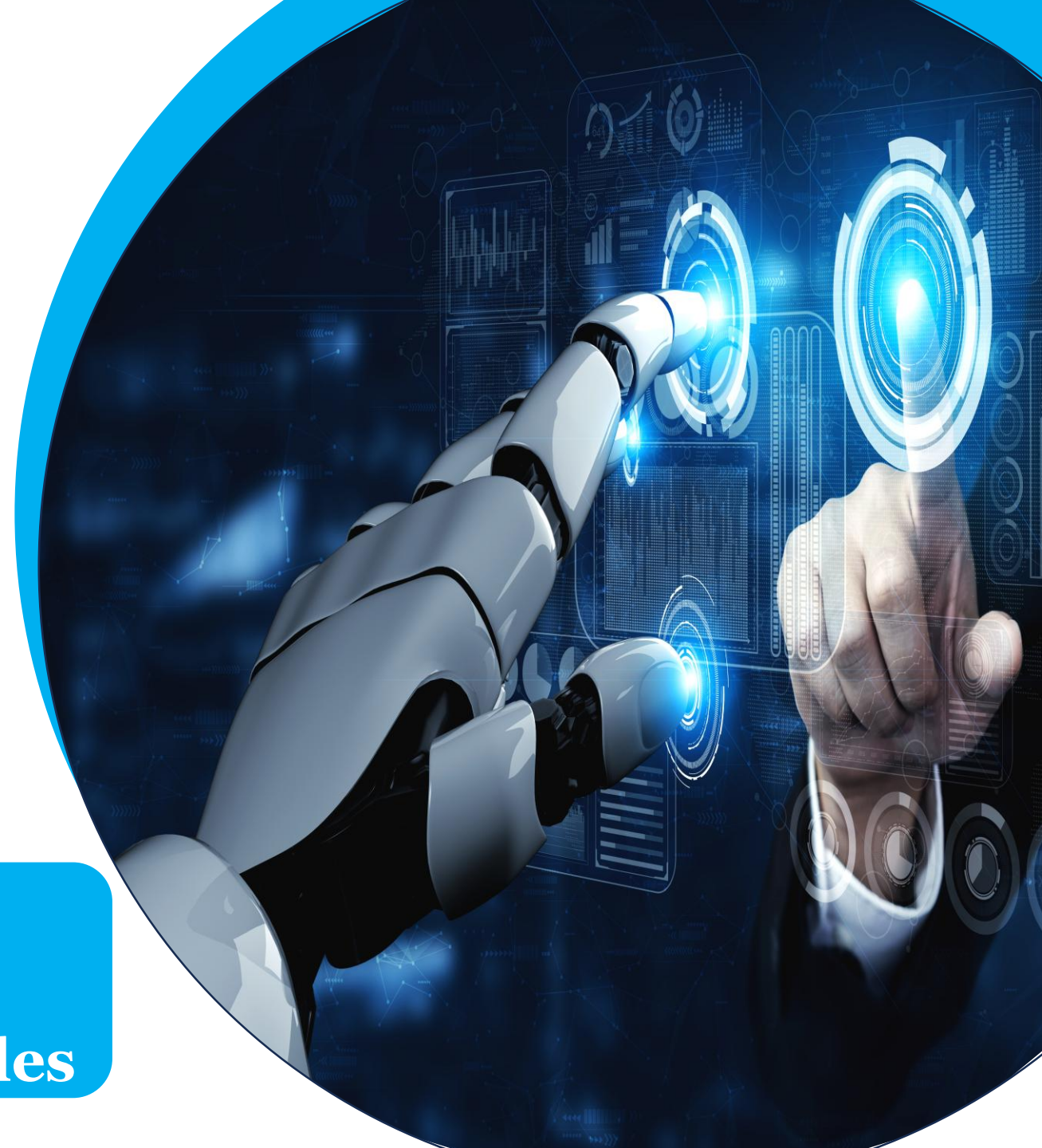


Real Estate Finance & Investment

Prepared by Dr. Emad Zaher
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REA 631

Lecture (1)
Introduction to Real Estate
Markets & Investment Principles



Introduction to Real Estate Markets & Investment Principles

Understanding the world's largest asset class

\$393T

Global market value (2025)

Reading: Baum & Hartzell , Chapter 1



By the End of This Lecture, You Will...



Define real estate

Explain what real estate is and identify its unique characteristics as an asset



Classify property types

Distinguish residential, commercial, industrial, retail, and hospitality assets



Explain investment rationale

Articulate why investors include real estate in diversified portfolios



Map the market structure

Use the Four Quadrants model to locate any property investment



Recognize market cycles

Identify the four phases of the real estate cycle with real examples



Understand global context

Compare global, MENA, Egyptian, and Saudi market data and dynamics

What Is Real Estate?

Real Estate

Land plus anything permanently attached to it such as buildings, structures, and the bundle of legal rights that come with ownership.

