

Real Estate Finance & Investment

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Lecture (8)

Real Estate Financing Instruments

Mortgages · Mezzanine · Equity · Islamic Finance



What We Will Cover Today

01 **The Capital Stack**
Senior debt, mezzanine, preferred equity, common equity

02 **Mortgage Fundamentals**
Types, LTV, DSCR, amortization, underwriting

03 **Advanced Instruments**
Mezzanine debt, preferred equity, joint ventures

04 **Islamic Finance**
Murabaha, Ijara, and Musharaka structures

The Capital Stack

Every real estate deal is funded by a combination of debt and equity. Each source carries a different risk level, return expectation, and priority in repayment. That layered structure is called the capital stack.

What Is the Capital Stack?

A simple idea with powerful consequences for who gets paid, and when.

The definition

The capital stack is the full list of money sources funding a project, arranged in the order they are repaid — from the safest claim at the bottom to the riskiest at the top.

The building metaphor

The foundation (senior debt) is the most stable part of the building. The penthouse (common equity) has the best views — and the greatest exposure when the storm comes.

The Capital Stack — Visualized

Read it from the bottom up: the foundation is repaid first, the penthouse last.

COMMON EQUITY

Highest risk · 25%+ · Paid last

PREFERRED EQUITY

Moderate-high risk · 18–25% · 3rd

MEZZANINE DEBT

Moderate risk · 15–22% · 2nd

SENIOR DEBT

Lowest risk · 8–14% · Paid 1st

Risk & return rise

The higher you sit, the more you can earn — and the more you can lose. Equity is wiped out before any lender takes a loss.

Safety falls

Senior debt is protected by a first mortgage on the property. Mezzanine is protected only by shares. Equity has no protection at all.

Capital Stack — Quick Reference

Memorise this table: it explains almost every financing decision you will see.

LAYER	RISK LEVEL	TYPICAL RETURN (EGYPT, 2025)	REPAYMENT PRIORITY
Senior Debt	Lowest	8 – 14%	1st
Mezzanine Debt	Moderate	15 – 22%	2nd
Preferred Equity	Moderate–High	18 – 25%	3rd
Common Equity	Highest	25%+ (no ceiling)	Last

In a default, senior lenders are made whole first. Common equity holders may receive nothing at all.

Mortgages

A mortgage is a loan secured by real property. If the borrower fails to repay, the lender may take ownership of the asset through foreclosure. It remains the most widely used financing tool in real estate worldwide.

Four Types of Mortgages

The same loan amount can be structured in very different ways.

1 Fixed-Rate

The interest rate stays constant for the whole term. Payments are fully predictable — the safest choice when rates are low.

2 Adjustable-Rate (ARM)

The rate resets periodically against a benchmark index. A lower starting rate, but payments can rise sharply later.

3 Interest-Only

The borrower pays interest only for an initial period. Early payments are small, but no principal is repaid at first.

4 Balloon

Small monthly payments followed by one large lump sum at maturity. Very common in commercial real estate.

Loan-to-Value Ratio (LTV)

The first question every lender asks: how much of this property is funded by debt?

$$\text{LTV} = \text{Loan Amount} \div \text{Property Value} \times 100$$

Property value

EGP 2,000,000

The appraised value of the asset

Loan amount

EGP 1,400,000

What the bank is willing to lend

LTV

70%

$1,400,000 \div 2,000,000 \times 100$

A 70% LTV means the borrower contributed EGP 600,000 of their own money. Lower LTV = less lender risk = better terms.

Debt Service Coverage Ratio (DSCR)

Does the property itself earn enough to pay its own loan? This is the ratio that decides.

$$\text{DSCR} = \text{Net Operating Income} \div \text{Annual Debt Service}$$

DSCR VALUE	MEANING	LENDER'S DECISION
Below 1.00	Income is smaller than the debt payments	Loan normally rejected
Exactly 1.00	Income equals the debt payments	Break-even — far too risky
1.25	Income covers 125% of debt service	Minimum acceptable for most banks

Most Egyptian and international banks require a DSCR of at least 1.25 before approving a commercial mortgage.

DSCR — Worked Example

A commercial property in Cairo. Work through it in two short steps.

GIVEN

Annual rental income **EGP 1,500,000**

Operating expenses **EGP 300,000**

Annual debt service **EGP 900,000**

STEP-BY-STEP SOLUTION

Step 1 — Net Operating Income

$$\text{NOI} = 1,500,000 - 300,000 = \text{EGP } 1,200,000$$

Step 2 — Divide by annual debt service

$$\text{DSCR} = 1,200,000 \div 900,000 = 1.33$$

DSCR = 1.33 — above the 1.25 threshold, so this deal would very likely be approved.

