TEXAS REALTORS

TACS 1: Introduction to Commercial Real Estate

TEXAS ACCREDITED COMMERCIAL SPECIALIST

TEXAS REALTORS

Professional Development

Texas REALTORS® strives to be the leading educational resource for REALTORS® in Texas by providing up-to-date and informative courses, training sessions and education-related services necessary to succeed in the real estate industry. We believe in developing and certifying the highest quality educational programs that allow members to increase their knowledge base, enhance their professional stature, and better service their clients. We recognize our responsibility to our members and their educational needs, to the state of Texas in which we do business, and to the public. While all Texas REALTORS® are licensees, only voluntary members of Texas REALTORS® may call themselves Texas REALTORS® and proudly display the REALTOR® name and logo. Within the REALTOR® organization you will find many opportunities for networking and building relationships, marketing tools, volunteer opportunities, legal tools, real estate transaction management software, and a variety of money-saving member benefits and services.

Visit www.TexasRealEstate.com for more information.

Professional Development Staff
800-873-9155
education@texasrealtors.com

Debra Hernandez – Director
dhernandez@texasrealtors.com

Jon Houser – Associate Director
jhouser@texasrealtors.com

Shiloh Modisett - Program Manager
smodisett@texasrealtors.com

Monique Hurd – Operations Coordinator
mhurd@texasrealtors.com

Gregory Lang – Senior Coordinator
glang@texasrealtors.com

David Sotelo – Program Coordinator
dsotelo@texasrealtors.com

The staff of Texas REALTORS® is here to serve its members. Please contact us if you have any questions.

Texas REALTORS®
1115 San Jacinto Blvd., Ste. 200
P.O. Box 2246
Austin, TX 78768-2246

Published by Texas REALTORS®

Course Policies

TREC credit requirements

To ensure your attendance is documented, please be seated when the class begins each day and return on time from lunch and any breaks extended by the instructor. This course satisfies 30 hours of SAE or current elective hours of CE credit. To receive either type of credit you must attend all class hours and pass your exam with a 70% score. No partial CE credit will be issued. To receive course credit, send a copy of your certificate of completion to TREC at least 10 days in advance of your license renewal date.

TREC Fitness Determination

Before you apply for a license, you can request that TREC determine whether your moral character meets their qualifications for honesty, trustworthiness, and integrity. If you have any criminal offenses, unpaid judgements, had disciplinary action taken against a professional or occupational license, or performed unlicensed activity, you should consider requesting a Fitness Determination from TREC. https://www.trec.texas.gov/forms/fitness-determination

Incomplete coursework

Students who missed part of the course, who did not take the exam, or who fail the course exam will be issued an incomplete and will be permitted to make up missed coursework and the exam. Students with an incomplete who later complete the course and exam makeup can receive credit by submitting their completion certificate to TREC.

Students who attend less than two-thirds of a class, who voluntarily terminate their enrollment, or whose enrollment is terminated for cause by an association/board will be dropped without refund. Students listed as incomplete who do not subsequently complete course and exam makeup work within the 90-day allotted timeframe also will be dropped from the class without refund. Attendees identified as dropped must complete the entire course again and remit any registration fees to the association to receive credit for the course.

Makeup provisions

Students who miss part of a course for any reason may not take the exam until they have completed the course makeup work. A student who misses part of any course day must make up the entire day or a recording of the exact class time they missed. It is the student's responsibility to find and schedule the appropriate makeup topic with the association hosting the new class, coordinate with the local association to schedule taking the exam, and to pay all related exam fees.

All course and exam makeup sessions must be completed within 90 days of the completion of the original course, or the student will be dropped. Once the makeup work and exam are completed, the student is responsible for submitting his completion certificate to TREC.

Texas REALTORS® charges a $50 fee to make up any missed coursework and the exam. The local association may charge an additional fee for the participant to make up any missed coursework and take the exam at their association. Texas REALTORS® charges a $25 fee to retake a failed exam. The local association may charge an additional fee to retake a failed exam. When retaking a failed exam, the new exam will contain questions not found on the original test. A student who fails the exam a second time must retake the course at full price as set by the local association.

Cancelled course

In the event a course is cancelled, the student may elect to receive a full refund or transfer registration to another iteration of the course.

Online course evaluations

A student may complete an instructor evaluation online at TREC's Web site at the following address: https://www.trec.texas.gov/public/course-and-instructor-evaluation. Student may complete the evaluation anonymously.

Provided and agreed to by

Debra Hernandez

Debra Hernandez, Director of Professional Development
Texas REALTORS®; TREC Provider 4520

I have read and understood the above policies.

Signature _____ Printed Name _____

Date _____

Updated 11/24/21

TACS 1: Introduction to Commercial Real Estate

PARTICIPANT WORKBOOK

ACKNOWLEDGMENTS

Texas REALTORS® expresses gratitude and appreciation for the subject matter and industry expertise, curriculum design, input and feedback, and commitment to the development of commercial real estate professionals to the following:

Texas REALTORS® Commercial Committee

Les Sweetow
Managing Member
Real Capital Insights, LLC

LEARNING OBJECTIVES

In learning this material, students will gain a comprehensive understanding of commercial real estate and be able to:

- Describe the role of a commercial agent, ethical practices, and how to communicate effectively with stakeholders
- Identify the different ownership structures associated with commercial real estate and the difference between investment real estate and commercial real estate
- Recognize the wealth generating aspects associated with the sue of leverage
- Determine a property's income and expenses before and after taxes and calculate a market capitalization rate (Cap Rate)
- Evaluate the impact of time value of money on cash flows and determine an appropriate discount rate
- Complete a multi-period discounted cash flow analysis of a property to determine the net present value of all future cash flows and its internal rate of return (IRR)
- Identify the key factors associated with capital and space markets and how commercial properties are impacted by those factors
- Differentiate between the various types of commercial real estate assets in the space market

CHAPTER 1: WORKING AS A COMMERCIAL REAL ESTATE AGENT

DIFFERENCES BETWEEN COMMERCIAL & RESIDENTIAL REAL ESTATE

Defining the Differences

As a licensed real estate agent in Texas, you are well versed in the definition of ***real property*** and ***real estate***. The Appraisal Institute defines real property as "the interests, benefits, and rights inherent in ownership of real estate," and defines real estate as "an "identified parcel or tract of land, including improvements." These definitions hold true regardless of whether the real property is held for residential or commercial purposes.

Residential properties are developed for living and personal enjoyment. Types of residential properties include single-family homes, duplexes, condominiums, co-ops, and apartments. ***Commercial properties*** are developed for business and commerce and include retail, industrial office, and shopping centers to name a few.

Users of residential properties are the parties that benefit from its use including owners and tenants. Users of commercial space can include owner-users or tenant-users who utilize the space to conduct business and trade activities for profit.

Investment properties are acquired for income generation, profit from appreciation, and tax advantages. Investment properties can be either residential or commercial. For example, apartment buildings provide a living and enjoyment space for its residents and as such are deemed residential properties, but they are also developed for cash flow generation and asset appreciation. Apartments are one example of residential property types that are considered an investment asset. An ***asset*** is simply something held that can produce a positive economic value to its owner.

Liquidity

From an investment perspective, commercial real estate assets are considered illiquid assets. ***Illiquid assets*** are assets that cannot be easily sold due to infrequent and low trading volumes. Stocks, on the other hand, trade millions of times a day, rendering that asset class as highly liquid. Illiquid assets carry more risk for the owner because they are difficult to sell during periods of low market demand, which can result in large price swings when sellers are motivated to sell.

Commercial Agents
Residential agent assist customers and clients in the selection and disposition of residential properties for personal use, while commercial agents are principally engaged in leasing, acquisition, management, and disposition of investment real estate assets developed for commerce and business. Commercial deals take months or even years to close, but the commissions can provide agents with sizable income. Perseverance and patience are two attributes agents will want to adopt.

Unlike residential brokerage, many commercial brokers are not REALTORS®. Large commercial brokerage firms are often independent of the REALTOR® organization. In a later chapter, we will discuss how to secure commissions through the use of cooperating broker agreements.

Commercial Brokerage
Commercial brokerage requires emphasis on determining highest and best use for a property and in evaluating its performance, or expected performance, as an income generating and appreciating asset. The Appraisal Institute® defines ***highest and best use*** as: "The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value."

Commercial agents are well acquainted with their market area and its properties and are often called upon to locate suitable properties for clients that are both listed and unlisted. Agents are expected to provide a comprehensive market based comparative analysis to help determine the best opportunities to buy or lease, costs to own and operate, as well as the risks and rewards associated with property selection.

Competency
Commercial real estate can be very complex across a wide range of areas. Agents often limit their practice to one or two property types and/or uses to ensure relevancy and competency. TREC Rule §531.3 requires license holders to be knowledgeable and competent in their areas of practice, and the rule holds true for all licensed agents including commercial real estate agents. Successful commercial agents clearly define the scope of their practice, leverage their strengths, and know their limitations.

Specialties
Agents frequently choose to limit their area(s) of practice to a few property types such as industrial or retail, and/or transaction types such as sales or leasing.

Additional specialty areas agents may elect to pursue include real estate consulting or property management. Property consultants are highly valued and experienced commercial real estate practitioners. Consulting opportunities include acquisition and disposition of real estate assets, marketing, performance analysis, and building operations, to name a few.

Commercial property managers offer critical leasing and operations management services to property owners. Services related to property management include advertising and marketing, lease negotiations, rent collection, tenant relations, and building and facility operations that include maintenance, capital, and tenant improvements as well as record keeping. Property managers in Texas are required to be licensed real estate agents unless the manager is a salaried employee of the property owner and is engaged in the leasing and management of employer-owned properties (TRELA §1101.002(1)(A) and TREC Rule 535.4(h)).

PROFESSIONAL ETHICS AND CONDUCT

TREC Rule Chapter 531 Canons of Professional Ethics and Conduct

TREC rules of professional conduct apply to all real estate license holders in Texas and for all areas of practice including commercial real estate. The canons of professional ethics and conduct include fidelity *(22 TAC §531.1)*, integrity *(22 TAC §531.2)*, competence *(22 TAC §531.3)*, Consumer Information rule *(22 TAC §531.18)*, and discriminatory practices rules *(22 TAC §531.19)*. Agents should review these canons periodically to ensure understanding and compliance.

REALTOR® Code of Ethics

In addition to the TREC Rules, REALTORS® must also comply with the REALTOR® Code of Ethics. The REALTOR® organization sets very high standards for its members.

CODE OF ETHICS AND **STANDARDS OF PRACTICE**
OF THE NATIONAL ASSOCIATION OF REALTORS®

Effective January 1, 2022

Where the word REALTORS® is used in this Code and Preamble, it shall be deemed to include REALTOR ASSOCIATE®s.

While the Code of Ethics establishes obligations that may be higher than those mandated by law, in any instance where the Code of Ethics and the law conflict, the obligations of the law must take precedence.

Preamble

Under all is the land. Upon its wise utilization and widely allocated ownership depend the survival and growth of free institutions and of our civilization. REALTORS® should recognize that the interests of the nation and its citizens require the highest and best use of the land and the widest distribution of land ownership. They require the creation of adequate housing, the building of functioning cities, the development of productive industries and farms, and the preservation of a healthful environment.

Such interests impose obligations beyond those of ordinary commerce. They impose grave social responsibility and a patriotic duty to which REALTORS® should dedicate themselves, and for which they should be diligent in preparing themselves. REALTORS®, therefore, are zealous to maintain and improve the standards of their calling and share with their fellow REALTORS® a common responsibility for its integrity and honor.

In recognition and appreciation of their obligations to clients, customers, the public, and each other, REALTORS® continuously strive to become and remain informed on issues affecting real estate and, as knowledgeable professionals, they willingly share the fruit of their experience and study with others. They identify and take steps, through enforcement of this Code of Ethics and by assisting appropriate regulatory bodies, to eliminate practices which may damage the public or which might discredit or bring dishonor to the real estate profession. REALTORS® having direct personal knowledge of conduct that may violate the Code of Ethics involving misappropriation of client or customer funds or property, willful discrimination, or fraud resulting in substantial economic harm, bring such matters to the attention of the appropriate Board or Association of REALTORS®. (Amended 1/00)

Realizing that cooperation with other real estate professionals promotes the best interests of those who utilize their services, REALTORS® urge exclusive representation of clients; do not attempt to gain any unfair advantage over their competitors; and they refrain from making unsolicited comments about other practitioners. In instances where their opinion is sought, or where REALTORS® believe that comment is necessary, their opinion is offered in an objective, professional manner, uninfluenced by any personal motivation or potential advantage or gain.

The term REALTOR® has come to connote competency, fairness, and high integrity resulting from adherence to a lofty ideal of moral conduct in business relations. No inducement of profit and no instruction from clients ever can justify departure from this ideal.

In the interpretation of this obligation, REALTORS® can take no safer guide than that which has been handed down through the centuries, embodied in the Golden Rule, "Whatsoever ye would that others should do to you, do ye even so to them."

Accepting this standard as their own, REALTORS® pledge to observe its spirit in all of their activities whether conducted personally, through associates or others, or via technological means, and to conduct their business in accordance with the tenets set forth below. (Amended 1/07)

Duties to Clients and Customers

Article 1

When representing a buyer, seller, landlord, tenant, or other client as an agent, REALTORS® pledge themselves to protect and promote the interests of their client. This obligation to the client is primary, but it does not relieve REALTORS® of their obligation to treat all parties honestly. When serving a buyer, seller, landlord, tenant or other party in a non-agency capacity, REALTORS® remain obligated to treat all parties honestly. (Amended 1/01)

- **Standard of Practice 1-1**
  REALTORS®, when acting as principals in a real estate transaction, remain obligated by the duties imposed by the Code of Ethics. (Amended 1/93)
- **Standard of Practice 1-2**
  The duties imposed by the Code of Ethics encompass all real estate-related activities and transactions whether conducted in person, electronically, or through any other means.

  The duties the Code of Ethics imposes are applicable whether REALTORS® are acting as agents or in legally recognized non-agency capacities except that any duty imposed exclusively on agents by law or regulation shall not be imposed by this Code of Ethics on REALTORS® acting in non-agency capacities.

  As used in this Code of Ethics, "client" means the person(s) or entity(ies) with whom a REALTOR® or a REALTOR®'s firm has an agency or legally recognized non-agency relationship; "customer" means a party to a real estate transaction who receives information, services, or benefits but has no contractual relationship with the REALTOR® or the REALTOR®'s firm; "prospect" means a purchaser, seller, tenant, or landlord who is not subject to a representation relationship with the REALTOR® or REALTOR®'s firm; "agent" means a real estate licensee (including brokers and sales associates) acting in an agency relationship as defined by state law or regulation; and "broker" means a real estate licensee (including brokers and sales associates) acting as an agent or in a legally recognized non-agency capacity. (Adopted 1/95, Amended 1/07)
- **Standard of Practice 1-3**
  REALTORS®, in attempting to secure a listing, shall not deliberately mislead the owner as to market value.

- **Standard of Practice 1-4**
  REALTORS®, when seeking to become a buyer/tenant representative, shall not mislead buyers or tenants as to savings or other benefits that might be realized through use of the REALTOR®'s services. (Amended 1/93)
- **Standard of Practice 1-5**
  REALTORS® may represent the seller/landlord and buyer/tenant in the same transaction only after full disclosure to and with informed consent of both parties. (Adopted 1/93)
- **Standard of Practice 1-6**
  REALTORS® shall submit offers and counter-offers objectively and as quickly as possible. (Adopted 1/93, Amended 1/95)
- **Standard of Practice 1-7**
  When acting as listing brokers, REALTORS® shall continue to submit to the seller/landlord all offers and counter-offers until closing or execution of a lease unless the seller/landlord has waived this obligation in writing. Upon the written request of a cooperating broker who submits an offer to the listing broker, the listing broker shall provide, as soon as practical, a written affirmation to the cooperating broker stating that the offer has been submitted to the seller/landlord, or a written notification that the seller/landlord has waived the obligation to have the offer presented. REALTORS® shall not be obligated to continue to market the property after an offer has been accepted by the seller/landlord. REALTORS® shall recommend that sellers/landlords obtain the advice of legal counsel prior to acceptance of a subsequent offer except where the acceptance is contingent on the termination of the pre-existing purchase contract or lease. (Amended 1/20)
- **Standard of Practice 1-8**
  REALTORS®, acting as agents or brokers of buyers/tenants, shall submit to buyers/tenants all offers and counter-offers until acceptance but have no obligation to continue to show properties to their clients after an offer has been accepted unless otherwise agreed in writing. Upon the written request of the listing broker who submits a counter-offer to the buyer's/tenant's broker, the buyer's/tenant's broker shall provide, as soon as practical, a written affirmation to the listing broker stating that the counter-offer has been submitted to the buyers/tenants, or a written notification that the buyers/tenants have waived the obligation to have the counter-offer presented. REALTORS®, acting as agents or brokers of buyers/tenants, shall recommend that buyers/tenants obtain the advice of legal counsel if there is a question as to whether a pre-existing contract has been terminated. (Adopted 1/93, Amended 1/22)
- **Standard of Practice 1-9**
  The obligation of REALTORS® to preserve confidential information (as defined by state law) provided by their clients in the course of any agency relationship or non-agency relationship recognized by law continues after termination of agency relationships or any non-agency relationships recognized by law. REALTORS® shall not knowingly, during or following the termination of professional relationships with their clients:
  1) reveal confidential information of clients; or
  2) use confidential information of clients to the disadvantage of clients; or
  3) use confidential information of clients for the REALTOR®'s advantage or the advantage of third parties unless:
     a) clients consent after full disclosure; or
     b) REALTORS® are required by court order; or
     c) it is the intention of a client to commit a crime and the information is necessary to prevent the crime; or
     d) it is necessary to defend a REALTOR® or the REALTOR®'s employees or associates against an accusation of wrongful conduct.

  Information concerning latent material defects is not considered confidential information under this Code of Ethics. (Adopted 1/93, Amended 1/01)
- **Standard of Practice 1-10**
  REALTORS® shall, consistent with the terms and conditions of their real estate licensure and their property management agreement, competently manage the property of clients with due regard for the rights, safety and health of tenants and others lawfully on the premises. (Adopted 1/95, Amended 1/00)
- **Standard of Practice 1-11**
  REALTORS® who are employed to maintain or manage a client's property shall exercise due diligence and make reasonable efforts to protect it against reasonably foreseeable contingencies and losses. (Adopted 1/95)
- **Standard of Practice 1-12**
  When entering into listing contracts, REALTORS® must advise sellers/landlords of:
  1) the REALTOR®'s company policies regarding cooperation and the amount(s) of any compensation that will be offered to subagents, buyer/tenant agents, and/or brokers acting in legally recognized non-agency capacities;
  2) the fact that buyer/tenant agents or brokers, even if compensated by listing brokers, or by sellers/landlords may represent the interests of buyers/tenants; and
  3) any potential for listing brokers to act as disclosed dual agents, e.g., buyer/tenant agents. (Adopted 1/93, Renumbered 1/98, Amended 1/03)
- **Standard of Practice 1-13**
  When entering into buyer/tenant agreements, REALTORS® must advise potential clients of:
  1) the REALTOR®'s company policies regarding cooperation;
  2) the amount of compensation to be paid by the client;
  3) the potential for additional or offsetting compensation from other brokers, from the seller or landlord, or from other parties;
  4) any potential for the buyer/tenant representative to act as a disclosed dual agent, e.g., listing broker, subagent, landlord's agent, etc.; and
  5) the possibility that sellers or sellers' representatives may not treat the existence, terms, or conditions of offers as confidential unless confidentiality is required by law, regulation, or by any confidentiality agreement between the parties. (Adopted 1/93, Renumbered 1/98, Amended 1/06)
- **Standard of Practice 1-14**
  Fees for preparing appraisals or other valuations shall not be contingent upon the amount of the appraisal or valuation. (Adopted 1/02)
- **Standard of Practice 1-15**
  REALTORS®, in response to inquiries from buyers or cooperating brokers shall, with the sellers' approval, disclose the existence of offers on the property. Where disclosure is authorized, REALTORS® shall also disclose, if asked, whether offers were obtained by the listing licensee, another licensee in the listing firm, or by a cooperating broker. (Adopted 1/03, Amended 1/09)
- **Standard of Practice 1-16**
  REALTORS® shall not access or use, or permit or enable others to access or use, listed or managed property on terms or conditions other than those authorized by the owner or seller. (Adopted 1/12)

Article 2

REALTORS® shall avoid exaggeration, misrepresentation, or concealment of pertinent facts relating to the property or the transaction. REALTORS® shall not, however, be obligated to discover latent defects in the property, to advise on matters outside the scope of their real estate license, or to disclose facts which are confidential under the scope of agency or non-agency relationships as defined by state law. (Amended 1/00)

- **Standard of Practice 2-1**
  REALTORS® shall only be obligated to discover and disclose adverse factors reasonably apparent to someone with expertise in those areas required by their real estate licensing authority. Article 2 does not impose upon the REALTOR® the obligation of expertise in other professional or technical disciplines. (Amended 1/96)
- **Standard of Practice 2-2**
  (Renumbered as Standard of Practice 1-12 1/98)
- **Standard of Practice 2-3**
  (Renumbered as Standard of Practice 1-13 1/98)
- **Standard of Practice 2-4**
  REALTORS® shall not be parties to the naming of a false consideration in any document, unless it be the naming of an obviously nominal consideration.
- **Standard of Practice 2-5**
  Factors defined as "non-material" by law or regulation or which are expressly referenced in law or regulation as not being subject to disclosure are considered not "pertinent" for purposes of Article 2. (Adopted 1/93)

Article 3

REALTORS® shall cooperate with other brokers except when cooperation is not in the client's best interest. The obligation to cooperate does not include the obligation to share commissions, fees, or to otherwise compensate another broker. (Amended 1/95)

- **Standard of Practice 3-1**
  REALTORS®, acting as exclusive agents or brokers of sellers/landlords, establish the terms and conditions of offers to cooperate. Unless expressly indicated in offers to cooperate, cooperating brokers may not assume that the offer of cooperation includes an offer of compensation. Terms of compensation, if any, shall be ascertained by cooperating brokers before beginning efforts to accept the offer of cooperation. (Amended 1/99)
- **Standard of Practice 3-2**
  Any change in compensation offered for cooperative services must be communicated to the other REALTOR® prior to the time that REALTOR® submits an offer to purchase/lease the property. After a REALTOR® has submitted an offer to purchase or lease property, the listing broker may not attempt to unilaterally modify the offered compensation with respect to that cooperative transaction. (Amended 1/14)
- **Standard of Practice 3-3**
  Standard of Practice 3-2 does not preclude the listing broker and cooperating broker from entering into an agreement to change cooperative compensation. (Adopted 1/94)
- **Standard of Practice 3-4**
  REALTORS®, acting as listing brokers, have an affirmative obligation to disclose the existence of dual or variable rate commission arrangements (i.e., listings where one amount of commission is payable if the listing broker's firm is the procuring cause of sale/lease and a different amount of commission is payable if the sale/lease results through the efforts of the seller/landlord or a cooperating broker). The listing broker shall, as soon as practical, disclose the existence of such arrangements to potential cooperating brokers and shall, in response to inquiries from cooperating brokers, disclose the differential that would result in a cooperative transaction or in a sale/lease that results through the efforts of the seller/landlord. If the cooperating broker is a buyer/tenant representative, the buyer/tenant representative must disclose such information to their client before the client makes an offer to purchase or lease. (Amended 1/02)
- **Standard of Practice 3-5**
  It is the obligation of subagents to promptly disclose all pertinent facts to the principal's agent prior to as well as after a purchase or lease agreement is executed. (Amended 1/93)
- **Standard of Practice 3-6**
  REALTORS® shall disclose the existence of accepted offers, including offers with unresolved contingencies, to any broker seeking cooperation. (Adopted 5/86, Amended 1/04)
- **Standard of Practice 3-7**
  When seeking information from another REALTOR® concerning property under a management or listing agreement, REALTORS® shall disclose their REALTOR® status and whether their interest is personal or on behalf of a client and, if on behalf of a client, their relationship with the client. (Amended 1/11)
- **Standard of Practice 3-8**
  REALTORS® shall not misrepresent the availability of access to show or inspect a listed property. (Amended 11/87)
- **Standard of Practice 3-9**
  REALTORS® shall not provide access to listed property on terms other than those established by the owner or the listing broker. (Adopted 1/10)
- **Standard of Practice 3-10**
  The duty to cooperate established in Article 3 relates to the obligation to share information on listed property, and to make property available to other brokers for showing to prospective purchasers/tenants when it is in the best interests of sellers/landlords. (Adopted 1/11)
- **Standard of Practice 3-11**
  REALTORS® may not refuse to cooperate on the basis of a broker's race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. (Adopted 1/20)

Article 4

REALTORS® shall not acquire an interest in or buy or present offers from themselves, any member of their immediate families, their firms or any member thereof, or any entities in which they have any ownership interest, any real property without making their true position known to the owner or the owner's agent or broker. In selling property they own, or in which they have any interest, REALTORS® shall reveal their ownership or interest in writing to the purchaser or the purchaser's representative. (Amended 1/00)

- **Standard of Practice 4-1**
  For the protection of all parties, the disclosures required by Article 4 shall be in writing and provided by REALTORS® prior to the signing of any contract. (Adopted 2/86)

Article 5

REALTORS® shall not undertake to provide professional services concerning a property or its value where they have a present or contemplated interest unless such interest is specifically disclosed to all affected parties.

Article 6

REALTORS® shall not accept any commission, rebate, or profit on expenditures made for their client, without the client's knowledge and consent.

When recommending real estate products or services (e.g., homeowner's insurance, warranty programs, mortgage financing, title insurance, etc.), REALTORS® shall disclose to the client or customer to whom the recommendation is made any financial benefits or fees, other than real estate referral fees, the REALTOR® or REALTOR®'s firm may receive as a direct result of such recommendation. (Amended 1/99)

- **Standard of Practice 6-1**
  REALTORS® shall not recommend or suggest to a client or a customer the use of services of another organization or business entity in which they have a direct interest without disclosing such interest at the time of the recommendation or suggestion. (Amended 5/88)

Article 7

In a transaction, REALTORS® shall not accept compensation from more than one party, even if permitted by law, without disclosure

to all parties and the informed consent of the REALTOR®'s client or clients. (Amended 1/93)

Article 8

REALTORS® shall keep in a special account in an appropriate financial institution, separated from their own funds, monies coming into their possession in trust for other persons, such as escrows, trust funds, clients' monies, and other like items.

Article 9

REALTORS®, for the protection of all parties, shall assure whenever possible that all agreements related to real estate transactions including, but not limited to, listing and representation agreements, purchase contracts, and leases are in writing in clear and understandable language expressing the specific terms, conditions, obligations and commitments of the parties. A copy of each agreement shall be furnished to each party to such agreements upon their signing or initialing. (Amended 1/04)

- **Standard of Practice 9-1**
  For the protection of all parties, REALTORS® shall use reasonable care to ensure that documents pertaining to the purchase, sale, or lease of real estate are kept current through the use of written extensions or amendments. (Amended 1/93)
- **Standard of Practice 9-2**
  When assisting or enabling a client or customer in establishing a contractual relationship (e.g., listing and representation agreements, purchase agreements, leases, etc.) electronically, REALTORS® shall make reasonable efforts to explain the nature and disclose the specific terms of the contractual relationship being established prior to it being agreed to by a contracting party. (Adopted 1/07)

Duties to the Public

Article 10

REALTORS® shall not deny equal professional services to any person for reasons of race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. REALTORS® shall not be parties to any plan or agreement to discriminate against a person or persons on the basis of race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. (Amended 1/14)

REALTORS®, in their real estate employment practices, shall not discriminate against any person or persons on the basis of race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. (Amended 1/14)

- **Standard of Practice 10-1**
  When involved in the sale or lease of a residence, REALTORS® shall not volunteer information regarding the racial, religious or ethnic composition of any neighborhood nor shall they engage in any activity which may result in panic selling, however, REALTORS® may provide other demographic information. (Adopted 1/94, Amended 1/06)
- **Standard of Practice 10-2**
  When not involved in the sale or lease of a residence, REALTORS® may provide demographic information related to a property, transaction or professional assignment to a party if such demographic information is (a) deemed by the REALTOR® to be needed to assist with or complete, in a manner consistent with Article 10, a real estate transaction or professional assignment and (b) is obtained or derived from a recognized, reliable, independent, and impartial source. The source of such information and any additions, deletions, modifications, interpretations, or other changes shall be disclosed in reasonable detail. (Adopted 1/05, Renumbered 1/06)
- **Standard of Practice 10-3**
  REALTORS® shall not print, display or circulate any statement or advertisement with respect to selling or renting of a property that indicates any preference, limitations or discrimination based on race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. (Adopted 1/94, Renumbered 1/05 and 1/06, Amended 1/14)
- **Standard of Practice 10-4**
  As used in Article 10 "real estate employment practices" relates to employees and independent contractors providing real estate-related services and the administrative and clerical staff directly supporting those individuals. (Adopted 1/00, Renumbered 1/05 and 1/06)
- **Standard of Practice 10-5**
  REALTORS® must not use harassing speech, hate speech, epithets, or slurs based on race, color, religion, sex, handicap, familial status, national origin, sexual orientation, or gender identity. (Adopted and effective November 13, 2020)

Article 11

The services which REALTORS® provide to their clients and customers shall conform to the standards of practice and competence which are reasonably expected in the specific real estate disciplines in which they engage; specifically, residential real estate brokerage, real property management, commercial and industrial real estate brokerage, land brokerage, real estate appraisal, real estate counseling, real estate syndication, real estate auction, and international real estate.

REALTORS® shall not undertake to provide specialized professional services concerning a type of property or service that is outside their field of competence unless they engage the assistance of one who is competent on such types of property or service, or unless the facts are fully disclosed to the client. Any persons engaged to provide such assistance shall be so identified to the client and their contribution to the assignment should be set forth. (Amended 1/10)

- **Standard of Practice 11-1**
  When REALTORS® prepare opinions of real property value or price they must:

  1) be knowledgeable about the type of property being valued,
  2) have access to the information and resources necessary to formulate an accurate opinion, and
  3) be familiar with the area where the subject property is located

  unless lack of any of these is disclosed to the party requesting the opinion in advance.

  When an opinion of value or price is prepared other than in pursuit of a listing or to assist a potential purchaser in formulating a purchase offer, the opinion shall include the following unless the party requesting the opinion requires a specific type of report or different data set:

  1) identification of the subject property
  2) date prepared
  3) defined value or price
  4) limiting conditions, including statements of purpose(s) and intended user(s)
  5) any present or contemplated interest, including the possibility of representing the seller/landlord or buyers/tenants
  6) basis for the opinion, including applicable market data
  7) if the opinion is not an appraisal, a statement to that effect
  8) disclosure of whether and when a physical inspection of the property's exterior was conducted
  9) disclosure of whether and when a physical inspection of the property's interior was conducted
  10) disclosure of whether the REALTOR® has any conflicts of interest (Amended 1/14)
- **Standard of Practice 11-2**
  The obligations of the Code of Ethics in respect of real estate disciplines other than appraisal shall be interpreted and applied in accordance with the standards of competence and practice which

clients and the public reasonably require to protect their rights and interests considering the complexity of the transaction, the availability of expert assistance, and, where the REALTOR® is an agent or subagent, the obligations of a fiduciary. (Adopted 1/95)

- **Standard of Practice 11-3**
  When REALTORS® provide consultive services to clients which involve advice or counsel for a fee (not a commission), such advice shall be rendered in an objective manner and the fee shall not be contingent on the substance of the advice or counsel given. If brokerage or transaction services are to be provided in addition to consultive services, a separate compensation may be paid with prior agreement between the client and REALTOR®. (Adopted 1/96)
- **Standard of Practice 11-4**
  The competency required by Article 11 relates to services contracted for between REALTORS® and their clients or customers; the duties expressly imposed by the Code of Ethics; and the duties imposed by law or regulation. (Adopted 1/02)

Article 12

REALTORS® shall be honest and truthful in their real estate communications and shall present a true picture in their advertising, marketing, and other representations. REALTORS® shall ensure that their status as real estate professionals is readily apparent in their advertising, marketing, and other representations, and that the recipients of all real estate communications are, or have been, notified that those communications are from a real estate professional. (Amended 1/08)

- **Standard of Practice 12-1**
  REALTORS® must not represent that their brokerage services to a client or customer are free or available at no cost to their clients, unless the REALTOR® will receive no financial compensation from any source for those services. (Amended 1/22)
- **Standard of Practice 12-2**
  (Deleted 1/20)
- **Standard of Practice 12-3**
  The offering of premiums, prizes, merchandise discounts or other inducements to list, sell, purchase, or lease is not, in itself, unethical even if receipt of the benefit is contingent on listing, selling, purchasing, or leasing through the REALTOR® making the offer. However, REALTORS® must exercise care and candor in any such advertising or other public or private representations so that any party interested in receiving or otherwise benefiting from the REALTOR®'s offer will have clear, thorough, advance understanding of all the terms and conditions of the offer. The offering of any inducements to do business is subject to the limitations and restrictions of state law and the ethical obligations established by any applicable Standard of Practice. (Amended 1/95)
- **Standard of Practice 12-4**
  REALTORS® shall not offer for sale/lease or advertise property without authority. When acting as listing brokers or as subagents, REALTORS® shall not quote a price different from that agreed upon with the seller/landlord. (Amended 1/93)
- **Standard of Practice 12-5**
  REALTORS® shall not advertise nor permit any person employed by or affiliated with them to advertise real estate services or listed property in any medium (e.g., electronically, print, radio, television, etc.) without disclosing the name of that REALTOR®'s firm in a reasonable and readily apparent manner either in the advertisement or in electronic advertising via a link to a display with all required disclosures. (Adopted 11/86, Amended 1/16)
- **Standard of Practice 12-6**
  REALTORS®, when advertising unlisted real property for sale/lease in which they have an ownership interest, shall disclose their status as both owners/landlords and as REALTORS® or real estate licensees. (Amended 1/93)
- **Standard of Practice 12-7**
  Only REALTORS® who participated in the transaction as the listing broker or cooperating broker (selling broker) may claim to have "sold" the property. Prior to closing, a cooperating broker may post a "sold" sign only with the consent of the listing broker. (Amended 1/96)
- **Standard of Practice 12-8**
  The obligation to present a true picture in representations to the public includes information presented, provided, or displayed on REALTORS®' websites. REALTORS® shall use reasonable efforts to ensure that information on their websites is current. When it becomes apparent that information on a REALTOR®'s website is no longer current or accurate, REALTORS® shall promptly take corrective action. (Adopted 1/07)
- **Standard of Practice 12-9**
  REALTOR® firm websites shall disclose the firm's name and state(s) of licensure in a reasonable and readily apparent manner.

  Websites of REALTORS® and non-member licensees affiliated with a REALTOR® firm shall disclose the firm's name and that REALTOR®'s or non-member licensee's state(s) of licensure in a reasonable and readily apparent manner. (Adopted 1/07)
- **Standard of Practice 12-10**
  REALTORS®' obligation to present a true picture in their advertising and representations to the public includes Internet content, images, and the URLs and domain names they use, and prohibits REALTORS® from:
  1) engaging in deceptive or unauthorized framing of real estate brokerage websites;
  2) manipulating (e.g., presenting content developed by others) listing and other content in any way that produces a deceptive or misleading result;
  3) deceptively using metatags, keywords or other devices/methods to direct, drive, or divert Internet traffic; or
  4) presenting content developed by others without either attribution or without permission; or
  5) otherwise misleading consumers, including use of misleading images. (Adopted 1/07, Amended 1/18)
- **Standard of Practice 12-11**
  REALTORS® intending to share or sell consumer information gathered via the Internet shall disclose that possibility in a reasonable and readily apparent manner. (Adopted 1/07)
- **Standard of Practice 12-12**
  REALTORS® shall not:
  1) use URLs or domain names that present less than a true picture, or
  2) register URLs or domain names which, if used, would present less than a true picture. (Adopted 1/08)
- **Standard of Practice 12-13**
  The obligation to present a true picture in advertising, marketing, and representations allows REALTORS® to use and display only professional designations, certifications, and other credentials to which they are legitimately entitled. (Adopted 1/08)

Article 13

REALTORS® shall not engage in activities that constitute the unauthorized practice of law and shall recommend that legal counsel be obtained when the interest of any party to the transaction requires it.