01

LAND

The physical site itself fixed in location, finite in supply

02

IMPROVEMENTS

Buildings, fences, roads, utilities permanently attached to the land

03

RIGHTS

The legal right to use, lease, sell, or borrow against the property

The Six Major Types of Real Estate



Residential

Single-family homes,
apartments



Commercial

Office buildings,
business centers



Retail

Shopping malls,
high-street shops



Industrial

Warehouses, factories,
logistics centers



Hospitality

Hotels, resorts, serviced
apartments



Special-Purpose

Hospitals, schools, places
of worship

Real Examples Across Egypt, KSA & the World

Type	Egypt Example	Saudi Arabia Example	Global Example
Residential	Madinaty (TMG)	ROSHN Sedra (Riyadh)	Burj Khalifa Apts
Commercial	Smart Village (6 Oct.)	KAFD (Riyadh)	Canary Wharf (London)
Retail	Mall of Egypt	Riyadh Park Mall	Dubai Mall
Industrial	10th of Ramadan City	KAEC Industrial Zone	Amazon Warehouses
Hospitality	Four Seasons Sharm	Red Sea Project	Marriott / Hilton chains
Special-Purpose	Grand Egyptian Museum	King Faisal Hospital	Harvard University

NOTE: Many large projects today are **mixed-use** — combining several types in one development (e.g., a tower with retail on the ground floor, offices in the middle, and apartments on top).

The World's Largest Asset Class

\$393.3
TRILLION

Total global value of real estate at the start of 2025

≈ 4× global GDP

Larger than all global stocks, bonds, and gold combined.

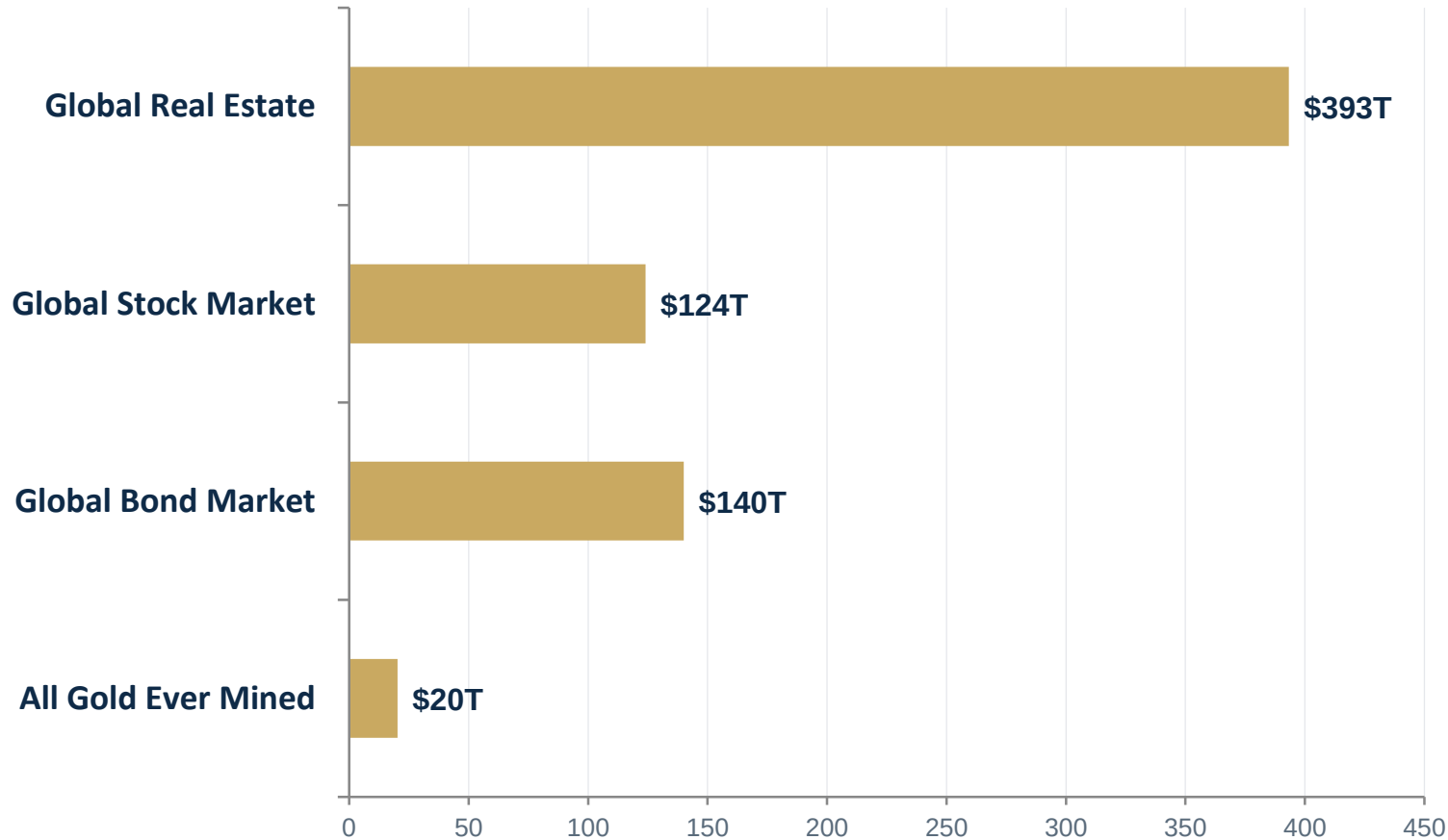
The World's Largest Asset Class: Value Breakdown

Total Global Real Estate Value: \$393.3 Trillion



Real Estate Dwarfs Other Asset Classes

Total Value of Major Global Asset Classes (USD Trillion)



