



**SC – UM Visiting Scholar Programme**  
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**Recent Crisis: Lessons for  
Islamic Finance**

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# The Conventional View:

- ❖ The narrative of the global crisis:
  - It was triggered by the crash of the US housing market whose overheating was caused by:
    - Abundant liquidity in search of high yield; excess liquidity brought about by:
      - ✓ years of easy monetary policy and expansionary fiscal policy
      - ✓ financial inflows of recent years particularly from emerging markets

- ❖ Regulation gone AWOL: three decades of deregulation. The theoretical foundation of ideology based deregulation:
  - Walras, Arrow-Debreu: existence of a general equilibrium in a market economy →
  - Modigliani-Miller theorem: Debt-equity indifference →
  - Efficient Market Hypothesis:
    - Market prices contain all needed information

- ❖ Financial innovations are a positive step toward market completion → regulatory barriers thwart this progress
- ❖ Instability (cycles of boom and bust) is caused exogenously by external shocks and/or by bad policies
  - Asymmetric Information and moral hazard amendments to the conventional narrative

# Structured Finance: Securitization

- ❖ Asset Based Securitization (ABS)
- ❖ Mortgage Based Securitization (MBS)
- ❖ Subprime MBS

# Borrower Credit

Good

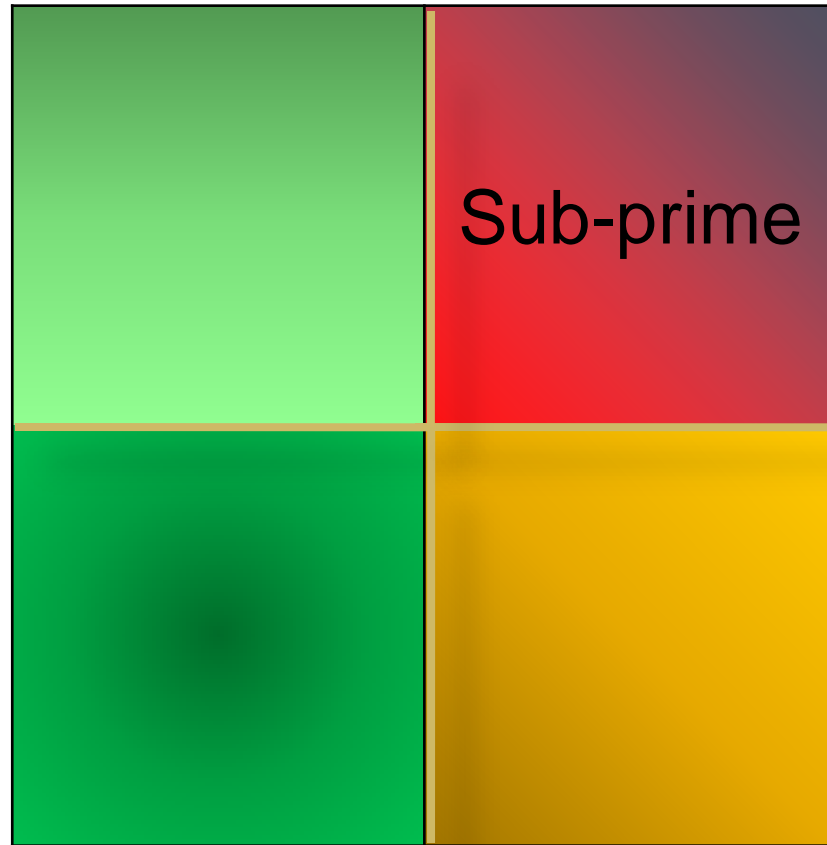
Bad

Low

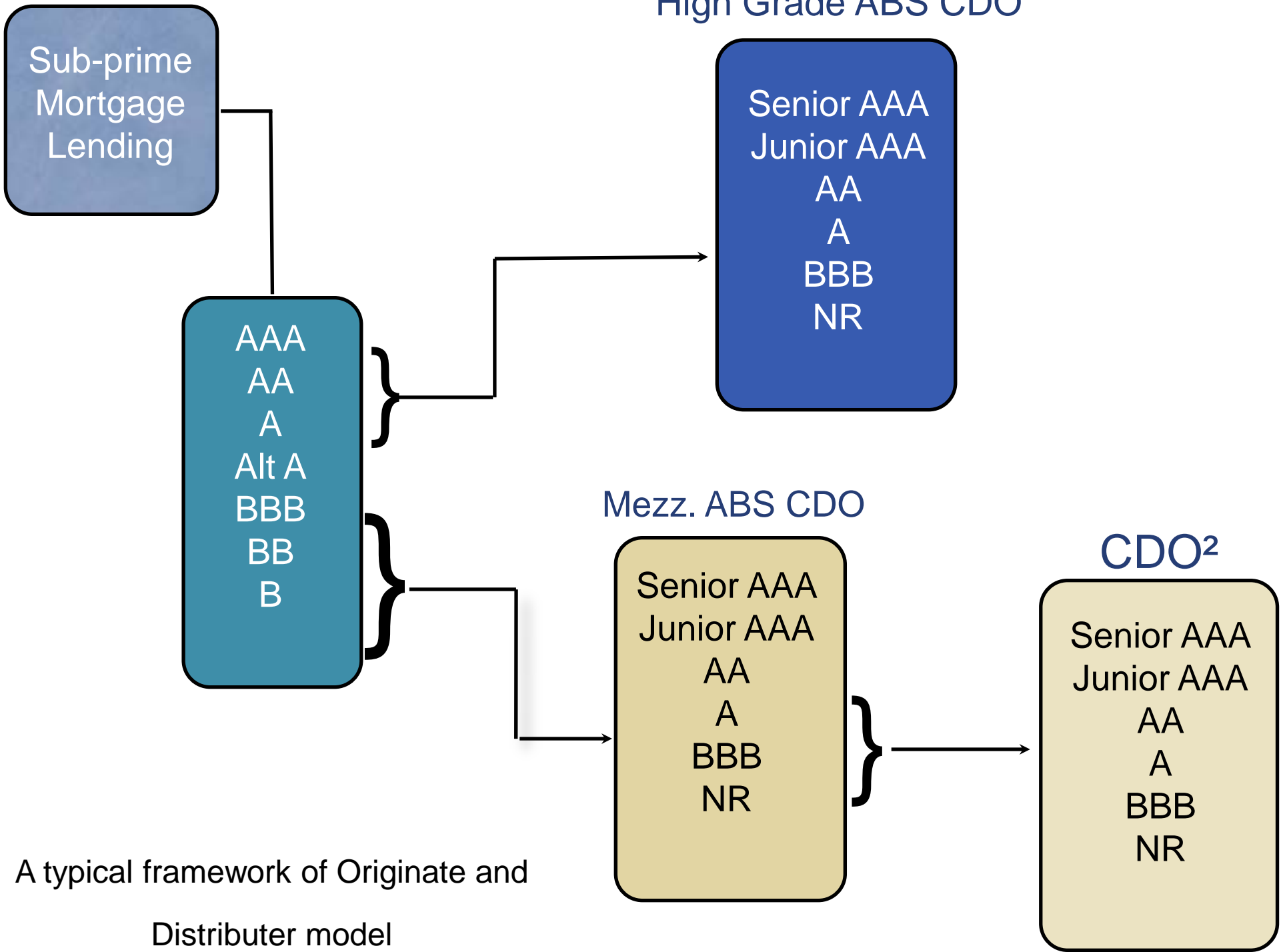
Sub-prime

Down Payment

High



- ❖ Subprime MBS and the banking system
  - No income, no job, no asset (NINJA loans)
  - Originate and Distribute Model: CDO's
  - A stylized framework of the CDO's



