A Berkshire Research Viewpoint

You Can't Manage What You Don't Measure

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Understanding Expense Inflation in Apartments

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Introduction

In the environment of rising cap rates, growth in net operating income is a key driver of property value and ultimately overall investment return. NOI growth is, in turn, a function of growth in revenues and expenses, whose respective impacts determine and explain variation in operational performance across geographic markets, multifamily subtypes, and individual assets. Historically, much of real estate research focused on analyzing the revenue side of the NOI equation while the expense side was more of an "afterthought." Both property valuations and underwriting proformas often simply assuming that over a typical holding period operating expenses tend to keep up with consumer price inflation, or more simply just average 3-4%.

The reality is quite different. For example, in the case of higher-quality institutional-grade apartment properties in NCREIF portfolios, same-store expense growth has exceeded inflation over the last 5, 10, 15, and 20 years. Similar dynamics can be observed in the much broader universe of properties captured by multifamily CMBS data. Moreover, average expense growth was slightly ahead of revenues over the last 5 years, and it appears this will also be the case in 2023 and potentially the first half of 2024. This will put pressure on NOI growth and margins, and we see from the data that the impact varies widely across markets, subtypes, and assets. Both the headline numbers and these wide variations are essential to consider when underwriting future expense growth. Investors should also pay close attention to the expense loads and performance across the various operating statement line-items (taxes, payroll, utilities, maintenance, insurance etc.). Each of these line-items have their own specific drivers and in aggregate determine the total expense load, growth, and the subsequent impact on NOI.

As revenue growth slows in the near-term, property owners' ability to control and reduce expenses becomes a key differentiator in achieving proforma assumptions and ultimately cushioning the impact of higher interest rates on property values. The first step to effectively managing various risks associated with expenses is measuring their magnitudes and variation

of its impacts across markets, subtypes, and individual assets. This understanding of historical trends is the essential starting point for investors and asset managers for benchmarking individual property performance, establishing more informed and realistic budgets and underwriting assumptions when making buy/sell decisions.

Why is historical trends analysis key to all this? Consider this question when managing your 401K. Suppose your financial advisor did not know long-term total returns on stocks, the historical magnitudes of annual changes, how growth stocks perform relative to dividend stocks, how does investment in a few individual stocks compare to investing in broad market indices, how does bonds performance correlate to stock performance, how different types of asset allocation strategies have performed in the past, etc. How could you possibly make good investment decisions without this knowledge? You would be lost!

The same logic applies to property investment. What were property investment returns in the past, how did they vary over a multi-year holding period and why, how much do location and property characteristics impact this variation, how have individual properties performed relative to the broader property market, and what factors help explain property outperformance or underperformance, etc.? Historical performance helps shed light on these and other considerations which provide the foundation for constructing a coherent investment plan, even things as basic as how much it typically costs to run a typical property in each market. But even history may not be a sufficiently reliable guide for underwriting future investments where/when certain factors such as changes in climate or regulatory/fiscal environments turn out to be more structural than cyclical, which could well be the case in some markets.

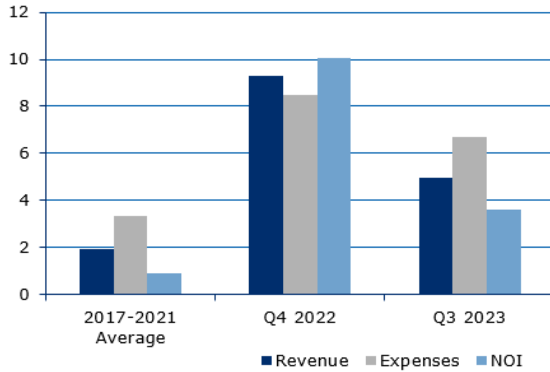
Persistent Expense Pressure in 2023

The usually boring subject of expenses started to get more attention last year as the economy was experiencing the highest inflation in 40 years. While much of the attention focused on unprecedented apartment revenue growth, expenses grew even faster, and this pattern has become even more pronounced in 2023 as market fundamentals moderated substantially at the same time as cost pressures edged even higher. The good news is that as broader inflation moderates, expenses will likely follow - but that might take some time. The major expense categories such as taxes and payroll are still accelerating, even though their rates of growth may not be as high compared to a much smaller category such as insurance which already increased by over 30% this year, more than doubling the pace of 2022 and the 5-year trailing average.