How a Mortgage Repays Itself

Every payment does two jobs at once — and the balance between them shifts over time.

Each monthly payment = interest owed on the outstanding balance + principal that reduces what you owe.

EARLY YEARS

High interest, low principal

Roughly 80–90% of each payment is interest. The balance is still large, so the interest charge is large.

MID-TERM

Balanced

Interest and principal are close to equal. Equity in the property finally starts to build at a visible pace.

LATE YEARS

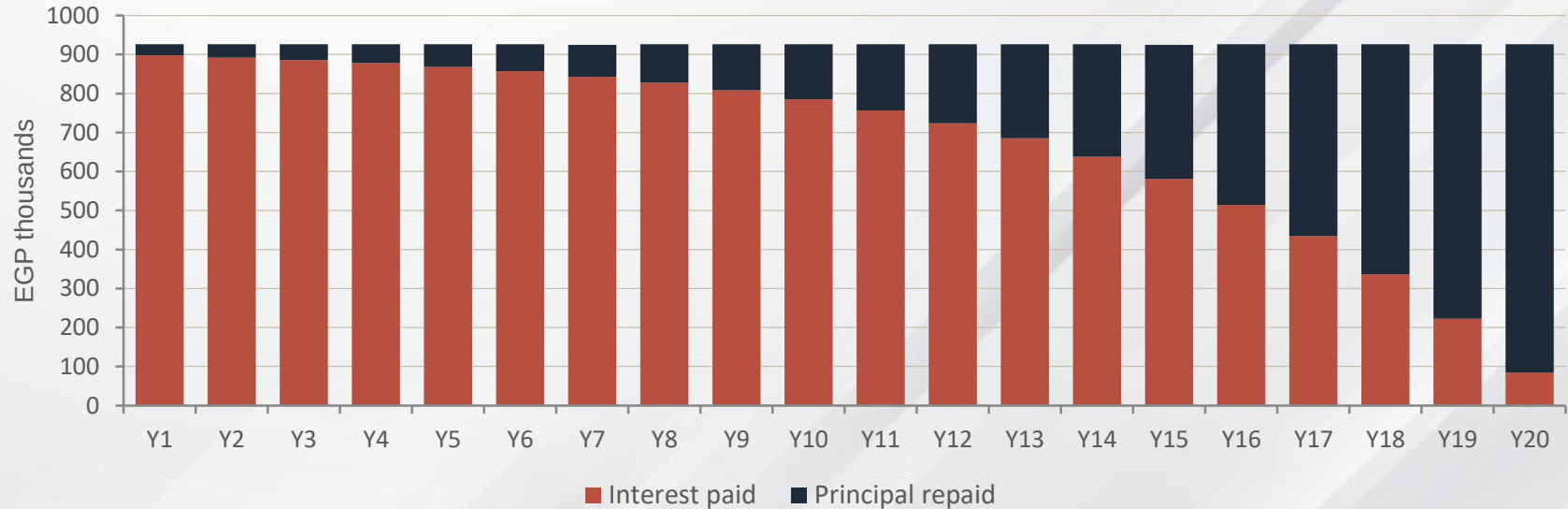
Low interest, high principal

Roughly 80–90% goes to principal. The balance is small, so very little interest accrues each month.

This is why the first years of a mortgage feel expensive — you are mostly paying the bank's profit before repaying the loan.

Interest vs. Principal Over 20 Years

EGP 5,000,000 mortgage at 18% annual interest — annual split, in EGP thousands.



Notice the crossover: principal repayment only overtakes interest deep into the loan's life.

Mezzanine Debt & Equity

When the bank loan does not cover the whole project, the developer must fill the gap. Mezzanine debt, preferred equity, and joint ventures are the tools that do it — each priced for the risk it carries.

Mezzanine Debt — How It Works

The gap financier: riskier than a bank loan, safer than pure equity.

- Sits above equity but below senior debt in the capital stack
- Usually not secured by the property itself — it is secured by the ownership interests (shares) in the company that owns the property
- Carries higher rates: typically 15 – 22% in Egypt, 10 – 15% in the United States
- Often includes an equity kicker — the right to convert into ownership if the loan is not repaid
- Used when bank lending alone does not cover the full funding requirement

Mezzanine lenders are often called gap financiers — they bridge the shortfall between the bank loan and the developer's own equity.

Preferred Equity — A Hybrid

Part lender, part owner. It behaves like debt in good times and like equity in bad ones.

Preferred equity holders receive their distributions BEFORE common equity holders — but only AFTER all debt has been served. More risk than a lender takes, less than a common shareholder.

