



Magical Math

for Property Management

Presented by Victoria Cowart, CPM, NAAEI Faculty



CAP Rate,
NOI, ROI...
OH MY!



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PetScreening

PetScreening™ helps housing providers manage residents' pets and assistance animals digitally while generating opportunities for pet-related revenue. The virtual screening platform standardizes risk-assessment for household pets by providing a digital Pet Profile and FIDO Score for each pet screened. PetScreening streamlines the assistance animal accommodation request review process while following HUD guidelines, and it helps limit unauthorized pets.

For more information, visit www.petscreening.com.

Magical Math for Property Management

Property management is an investment exercise. By performing our management tasks with this in mind, we can enhance the quality of the lives of our residents, serve our owners, investors, company and teammates. Understanding performance metrics and calculations is key to accomplishing this. Gaining an understanding of common terms, statements, and calculations will help attendees communicate better, understand and realize goals, and understand the true dollar value of every team member's contributions.

This session will give attendees insight into:

- Occupancy related terms & calculations
- Financial terms, calculations of gross operating income
- Understanding operating & cash flow statements
- Understanding investment terms & calculating net operating income

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Meet the Presenter

Victoria Cowart, CPM, NAAEI Faculty, is a multi-family industry member with extensive experience proving management and oversight for multifamily housing communities (conventional & subsidized), mobile home communities, and HOAs. She is a property management instructor and a proud graduate of the NAA Lyceum Program. Victoria obtained her degree in the Management of Human Resources and then her industry CPM designation. She was honored to be commissioned a SC "Palmetto Patriot," to receive the Charleston Regional Business Journal's Executive "Influential Women in Business," and the NAA AIMS Grassroots Member Advocate of the Year. Victoria has served the industry as President of both the local and state affiliates. She has proudly served the National Apartment Association as a Region IV Regional VP and as the Chair of four committees—most recently the Legislative Committee in 2021. She is passionate about education, simplification and creating ease and understanding for industry members. Victoria is a wife, mother and a proud PetScreening pack member who also leads her own "pride" of three pound-kitties.

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Meet the Presenter

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Magical Math for Property Management

Our Goal Today

Understand performance metrics and calculations to better:


- Communicate effectively - using common terms
- Understand financial expectations
- Realize the true dollar value of each team member's efforts
- Learn how to sell your budget versus present it



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Occupancy Terms & Calculations

Let's divide & Multiply!



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Occupancy Terms & Calculations

Physical Occupancy (PO) is the percentage of apartments at Sea View Apartments that are occupied.
 *If you have a model, please ask if that counts as occupied for future calculations.

- Example: 250 Apartments with 243 Occupied - Calculating Occupancy looks like this...
 $243 \text{ Occupied Apts} / 250 \text{ Total Apts} \times 100 = 97.2\% \text{ Occupancy}$

Vacancy: Percentage of the apartments at Sea View Apartments that are vacant.
 *Same note: Is the model, if you have one, considered vacant for future calculations?

- Example: 250 Apartments with 7 Vacant - Calculating Vacancy looks like this...
 $7 \text{ Vacant Apts} / 250 \text{ Total Apts} \times 100 = 2.8\% \text{ Vacancy}$

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Occupancy Terms & Calculations

Preparing for Economic Occupancy

Gross Potential Rent (GPR): The total income when you consider all apartments at their full, market rate. This calculation would include all units in the community.

- Example: 100 Apartments renting for \$1500 each:
 $100 \times \$1,500 = \$150,000 \text{ GPR}$

Effective Gross Income (EGI): The result of GPR minus anything that reduces the rent such as vacancy or losses to old leases.