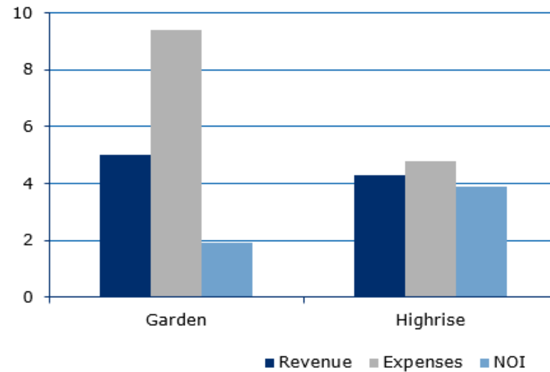
This acceleration in expense growth in 2023 is a broad-based trend nationally but there remains a wide variation across geographic markets and multifamily subtypes. For example, year/year expense growth for institutionally owned garden apartments is about 11% compared to 7% for high-rise properties, which helps explain why the latter segment is now slightly ahead in terms of NOI growth – even as it still lags on revenues. Regionally, expense momentum remains more pronounced across the Sunbelt region, which was already leading this trend last year. Expenses are up about 15% year/year in Florida markets from about 9% last year due to outsized increases not only in insurance but also taxes and property

management/maintenance. In general, areas with tighter labor market conditions are seeing the dual impact as higher wage growth boosts not only rents but also payroll costs.

Same-Store Operational Benchmark
Year/Year Change, %



Same-Store Operational Benchmark
***Q3 2023** Year/Year Change, %*



Sources: BLS, NCREIF, Berkshire Research.

To better understand and explain expense trends vary across the entire apartment market rather than just its higher-quality institutionally owned segment, we examined operating statements for all multifamily loans in the CMBS universe that reported full calendar year results for 2022 and 2021. The table below summarizes 2022 changes in revenue, expense, and NOI across 8,734 properties in 30 metro areas, with each having at least 100 year/year property observations and together accounting for about 80% of all multifamily properties

nationally that provided their operating statements last year. The prototypical apartment property in this data set had 117 units and average monthly revenue of $1,512 per unit.

Market	Properties	Units	Units/ Property	Revenue/ Unit, $	Expense Load, %	2022/2021 Change, %		
						Revenue	Expenses	NOI
Tampa	141	33,401	237	1,431	45.6	14.4	12.1	16.4
Miami	270	28,422	105	1,805	43.7	12.3	12.0	12.5
Atlanta	298	61,572	207	1,390	45.0	10.3	11.9	9.0
Orlando	112	27,964	250	1,447	41.5	13.2	11.6	14.3
Phoenix	239	41,295	173	1,398	34.1	13.1	11.5	14.0
Charlotte	105	20,375	194	1,297	40.3	11.1	11.5	10.9
Minneapolis	193	14,936	77	1,356	49.2	3.6	11.2	-2.9
Denver	298	42,028	141	1,575	37.1	8.6	11.0	7.3
Riverside	123	17,410	142	1,710	38.1	8.0	10.4	6.5
Austin	105	18,430	176	1,384	50.9	10.7	10.4	11.0
Las Vegas	128	26,911	210	1,306	37.1	10.7	10.3	11.0
Boston	163	13,693	84	2,066	40.6	9.2	9.9	8.7
San Antonio	128	25,720	201	1,185	51.6	8.9	9.2	8.7
Washington, DC	253	53,543	212	1,697	44.7	6.0	9.2	3.5
Kansas City	148	20,922	141	1,063	48.7	7.7	9.0	6.5
Philadelphia	258	38,537	149	1,500	44.0	7.0	9.0	5.6
Baltimore	143	27,847	195	1,481	44.7	4.8	9.0	1.6
Columbus	132	23,156	175	1,153	45.3	9.7	8.9	10.4
Chicago	607	40,450	67	1,454	47.4	7.6	8.4	6.9
Cincinnati	129	15,270	118	1,053	43.0	8.3	8.3	8.3
Dallas	501	101,816	203	1,325	51.0	10.2	8.2	12.5
Los Angeles	1,167	70,769	61	2,025	36.4	7.6	8.1	7.3
Portland	258	22,688	88	1,492	37.6	7.4	7.9	7.0
Detroit	146	24,510	168	1,099	45.6	6.7	7.9	5.7
San Diego	180	15,978	89	2,107	36.8	8.8	7.6	9.5
Houston	340	64,238	189	1,189	52.7	6.8	7.5	5.9
Cleveland	108	13,319	123	1,096	49.1	8.0	7.4	8.7
San Francisco	245	12,209	50	2,184	42.0	5.1	6.3	4.2
Seattle	405	30,275	75	1,716	38.8	9.4	5.4	12.0
New York	1,411	72,431	51	1,948	45.5	6.4	5.1	7.6
Total	**8,734**	**1,020,115**	**117**	**1,512**	**44.1**	**8.8**	**9.0**	**8.6**