Article 14

If charged with unethical practice or asked to present evidence or to cooperate in any other way, in any professional standards proceeding or investigation, REALTORS® shall place all pertinent facts before the proper tribunals of the Member Board or affiliated institute, society, or council in which membership is held and shall take no action to disrupt or obstruct such processes. (Amended 1/99)

- **Standard of Practice 14-1**
  REALTORS® shall not be subject to disciplinary proceedings in more than one Board of REALTORS® or affiliated institute, society, or council in which they hold membership with respect to alleged violations of the Code of Ethics relating to the same transaction or event. (Amended 1/95)
- **Standard of Practice 14-2**
  REALTORS® shall not make any unauthorized disclosure or dissemination of the allegations, findings, or decision developed in connection with an ethics hearing or appeal or in connection with an arbitration hearing or procedural review. (Amended 1/92)
- **Standard of Practice 14-3**
  REALTORS® shall not obstruct the Board's investigative or professional standards proceedings by instituting or threatening to institute actions for libel, slander, or defamation against any party to a professional standards proceeding or their witnesses based on the filing of an arbitration request, an ethics complaint, or testimony given before any tribunal. (Adopted 11/87, Amended 1/99)
- **Standard of Practice 14-4**
  REALTORS® shall not intentionally impede the Board's investigative or disciplinary proceedings by filing multiple ethics complaints based on the same event or transaction. (Adopted 11/88)

Duties to REALTORS®

Article 15

REALTORS® shall not knowingly or recklessly make false or misleading statements about other real estate professionals, their businesses, or their business practices. (Amended 1/12)

- **Standard of Practice 15-1**
  REALTORS® shall not knowingly or recklessly file false or unfounded ethics complaints. (Adopted 1/00)
- **Standard of Practice 15-2**
  The obligation to refrain from making false or misleading statements about other real estate professionals, their businesses, and their business practices includes the duty to not knowingly or recklessly publish, repeat, retransmit, or republish false or misleading statements made by others. This duty applies whether false or misleading statements are repeated in person, in writing, by technological means (e.g., the Internet), or by any other means. (Adopted 1/07, Amended 1/12)
- **Standard of Practice 15-3**
  The obligation to refrain from making false or misleading statements about other real estate professionals, their businesses, and their business practices includes the duty to publish a clarification about or to remove statements made by others on electronic media the REALTOR® controls once the REALTOR® knows the statement is false or misleading. (Adopted 1/10, Amended 1/12)

Article 16

REALTORS® shall not engage in any practice or take any action inconsistent with exclusive representation or exclusive brokerage relationship agreements that other REALTORS® have with clients. (Amended 1/04)

- **Standard of Practice 16-1**
  Article 16 is not intended to prohibit aggressive or innovative business practices which are otherwise ethical and does not prohibit disagreements with other REALTORS® involving commission, fees, compensation or other forms of payment or expenses. (Adopted 1/93, Amended 1/95)
- **Standard of Practice 16-2**
  Article 16 does not preclude REALTORS® from making general announcements to prospects describing their services and the terms of their availability even though some recipients may have entered into agency agreements or other exclusive relationships with another REALTOR®. A general telephone canvass, general mailing or distribution addressed to all prospects in a given geographical area or in a given profession, business, club, or organization, or other classification or group is deemed "general" for purposes of this standard. (Amended 1/04)

  Article 16 is intended to recognize as unethical two basic types of solicitations:

  First, telephone or personal solicitations of property owners who have been identified by a real estate sign, multiple listing compilation, or other information service as having exclusively listed their property with another REALTOR® and

  Second, mail or other forms of written solicitations of prospects whose properties are exclusively listed with another REALTOR® when such solicitations are not part of a general mailing but are directed specifically to property owners identified through compilations of current listings, "for sale" or "for rent" signs, or other sources of information required by Article 3 and Multiple Listing Service rules to be made available to other REALTORS® under offers of subagency or cooperation. (Amended 1/04)
- **Standard of Practice 16-3**
  Article 16 does not preclude REALTORS® from contacting the client of another broker for the purpose of offering to provide, or entering into a contract to provide, a different type of real estate service unrelated to the type of service currently being provided (e.g., property management as opposed to brokerage) or from offering the same type of service for property not subject to other brokers' exclusive agreements. However, information received through a Multiple Listing Service or any other offer of cooperation may not be used to target clients of other REALTORS® to whom such offers to provide services may be made. (Amended 1/04)
- **Standard of Practice 16-4**
  REALTORS® shall not solicit a listing which is currently listed exclusively with another broker. However, if the listing broker, when asked by the REALTOR®, refuses to disclose the expiration date and nature of such listing, i.e., an exclusive right to sell, an exclusive agency, open listing, or other form of contractual agreement between the listing broker and the client, the REALTOR® may contact the owner to secure such information and may discuss the terms upon which the REALTOR® might take a future listing or, alternatively, may take a listing to become effective upon expiration of any existing exclusive listing. (Amended 1/94)
- **Standard of Practice 16-5**
  REALTORS® shall not solicit buyer/tenant agreements from buyers/ tenants who are subject to exclusive buyer/tenant agreements. However, if asked by a REALTOR®, the broker refuses to disclose the expiration date of the exclusive buyer/ tenant agreement, the REALTOR® may contact the buyer/tenant to secure such information and may discuss the terms upon which the REALTOR® might enter into a future buyer/tenant agreement or, alternatively, may enter into a buyer/tenant agreement to become effective upon the expiration of any existing exclusive buyer/tenant agreement. (Adopted 1/94, Amended 1/98)
- **Standard of Practice 16-6**
  When REALTORS® are contacted by the client of another REALTOR® regarding the creation of an exclusive relationship to provide the same type of service, and REALTORS® have not directly or indirectly initiated such discussions, they may discuss the terms upon which they might enter into a future agreement or, alternatively, may enter into an agreement which becomes effective upon expiration of any existing exclusive agreement. (Amended 1/98)
- **Standard of Practice 16-7**
  The fact that a prospect has retained a REALTOR® as an exclusive representative or exclusive broker in one or more past transactions does not preclude other REALTORS® from seeking such prospect's future business. (Amended 1/04)

- **Standard of Practice 16-8**
  The fact that an exclusive agreement has been entered into with a REALTOR® shall not preclude or inhibit any other REALTOR® from entering into a similar agreement after the expiration of the prior agreement. (Amended 1/98)
- **Standard of Practice 16-9**
  REALTORS®, prior to entering into a representation agreement, have an affirmative obligation to make reasonable efforts to determine whether the prospect is subject to a current, valid exclusive agreement to provide the same type of real estate service. (Amended 1/04)
- **Standard of Practice 16-10**
  REALTORS®, acting as buyer or tenant representatives or brokers, shall disclose that relationship to the seller/landlord's representative or broker at first contact and shall provide written confirmation of that disclosure to the seller/landlord's representative or broker not later than execution of a purchase agreement or lease. (Amended 1/04)
- **Standard of Practice 16-11**
  On unlisted property, REALTORS® acting as buyer/tenant representatives or brokers shall disclose that relationship to the seller/landlord at first contact for that buyer/tenant and shall provide written confirmation of such disclosure to the seller/landlord not later than execution of any purchase or lease agreement. (Amended 1/04)

  REALTORS® shall make any request for anticipated compensation from the seller/landlord at first contact. (Amended 1/98)
- **Standard of Practice 16-12**
  REALTORS®, acting as representatives or brokers of sellers/landlords or as subagents of listing brokers, shall disclose that relationship to buyers/tenants as soon as practicable and shall provide written confirmation of such disclosure to buyers/tenants not later than execution of any purchase or lease agreement. (Amended 1/04)
- **Standard of Practice 16-13**
  All dealings concerning property exclusively listed, or with buyer/tenants who are subject to an exclusive agreement shall be carried on with the client's representative or broker, and not with the client, except with the consent of the client's representative or broker or except where such dealings are initiated by the client.

  Before providing substantive services (such as writing a purchase offer or presenting a CMA) to prospects, REALTORS® shall ask prospects whether they are a party to any exclusive representation agreement. REALTORS® shall not knowingly provide substantive services concerning a prospective transaction to prospects who are parties to exclusive representation agreements, except with the consent of the prospects' exclusive representatives or at the direction of prospects. (Adopted 1/93, Amended 1/04)
- **Standard of Practice 16-14**
  REALTORS® are free to enter into contractual relationships or to negotiate with sellers/landlords, buyers/tenants or others who are not subject to an exclusive agreement but shall not knowingly obligate them to pay more than one commission except with their informed consent. (Amended 1/98)
- **Standard of Practice 16-15**
  In cooperative transactions REALTORS® shall compensate cooperating REALTORS® (principal brokers) and shall not compensate nor offer to compensate, directly or indirectly, any of the sales licensees employed by or affiliated with other REALTORS® without the prior express knowledge and consent of the cooperating broker.
- **Standard of Practice 16-16**
  REALTORS®, acting as subagents or buyer/tenant representatives or brokers, shall not use the terms of an offer to purchase/lease to attempt to modify the listing broker's offer of compensation to subagents or buyer/tenant representatives or brokers nor make the submission of an executed offer to purchase/lease contingent on the listing broker's agreement to modify the offer of compensation. (Amended 1/04)
- **Standard of Practice 16-17**
  REALTORS®, acting as subagents or as buyer/tenant representatives or brokers, shall not attempt to extend a listing broker's offer of cooperation and/or compensation to other brokers without the consent of the listing broker. (Amended 1/04)
- **Standard of Practice 16-18**
  REALTORS® shall not use information obtained from listing brokers through offers to cooperate made through multiple listing services or through other offers of cooperation to refer listing brokers' clients to other brokers or to create buyer/tenant relationships with listing brokers' clients, unless such use is authorized by listing brokers. (Amended 1/02)
- **Standard of Practice 16-19**
  Signs giving notice of property for sale, rent, lease, or exchange shall not be placed on property without consent of the seller/landlord. (Amended 1/93)
- **Standard of Practice 16-20**
  REALTORS®, prior to or after their relationship with their current firm is terminated, shall not induce clients of their current firm to cancel exclusive contractual agreements between the client and that firm. This does not preclude REALTORS® (principals) from establishing agreements with their associated licensees governing assignability of exclusive agreements. (Adopted 1/98, Amended 1/10)

Article 17

In the event of contractual disputes or specific non-contractual disputes as defined in Standard of Practice 17-4 between REALTORS® (principals) associated with different firms, arising out of their relationship as REALTORS®, the REALTORS® shall mediate the dispute if the Board requires its members to mediate. If the dispute is not resolved through mediation, or if mediation is not required, REALTORS® shall submit the dispute to arbitration in accordance with the policies of the Board rather than litigate the matter.

In the event clients of REALTORS® wish to mediate or arbitrate contractual disputes arising out of real estate transactions, REALTORS® shall mediate or arbitrate those disputes in accordance with the policies of the Board, provided the clients agree to be bound by any resulting agreement or award.

The obligation to participate in mediation and arbitration contemplated by this Article includes the obligation of REALTORS® (principals) to cause their firms to mediate and arbitrate and be bound by any resulting agreement or award. (Amended 1/12)

- **Standard of Practice 17-1**
  The filing of litigation and refusal to withdraw from it by REALTORS® in an arbitrable matter constitutes a refusal to arbitrate. (Adopted 2/86)
- **Standard of Practice 17-2**
  Article 17 does not require REALTORS® to mediate in those circumstances when all parties to the dispute advise the Board in writing that they choose not to mediate through the Board's facilities. The fact that all parties decline to participate in mediation does not relieve REALTORS® of the duty to arbitrate.

  Article 17 does not require REALTORS® to arbitrate in those circumstances when all parties to the dispute advise the Board in writing that they choose not to arbitrate before the Board. (Amended 1/12)
- **Standard of Practice 17-3**
  REALTORS®, when acting solely as principals in a real estate transaction, are not obligated to arbitrate disputes with other REALTORS® absent a specific written agreement to the contrary. (Adopted 1/96)
- **Standard of Practice 17-4**
  Specific non-contractual disputes that are subject to arbitration pursuant to Article 17 are:

1) Where a listing broker has compensated a cooperating broker and another cooperating broker subsequently claims to be the procuring cause of the sale or lease. In such cases the complainant may name the first cooperating broker as respondent and arbitration may proceed without the listing broker being named as a respondent. When arbitration occurs between two (or more) cooperating brokers and where the listing broker is not a party, the amount in dispute and the amount of any potential resulting award is limited to the amount paid to the respondent by the listing broker and any amount credited or paid to a party to the transaction at the direction of the respondent. Alternatively, if the complaint is brought against the listing broker, the listing broker may name the first cooperating broker as a third-party respondent. In either instance the decision of the hearing panel as to procuring cause shall be conclusive with respect to all current or subsequent claims of the parties for compensation arising out of the underlying cooperative transaction. (Adopted 1/97, Amended 1/07)

2) Where a buyer or tenant representative is compensated by the seller or landlord, and not by the listing broker, and the listing broker, as a result, reduces the commission owed by the seller or landlord and, subsequent to such actions, another cooperating broker claims to be the procuring cause of sale or lease. In such cases the complainant may name the first cooperating broker as respondent and arbitration may proceed without the listing broker being named as a respondent. When arbitration occurs between two (or more) cooperating brokers and where the listing broker is not a party, the amount in dispute and the amount of any potential resulting award is limited to the amount paid to the respondent by the seller or landlord and any amount credited or paid to a party to the transaction at the direction of the respondent. Alternatively, if the complaint is brought against the listing broker, the listing broker may name the first cooperating broker as a third-party respondent. In either instance the decision of the hearing panel as to procuring cause shall be conclusive with respect to all current or subsequent claims of the parties for compensation arising out of the underlying cooperative transaction. (Adopted 1/97, Amended 1/07)

3) Where a buyer or tenant representative is compensated by the buyer or tenant and, as a result, the listing broker reduces the commission owed by the seller or landlord and, subsequent to such actions, another cooperating broker claims to be the procuring cause of sale or lease. In such cases the complainant may name the first cooperating broker as respondent and arbitration may proceed without the listing broker being named as a respondent. Alternatively, if the complaint is brought against the listing broker, the listing broker may name the first cooperating broker as a third-party respondent. In either instance the decision of the hearing panel as to procuring cause shall be conclusive with respect to all current or subsequent claims of the parties for compensation arising out of the underlying cooperative transaction. (Adopted 1/97)

4) Where two or more listing brokers claim entitlement to compensation pursuant to open listings with a seller or landlord who agrees to participate in arbitration (or who requests arbitration) and who agrees to be bound by the decision. In cases where one of the listing brokers has been compensated by the seller or landlord, the other listing broker, as complainant, may name the first listing broker as respondent and arbitration may proceed between the brokers. (Adopted 1/97)

5) Where a buyer or tenant representative is compensated by the seller or landlord, and not by the listing broker, and the listing broker, as a result, reduces the commission owed by the seller or landlord and, subsequent to such actions, claims to be the procuring cause of sale or lease. In such cases arbitration shall be between the listing broker and the buyer or tenant representative and the amount in dispute is limited to the amount of the reduction of commission to which the listing broker agreed. (Adopted 1/05)

- **Standard of Practice 17-5**
  The obligation to arbitrate established in Article 17 includes disputes between REALTORS® (principals) in different states in instances where, absent an established inter-association arbitration agreement, the REALTOR® (principal) requesting arbitration agrees to submit to the jurisdiction of, travel to, participate in, and be bound by any resulting award rendered in arbitration conducted by the respondent(s) REALTOR®'s association, in instances where the respondent(s) REALTOR®'s association determines that an arbitrable issue exists. (Adopted 1/07)

Explanatory Notes

The reader should be aware of the following policies which have been approved by the Board of Directors of the National Association:

In filing a charge of an alleged violation of the Code of Ethics by a REALTOR®, the charge must read as an alleged violation of one or more Articles of the Code. Standards of Practice may be cited in support of the charge.

The Standards of Practice serve to clarify the ethical obligations imposed by the various Articles and supplement, and do not substitute for, the Case Interpretations in Interpretations of the Code of Ethics.

Modifications to existing Standards of Practice and additional new Standards of Practice are approved from time to time. Readers are cautioned to ensure that the most recent publications are utilized.

EQUAL HOUSING OPPORTUNITY

430 North Michigan Avenue | Chicago, IL 60611-4087
800.874.6500 | www.nar.realtor

166-288-22 (01/22 VG)

NATIONAL ASSOCIATION OF REALTORS®

SCENARIO BASED LEARNING

Exercise 1

Shortly after the death of his Uncle Dan, Grant received word that he inherited a vacant warehouse that previously housed his uncle's business. This was quite a surprise to Grant, who had only met his uncle twice. As a dentist, Grant had no use for a warehouse. He decided it would be best to sell the building and put money toward opening his own practice. Grant contacted Bob, a REALTOR®, and asked hiim to look at the property and suggest a listing price. Bob checked out the property and suggested $100,000. This price seemed low to Grant given the commercial growth occurring around the warehouse, but he agreed to it.

Within two weeks, Bob called Grant with an offer. Bob stated he would be the buyer at the listed price, less his commission. Grant became increasingly uneasy about the price. He told Bob he intended to have the warehouse appraised before accepting the offer. Bob got upset and said, "Listen, you can take my offer or not - that's up to you. But it's a legitimate offer based on the price you agreed to. So as far as I'm concerned, I've done my job and you owe me a commission."

1. Do you think Bob is in violation of the Code?
   - No, he's right. It's a legitimate offer and Grant should sell to Bob or pay him the commission.
   - Yes. The Code prohibits REALTORS® from buying property listed with them
   - Yes. Bob placed his interests above those of his client's.
   - No. Bob is not obligated to pay the appraised price even if it is higher than the original listing price.

2. What was Bob's obligation to Grant?
   - Bob's obligation was to protect and promote the interests of Grant, his client, and not put his own interests ahead of Grant's.
   - Bob's obligation was to serve his client Grant, but Bob is allowed to make a reasonable profit in buying a client's property.
   - Bob had no obligation to Grant other than to get his property sold, which he tired to do.

COMMUNICATING EFFECTIVELY WITH CLIENTS

A key element for success in any business is effective communication. The business of commercial real estate brokerage is no different. Commercial real estate principals and their designees are key stakeholders requiring the services of agents to assist them in their financial and operational decisions associated with their real estate holdings. Successful agents and brokers are effective communicators with all stakeholders utilizing a common language to communicate financial and operational information.

Throughout this course students will be exposed to a number of key definitions and concepts that will lay the foundation for developing fluency in the language of investment real estate and its commercial applications.

Cornerstones of Effective Communication

Knowledge and experience are two critical elements that can demonstrate an agent's capacity to provide exceptional client service. While at this stage of your career, your level of experience in commercial real estate may be limited or none, superior knowledge and understanding can often provide some leverage in convincing others that you are the better choice.

Correct Terminology is Essential for Effective Communication

An important concept for agents to understand is the difference between investment real estate and commercial real estate. Investment real estate pertains to all real estate assets that generate revenue and/or profit for the owner regardless of whether that property is classified as residential or commercial. Commercial real estate is a subset of investment real estate and it is technically comprised of only those investment properties that are involved in commerce or trade.

While the focus of this course in on commercial real estate, we will also include certain residential investment property types such as apartments because they are commonly regarded as a commercial property even though they are technically classified as a residential investment property.

Needs and Wants

Effective communication begins with understanding client needs and wants, and the easiest way to gain that understanding is to ask. Taking the time to learn about a client's business and growth plans, market expectations, special use requirements such as storage tanks or painting booths, and access to rail or other transportation logistics concerns are all a part of understanding client needs.

Identifying Suitable Properties

Commercial clients are busy executives with limited time availability. Prioritize tasks that result in the efficient use of their time for maximum benefit. For example, showing a prospective industrial client a space with only two loading docks when the client requires ten is not an effective use of their time or yours. As the questions up front, it will save a lot of time and aggravation.

Costs to Own or Lease

Costs to own and operate are a primary consideration for investors and users of commercial space. Agents must be prepared to effectively articulate all costs. Tenants will want to understand the costs to operate from a selected location so that they can determine whether the business opportunities associated with that location warrant the expense. Investors will undertake a rigorous analysis of expected returns related to cash flow to determine whether the investment can achieve their required rate of return.

Risks and Rewards

As with any investment, there are risks. Investors will seek the guidance of agents to identify many of the risks to own and/or operate and to communicate timely market observations to assist clients in determining the potential risks and rewards of a particular location. For example, if an agent learns about a large company relocating to a specific area, they can offer their client the opportunity to acquire property in the area at a good price prior to the anticipated price increases associated with the company's relocation. The services offered by that agent will be invaluable to that client.

Key Physical and Financial Attributes of the Property

Commercial real estate agents are expected to have a solid understanding of the physical and financial attributes of a property. In order to gauge the financial feasibility of an investment, clients will ask agents to assist them in determining a fair value based in part on operating income, expenses, and projected future cash flows, as well as other financial determinants. Providing clients with accurate data and communicating it effectively are essential elements for a successful commercial brokerage business.

Moreover, clients depend on agents to assess the physical characteristics of a property. Physical characteristics include design, shape and size, footprint, setbacks and easements, ingress and egress, parking, safety and security, construction materials, mechanicals including common areas, stairwells, and elevators, heating, ventilation and air conditioning (HVAC), and electrical service. Obsolescence issues as well as any apparent physical defects are additional factors that agents will be expected to communicate to their clients.

Communicating the Value Proposition

Pricing for sale and lease incorporates many factors. For example, comparative market analysis to determine competition and value trends from recent sales or leases is one component; a property's operating performance is another.

Commercial real estate has far fewer comps to choose from than its residential counterpart, rendering the process more complex. Property owners will rely on their agent's ability to assist them in determining market value pricing in order to attract buyers or tenants. Buyer and tenant clients will rely on their agent's ability to negotiate a better price. How well agents communicate a thoughtful pricing strategy is critical to the success of their business.

Communicating Financing Options
Lenders can view a specific property, property type, or broader economic market condition as factors that pose elevated risk for loan default. Commercial loans are typically non-recourse. ***Non-recourse commercial loans*** are loans where the borrower has no contingent liabilities in case of default, and the lender's sole remedy is their security interest in the property as collateral.

Accordingly, lenders may require a lower loan-to-value ratio prior to underwriting a loan. Lenders for commercial real estate also utilize a ratio called the debt service coverage ratio (DSCR) to determine if the property's cash flow is sufficient enough to service the debt with a predetermined margin for potential decreases in monthly cash flow.

Financing availability for a given property can vary based on market trends and lender risk assessments. Agents are expected to be familiar with financing trends so that they can better communicate options to clients.

Alternative Financing Structures
Lending structures vary. In some cases, the financing structure can be separated by tranches to bring in additional lending sources. A ***tranche*** means a portion of something. Different types of lenders may be willing to take on different pieces of the lending structure if the return justifies the risk. For example, if a permanent financing lender for a development is only willing to finance the first 60% of loan to value; other lenders may be willing to finance the difference up to the remaining 40% for a higher rate of return.

Effective agents are able to suggest alternative financing solutions in order to close the deal. For an unfamiliar client, communicating options to clients in the various types of lending structures can be an invaluable asset.

Competent Practice Includes Communicating Agent Limitations
Effective client communication involves a lot of thought and preparation. Licensed agents are required to exercise judgment and skill in the performance of their duties (TREC §531.3 Competency). Agents must be prepared to communicate to clients any limitations in their ability to act if asked to do something beyond the scope and authority of their license or area of expertise. Clients should be advised to seek the advice of experts in areas beyond the agent's purview.

Legal Forms and Disclosures
One additional element for effective communication involves the use of and explanation of required legal forms listing, disclosure, purchase, lease, and other matters. Proper use of these forms is required under the authority of an agent's license.

In order to be an effective communicator, agents should be familiar with the types of forms available and their use in commercial real estate. In a later section, we will cover the various legal forms and disclosures.

Advancing Your Commercial Real Estate Career

Commercial real estate has a number of integrated facets that require deeper knowledge and understanding. While this course will prepare agents to enter into the challenging and rewarding world of commercial real estate, the evolution of greater knowledge shouldn't stop here. The most successful commercial brokers continually challenge themselves throughout their career to learn more about evolving trends and industry changes through continuing education and networking with other professionals.

CCIM Institute

The CCIM institute is one of the most influential commercial real estate organizations in the industry with members representing a cross-section of commercial real estate interests. The Institute offers members continuing education, networking opportunities, and the opportunity to earn their prestigious Certified Commercial Investment Member (CCIM) designation. Even though there is an experience prerequisite for the designation, new commercial agents can begin the track to CCIM by completing select courses offered by the CCIM Institute.

KEY PLAYERS & STAKEHOLDERS

Types of Investors

Commercial real estate buyers acquire property for business expansion or relocation, asset appreciation, cash flow, and tax purposes.

Foreign buyers purchase U.S. real estate for the same reasons as U.S. buyers, but may also acquire properties for capital preservation and as a currency hedge. ***Capital*** is a financial asset, such as money. Foreign buyers that perceive the U.S. to be a safer place for their capital than their home country invest in U.S. real estate as protection from onerous taxes or confiscation risks at home. They may also believe that their domestic currency may weaken and lose value and as such often seek to mitigate devaluation risks by investing in U.S. dollar-denominated assets, such as real estate, as a means to hedge their currency risk. A ***hedge*** is a method to reduce certain financial risks.

In general, buyers and sellers of commercial real estate fall within the following categories:

- Non-exempt U.S. investors subject to tax at sale
- Tax-exempt U.S. investors in the U.S. such as pension plans, Farmer's Cooperative Associations, Religious Associations, and Mutual Insurance companies
- Local, state, and federal governments
- Foreign Investors subject to capital gains tax and FIRPTA withholding. ***FIRPTA*** stands for Foreign Investment in Real Property Tax Act which requires that the transferee (title company) deduct and withhold 15% of the gross sale amount at closing to ensure that the foreign seller pays taxes to the IRS on gains
- Foreign sovereign wealth funds such as NORGES, a Norwegian sovereign wealth fund; one of the largest investors in U.S. commercial real estate
- Qualified foreign pension plans (QFPF) that provide tax-free or deferred pension or retirement benefits to current or retired workers in their home country

Acquisition Agents
Acquisition agents represent institutional investors and are charged with the initial due diligence elements associated with local suitable properties. Some acquisition agents are licensed real estate agents. Listing agents can expect to work directly with acquisition agents when institutional buyers are involved.

Investment Committees
Investment committees oversee real estate portfolios and its assets as a part of a larger investment strategy. Investment decisions including the acquisition and sale of real estate are authorized through investment committees. Agents working with institutional investors can expect contract contingencies subject to investment committee approval.

Portfolio Managers
Portfolio managers are financial investment fiduciaries that make investment decisions regarding the risks and rewards associated with holding any one or a group of properties in their portfolio. Determinations as to whether to buy or sell properties are based on portfolio performance assessments. Licensed agents rarely interact with portfolio managers.

Asset Managers
Asset managers are responsible for maximizing the value of their commercial real estate assets through enhanced operational efficiencies and by developing new revenue opportunities for income.

Sponsors
Sponsors represent the interests of real estate property owners in the acquisition, management, and disposition phases of property ownership. Sponsors typically represent institutional investors, joint ventures, large trusts or partnerships, and syndicated ownership interest in real estate.

Typical sponsors are business and financial operations experts such as attorneys, business managers, CPAs, investment bankers, and others. Agents may have to negotiate listings, sales, and leases with sponsors rather than with the owners.

Tenants
Tenants of commercial real estate own a leasehold interest in the property for a period of time with the right to exclusive use. Unlike a fee simple interest granted to a property owner with the perpetual right to possess the property and its improvements, a leasehold interest is created through the formation of a lease. While tenants may be granted exclusive use, they are bound by their lease agreement, which may restrict certain activities and uses.

Tenant Reps
Tenant representation is another specialty in commercial real estate where agents work exclusively with tenants to lease property. While the thought of large selling commissions is appealing to agents, transactions can take months or years to close. Agents that limit their practice to tenant representation can usually realize commissions sooner. Since commercial leases typically renew within 5-10 years, there are additional opportunities to earn commissions from the same client when they renew their lease or relocate to another property.

Leasing Agents
Leasing agents can be salaried employees of the building owner, real estate brokerages, or property management firms. Activities of leasing agents typically involve lease negotiations, rent collection, tenant relations, and record keeping. Individuals that engage in property leasing activities an/or accept rents on behalf of a property owner are required to be licensed real estate agents in Texas unless the leasing agent is a salaried employee of the property owner and is exclusively engaged in leasing activities for employer-owned properties. TRELA §1101.002(1)(A) and TREC Rule 535.4(h) clearly define the licensing requirements for leasing activities.

Brokers & Agents
Real estate brokers/agents in Texas represent either the buyer/tenant or seller/landlord. Dual agency (representing both principals in a transaction) is not permitted in Texas {TRELA §1101.56(b)]. Some agents choose to limit their business to working exclusively with buyers or tenants, or seller/landlord.

Property Managers
Property managers oversee the management operations of a property and communicate on a regular basis with property owners or their designee. Additional activities may include building and facility operations management to include maintenance, tenant improvements, advertising, marketing, and reserve study analysis. A ***reserve study*** is an analysis of the replacement timeline and costs for the replacement of the physical components of a property such as elevators, heating, ventilation, and air conditioning (HVAC). Expected replacement dates are determined based on typical life cycles for that equipment or component. Property managers will develop a long-term capital budgeting plan for the building so that the capital required for future upgrades or replacements can be set aside over time as ***reserve funds***.

Property managers are subject to the same TREC licensing requirements as leasing agents unless they are a salaried employee of the building owner.

Facilities Managers
Facilities management involves the daily management of the property including buildings and grounds. Key responsibilities include safety and security, maintenance and repair of building systems, common area maintenance, utility services, snow removal, and landscaping.

Property Consultants
Property consultants are experienced property and facility managers engaged by owners to evaluate the operational and financial performance of a property and to recommend ways to enhance efficiency and financial performance. Recommendations can include new pricing strategies for marketing and leasing, facility and amenities upgrades to entice higher rents, new income sources for added revenue, as well as mechanical upgrades to realize greater energy efficiency.

Corporate Real Estate
Large corporations often have an internal real estate property management team to manage facilities, leases, sales, and acquisitions. Most corporate real estate offices are staffed by salaried employees who are not required to be licensed agents. Corporate real estate officers manage all property interests for the company wherever they are located.

Appraisers
Appraisers estimate the value of real estate based on sales comparisons, replacement cost, and income. Most states, including Texas, require appraiser licensing. Appraiser licensing and oversight in Texas is governed by the Texas Appraiser Licensing and Certification Act which is a part of the Texas Occupations Code. The Texas Appraiser Licensing and Certification Board (TALCB) has jurisdiction over license holders and adopts rules regarding their practice. TALCB established three levels of appraiser licensing based on experience and examination. Commercial appraisers in Texas are often licensed as Certified General Appraisers.

The Appraisal Institute is a professional association of real estate appraisers. The MAI designation is the highest standard for appraisers offered by the Appraisal Institute. Most commercial real estate appraisers are members of the Appraisal Institute and hold and MAI designation.

Property Inspectors/Engineers
Real estate property inspectors in Texas are licensed by the Texas Real Estate Commission (TREC) and subject to rules regarding qualification, professional conduct, and ethics. Commercial inspectors are often asked to assess the integrity of structural and mechanical elements of a building and to make recommendations regarding structural defects. Opinions as to structural integrity and necessary repairs may require an engineering license to ensure competent authority. The Texas Board of Professional Engineers licenses engineering practices in Texas.

Attorneys and CPAs
Attorneys are licensed by the State Bar of Texas and provide real estate stakeholders advice regarding businesses, legal, and tax considerations. Certified Public Accountants (CPAs) provide accounting and tax preparation services for clients and are licensed by the Texas State Board of Public Accountancy.

Business Managers and Financial Advisors

Commercial real estate is a business and the bigger the business, the more complicated its operations. ***Business managers*** are often employed by property owners to oversee the business elements of income-producing properties to ensure operational and financial efficiencies in order to maximize profits.

Financial advisors are fiduciaries employed by investors to help them manage their financial portfolio, including real estate assets.

CRE INVESTMENT CONSIDERATIONS

Ownership Types and Structures

Individual or sole proprietorship is a business owned and run by a single person which is taxed as if it were an individual. The owner has no liability protection for claims against the business. As such, this is not a typical ownership structure for commercial real estate because it does not limit the liabilities associated with the ownership of real estate.

Limited Liability Company (LLC)

A limited liability corporation is comprised of at least one member and the owners are personally protected from any business debts or liabilities. All of the profits and losses of the business "pass through" to the individual owner(s) and are reported on their personal tax returns and thus are only taxed once. (Corporate earnings are taxed as income to the business and the again as earnings to the owners.)

Corporations

There are both publicly held and closely (privately) held corporations. Publicly held corporations issue common shares traded for public ownership, whereas closely held corporations have few shareholders and do not trade on a public exchange.

- ***S-Corporations*** are a specific category of corporation limited too 100 shareholders issuing only one class of stock. This structure protects shareholders from liability and may reduce self-employment tax liabilities such as Social Security and Medicare.
- ***C-Corporations*** are business entities with unlimited shareholders who are protected from liability. Large companies are usually organized as C-Corporations.
- ***Professional Corporations*** consist of professionals such as lawyers, doctors, and CPAs. The tax and limited liability benefits are present in this structure, but its shareholders are limited to members of the same practice profession.
- ***Non Profit Corporations*** are tax exempt entities such as hospitals and charitable organizations.

Tenants in Common (TIC) is a common ownership interest created by deed. Under this construct, investors can hold real estate with others in unequal interests that survive death of the individual. Many commercial real estate interests were created under this structure but its internal governance issues are re-financing difficulties have made this now a less popular choice.

General Partnership (GP) is formed when two or more individuals agree to pool resources and to share in the risks and rewards of a business or real estate venture.

Limited Partnership (LP) is formed by two or more individuals to insulate partners from the company's debts. LPs select one owner to be a general partner who makes the decisions and assumes the liability for debts while the limited partners invest without liability.

Limited Liability Partnerships (LLP) does not have general partners. All partners have limited liability for business debts.

Real Estate Limited Partnership (RELP) is a limited partnership that invests strictly in real estate.

Joint Ventures (JV) are formed when two businesses agree to partner on a deal to share resources in order to achieve a common goal. These types of structures are common with developers of commercial real estate that want to leverage the experience and financial strengths of partners to maximize the financial opportunities associated with development.

Private equity funds can be either open-ended or closed-ended funds holding a single property or multiple properties with multiple investors. Typically, a sponsor serves as general manager or general partner for the management of the property on behalf of the fund and its investors.

Trusts are a legal arrangement to hold assets in trust to be controlled by a trustee for the benefit of the trustor. Trustees are persons entrusted with administrative powers over the assets of the trust, trustors are those who receive the benefits.

- ***Living trusts*** are created for the benefit of the individual or family for use during their lifetime. Upon death, assets may be transferred to beneficiaries according to the wishes of the trustor and administered by the trustee. Living trusts are very common with high net worth individuals that want to ensure orderly management and disposition of their assets.
- ***Grantor trusts*** are a type of living trust that is revocable which means that the terms of the trust can be changed or canceled by the trustor.
- ***Real Estate Investment Trust (REIT)*** is a company managing a portfolio of high valued investment grade assets for the benefit of its shareholders. Some public REITs trade daily on a stock exchange such as the NYSE, while other public REITs are not listed on a public exchange. REITs can also be private where they are not open to the public for investment.
  - ***Equity Real Estate Investment Trusts*** own and operate several income generating properties in a portfolio for the benefit of its shareholders.
  - ***Mortgage REITs*** own mortgage-backed securities (MBS) or commercial mortgage-backed securities (CMBS) comprised of debt securities (mortgages) instead of real estate in order to generate earnings from interest payments.
- ***Delaware Statutory Trust*** is a business trust created under Delaware law that offers qualified investors syndicated fractional ownership interests
- into institutional level investment grade properties.

Wealth Generator

Investment in real estate has historically been one of the most effective ways for investors to grow their portfolio and generate wealth over time. ***Leverage*** is the strategy of using borrowed capital to increase the potential return on an investment.

The use of leverage can provide investors with the opportunity to purchase real estate assets on a greater scale.