Real estate is 19× larger than all gold

\$393T vs \$20.2T

Real estate is 3× larger than all stocks

\$393T vs ~\$124T

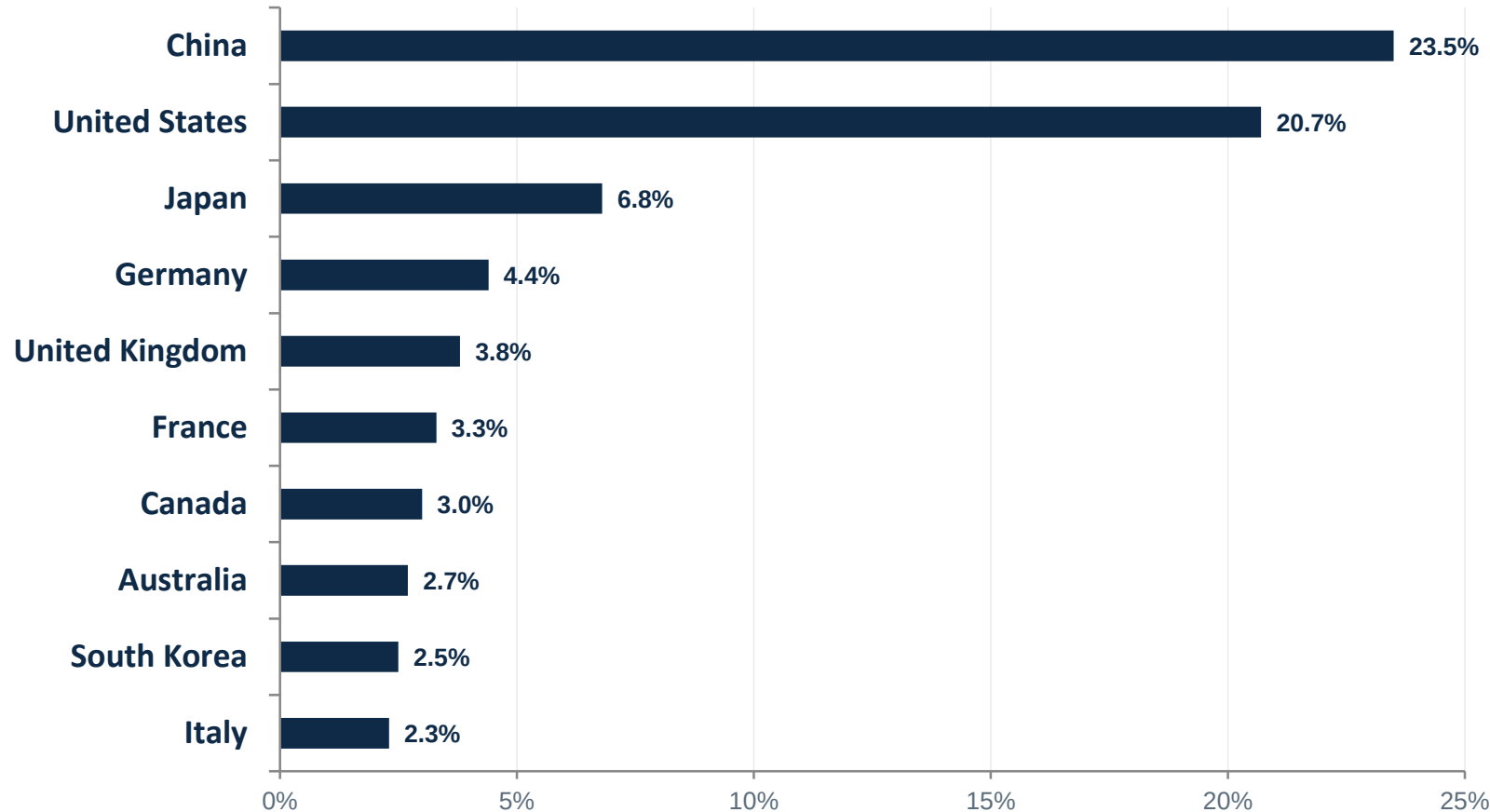
Real estate is 2.8× larger than all bonds

\$393T vs ~\$140T

Sources: Savills, World Federation of Exchanges, BIS, World Gold Council (2025)

Top 10 Real Estate Markets by Total Value

Share of Global Real Estate Value (Top 10 Countries)