FEATURE	SENIOR DEBT	PREFERRED EQUITY	COMMON EQUITY
Fixed payments?	Yes	Sometimes	No
Ownership stake?	No	Yes	Yes
Repaid before common equity?	Yes	Yes	—
Share in the upside?	No	Limited	Unlimited

Common Equity — Risk and Reward

The developer's own skin in the game, and the last claim on every pound the project earns.

Last to be paid

Common equity receives whatever remains after every debt and every preferred distribution has been satisfied in full.

No ceiling on returns

If the project succeeds, common equity captures all of the upside. No lender shares in that profit — the reward belongs to the owner.

Total loss is possible

In a default or a weak project, equity holders can lose their entire investment before any senior party loses a single pound.

Higher position in the stack is not a privilege — it is a price paid in risk for the chance of an uncapped return.

Joint Ventures & Equity Partnerships

One partner brings the land or the expertise; the other brings the capital.

1

Why joint ventures exist

A developer may own the land and the know-how but lack cash. An investor may have capital but no operating capability. The joint venture combines both and shares risk and reward on negotiated terms.

2

The waterfall structure

Profits are distributed in tiers: first a preferred return to the capital partner, then a carried interest to the developer, then further splits once each hurdle rate is met.

3

A typical split

A common arrangement is 70 / 30 in favour of the capital partner up to an 8% return, then 50 / 50 on everything above that threshold.

The waterfall is where the real negotiation happens — the headline split rarely tells the whole story.

Islamic Real Estate Finance

Across Egypt, Saudi Arabia, and the wider MENA region, Islamic finance is a serious alternative to conventional lending. Its structures are designed to comply with Sharia law, which prohibits *riba* — interest.

The Core Principle

Money must be tied to a real asset and a real transaction, not rented out for a fee.

Riba — a predetermined return on money lent — is prohibited. Profit must instead arise from trade, from leasing a real asset, or from genuine partnership in risk.

Murabaha

Cost-plus sale

The bank buys and resells at a declared markup

Ijara

Lease-to-own

The bank buys and leases; ownership transfers over time

Musharaka

Partnership

Bank and client co-own; the client buys out the bank

The Three Structures in Detail

Same economic destination as a mortgage — reached by a different legal road.

Murabaha

The bank purchases the property, then resells it to the client at a pre-agreed markup payable in instalments. There is no interest — only a transparent, fixed profit margin.

Example: Bank buys for EGP 2M, resells for EGP 2.6M over 10 years.

Ijara

The bank buys the property and leases it to the client. Part of each payment builds the client's ownership share, until the asset transfers outright at the end of the term.

Example: Monthly lease payments over 15 years; full ownership at maturity.

Musharaka

Bank and client jointly own the property. The client progressively buys out the bank's share. Profits and losses are shared in proportion to ownership.

Example: Bank owns 70%, client 30%; client buys 5% each year.

Islamic vs. Conventional Finance

Comparing a standard mortgage with an Ijara structure.

FEATURE	CONVENTIONAL MORTGAGE	ISLAMIC FINANCE (IJARA)
Basis of the return	Interest (riba)	Lease, sale, or profit-sharing
Sharia-compliant?	No	Yes
Risk sharing	Borrower bears essentially all risk	Shared between bank and client
Asset ownership	Borrower owns from day one	Bank owns until fully paid
How the bank profits	Interest income	Markup or rental income
Availability in Egypt	All commercial banks	ADIB, Faisal Islamic, Al Baraka
<i>The economics often look similar. The legal form, the ownership of risk, and the timing of ownership are what differ.</i>		

Islamic Finance — Worked Example

A Murabaha structure used for a property acquisition in Egypt.

DEAL STRUCTURE

Property purchase price	EGP 3,000,000
Bank markup (10 years)	20%
Total agreed sale price	EGP 3,600,000
Monthly instalment	EGP 30,000

WHY IT IS SHARIA-COMPLIANT

- The bank genuinely purchases the property before reselling it — there is no fictitious loan.
- The profit is a fixed, declared markup, not a variable interest charge.
- Both parties know the full cost from day one — complete transparency.

Key difference: the bank acts as a merchant, not a moneylender. It earns a trade profit, not loan interest.

Key Formulas — Quick Reference Card

These six formulas appear in exams, in interviews, and in every real underwriting conversation.