- Example: 100 Apartment community \$1500 rent each and 3 are vacant (\$4,500), and another 3 are being rented below market value by \$200 each month (\$600)
 $\$150,000 \text{ (GPR)} - \$4,500 \text{ (Vac)} - \$600 \text{ (LTOL)} = \$144,900 \text{ EGI}$

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Occupancy Terms & Calculations


Economic Occupancy (EO):

- Practice Question
- Different calculation related to occupancy--in financial terms
- Combination of physical occupancy and attention to details

Example:

- Physical Occupancy: 4 Units with 1 Vacant = $3 / 4 \times 100\% = 75\% \text{ PO}$
- Economic Occupancy (EO) $\text{EGI} / \text{GPR} \times 100 = \text{EO}$

$\text{EGI: GPR} - \text{Vacancy} - \text{LTOL}$ $4 \times \$1,000 = \$4,000 \text{ (GPR)}$ $-1 \text{ Vacancy} = -\$1,000$ $+2 \text{ Paying } \$900 = -\200 (LTOL) $\text{EGI} = \$2,800$	$\$2800 \text{ (EGI)} / \4000 (GPR) $\times 100 = 70\%$ Economic Occupancy
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Occupancy Terms & Calculations

Physical Occupancy (PO) & Economic Occupancy (EO):

- Bonus Question:
- 10 plex (10 Units) with Ideal Rents of \$1200 each p/month
- Two are vacant & two are paying 50% under market
- Tip: For EO below, 1st calculate GPR and EGI
- Physical Occupancy (PO)? (Occupied Units / Total Units x 100 = PO)
- Economic Occupancy (EO)? (Then: $\text{EGI} / \text{GPR} \times 100 = \text{EO}$)

-A	80% (PO)	87.92% (EO)
-B	75% (PO)	75.83% (EO)
-C	80% (PO)	75.83% (EO)
-D	80% (PO)	77.92% (EO)



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Occupancy Terms & Calculations

Economic Occupancy (EO):


- Bonus Question Answer: 80% (PO) 75.8% (EO)
- 10 plex (10 Units) with Ideal Rents of \$1200 each p/month
- Two are Vacant & Two are paying \$250 under market

• **Physical Occupancy (PO):** 8 Occ. / 10 Apts x 100 = **80% (PO)**

• **Economic Occupancy (EO):**


- 10 Units x \$1200 rent = \$12,000 (GPR)
- -Vacants 2 @ \$1200 each = -2,400
- -Under Market 2 @ \$250 each = -500
- \$9,100 (EGI)

• \$9,100 (EGI) / \$12,000 (GPR) x 100 = **75.83% (EO)**



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Financial Terms, Statements & Calculations



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Financial Terms, Statements & Calculations

INCOME

- Gross potential rent (GPR): Ideal revenue at Sea View Apartments with perfect conditions and everything is possible – all units at top market rents.
- Lost income (LI): Vacancies, losses to old leases, concessions, etc.
Building the equation, we are now at $GPR - LI$
- Effective Gross Income (EGI): The difference between the GPR and the LI
Building the equation, we are now at $GPR - LI = EGI$

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Financial Terms, Statements & Calculations

INCOME

- Other Income (OI): Income other than rent. Here are a few examples from "ButterflyMX"
 - Application fees, Late fees, Laundry, Parking rent/fees, Pet rent/fees
 - Furniture rental, Early lease termination fees, Property damage fees
 - Amenity access fees, etc...**Building the equation, we are now at $GPR - LI = EGI + OI$**
- Gross Operating Income (GOI): This is the money that you have to work with for Sea View Apartments, and it is the result of the terms above shown as:
Building the equation, we are now at $GPR - LI = EGI + OI = GOI$


Magical Math for Property Management

Example

	A	B	C	D
11				
12	NET OPERATING INCOME (NOI)	189,583.79	163,019.00	26,564.79
13				
14	TOTAL DEBT SERVICE	31,000.00	31,000.00	0.00
15				
16	CAPITAL EXPENSES (CapEx) TOTAL	4,000.00	14,130.00	10,130.00
17				
18	CASH FLOW	154,583.79	117,889.00	16,434.79
19				
20				

Net Operating Income (NOI)
 - Debt Service
 - Capital Expenses (CapEx)
 = Cash Flow

Investment Terms & Calculations



Investment Terms & Calculations

Do Owners/Investors buy sticks & bricks or an income stream?

Cap Rate: A way to express what your Owners/Investors are willing to pay for every dollar of annual NOI (the income stream).

What's the WIFM for me? This tells you the dollar-value of YOUR work!

Three numbers involved: NOI, Property Value, & the CAP rate. When you have any two, you can solve for the third.

Let's do that together!

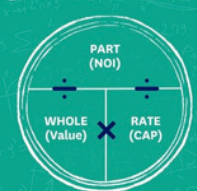


Investment Terms & Calculations

Remembering Formulas?