Advantages of using leverage

- Insufficient capital - if an investor lacks sufficient capital to acquire a property, the use of leverage can help with any shortfall
- Tax benefit - debt service and interest payments can reduce an owner's taxable income
- Leverage can free up investor(s) capital for other investments

Disadvantage of using leverage

- It can increase investment risks if the return on the property is lower than its debt service obligation. High leverage ratios used to acquire expensive assets can exacerbate a problem if the asset fails to meet cash flow expectations sufficient enough to service the debt.

Positive leverage

- Created when the leveraged property returns are greater than the cost of borrowing.

Negative Leverage

- Created when the cost of borrowing is greater than the leveraged property returns.

Neutral Leverage

- Occurs when the cost of borrowing is the same as the leveraged property returns.

Another distinct opportunity to create wealth through real estate is to ***build equity*** through property appreciation and debt repayment paid with income generated from the property. As the loan-to-value ratio decreases, property investors can either borrow more money to acquire additional property assets to grow their portfolio or simply allow the debt to be paid down in full, thereby creating a sizable cash flow investment vehicle for income and retirement.

FINANCIAL PERFORMANCE MEASURES

Opportunity Cost of Capital (OCC)

One of the most important financial concepts for commercial agents to understand is the opportunity cost of capital. In general, investors will not invest unless the expected return on capital is higher than the cost of capital.

The opportunity cost reflects the potential missed revenue opportunity when selecting a lower performing investment over a higher performing one. It is determined by comparing the expected returns of competing investments and then calculating the difference between them. The difference in expected returns represents the potential missed opportunity or opportunity cost of capital to

the investor. It is important to note that opportunity cost of capital comparisons assume that comparable investments possess similar investment risks. Comparable investments can also include different asset types such as bonds and real estate. The process of how to determine expected returns will be covered later in this course.

Let's look at an example to illustrate OCC. An investor is torn between investing in a comparably risked stock trading at $10.00/share or a bond that yields 6%. If the investor expects the stock to increase 10%/year, the investor will choose the stock over the bond because its expected return is better by 4% (10%-6%=4%). The opportunity cost to the investor is the 4% loss in potential income by selecting the bond over the stock.

Let's now assume that at the end of a year, the stock was sold for $10.50/share, the investor's return was $0.50/share which equals a 5% return, much less than expected. As it turned out, the bond would have been a better choice. So what could have gone wrong?

Markets operate with uncertainty; the degree of uncertainty is measured as ***volatility***. No one can predict the future. But suppose the investor had made the investment decision based on the guidance of a broker and that broker had based the 10% return on a guess or a hunch rather than market-based analysis. The investor would be rightfully upset with that broker. This example highlights the importance of applying reasonable and measured assumptions to estimations.

Return on Investments (ROI)

We will now introduce the first of many performance measure formulas used in commercial real estate, return on investment or ROI. ROI is a simple method that can be used to evaluate efficiency, or how well an investment performed after its costs. It is the basic growth rate or simple rate of return (RoR) that does not take into account inflation or time value of money. ***Time value of money*** is a concept whereby the value of having a dollar today is higher than if received in the future due to inflation.

Let's try an example:
You recently listed and resold a property owned by an investor client you had worked with 5 years ago. At that time, the investor wasn't sure whether real estate was the best option or whether to invest the same amount of money in a corporate bond yielding 6%. The investor planned to hold the property for 5 years and then sell.

As part of your due diligence, you provided the client with a broker package that included cash flow projections, operating analysis, and an 8% expected return for the property over the 5 year holding period based on market data. The 8% expected return was compared with the bond yielding 6% and it was determined that the opportunity cost of capital to the investor if the investor chose the bond instead of the property was 2%, and so the investor purchased the income property 5 years ago for $500,000 cash. Acquisition and improvement costs included $25,000 in closing costs and an additional $100,000 for improvements, all paid with cash.

Throughout the 5 year holding period, the investor incurred an additional $50,000 in repairs and maintenance. The total cost to the investor after 5 years was $675,000 ($500,000 + $25,000 + $100,000 + $50,000 = $675,000). The property just sold for $700,000. What was the investor's ROI?

Answer:
ROI = [(Current Value of Investment - Cost of Investment) ÷ Cost of the Investment] x 100

ROI = [($700,000 - $675,000) ÷ $675,000] x 100 = 3.7% return

This is less than the 6% that would have been earned on the corporate bond. In this case, the actual opportunity cost to the investor was 2.3% *(6%-3.7% = 2.3%)* in lost revenue potential because the real estate was chosen instead of the bond, the complete opposite of what was expected. The bond appears to have been a better investment.

But we never considered the income generated over the 5 year period. Let's try a different approach where we incorporate the income. Suppose the property generated $50,000/year in net income for the entire 5 year period totaling $250,000. What is the ROI now?

Before we begin, let's take another look at the first part of the equation: [Current Value of Investment - Cost of Investment]. Another way to view this is to think about it in terms of net income. In this case there is a $25,000 profit *($700,000 - $675,000 = $25,000 profit)*. But total profits also include the net income paid to the investor over the 5 year period.

So let's now add in our net income for the 5 years of $250,000 for a total net profit of $275,000 *($700,000 - $675,000 + $250,000 = $275,000)*.

Now we can use this result to add to the remaining part of the equation: *[($275,000 ÷ Cost of Investment) x 100]*

Therefore, *ROI = ($275,000 ÷ $675,000) x 100 = 40.74%*

Wow! That's a big difference. You can see now why real estate is so popular with investors. It's all about the net cash flows.

Summary
We began this course by learning about key CRE stakeholders and understanding the importance of effective communication with clients. We highlighted agent responsibilities and expectations under their Texas licenses and as a member of Texas REALTORS®. In addition, we covered many of the typical ownership structures and the types of real estate investor(s) and their investment considerations which led to a brief discussion about wealth generation methods attained through real estate ownership and its effects on the use of leverage. Other key investor considerations such as Opportunity Cost of Capital (OCC) and Return on Investment (ROI) were

covered as an introduction to a series of financial performance measures used to analyze CRE. Furthermore, we have started to develop vocabulary of investment real estate principles. As we move forward in our discussions, we will begin to use CRE as our abbreviated reference for commercial real estate since its use is common in the industry. Also, we will incorporate residential properties such as multi-family apartments as a part of our CRE discussions with the understanding of its technical difference as a residential investment property.

Having covered all the basics, we will now begin to dive more deeply into CRE investment analysis. In later sections you will be able to apply this analysis to typical brokerage functions.

QUIZ 1

Choose the correct answers for the following questions:

1. Which of the following are considered illiquid assets?
   a) Stocks
   b) Office buildings
   c) Single family homes
   d) Bonds

2. Licensed Texas commercial real estate agents are required to abide by which of the following rules?
   a) REALTOR® Code of Ethics
   b) TREC Rule 531 Canons of Professional Ethics and Conduct
   c) TREC Rule 535.4 (h) Property Management
   d) All of the above

3. The advantages of using leverage include which of the following?
   a) Leverage increases the owner's equity
   b) Leverage provides investors with the opportunity to acquire more real estate with less required capital
   c) Positive leverage is always achieved through borrowed capital
   d) Leverage decreases and investor's risk

CHAPTER 2: UNDERSTANDING THE USE & APPLICATION OF CRE FINANCIAL ANALYSIS

In this chapter we will start to build a pyramid of financial performance metrics, each of which will be dependent on each other leading to a determination as to whether a specific property is likely to achieve the investor's required rate of return.

CRE FINANCIAL ANALYSIS

Gross Rent Multiplier (GRM) is sometimes referred to as the *Gross Income Multiplier (GIM)* and is a good way to estimate property values for small investment properties with similar physical characteristics and operating costs such as rental houses. GRM is calculated by dividing the sales price by the *Gross Scheduled Income (GSI).* The result is the number of years it takes for the gross revenue to pay for the cost of acquisition.

Sales Price ÷ GSI = **GRM**

For example, if a rental house in a neighborhood that sold for $250,000 has a tenant paying $1,700/month, what is the annualized GRM for that property?

$250,000 ÷ ($1,700 x 12) = 12.26

It will take a little more than 12 years for the gross rental income to pay for the cost of acquisition.

Note that GRM can also be calculated using monthly rents, instead of annual rents. Removing the 12x multiplier from the equation will yield the following: *$250,000 ÷ $1,700 = 147.06* months, which is equal to the same result of 12.26 years.

Potential Gross Income (PGI) is the annual potential income for the property. In this assessment we want to know how much income the building could generate if all of the rentable space is leased; we will account for vacancy later. For example, a 100-unit apartment complex purchased for $12,000,000 has equal monthly rents of $1500/unit.

Its potential gross income *(PGI) is: 100 x $1500 = $150,000/month*, but we want to annualize the number, so *100 x $1500/month x 12 = $1,800,000* annual potential gross income.

Other Source Income (OI) can be parking, pet fees, storage lockers, laundry and vending machines, bike storage, and others. The total amount of income from sources other than rents falls into this category. For example, let's say that this 100-unit apartment generates $50,000/year in other income.

Vacancy Loss (V) accounts for units that are not rented throughout the year. For example, if our 100-unit apartment building typically has 10 units that are not rented throughout the year (or it is typically 90% occupied), then the income lost from those 10 units needs to be accounted for to determine its likely revenue based on historic vacancy rates. Since our building has equal rents of $1500/month, its annual vacancy loss will be: *10 x $1500 X 12 = $180,000*.

Credit Loss (C) accounts for lost income associated with occupied units where the tenant fails to pay their rent. For our apartment example, let's assume that on average the building incurs a write off of $18,000/year in credit losses.

Effective Gross Income (EGI)

We can now begin to integrate these costs into our analysis. EGI is an important metric for investors contemplating a purchase because they want to understand the building's cash flow, in order to determine whether the building is a suitable investment.

Effective Gross Income (EGI)

PGI + OI - (V+C) = **EGI**

Let's calculate using the data provided here:

$1,800,000 + $50,000 - ($180,000 + $18,000) = $1,652,000

Note: An important factor in determining accurate EGI is to make sure to subtract any rent abatements from your PGI. Rent abatements (RA) are conditions where rents are reduced or forgiven and, accordingly, affect the potential gross income of property. Let's now assume that 20 of the units were rented with one month free rent *(20 x $1500 = $30,000)* and recalculate EGI:

Effective Gross Income (EGI) with Rent Abatements Factored In

PGI - RA + OI - (V+C) = **EGI**

$1,800,000 - $30,000 + $50,000 ($180,000 + $18,000) = $1,622,000

Operating Expenses (OPEX)

Property related operating expenses fall within these three categories:

- Fixed expenses that remain the same regardless of occupancy rate
  - Property Taxes
  - Insurance
  - Security
  - Trash Removal and Recycling

- Variable expenses that vary with different vacancy rates
  - Utility Costs
  - Maintenance and Janitorial
- Common Area Maintenance (CAM) costs
  - Internal space includes upkeep of common areas, elevators and stairwells, garages and janitorial
  - External space includes costs for parking spaces, pedestrian walkways, snow removal, and landscaping
- Replacement reserves are monies set aside for repairs and replacement of building components and improvements such as carpeting, HVAC, plumbing, elevators, and escalators.

Note: Operating expenses include non-reimbursed expenses and should be annualized. If expenses given are monthly, simply multiply the expense by 12 to determine its annual expense.

Let's assume our 100-unit apartment building has the following expenses, what is the property's OPEX? As you can see below, all of these expenses are a part of the OPEX = $450,000.

Annual Expenses	
Property Taxes	$ 100,000.00
Insurance	$ 45,000.00
Security	$ 20,000.00
Trash Removal and Recycling	$ 5,000.00
Non-Tenant Reimbursed Utility Costs	$ 25,000.00
Maintenance and Janitorial	$200,000.00
Non-Tenant Reimbursed CAM Expenses	$ 30,000.00
Replacement Reserves	$ 25,000.00
Total Annual OPEX	$450,000.00

Capital Expenditures (CapEx) are expenses for major improvements or expensive equipment replacements that will benefit the property and its tenants for many years rather than for just one single year. Budgeting for these expenses involves annual adjustments to cash flow with the funds set aside as reserves for future use.

Net Operating Income (NOI)

NOI is found by subtracting the operating expenses from the effective gross income (EGI). It is a commonly used indicator to quickly assess how well a property is able to generate profits through cash flow. CapEx reserves should be subtracted from your EGI to render a more accurate indicator of net cash flows.

Let's revisit our 100-unit building that we use to calculate EGI. Recall that the EGI for the building is $1,622,000. Now let's include non-reimbursed operating expenses of $450,000 as listed above, and an annual CapEx reserve allowance of $50,000. What's the NOI?

EGI - (OPEX + CapEx) = **NOI**
$1,622,000 - ($450,000 + $50,000) = $1,122,000

Leasing Commissions
Leasing commissions paid to brokers are also an expense to the investor. Commission payments vary and are negotiated between the broker and the investor, but in general brokers are paid a percentage of the total rent for the entire term of the lease. If a tenant signs a 10-year lease, brokers can expect to receive commission fees periodically or at once based on the negotiated payment schedule.

Commission expenses are associated with the management of the building and can vary from owner to owner, so these charges are not applied to NOI because they are not a required expense in operating the building. For example, a new owner could choose to manage all tenant marketing activities in house without having to pay an outside commission. Adjustments for commission expenses are deducted from the cash flow after NOI.

CAP Rate
CRE assets vary considerably by type and costs to operate and, as such, CRE investors require a more effective measure than GRM/GIM to estimate value. GRM/GIM does not account for varying operating expenses between properties; therefore; it is not suitable for CRE value estimation.

A better method for estimating value in commercial real estate is called the CAP rate, or capitalization rate. A CAP rate reflects the property return for a one year period and is found by taking the NOI and dividing it by its current value:

CAP Rate = NOI ÷ Current Value

For example, let's revisit our 100-unit building purchased for $12,000,000 and suppose that the building is currently valued at $16,520,000. What's its CAP rate (assume the NOI value is current as of today)?

We can solve for CAP rate using the same formula used in residential transactions:

I = R x V where,
I = NOI, R = Cap Rate, V = Current Value
We can rewrite this formula to solve for CAP rate or current value as follows:

$$\textit{CAP Rate} = \frac{\text{NOI}}{\text{Current Value}} \qquad \textit{Current Value} = \frac{\text{NOI}}{\text{CAP Rate}}$$

CAP rate is just another rate calculation, where NOI is the "I" in income and "V" is the current value. Recall that each answer is a ratio, so we multiply by 100 to convert it to a percentage.

$$CAP\ Rate = \frac{NOI}{Current\ Value} = (\$1{,}122{,}000 \div \$16{,}520{,}000) \times 100 = 6.79\%$$

Another way to calculate CAP rate is by dividing NOI by the purchase price of the property.

$$CAP\ Rate = \frac{NOI}{Purchase\ Price} = (\$1{,}122{,}000 \div \$12{,}000{,}000) \times 100 = 9.35\%$$

The problem with using the purchase price method to solve for CAP rate is that it fails to incorporate higher or lower market values if the asset was purchased years ago.

What is CAP rate? Notice that in the second CAP rate example where we used the purchase price instead of the market value, the CAP rate equation is identical to the ROI equation seen earlier if we substitute purchase price as an equivalent value for cost of the investment *(ROI = [Net Income ÷ Cost of Investment] x 100).* So in this case, we could say that the 9.35% CAP rate is the same as its return on investment (ROI). This property has a 9.35% return to the investor.

So what does the 6.79% CAP rate example represent to the investor? It's essentially the same as the one utilizing the purchase price with one distinct difference; it represents the return on investment (ROI) to the investor adjusted for time. Time adjustments incorporate a growth rate which can be negative or positive since its acquisition date.

CAP rates determined by using the current market value of the investment is the better solution for CAP rate and it is the industry standard. Hence, we will only use this method for determining CAP rate for the rest of this course.

$$CAP\ Rate = \frac{NOI}{Current\ Value}$$

In addition, we can also determine the current value of the property if we know the CAP rate and NOI.

$$Current\ Value = \frac{NOI}{CAP\ Rate}$$

Suppose we have an investor who wants to invest in a specific type of building in a certain area with a budget of $3,000,000. As you begin your search, you see from the sales comps that similar buildings had sold for a price that suggested a CAP rate of 7% was typical for the area. Your investor is interested in one particular building with a NOI of $240,000 and asks your opinion about price. Using the above formula:

Current Value

$240,000 ÷ 0.07 = $3,428,571

This is above the investor's budget, so it looks like you're in for negotiations ahead.

Now that we've learned how to calculate the net operating income (NOI) for a property and determine its CAP rate, the next steps involve adjustments to cash flow for other costs that have yet to be accounted for, and evaluating the property cash flow before and after taxes.

Leverage

As we discussed previously, leverage plays an important part in generating wealth for investors by increasing the rate of return to the investor. When an investor utilizes leverage through borrowed funds, the return is called a ***leveraged return***. Alternatively, when leverage is not utilized, it's called an ***unleveraged return***. It is important for agents to understand leverage and its effect on value.

Let's try an example to demonstrate the effects that leverage can have on an investment's rate of return. Since rate of return (ROR) and ROI are the same in the context of our discussions, we will use ROI:

[(Current Value of Investment - Cost of Investment) ÷ Cost of Investment] x 100 = **ROI**

Example: An investor purchased a building 7 years ago for $900,000 all cash that returned $50,000/year in net cash flow for 7 years for a total of $350,000. If the total costs incurred in the ownership of the building equaled $325,000 and the building just sold for $1,300,000, what was the investor's unleveraged ROI?

Answer:

[($1,300,000 + $350,000) - ($900,000 + $325,000)] ÷ ($900,000 + $325,000) = 34.69% unleveraged return

Suppose that instead of paying all cash, the investor borrowed 60% of the funds and, for this example, assume $0 in interest costs. The leveraged amount totals $540,000 and the balance of $360,000 is in cash. Determine the leveraged ROI.

Answer:

ROI = [($1,300,000 + $350,000) - ($360,000 + $325,000)] ÷ ($360,000 + $325,000) = 140.88% leveraged return

You can see why leverage plays an important role. The leveraged return on this investment is far greater than the unleveraged example.

Now let's assume the market had weakened since the property was purchased and the property's value is now only worth $750,000, $150,000 less than the original purchase price. Recalculate the leveraged and unleveraged ROI:

Unleveraged ROI = [($750,000 + $350,000) - ($900,000 + $325,000)] ÷ ($900,000 + $325,000) x 100 = -10.20% > unleveraged return

Leveraged ROI = [($750,000 + $350,000) - ($360,000 + $325,000)] ÷ ($360,000 + $325,000) x 100 = 60.58% leveraged return

As can be seen from the results, the unleveraged return is actually negative, but the leveraged return is still very good. However, there is an important factor that was left out of this calculation. The cost of the debt and other expenses are not a part of this calculation. ROI and RoR measure the return on the invested capital, not the return on the overall investment. It's not surprising, therefore, to expect greater returns on invested capital if an investor has less skin in the game.

Debt Service

In the above example we assume $0 borrowing costs and debt service. Debt service is the principal and interest payments (P&I) required to pay the debt. Debt service costs are subtracted from the NOI to determine cash flow before taxes (CFBT). As we will see in later sections of this manual, the costs of borrowing and its tax implications are also important considerations in determining rates of return.

Cash Flow Before Taxes (CFBT)

Cash flow, as mentioned earlier, is one of the biggest reasons why investors choose real estate as an investment. Agents should be prepared to analyze the degree to which an investment property produces annual cash flow after expenses. Investors can utilize the data in assessing the impact of debt service (P&I) on their projected cash flows.

Let's revisit the building purchased for $12,000,000 in our NOI example and calculate the investor's cash flow before taxes (CFBT):

NOI (annual) = $1,122,000
Debt = $7,200,000 (60% LTV) @ 5% annual interest amortized for 20 years = $570,202 in annual debt service expenses.

CFBT (annualized) = NOI - Debt Service

Annual CFBT to this investor is
$1,122,000 - $570,202 = $551,798

Cash-on-Cash Return Before Taxes

Cash-on-Cash is a method investors use to determine how well their total cash investment in the property (including closing costs) is performing relative to its annual cash flow.

Continuing with our leveraged 100-unit apartment building example, let's assume the total cash invested amounted to $5,250,000 ($4,800,000 down payment plus $450,000 in improvements all paid with cash). What's this investor's cash-on-cash return before taxes for this annual period?

Cash-on-Cash Return = CFBT (annualized) ÷ Total Cash Invested

Annualized Cash-on-Cash return before tax is
$551,798 ÷ $5,250,000 = 0.1051 = 10.51%

The investment is returning 10.51% cash-on-cash return for this year.

Now, let's assume we paid cash for the building instead of using leverage and recalculate our cash-on-cash for the 100-unit building for this annual period.

Total cash invested amounted to $12,450,000 ($12,000,000 down payment plus $450,000 in improvements all paid with cash)

Annualized cash-on-cash return before tax = $1,122,000 ÷ $12,450,000 = 9.00%

As you can see, the return on cash invested is higher with leverage. So let's take this one step further.

In the Wealth Generator section covered earlier, we discussed different types of leverage. Positive leverage is created when the leveraged asset return is greater than the cost of borrowing. In this example the cost of borrowing is 5%. Since the return on cash of the leveraged asset is 10.51%, which is greater than the 5% cost of borrowing, the investor has benefited from positive leverage. This scenario also assumes that the remaining cash can be invested elsewhere where the combined return on all of the cash is still greater than the 5% cost of funds. The investor's cash in this scenario is more efficiently allocated by using borrowed funds with the lower interest rate.

Let's assume the investor chose to borrow the 60% on this property and use the remaining 40% to invest in another property with similar cash-on-cash return; this option would increase the combined total CFBT to the investor and enhance the opportunity to build equity by owning two properties instead of one. But this strategy also increases the risks to the investor if the cash flows on either property are insufficient to service the debt.

INVESTOR TAX CONSIDERATIONS

Tax considerations for investors are an important factor in determining the degree to which their investment property can add to their income after taxes. As of 2019, the highest U.S. individual tax rate is 37% for unmarried individuals earning $519,200, and for married couples filing jointly, the top bracket is $612,350 or greater. The corporate tax rate as of 2019 is 21% at the federal level with many states taxing corporate earnings at the state level. Texas does not tax corporate earnings, which is one reason why the state has attracted businesses away from states with high taxes. ***Depreciation*** is a method to depreciate the value of improvements such as buildings and facilities as well as CapEx over time to reduce an investor's taxable income. Land is not a depreciable asset, only the property improvements that generate income are able to be depreciated. Typical depreciation schedules for commercial real estate is 39 years, but accelerated depreciation schedules with lower periods can be applied under certain conditions. Depreciation deductions taken over the holding period are recaptured when the property is sold, thus increasing the owner's tax liability at sale. Multi-family units' depreciation schedules are 27.5 years.

Long-term capital gains for assets in the U.S. are taxed at 20% as of 2019. Long-term capital gains refer to the gains realized when a property is held for at least a year prior to being sold. Exit strategies to reduce or defer capital gains and depreciation recapture will be discussed in a later section of this manual.

Note: *Agents should refrain from offering legal, tax, or financial advice unless licensed to do so. Clients should be advised to seek legal, tax, and financial advice from qualified professionals.*

Cash Flow After Taxes (CFAT)
Cash flow after taxes is obtained by subtracting the investor's tax liability from cash flow before taxes (CFBT).

CFAT = CFBT - Tax Liability

Total tax liability to the investor includes adjustments for mortgage interest and depreciation to determine adjusted net cash flow subject to tax. To illustrate let's return to our 100-unit apartment building example and assume the investor is a Texas corporation subject to a 21% federal corporate income tax rate.

Depreciation Calculation:

- Cost basis for the building = Assuming land accounts for 20% of the property value. Therefore 80% of $12,000,000 = $9,600,000 as the cost basis for the building.
- Recovery period (useful life) = 27.5 years
- Assume that the start and end dates over the 27.5 year property period began January 1 and ended December 31, otherwise partial year calculations would be necessary
- Annual depreciation adjustments in 27.5 equal periods = Cost basis/27.5 years = $9,600,000 ÷ 27.5 = $349,091/year = 3.636 per year

Mortgage Loan Terms:

- Debt = $7,200,000 (60% LTV) @ 5% with a 20 year amortization schedule and a 10 year all (balloon payment after year 10).
- Interest only payments in year 1 = $355,115/year

Now we can determine the first year annual corporate tax liability as follows:

Tax Liability = CFBT - Interest Paid - Depreciation
CFBT = $551,798
NOI = 1,122,000
Interest Paid = $355,115
Depreciation Adjustment = $349,091

Tax Liability is
$1,122,000 - $355,115 - $349,091 = $417,794 x 0.21 (corporate tax rate) = -$417,794
The corporation's tax burden will be $87,736.74

Now let's apply these numbers to CFAT:

CFAT = CFBT - Tax Liability
CFAT = $551,798 - $87,736.54 = $464,061

Effects of Leverage on Cash Flow

Suppose our investor paid all cash with no loan. How would this effect CFAT?

Let's take a look:

CFBT (annualized) = NOI - Debt Service

Annual CFBT to this investor = $1,122,000 - $0 = $1,122,000

Tax Liability = CFBT - Interest Paid - Depreciation
CFBT = $1,122,000
Interest Paid = $0
Depreciation Adjustment = $349,091

Tax Liability is
$1,122,000 - $0 - $349,091 = $772,909 x 0.21 (corporate tax rate) = $162,310.89

CFAT = $1,122,000 - $162,310.89 = $959,689

While the investor's cash flow would be higher as expected, the taxable liabilities to the corporation are also higher with a net difference of $74,574 in additional cash flow tax liability. This is another example of how leverage plays a big role in investment decisions when considering the tax implications of adjusted cash flows.

Use of a Spreadsheet

Spreadsheets offer agents the opportunity to organize complex data for easy viewing and reference. Financial professionals utilize spreadsheets extensively and agents are expected to be familiar with their application and use. As such, for the remainder of this course, we will learn how to organize our financial data into spreadsheets using Microsoft Excel. Here's our current spreadsheet:

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	$ 1,622,000									
Projected Gross Income +	$ 1,800,000									
Other Income Sources -	$ 50,000									
Vacancy Loss -	$ 180,000									
Credit Loss -	$ 18,000									
Rent Abatements	$ 30,000									
Net Operating Income (NOI)	$ 1,122,000									
Effective Gross Income -	$ 1,622,000									
Operating Expenses + CapEx	$ 450,000									
Property Taxes	$ 100,000									
Insurance	$ 45,000									
Security	$ 20,000									
Trash Removal and Recycling	$ 5,000									
Non-Tenant Reimbursed Utility Costs	$ 25,000									
Maintenance and Janitorial	$ 200,000									
Non-Tenant Reimbursed CAM Expenses	$ 30,000									
Replacement Reserves	$ 25,000									
CapEx	$ 50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	$ 250,000									
Gross Scheduled Income (GSI)	$ 20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	$ 1,122,000									
Current Value	$ 16,520,000									
Cash Flow Before Taxes (CFBT)	$ 551,798.00									
Net Operating Income -	$ 1,122,000									
Debt Service (P&I)	$ 570,202									
Cash-on-Cash Return Before Taxes	10.51%									
CFBT ÷	$ 551,798									
Total Cash Invested	$ 5,250,000									
Cash Flow After Taxes (CFAT)	$ 464,061									
CFBT -	$ 551,798									
Tax Liability	$ 87,736.74									
Interest Paid +	$ 355,115									
Depreciation +	$ 349,091									
Net Taxable Gain/Loss	$ 417,794									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	$ 87,736.74									

Identifying the Holding Period

Holding period refers to the time an owner intends to hold the property. Traditionally, CRE investors hold property for 10-15 years before selling or exchanging into another property. The selection of the 10-15 year time frame was principally based on when the property became a tax liability to the investor, having exhausted most of its tax benefits. However, many institutional property owners in today's market are tax exempt which can affect the average holding period on larger CRE properties. Identifying an investor's intended holding period will become important when we begin to discuss multi-year cash flow analysis.

Reversion Cash Flow

Reversion cash flow refers to the cash proceeds or future cash benefits the owner will receive at sale (after the holding period). When we begin our multi-period cash flow analysis, we will account for the reversionary benefit to the owner by estimating the CAP rate at the end of the holding period. The end CAP rate is called the ***Terminal CAP rate*** or terminal value.

VALUE OF MONEY

Time Value of Money and Risk Reward

Time value of money is a very important concept for agents to understand. In essence, investors would prefer to receive money today rather than at some point in the future unless that money offers a return greater than the rate of inflation. To illustrate, would you rather receive $100,000 today that you can invest now or $100,000 in 5 years? Today is preferred because the value of that money erodes with time due to inflation. If you invested the $100,000 in a cash deposit paying 3% for 5 years, your $100,000 will be worth $115,927 at the end of 5 years. So would you prefer to receive $115,927 in 5 years or $100,000 in 5 years? In this case, waiting the 5 years would cost you $15,927.

The above example generalized the concept, but how did we come to the answer of $115,927? The result will require some math. Fortunately, we can use Excel to solve this problem, but first we need to understand the components of the time value money of equation.

Time Value of Money Equation:

$$FV = PV \times (1 + r)^{(n)}$$

Yikes, it looks complicated, but let's break it into parts and discuss what each piece implies:

- FV = Future Value or what the asset will be worth at the end of our holding period when we account for the growth rate. In the case of $100,000 it will be worth $115,927.
- PV = Present Value is not the same as the market price paid for the property. It represents that current value of all the future cash flows discounted for time, or investment value, not the market value of the real estate.
- r = rate of return. In our example, the rate of return was 3%
- n= Number of payment periods. In this case, we received one interest payment each year for 5 years, so the answer is 5. If we were paid interest quarterly, the answer would have been 20 over 5 years.

So let's dissect the equation $FV = PV \times (1 + r)^{(n)}$

- PV = $100,000
- (1 + r) = 1 + (.03) = 1.03
- (n) = 1 x 5 = 5
- Because the $^{(n)}$ is a superscript, it is called an exponent which refers to how many times you will need to multiply a number by itself. In this case, we will need to multiply 1.03 by itself 5 times such that: 1.03 x 1.03 x 1.03 x 1.03 x 1.03 = 1.15927. So, $(1.03)^5 = 1.15927$. An easy way to solve this part in Excel is: =1.03^5
- Putting it all together, we have $100,000 x 1.15927 = $115,927
- In Excel, the equation is: =100000*((1+.03)^5) = $115,927

In this example, our $100,000 is worth $115,927 in 5 years. But let's change the problem a bit. Suppose instead of the 3% deposit earnings, 3% represented the rate of inflation. For example, if a parcel of land is selling for $100,000 today, what will it cost to buy the same parcel in 5 years if we account for inflation at a rate of 3%/year? The answer is the same; $115,927. Inflation has reduced the spending power of our $100,000 over 5 years by 3%/year so that in 5 years it will take $115,927 to buy the same $100,000 parcel. Our dollar is worth less tomorrow than today if we factor in inflation.

We can always modify the equation to solve for an unknown variable if we know the other variables. For example, let's change the problem to an investment that will be worth $115,927 in 5 years, what is it worth today if we discount it for time? In this statement we introduced the term discount. Discounting represents the method for determining present value (PV). It's the same as time value of money.

Recall our original FV equation: $FV = PV \times (1+ r)^{(n)}$. How can we re-express this equation to determine PV when we know FV? Let's re-write the equation and solve for PV:

$$PV = FV \div (1+ r)^{(n)}$$
$$PV = \$115,927 \div ((1 + .03)^5) = \$100,000$$
In Excel: =115927/((1+.03)^5) = $100,000

We have now confirmed that this asset will be worth $115,927 in 5 years due to inflation, but its current value is $100,000 if we discount for time.

Discount Rate

Discount rate used in CRE finance is a rate used to estimate the value of an investment when discounted for time. It is used in discounted cash flow analysis (DCF) to determine the time value of money of expected future cash flows. We will cover DCF in an upcoming section of this manual.

Since CRE is an illiquid asset that requires a substantial amount of capital to purchase and operate, investors will choose a discount rate sufficient enough to compensate them for risks in owning the property over the holding period. So what is the number? Your client will likely know, but sometimes they will ask for some input. We will cover one method in determining a discount rate shortly.

The application of discount rates in determining investment value as a component of the time value of money is not a trivial exercise. Its proper application assumes that the selected rate is the best fit for the investment we seek. The choice of discount rate should be the same as the discount rates present in the market for other similar properties. Discount rates will always be less than an investor's required rate of return because, as we learned from the Opportunity Cost of Capital section, investors will not invest if the return on capital is not greater than the cost of capital.

In the time value of money section, we chose 3% as our discount rate to solve for PV on our cash deposit. This rate was based on the expectation of a 3% annual rate of inflation to determine the future value (FV) of our investment after 5 years. Inversely, we calculated the present value (PV) after year 5 by discounting its terminal or end value by 3%. But simply selecting the rate of inflation as a discount rate in DCF does not account for the investor's risk premium. In this example, the cash deposit was risk-free, but CRE investments have significant risks. Investors will want to determine which property offers the highest risk-adjusted returns before investing.

The object of this chapter is to determine whether an investment is likely to be more profitable and to be able to compare its expected degree of profitability with other available properties to determine which property is best for the investor.

The method for determining a degree of profitability is called ***internal rate of return*** (IRR). But before we can solve for IRR, we will need to revisit the same methods used to determine CAP rates and time value of money by using a discount rate for multiple-period cash flows called discounted cash flow analysis (DCF). As we will see in an upcoming section of this manual, the internal rate of return (IRR) will be independent of external factors such as inflation. IRR is only interested in the internal cash flow performance of the property.

Going in CAP rates

Let's review our CAP rate discussion from an earlier section of this manual. CAP rates reflect the property return for a one year period and are found by dividing NOI by its current value:

CAP Rate = NOI ÷ Current Value

In our earlier discussion we used CAP rate to estimate the current value of a property based on its next year's projected net operating income (NOI), But since CAP rates can be used differently, let's call this CAP rate the going in CAP rate. The ***going in CAP rate*** refers to the entry CAP rate going into the property.

Investors will also want to determine the average return over the entire time the property is held. Therefore we will also need to estimate the value of the property when sold at the end of the holding period. This requires a different CAP rate. The CAP rate used at the end of a holding period is called the ***terminal CAP rate.***

Terminal CAP rate = Terminal NOI ÷ Expected Sales Price

The terminal CAP rate can also be viewed as the investor's risk premium, or discount rate, if used to discount future cash flows to the present. As we covered earlier, the discount rate excludes external factors such as inflation as a growth rate.

Terminal CAP rate = Expected Rate of Return - expected growth rate

CAP rates and PV

Now that we can apply our knowledge to solve for present value (PV), let's continue with our 100-unit apartment building example and add a few more data points;

Recall that the client purchased a 100-unit apartment building for $12,000,000 with a NOI of $1,122,000 and let's assume that the holding period is 10 years. The investor's required rate of return is 11%. Assume that all 100 units are newly leased with a 10-year term, so NOI and net cash flow will remain the same for 10 years. However, after year 10 the NOI is expected to increase to $1,370,000 due to higher rents. Also, rental income is expected to rise by 3%/year thereafter. What is the present value (PV) once we incorporate 10 years of growth? Keep in mind from our earlier discussion of CAP rates that NOI reflects the operating income from the last year of the holding period. Since the building will be sold after 10 years, the terminal CAP rate requires an estimate for the operating income in year 11 in order to calculate the terminal CAP rate in year 10.

Terminal CAP rate = required rate of return - growth rate
11% - 3% = 8% terminal CAP rate

$$\text{Sales price at the end of the holding period} = \frac{\$1,370,000}{.08} = \$17,125,000$$

Now we can solve for the estimated value adjusted for time value of money as we did before:

- FV = $17,125,000
- r = 0.08. In our cash deposit example, r represented rate of return (growth) for future value (FV). It can also represent a discount rate (opposite of growth) when used to determine present value. In this example r is the discount rate since we are solving for present value (PV).
- n = 10 annual periods (10 years)
- (1 + r) = (1 + .08) = 1.08

$$PV = FV \div (1 + r)^{(n)}$$
$$PV = \$17,125,000 \div ((1 + .08)^{10}) = \$7,932,188$$

We have applied an 8% discount rate to our $17,125,000 expected sales price over the 10 years period to determine that its present value = $7,932,188. But this assumes that we had $0 cash flow for 10 years until the property was sold. We will need to incorporate the 10 years of net cash flow into our formula to determine its correct present value, or total return value. Total return is the entire return which includes net cash flows over the entire period and its sales price.