Key Takeaways

44%

China + USA together control nearly half the global market

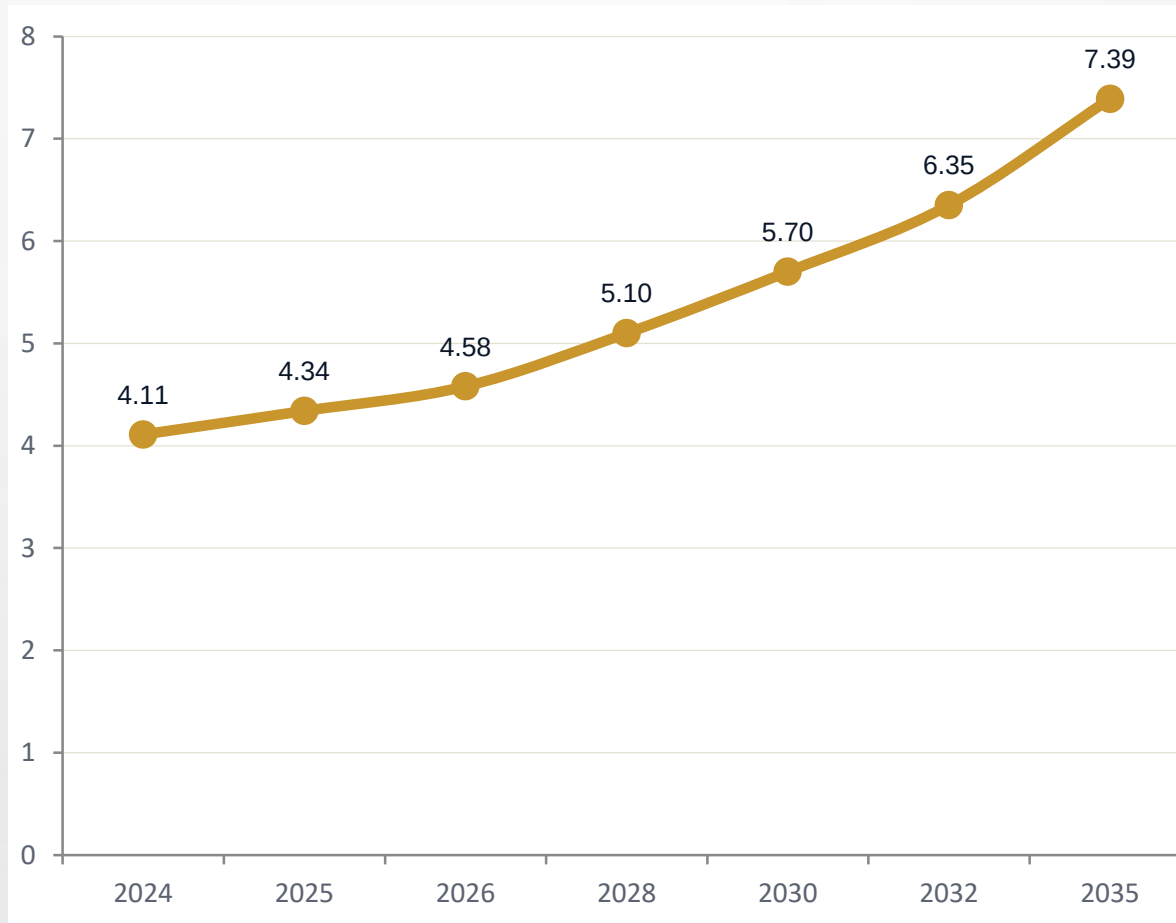
71%

Top 10 countries hold 71% of total real estate value

29%

Remaining 180+ countries share only 29% — including Egypt and KSA

Global Real Estate Market, 2024 → 2035



Source: Precedence Research, 2026

Growth, but uneven.

Asia-Pacific holds ~40% of global revenue share.

MEA is the fastest-growing region at ~6.5% CAGR.

Before We Begin: The 2008 Subprime Crisis

Why does it still matter?

U.S. banks issued home loans to borrowers who could not realistically afford them — known as **subprime mortgages**.

When U.S. house prices fell in 2007–2008, defaults exploded. Major institutions like **Lehman Brothers collapsed**, credit froze, and the world entered the worst recession since 1929.

Five Reasons Investors Buy Real Estate

1

Income (Cash Flow)

Monthly rent gives a steady stream — like a salary from your asset

2

Capital Appreciation

Property values tend to grow over the long run as land becomes scarce

3

Leverage

You can buy a \$100k apartment with only \$20k cash, using a mortgage

4

Tax Benefits

Depreciation, mortgage interest, and other deductions reduce tax bills

5

Inflation Hedge

When prices rise, both rent and property value usually rise with them

The Real Power of Leverage — After Interest & Costs

Same deal as the simple slide (\$100,000 property → \$130,000 in 5 years) — but now we count the interest, the rent, and the selling costs.

Scenario A — All Cashno loan	
Purchase price	\$100,000
Your cash (equity in)	\$100,000
Loan @ 7%, 30-yr	\$0
Value in 5 yrs (+\$30,000 gain)	\$130,000
(+) Net rent, 5 yrs	+\$25,000
(-) Interest paid, 5 yrs	\$0
(-) Selling costs (6%)	-\$7,800
NET PROFIT (after all costs)	\$47,200
RETURN ON YOUR CASH	47%
5-year total · on \$100,000 cash in annualized ≈ 8.7% / yr	

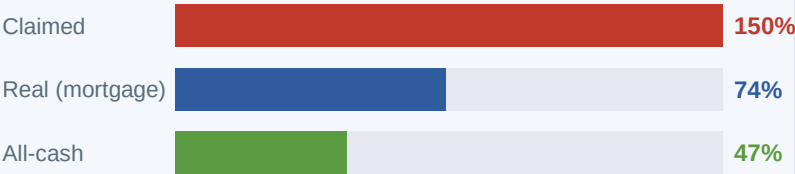
Scenario B — With a Mortgage80% loan	
Purchase price	\$100,000
Your cash (20% down)	\$20,000
Loan from bank (80%) @ 7%, 30-yr	\$80,000
Value in 5 yrs (+\$30,000 gain)	\$130,000
(+) Net rent, 5 yrs	+\$25,000
(-) Interest paid, 5 yrs	-\$27,240
(-) Selling costs (6%)	-\$7,800
NET PROFIT (after all costs)	\$19,960
RETURN ON YOUR CASH	74%
5-year total · on \$26,935 cash in annualized ≈ 13.6% / yr	

THE REALITY CHECK

The simple slide's "150%" counted only the \$20,000 down payment and ignored **\$27,240 of interest**. Measured honestly, leverage earns **74% (≈13.6%/yr)** vs **47% (≈8.7%/yr)** all-cash — better, but about **1.6x, not 5x**.

