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Apartment Operating Expense Inflation: Effects of the Pandemic and Lessons for Investors

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Introduction

This paper focuses on 2021 operating expense inflation based on a property-level analysis of 14,405 garden, mid-rise, and high-rise apartment properties securing loans in Freddie Mac CMBS. While much of the media's attention focused on unprecedented apartment revenue growth in the aftermath of the COVID-19 pandemic, the expense side of the story was no less impressive and carries important lessons to apartment owners and investors as the U.S. economy and real estate markets enter a new phase.

Our analysis of property-level year-on-year operating performance through the year-end 2021 statement year reveals the following three findings:

1) Across 20 major metro areas that we focused on in this analysis, operating expenses grew at the fastest pace in at least a decade, with insurance, utilities, repairs/maintenance, management, and payroll costs being the key drivers. In 15 out of the 20 markets expenses grew faster than revenues in both 2020 and 2021.

2) 2021 operating expense growth was positively correlated with revenue growth across properties as well as geographically, with the Sunbelt markets and more affordable/lower density locations on one end of the spectrum and the more expensive gateway/coastal markets and higher density locations, on the other.

3) 2021 operating expense growth across markets was positively correlated with regional consumer price inflation, which in turn was highly correlated with net migration rates observed in 2021.

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We conclude that while the effects of the pandemic on apartment performance have clearly varied across various types of assets and locations, absolute net operating incomes (NOI) have increased and in most cases surpassed prior peaks, but the overall impact of rising expense loads have narrowed NOI margins, something that owners and investors will need to monitor carefully, especially if the broader inflationary pressures on costs remain elevated.

Data

For the purposes of our analysis, we used operating statements reporting full calendar year results for 2021 and 2020 for 8,881 properties across 20 major metropolitan areas with 100 or more observations[2]. The table below shows median 2021/2020 changes in revenue, expense, and NOI across properties in each of the metros, along with the median revenue per unit levels. The prototypical apartment property in this data set had about 124 units and average monthly revenue of $1,307 per unit.

Metro Area	Properties	Units	Units/ Property	Revenue/ Unit, $	2021/2020 Change, %		
					Revenue	Expenses	NOI
Atlanta	401	88,326	220	1,195	6.9	5.4	8.9
Baltimore	187	41,776	223	1,273	3.9	4.7	3.2
Boston	225	20,656	92	1,761	1.6	4.4	-1.2
Chicago	665	50,857	76	1,279	1.8	5.1	-1.1
Dallas	669	148,705	222	1,076	5.6	6.4	5.9
Denver	383	57,175	149	1,326	4.4	5.4	3.7
Detroit	161	28,904	180	855	5.1	6.2	4.5
Houston	482	104,201	216	1,011	4.3	6.0	2.3
Los Angeles	1,345	87,262	65	1,606	2.7	4.1	2.0
Miami	320	42,169	132	1,299	5.9	6.4	5.5
Minneapolis	202	16,032	79	1,075	2.7	4.5	1.6
New York	1,664	92,529	56	1,685	1.2	4.2	-0.2
Philadelphia	298	46,808	157	1,281	5.1	5.4	4.8
Phoenix	292	60,188	206	1,169	9.4	5.8	11.1
Riverside	149	21,428	144	1,350	6.1	4.9	7.6
San Diego	220	22,723	103	1,689	4.2	3.8	5.2
San Francisco	286	16,300	57	1,905	-1.2	2.4	-6.1
Seattle	462	38,620	84	1,475	0.8	4.8	-2.7
Tampa	176	40,712	231	1,158	8.5	6.3	9.4
Washington, DC	294	71,728	244	1,494	1.6	3.4	1.0
Total	**8,881**	**1,097,099**	**124**	**1,307**	**4.3**	**5.2**	**3.8**

Sources: Freddie Mac, Multifamily Comps.

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[2] Based on reporting as of June 2022.