To begin, let's summarize our two CAP rates:

$$\text{Going in CAP rate} = \frac{\$1,122,000}{\$12,000,000} = 0.0935 \text{ or } 9.35\%$$

$$\text{Terminal CAP rate} = \frac{\$1,370,000}{\$17,125,000} = 0.08 \text{ or } 8\%$$

For this example, the client requires an 11% unlevered (no debt) total return over 10 years less a 3% growth rate.

But what if our client isn't sure about whether the choice of the 11% required rate of return is appropriate for the market? One method to determine that rate is to determine the market CAP rates (going in) for similar buildings and to add the expected growth rate to the going in CAP rate.

Note: Clients will select a growth rate that is comparable to similar assets.

Staying with our 100-unit apartment building, determine an appropriate discount rate if the investor's going in CAP rate is 9.35% and the growth rate is 3%:

$$\textit{Discount Rate} = \text{Growth Rate} + \textbf{GOING IN CAP RATE}$$

$$\text{Discount Rate} = 3\% + 9.35\% = 12.35\%$$

Now let's compare this discount rate formula to the Terminal CAP rate formula we just used and rearrange the terms so that the equation looks similar:

$$\text{Terminal CAP rate} = \text{Required Rate of Return} - \text{Growth Rate}$$

or

$$\textit{Required Rate of Return} = \text{Growth Rate} + \textbf{TERMINAL CAP RATE}$$

Notice the similarities and differences in the two expressions with different fonts. The growth rates are the same, but when we solved for discount rate we used the Going in CAP rate, and when we solved for Required Rate of Return, we used the Terminal CAP rate instead of the Going in CAP rate. This tells us that the only difference between our investor's required rate of return and the discount rate is whether we are determining future value (FV) or present value (PV).

Based on the discount rate calculation above, we can see that the 12.35% discount rate is greater than our client's 11% required return. But the fact that the discount rate is higher than the required rate of return seems to violate our definition of discount rate and the Office of the Comptroller of Currency (OCC) rule that investors will not invest if the return on capital is not greater that the cost of capital. As we will see later in the IRR section, the calculated IRR or investor's required rate of return for this example is actually higher at 16%, therefore, we have not violated the rule. In fact, it appears that the client bought the property below market if we assume that the growth rate and the required 11% return were determined by comparing similar properties in the market. How much below market? We will explore this further in the next section.

REQUIRED RATE OF RETURN

In general, investors will demand a higher rate of return for riskier assets than for risk-free assets. Risk-free assets include U.S. Government Treasuries and 10-year corporate investment-grade bonds rated BBB.

Treasuries are often referred to as bonds regardless of their duration. However, there are several types of Treasury securities. Treasury bills (T-bills) have the shortest duration of up to 52 weeks. Treasury notes are issued with the durations between 2-10 years, while Treasury bonds have durations of 20-30 years.

Investors will expect to be rewarded for taking on more risk. CRE assets have a number of risks associated with its ownership that include market rent rate volatility, vacancy rates, and almost anything that can negatively impact cash flow or risk loan default. Time and liquidity are additional factors for elevating risk.

CRE assets are held for years and subject to market volatility throughout the holding period. As an illiquid asset, a 10-year expected hold period could be extended if market conditions are soft.

Additionally, terminal CAP rate calculations can be considerably off if expectations fall short of initial projections. Needless to say, an investor expects to be rewarded well above the 10-year Treasury note yield for holding a property for 10 years due to the higher risks of ownership.

Required returns analysis can be complicated. Fortunately, there is an abundance of software products available to do the math. To demonstrate the basic principle, let's try an example using the following formula:

Required Return = Risk Free Rate + Risk Premium

Recall from our previous example that the investor's required rate of return was 11% for the 10-year holding period. What was the investor's risk premium if the 10-year Treasury note (risk free rate) has a current yield of 2%?

To solve for Risk Premium, we can rearrange the equation as follows:

Risk Premium = Required Return - Risk Free Rate

Risk Premium = 11% - 2% = 9%

The risk premium for this investor was 9%. The investor regarded the CRE asset as riskier than the U.S. Treasury risk free rate by 9%, or, in other words, the investor required a 9% premium for taking on the additional risk. Not surprisingly, we had already calculated the Going in CAP rate at 9.35%. Going in CAP rate is another way to view the current market risk premium associated with owning similar properties and the risk premium is just another way of defining the discount rate.

Hurdle Rate
The investor's hurdle rate is the same as the required rate of return. In this example, the investor's hurdle rate was 11%.

Discounted Cash Flow Analysis (DCF)
Discounted cash flow (DCF) analysis is used to estimate value based on future cash flows by applying the same time value of money adjustments we made earlier to solve for FV and PV. As before, we will first need to know the investor's required rate of return in order to derive future value estimates and then apply that measures as a discount rate to determine PV by discounting the cash flows.

Let's try solving for present value using our 100-unit apartment building by applying the following 10-year series of net cash flows (NOI), but instead of applying the higher cash flow of $1,370,000 after year 10, we'll apply it sooner to year 7 due to an increase in rents:

Year	0	1	2	3	4	5
NOI	$0	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000
Year	6	7	8	9	10	Sale price at end of 10th Year
NOI	$ 1,122,000	$ 1,370,000	$ 1,370,000	$ 1,370,000	$ 1,370,000	$ 17,125,000

The 10th year is referred to as the ***reversion period,*** or the end of the holding period. At year 10 the investor will receive $18,495,000 which includes the sales price and the net cash flow ($17,125,000 + $1,370,000 = $18,495,000).

Let's also recall that the investor's required rate of return is 11%. Therefore, r=0.11, n= the number of reporting periods over 10 years = 10.

Recall our original PV formula and solve for PV:

$$PV = FV \div (1 + r)^{(n)}$$
$$PV = \$18,495,000 \div ((1 + .11)^{10}) = \$6.513,652$$

However, this form of the equation only factors in the reversion sale price. It ***doesn't*** include 9 years of cash flows and a final cash flow in year 10. Therefore, we need to account for each year of discounted cash flows as follows:

Note: Subscripts ($_y$) represent years

Year 1: $PV_1 = NOI_1 \div (1 + r)^{(n)} = \$1{,}122{,}000 \div (1 + .11)^{(1)} = \$1{,}010{,}811$
Year 2: $PV_2 = NOI_2 \div (1 + r)^{(n)} = \$1.122{,}000 \div (1 + .11)^{(2)} = \$910{,}640$
Year 3: $PV_3 = NOI_3 \div (1 + r)^{(n)} = \$1{,}122{,}000 \div (1 + .11)^{(3)} = \$820,\ 397$
Year 4: $PV_4 = NOI_4 \div (1 + r)^{(n)} = \$1{,}122{,}000 \div (1 + .11)^{(4)} = \$739{,}096$
Year 5: $PV_5 = NOI_5 \div (1 + r)^{(n)} = \$1.122{,}000 \div (1 + .11)^{(5)} = \$665{,}852$
Year 6: $PV_6 = NOI_6 \div (1 + r)^{(n)} = \$1{,}122{,}000 \div (1 + .11)^{(6)} = \$599{,}867$
Year 7: $PV_7 = NOI_7 \div (1 + r)^{(n)} = \$1{,}370{,}000 \div (1 + .11)^{(7)} = \$659{,}872$
Year 8: $PV_8 = NOI_8 \div (1 + r)^{(n)} = \$1{,}370{,}000 \div (1 + .11)^{(8)} = \$594{,}479$
Year 9: $PV_9 = NOI_9 \div (1 + r)^{(n)} = \$1{,}370{,}000 \div (1 + .11)^{(9)} = \$535{,}567$
Year 10: $PV_{10} = NOI_{10} \div (1 + r)^{(n)} = \$1{,}370{,}000 \div (1 + .11)^{(10)} = \$6{,}513{,}652$

Notice how the present values decreased throughout the holding period. We had the same net cash flow in those years, but the discounting mechanism did its job. The value dropped due to the time value of money. Note that the value was higher in year 7 than in year 6 because of an increase in NOI by $248,202 due to a rent increase.

Now that we have the PV for years 1-10 cash flows and expected sales price, what does it mean? Recall that we are interested in solving for the present value of this investment including all the cash flows during the holding period discounted to the current period. Therefore, we need to add the PV values for all 10 years to determine its total return: PV = $13,050,233. This is the estimated present value of the property yielding the investor an average total return of 11%. Since the client paid $12,000,000 ($1,050,233 below the estimate), the return is higher for our client. In fact, we already saw this when we calculated our discount rate at 12.35% which is 1.35% greater than the client's required rate of return of 11%. The seller could have negotiated for a higher price up to $13,050,233 and the client might have paid it based on the client's required rate of return.

Now that we've gone to all this trouble to calculate the discounted cash flow (DCF) value, there's an easier way to solve this using the following Excel input:

=XPNV(0.11,B1:B11,A1:A11) = $13,044,679.08

Note that the Excel value output is slightly lower than our periodic summary above because we chose to round the 10 discounted cash flows above to the closest dollar, therefore introducing some error in the output.

Also, the 10 manual calculations do not account for unequal periods associated with the actual calendar dates and a 365 day calendar year. The difference in Excel between the NPV and XNPV functions is that XNPV includes actual days rather than using years as n=1,2,3... Therefore, if the period began on June 12th, for instance, it would accurately account for the partial year. For this reason, the Excel output using XNPV is always more accurate. We will do the same for IRR by using XIRR.

Note that instead of 10 we have 11 periods. Recall that the 10th year cash flow is taken from the 11th period. The first year's cash flow is $0 since the property was just acquired and we have yet to complete an annual period. The period is traditionally called time 0.

Also, Excel requires calendar dates for the calculation. January 1, 2018 was arbitrarily selected as the beginning period with each cash flow reported on January 1 of each subsequent year. A1:A11 represent the dates when the cash flows are reported and B1:B11 are the cash flows over the 10 year period.

The following table is a summary of the Excel input for dates and cash flows. Note that year 0 represents the first year of ownership prior to its full year of cash flow.

	A	B
	Year	Cash Flow (NOI)
0	1/1/2018	$0
1	1/1/2019	$ 1,122,000
2	1/1/2020	$ 1,122,000
3	1/1/2021	$ 1,122,000
4	1/1/2022	$ 1,122,000
5	1/1/2023	$ 1,122,000
6	1/1/2024	$ 1,122,000
7	1/1/2025	$ 1,370,000
8	1/1/2026	$ 1,370,000
9	1/1/2027	$ 1,370,000
10	1/1/2028	$ 18,495,000

Now let's update our spreadsheet:

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	$ 1,622,000									
Projected Gross Income +	$ 1,800,000									
Other Income Sources -	$ 50,000									
Vacancy Loss -	$ 180,000									
Credit Loss -	$ 18,000									
Rent Abatements	$ 30,000									
Net Operating Income (NOI)	$ 1,122,000									
Effective Gross Income -	$ 1,622,000									
Operating Expenses + CapEx	$ 450,000									
Property Taxes	$ 100,000									
Insurance	$ 45,000									
Security	$ 20,000									
Trash Removal and Recycling	$ 5,000									
Non-Tenant Reimbursed Utility Costs	$ 25,000									
Maintenance and Janitorial	$ 200,000									
Non-Tenant Reimbursed CAM Expenses	$ 30,000									
Replacement Reserves	$ 25,000									
CapEx	$ 50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	$ 250,000									
Gross Scheduled Income (GSI)	$ 20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	$ 1,122,000									
Current Value	$16,520,000									
Cash Flow Before Taxes (CFBT)	$551,798.00									
Net Operating Income -	$ 1,122,000									
Debt Service (P&I)	$ 570,202									
Cash-on-Cash Return Before Taxes	10.51%									
CFBT ÷	$ 551,798									
Total Cash Invested	$ 5,250,000									
Cash Flow After Taxes (CFAT)	$ 464,061									
CFBT -	$ 551,798									
Tax Liability	$ 87,736.74									
Interest Paid +	$ 355,115									
Depreciation +	$ 349,091									
Net Taxable Gain/Loss	$ 417,794									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	$ 87,736.74									
Periodic Cash Flows - NOI	$ 1,122,000	$1,122,000	$1,122,000	$1,122,000	$1,122,000	$1,122,000	$1,370,000	$1,370,000	$1,370,000	$18,495,000
DCF (Unlevered)	$13,044,679									
Estimated Terminal Sales Price at Reversion										$ 17,125,000
Terminal CAP Rate										8.00%
Going in CAP Rate	9.35%									
Discount Rate	12.35%									
Risk Premium	9%									

It is important to note that the DCF analysis we just completed excluded debt service and CapEx. Since our 100-unit apartment building was leveraged at 60% LTV, let's see how this impacts our DCF analysis if we choose cash flow before taxes (CFBT) instead of NOI.

To begin, we need to revise our Excel table to incorporate CFBT and let's increase the cash flows from $551,798 to $700,000 in years 7-10 due to the anticipated higher rents and solve for our terminal value:

$$\text{Sales price at the end of the holding period} = \frac{\$799,798}{0.08} = \$9,997,475$$

	A	B
	Year	Cash Flow (CFBT)
1	1/1/2018	$0
2	1/1/2019	$ 551,798
3	1/1/2020	$ 551,798
4	1/1/2021	$ 551,798
5	1/1/2022	$ 551,798
6	1/1/2023	$ 551,798
7	1/1/2024	$ 551,798
8	1/1/2025	$ 799,798
9	1/1/2026	$ 799,798
10	1/1/2027	$ 799,798
11	1/1/2028	$ 10,797,273

Note that Year 10 on the table above includes the sale price at the end of the holding period plus CFBT for year 10, the estimated cash flow for year 10 ($9,997,475 + $99,798 = $10,797,273). Using this data, we can calculate the PV formula using Excel.

Now let's solve again for the Going in and Terminal CAP rates using our new PV calculation:

$$\text{Going in CAP rate} = \frac{\$551,798}{\$6,574,280} = 0.0839 \text{ or } 8.39\%$$

$$\text{Terminal CAP rate} = \frac{\$1,370,000}{\$17,125,000} = 0.08 \text{ or } 8\%$$

Is this in line with the client's required rate of return? Recall how we solved for discount rate:

Discount Rate = Growth Rate + Going in CAP rate

Discount Rate = 3% + 8.39% = 11.39%

Absolutely! The discount rate of 11.39% is above the client's required rate of return, so even when viewed with leverage, the client still negotiated a good deal. Recall that discount rate and required rate of return are the same, except that the latter represents FV and the former, PV.

***Note**: It's important to make a distinction as to whether the analysis for DCF, NPV, or IRR is levered (debt) or unlevered (no debt). In this case, the levered discount rate of 11.39% is lower compared to the unlevered 12.35% discount rate. The levered outcome offers a more accurate picture of the cash flow performance for this investment since leverage was used.*

Here's the updated spreadsheet reflecting levered and unlevered DCF:

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	$ 1,622,000									
Projected Gross Income +	$ 1,800,000									
Other Income Sources -	$ 50,000									
Vacancy Loss -	$ 180,000									
Credit Loss -	$ 18,000									
Rent Abatements	$ 30,000									
Net Operating Income (NOI)	$ 1,122,000									
Effective Gross Income -	$ 1,622,000									
Operating Expenses + CapEx	$ 450,000									
Property Taxes	$ 100,000									
Insurance	$ 45,000									
Security	$ 20,000									
Trash Removal and Recycling	$ 5,000									
Non-Tenant Reimbursed Utility Costs	$ 25,000									
Maintenance and Janitorial	$ 200,000									
Non-Tenant Reimbursed CAM Expenses	$ 30,000									
Replacement Reserves	$ 25,000									
CapEx	$ 50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	$ 250,000									
Gross Scheduled Income (GSI)	$ 20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	$ 1,122,000									
Current Value	$ 16,520,000									
Cash Flow Before Taxes (CFBT)	$ 551,798.00									
Net Operating Income -	$ 1,122,000									
Debt Service (P&I)	$ 570,202									
Cash-on-Cash Return Before Taxes	10.51%									
CFBT ÷	$ 551,798									
Total Cash Invested	$ 5,250,000									
Cash Flow After Taxes (CFAT)	$ 464,061									
CFBT -	$ 551,798									
Tax Liability	$ 87,736.74									
Interest Paid +	$ 355,115									
Depreciation +	$ 349,091									
Net Taxable Gain/Loss	$ 417,794									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	$ 87,736.74									
Periodic Cash Flows - NOI	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,370,000	$ 1,370,000	$ 1,370,000	$ 18,495,000
DCF (Unlevered)	$ 13,044,679									
Estimated Terminal Sales Price at Reversion										$ 17,125,000
Terminal CAP Rate										8.00%
Going in CAP Rate	9.35%									
Discount Rate	12.35%									
Risk Premium	9%									
Periodic Levered Cash Flows (CFBT)	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 749,798	$ 749,798	$ 749,798	$ 10,797,273
DCF PV Estimate (Levered)	$ 6,574,280									
Levered Terminal CAP Rate										8%
Levered Going In CAP Rate	8.39%									

NET PRESENT VALUE (NPV)

We are almost ready to determine IRR, but first we will need to solve for net present value (NPV).

Net present value of an investment is simply its present value (PV) of cash flows minus its cash outflows. Cash outflow in our example is the initial investment of $12,000,000.

NPV = PV - Initial Cash Outflow (Purchase Price)

Having already learned how to calculate PV by discounting future cash flows plus the terminal sales price over the entire holding period, we can now subtract our initial cash outflow from PV. Recall that our initial cash outflow is the purchase price of the property of $12,000,000. Therefore,

NPV (unlevered) = $13,044,679 - $12,000,000 = $1,044,679
NPV (levered) at 60% LTV = $6,574,280 - $4,800,000 = $1,774,280

As long as NPV is greater than $0, the investment is worth taking. Also notice that the levered NPV is higher than the unlevered. This is yet another example of the power of leverage.

Internal Rate of Return (IRR)

We have now reached one of the most important financial metrics used in CRE, the internal rate of return. The internal rate of return of an investment uses multi-period net cash flows over the holding period and an estimated sales price for the property at the end of the holding period to estimate its degree of profitability. IRR provides an estimate of the time averaged rate of return over the period. The reference to "internal" assumes that there are no external factors such as inflation affecting the return calculation. IRR is an easy method to compare the returns of different investments.

Since IRR is a measure of likely profitability, it reasons that the larger the IRR value, the more likely the investment will be profitable. Anything greater than 0 should be profitable.

Now we can add to our previous definitions of discount rate and required rate of return to include IRR in a similar context. IRR is the required rate of a return of an investment applied as a discount rate to solve for NPV such that NPV = 0.

IRR: NPV = 0.

Another way to view it is that IRR is the rate that makes the PV of net cash inflows = cash outflows. To accomplish this, we need to determine the discount rate that makes the discounted cash flows (PV) of $13,044,679 calculated earlier, using an 11% rate, equal to $12,000,000, the initial cost of the investment. In other words, we need to determine a discount rate that will discount the PV from $13,044,679 to $12,000,000 such that:

NPV = $12,000,000 (PV) - $12,000,000 (the cash out to purchase the property) = 0

The math associated with calculating this is very complicated, but fortunately Excel has an easier solution:

Let's first start with a table that reflects the cash inflows and outflows (denoted by parentheses) by dates and use XIRR rather than IRR because the result will be more precise for uneven periods as discussed in the DCF section of this manual:

A	B	C
Periods	Unlevered	Levered
1/1/2018	$ (12,000,000.00)	$ (4,800,000.00)
1/1/2019	$ 1,122,000.00	$ 551,798.00
1/1/2020	$ 1,122,000.00	$ 551,798.00
1/1/2021	$ 1,122,000.00	$ 551,798.00
1/1/2022	$ 1,122,000.00	$ 551,798.00
1/1/2023	$ 1,122,000.00	$ 551,798.00
1/1/2024	$ 1,122,000.00	$ 551,798.00
1/1/2025	$ 1,370,000.00	$ 799,798.00
1/1/2026	$ 1,370,000.00	$ 799,798.00
1/1/2027	$ 1,370,000.00	$ 799,798.00
1/1/2028	$ 18,495,000.00	$ 10,797,273.00

Excel:
=XIRR(B1:B11,A1:A11,0,11) for Unlevered = 12.30%

An IRR of 12.30% implies that the investor's required rate of return is actually 12.30% over the 10 year period. A discount rate of 12.30% will set the unlevered NPV = 0.

=XIRR(C1:C11,A1:A11,0.11) for levered = 17.39%

An IRR of 16.06% implies that the investor's required rate of return is actually 16.06% over the 10 year period. A discount rate of 16.06% will set the levered NPV = 0.

Note that an **11%** investor rate was used in the Excel formula as the required third variable when solving for IRR. Excel requires an input here which is just a guess of what you think the required rate of return will be (must be a positive value). If a guess is omitted, Excel will still calculate IRR using .10 as the default value.

Since IRR is a measure of profitability, it makes sense that the higher the IRR, the more likely the investment will be profitable. As we can see from our IRR output above, the levered and unlevered case are both expected to be profitable. But once again, the use of leverage measures a higher likelihood of profitability.

See our final spreadsheet on the next page.

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	$ 1,622,000									
Projected Gross Income +	$ 1,800,000									
Other Income Sources -	$ 50,000									
Vacancy Loss -	$ 180,000									
Credit Loss -	$ 18,000									
Rent Abatements	$ 30,000									
Net Operating Income (NOI)	$ 1,122,000									
Effective Gross Income -	$ 1,622,000									
Operating Expenses + CapEx	$ 450,000									
Property Taxes	$ 100,000									
Insurance	$ 45,000									
Security	$ 20,000									
Trash Removal and Recycling	$ 5,000									
Non-Tenant Reimbursed Utility Costs	$ 25,000									
Maintenance and Janitorial	$ 200,000									
Non-Tenant Reimbursed CAM Expenses	$ 30,000									
Replacement Reserves	$ 25,000									
CapEx	$ 50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	$ 250,000									
Gross Scheduled Income (GSI)	$ 20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	$ 1,122,000									
Current Value	$ 16,520,000									
Cash Flow Before Taxes (CFBT)	$ 551,798.00									
Net Operating Income -	$ 1,122,000									
Debt Service (P&I)	$ 570,202									
Cash-on-Cash Return Before Taxes	10.51%									
CFBT ÷	$ 551,798									
Total Cash Invested	$ 5,250,000									
Cash Flow After Taxes (CFAT)	$ 464,061									
CFBT -	$ 551,798									
Tax Liability	$ 87,736.74									
Interest Paid +	$ 355,115									
Depreciation +	$ 349,091									
Net Taxable Gain/Loss	$ 417,794									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	$ 87,736.74									
Periodic Cash Flows - NOI	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,122,000	$ 1,370,000	$ 1,370,000	$ 1,370,000	$ 18,495,000
DCF (Unlevered)	$ 13,044,679									
Estimated Terminal Sales Price at Reversion										$ 17,125,000
Terminal CAP Rate										8.00%
Going in CAP Rate	9.35%									
Discount Rate	12.35%									
Risk Premium	9%									
Periodic Levered Cash Flows (CFBT)	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 551,798	$ 749,798	$ 749,798	$ 749,798	$ 10,797,273
DCF PV Estimate (Levered)	$ 6,574,280									
Levered Terminal CAP Rate										8%
Levered Going In CAP Rate	8.39%									
NPV (Levered)	$ 1,774,280									
NPV (Unlevered)	$ 1,044,679									
IRR (Levered)	16.06%									
IRR (Unlevered)	12.30%									

QUIZ 2

Choose the correct answers for the following questions:

1. Identify the correct sequence when calculating the following measures (1-4):

   ___ PGI

   ___ NOI

   ___ EGI

   ___ CapEx allowance

2. Which expenses below are included in the OPEX of a property?

   a) Property taxes

   b) Non-reimbursed Common Area Maintenance (CAM)

   c) Debt service

   d) All of the above

   e) A and B

3. Calculate EGI for the following example:
   An investor owns a 10-unit fully leased apartment building with equal monthly rents of $1500/month. 5 of the 10 tenants pay an additional fee per month of $100 for parking. Assume vacancy and credit losses are $0 and no rent abatements were given.

4. Now calculate the same apartment building's ***annual*** OPEX and NOI using the following expenses:

Monthly Expenses	
Property Taxes	$ 2,000.00
Debt Service	$ 4,000.00
Insurance	$ 450.00
Non-Tenant Reimbursed Utility and CAM Expenses	$ 700.00
Replacement Reserves	$ 500.00
Total Annual OPEX	

SCENARIO BASED LEARNING

Exercise 2

Utilizing our 100-unit apartment building example and spreadsheet in this section, suppose an investor wants to know how increasing the debt service from $570,202 to $650,000 will affect the current levered IRR of 16%.

1. Which of the following variables would first require an adjustment?
   a) CFAT
   b) NPV
   c) CFBT
   d) NOI

2. Once the adjustment is made, how will this change CFBT?
   a) CFBT increases
   b) CFBT is not affected
   c) CFBT is reduced

3. Calculate CFBT with the higher debt service for Years 1-6. What did you determine?
   a) $79,798
   b) $472,000

4. Next, plug the new CFBT numbers for Years 1-6 and assume that the projected increase in cash flows from higher rents in Years 7-10 will result in a new CFBT of $620,000 (once the higher debt service is accounted for). Now, recalculate NPV using Excel. Did NPV increase or decrease?

5. Based on this information, do you think IRR increased or decreased?

There are three ways to calculate IRR:

a. Use the IRR or XIRR function in spreadsheet software
b. Use a financial calculator
c. Use an iterative process where the analyst tries different discount rates until the NPV equals zero (Goal Seek in Excel can be used for this)

6. What's your new IRR value? Did it increase or decrease?

Based on this information, do you think your investor would pursue this option if cash wasn't an issue? Or if cash was an issue, does this investment still meet the investor's return requirement?

CHAPTER 3: CAPITAL MARKETS

ASSET/PROPERTY MARKET

Real estate is an asset and a part of the asset market, along with fixed income securities and equities. The real estate asset market is more commonly referred to as the property market, which consists of residential and commercial properties.

Capital markets, on the other hand, are where capital is exchanged between sellers and buyers of capital. Recall that our definition for capital is a financial asset such as money. Capital markets can be either public or private markets. Common public markets include stocks and bonds while private markets can include bank loans and private equity funds. One of the primary differences between public markets and private markets is that private markets lack liquidity. The CRE market is a private illiquid market. REITs, on the other hand, can be a part of the public or private market. Publicly traded REITs such as Boston Properties and Vornado are liquid assets trading millions of shares a day.

Buyers of capital are borrowers such as investors and sellers or capital are lenders such as banks. Investors can actually be either buyers of capital or sellers of capital. For example, some investors lend money to other investors for the loan yield which is considered a debt asset because it is a claim to future cash flows paid by the borrower; while owners of CRE properties may seek to borrow capital to increase their leveraged position in the property. CRE properties are considered equity assets because it is a claim to the net cash flows after debt service.

Availability of Capital and Credit

Commercial real estate loans are less prevalent than residential loans. CRE lending sources include:

- Commercial Banks
- REITs
- Pension Funds
- Insurance Companies
- Private Equity
- Crowdfunding

Commercial real estate mortgages can be pooled together to form a security called a Commercial Mortgage Backed Security (CMBS) that is sold to investors and held as a debt asset for its yield. The CMBS market provides the greatest amount of liquidity to the commercial lending market for commercial loan availability.

TYPES OF FINANCING, UNDERWRITING, AND STRUCTURE

Agents should be familiar with the various types of lending structures in CRE. Commercial property owners are not unlike residential owners in that they seek to obtain the best financing terms available.
The standard commercial loan is a permanent loan pledging the property as security

for an intermediate term. Commercial loans typically have terms of up to 10 years, but some may be longer depending on the lender. When commercial lenders hold the loans as a part of their portfolio, terms of 10 years or less are required by their internal lending policies as a means to limit their long-term exposure to debt.

Commercial loan terms include fixed-rate and variable-rate mortgages. The amortization schedule can be as high as 30 years, but since its term is often limited to 10 or fewer years, there is a balloon payment due at the end of the term. There is no guarantee that the loan can be refinanced at the end of the term. Market conditions and availability of credit will play an important role in whether additional financing is possible. The process of refinancing a commercial loan is called "rolling over debt," or just "rollover."

Non-recourse Loans

Unlike residential loans, commercial loans are ***non-recourse loans*** which means that the lender's sole remedy in case of default is the property. CRE owners typically will not offer personal guarantees for the loan, so lenders will set stricter underwriting standards than their residential counterparts.

Permanent financing underwriting requirements will limit the banks' exposure by setting a lower loan to value ratio (LTV), typically between 60% and 70% LTV. The lower ratios will ensure that the bank is more likely to recover the loan in case of a market downturn and default by the borrower.

Due-on-Sale Clause

Residential mortgages often have due-on-sale clauses that prohibit the borrower from assigning the loan to the buyer (loan assumption) when the property is sold. Commercial loans, however, usually permit assumption of the loan because, unlike residential where the loans are based on the creditworthiness and income of the buyer, commercial loans are underwritten based on the financial performance of the property. As long as the property is performing well financially, the individual borrower is less important.

Debt Service Coverage Ratio (DSCR)

Underwriting standards for qualifying the income that a property must generate in order to qualify for a loan is done by comparing its debt to its income. In residential lending, the debt-to-income ratio is common for assessing the financial means of an individual borrower. It's the same for commercial lending except that the property is now treated as the borrower. The method for determining a qualifying ratio in commercial lending is called the debt service coverage ratio (DSCR). DSCR is found by dividing its NOI by the annual debt service required by the loan. A ratio of 1.2 or better is typical for underwriting. A ratio of 1.0 means that the net income is just enough to cover the debt with nothing left over and no margin for error; a ratio of 1.2 means that there's a 20% buffer built into the income performance of the property to cover its debt.

Example: let's revisit our 100-unit apartment building. The NOI is $1,122,000 and its

debt service is $570,202. Determine the DSCR.

DSCR = NOI ÷ Debt Service
DSCR = $1.122,000 ÷ $570,202 = 1.97

Since the DSCR underwriting standards require a ratio of 1.2 or better to qualify, this property is a strong candidate for a loan with a ratio of 1.97. In other words, the buffer margin is almost double its debt obligation.

Construction/Take-Out
Unlike permanent loans, construction loans are riskier for the lender and typically have a shorter duration of 3 years or less. The purpose of these loans is to complete the construction and can be paid off from the financing associated with the permanent loan.

Construction loan disbursements are made gradually as the development progresses. Construction loans are rarely made without a commitment from a lender for the permanent loan first. The permanent loan for new construction is called a take-out loan because it is used to take out the construction loan (pay it off).

Given the short-term duration of construction financing, commercial banks are the typical sources for financing a construction loan. Rates on these loans vary, but are often tied to a similar duration bond rate and, as such, will float based on the performance of that bond.

Small Business Association (SBA) Loans
The SBA offers CRE loans to help small businesses grow or get started. These loans are guaranteed loans by the SBA and processed by commercial banks for businesses that may not have established adequate credit to qualify for a loan. SBA loans for CRE can range from $350,000 to $5,000,000 for as long as 25 years. Construction and permanent financing options are available.

Commercial Bridge Loans
Commercial bridge loans are short term loans to acquire property when permanent financing is not available because the property requires significant repairs before it can be underwritten by a lender. A common use for these loans is to acquire distressed properties that require significant renovations and to complete those renovations so that permanent financing is an option.

Capital Structure
Capital structure in finance is an important concept for agents to understand. It pertains to a particular structure where debt and equity interests are assigned and ranked (subordinated).

We have already covered the effects of leverage on the property performance and the different lending sources available for financing. But in our discussion about permanent financing we mentioned the lender's LTV requirement of 60-70% and

assumed the difference would be made up with cash from the investor/borrower. However, other alternatives are available to reduce the amount of capital required by the investor to finance a property. The alternatives can involve additional lenders that take an equity stake in the property, or strictly a debt position where the loan acts similarly to a second mortgage, or a combination of both.

1. Mezzanine Financing

The term mezzanine refers to an intermediate floor of a building. Mezzanine debt can be thought of as the middle lender. This form of lending carries significant risks for the lender. As a middle lender, the loan terms will require that the loan be subordinated, or placed below the permanent loan in priority. The permanent loan would be considered the more "senior" loan receiving the benefit of being paid off before the others in case of default.

Mezzanine lenders will charge rates higher than permanent lenders because of the added risks of default by taking a position subordinate to the permanent lender's 60-70% LTV.

Mezzanine lenders will sometimes provide additional financing up to 95% LTV. Even though the default risks are elevated, the higher yields can be appealing to mezzanine lenders.

Mezzanine lenders will often take a piece of the equity and a piece of the debt structure. The advantage of the equity piece is that in the case of a default, the mezzanine lender can convert their interest into an equity interest, allowing them to take control of the property prior to default with the permanent lender who in turn would sell the assets. Depending on the outcome of that sale, the mezzanine lender could lose their entire investment if the proceeds of sale are not enough to cover their loan once the permanent loan has been satisfied. By taking control sooner, mezzanine lenders can put in place a new management team to improve upon the performance of the property and preserve their investment.

2. Common and Preferred Equity

Common equity investors are subordinated to preferred equity investors the same as you would see with common shareholders of a company's stock compared with its preferred shareholders. Preferred equity interests are then subordinated to any secured debt on the property to include the permanent financing lender and mezzanine lender.
Common and preferred equity investors have an ownership interest in the property's equity, but that interest is not secured. They have no recourse in the case of default. Common equity interests are not guaranteed a return, but preferred equity investors typically receive a dividend, or yield for their investment.

Typical capital structure for a property will assign the property ownership a common equity interest with no guarantee of a return.

3. Waterfall IRR Model

Equity waterfall models can be very complex and are beyond the scope of this course, but agents should at least be familiar with the concept.

In essence, a waterfall model is used to split up the net cash flow payouts or profits to different investment partners in a variety of ways. Incentives are built into the model to incentivize the operating partner (the partner managing the project) to exceed return expectations with superior performance and in turn receive a bonus. This bonus is called a promote. Waterfall models are used frequently with high value development projects.

Different levels of required returns of IRRs will be identified as a return hurdle. Payouts to partners will be based on the property's ability to achieve these IRR hurdles. Thus, the waterfall concept can be visualized as a waterfall where partners are paid along the waterfall path once certain IRR hurdles have been achieved.

EXTERNAL FACTORS TO CONSIDER IN CRE MARKETS

When most people think about commercial real estate, the first thing that comes to mind is the image of buildings or structures such as shopping malls, retail, office, factories, etc. But as we've just learned, commercial real estate is primarily about money. It's an investment that needs to be managed.

No market, including the commercial real estate market, just happens by accident. They are carefully planned and developed. City planners develop urban growth plans that attempt to maximize land use for both public welfare and commerce. Prior to discussing the various CRE property types, we will first need to understand how external factors affect CRE markets and how CRE land use in urban centers is segmented and developed for efficiency in commerce, so that we can begin to more narrowly define the characteristics of a particular area or location. Agents should be familiar with the characteristics of a commercial real estate property, including its land use.

Market Efficiency

Markets that trade with a great deal of transparency and frequency, such as the NASDAQ, are considered efficient markets because buyers are able to access a great deal of information about a particular stock prior to investing and the price of the stock reflects all of the information about that company that is publicly known. CRE markets, however, are considered inefficient markets because of the limited amount of information available to buyers due to the small number of transactions and the fact that many of these transactions are confidential and not publicly available for viewing.

Efforts to increase greater transparency in CRE market efficiency have been spearheaded by the National Council of Real Estate Investment Fiduciaries (NCREIF) and Real Capital Analytics (RCA) which are two of the largest organizations in the U.S.

that track the performance of institutional properties and aggregate that data for distribution to its membership.

Note: *Lack of market transparency is primarily concentrated in the higher valued CRE asset space, so agents working with smaller properties may find that the availability of transactional information for non-institutional properties is more accessible.*

The fact that no two properties are identical is another reason why CRE markets are inefficient. To illustrate, consider the coffee market. If your favorite flavor of coffee is not available at one location, there are plenty of substitutes available at the same store. In the CRE market, however, properties cannot be easily substituted for one another. Properties by their nature are unique and are permanently attached to the land, so you cannot simply identify another property at a different location as an identical substitute for the first property. Even if two identical buildings are built at the same time, they cannot be built on the same piece of land.