A typical framework of Originate and Distributer model



❖ Complicity of:

- financial institutions (banks and non-bank financial institutions)
- real estate developers
- appraisers
- insurance companies, and
- ratings agencies

## ❖ Alternative Narratives:

- Financial capitalism is inherently unstable. The more debt-based the structure of finance, the more unstable the financial system.
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- ❖ Debt-based leverage amplifies fluctuations as the balance sheets of the leveraged institutions expand and contract a multiple of asset price increase or decrease.

- ❖ Leverage in a simplified balance sheet adjustment of a bank in the fractional reserve banking system:
  - multiple credit expansion/contraction

### A Simplified Balance Sheet of a Commercial Bank

Assets	Liabilities
1. Securities	1. Deposits (end users)
2. Loans to end users (Bus, HH, Govts.)	2. Equity Capital

❖ The leverage ratio and bank balance sheet adjustment: credit expansion

✓ Leverage ratio =  $\frac{\text{Equity}}{\text{Assets}}$

- Assume target leverage ratio of 10 (the leverage ratio of US banks is estimated as 9.8);
- assets and loan = \$100
- equity capital = \$10, and
- deposits = \$90

# Balance Sheet

A	B
S = 100	D = 90 E = 10
100	100

Assume asset price increases by \$1  $\Rightarrow$   
The leverage ratio now declines since

$$\frac{A = 101}{E = 11} = 9.2$$

To restore the target leverage ratio the balance sheet has to adjust, i.e.

$$10 = \frac{A}{11} \Rightarrow A = 110$$

Which means the bank expands credit (loan to end users, i.e. D) by 9 to restore its target leverage

A	L
$S = 110$	$D = 99$ $E = 11$
110	110

The balance sheet has expanded via increase in credit to the end user.