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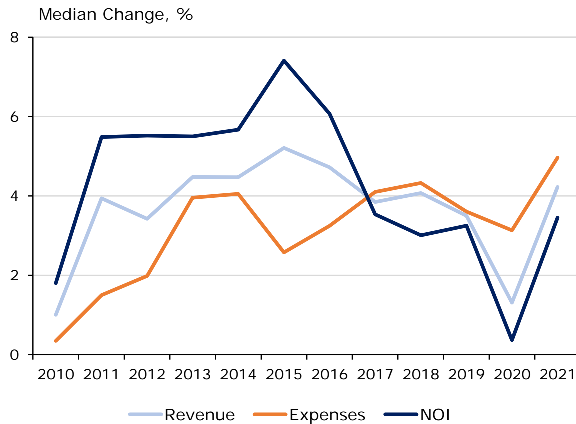
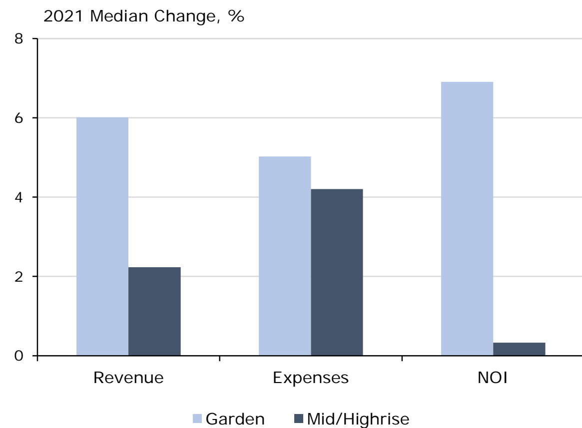
2020-2021 Operational Performance – Overall Summary

Prior to the start of the COVID-19 pandemic, revenue growth has generally been slowing for some time across the sample of properties included in the analysis. As the chart below shows, after peaking at 5.2% in 2015, revenue grew at about 4% annual pace in 2017-18 and at 3.5% in 2019. Meanwhile, expense growth has been edging higher: from 2.6% in 2015 to about 4.2% in 2017-18 and 3.6% in 2019. Overall, expense growth has been running above revenue growth over 2017-2019 period, but only slightly.

As the pandemic hit and the U.S. economy went into a sharp, brief recession in early 2020, revenue growth slowed down to about 1.5% - the lowest pace that these major markets experienced since 2010. Unlike a decade ago, however, expense growth moderated only slightly to 3.1%- basically keeping pace with the historical average. With the public health situation starting to improve by early 2021, both the broader economy and operational performance quickly bounced back. Apartment revenue growth accelerated to 4.3% compared to 3.6% historically, driven by much stronger performance of the garden-style segment concentrated in the Sunbelt region of the country. At the same time, expenses jumped by 5.2% - the highest increase back to the start of the Freddie Mac CMBS dataset. In fact, out of the 20 markets in this analysis, only 5 had revenue growth above expenses over 2020-21 period: Atlanta, Phoenix, Riverside, San Diego, and Tampa. All but one out of the top 5 markets based on 2021 expense growth were in the Sunbelt region (Dallas, Houston, Miami, Tampa, and Detroit) where it has averaged 6.3%. In contrast, expense growth has averaged 3.9% in most gateway/coastal markets such as New York, Los Angeles, Chicago, Washington DC, and San Francisco) which have higher concentrations of both high-rise and smaller mid-rise properties located in high-density urban areas.

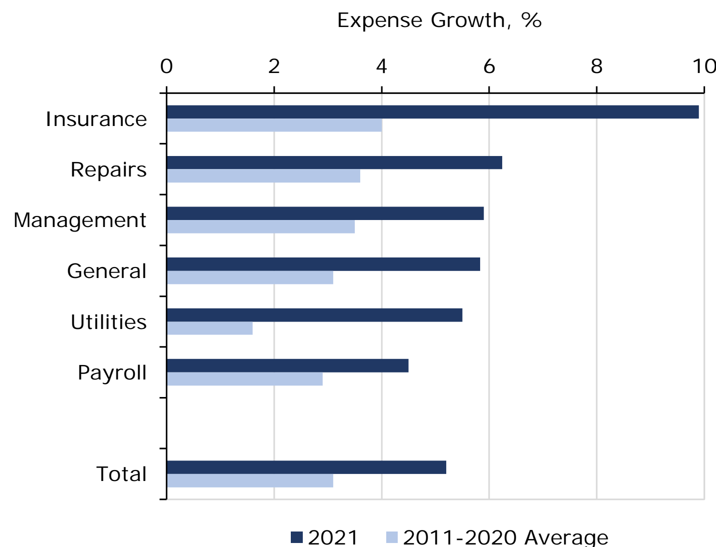
While expense growth was also reported to be higher among garden-style properties, the difference relative to mid/high-rise apartments was not as wide as on the revenue side. As a result, there was a material difference in net operating (NOI) results between garden-style apartments with 6.9% 2021 NOI growth as compared to just 0.3% NOI growth for mid/high-rise properties.