Market Classifications

Large institutional investors view certain cities as more investable than other cities due in part to the diversity of their economic bases, educational levels, higher per capita incomes, and livability scores. These types of cities are typically more stable during weak economic times and are called ***gateway cities.*** Institutional investors view CRE assets located in these types of cities as a part of their core holdings. There are only a few global gateway cities in the U.S. They include San Francisco, Los Angeles, Chicago, Washington, D.C., New York, and Boston. These cities tend to have the lowest CAP rates and highest property values. Premier assets held in gateway cities are called trophy assets, valued as some of the most expensive properties in the world.

Traditional U.S. CRE market classifications are divided into three tiers based on their degree of investment risk. Tier 1 cities have a well-established CRE market with an expensive and stable real estate market and include the gateway cities listed above. Tier 2 cities are markets and experiencing strong demand and growth such as Dallas and Austin. Tier 3 cities are markets that have yet to realize growth or may even be in decline, such as Detroit.

Market Segmentation

The Appraisal Institute defines real estate markets as a "group of individuals or firms that are in contact with one another for the purpose of conducting real estate transactions." Real estate markets are divided into different areas known as metropolitan statistical areas, or MSAs, that are designated by the U.S. Office of Management and Budget (OMB) as urbanized areas with a core city and surrounding region and with a population of greater than 50,000 residents. MSAs share a common economic and social base. In Texas, there are 24 MSAs such as Austin-Round Rock, Amarillo-Borger, Midland-Odessa, Houston-The Woodlands-Sugar Land, San Antonio-New Braunfels, and Dallas-Fort Worth-Arlington to name a few.

Real estate markets are segmented by different property types and uses. The method

of identifying sub-markets within a market is called market segmentation.

Additional segmentation is found in cities where the urban center differs in economic and social base from the surrounding population within the same MSA. For example, central business districts (CBDs) are urban financial districts or city centers where the concentration of social and economic activity is business. These areas typically have a higher concentration of CRE properties such as office or industrial than their surrounding communities within the same MSA. Areas designated exclusively as office districts, medical districts, retail districts, or industrial districts are additional examples of market segmentation.

Market Cycles
CRE market areas are subject to the same financial and economic life cycles as any other market. The Appraisal Institute defines market cycle periods as the growth stage, stability stage, decline stage, and revitalization stage. The economic vitality of an area will drive demand for CRE properties. If an area is experiencing high crime rates and high unemployment levels, demands for many types of CRE to include apartments, office, and retail can be expected to fail. Environmental regulations and tax rates set by the local government can also impact demand for a given area.

Real Estate Cycles
Real estate markets are just as susceptible to economic cycles as any other market. Real estate market boom-and-bust cycles tend to last longer than other market cycles due to the inefficiencies of the CRE market.

Land Use, Compatibility, and Boundaries
Land use patterns have a great deal of impact on the value of property in a given area. Land in highly dense urban areas may have more value than outlying areas due to its proximity to the urban center. Urban boundaries are typically formed by residents sharing a similar economic and social base. These boundaries in turn drive the demand for CRE in order to maximize highest and best use of the land. For example, high-end retailers will locate to areas closest to their customer demographics, which in turn drive future demand in the area from people and businesses with a similar social and economic base.

CRE properties are located in areas that are compatible for their purposes. For instance, heavy industrial sites are typically located away from residential areas, but may be ideally situated near airports or coastal shipping ports. Local zoning restrictions will determine the types of uses permitted in a given area.

Space Market
The space market is simply the market where CRE properties exist for use by tenants. It's the supply and demand for space where the level of demand drives prices for rents. Demand for CRE properties varies from one property type to another and by location. For example, demand for retail properties in 2019 is lower, whereas demand for industrial warehouse space is higher, and the demand will not be the same in Houston as it is in El Paso. Market demand will dictate the types of CRE properties

that are best suited for a particular area.

Properties compete for quality tenants, thus property owners and managers must understand the market needs of tenants in order to assess how competitive they are in the market. To accomplish this, they will need to define their market area by property type, time, and distance to travel. Customers are not likely to travel long distances for retail goods that can be purchased closer to home or office, whereas industrial space users will be more concerned with a location closer to primary transportation routes or rail lines. Owners and managers will price their rents based on their property's competitiveness in the market.

Supply and Demand
Supply of available CRE space will vary depending on the demand. If demand is high and supply is low, rents can be expected to rise. Alternatively, when supply exceeds demand, rents can be expected to fall, and when supply and demand are equal, renters and landlords are satisfied with the rent. This is known as an ***equilibrium rent***.

When demand exceeds supply, additional space is required by the market which can result in new construction if the cost of development can be recovered from rents high enough to justify the expense of developing a new property. This is known as the ***replacement cost of rent*** which also assumes that once the excess demand for space is satisfied, development will stop.

Gross and Net Absorption
Gross absorption measures the total amount of space leased in a market over a period of time. Net absorption is the change in leased space over a period of time. If the net absorption is increasing, vacancies are decreasing so it is a measure of available space inventory. The rate of absorption will affect how property managers price their rents.

Market Vacancy Rate
A complement to the absorption definition above is market vacancy rate. Market vacancy rate is determined by taking the total amount of vacant space in a market and dividing it by the amount of built space in that market.

For example, determine the market vacancy rate if 600,000 square feet out of a total of 750,000 square feet of built space is leased.

Answer: We need to first determine the amount of vacant space:
750,000 total built - 600,000 leased = 150,000 square feet of vacant space.

Therefore:
Total Amount Vacant Space ÷ Total Amount Built Space = Vacancy Rate
150,000 square feet ÷ 750,000 square feet = 20% Vacancy Rate

Months Supply

A good measure for how long it will take for the market to absorb the available space is the months supply indicator. For example, suppose we have 150,000 sf of vacant space plus an additional 50,000 sf under construction and the net absorption is 10,000 sf/month. What is the months supply?

The formula for determining months supply is as follows:
Months Supply = (Vacant Space + Under Construction) ÷ Net Absorption (Months)

Months Supply =
(150,000 sf vacant + 50,000 sf under construction) ÷ 10,000 sf/mo =
20 months supply
Note: if net absorption is given as an annual number, simply divide that number by 12 to determine its monthly net absorption

Land Scarcity
Land scarcity is another important factor to consider when evaluating CRE markets. Land scarcity refers to a condition where the available land for property is scarce, or insufficient to satisfy demand. Densely populated urban centers such as New York are one example where the availability of land for new development is scarce. When land is scarce and demand is high, rents can be expected to rise. When rents rise high enough it will lead to new development, developers will attempt to locate existing developed sites where redevelopment is justified and can be profitable.

QUIZ 3

Choose the correct answers for the following questions:

1. Space market factors include which of the following (circle all that apply)?

   a) net absorption

   b) location

   c) vacancy rates

   d) competition

2. Determine the months supply in an area with 100,000 sf vacant space and an annual absorption rate of 60,000 sf.

3. Determine the market vacancy rate in an area with 350,000 sf vacant space in a market with a total of 3,500,000 sf of built space.

SCENARIO BASED LEARNING

Exercise 3
WeWork Case Study
WeWork is a CRE disruptor to the office space market. Their offices offer a shared space opportunity for any size business thereby changing office demand in the markets they serve.

Suppose you are representing an investor considering an office building to purchase in a market where WeWork has announced plans to begin operations in the coming months. Discuss amongst your group the potential effects on office space square footage requirements per employee due to market disruptors such as WeWork, and how those market changes may affect office property returns in that market as well as future value expectations.

- Will businesses demand less office space if a shared office opportunity exists?
- Will conventional office buildings ultimately have to adapt to this model or is this trend likely to be short lived?

Search for a recent article about WeWork's recent financial problems and discuss their struggles. Decide whether their success story will continue or be short lived. Based on your conclusions, what are the future implications for the office space market?

CHAPTER 4: MAJOR TYPES OF CRE INVESTMENTS

OFFICE SPACE

As we begin our discussion about the major types of CRE investments, it's important to note that the structure and design of properties change to meet market demand. For example, rectangular shaped buildings with straight lines were common for an office building built 60 years ago. Today, modern designs include various engineering marvels with curved lines and shapes.

Developers of CRE properties seek to build the most competitive building of its type in order to attract the highest possible rents for their target market. The evolution of building design reflects the changing attitudes toward the environment and developers, businesses, and the community can work together to develop buildings that are more compatible with the surrounding area and offer both a functional and efficient space for business.

Office Building

The National Association for Industrial and Office Parks (NAIOP) defines an office building as "a structure providing environments that are conducive to the performance of management and administrative activities, accounting, marketing, information processing, consulting, human resources management, financial and insurance services, educational and medical services, and other professional services. At least 75% of their interior space is finished to accommodate office users, but the rest of the space can include other users such as retail, restaurant, or fitness." Some office buildings are a part of a multi-use design that can incorporate a larger mix of other uses such as residential, hotel, and retail within the same structure.

Office Classifications

Office buildings are classified by quality, types, and/or use.

Classification by Quality

Office buildings are classified as A, B, or C depending on its perceived value in the

space market.

- Class A buildings will demand the highest rents and offer many amenities and services to its tenants. These buildings are professionally managed and located in highly desirable locations with excellent access; the condition of the building is either new, or competitive with new properties.
- Class B buildings are also professionally managed and are located in a good location. These properties are in good condition and may offer amenities and services to tenants similar to Class A buildings, but the physical building is typically older with some obsolescence issues. Rents for these buildings are lower than Class A.
- Class C buildings are older buildings with some deterioration and functional obsolescence. These buildings command lowest rents.

Classification by Types

Office buildings can also be classified by types such as office condos, office parks, low-rise, mid-rise, and high rise.

Office condos are owned rather than leased space. Common areas in office condo buildings are owned in common with other condo owners.

Office parks are areas consisting of multiple buildings grouped together, usually with the same physical characteristics.

In terms of its height classification, it is important to note that different areas adopt different definitions for building type. For example, in Portland, Oregon has the following definition for building height:

- Low-rise: 1-6 stories
- Mid-rise: 7-12 stories
- High-rise: 13 stories and above

Emporis (a global provider of building information for the building industry), on the other hand, defines height class by meters, which we've converted to stories based on 10-feet/story as follows:

- Low-rise: 11 stories or less
- High-rise: 12-32 stories
- Skyscraper: 32 stories and above

The National Association for Industrial and Office Parks (NAIOP) defines building height as:

- Low-rise: 1-6 stories
- Mid-rise: 7-25 stories
- High-rise: 25 stories and above

Agents will need to learn about the different classifications of buildings applicable to their area in order to determine its type.

Classification by Use

The office market is an example of further market segmentation. Competition in the office space market can include many properties in all three office building classifications. Buildings can be further segmented by use to include medical/dental, office, government, educational, and others.

Market Analysis

Agents should begin to assess the characteristics of a building by first analyzing its market. To begin, define the market area by the property's physical location and its competitiveness in that area. Recall that old adage to describe the most important factor in real estate value: "location, location, location." Investors will evaluate how a building's location is situated within the broader urban plan, current and expected growth patterns, access to public transportation, proximity to customers, and supporting businesses and infrastructure.

Forecast demand for space is another important factor for investors to consider. Agents should be prepared to discuss how current demand is expected to remain the same or change over the expected holding period. Trends in population and employment growth as well as vacancy and absorption rates are useful in predicting future demand for the space.

Location

Commercial office buildings can be located in an urban or suburban area. The factors that determine an office building's locational desirability include its proximity to residential areas that support the tenant mix, physical location, access to transportation, functional utility, amenities, walk score, etc.

Buildings will often be given a walk score. A walk score measure is between 0-100 based on the number of amenities that are walkable from the property within a 1-mile radius. A score of 0 is not walkable; it is car dependent. A score of 100 is a walker's paradise. Buildings with a very high walkable score can demand higher rents.

Analysis of the Property

Property analysis should include the building design and construction, parking, exterior landscaping, ingress and egress, utilities, easements, mechanicals, management, security, office space layout, building finishes, and common areas, to name a few.

Functional utility is an important factor in evaluating a building's design. The Appraisal Institute lists the important considerations for functional utility as:

- Column spacing
- Bay depth
- Live-load floor capacity
- Ceiling height
- Module width

- Elevator speed, capacity, number and safety
- Tenant finish
- Energy efficiency
- Parking

It is also important to define the tenant mix and property reputation. The types and numbers of tenants a building can attract is an important factor in determining a marketing strategy for the building. In some cases, large companies will occupy most of all of the space for their business needs. The stability of cash flow in a single tenant use building, for example, is critical to investors for understanding cash flow risks. In the case of a single tenant building, a strong business with a long-term lease is desirable, but adverse market changes can impact the ability of the tenant to remain in the property long-term. Multi-tenant buildings with staggered lease expirations can reduce the risks to cash flow by having multiple revenue sources. Existing leases should be carefully reviewed to determine tenant improvement commitments, rent abatements, remaining lease terms, and expiration dates.

Office Space Metrics

Office space considerations are numerous and agents should become familiar with the key metrics associated with office space and rent analysis. The following key metrics play an important role in evaluating an office building:

1. Office Space/Employee
   The Building Owners and Managers Association (BOMA) lists 175 to 200 sf per office worker as the current use. This number is considerably down from prior years where office workers and managers enjoyed larger office spaces. as you learned in the last exercise, market disruptors such as WeWork have revolutionized the way businesses view office space use.

2. Building and Ceiling Heights
   Building heights are an important consideration for tenants and owners. The infrastructure required for mechanical services to multiple floors, such as HVAC, electrical and plumbing is more complex than for a single level building and requires additional costs to manage.

   Ceiling heights can add to the value of the rented space. Minimum ceiling height requirements for office space are dependent upon the size of the space. Small office ceiling heights can be as low as 8 feet, larger office space minimum ceiling heights are 9 feet. Ceiling heights of 10 feet or greater with large windows offering scenic views create a greater sense of openness for tenants and can command premium pricing for rents.

3. Gross Building Area
   The Appraisal Institute defines gross building as "the total floor area of a building, excluding unenclosed areas, measured from the exterior of the walls; includes both the superstructure floor area and the substructure or basement area."

4. Usable Area
   Usable area is the space measured in square feet that a tenant occupies, including private hallways, private bathrooms, or private mechanical closets.

5. Leasable/Rentable Building Area
   NAIOP defines rentable building area as "the total square footage of a building that can be occupied or assigned to a tenant for the purpose of determining a tenant's total rental obligation." This area can include common areas such as hallways, lobbies, and restrooms. It is the tenant's pro rata share of the office building.

6. Rented Area
   Rented area is defined as the amount of space currently leased.

7. Rental Rate
   Rental rate is the amount of rent charged per unit per square foot.

8. Load Factor
   Property owners will often use load factor to determine rents based on a tenant's usable square feet. Load factor is determined by dividing the building's rentable square feet by the building's usable square feet.

   Let's try an example:
   Suppose a building has 50,000 rentable square feet but 10,000 sf is allocated to common area use. Therefore, 40,000 usable sf are available. Tenant 1 leased 2,500 sf at $10/sf/year, determine tenant 1's rentable square feet and solve for the annual rent rate.

   First we need to determine the load factor:

   Load Factor = Rentable Square Feet ÷ Usable Square Feet
   Load Factor = 50,000 sf ÷ 40,000 sf = 1.25

   Next, let's calculate the tenant's rentable square feet:

   Tenant Rentable Square Feet = Tenant's Usable Square Feet x Load Factor
   Tenant's Rentable Square Feet = 2,500 x 1.25 = 3,125 rentable square feet

   Now we can determine the rent:

   If Tenant 1's rent rate is $10/sf/year,
   Tenant 1's yearly rental rate = 3,125 sf x $10/sf/year
   = $31,250

9. Floor Area Ratio (FAR)
   Floor area ratio is the ratio between the square footage of the building to

the total square footage of the land parcel the building is situated on. it is a good measure for determining the productivity of the land.

10. Efficiency Ratio
    Efficiency ratio is a good way to determine how efficiently the gross building area is contributing to the building's cash flow productivity through rents. It is found by dividing the rentable area by the gross building area.

11. Parking Ratio
    Parking ratios are important to both tenants and owners. NAIOP data suggests a parking ratio of 4 parking spaces per 1,000 square feet of leased space as the current market trend.

12. Floor Plate
    Floor plate is the gross square footage of an entire floor in a building. It is useful in conveying square footage variations between floors in size and shape. Floor sizes typically range from 16,000 sf to 30,000 sf.

13. Common Area Maintenance (CAM) Fees
    CAM fees are owner expenses related to building security and the maintenance of common use areas such as lobbies, elevators, and hallways. Often times, property owners will negotiate with tenants for recovery of a portion of those expenses. CAM fees are common in office buildings and are charged to tenants as either a fixed fee or variable depending on actual costs. These fees can be apportioned equally or on a pro rata basis.

Office Building Management Organizations
Two of the largest trade organizations for office buildings include:

- Institute of Real Estate Management (IREM) - www.irem.org
- Building Owners and Managers Association (BOMA) - www.boma.org

Agents can often find useful information about measuring methods, design, emerging market trends, and other considerations from these organizations.

RETAIL PROPERTIES

Retail areas are areas zoned for selling and marketing consumer goods and services.

Larger retail centers are often anchored by large retail tenants. Rents for anchor tenants are lower than the other tenants because of their market visibility and ability to draw customers to the retail center. Retail tenants often pay a percentage of in-store sales in addition to their base rent. This type of lease can benefit the tenant during slow sales periods by paying a lower rent, while property owners can benefit from higher rents during strong sales periods. ***Breakpoint*** is the point where the percentage rent kicks in once a certain level of store sales is achieved.

Types of Retail Properties

Retail property types include freestanding structures, strip centers, main street, neighborhood shopping centers, community shopping centers, outlets, lifestyle centers, power centers, regional shopping centers, and super-regional shopping centers. Most retail space is leased, but some retail condos exist in small centers for owner/users.

NAIOP defines such retail structure as follows:

Freestanding retail structures are stand-alone structures such as McDonald's or a large big box such as Home Depot with a minimum of 50,000 square feet

Strip centers are located along main transportation routes on narrow parcels with a size less than 30,000 square feet.

Main street retail shops are concentrated in dense urban or urban-like areas.

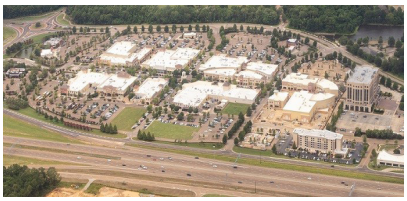
Neighborhood shopping centers are the most common type of retail property in the U.S. They are typically one-level rectangular structures, anchored by grocery stores with parking in front and loading areas in the back. Sizes range from 3,000 square feet to 125,000 sf.

Community shopping centers have a wide variety of shops as well as discount retailers such as Target. Size range is between 125,000 sf to 400,000 sf.

Outlet centers consist of manufacturers' outlet merchandise sold at discounted prices. Size range is from 50,000 sf to 400,000 sf.

Lifestyle centers are similar to main street settings with pedestrian circulation in the core and with vehicular circulation along the perimeter. Tenants are typically upscale, national chain specialty stores, restaurants, and theaters. Size ranges from 150,000 sf to 500,000 sf.

Power centers are typically made up of large rectangular one-level buildings with surface parking in front of merchandise loading in the back. Power centers are unenclosed shopping centers with common parking for all retailers and featuring several big box retailers with smaller retailers clustered together. Size range is from 250,000 sf to 600,000 sf.



Regional shopping centers feature large anchor tenants configured like suburban malls or main street retail formats with surface and/or garage parking. Size range is from 400,000 sf to 800,000 sf.

Market Analysis
Area growth is a key component for the success of a retail center. Areas that are growing in population and income are more likely to succeed that weaker economic areas. The ability for a retail center to thrive is largely dependent on the strength of its retail tenants and trade area.

Retail trade areas are geographic areas that radiate from the core shopping center. Owners will draw trade area circles for the areas in which they expect to draw customers. Retail owners will develop their marketing strategies based on an understanding of where their customers are coming from. NAIOP defines the various trade areas by type as follows:

- Neighborhood shopping centers: 3 miles
- Community shopping centers: 3-6 miles
- Outlet centers: 25-75 miles
- Lifestyle centers: 8-12 miles
- Power centers: 5-10 miles
- Regional shopping centers: 15 miles

Location
A retail center's ability to attract customers will, to a great degree, depend on the time it takes for customers to drive to the center; therefore proximity to major traffic arteries with sufficient frontage offers easy and convenient access to the property. ***Frontage*** defines the length of the front boundary of a parcel of land that is alongside a road. Frontage space on highly trafficked areas is a premium for retailers because of the added visibility it provides. Similar to office buildings, smaller retail properties will be given a walk score. Retail properties with a very high walk score can demand higher rents.

Agents should assess the land use and its efficiency and how well it is linked to adjacent properties. Is the retail center a good fit for the area? Is it located within the pattern of growth for the area? How competitive is the retail center? Where is the competition?

Analysis of the Property
The following factors should be analyzed to evaluate a retail property's ability to attract customers:

- The design and layout of a retail center can attract or deter interest from shoppers. Appearance, design, tenant mix, types of amenities, and food concessions are all determinants as to whether a property generates a positive shopping experience for the customer or not.

- Signage can add or detract from the overall appeal of the center. Strict management of proper and well-maintained signage will benefit both retailers and center owners.

- End caps are at the ends of strip centers and shopping centers that command higher rents due to the added market visibility of having two store fronts, both

with signage.
- Parking should be conveniently located to the shops. The distance between the parking area and the shops should be less than 400 feet.

- Functional utility is also important. The Appraisal Institute lists the important considerations for functional utility as:
  - » Attractive public areas
  - » Well-kept grounds
  - » Adequate, well-located restroom facilities
  - » Suitable traffic patterns for shoppers
  - » Adequate column spacing
  - » Sufficient number of escalators
  - » Durable and easily maintained surface and finish elements
  - » Areas for shoppers and workers to rest
  - » Strong lighting and attractive, coordinated signs

Retail Space Metrics

Agents should be familiar with the key metrics associated with the retail space and rent analysis. The following key metrics play an important role in evaluating retail space:

- Gross Floor Area (GFA) - Total floor area including common area
- Gross Leasable Area (GLA) - Total floor area leased to tenants including basements and mezzanines
- Gross Sales Area (GSA) - Total leasing area attributed to sales activity, excluding non-sales area
- Landscape and walkway areas should be about 10% of the gross leasable area (GLA).
- Parking ratio - the ratio of parking area to gross floor area (GFA).
- Parking index - Ideally 6.5 parking spaces per 1,000 sf of gross leasable area (GLA).

Retail Property Management Organizations

- International Council of Shopping Centers

INDUSTRIAL PROPERTIES

Industrial properties are located in areas designated for commercial industrial use through zoning ordinances where permitted uses can range from heavy, medium, light, industrial, or low-impact uses such as assembly and distribution.

Industrial parks can include several industrial buildings as a part of an industrial complex. **Types of Industrial Properties**

- Light industrial properties typically have a low environmental impact
- Heavy industrial properties utilize or manufacture products with the potential

for an environmental impact.

- Manufacturing facilities, such as auto plants, produce commercial goods on a large scale for distribution.
- Research and Development properties, such as biomedical facilities, maintain a low visibility profile and secure access to protect intellectual property.
- Self-storage or mini-warehouse facilities such as Public Storage are used by individuals to store personal items in small privately-secured cubed storage spaces.
- Warehouses vary in size up to millions of square feet and are used to store or distribute goods and materials.
- Flex space buildings are large buildings that can easily be changed to accommodate different uses and office space configurations.
- Cold storage areas are refrigerated for food and medicine storage or for any product with a shelf life requiring refrigeration.
- Truck terminals are distribution buildings where the goods from one truck are transferred to another truck. FedEx terminals are one example.
- Long-term storage warehouses store goods for months or years. Moving companies use part of their warehouse space for long-term storage needs.
- Distribution warehouses are large buildings used to store goods for distribution to different market areas. Some distribution warehouses are refrigerated. Logistics plays an important role in maximizing the efficient distribution of products nationally; therefore, access to major transportation arteries is critical.

While an industrial facility can bring welcome job opportunities to the local economy, a careful balance is necessary to limit the potential for nuisances that could affect the surrounding community.

Environmental concerns are one of the primary factors urban planners consider when developing an industrial plan for the area. Industrial properties may contain above and/or below ground storage facilities for a variety of hazardous materials that can leak into the ground contaminating the soil and underground water. Agents should investigate the site for contamination concerns and be prepared to disclose any environmental issues, past or present, to prospective buyers.

Environmental Site Assessment

Environmental site assessments (ESAs) are typically completed as part of the buyer's due diligence inspection period. There are three phases of environmental site assessments. Phase I and Phase II environmental site assessments evaluate

environmental issues as commercial sites according to standards issued by the American Society for Testing and Materials (ASTM) and the Comprehensive Environmental Response and Liability Act (CERCLA) which implemented national policies and procedures for the containment or removal of hazardous substances. A Phase III ESA is the remediation phase of an ESA contaminated site.

Typical types of potentially contaminated sites include:

- Airports
- Rail terminals
- Gas stations
- Oil refineries and oil storage
- Chemical storage tanks and facilities
- Heavy manufacturing plants
- Dry cleaning facilities

The Wisconsin Department of Natural Resources summarized the nationally adopted elements associated with a Phase I and Phase II ESA as follows: "Phase I ESA involves a review of records, a site inspection, and interviews with owners, occupants, neighbors, and local government officials. Sampling and laboratory analysis may also be required. If a Phase I ESA identifies potential contamination of the site by hazardous materials, a Phase II ESA may be conducted. The Phase II ESA includes sampling and laboratory analysis to confirm the presence of hazardous materials. Some of the tests that may be performed include:

- Surficial soil and water samples
- Subsurface soil borings
- Groundwater monitoring, well installation, sampling, and analysis (may be appropriate on neighboring properties as well to determine the presence of contamination)
- Drum sampling (if any were left on the property)
- Sampling of dry wells, floor drains, and catch basins
- Transformer/capacitor sampling for polychlorinated biphenyls (PCBs)
- Geophysical testing for buried tanks and drums
- Testing of underground storage tanks

Depending on the results of the samples, the Phase II ESA should outline additional site investigation needs, and potential remedial actions that may be required to clean up the property."

Brownfield Sites

The Texas Commission on Environmental Quality (TCEQ) is the environmental agency for the state of Texas that has jurisdiction over state ESA inspections and provides cleanup guidance on brownfield sites. The EPA defines ***brownfield sites*** as a "property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." Brownfield sites are areas associated with hazardous waste such as steel production or other industrial manufacturing that have since been abandoned.

Agents should be aware that legal liabilities associated with the disposition of properties with environmental issues can be serious and expensive if not properly disclosed and correctly managed under state and federal guidelines. Current owners are liable for cleanup under CERCLA. Prior owners may also have contingent liabilities under certain conditions. There are a number of landowner liability defenses under CERCLA, but all defenses require at a minimum that a prospective buyer conduct an environmental site assessment prior to purchasing. Agents representing buyers should strongly encourage an ESA during the due diligence period. Liability concerns regarding contaminated sites should be referred to qualified legal counsel.

Asbestos

Asbestos is another environmental hazard that is toxic and cancer-causing to humans when inhaled. It appears as a white cast-like material wrapped around steel beams, columns, and other components of multi-story buildings used as a heat-resistant/ fireproofing material in the 1980s.

Common areas of use in commercial buildings include:

- Flooring
- Walls
- Insulation
- Hot water tanks
- Roofs
- Ceilings
- Water pipes

Asbestos removal requires careful handling of the material in order to contain the release of dangerous fibers into the air during removal. The EPA provides guidance on how to remove asbestos safely, and it should only be accomplished by qualified experts.

Market Analysis

Similar types of industrial use properties are typically located in the same areas or along the same transportation routes which define its trade area and competition.

Forecast demand for industrial space is largely a component of market demand for industrial products. Access to raw materials, labor, and local infrastructure development are key factors for industrial property demand in a given location.

Availability of warehousing facilities is another important factor for the industrial sector. Producers of industrial goods often require local warehousing space to store inventory or raw materials and parts used in the production process. Warehouse property owners are familiar with the market demand factors that industrial producers consider when choosing warehousing space. According to The Appraisal Institute, demand considerations for the space include:

- Size
- Age
- Vacancy level

- Access
- Building management and tenant quality
- Building quality and condition
- Refrigeration capacity (if required)

Location

Many industrial properties are owned and operated by the same company that produces and distributes the goods produced at the site. Owner/operators or tenants will consider location to be an important factor when considering the logistics of distribution via rail or truck. Access to key transportation routes is critical to the efficient and timely distribution of their products.

A local skilled labor pool to draw from in order to operate the facility is another important consideration when analyzing a location.

Analysis of the Property

The most flexible design for industrial properties is a one-story square building. Older buildings can suffer from functional obsolescence issues. The greater the operating efficiency of the building, the more desirable the property will be to prospective purchasers or tenants. Because shipping and receiving have different operational functions, efficient properties typically separate the two by placing those functions at opposite ends of the building.

The following items are additional considerations for industrial space operators and owners when analyzing the property:

- Specialized operations may require refrigeration, loading dock levelers (sleep plates moved by auto-hydraulic lifts to make a loading dock level with a truck bed), cranes and hoists, conveyor systems, and power wiring for high amp loads.
- High tech companies often require clean rooms for the production of electronic chips.
- Loading docks are very important to industrial users and can be either side-loading or rear-loading. The number of docks, size, and height are critical to the effective operation of the facility. Typical dock heights are 48 inches with ramp access to the exterior of the building via an overhead or sliding door, or the interior of a covered loading space via a ramp door. Rail doors may also be installed for properties located adjacent to rail lines for loading and offloading of rail driven goods and materials.
- Large ceiling heights are also an important factor. Greater efficiencies can be attained by stacking vertically as opposed to horizontally. With the advent of greater technologies, many modern warehouses are operated with robotics where automated lifts and other machinery stack, remove, and locate materials quickly and at very tall heights making the height of a warehouse a valuable consideration for users.
- Other factors considered by users of industrial space include fire detection and suppression systems, security, heating, humidity, and air conditioning controls.

Users of industrial sites, whether owner/users or tenants, will review the competitive elements of the property, and compare it to other properties to determine which property is the best fit for their intended use. Important physical elements associated with industrial space selection are listed by The Appraisal Institute as follows:

- Size
- Ceiling height
- Loading capacity
- Climate control
- Percentage of office space
- Automated operations (use of robotics and other technologies)
- Utilities
- Security
- Building management and tenant mix
- Environmental regulations

Industrial Space Metrics

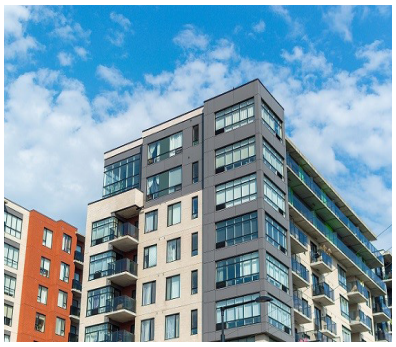
The following key metrics play an important role in evaluating industrial space as described by The Appraisal Institute:

- Industrial rents are typically based on a rate per square foot plus CAM charges.
- Floor area ratio (FAR), also known as the land-to-building ratio for industrial properties. Typical ratios are from 2.5-3.5, which means the land should be between 2.5 and 3.5 times larger than the building. The added space margin should be able to accommodate parking, truck maneuvering areas known as truck court, yard storage, and expansion.
- Clear span is the distance between supporting pillars, columns, or walls. Warehouses typically operate with a clear span of between 21-35 feet.
- Clear height or high cube, also called high bay. NAIOP defines clear height as the "distance from the floor to the lowest-hanging ceiling member or hanging objects, beams, joists, or truss work descending down into a substantial portion of the industrial work area." Heights range from 10 - 32 feet.
- Truss height is the distance from the floor to supporting truss (ceiling or roof of a building).
- Percentage of office space is simply the square footage of the office space divided by the total square footage of the property. Typically it is less than 30%.
- Floor load capacity - typically 5-8 inches of reinforced concrete and 125 pounds/sf light warehouse and manufacturing buildings, 250 pounds/sf for heavy warehouses when moving objects within the building at a certain weight (live-load-capacity).
- Ceiling heights are typically 16 to 24 feet.
- Slope of loading areas should optimize truck egress and ingress.
- Power service varies by use. Manufacturing amp load requirements are typically higher than warehouse requirements.
- Truck turning radius - 130 feet is required to turn a large 18-wheeler truck around.

Industrial Property Organizations

- Society of Industrial Office REALTORS®* (SIOR) is a part of the National Association of REALTORS® - www.sior.com

MULTI-FAMILY PROPERTY



Multi-family properties consist of 5 or more residential units and are classified by quality, type, and size.

Classification by Quality

Multi-family buildings are classified as A,B, or C depending on quality and market reputation.

- Class A buildings are the most prestigious, commanding the highest rents and selling prices. Class A buildings offer exceptional amenities including a doorman, concierge service, valet or private parking, physical fitness areas, and full-time on-site management. Very high walk scores are associated with Class A buildings.

- Class B buildings are also professionally managed and are located in a good location. These properties are in good to fair condition and may offer amenities and services to tenants similar to Class A buildings, but the physical building is typically older with some obsolescence issues. Amenities offered are sometimes similar to Class A buildings, but with less personal attention to detail. Rents and selling prices for these buildings are lower than Class A.

- Class C buildings are older buildings with some deterioration and functional obsolescence and with off-site management. Amenities are fewer or non-existent as compared with Class A or Class B. These buildings command the lowest rents and sales prices.

Classification by Type and Size

Multi-family properties are also classified by types such as condominiums, conversions, co-ops, mixed use, duplex, triplex, garden-style apartment, mid-rise, and high-rise:

- Condominiums are privately owned units sharing common space with their owners.
- Condo conversions are apartment buildings that are converted to condominiums.
- Cooperatives or co-ops are owned by a corporation whose stockholders are its residents. Shareholders are entitled to occupy a particular unit in the building owned by the co-op for as long as the person owns the stock. A board of directors is elected by the residents to oversee management of the property.
- Mixed use buildings are very common in large urban areas. These buildings contain multi-family residential units owned or leased as well as commercial space for uses such as retail, hotel, and office. Many times the revenue from

the leased space can benefit a residential HOA if the entire space of the building is owned in common by the residential owners. CAM fees or common area maintenance fees are apportioned to commercial tenants as part of their rent.
- A duplex is a residential property having two separate units located on two different levels.
- A triplex is a residential property that has a total of three separate units on three different levels.
- A garden-style apartment building is four stories or less with multiple single level apartments per story. These types of buildings surround an interior courtyard with parking along its perimeter.

Multi-family building height classifications vary in definition. For example, Portland, Oregon has the following classifications for building heights:
- Low-rise: 1-6 stories
- Mid-rise: 7-12 stories
- High-rise: 13 stories and above

Emporis (a global provider of building information for the building industry), on the other hand, defines height class by meters, which we've converted to stories based on 10-feet/story as follows:
- Low-rise: 11 stories or less
- High-rise: 12-32 stories
- Skyscraper: 32 stories and above

The National Association for Industrial and Office Parks (NAIOP) defines building height as:
- Low-rise: 1-6 stories
- Mid-rise: 7-25 stories
- High-rise: 25 stories and above

Agents will need to learn about the different classifications of buildings applicable to their area in order to determine its type.

Market Analysis

The National Multi-Family Housing Council (NMHC) reported in October 2018 that 36% of U.S. households lived in renter-occupied space. The demographic composition of those rents were mostly under age 30 with a 50% share of that market, while 30-44 year olds comprised 23% of that market space. The remaining 19% of renters were ages 45-64.

The most commonly leased multi-family structure was 5 or more units owning 43% of the renter's market. An increasing number of renters marking more than $50,000/year are opting to rent rather than own. The Dallas-Fort Worth-Arlington and Houston-The Woodlands-Sugar Land MSAs report shows that 18% of the total population in those MSAs resides in apartments. Across the state of Texas, 14%of all state residents reside in apartments for a total apartment population of 3,386,680 which is the third

highest in the country behind California and New York.

As you can see, demand for multi-family leased housing is growing. Multi-family is a residential investment class property designated as one of the 4 major property types of commercial real estate. A multi-family building is comprised of 5 or more units that are owned or leased. A multi-family complex is comprised of multiple multi-family buildings. Apartments are simply another term for multi-family leased housing of 5 or more units.

Vacancy rates for apartments are a key indicator for evaluating the health of the property as an investment. Higher market vacancy rates can imply that a property is less competitive due to age, obsolescence, design, maintenance, management, or lack of amenities. Even superior buildings can suffer from higher than market vacancy rates if the reputation of the management and/or building appearance is poor. Agents can assess the reputational score of apartments by searching for tenant comments on apartment websites or sites like Yelp.com.

