITIZATION

Securitization refers to the process of transforming debt instrument into a security.

• Portfolio of assets "pooled" and transferred => Special Purpose Vehicle (SPV)/the issuer.

• Issuer SPV: a tax-exempt company or trust formed for funding the assets.

• The issuer SPV issues securities to buy the assets from the originator.

• Investors purchase the securities in the open market, or sometimes (less common) through a private offering.

Structured securitization-

ORIGINATOR(providers of loan) sells their loans to special purpose vehicles and the SPVs pay the banks by the funds provided by the investors. Where investors buy securities/bonds from SPVs.

- If originator(bank) goes bankrupt, the creditor (SPV) will not get the benefits of the assets.
- Performance of securities is directly linked to performance of assets
- As the loans are bought by the SPV, the originator can free their assets from the balance sheet and do more business
- SPV is bankruptcy remote i.e., it cannot be insolvent

IN THIS CASE, THE BANKS INCORPORATE A SPV WHICH BUYS THE ASSETS/LOANS FROM THE ORIGINATOR(BANKS), DIVIDE THE LOANS INTO GROUPS/TRANCHES AND THEN SELL THOSE ASSETS IN THE FORM OF BONDS TO DECREASE THE CREDIT RISK.

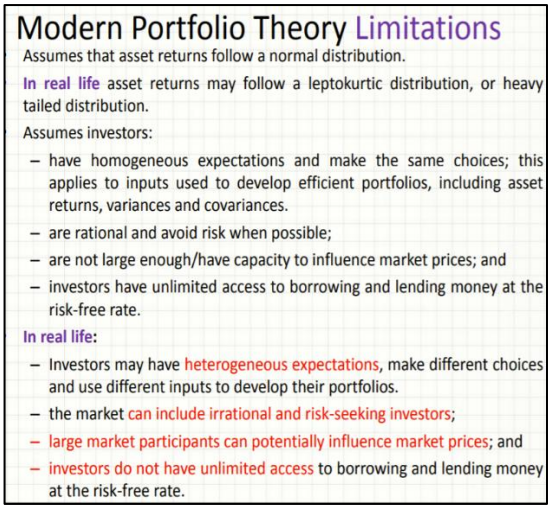
THE BONDS ARE BASICALLY PARTS OF ASSETS WHICH ARE SOLD TO THE INVESTORS. THE INVESTORS PAY THAT PART OF THE DEBT AND EARN PERIODIC INTEREST ON IT. THE AMOUNT IS TO BE RETURNED BY THE SPV. THE BOND DOES NOT GIVE ANY PARTICIPATING RIGHT TO THE INVESTORS.

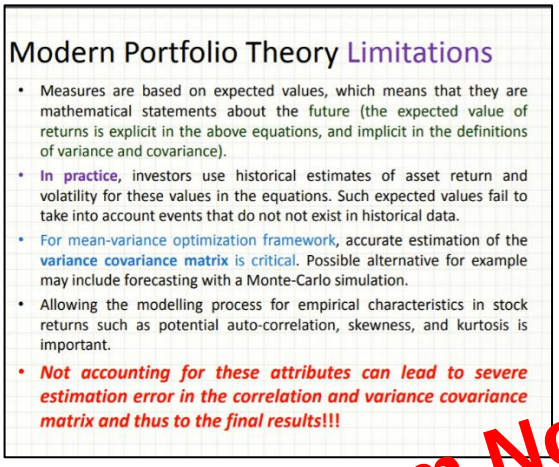
CREDIT STRUCTURING- Credit enhancement required for sufficient credit quality, ways to enhance-
– Internal credit enhancement.
• Subordination (overcollateralization in note form junior to more senior notes).
• Overcollateralization (assets > notes).
• Reserve fund.
• Excess spread.
– External credit enhancement.
• Letter of credit, swap

Securitization REPAYMENT *Structures-*

- *Static pool- No more mortgages allowed if the previous mortgage is still outstanding.*
- *Revolving pool- More mortgages/loans can be added but it must be aligned to the restrictions.*

WATERFALL-





ALTERNATIVES

- Autoregressive (AR) model- There's some level of serial or auto correlation between the returns across time i.e., the return generated this year is linked to the returns generated in past.
- Monte Carlo Simulation- Assumptions are made about the mean, standard deviation and correlation which helps in creating several hypothetical outcomes. The simulated returns are sorted (highest to lowest) and organized into probability percentile ranges. The simulated returns (%) are then used to calculate wealth values ($). Also, the necessary changes in input to evaluate precise output.

LECTURE 7

Capital Asset Pricing model-

$$\textbf{Return} = r_f + \beta_i (r_m - r_f)$$

β_i measures security's i contribution of total risk of a well-diversified portfolio, namely the market portfolio. It measures the non-diversifiable risk of the stock.

- Investors are compensated for holding systematic risk in the form of higher returns
- The magnitude of compensation depends on the equilibrium risk premium-- $\mathbf{(r_m - r_f)}$