Golden rule — positive vs. negative leverage: debt boosts your return only when the property's own return (≈8.7%) beats the loan rate (7%). A higher rate than the property's return would **shrink returns and magnify losses**.

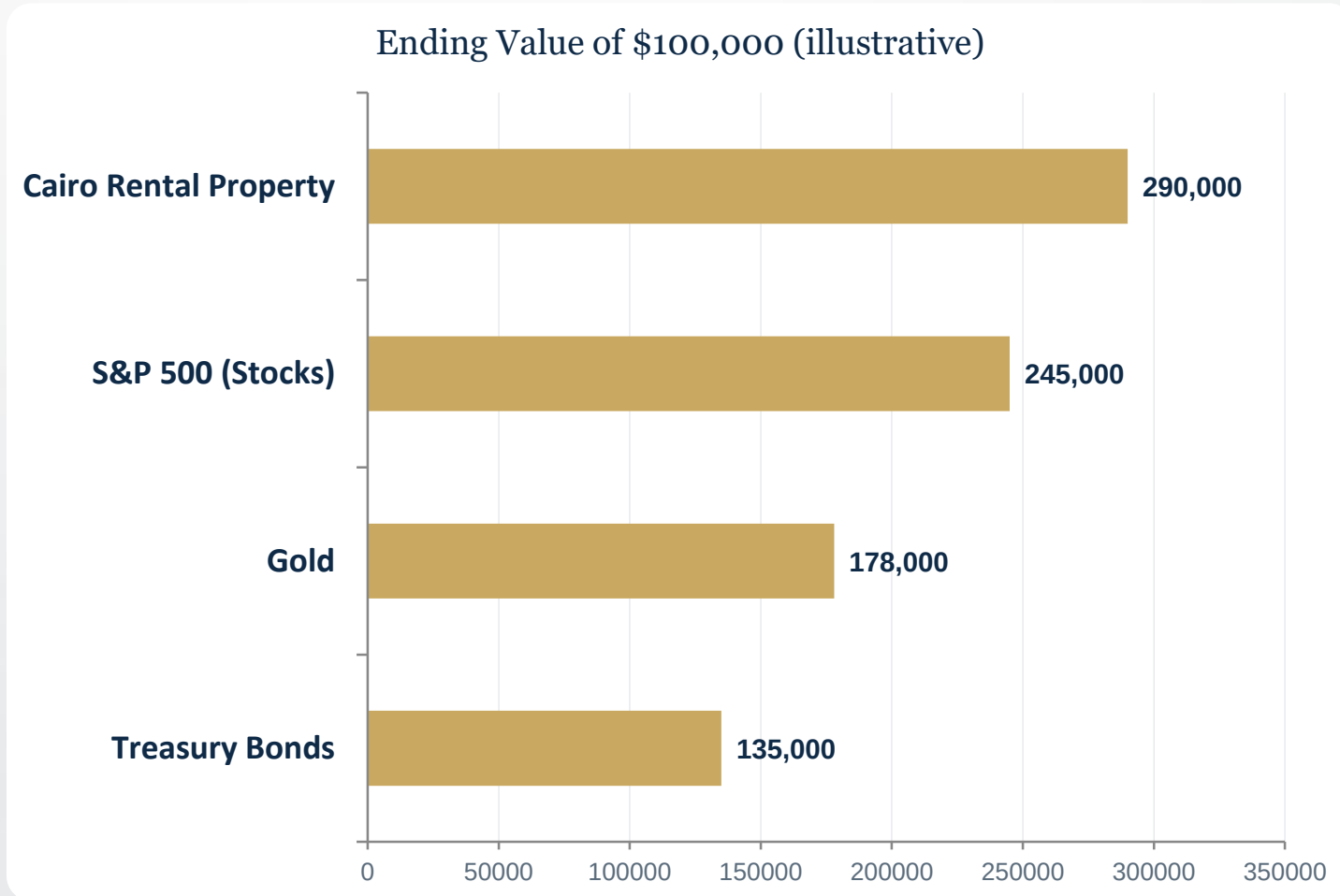
Return on your cash (5-yr)



Real Estate vs. Stocks, Bonds & Gold

Feature	Real Estate	Stocks	Bonds	Gold
Typical Return	8–12% / yr	9–11% / yr	3–6% / yr	4–7% / yr
Risk Level	Medium	High	Low–Medium	Medium
Liquidity	Low (weeks/months)	Very High (seconds)	High	High
Income Stream	Yes — rent	Sometimes dividends	Yes — coupons	None
Inflation Hedge	Strong	Moderate	Weak	Strong
Leverage Possible?	Yes — easily	Limited (margin)	Limited	Rare
Tangible Asset?	Yes — physical	No — paper	No — paper	Yes — physical

\$100,000 Invested 10 Years Ago — Where Are You Today?



Bonds **+35%**

Safe but slow — barely beats inflation

Gold **+78%**

Solid hedge, no income generated

S&P 500 **+145%**

Strong growth, but with major swings

Cairo Rental **+190%**

Capital growth + rental income combined

Note: Hypothetical example for teaching purposes — past performance does not guarantee future results. Prepared by Dr. Emad Zaher

Primary vs. Secondary Real Estate Markets

PRIMARY MARKET Brand-New Properties

Buying directly from a developer when a project first launches.

Examples:

- Off-plan apartment in NAC, Cairo
- New villa in NEOM, Saudi Arabia
- Pre-launch condo in Dubai Marina

SECONDARY MARKET Resold Properties

Buying from a previous owner who already lived in or owned the property.