As with office and retail, apartments will be given a walk score. A walk score measure is between 0-100 based on the number of amenities that are walkable from the property within a 1-mile radius. A score of 100 is a walker's paradise. Apartments with very high walk scores can demand higher rents.

Multi-family apartment buildings, similar to other commercial assets, have a market area delineated by a time-distance relationship to work, schools, transportation routes, shopping, and competition with similar housing. Investors looking for multi-family properties will review the existing leases for rent rate, tenant concessions, and remaining term of lease. The composition of the tenant mix and tenant profiles can also assist prospective buyers in determining future marketing strategies and in gauging the likelihood that tenants will renew their lease at the end of the leasing period.

Demand for multi-family apartments can be determined in part from analysis of the general growth trends for the market and submarket to include new construction, absorption rates, rental rates, and vacancy rates. Agents should evaluate competition by looking at existing and new development for comparable properties as well as for any plans for future development.

Analysis of the Property

Multi-family properties are located in multi-family residential districts determined by city planners and zoning committees. Apartment buildings can be located in an urban or suburban setting. The factors that determine an apartment building's locational desirability include its physical location, proximity to neighborhood shopping areas, proximity to schools, quality of the schools, play areas or parks, safety of the area, access to transportation, functional utility, amenities, parking, and walk score.

According to The Appraisal Institute, multi-family property owners and residents will consider a number of factors prior to buying or leasing to include: Access to

workplaces/proximity to employment
- Transportation service
- Access to shopping centers, cultural facilities, and entertainment
- Reputation of the area
- Separation from undesirable commercial property intrusion
- Residential atmosphere and appearance
- Proximity to parks and open space
- Parking
- Elevator or stairway access
- Energy efficiency

Also according to The Appraisal Institute, functional utility of a multi-family property results from its layout, accommodation of specific activities within the unit such as laundry areas, dining and entertainment, adequacy of space and ease and cost of maintenance. In general, apartment tenants will consider the unit's amenities such as larger closets, fireplace, washer/dryer, covered parking, or second bathroom before considering the size of the apartment space.

Multi-family Space Metrics

The following metrics are defined by National Multi-Family Housing Council (NMHC) and National Apartment Association (NAA):
- Absorption rate is the proportion of newly completed units that are or have been leased, usually over a 3-month period. Absorptions are the net change in the total number of apartment homes leased.
- Occupancy rate is the percentage of total apartment units that are occupied.
- Turnover rate is the ratio between the number of move-outs or units vacated to the total number of units in a property over a one-year period.
- Economic losses is a standard measure of the health of the housing market according to the NAA. It is found by taking the difference between potential gross income (PGI) and rental revenue collected.
- Price per unit, also known as value per door, is a quick way to determine value by comparing similar properties. It is found by simply dividing the value of the building by its number of apartments (doors). For example, our 100-unit apartment example was purchased for $12,000,000. The price per unit or value per door was $120,000.
- GRM or GIM approach to value may be used with extreme caution as was discussed in a previous chapter.
- NOI and CAP rate calculations are better methods for determining value as we covered in a previous chapter.
- Cash-on-cash is another important consideration for investors as we also covered in a previous chapter.

Multi-Family Property Organizations
- National Apartment Association (NAA) - www.naahq.org
- National Multi-Family Housing Council (NMHC) - www.nhmc.org

SPECIAL PURPOSE PROPERTIES

Special purpose properties are properties that are designed and customized to suit a specific type of use. Two major types of CRE properties include hospitality and senior housing.

Hospitality Properties

Hospitality properties are capital intensive with high revenue volatility. Types of hospitality properties include hotels, resorts, and recreation.

Subcategories of hospitality properties include:

- Luxury hotels offering full service luxury amenities to include health club and sauna, upscale restaurants and personalized service. For example, the Four Seasons hotel is a luxury hotel brand.
- Full service hotels offer full service amenities to include restaurants and health and fitness amenities. Marriott is a full service hotel.
- Resort/convention hotels offer large meeting and banquet facilities for guests and attendees. Resort style amenities can include pools, beach access, health club facilities, restaurants, and bars.
- Extended stay hotels are designed for guests that require a longer stay of weeks or months. Limited amenities are associated with this type of hotel. Full kitchenettes, room suites, and laundry services are common.
- Economy hotels, such as Super 8, are hotels offering few amenities, attracting transient guests for a short overnight stay.
- Bed and breakfast hotels are residential type family-run hotels with limited room capacity offering customized service at affordable rates.

Market Analysis

Demand for hospitality spaces varies by the type of commercial establishment. For example, hotels located near airports will see year-round traffic from air travelers. Many of these hotels also offer convention services for businesses with a convenient airport location.

Motels attract transient guests seeking an overnight stay from their travels and are typically located alongside busily traveled interstate highways for convenient access.

Since hotels tend to cluster in areas where the demand is the highest, competition from other properties is generally limited to that market area. Any new development in the same market area can affect the revenue expectations for a property and its market value.

A property's competitiveness in the market can be determined by completing a property productivity analysis. The Appraisal Institute lists the following factors in determining a property's competitiveness:

- Size

- Room rate structure
- Overall decor and physical appearance
- Quality of management
- Chain affiliation (if any)
- Quality and character of the market area
- Facilities and amenities offered
- Revenue per available room (RevPar)

Demand for hotel space is typically based on historical occupancy rates and room rental rates. Agents can assess the demand for a property and its seasonality (if any) by reviewing the following data according to the Appraisal Institute:

- Number of nights per stay
- Number of people per room
- Periods of use during the year
- Prices paid for rooms
- Food, beverage, and entertainment
- Methods of travel, how the guest arrived at the destination (i.e. air, auto)?
- Travel distance
- Quality of facilities
- Amenities
- Quality of management
- Public image

Hospitality Space Metrics

- Occupancy rate is calculated by dividing the number of occupied rooms by the total number of rooms.
- Average daily rate is the sum of all rates per room for the day divided by the number of rooms.
- Revenue per available room (RevPar) is the industry standard for performance and offers a quick assessment of the hotel's ability to fill its rooms at an average rate. It is found by multiplying a hotel's average daily room rate by its occupancy rate. For example, what is the RevPar for a hotel that has 300 rooms, an average occupancy rate of 85%, and an average room rate of $125?

RevPar = $125 x 0.85 = $106.25

Hospitality Property Associations

- American Hotel and Lodging Association (AHLA) - www.ahla.com

SCENARIO BASED LEARNING

Exercise 4

AirBnB Case Study
AirBnB is a hospitality space disruptor. By offering guests a platform to book privately owned properties as an alternative to the traditional hospitality space; AirBnB provides guests greater choice while creating a potential revenue generating opportunity for non-commercial property owners.

Discuss amongst your group the effects on traditional lodging from market disruptors such as AirBnB and present to the class how those effects may change demand for any of the traditional hospitality property types.

- Does the existence of AirBnB create a new demand in excess of historic hospitality use?
- Or on net, will this destroy demand for conventional hospitality space?
- How will values be affected?

SENIOR HOUSING

Senior housing is a growing segment in commercial real estate. Investor demand for senior housing in the U.S. continues to increase due to an aging population. Sector growth expectations remain steady irrespective of the broader economy.

Properties involved in the direct care of seniors are regulated by state agencies and in some cases may be accredited by health care organizations. Agents should investigate whether a senior housing property is subject to government oversight.

Property Types

The three property types associated with senior housing include:

- Independent living facilities do not provide care or assistance to its residents, but instead provide a full service living experience to include housekeeping service, restaurants, fitness programs, transportation services, as well as a full schedule of activities.
- Assisted living facilities provide daily assistance to residents to include bathing, dressing, eating, exercise, cleaning, and most other needs associated with daily activities.
- Acute care facilities include memory care and total nursing care. Full-time nursing care and monitoring are provided to its residents to include daily assistance for basic needs such as eating, medications, bathing, etc. These facilities are regulated by state agencies.

Market Analysis

According to a 2015 CB Richard Ellis (CBRE) article prepared for the Appraisal Institute, the primary market area for senior housing is the MSA where the facility is located. Approximately 80% of senior housing residents come from areas close to their chosen facility.

Occupancy rates for senior housing can be expected to range from 80-90%. Given the robust demand from investors to develop more senior housing, competition from new inventory is impacting occupancy rates, net income, and valuations in markets where new development has well outpaced demand. The market impact attributed to new inventory can be observed by falling occupancy rates as some residents opt to change facilities. The National Investment Center for Seniors Housing and Care (NIC) reports that for the first 2 quarters of 2019, occupancy rates and annual rent growth decreased, yet the absorption rate remained the same suggesting that demand remains steady. In fact, construction and inventory appear to have fallen slightly which is an indication that investors are becoming more cautious about new development.

Senior Housing Metrics

Agents should be familiar with the following metrics for senior living properties:

- Occupancy rate
- Annual rent growth
- Annual absorption rate
- Annual inventory growth

- Income and expenses are determined per resident per day (PRD)
- CAP rate

Senior Housing Associations and Organizations

- The National Investment Center for Seniors Housing & Care (NIC) - www.nic.org
- American Seniors Housing Association (ASHA) - www.seniorhousing.org

COMMERCIAL LAND

In general, land is either raw or improved. Raw land is used for farming and agriculture and can be either institutionally or privately held. Improved land includes roads, sewers, utilities, or physical structures developed for current or future use.

The Appraisal Institute lists the physical characteristics of land as follows:

- Site size and shape to include frontage that abuts a street or other prominent feature. Dimensions are given in square feet or acres.
- Corner influence pertains to frontage on two or more streets.
- Plottage value includes assembling two or more parcels for one owner such as for agricultural use.
- Excess land and surplus land is the part of the land not contributing to the value of the property's production.
- Topography including the land's drainage, grading, slope, soil condition, and view
- Utilities
- Site improvements such as buildings
- Accessibility including parking, access to streets, highways, rails, etc.
- Environmental conditions including climate, wildfire, air quality, rivers, lakes, or oceans.

Types of Land Use

- Agribusiness land including commercial farms. Careful analysis of the soil and irrigation sources to determine whether crops can be supported by the soil's properties is important. Water rights are also an important consideration for commercial farmers. In Texas, groundwater usually belongs to the land owner as a capture right to use the water, whereas surface water belongs to the state.
- Vineyards consist of grapevines used to harvest grapes for consumption or for the production of wines.
- Commercial boarding facilities or equestrian facilities board horses for profit.
- Livestock farms raise commercial livestock such as chickens and pigs.
- Dairy farms raise cows to produce milk.
- Hunting properties are areas to hunt birds or other prey.
- Timberland is land covered by a forest and operated for timber sales.

- Recreational and waterfront properties are for the enjoyment of vacation goers, fishermen, boaters, and other sport enthusiasts.
  - » Marinas are areas that provide secure moorings for boats.
  - » Golf properties are public or private golf courses.
- Oil and minerals properties in Texas are regulated by the Railroad Commission of Texas (RRC). The disposition of properties containing oil and mineral rights are described by RRC as follows: "Under Texas law, land ownership includes two distinct sets of rights, or 'estates:' the surface estate and the mineral state. Initially, these two estates were owned by the same person and they may continue to be owned together by one person. However, in many areas of Texas, especially those where there has been extensive historical oil and gas development, it is common for the mineral estate and surface estate to be owned by different people. The division, or 'severance,' of the mineral estate and surface estate occurs when an owner sells the surface and retains all or part of the minerals (or, less commonly, an owner sells the minerals and retains the surface). If an owner does not explicitly limit the transfer of ownership to the "surface only" or explicitly retain the minerals when selling the surface, the mineral estate he owns automatically is included in the sale."

Land Metrics

- Land to building ratio is the ratio of the size of a building to its land.
- NOI and CAP rates.

Land Residual Value & Highest and Best Use

The use that produces the highest residual land value is its highest and best use. Land residual value is an important concept for commercial agents to understand because it is the basis for determining land value.

There are several methods for determining value, as we have already seen, but to illustrate the concept, we'll choose the land residual technique which uses the same direct capitalization methods we've used before.

The residual technique first separates the value of the site's improvements from the value of the land. For example, suppose in our 100-unit apartment building we assume that 90% of the $12,000,000 property is attributed to the value of its improvements. Then $10,800,000 is our estimated value for just the improvements.

The next step is to allocate the property's NOI by the contribution values of the improvements to the land using the same 90%/10% allocation. Therefore, we can use the IRV formula to determine the income attributed to just the improvement as follows:

Note: Recall that our Going in CAP rate was 0.0953 (9.35%)

Income = rate x value

Allocated Building Income = 0.0935 x $10,800,000 = $1,009,800

We can now determine the NOI allocated to the land by subtracting the combined NOI of $1,122,000 from our improvement NOI of $1,009,800:

$$\$1,122,000 - \$1,009,800 = \$112,200$$

Now let's determine the value of the land using our CAP rate formula as before and assume the market land capitalization rate (CAP rate) is 0.0850 (8.5%) as determined from a competitive market analysis of land values in the market area:

$$\textit{Current Value} = \frac{\text{NOI}}{\text{CAP Rate}}$$

$$\textit{Current Value} = \frac{\$112,000}{0.0850} = \$1,320,000$$

In this example, the land residual value is $1,320,000

Now that we have a residual value for the land attributed to 100-unit apartment building, we can compare the residual land value to other potential uses to derive the highest and best use.

When investors consider land for property development, for business operations, or for agribusiness, the highest and best use of the land should be the use that maximizes the productive capacity of the land. By comparing the residual land values of alternative uses, the use that yields the highest value is the highest and best use. If alternative uses for this site generated a value greater than $1,320,000, then the 100-unit apartment building is not the highest and best use for the property.

Quick Service Restaurant (QSR)
Quick service restaurants are businesses that are typically part of a large franchise such as McDonald's or Taco Bell. These types of businesses may utilize the space as a tenant or owner. Brokerage functions associated with the sale of a QSR or any other business are not required to be licensed under TREC unless a part of the activity involves the sale or lease of real estate.

QUIZ 4

Choose the correct answers for the following questions:

1. Which of the following is a direct measure for property value? (Circle all that apply)

   a) absorption rate

   b) land residual technique

   c) market capitalization

   d) occupancy rate

2. List the three property types associated with senior living:

3. Oil and gas interests in Texas are managed by:

   a) Texas Commission on Environmental Quality

   b) Railroad Commission of Texas

   c) Texas Real Estate Commission

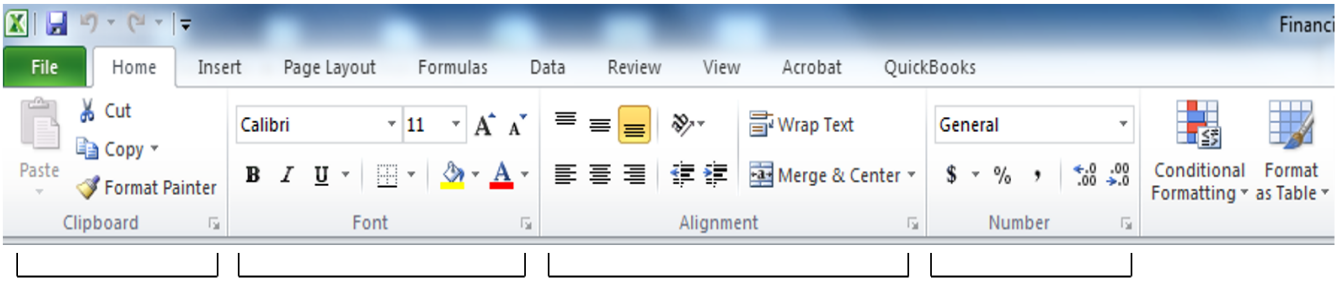
   d) Texas Board of Professional Engineers

APPENDIX A

EXCEL BASICS

Most Frequently Used Tabs of the Excel Ribbon

1. Home Tab: Most frequently used tab in Excel



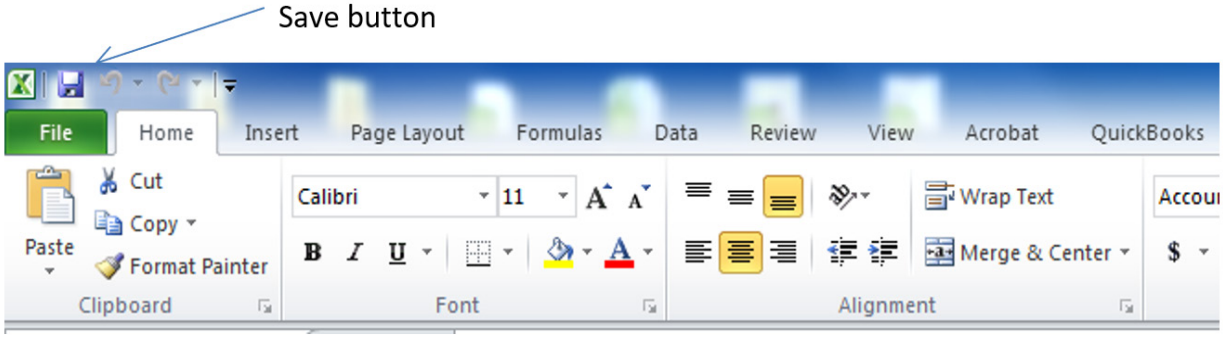
Cut, copy, and paste functions

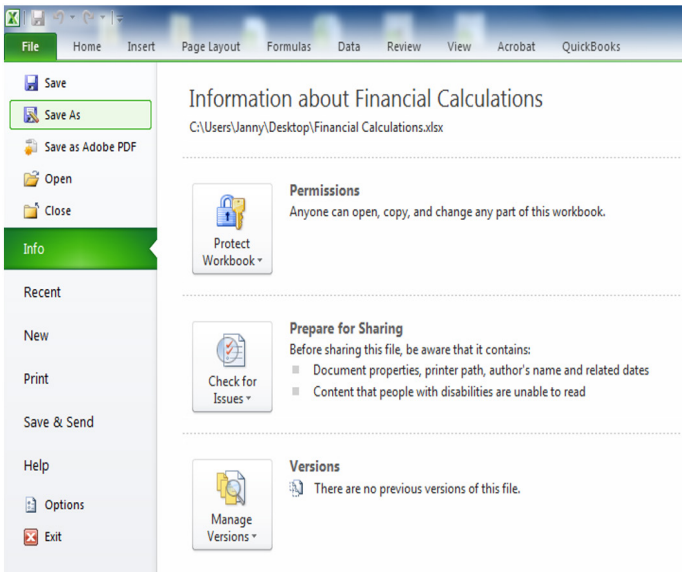
Font format: type, size, bold, underline, highlight etc.

Format cell alignment

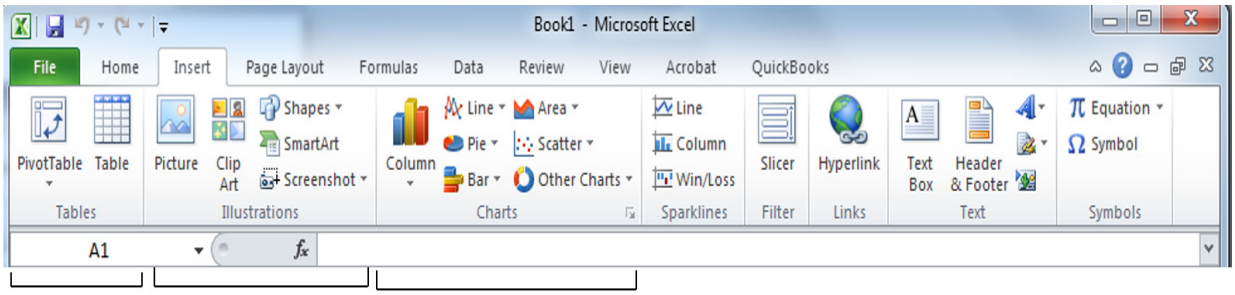
Format cell values: number, currency, date, time, etc.

2. Save your work periodically. To save, you can click on the disc icon at the top left corner. If you want to save it in a different location, click File/Save As. This will open a new screen where you can choose where the file will be saved.





3. Insert Tab

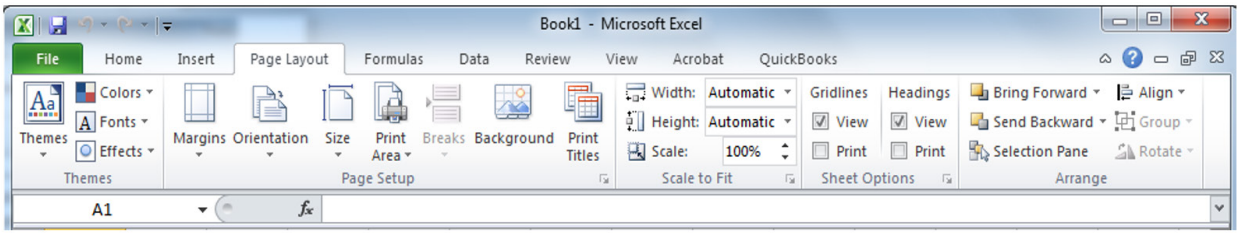


Insert a table

Insert pictures, clip art, etc.

Insert any type of charts

4. Page Layout



Page Setup: change orientation, margins, and most importantly set up your print area

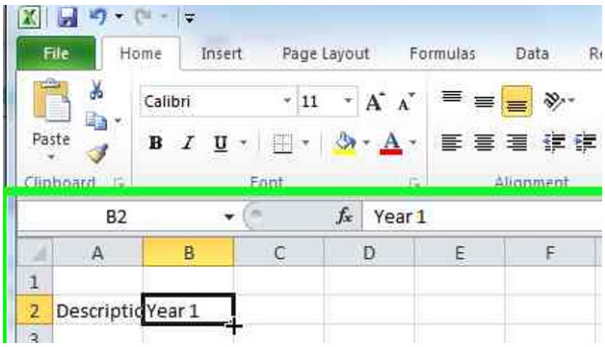
To Begin Setting Up Your Spreadsheet

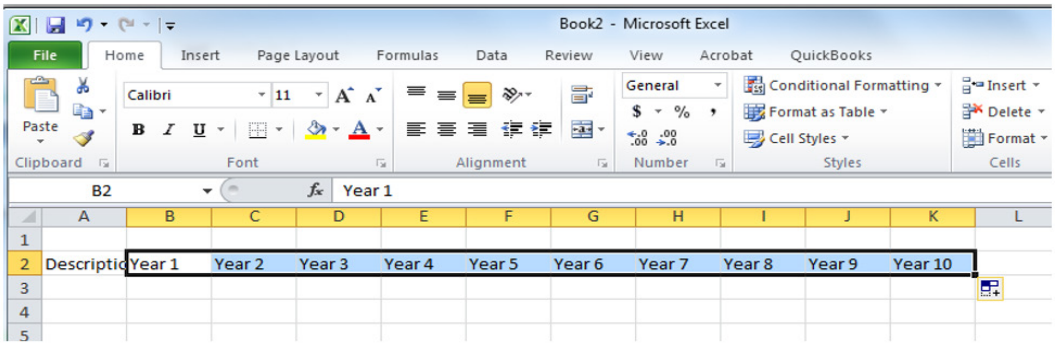
1. Open your Excel program. It will automatically take you to a blank sheet. If you want to open a new file, click File —> New —> Blank Workbook. Columns are labeled alphabetically and rows are always numbered.

Labeling Columns and Rows

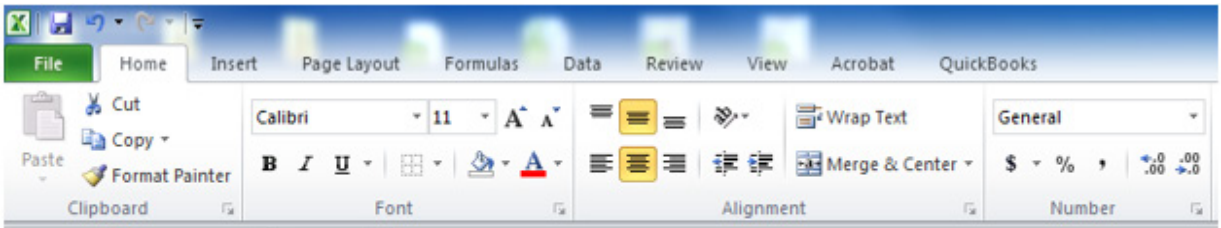
The financial calculations spreadsheet will consist of 11 columns. Column A will contain the description of the formulas/calculations and Columns B through K will store values for 10 years. Always name the columns:

- Move your cursor to cell A2 and type "Description." The text ends beyond the cell width; we will format this later.
- Use your tab to move to the next adjacent cell (B2) and type "Year 1." You can continue to manually enter each year by using your Tab key or use the AutoFill feature in Excel. To use the AutoFill feature, select column B2. Notice that this is the active cell because it has a heavy outline. At the bottom-right corner of the outline, there is a small square. Move your mouse pointer over the square (it will turn into a plus sign), click, hold, and drag across until you have highlighted B2 to K2. Release the mouse button and Excel automatically fills in the year for you.





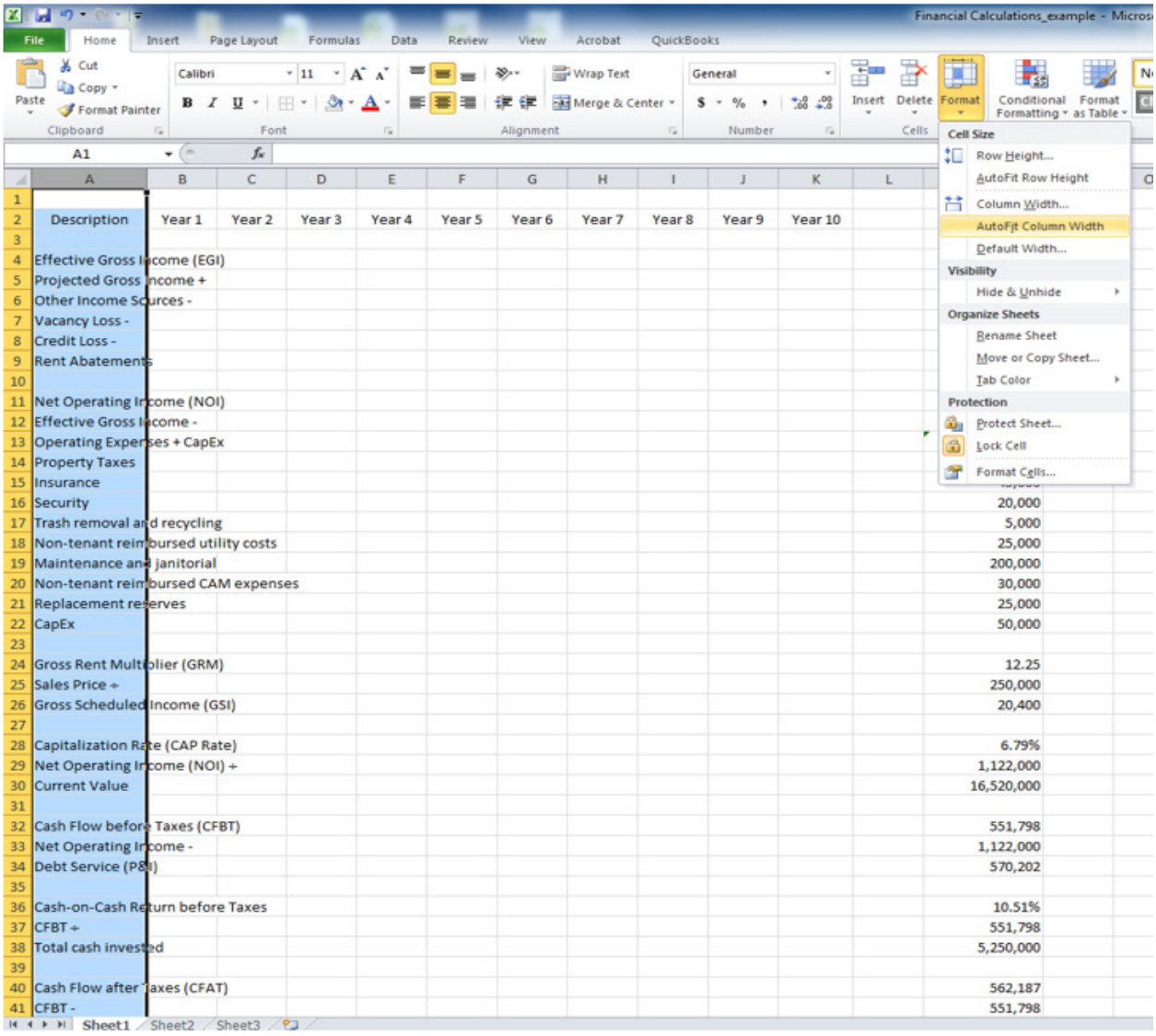
- Place your cursor to A4 and enter Effective Gross Income (EGI) and press Enter. You will continue to enter the variables associated with each calculation in Column A. Your worksheet will look like this after entering the column headings and financial calculations descriptions. It looks messy, but don't worry as we will format it next.



	A	B	C	D	E	F	G	H	I	J	K
1											
2	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3											
4	Effective Gross Income (EGI)										
5	Projected Gross Income +										
6	Other Income Sources -										
7	Vacancy Loss -										
8	Credit Loss -										
9	Rent Abatements										
10	Net Operating Income (NOI)										
11	Effective Gross Income -										
12	Operating Expenses + CapEx										
13	Property Taxes										
14	Insurance										
15	Security										
16	Trash removal and recycling										
17	Non-tenant reimbursed utility costs										
18	Maintenance and janitorial										
19	Non-tenant reimbursed CAM expenses										
20	Replacement reserves										
21	CapEx										
22											
23	Gross Rent Multiplier (GRM)										
24	Sales Price ÷										
25	Gross Scheduled Income (GSI)										
26											
27	Capitalization Rate (CAP Rate)										
28	Net Operating Income (NOI) ÷										
29	Current Value										
30											
31	Cash Flow before Taxes (CFBT)										
32	Net Operating Income -										
33	Debt Service (P&I)										
34											
35	Cash-on-Cash Return before Taxes										
36	CFBT ÷										
37	Total cash invested										
38											

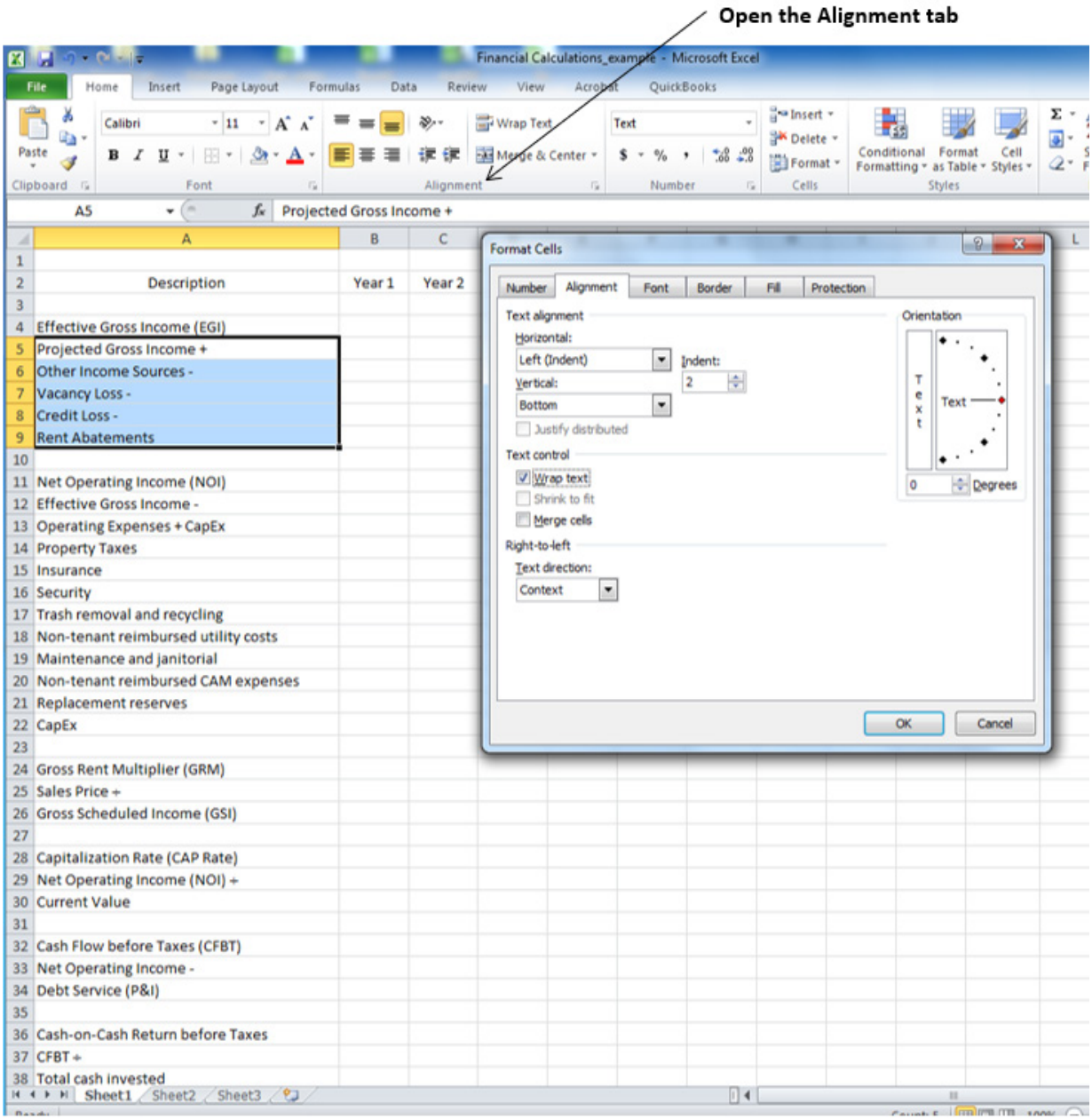
Change the Column Widths:

- Click on Column A (the whole column will become active - heavy border and highlighted), then drag the right-column border with your mouse until the column is the desired width. Or, click on the column, choose Home —> Cells —> Format —> AutoFit Column Width



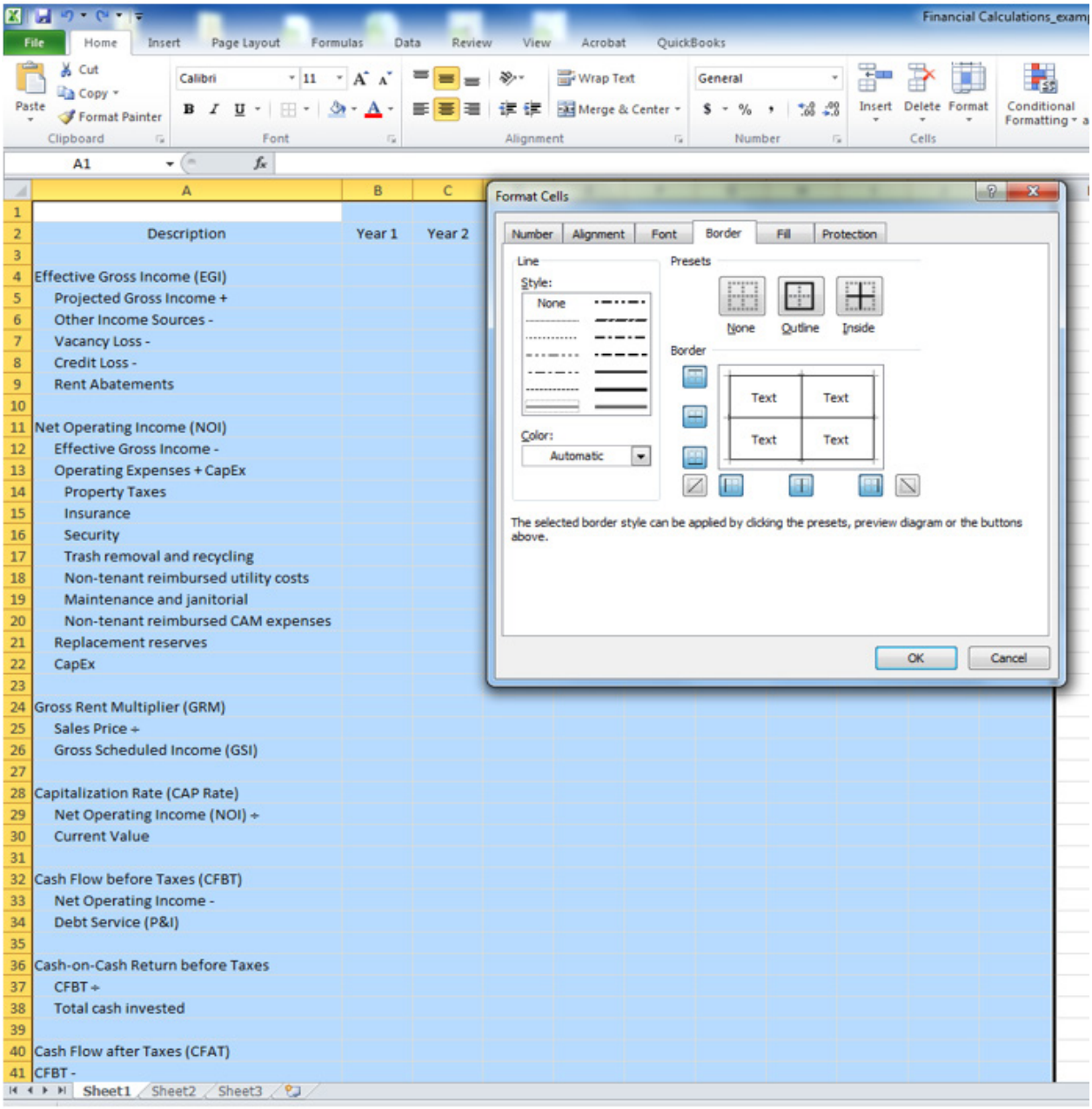
Indent and Wrap Text

- To indent and wrap text, highlight the cells, go to Home –> Assignment Tab –> Alignment and under Indent enter 2. Also, click on the wrap text if you have text too wide to fit the column width but you do not want to widen the column anymore. You will do this for any cell that you want to indent and/or wrap text.