$CAP \times Value = NOI$
 $NOI / Value = CAP$
 $NOI / CAP = VALUE$

Expressed another way, this visual covers it all without formula memorization.



Examples

- A property with an annual NOI of \$250,000 per year sold for \$5,000,000. What is the CAP Rate?
 - $\$250,000 / \$5,000,000 = .05 \times 100$ (to express as a %) 5% CAP Rate
- A property in an area with a 4% CAP rate recently sold for \$23 million. What is the NOI for this community?
 - $\$23,000,000 \times .04 = \$920,000$ NOI
- A property with an NOI of \$325,000 in a 3.5% CAP rate area. What is the value for the property?
 - $\$325,000 / .035 = \$9,285,714$



Investment Terms & Calculations

Here's the mathematic bottom line in that...

A Dollar at a 5% CAP is worth (magic wand here) \$20.00!

A Dollar at a 4% CAP is worth (swish again) \$25.00!

A Dollar at a 3.5% CAP is worth (last swish) \$28.57!

Rule of thumb: As the CAP rate lowers, the dollar is worth more. It's like the size of the slices of a pizza when there are less people to divide it among. The smaller the group of friends, the bigger the slices of the pie!



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Investment Terms & Calculations | Results

You can **increase** income & value...

- Rent increase of \$100 per month @ a 5% CAP does what?
- *Application fees 4 per month @\$75 @ a 4% CAP does what?
- New Monthly Pet Fees 8 per month @\$40 @ a 4% CAP does what?

You can **decrease** income & value...

- Paying to sparkle 5 units p/month @\$35 each @ a 4% CAP does what?
- Wow Fridge magically disappearing @\$100 each time 20 extra times a year @ a 4% CAP does what to the value?
- *Drilling locks due to disorganized key management 2 per month @\$50 each @ a 5% CAP does what to value?

Magical Math for Property Management

Investment Terms & Calculations | Results

You can **increase** income & value...

- Rent increase of \$100 per month @ a 5% CAP does what?
 - $\$100 \times 12 \text{ months} = \$1200 / .05 = \$24,000$ INCREASE in property value

You can **decrease** income & value...

- Paying to sparkle 5 units p/month @\$35 each @ a 4% CAP does what?
 - $5 \times \$35 \times 12 = \$2100 / .04 = \$52,500$ DECREASE in property value

Magical Math for Property Management

Investment Terms & Calculations | Results

Bonus Questions:

You can increase income & value...

- Using PetScreening to properly assess Assistance Animal Requests & document pets creating 12 new paying pets a year @ \$600 annual value for each pet & a 5% CAP does what?
 - A Increases Income \$7,200 per year
 - B Increases Property Value \$144,000
 - C Both A & B

The Answer is C - Both A & B

You can decrease income & value...

- Maintenance Staffing challenges? Compensating for delays in services to Residents or move ins? Crediting 3 units p/month @ \$150 each @ 4% CAP does what?
 - A Decreases Income \$450 per year
 - B Decreases Income \$5,400 per year
 - C Both B & C
 - D Decreases Property Value \$135,000

The Answer is C - Both B & C

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Investment Terms & Calculations | ROI

Return on Investment(ROI)... How do you determine what to charge for improvements to the unit or community? How do you sell your budget ideas? Begin with the end in mind. What ROI is acceptable to your owners/investors? What would excite you?

Selling a modest kitchen renovation

- Costs are what?
 - Lighting \$ 450
 - Backsplash \$ 350
 - New Counters \$3500
 - Total \$3,300**

Formula:
Annual premium / project cost x 100 = ROI

<p>Example 1</p> <ul style="list-style-type: none"> \$125 p/month rent premium = \$1,500 p/year \$1,500 / \$3,300 (total cost) = .45 X 100 = 45% ROI That's AMAZING! 	<p>Example 2</p> <ul style="list-style-type: none"> \$75 p/mo = \$900 p/year \$900 / \$3,300 = 27% ROI Pretty Great!
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Investment Terms & Calculations | ROI

Return on Investment(ROI)... Sell your ideas and become a true asset manager!