Examples:

- Re-selling an old apartment in Zamalek
- Buying a 10-year-old villa in Riyadh
- Estate sale of a flat in London

TIP: Primary market = brand new from developer. Secondary market = used from previous owner.

Public vs. Private Real Estate Markets

PRIVATE MARKET

Direct ownership of physical property — bought person-to-person or developer-to-buyer

Examples:

- Direct purchase of an apartment
- Buying a villa from another owner
- Private real estate funds (institutional)

~94% of total real estate value globally is held privately

PUBLIC MARKET

Real estate accessed through securities traded on a stock exchange

Examples:

- REITs (Real Estate Investment Trusts)
- Listed property developer shares (e.g., TMG, Emaar)
- CMBS — bonds backed by commercial mortgages

Global listed real estate ≈ \$2.2 trillion (FTSE EPRA Nareit Index, 2024)

The Four Quadrants of Real Estate

EQUITY (Ownership)

PRIVATE EQUITY

Direct ownership of property

Example:

Buying a Cairo apartment

PUBLIC EQUITY

REITs & developer stocks

Example:

Shares in TMG or Emaar

PRIVATE DEBT

Mortgages, construction loans

Example:

Bank mortgage on your home

PUBLIC DEBT

Bonds backed by mortgages

Example:

CMBS in U.S. capital markets

DEBT (Lending)

Every real estate investment lives in **ONE** of these four boxes.

Investors choose a quadrant based on:

- How much capital they have
- How much risk they accept
- How fast they need their money back (liquidity)

Private = Higher returns, less liquidity

Public = Lower returns, faster access to cash

Mapping Real Companies to the Four Quadrants

Quadrant	What Investors Buy	Egypt Example	Saudi Arabia Example
Private Equity	Direct ownership	TMG private projects	ROSHN unlisted assets
Public Equity	Listed shares & REITs	TMG Holding (EGX)	Dar Al Arkan (Tadawul)
Private Debt	Mortgages & loans	CIB / NBE mortgages	Al Rajhi Bank loans
Public Debt	Mortgage-backed bonds	EFG-Hermes securitisations	SRC sukuk / mortgage bonds

How Money Moves Through the Property Market



KEY IDEA: Real estate sits at the intersection of **equity** (ownership) and **debt** (borrowing). Banks make most deals possible because property is too expensive to buy with cash alone.

Who's Who in the Real Estate Market

Investors

Buy properties seeking income and capital growth

e.g., You and me, pension funds

Developers

Build new projects from raw land or redevelop old buildings

e.g., TMG, Emaar, ROSHN

Lenders

Provide mortgages and loans to fund purchases and projects

e.g., Commercial banks, CBE, SAMA

Brokers / Agents

Connect buyers with sellers and tenants with landlords

e.g., Coldwell Banker, Aqarmap

Appraisers

Estimate the fair market value of a property

e.g., Licensed valuation firms

Tenants

Pay rent to use a property they don't own

e.g., Households, retailers, companies

Property Managers

Operate buildings on the owner's behalf — collect rent, do repairs

e.g., JLL, CBRE, local firms

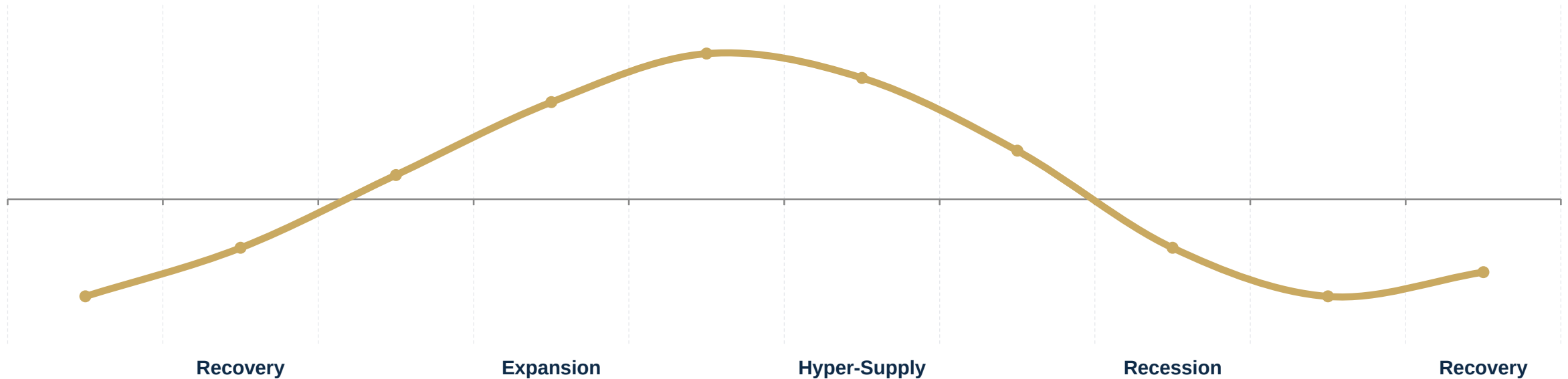
Government / Regulators

Set zoning, building codes, taxes, and ownership laws

e.g., NUCA (Egypt), REGA (KSA)