- ❖ In the initial phase of a boom, as asset prices increase, a leveraged financial institution expands credit to restore its target leverage ratio. As optimism gives way to euphoria, a leveraged financial institution reduces its target leverage ratio leading to a much faster and much larger credit expansion to meet all the increased demand for credit.



# Balance Sheet Adjustment: Credit Contraction

Original Balance Sheet

A	L
$S = 100$	$D = 90$ $E = 10$
100	100

Assume an asset price reduction of \$1  $\Rightarrow$

## New Balance Sheet

A	L
S = 99	D = 90 E = 9
99	99

The leverage ratio =  $\frac{99}{9} = 11$  to restore the

target leverage ratio  $10 = \frac{A}{9} \Rightarrow A$  has to

contract by \$9 since now  $A = 90$  therefore D  
has to reduce by \$9

A	L
S = 90	D = 81 E = 9
90	90

## ❖ De-leveraging and Credit Crunch:

- In the early stage of the downward movement of the financial asset prices, leveraged financial institutions reduce credit to restore their target leverage ratios. But as pessimism gives way to panic, the leveraged institutions increase their target leverage ratios which exacerbates an already tight credit market leading to a credit crunch.

- ❖ In an economy where the financial system is dominated by highly leveraged institutions where the objective of every transaction is money now for more money later, and where transactions are supported by interest rate (fixed or variable) - based debt contracts, financial institutions (banks and non-bank financial firms) become “merchants of debt.” Such a financial structure is inherently fragile and unstable. In such a system cycles of boom and bust are endogenously created.

- ❖ The intellectual pedigree of the alternative narrative: the inherent instability of the financial capitalism
  - Fisher and Simons: 100% reserve banking
  - Keynes: “The evil of the piece”
  - Minsky: The Financial Instability Hypothesis
  - Metzler: A Stock Market Economy

# Lessons for Islamic Finance

- ❖ Islamic finance and lessons of the recent crisis
  - The stability of a financial system without an interest-based debt structure has been demonstrated theoretically.

## ❖ Theoretical Stability of an Islamic financial System:

- Khan (1986) constructed a Metzler-type closed economy model and showed that a system “based on principles of equity participation, may well prove to be better suited to adjusting to shocks that result in banking crisis and disruptions of the payment mechanism of the country.



In an equity-based system that excludes predetermined interest rates and does not guarantee denominal value of deposits, shocks to asset positions are immediately absorbed by changes in the value of shares (deposits) held by the public in the bank. Therefore, the real values of assets and liabilities of banks in such a system would be equal at all points in time.”

- ❖ Mirakhor and Zaidi (1988) developed a simple open-economy general equilibrium model that, inter alia, demonstrated that “an Islamic financial system has the capacity for a better adjustment to macroeconomic disturbances that require the shifting of resources from the traded to the non-traded sector than does the conventional interest-based system.”

- ❖ Mirakhor (1988) developed an open-economy model in which the real sector of the economy was the source of all macroeconomic behavior, in which the rate of return to capital determined saving and investment behavior as well as the behavior of the asset holders, and where the asset portfolios included money as well as equity shares as two specific assets. It was shown that such an economic system would attain a stable equilibrium in response to real shocks.

- ❖ Stability of an Islamic financial system in practice: the institutional requirements:
  - Even if the financial system is called Islamic but the system is embedded in an institutional framework with many of the features characterizing financial capitalism in which financial engineering and innovation replicate financial instruments designed in and for the letter system through reversed engineering, there is no assurance that boom and bust cycles can be avoided.

- ❖ The institutional scaffolding of an Islamic financial system:
  - The theoretical stability of an Islamic financial system is buttressed by an institutional network each of whose constituent elements reinforces the mechanics of the system.

- This institutional scaffolding includes:
  - ✓ Property rights and obligations
  - ✓ Sanctity of (implicit and explicit) contracts
  - ✓ Trust
  - ✓ Governance
  - ✓ Markets
  - ✓ Post-market distribution and redistribution

- ✓ Most important lesson of the recent crisis for Islamic finance is the need for a comprehensive, legislatively-based, unified, and dynamic regulatory and supervisory framework. Designing and implementing such a regulatory framework is urgently needed.

- ✓ The regulatory challenge is far more serious within the framework of Islamic finance than in the conventional system. Regulation and supervision in the former system has to consider the risk of violation of finance-relevant doctrinal precepts embedded in the institutional scaffolding in addition to violation of strictly regulatory and supervisory framework ruling the latter financial system.



# Thank You

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