FORMULA	EQUATION	TYPICAL BENCHMARK
Loan-to-Value (LTV)	$\text{Loan} \div \text{Property Value} \times 100$	Maximum 65 – 80%
Debt Service Coverage (DSCR)	$\text{NOI} \div \text{Annual Debt Service}$	Minimum 1.25
Net Operating Income (NOI)	$\text{Gross Income} - \text{Operating Expenses}$	Higher is better
Debt Yield	$\text{NOI} \div \text{Loan Amount} \times 100$	Minimum 8 – 10%
Equity Multiple	$\text{Total Distributions} \div \text{Equity Invested}$	Target 1.8 – 2.5x
Break-Even Occupancy	$\text{Operating Costs} \div \text{Potential Gross Income}$	Below 80%

Learn these by heart. Every financing conversation in this industry runs through one of them.

Practice Question Bank

Which layer of the capital stack is repaid LAST in the event of a default?

A Senior Debt

B Mezzanine Debt

C Preferred Equity

D Common Equity

ANSWER: D. Common equity is the residual claim — it is paid only after every lender and preferred investor has been satisfied.

A property has NOI of EGP 900,000 and annual debt service of EGP 720,000. What is the DSCR?

A 0.80

B 1.00

C 1.25

D 1.50

ANSWER: C. $DSCR = NOI \div Debt\ Service = 900,000 \div 720,000 = 1.25$ — exactly the usual minimum threshold.

A property worth EGP 4,000,000 carries a loan of EGP 2,800,000. What is the LTV?

A 30%

B 60%

C 70%

D 80%

ANSWER: C. $LTV = \text{Loan} \div \text{Value} \times 100 = 2,800,000 \div 4,000,000 \times 100 = 70\%$. The borrower funds the other 30%.

Which mortgage type requires a large lump-sum payment at the end of the term?

A Fixed-Rate

B Adjustable-Rate (ARM)

C Interest-Only

D Balloon

ANSWER: D. A balloon mortgage keeps monthly payments small, then demands one large final payment at maturity.

Which Islamic finance structure has the bank and the client jointly OWN the property?

A Murabaha

B Ijara

C Musharaka

D Sukuk

ANSWER: C. Musharaka is a genuine partnership: both parties own shares, and the client buys out the bank's share over time.

In a Murabaha transaction, how does the bank earn its profit?

A By charging interest

B By collecting rent

C By marking up the resale price

D By sharing dividends

ANSWER: C. The bank buys the asset and resells it at a declared markup. It acts as a merchant, not a moneylender.

For an EGP 50 million project financed with 60% senior debt, how large is the bank loan?

A EGP 20 million

B EGP 25 million

C EGP 30 million

D EGP 35 million

ANSWER: C. $50,000,000 \times 60\% = \text{EGP } 30,000,000$ of senior debt; the remaining EGP 20M comes from mezzanine and equity.

Mezzanine debt is typically secured by:

A The physical property

B Ownership interests (equity shares)

C The developer's personal salary

D Government bonds

ANSWER: B. The senior lender already holds the property as collateral, so the mezzanine lender takes a pledge over the owner's shares.

An Ijara structure is most similar to which conventional instrument?

A A bridge loan

B Mezzanine debt

C A lease-to-own mortgage

D A construction loan

ANSWER: C. The bank owns and leases the asset while part of each payment builds the client's ownership — economically like a mortgage.

If a property's NOI is EGP 600,000 and the loan amount is EGP 5,000,000, what is the Debt Yield?

A 8%

B 10%

C 12%

D 15%

ANSWER: C. Debt Yield = $\text{NOI} \div \text{Loan} \times 100 = 600,000 \div 5,000,000 \times 100 = 12\%$ — comfortably above the 8–10% minimum.

Senior debt holders are paid LAST in a default scenario.

TRUE

FALSE

ANSWER: FALSE. They are paid FIRST. Seniority in the capital stack means first claim on all proceeds — that is why the return is lowest.

A DSCR of 0.90 means the property's income does not fully cover its debt payments.

TRUE

FALSE

ANSWER: TRUE. Any DSCR below 1.00 means income is smaller than debt service. Such a loan is normally rejected outright.

In Islamic finance, Murabaha involves the bank charging monthly interest on a loan.

TRUE

FALSE

ANSWER: FALSE. Murabaha is a cost-plus SALE. The bank buys the asset and resells it at a fixed markup — there is no interest.

QUESTION 15 OF 20

A balloon mortgage has low monthly payments but requires a large final payment at maturity.

TRUE

FALSE

ANSWER: TRUE. That is exactly its structure — attractive cash flow early, but significant refinancing risk at the end.

QUESTION 16 OF 20

A property with NOI of EGP 1.2 million and debt service of EGP 900,000 has a DSCR of 1.33.

TRUE

FALSE

ANSWER: TRUE. $1,200,000 \div 900,000 = 1.33$. Above the 1.25 threshold, so most lenders would approve this deal.

Thank You