The Four Phases of the Real Estate Cycle

Demand / Supply Balance Over Time



1. RECOVERY

Vacancies high, rents low — but starting to absorb

2. EXPANSION

Demand strong, rents and prices rise quickly

3. HYPER-SUPPLY

Too much new construction; supply outpaces demand

4. RECESSION

Vacancies climb, prices fall, projects stall

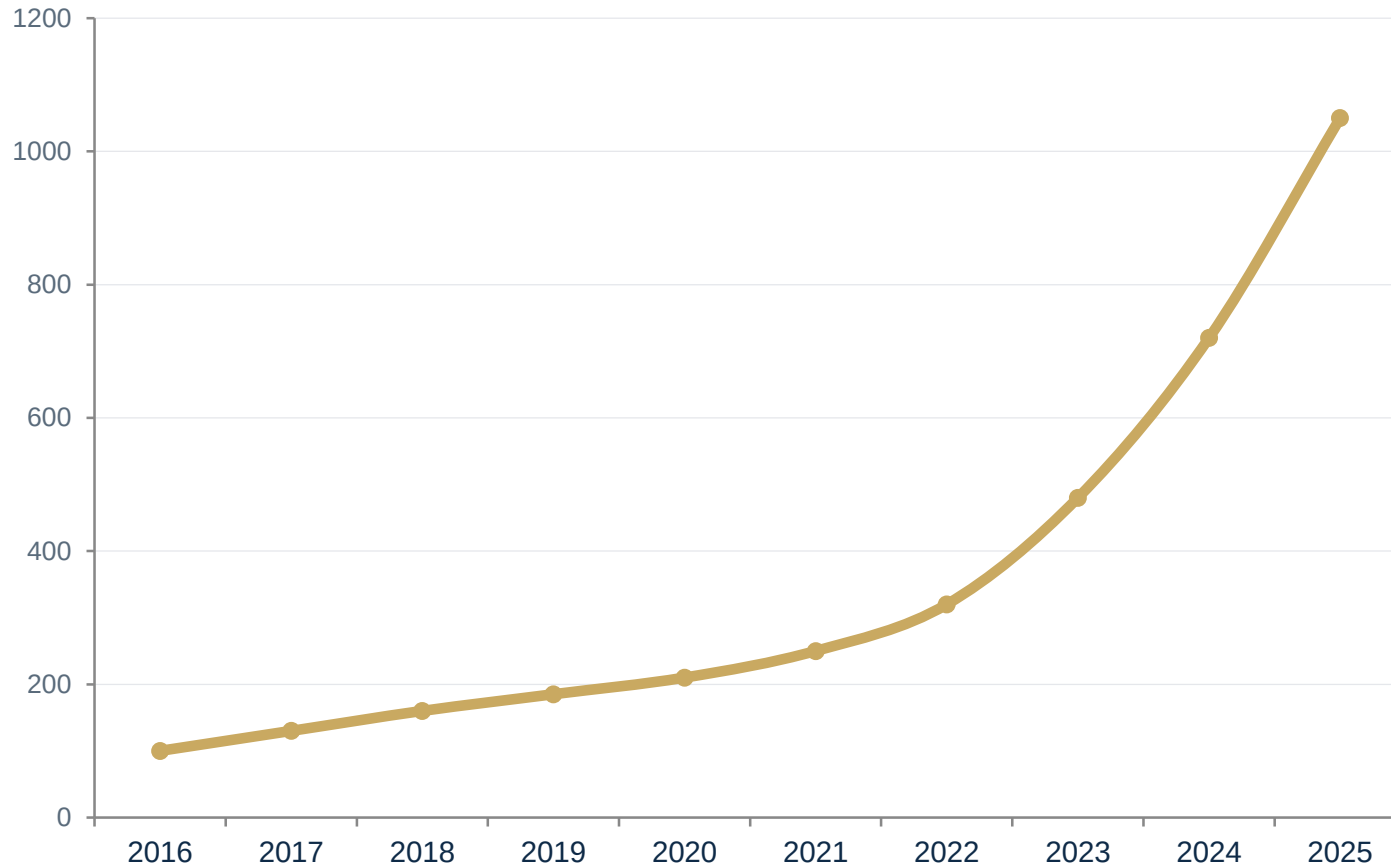
Egypt and Saudi Arabia — Side by Side

Indicator	Egypt	Saudi Arabia
Population (2025)	~110 million	~33 million
Urbanization rate	~43%	~85%
Real estate market size	~\$22 B	~\$77 B
Forecast CAGR	~5.7%	~6.7%
Avg. residential rental yield	~6.7%	~5–7%
Homeownership rate	~80% (mostly informal)	~63% (target 70% by 2030)
Foreign ownership rules	Limited — selected zones	Liberalized in 2026
Flagship project	New Administrative Capital	NEOM

Both markets are driven by population pressure, government mega-projects, and reforms — yet differ in scale, capital, and openness to foreign buyers.

Why Did Egyptian Property Prices Rise So Sharply?

Egyptian Residential Price Index — 2016 to 2025 (illustrative)



Four reasons behind the surge

1

EGP devaluation

EGP fell from 8.8/\$ in 2016 to 50+/\$ in 2024 — investors fled to property

2

High inflation

Annual inflation peaked above 35% in 2023 — real estate hedged the loss

3

Mega-projects

NAC, New Alamein, North Coast launches drove new demand and pricing

4

Population growth

+1.5M per year — chronic housing shortage in major cities

Index is illustrative for teaching — sources: CBE inflation data, Aqarmap price tracker, JLL Cairo reports

What Can Go Wrong? The Main Risks

⚠️ Market Risk

Property values and rents fall during economic downturns

⚠️ Liquidity Risk

You may not find a buyer quickly if you need cash

⚠️ Interest Rate Risk

Rising rates make mortgages and projects more expensive

⚠️ Tenant / Vacancy Risk

Empty units mean no income while expenses continue

⚠️ Currency Risk

Devaluation can hurt foreign investors and dollar-pegged costs

⚠️ Regulatory Risk

Sudden law or tax changes can wipe out profits

⚠️ Operational Risk

Maintenance, repairs, and management can be costly and time-consuming

⚠️ Concentration Risk

Putting most of your wealth in one property is dangerous

THE GOLDEN RULE

"Buy when others are fearful; sell when others are greedy."