Sources: Freddie Mac, Multifamily Comps.

We next reviewed the contributions to expense growth across the various operating expense categories. This more detailed analysis shows that insurance costs had the highest increase, followed by repairs, utilities, management, and payroll. Notably, while insurance-related expenses (as well as real estate taxes for that matter) have been trending higher for several years before the pandemic as apartment values have also been rising rapidly, the synchronized above-average inflation in the other four major cost categories (together accounting for approximately 60% of total expenses) was an emerging new pattern not observed in previous years. The broadly based pattern of expense growth has generally held both across garden and mid/high-rise segments, as well as regionally by market.



Sources: Freddie Mac, Multifamily Comps.

2020-2021 Operational Performance – Market Variation

In terms of revenue growth, the Freddie Mac CMBS apartment dataset reflected market variation patterns that were very similar to those reported by other sources. More specifically, we found over 95% cross-market correlation with a RealPage same-store dataset comprised of over 17 thousand properties with 3.96 million units in the 20 major markets we analyzed.

While RealPage's coverage is more weighted towards larger properties, both datasets showed a striking divergence in revenue growth between markets in the Sunbelt region relative to the coastal ones. First, revenue growth in the Sunbelt markets was much less affected by the pandemic and the recession, despite similarly sharp and in some cases even deeper, job losses. For example, based on the Freddie CMBS dataset revenue growth in Phoenix slowed from 7.2% annual pace over 2018-2019 to 6.5% in 2020 as compared to San Francisco, where it plunged from 4.0% to -2.2%.

Second, while subsequent revenue growth recovery in 2021 was broad-based, it was also much more pronounced in the Sunbelt region rather than on the coasts. Using the above example, Phoenix revenue growth improved to 9.4% in 2021 as compared to just -1.2% in San Francisco. For the top 5 markets based on 2021 revenue growth (Phoenix, Tampa, Atlanta, Miami, and Riverside) the revenue growth improvements last year averaged 3.7% while for the bottom 5 markets (San Francisco, Seattle, New York, Washington DC, and Boston) that average improvement was 0.9%.

One potential explanation to these dynamics is that both during and after the pandemic, renters migrated out of high rent and/or high population density areas (which also tend to have much smaller apartment unit sizes based on square footage) into markets with lower rents and/or lower population density with more room space, especially as work from home arrangements for office workers became more widely accepted by employers. Support to this hypothesis is found both in market-level data (for example, negative 75% correlation between 2020 revenue per unit and 2021 revenue growth) as well as property-level data in combination with micro-location (census tract) information.

On the expense side, two notable patterns were observed during the 2021 recovery. First, there was a moderately high positive correlation across these 20 markets between their revenue and expense growth rates: about 65% compared to just 25% historically. In other words, markets with stronger revenue growth also generally experienced higher increases in expenses and vice versa. For example, the median expense growth across apartment properties in Phoenix was 5.8% - more than twice the rate of 2.4% reported in San Francisco.

Second, in 15 out of 20 markets expenses grew faster than revenue both in 2020 as well as 2021, reducing what would otherwise be stronger NOI gains. Like the high cross-market correlation with revenue growth, this was also a deviation from what was observed over the prior decade when revenue growth exceeded expense growth in most cases.