Sources: Freddie Mac, ThirtyCapital, Berkshire Research.

Even before getting into the details of multiple expense line items, one should note that both overall expense growth and expense loads (ratios of expenses to property revenues) vary widely across markets. There was only moderate (55%) correlation between revenue growth and expense growth across markets and in many cases above-average revenue growth was still accompanied by below-average expense growth or vice versa. Minneapolis was the most extreme example – the only major market where average NOI growth turned negative due to expense inflation running well ahead of revenues. This impact was further exacerbated that Minneapolis also had had above-average expense load which made its rising pressure even more pronounced.

All Line Items Matter!

Depending on how they are being accounted for, operating expenses for apartment properties are typically grouped and reported as 8-10 major line items, such including property taxes, maintenance, payroll, repairs, utilities, management fees, marketing, and other. Taxes are by far the largest component, accounting for about 26% of the total expense for a typical multifamily property in CMBS universe and 32% of the total for a typical institutionally owned multifamily property. Share of the total expense accounted by taxes does vary widely across markets however and that is also the case with all other line items. As a result, even the same change in a line item can have a different impact on the total, depending on a market. But changes in line items also vary widely across markets as the tables below illustrate.

While changes in individual line items are indeed correlated with the total across markets all and each of them need to be considered to explain the variation in overall expense inflation.

Changes in line items such as taxes and payroll do tend to matter more due to their share of the total, but others can be very significant too, depending on their trends each year. In the case of Minneapolis, for example, surging utility costs were one of the key drivers behind the total expense inflation in 2022.

Of course, how each line-item changes in turn depends on both the macro trends and how those trends might be impacting various regional markets or types of assets. Utility expenses experienced high growth last year largely due to rising prices of electricity, piped gas, and oil. Nationally, price of electricity per kilowatt hour grew by 4.4% in 2021 and 12.8% in 2022 compared to the historical (2001-2020) average of 2.2%. Price of piped gas per term increased by 18.2% in 2021, 26.7% in 2022 versus the historical average of 2.1%. Gasoline prices increased by 39.7% in 2021 and 33.8% in 2022 versus the historical average of 3.0%.[1]

Payrolls also grew more than in prior years as the tightening labor market boosted wages. Nationally, average hourly earnings in the private sector increased by 4.9% in 2021 and 6.4% in 2022, well above the historical average of 3.0%[2]. Stronger economic conditions in parts of the country including the Sunbelt region, led to much higher wage growth there.

Insurance-related expenses grew at record pace as incidence and costs of severe climate/weather disasters (with combined insured losses over $1B) continued to rise, pushing premiums higher. There were 20 such events reported in 2021 and 18 in 2022, with combined insured losses of $159B and $172B, respectively compared to 2001-2020 period which averaged 11 events and $83B in insured losses per year.[3] Furthermore, negative returns for both stocks and bonds in 2022 also made operating environment for insurers and their re-

[1] Source: Bureau of Labor Statistics.
[2] Source: Bureau of Labor Statistics.
[3] Source: National Centers for Environmental Information.

insurers challenging from the capital reserves perspective, contributing to the hardening market.