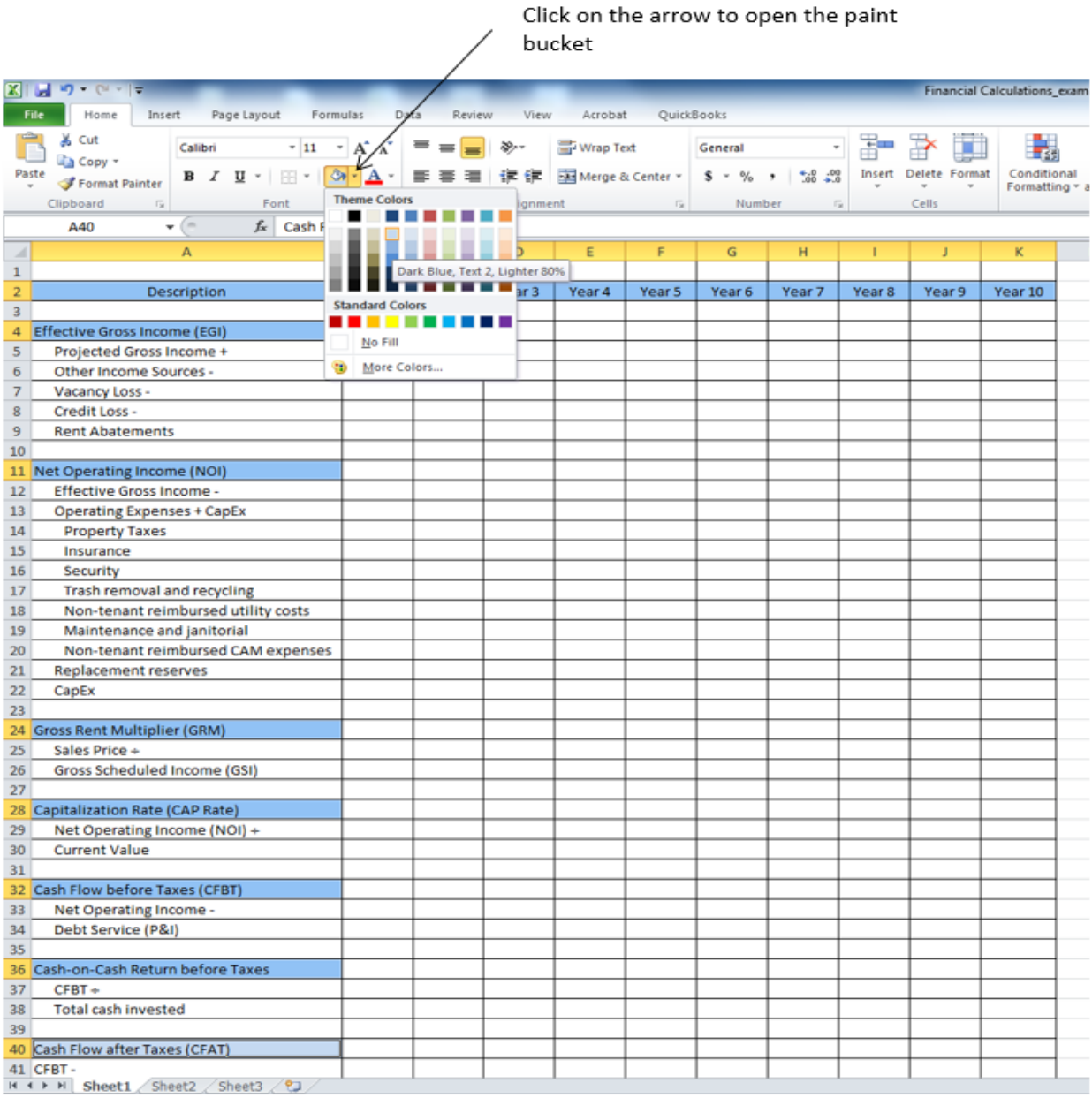
Borders and Lines

- You will use the Alignment Tab to add borders and lines to your spreadsheet. First highlight the cells that you want to add borders and line. In this case highlight the whole spreadsheet.
- Go to Home –> Alignment Tab –> Border and choose Outline and Inside. The "Inside" adds lines to every single cell.



Using Colors and Shading

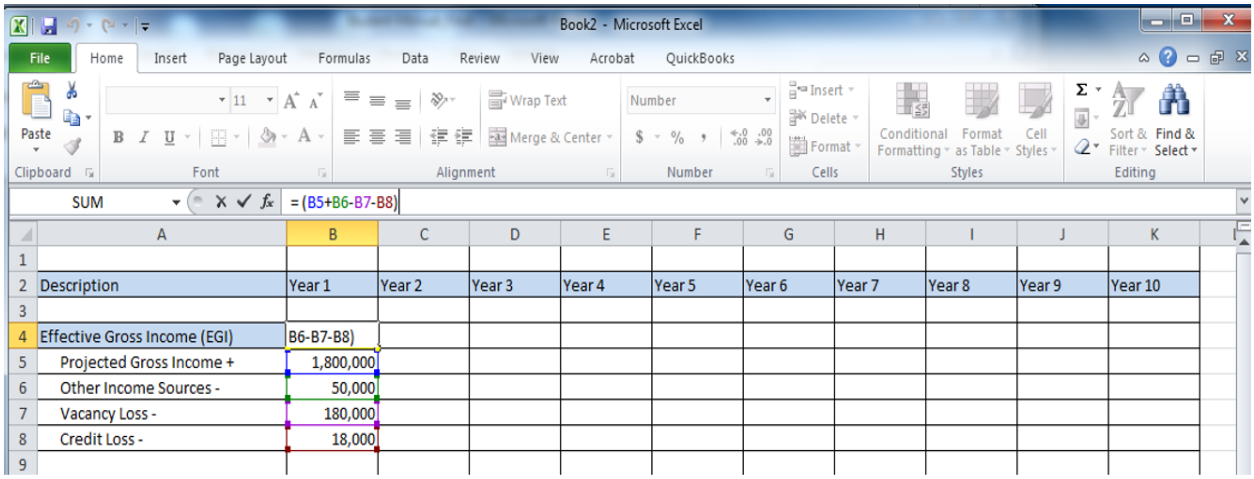
- Let's shade the column titles and each formula for easier reading. Place the cursor on the cells to be shaded. You can click and drag to choose a group of cells. If the cells that you want to shade are scattered throughout the spreadsheet, click on the cell you want to shade, hold the Ctrl key and click any other cells to be shaded.
- Then go to the Font tab, click the arrow next to the paint bucket to open and choose a color to fill.



Entering Numeric Values

Let's finish the spreadsheet by entering the numeric values and format the cells as currency with no decimal points. We will enter all the values for the variables and use the Excel function key to calculate the results.

- Click on B5 cell, enter the projected gross income of 1,800,000, hit enter
- In B6 cell, enter the other income sources of 50,000, hit enter
- In B7 cell, enter the vacancy loss of 180,000, hit enter
- In B8 cell, enter the credit loss of 18,000, hit enter
- In B9 cell, enter the rent abatements losses of 30,000, hit enter
- Now click on cell B4 (EGI) and then click in the formula bar and enter the following formula: =SUM(B5:B9)



	A	B	C	D	E	F	G	H	I	J	K
1											
2	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3											
4	Effective Gross Income (EGI)	B6-B7-B8)									
5	Projected Gross Income +	1,800,000									
6	Other Income Sources -	50,000									
7	Vacancy Loss -	180,000									
8	Credit Loss -	18,000									
9											

Continue to enter the values in each cell for each formula (calculation). The equation for each formula is as follows:

- In B11, Net Operating Income =(B12-(B13+B22))
- In B24, Gross Rent Multiplier =(B25/B26)
- In B28, Capitalization Rate =(B29/B30)
- In B32, Cash Flow Before Taxes =(B33-B34)
- In B36, Cash-on-Cash Return Before Taxes =(B37/B38)
- In B40, Cash Flow After Taxes =B41-B46)
- In B42, Tax Liability =(B45*0.21), where 0.21 is the tax rate
- In B45, Net Taxable Gain/Loss =(B41-(B43+B44))

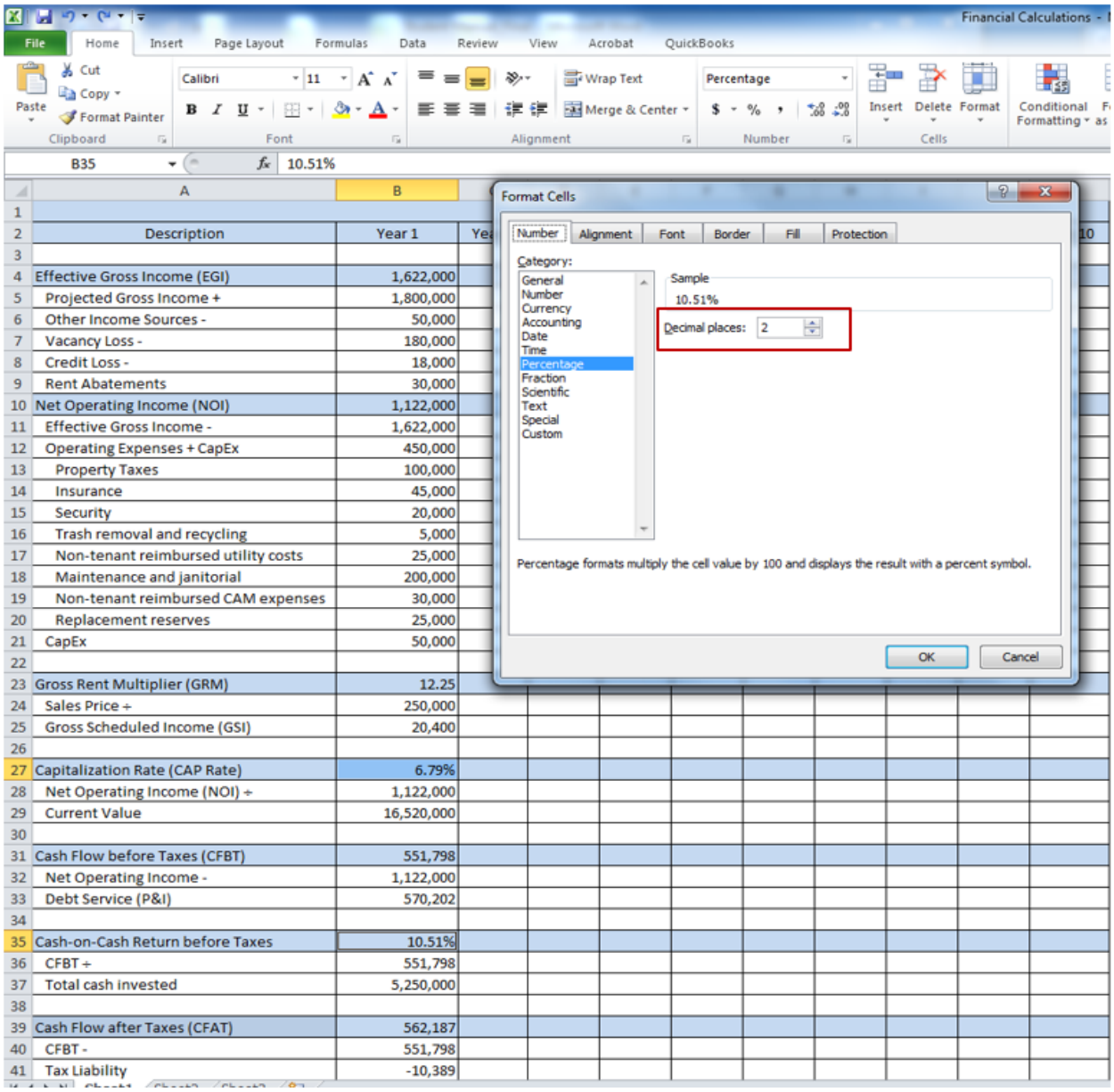
Your spreadsheet should now look like this:

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	1,622,000									
Projected Gross Income +	1,800,000									
Other Income Sources -	50,000									
Vacancy Loss -	180,000									
Credit Loss -	18,000									
Rent Abatements	30,000									
Net Operating Income (NOI)	1,122,000									
Effective Gross Income -	1,622,000									
Operating Expenses + CapEx	450,000									
Property Taxes	100,000									
Insurance	45,000									
Security	20,000									
Trash removal and recycling	5,000									
Non-tenant reimbursed utility costs	25,000									
Maintenance and janitorial	200,000									
Non-tenant reimbursed CAM expenses	30,000									
Replacement reserves	25,000									
CapEx	50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	250,000									
Gross Scheduled Income (GSI)	20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	1,122,000									
Current Value	16,520,000									
Cash Flow before Taxes (CFBT)	551,798									
Net Operating Income -	1,122,000									
Debt Service (P&I)	570,202									
Cash-on-Cash Return before Taxes	10.51%									
CFBT ÷	551,798									
Total cash invested	5,250,000									
Cash Flow after Taxes (CFAT)	562,187									
CFBT -	551,798									
Tax Liability	-10,389									
Interest Paid +	355,115									
Depreciation +	246,154									
Net Taxable Gain/Loss	-49,471									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	-10,389									

FORMATTING CELLS

Percentages

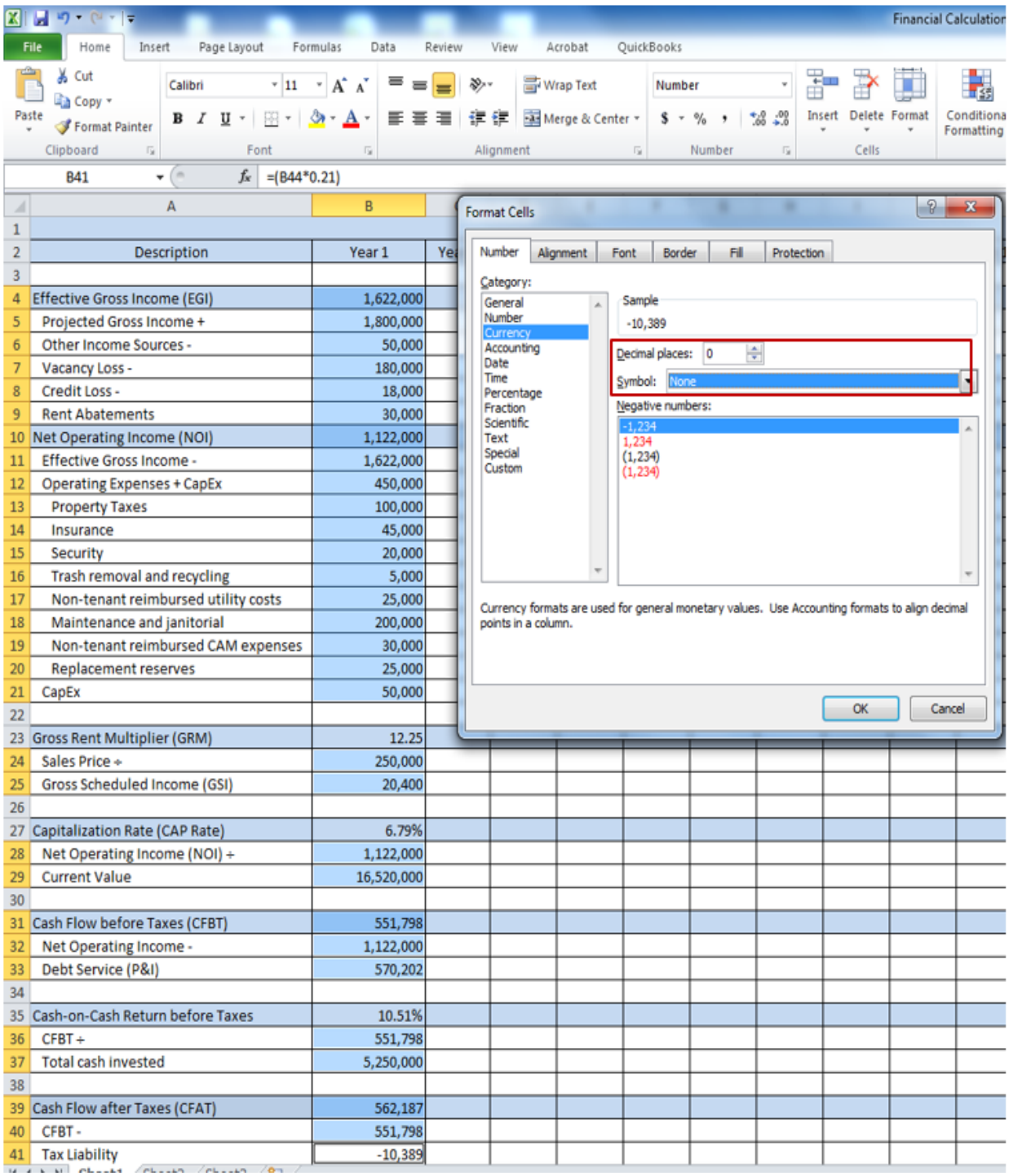
- To format cells to show %, hold the Ctrl key and click on the cells to be formatted as %. You can specify the number of decimal places; in this case, we want 2 decimal places.
- Click on the right lower arrow in the alignment tab, click on "Number" tab, click "Percentage," enter 2 in the decimal places box.



	A	B
1		
2	Description	Year 1
3		
4	Effective Gross Income (EGI)	1,622,000
5	Projected Gross Income +	1,800,000
6	Other Income Sources -	50,000
7	Vacancy Loss -	180,000
8	Credit Loss -	18,000
9	Rent Abatements	30,000
10	Net Operating Income (NOI)	1,122,000
11	Effective Gross Income -	1,622,000
12	Operating Expenses + CapEx	450,000
13	Property Taxes	100,000
14	Insurance	45,000
15	Security	20,000
16	Trash removal and recycling	5,000
17	Non-tenant reimbursed utility costs	25,000
18	Maintenance and janitorial	200,000
19	Non-tenant reimbursed CAM expenses	30,000
20	Replacement reserves	25,000
21	CapEx	50,000
22		
23	Gross Rent Multiplier (GRM)	12.25
24	Sales Price ÷	250,000
25	Gross Scheduled Income (GSI)	20,400
26		
27	Capitalization Rate (CAP Rate)	6.79%
28	Net Operating Income (NOI) ÷	1,122,000
29	Current Value	16,520,000
30		
31	Cash Flow before Taxes (CFBT)	551,798
32	Net Operating Income -	1,122,000
33	Debt Service (P&I)	570,202
34		
35	Cash-on-Cash Return before Taxes	10.51%
36	CFBT ÷	551,798
37	Total cash invested	5,250,000
38		
39	Cash Flow after Taxes (CFAT)	562,187
40	CFBT -	551,798
41	Tax Liability	-10,389

Currency

- Next, we will format the money values to "currency" with no decimal places and no "$" symbol. If you choose to include the "$" symbol, use the drop down arrow for "Symbol" box and choose "$."
- Click on the lower right arrow in the alignment tab, click on "Number" tab, click "Currency," enter 0 in the decimal places box. Choose none for symbol.

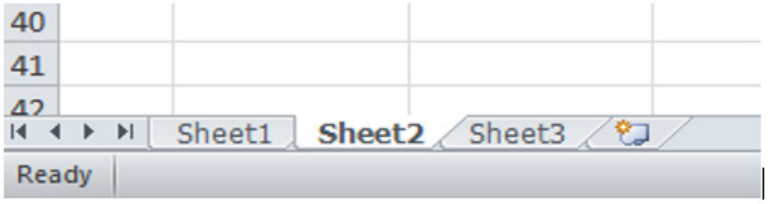


	A	B
1		
2	Description	Year 1
3		
4	Effective Gross Income (EGI)	1,622,000
5	Projected Gross Income +	1,800,000
6	Other Income Sources -	50,000
7	Vacancy Loss -	180,000
8	Credit Loss -	18,000
9	Rent Abatements	30,000
10	Net Operating Income (NOI)	1,122,000
11	Effective Gross Income -	1,622,000
12	Operating Expenses + CapEx	450,000
13	Property Taxes	100,000
14	Insurance	45,000
15	Security	20,000
16	Trash removal and recycling	5,000
17	Non-tenant reimbursed utility costs	25,000
18	Maintenance and janitorial	200,000
19	Non-tenant reimbursed CAM expenses	30,000
20	Replacement reserves	25,000
21	CapEx	50,000
22		
23	Gross Rent Multiplier (GRM)	12.25
24	Sales Price ÷	250,000
25	Gross Scheduled Income (GSI)	20,400
26		
27	Capitalization Rate (CAP Rate)	6.79%
28	Net Operating Income (NOI) ÷	1,122,000
29	Current Value	16,520,000
30		
31	Cash Flow before Taxes (CFBT)	551,798
32	Net Operating Income -	1,122,000
33	Debt Service (P&I)	570,202
34		
35	Cash-on-Cash Return before Taxes	10.51%
36	CFBT ÷	551,798
37	Total cash invested	5,250,000
38		
39	Cash Flow after Taxes (CFAT)	562,187
40	CFBT -	551,798
41	Tax Liability	-10,389

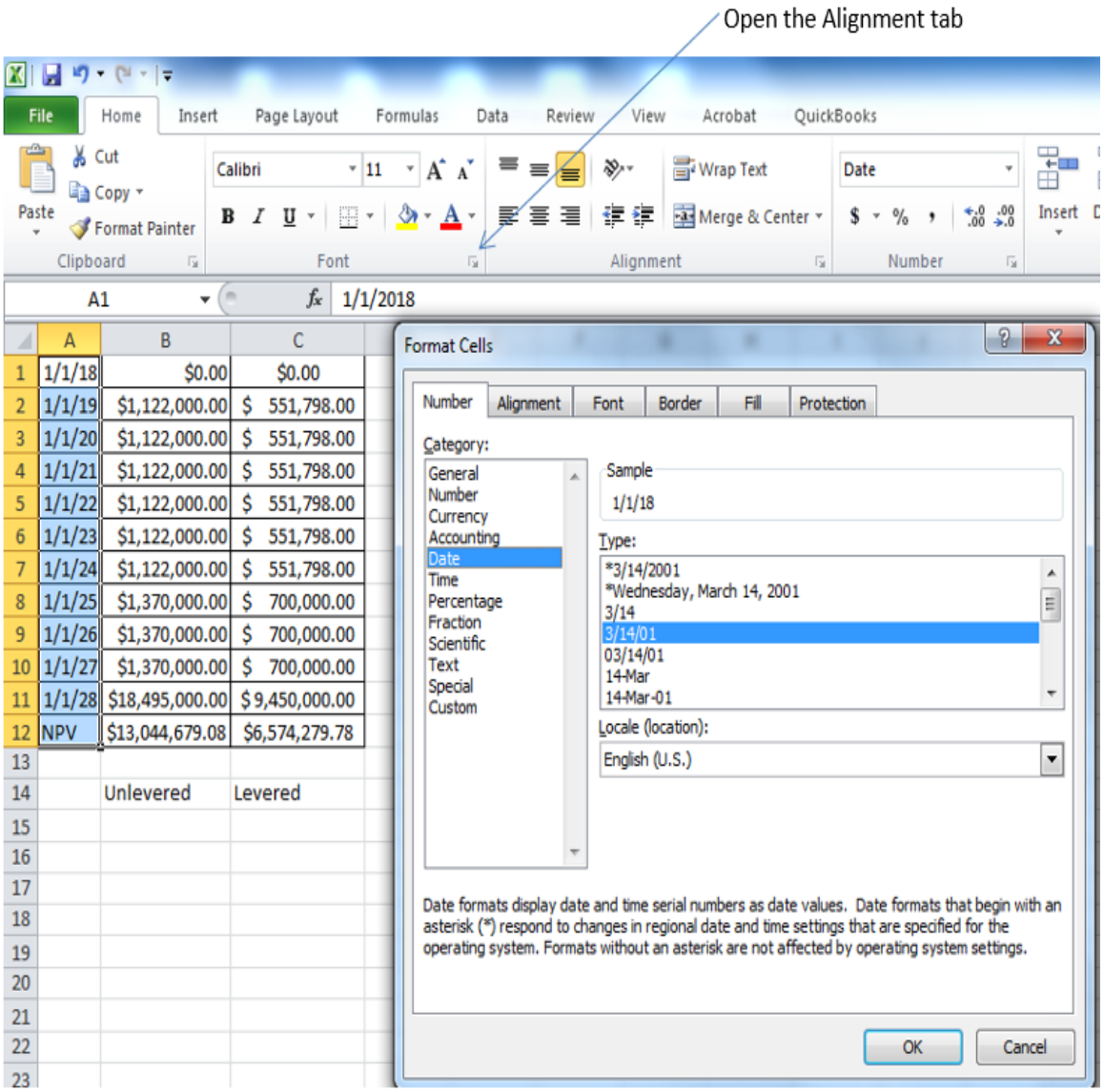
Calculating NPV

To calculate NPV for the levered and unlevered cash flows and estimated terminal sales price at reversion, we will create another table and use the XNPV formula in Excel to calculate the discounted cash flows (unlevered and levered):

- Open a new sheet within the same file by clicking on Sheet 2 tab at the bottom of your spreadsheet. Enter the dates and cash flows (both unlevered and levered)

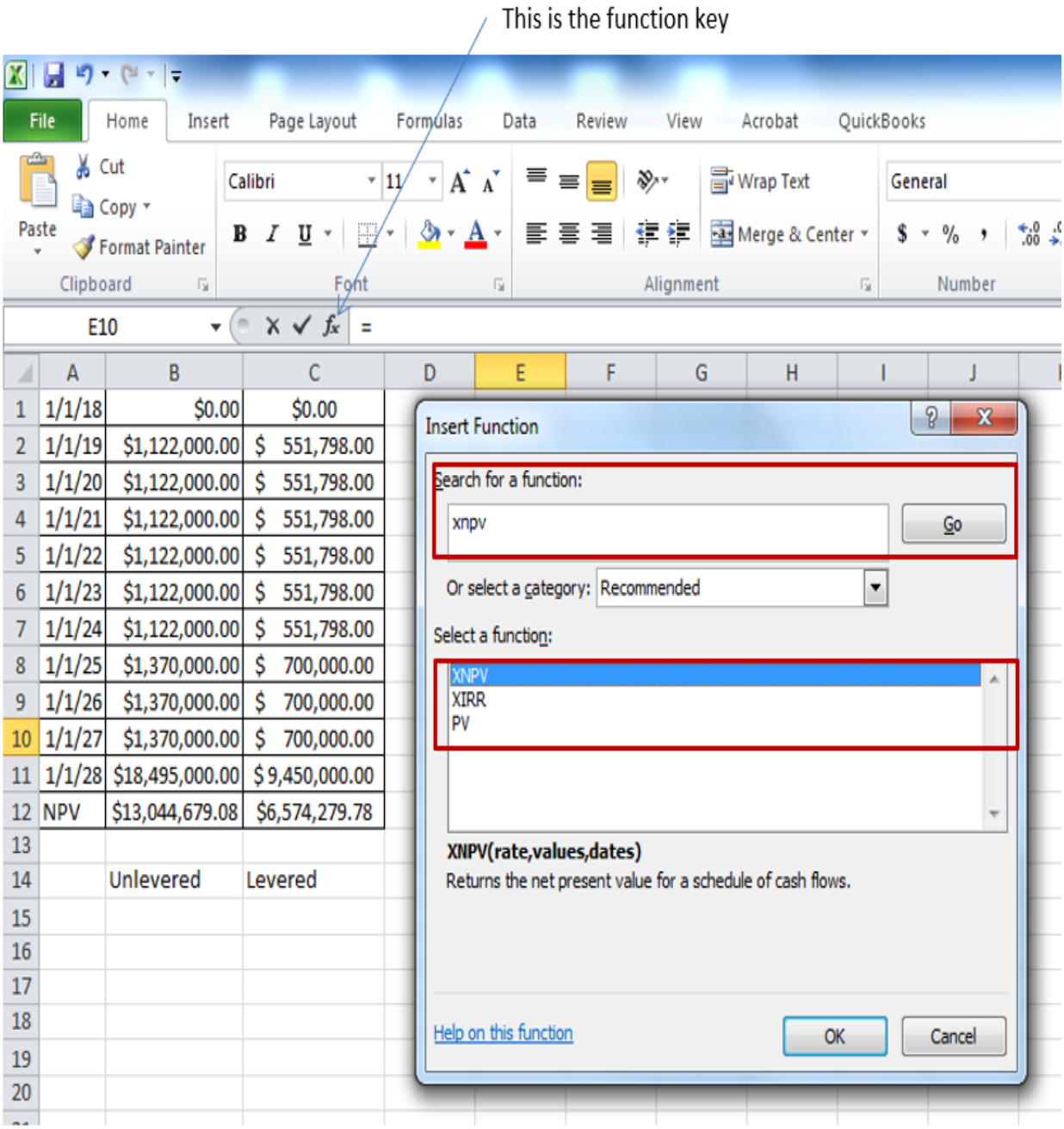


- Make sure you format your money values in currency and your dates in date format as m/d/yy (i.e., 1/1/18). Excel is a little picky on the format of the cells when formulas are used.



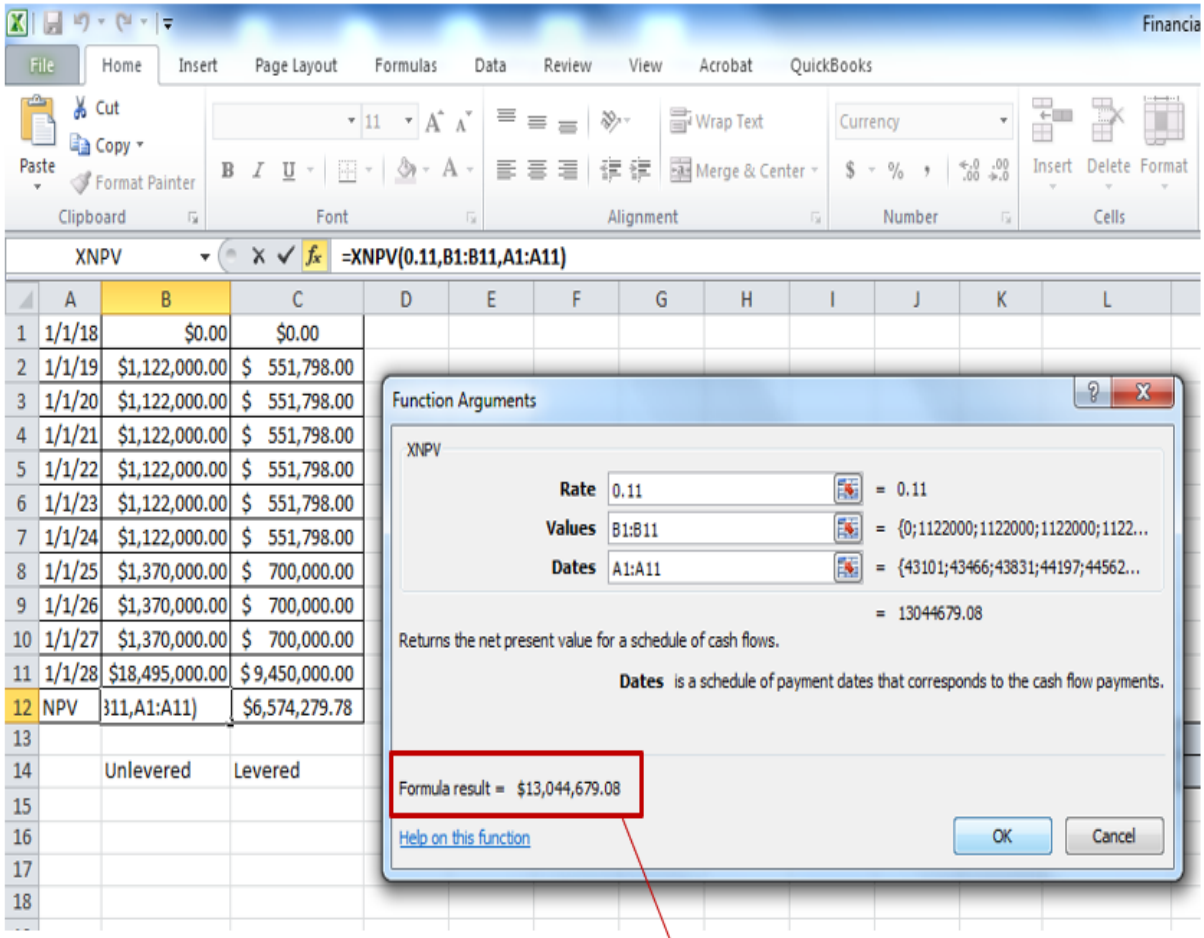
	A	B	C
1	1/1/18	$0.00	$0.00
2	1/1/19	$1,122,000.00	$ 551,798.00
3	1/1/20	$1,122,000.00	$ 551,798.00
4	1/1/21	$1,122,000.00	$ 551,798.00
5	1/1/22	$1,122,000.00	$ 551,798.00
6	1/1/23	$1,122,000.00	$ 551,798.00
7	1/1/24	$1,122,000.00	$ 551,798.00
8	1/1/25	$1,370,000.00	$ 700,000.00
9	1/1/26	$1,370,000.00	$ 700,000.00
10	1/1/27	$1,370,000.00	$ 700,000.00
11	1/1/28	$18,495,000.00	$ 9,450,000.00
12	NPV	$13,044,679.08	$6,574,279.78
13			
14		Unlevered	Levered
15			
16			
17			
18			
19			
20			
21			
22			
23			

- Once you complete entering your values, click on the fx key, type XNP in the "Search for a function" box and click "Go", then highlight the XNPV function and click OK.