PART II

Question Bank

22 practice questions with full solutions

What Real Estate Really Is

Q1 MULTIPLE CHOICE

Which statement BEST defines real estate?

- A. Only the buildings constructed on a piece of land
- B. Land plus anything permanently attached to it, together with the legal rights of ownership ✓**
- C. Any financial asset that pays a fixed rate of interest
- D. Movable property such as furniture, vehicles and equipment

Q2 TRUE / FALSE

The supply of land is finite and fixed in location.

- True**
- ☐ False
- ✓ **Correct: True**

Land, Improvements & Rights

Q1 MULTIPLE CHOICE

Which of the following is NOT one of the three core components of real estate?

- A. Land
- B. Improvements
- C. Rights
- D. Liquidity ✓

Q2 TRUE / FALSE

“Improvements” include buildings, fences, roads and utilities permanently attached to the land.

- ☒ True ☐ False ✓ Correct: True

Classifying Property Assets

Q1 MULTIPLE CHOICE

A shopping mall such as Mall of Egypt is classified as which property type?

- A. Residential
- B. Retail ✓**
- C. Industrial
- D. Hospitality

Q2 TRUE / FALSE

Warehouses and logistics centres are examples of industrial real estate.

- ☒ **True** ☐ False ✓ **Correct: True**

Hospitality & Special-Purpose Assets

Q1 MULTIPLE CHOICE

Hotels, resorts and serviced apartments belong to which category?

- A. Commercial
- B. Special-purpose
- C. Hospitality ✓**
- D. Residential

Q2 TRUE / FALSE

A hospital is best classified as a residential property.

- ☐ True ☒ **False** ✓ *Correct: False*

The Four Quadrants Model

Q1 MULTIPLE CHOICE

The Four Quadrants model classifies a real estate investment along which two dimensions?

- A. Old vs. new and large vs. small
- B. Private / public and equity / debt ✓**
- C. Local vs. foreign and cheap vs. expensive
- D. Residential vs. commercial and rent vs. sale

Q2 TRUE / FALSE

A development combining retail, offices and apartments in one project is called a mixed-use development.

- ☒ **True**
- ☐ False
- ✓ **Correct: True**

The World's Largest Asset Class

Q1 MULTIPLE CHOICE

Approximately how many times larger is global real estate than all the gold in the world?

- A. About 2 times
- B. About 5 times
- C. About 19 times ✓
- D. About 50 times

Q2 TRUE / FALSE

At the start of 2025 the global value of real estate was roughly \$393 trillion — about 4× global GDP.

- True
- ☐ False
- ✓ Correct: True

Reading the Real Estate Cycle

Q1 MULTIPLE CHOICE

According to the “golden rule”, the best phases to buy real estate are usually:

- A. Peak and hyper-supply
- B. Late recession or early recovery ✓
- C. Boom and expansion only
- D. The timing never matters

Q2 TRUE / FALSE

The real estate cycle has four phases: recovery, expansion, hyper-supply and recession.

- True
- ☐ False
- ✓ Correct: True

Identifying Investment Risks

Q1 MULTIPLE CHOICE

The risk that you cannot quickly find a buyer when you need cash is called:

- A. Market risk
- B. Liquidity risk** ✓
- C. Currency risk
- D. Regulatory risk

Q2 TRUE / FALSE

Concentration risk means putting most of your wealth into a single property.

- ☒ **True**
- ☐ False
- ✓ **Correct: True**

Matching Risks to Definitions

Q1 MULTIPLE CHOICE

Rising rates that make mortgages and projects more expensive are an example of:

- A. Tenant / vacancy risk
- B. Operational risk
- C. Interest rate risk ✓**
- D. Currency risk

Q2 TRUE / FALSE

Empty units that earn no income while expenses continue describe tenant / vacancy risk.

- True**
- ☐ False
- ✓ Correct: True**

Egypt, MENA & the Gulf

Q1 MULTIPLE CHOICE

Which factor most directly pushed Egyptian investors toward property as a store of value?

- A. A falling population
- B. Currency devaluation and high inflation ✓**
- C. Declining tourism revenues
- D. Lower construction costs

Q2 TRUE / FALSE

Saudi Arabia's real estate market is larger than Egypt's — roughly \$77 B versus \$22 B.

- ☒ **True** ☐ False ✓ **Correct: True**

Thinking Like an Investor

Q1 MULTIPLE CHOICE

Which of the following is described as a current challenge facing real estate capital today?

- A. A falling cost of debt
- B. The refinancing wall of maturing commercial mortgages ✓**
- C. Unlimited market liquidity
- D. Permanently rising office demand

Q2 TRUE / FALSE

Diversifying and using leverage wisely is part of thinking like a real estate investor.

- ☒ **True** ☐ False ✓ **Correct: True**



Thank You