Expense	2023* % Total	Average Annual Change, % 2023*	5 Yrs	10 Yrs
Taxes	30.6	4.8	4.6	3.1
Maintenance	17.7	10.4	4.9	5.1
Administrative	16.4	6.9	3.2	3.1
Utilities	10.5	7.8	2.8	4.1
Insurance	7.3	25.4	6.7	14.8
Other	6.5	14.0	1.1	1.4
Management Fee	6.6	7.1	3.1	3.6
Marketing	4.3	0.6	0.9	0.0
Total	**100.0**	**8.1**	**3.7**	**3.8**

**As of Q3 2023.*
Sources: NCREIF, Berkshire Research.

MSA	2022/2021 Change, % Total	Taxes	Payroll	Utilts	Reprs	Insur	Mgmt	Other
Tampa	12.1	5.0	11.3	12.1	6.5	22.0	16.5	28.5
Miami	12.0	6.6	8.6	9.4	13.1	37.1	13.1	11.2
Atlanta	11.9	10.2	6.3	7.3	15.4	22.4	8.1	28.9
Orlando	11.6	9.6	9.5	7.9	10.9	20.4	12.6	18.3
Phoenix	11.5	2.0	7.3	8.6	17.9	18.5	13.9	24.6
Charlotte	11.5	-1.8	10.0	5.9	20.2	18.6	10.3	33.6
Minneapolis	11.2	3.0	10.3	24.0	10.8	11.3	3.1	28.2
Denver	11.0	7.1	10.2	14.7	10.3	11.1	6.8	18.1
Riverside	10.4	4.8	10.6	9.2	10.6	14.9	7.0	29.9
Austin	10.4	3.7	10.4	11.0	15.0	16.5	10.2	24.6
Las Vegas	10.3	5.0	7.6	8.3	22.3	8.5	12.2	10.9
Boston	9.9	1.3	9.3	15.3	7.4	8.0	14.2	25.2
San Antonio	9.2	3.0	5.5	9.5	11.4	16.7	6.5	30.3
Washington, DC	9.2	3.0	3.7	8.3	7.2	14.5	5.2	42.2
Kansas City	9.0	6.2	8.1	6.3	16.6	18.1	7.6	4.1
Philadelphia	9.0	6.9	9.7	13.0	3.4	7.9	7.4	16.5
Baltimore	9.0	1.0	4.1	5.2	16.4	26.6	6.4	28.1
Columbus	8.9	-2.5	11.9	9.4	11.2	15.6	9.1	25.3
Chicago	8.4	6.3	10.5	9.6	1.2	14.6	7.4	15.1
Cincinnati	8.3	1.2	9.2	9.7	14.6	11.3	8.6	7.9
Dallas	8.2	2.2	7.5	9.7	9.6	16.4	9.4	19.8
Los Angeles	8.1	3.8	2.2	9.5	15.0	8.1	9.0	16.6
Portland	7.9	3.0	9.5	6.6	16.5	10.1	6.8	8.9
Detroit	7.9	1.5	10.8	8.5	12.6	-0.3	5.0	15.2
San Diego	7.6	5.6	4.8	7.4	7.5	22.0	10.3	9.7
Houston	7.5	-0.4	5.0	11.4	9.9	26.2	5.6	14.6
Cleveland	7.4	9.9	2.1	2.2	11.1	17.0	8.0	11.6
San Francisco	6.3	3.5	4.7	8.0	17.2	21.8	4.7	-4.1
Seattle	5.4	-1.1	6.1	5.4	13.3	7.6	12.0	8.1
New York	5.1	2.1	5.5	10.9	2.4	10.9	6.4	4.8
Total	**9.0**	**3.7**	**7.2**	**9.6**	**11.1**	**15.8**	**8.7**	**19.1**

Sources: Freddie Mac, ThirtyCapital, Berkshire Research.

For the higher quality institutionally owned apartments, insurance costs were still accelerating in the first half of 2023 at an annual pace of 29% or twice the pace of 2022 annual average over the prior five years and these increases are even more dramatic in states such as Florida which is viewed as increasingly riskier from the property insurance perspective. The impact of rising insurance expense has become more pronounced over the last few years and while its share of the total is still relatively small compared to other major line items, it is now more than twice of what it was in 2018.