	A	B	C
1	1/1/18	$0.00	$0.00
2	1/1/19	$1,122,000.00	$ 551,798.00
3	1/1/20	$1,122,000.00	$ 551,798.00
4	1/1/21	$1,122,000.00	$ 551,798.00
5	1/1/22	$1,122,000.00	$ 551,798.00
6	1/1/23	$1,122,000.00	$ 551,798.00
7	1/1/24	$1,122,000.00	$ 551,798.00
8	1/1/25	$1,370,000.00	$ 700,000.00
9	1/1/26	$1,370,000.00	$ 700,000.00
10	1/1/27	$1,370,000.00	$ 700,000.00
11	1/1/28	$18,495,000.00	$ 9,450,000.00
12	NPV	$13,044,679.08	$6,574,279.78
13			
14		Unlevered	Levered

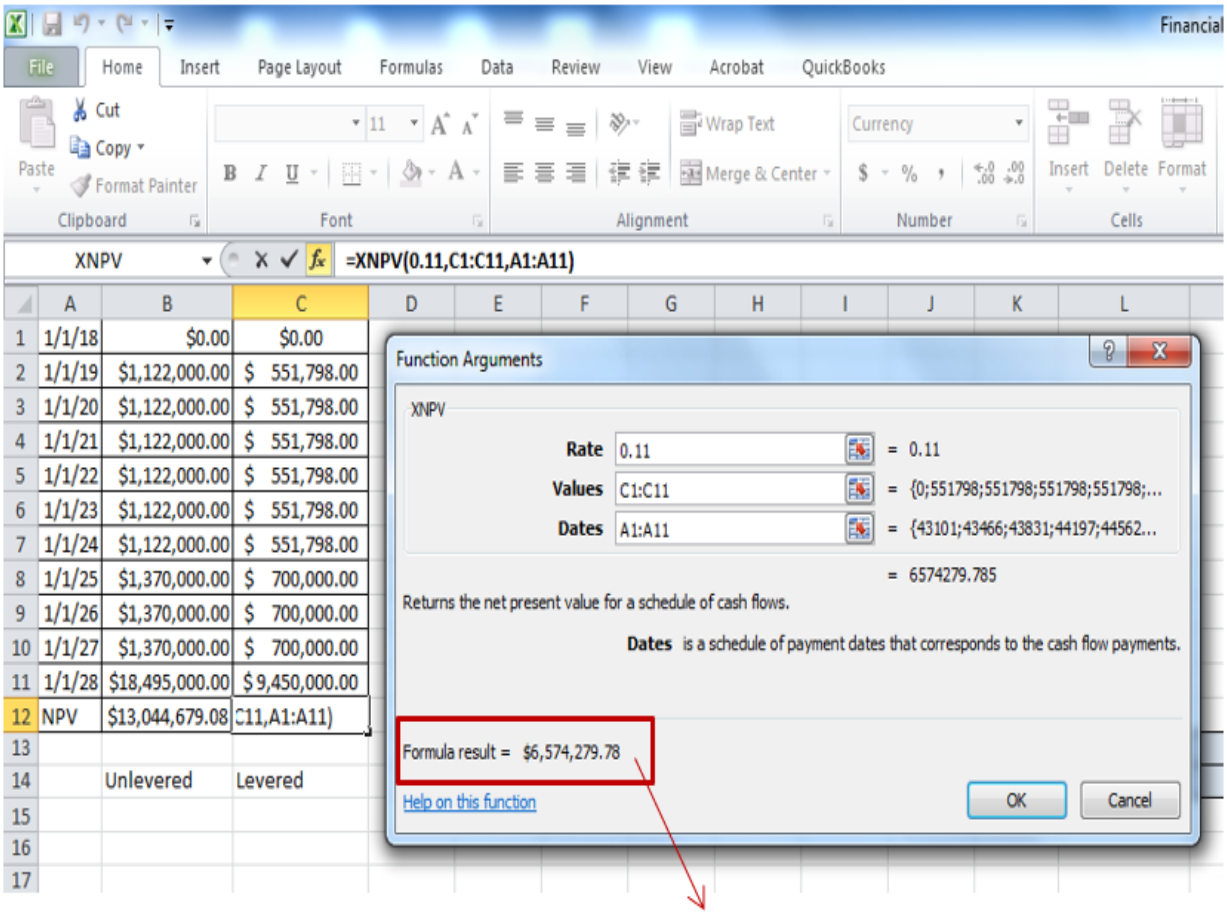
- A new window will open, manually enter the interest rate of 0.11, in the Values cell center B63:B73, and in the Dates cell enter A63-A73, click OK. This will give you the NPV of the unlevered cash flows and sales price.



Notice the formula result = 13,044,679 where,

Rate = 0.11
Values = cells B63 thru B73
Dates = cells A63 thru A73

- Do the same to get the NPV of the levered cash flows and sales price:



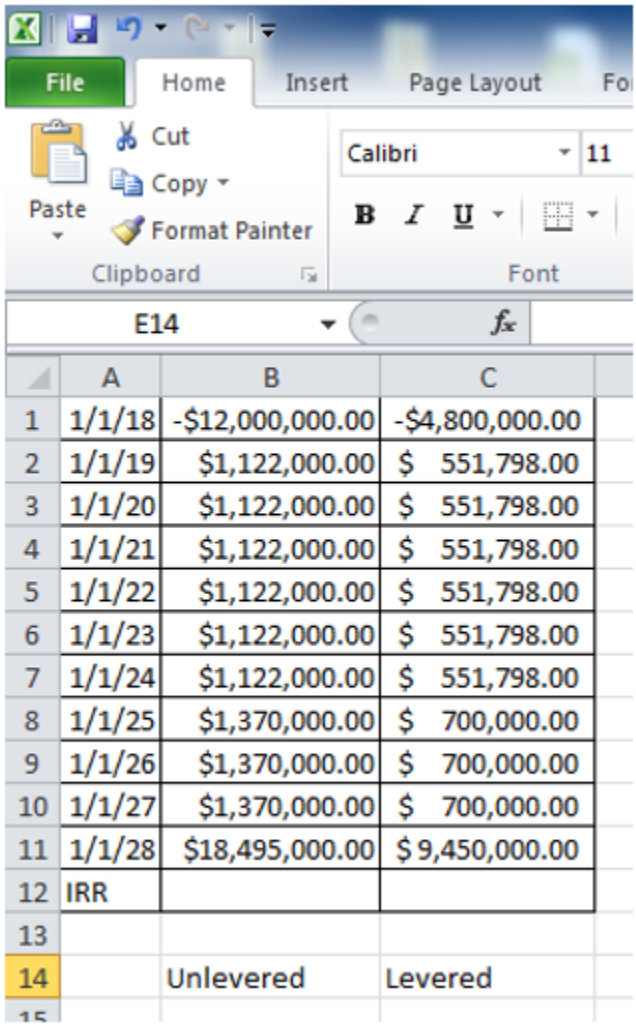
	A	B	C
1	1/1/18	$0.00	$0.00
2	1/1/19	$1,122,000.00	$ 551,798.00
3	1/1/20	$1,122,000.00	$ 551,798.00
4	1/1/21	$1,122,000.00	$ 551,798.00
5	1/1/22	$1,122,000.00	$ 551,798.00
6	1/1/23	$1,122,000.00	$ 551,798.00
7	1/1/24	$1,122,000.00	$ 551,798.00
8	1/1/25	$1,370,000.00	$ 700,000.00
9	1/1/26	$1,370,000.00	$ 700,000.00
10	1/1/27	$1,370,000.00	$ 700,000.00
11	1/1/28	$18,495,000.00	$ 9,450,000.00
12	NPV	$13,044,679.08	C11,A1:A11)
13			
14		Unlevered	Levered
15			
16			
17			

Notice the formula result = 13,044,679 where,

Rate = 0.11
Values = cells B63 thru B73
Dates = cells A63 thru A73

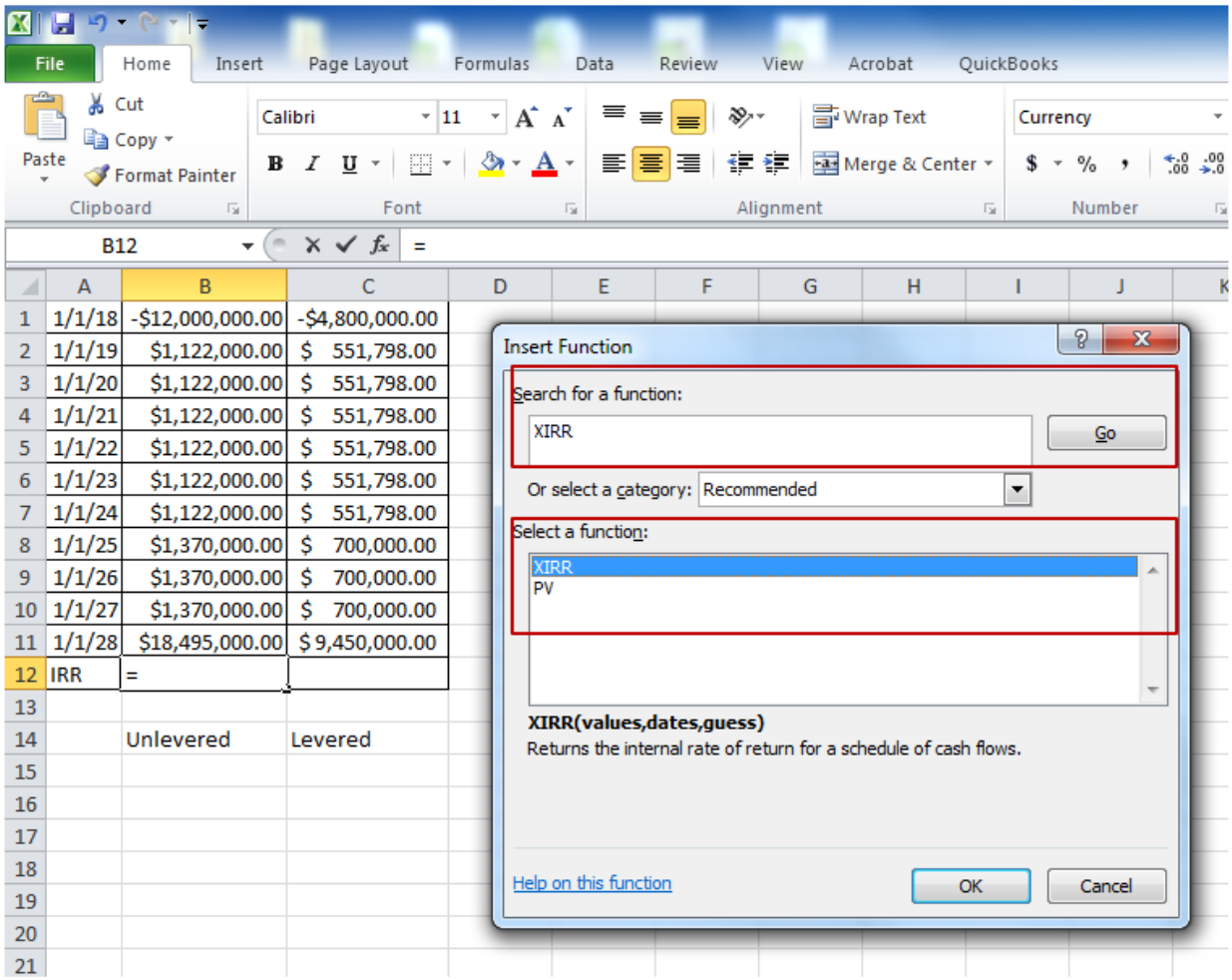
Calculating the IRR

The steps for IRR are essentially the same as for XNPV. The only difference is that we need to add the initial cash out or initial cost of acquiring the property. In this case, the cash out for the unlevered examples is negative (12,000,000) while the cash out for the levered scenario is negative (4,8000,000). The spreadsheet should look like this:

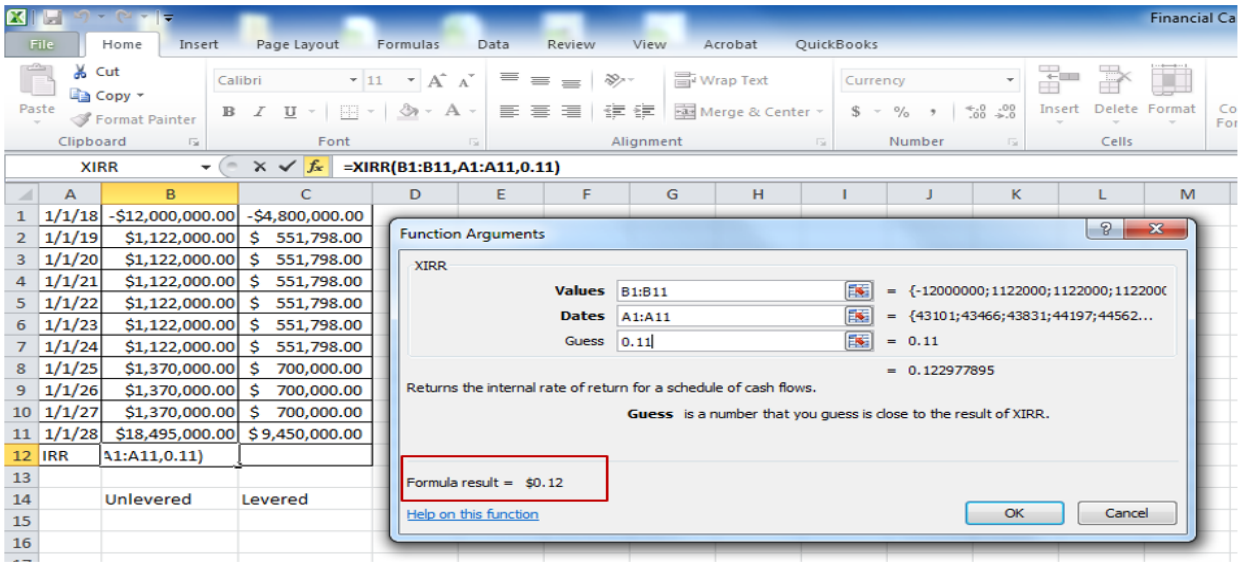


	A	B	C
1	1/1/18	-$12,000,000.00	-$4,800,000.00
2	1/1/19	$1,122,000.00	$ 551,798.00
3	1/1/20	$1,122,000.00	$ 551,798.00
4	1/1/21	$1,122,000.00	$ 551,798.00
5	1/1/22	$1,122,000.00	$ 551,798.00
6	1/1/23	$1,122,000.00	$ 551,798.00
7	1/1/24	$1,122,000.00	$ 551,798.00
8	1/1/25	$1,370,000.00	$ 700,000.00
9	1/1/26	$1,370,000.00	$ 700,000.00
10	1/1/27	$1,370,000.00	$ 700,000.00
11	1/1/28	$18,495,000.00	$ 9,450,000.00
12	IRR		
13			
14		Unlevered	Levered

- To calculate IRR, click on the function key, enter XIRR in the Search for a function box, click go. Make sure the XIRR function is highlighted and click OK

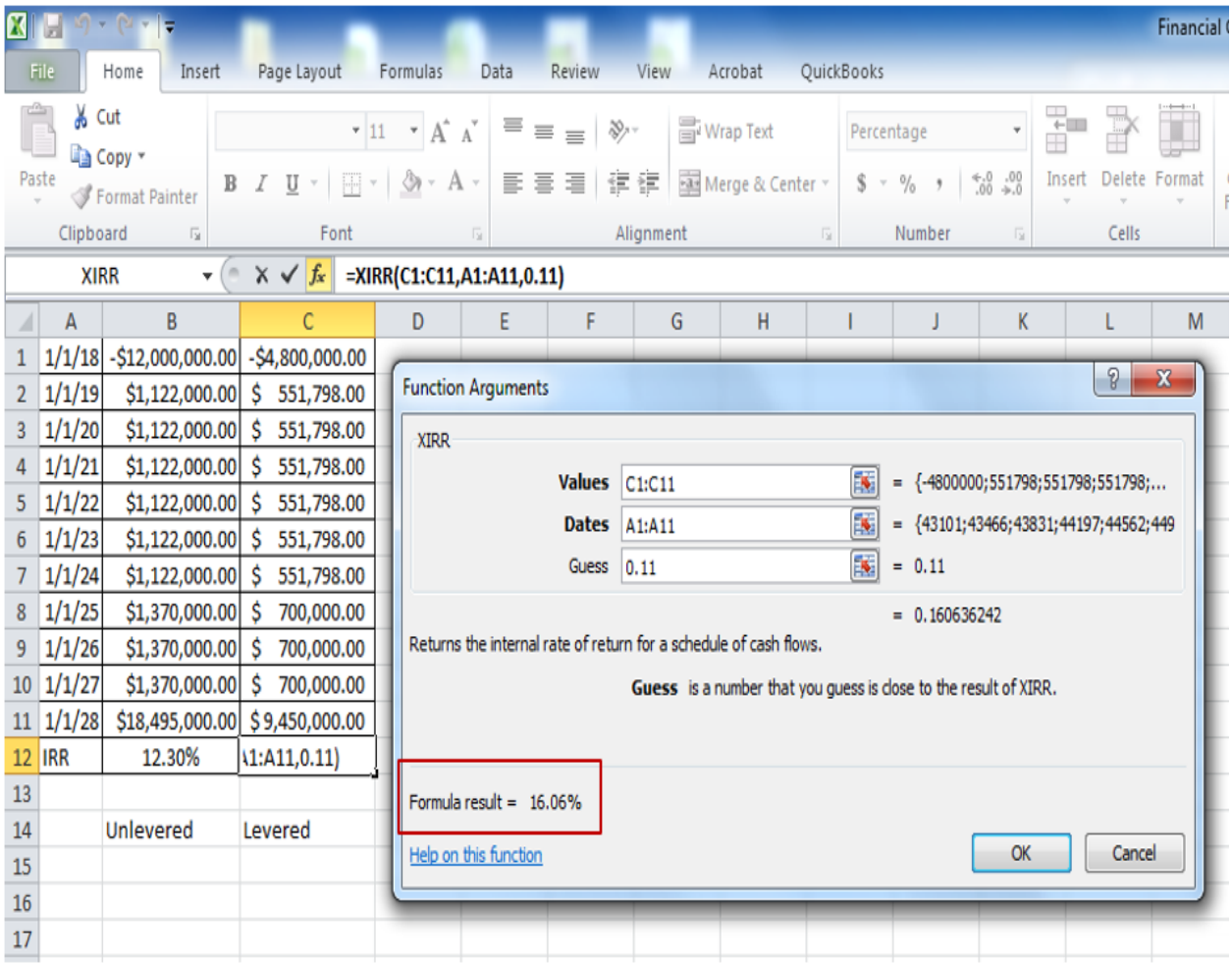


- A new box will open; enter values by highlighting all the values. Do the same for the dates.



Notice the result is $0.12. This is because we formatted the cell in currency. We will need to format it in percentage as demonstrated earlier. Click on the cell, you can right click or go to the Alignment tab to change the format to percentage with 2 decimals.

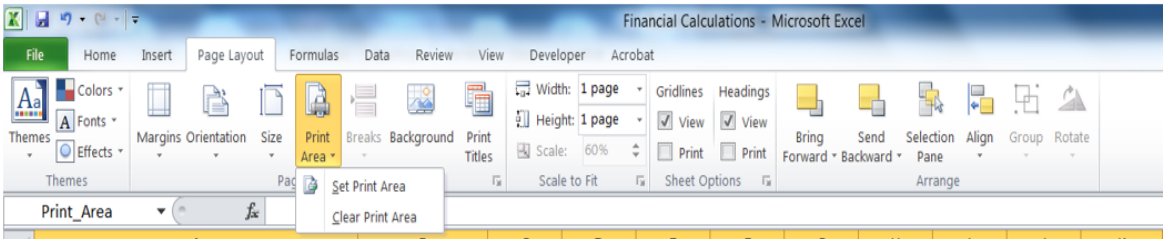
- Repeat, to get the IRR for the levered scenario:



	A	B	C
1	1/1/18	-$12,000,000.00	-$4,800,000.00
2	1/1/19	$1,122,000.00	$ 551,798.00
3	1/1/20	$1,122,000.00	$ 551,798.00
4	1/1/21	$1,122,000.00	$ 551,798.00
5	1/1/22	$1,122,000.00	$ 551,798.00
6	1/1/23	$1,122,000.00	$ 551,798.00
7	1/1/24	$1,122,000.00	$ 551,798.00
8	1/1/25	$1,370,000.00	$ 700,000.00
9	1/1/26	$1,370,000.00	$ 700,000.00
10	1/1/27	$1,370,000.00	$ 700,000.00
11	1/1/28	$18,495,000.00	$ 9,450,000.00
12	IRR	12.30%	A1:A11,0.11)
13			
14		Unlevered	Levered
15			
16			
17			

To print your spreadsheet:

- Go to Page Layout tab
- Hold the left click and highlight the cells that you want to print
- Go to Print Area and click "Set Print Area." Once the area is set up, go to File —> Print. Here you can adjust the margins, paper size, scaling, and orientation.



	A	B	C	D	E	F	G	H	I	J	K
40	CFBT -	551,798									
41	Tax Liability	-10,389									
42	Interest Paid +	355,115									
43	Depreciation +	246,154									
44	Net Taxable Gain/Loss	-49,471									
45	Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	-10,389									
46	Periodic Cash Flows - NOI	1,122,000	1,122,000	1122000	1122000	1122000	1122000	1370000	1370000	1370000	18495000
47	DCF (unlevered)	13,044,679									
48	Estimated Terminal Sales Price at reversion										17,125,000
49	Terminal CAP rate										8.00%
50	Going in CAP rate	9.35%									
51	Discount rate	12.35%									
52	Risk Premium	9%									
53	Periodic Levered Cash Flows (CFBT)	551,798	551,798	551798	551798	551798	551798	700000	700000	700000	9450000
54	DCF PV Estimate (levered)	6,574,280									
55	Levered Terminal CAP rate										8%
56	Levered going in CAP rate	8.39%									
57	NPV (levered)	1,774,280									
58	NPV (unlevered)	1,044,679									
59	IRR (levered)	16.06%									
60	IRR (unlevered)	12.30%									

Your final spreadsheet should now look like this:

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Effective Gross Income (EGI)	1,622,000									
Projected Gross Income +	1,800,000									
Other Income Sources -	50,000									
Vacancy Loss -	180,000									
Credit Loss -	18,000									
Rent Abatements	30,000									
Net Operating Income (NOI)	1,122,000									
Effective Gross Income -	1,622,000									
Operating Expenses + CapEx	450,000									
Property Taxes	100,000									
Insurance	45,000									
Security	20,000									
Trash removal and recycling	5,000									
Non-tenant reimbursed utility costs	25,000									
Maintenance and janitorial	200,000									
Non-tenant reimbursed CAM expenses	30,000									
Replacement reserves	25,000									
CapEx	50,000									
Gross Rent Multiplier (GRM)	12.25									
Sales Price ÷	250,000									
Gross Scheduled Income (GSI)	20,400									
Capitalization Rate (CAP Rate)	6.79%									
Net Operating Income (NOI) ÷	1,122,000									
Current Value	16,520,000									
Cash Flow before Taxes (CFBT)	551,798									
Net Operating Income -	1,122,000									
Debt Service (P&I)	570,202									
Cash-on-Cash Return before Taxes	10.51%									
CFBT ÷	551,798									
Total cash invested	5,250,000									
Cash Flow after Taxes (CFAT)	562,187									
CFBT -	551,798									
Tax Liability	-10,389									
Interest Paid +	355,115									
Depreciation +	246,154									
Net Taxable Gain/Loss	-49,471									
Tax Liability @ 21% Corporate Tax Rate = Net Taxable Gain/Loss x 0.21	-10,389									
Periodic Cash Flows - NOI	1,122,000	1,122,000	1122000	1122000	1122000	1122000	1370000	1370000	1370000	18495000
DCF (unlevered)	13,044,679									
Estimated Terminal Sales Price at reversion										17,125,000
Terminal CAP rate										8.00%
Going in CAP rate	9.35%									
Discount rate	12.35%									
Risk Premium	9%									
Periodic Levered Cash Flows (CFBT)	551,798	551,798	551798	551798	551798	551798	700000	700000	700000	9450000
DCF PV Estimate (levered)	6,574,280									
Levered Terminal CAP rate										8%
Levered going in CAP rate	8.39%									
NPV (levered)	1,774,280									
NPV (unlevered)	1,044,679									
IRR (levered)	16.06%									
IRR (unlevered)	12.30%									

GLOSSARY OF TERMS

Absorption Rate: Proportion of newly completed units that are or have been leased; usually over a 3-month period. Absorptions are the net change in the total number of apartment homes leased.

Acquisition agents: Institutional investors who are charged with the initial due diligence elements associated with the identification of suitable properties that meet investor objectives.

Appraiser: Estimates the value of real estate based on sales comparisons, replacement cost, and income

Asset: Something held that can produce positive economic value to its owner

Asset manager; Asset managers are responsible for maximizing the value of their commercial real estate assets through enhanced operational efficiencies and by developing new revenue opportunities for income.

Average Daily Rate: Sum of all rates per room for the day divided by the total number of rooms.

Breakpoint: Point where the percentage rent kicks in for retail tenants once the gross sales amount is reached.

Brownfield sites: Defined by the EPA as a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Business manager: Individual employed by property owners to oversee the business elements of income producing properties to ensure operational and financial efficiencies in order to maximize profits.

Capital: A financial asset or more commonly a way to think of funds in deposit accounts or financial resources.

Capital Expenditures (CapEx): Expenses for major improvements or expensive equipment replacements that will benefit the property and its tenants for many years rather than for just one single year.

Capital Structure: Refers to a financial structure where debt and equity interests are assigned and ranked.

Capitalization rate (CAP rate): CAP rates reflect the property return for a one-year period. It is calculated by dividing the property's NOI by its value or sales price.

Cash Flow After Taxes (CFAT): Obtained by subtracting the investor's tax liability from cash flow before taxes (CFBT).

Cash Flow Before Taxes (CFBT): Net cash flow of a property prior to considering taxes. It is calculated by subtracting debt service from net operating income.

Cash-on-Cash return before taxes: Method investors use to determine how well their total cash investment in the property (including closing costs) is performing relative to its annual cash flow.

CCIM Institute: Certified Commercial Investment Member Institute, commercial real estate's most influential organization with members representing a cross-section of commercial real estate interests.

C-Corporations: Business entities with unlimited shareholders who are protected from liability.

Commercial bridge loan: Short term loan to acquire property when permanent financing is not available because the property requires significant improvement before it can be underwritten by a lender.

Commercial properties: Properties developed for business and commerce.

Common area maintenance costs (CAM fees): fees paid by tenants to reimburse property owners for expenses related to the maintenance of common elements of a building.

Construction/Take-Out loan: Monies borrowed short-term by developers to complete construction in order to secure a permanent loan once the project is complete.

Corporations: Type of ownership structure. Corporations are both publicly held and closely held. Publicly held corporations issue common shares traded for public ownership, whereas closely held corporations have few shareholders and do not trade on a public exchange.

CRE: Acronym for Commercial Real Estate

Credit loss (C): Lost income associated with occupied units where the tenant failed to pay their rent.

Debt service: Principal and interest payments required to pay the debt.

Debt service coverage ratio: Method for determining a qualifying ratio in commercial lending; calculated by dividing NOI by annual debt service.

Delaware statutory: DE business trust that offers qualified investors syndicated fractional ownership interests into institutional level investment properties

Depreciation: Method to depreciate the value of improvements over time such as buildings and facilities as well as CapEx to reduce an investor's taxable income.

Discount rate: Interest rate used to calculate the value of an investment discounted for time.

Discounted cash flow analysis (DCF): A method to determine the present value of expected future cash flows discounted for time.

Due-on-sale clause: Clause in a real estate loan that requires full repayment upon sale of the property to another party.

Economic losses: A standard measure of the health of the housing market according to the National Apartment Association (NAA). It is found by taking the difference between potential gross income (PGI) and rental revenue collected.

Effective gross income (EGI): Potential gross income plus other income minus vacancy and credit loss.

Efficiency ratio: Determines how efficiently the gross building area is contributing to the building's cash flow through rents and it is calculated by dividing the rentable area by the gross building area.

Equilibrium rent: The point where the rent replacement cost is in equilibrium and the space market is in balance with supply equal to demand.

Equity Real Estate Investment Trust (REIT): Company that owns and operates several income generating properties in a portfolio for the benefit of its shareholders.

Facilities management: Daily management of the property including all buildings and grounds.

Fee simple (Freehold): Title to and the right to possess the property and its improvements.

Financial advisors: Fiduciaries employed by investors to help them manage their financial portfolio, including real estate assets.

Floor area ratio: Ratio between the square footage of the building to the total square footage of the parcel of land it is situated on.

Floor plate: Gross square footage of each floor in a multi-story building.

Frontage: Defines the length of the boundaries of a parcel of land that is alongside a road.

Future value: The estimated value of an asset in the future based on an assumed

growth rate.

Gateway cities: Cities that are typically considered more stable during weak economic times.

General Partnership (GP): Business entity formed by two or more individuals with an agreement to pool resources and share in the risks and rewards of a business or real estate venture.

Going in CAP rate: CAP rate at the beginning period.

Grantor trust: A type of living trust that is revocable, which means that the terms of the trust can be changed or canceled by the Trustor.

Gross absorption: Measures the total amount of newly leased space leased in a market over a one year period.

Gross building area: Total floor area of a building, excluding unenclosed areas, measured from the exterior of the walls that include both the superstructure floor area and the substructure or basement area.

Gross floor area: Total floor area including the common area.

Gross leasable area: Total floor area leased to tenants including basements and mezzanines.

Gross rent multiplier (GRM): Calculation that estimates the number of years it will take for the gross revenue to pay for the cost of acquisition.

Gross sales area: Gross leasing area attributed to sales activity, excludes non-sales areas.

Hedge: Financial method to reduce certain risk(s).

Highest and best use: The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value.

Holding period: Refers to the time an owner intends to hold the property.

Hurdle rate: Investor's required rate of return.

Illiquid assets: Assets that cannot be easily sold due to infrequent and low trading volumes.

Individual or sole proprietorship: Type of business owned and run by a single person and taxed at the same rate as the individual with no limited liability protection

Institutional owners: Institutions such as sovereign wealth funds, large private endowments, private equity interests, pensions, insurance companies, real estate investment trusts (REITs), and large business trusts that control and manage real estate assets.

Internal rate of return: Method to determine the degree of profitability of an investment using multi-period discounted cash flow analysis. It is the rate of return that makes NPV = 0.

Investment committees: Committees that oversee real estate portfolios and its assets as part of a larger investment strategy.

Investment properties: Properties acquired for income generation, profit from appreciation, and tax advantages.

Joint ventures: Formed when two businesses agree to partner on a deal to share resources in order to achieve a common goal.

Land scarcity: Condition where the available land for property is scarce.

Leasable/rentable building area: Total square footage of a building that can be occupied by or assigned to a tenant for the purpose of determining a tenant's total rental obligation.

Leasehold: Property interest created through a lease for a period of time.

Leasing agents: Individuals that engage in property leasing activities and/or accept rents on behalf of a property owner.

Leverage: Borrowed capital that offers investors the opportunity to purchase real estate assets on a greater scale.

Limited Liability Company (LLC): Company that can involve as little as one member and may protect owners from creditors and lawsuits. Profits and losses can pass-through to owners as an adjustment to personal income.

Limited Liability Partnerships (LLP): Business entity that has no general partners. All partners have limited liability for business debts.

Limited Partnerships (LP): Formed with two or more individuals to insulate partners from the company's debts. LPs select one owner to be a general partner who makes the decisions and assumes liability for debts while limited partners can invest without liability.

Living trust: a legal arrangement to ensure orderly management and disposition of assets to family members upon the death of the individual.

Load factor: Factor used to determine rents based on a tenant's usable square feet.

Market vacancy rate: Rate determined by taking the total amount of vacant space in a market and dividing it by the amount of built space in that market.

Mezzanine financing: Type of capital structure where financing is provided by another lender subordinate to the permanent loan.

Months supply: A measure for determining how long it will take for the market to absorb existing vacant space.

Mortgage REITs: Companies that own mortgage-backed securities (MBS) or commercial mortgage-backed securities (CMBS) comprised of debt securities (mortgages) instead of real estate in order to generate earnings from interest payments.

Net operating income (NOI): Result of subtracting the operating expenses from the effective gross income (EGI) and is a commonly used indicator to quickly assess how well a property is able to generate profits through cash flow.

Net present value: An investment's present value of estimated cash flows minus its cash outflows.

Nonprofit corporations: Tax exempt entities such as hospitals or charitable organizations.

Non-recourse commercial loans; Types of financing where the borrower has no contingent liabilities in case of default and the lender's sole remedy is the security interest in the property as collateral.

Occupancy rate: Percentage of total space that is occupied.

Office building: Defined as a structure providing environments that are conducive to the performance of management and administrative activities, accounting, marketing, information processing, consulting, human resources management, financial and insurance services, educational and medical services, and other professional services.

Operating expenses: Annual expenses incurred in the management, operation, and maintenance of a property.

Opportunity cost of capital: Reflects the potential missed revenue opportunity when selecting a lower performing investment over a higher performing one.

Other income sources (OI): Income from sources other than rents such as parking, pet fees, storage lockers, and others.

Portfolio managers: Financial investment fiduciaries that make investment decisions regarding the risks and rewards associated with holding any one or a group of properties in their portfolio.

Positive leverage: The leveraged asset returns are greater than the cost of borrowed capital.

Potential Gross Income (PGI): Annual potential income for the property.

Private equity funds: Can be either open or closed funds holding a single or multiple properties with multiple investors. Typically, a sponsor serves as a general manager or a general partner for the management of the property.

Professional corporations: Business entities that consist of professionals such as lawyers, doctors, and CPAs. The tax and limited liability benefits are present in this structure, but its shareholders are limited to members of the same practice profession.

Property consultants: Individuals, usually experienced property and facility managers, who are engaged by owners to evaluate the operational and financial performance of a property and to recommend ways to enhance its efficiency and financial performance.

Property inspectors: Licensed individuals who assess the integrity of structural and mechanical elements of a building and make recommendations regarding structural defects.

Property managers: Individuals who oversee the management operations of a property and offer critical leasing and operations management services to property owners.

Quick service restaurants: Businesses that are typically part of a large franchise such as McDonald's or Taco Bell.

Real estate: Property consisting of land and buildings including improvements.

Real Estate Investment Trust (REIT): Company managing a portfolio of high valued investment grade assets for the benefit of its shareholders.

Real Estate Limited Partnership (RELP): Limited partnership that invests strictly in real estate.

Real property: Interests, benefits, and rights inherent in the ownership of real estate.

Rent abatements: Conditions where rents are reduced or forgiven reducing the effective gross income.

Rented area: Defined as the amount of space currently leased.

Replacement cost of rent: A measure for determining when new development can be profitable. If the replacement cost is above the rents, new development will not be profitable. If the replacement cost is below the rents, new development is warranted. If the replacement cost is equal to the rents, the market is in equilibrium.

Reserve funds: Capital reserved for upgrades or replacements as a part of a long-term capital budgeting plan for a property.

Reserve study: Analysis of the physical components of a property, such as elevators and HVAC, and their expected replacement dates based on typical life cycles for that equipment or component.

Residential properties: Properties developed for living and personal enjoyment.

Return on investment (ROI): Simple method used to evaluate efficiency, or how well an investment performed after its costs.

Revenue per available room (RevPar): Industry standard for performance that offers a quick assessment as to the hotel's ability to fill its rooms using the average daily room rate. It is found by multiplying a hotel's average daily room rate by its occupancy rate.

Reversion cash flow: Refers to the cash proceeds or future cash benefits the owner will receive at sale (after the holding period).

Reversion period: End of the holding period.

S-Corporations: Sub category of corporation limited to 100 shareholders with only one class of stock. Protects shareholders from liability and may reduce self-employment tax liabilities such as social security and Medicare.

Sponsors: Individual or company that represents the interests of real estate property owners in the acquisition, management, and disposition of properties.

Tax liability: Taxes owed to the government on net income adjusted for mortgage interest and depreciation.

Tenant representation: Specialty in commercial real estate where agents strictly work with tenants to lease property.

Tenants: Individuals/entities that have a leasehold interest in the property for a period of time and possess the right to its exclusive use.

Tenants in common (TIC): Common ownership interest created in a deed. Investors can hold real estate with others in unequal interests which survive the death of the

investor.

Terminal CAP rate: CAP rate at the end of the holding period.

Time value of money: Concept whereby the value of having a dollar today is higher than if received in the future.

Tranche: To divide something such as a loan into different risk components.

Trust: A legal arrangement to hold assets in trust and controlled by a trustee for the benefit of another.

Turnover rate: Ratio between the number of move-outs or units vacated to the total number of units in a property measured over one-year period.

Usable area: Space measured in square feet that a tenant occupies that includes private hallways, private bathrooms, or private mechanical closets.

Users of real estate properties: Parties that benefit from the use of residential or commercial properties that can include owners and tenants.

Vacancy loss (V): Lost income associated with units that are not rented throughout the year.

Walk score: Measures the number of amenities that are walkable from the property within a 1-mile radius. A score of 0 is not walkable; it is car dependent, and a score of 100 is a walker's paradise.

Waterfall IRR model: Model used to split up the net cash flow payouts or profits to different investment partners in a variety of ways.