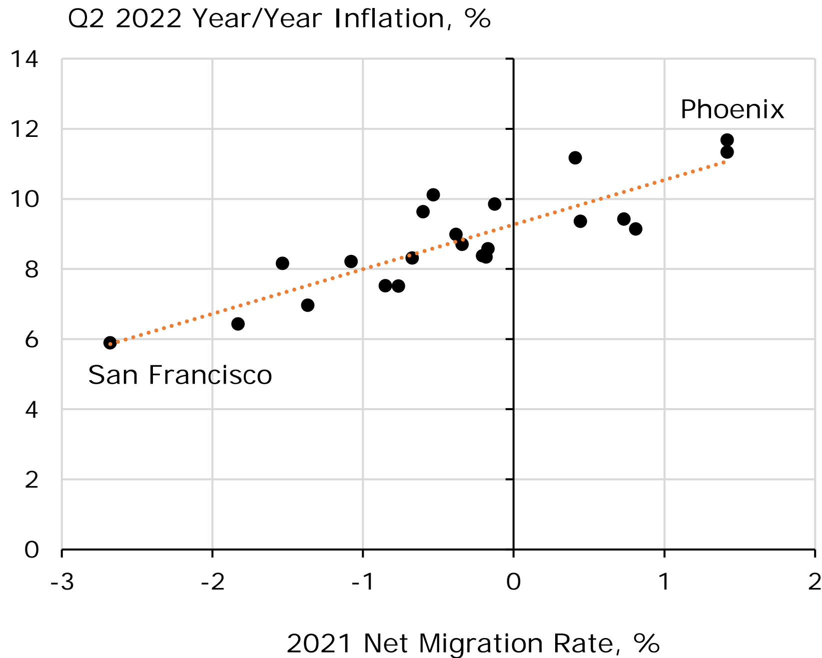
While it may be too early to tell if these patterns of expense growth relative to revenue seen during the pandemic and subsequent recovery are anomalies that will not be repeated going forward, we do believe they are worth monitoring closely given their potential link to the broader macro-economic context of rising inflation and significant regional differences due to migration and other factors.

Migration-Inflation Conjecture

On a macro-economic level, one of the new trends following the pandemic has been rising consumer price inflation which has been progressively intensifying since the end of 2021 and has now reached the highest pace since the early 1980s. While the root causes of this will ultimately be a subject for many academic studies, the initial view is that in addition to purely monetary policy factors, one of the triggers behind higher inflation is disruption in global supply chains which has led to deepening shortages both in the U.S. as well as globally. So far, much of the discussion on this topic seems to have focused more on the headline national figures, and yet the regional variation is equally important when trying to understand the full story.

Taking a closer look at the market-by-market variation in reported consumer price inflation in 2021 and 2022 year-to-date, we find direct parallels and correlations with the post-pandemic revenue and expense growth reflected in Freddie Mac apartment data used for this analysis. The BLS regional CPI indices show that much more pronounced inflation in the Sunbelt metros such as Phoenix while lagging substantially in the major gateway markets such as San Francisco.

It is quite possible that increased migration out of the coastal areas into the Sunbelt during and after the pandemic provided enough of a positive shock to local consumption of goods and services to have these material impacts on inflation differentials across markets. Prior to the pandemic, there was no substantial correlation between the 1-year lagged net migration rates and inflationary readings across markets for which the Bureau of Labor Statistics published local consumer price indices. This pattern changed last year when the correlation jumped to 74% and is 86% as of mid-year 2022.



Sources: Bureau of the Census, Bureau of Labor Statistics.

Both macro-economists, as well as apartment owners and investors should monitor these dynamics closely. If indeed such regional post-pandemic patterns are only "transitory" and start normalizing by late 2022/early 2023 as the current "consensus" expectation suggests, then we will likely see moderating revenue and expense growth in the Sunbelt as well as accelerated recovery in the coastal markets. At the same time, if the recent migration patterns persist and the pressure on local prices of goods and services remains, expense control (especially in the major categories such as payroll and utilities) will come to the fore as one of the key considerations for managing NOI margins – especially if the broader economy and apartment rent growth begin to slow.

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