Change in taxes, by far the largest expense for apartments, is a function of changes in property values and changes in property tax rates and both drivers are greatly impacted by the broader macro trends such as fundamentals, capital markets environment, and fiscal

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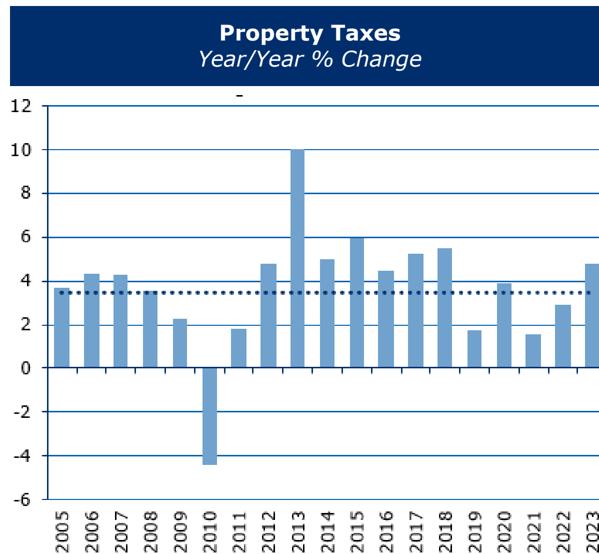
health of state and local finances. As these factors interact, they do tend to impact changes in property taxes with some lag however: sharp drops in property values that took place in 2009 did not show up as decline in tax expenses in 2010 and the subsequent strong recovery in values that took place in 2012 did not show up as a spike in tax expenses until 2013, and the most recent surge in values that took place in 2022 has started to be reflected in above-average tax expense growth in 2023.



Sources: NCREIF, Berkshire Research.

While it does appear that rising expenses will continue to pressure on apartment NOI growth in the near term, some of them, such as payroll and utilities are likely to start moderating towards the end of 2023 – at least judging by the current trajectories in energy and labor costs. Moreover, lower resident turnover can also help reduce reoccurring expenses.

Insurance expenses should also rise much less as so far this year cumulative insurance losses being less than a third of those incurred in 2022. And on the tax front, recent drops in apartment values should help ease that burden too – if tax rates don't change. Of course, whether that assumption holds also ultimately depends on the ability of local governments generate sufficient revenues, especially as office real estate becomes less viable and reliable source. With a record wave of new apartment properties expected to be completed over the next two years, many of them could face above-average tax increases as has been the case in 2022 and historically.

Either way, there are clearly both cyclical and structural components to expense trends. For insurance, for example, climate change is more structural: as long as climate disasters keep trending up it would be a headwind. At the same time, insurers' capital reserves are more of a cyclical component – when bonds (which account for most of insurers' investments) are doing well, there is less pressure to push insurance premiums up and vice versa.

For property taxes, the cyclical component is property value – as values rise, so do taxes (usually with some lag) and vice versa. At the same time, tax rates set by local governments could be viewed as undergoing a more structural shift considering the aging population

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(leading to lower payroll tax collections) and falling long-term demand for office real estate (affecting commercial property tax collections).

Conclusion

There are two main practical take-aways stemming from our analysis. First, to make better decisions and have more realistic underwriting, apartment investment, owners, as well as their lenders need to pay close attention not only to variation in rent and occupancy trends across markets and property sub-types, but also expenses. In the environment when expenses are rising ahead of revenues initial proforma assumption could make a difference between a current or delinquent loan.

Second, to understand the above variation in the total expense change more fully one must consider that all major line items matter for the overall picture and both their shares of the total and changes ultimately impact the overall result. Furthermore, changes in these line items can and should be evaluated in the context of broader macro trends affecting them.

Greater availability of property-level operational data and sophisticated tools to measure, analyze, and predict it (including AI) can help address key questions not only with regards to revenue but also expense side of property operations as well as portfolio construction when it comes to market and asset selection decisions.

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