Bonus Question:

Selling a modest lighting upgrade

- Costs are what?
 - Lighting (Dining/Kit) \$ 450
 - Bathrooms \$ 300
 - Bedrooms \$ 250
 - Total \$1,000**
- What is the ROI if you raise rents \$35 per month on each apartment?
 - A 3.5% 35%
 - B 42%
 - C None of the
 - D above

For mul.a:
Annual premium / project cost x 100 = ROI

The Answer is C - 42% ROI

Magical Math for Property Management

Investment Terms & Calculations | ROI

Return on Investment(ROI)... How do you determine what to charge for improvements to the unit or community? Begin with the end in mind. What ROI is acceptable to your owners/investors? What is acceptable to you?

Selling a modest lighting upgrade

- Costs are what?
 - Lighting (Dining/Kit) \$ 450
 - Bathrooms \$ 300
 - Bedrooms \$ 250
 - Total \$1,000**

Formula:
Annual premium / project cost x 100 = ROI

<p>Example 1</p> <ul style="list-style-type: none"> \$35 p/month rent premium = \$420 p/year \$420 / \$1,000 (total cost) = .42 X 100 = 42% ROI That's AMAZING! 	<p>Example 2</p> <ul style="list-style-type: none"> \$20 p/mo = \$240 p/year \$240 / \$1,000 = 24% ROI Pretty Great!
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Investment Terms & Calculations | PBP

Payback Period (PBP)... How long will it take, with the annual premium coming in, for the owners/investors to get their money paid back? Is the length of the Payback Period in keeping with their goals?

- **Selling that Kitchen Renovation**
 - Costs are what?
 - Lighting \$ 450
 - Backsplash \$ 350
 - New Counters \$2,500
 - Total **\$3,300**

Formula:
 $\text{Project Cost} / \text{Monthly Rent Premium} = \text{\# of months for Payback (PBP)}$

Example 1

- \$125 p/month rent premium
- \$3,300 / \$125 (p/mo) = 26-month PBP

Example 2

- \$75 p/month rent premium
- \$3,300 / \$75 (p/mo) = 44-month PBP

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Resources

Shown in the workbook with a QR Code for your convenience

- [Cash Vs Accrual Accounting](#)
basics by Leila Gharani (w/1.85M subscribers)
- [The Most Important Formula in Multifamily Investing](#)
- [Adding Value in the Age of Amenities Wars](#)
- [Property Management Budget Guide](#)
- [Capitalization Rate \(Investopedia\)](#)
- [Best Practices: Asset Repositioning](#)
Tax-credit focused

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Calculate The Value of PetScreening As Your New Pawtner!

What is PetScreening?

Offering three different profiles – Valuable Digital Records When you Need Them:

- No Pet / Animal – Gets the details down
- Household Pets – Scores pets for risk
- Assistance Animals – Processes these requests

Resulting in enhanced:

- Risk Management – FIDO Scores
- Revenue Management – FIDO Pricing & Pivots
- Time & Process Management – WE process AA Requests!

Magical Math for Property Management

Calculate The Value of PetScreening As Your New Pawtner!

PetScreening

- Easy to deploy – 3 steps
- Integrated with your PMS
- No Contract
- No Cost

WOW!

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Resources



Cash vs Accrual Accounting



The Most Important Formula in Multifamily Investing



Adding Value in the Age of Amenities Wars



Property Management Budget Guide



Capitalization Rate (Investopedia)



Best Practices: Asset Repositioning



The Pet-Friendly Property Manager's Best Friend

PetScreening is the industry's first and leading solution for implementing smart pet policies at no cost to pet-friendly property managers, landlords and asset owners & operators.

- ✓ Verify assistance animals per HUD guidelines
- ✓ Boost opportunities for pet revenue
- ✓ Protect your assets with better data

Get Started Today at PetScreening.com

After you've run the numbers, let's chat!

Scan here to book a demo!



Validate Assistance Animal Requests

Review reasonable accommodation requests for service animals & support animals.



Generate more pet revenue with the FIDO Score™

Collect data that can be used to fine tune your pet-related fees and increase ancillary income.



Scan the QR code to try our Revenue Fetcher Calculator!



Streamline the Application Process for All

Ensure applicants & residents acknowledge your pet policies — whether they have a pet or not.