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High Cost of Home Ownership and Elevated Inflation to Sustain Single-Family Rent Growth

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Over the next two years, single-family rents are expected to grow ~200 bps higher than multifamily; despite expected growth, we believe single-family rentals will remain significantly more affordable relative to ownership.

Executive Summary

The rental market is currently experiencing two major tailwinds:

1. **Home Affordability**
   The combination of high mortgage rates and home prices have made the cost of ownership significantly higher than the cost of renting, supporting rents.
2. **Elevated Inflation**
   Historically, rent growth and inflation have been highly correlated and rent growth has outpaced CPI (Consumer Price Index) growth by a factor of 1.2x.

Where we are seeing a key divergence between single-family and multifamily specifically is within supply challenges and shifting household demographics. As it relates to supply, homes under construction are at elevated levels in multifamily and continuing to climb, especially in the South, while the under-construction pipeline for single-family homes has been on the decline.

On the demand side, demographics suggest there is and will be a greater need for larger homes, with nearly 40% of the U.S. population (or 130 million people) seeking homes with 3+ bedrooms, meriting structurally higher rent growth for single-family rentals. It is our view that structurally higher rent growth is the reason a valuation gap persists between single-family rental and multifamily REITs.

The bottom line: We believe this confluence of factors should result in sustainably stronger rent growth in the single-family versus multifamily space, both in the near- and medium-term. **Over the next two years, we project that multifamily rents will grow 3-5%, while single-family rents are projected to grow 5-7% or about 200 bps higher.**

Factor	Single-Family	Multi-family	Effect	Notes
Market Supply	-	✕✕	Near-term	Significant pipeline of homes under construction to pressure multifamily rents, particularly in the South.
Broader Inflation Trends	✓	✓	Near-term	Rents are well correlated to and outpace broader CPI by a factor of 1.2x.
Demographics	✓✓	-	Medium-long term	Growth in the large cohort of 35-54y households who have shown a preference for larger homes, which exist overwhelmingly in single-family.

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Section 1

A look at single-family and multifamily rent growth over time.

Historically, multifamily and single-family rent growths have moved in tandem, which remained true throughout the COVID-19 pandemic. As Exhibit 1 shows, rent growth for both multifamily and single-family has averaged 2-4% in the decade preceding COVID-19 times.

Single- and multifamily rent growth trends largely persisted during the pandemic. The last three years have been characterized by notable rent growth, peaking above 9%, which is largely driven by strong household formation trends. While the peaks and troughs have been more pronounced for multifamily than single-family, rents are cumulatively about 20% higher now versus pre-pandemic levels for both sectors. Pandemic-era wage growth as computed by the Atlanta Fed, was 17%, which means income growth has mostly kept up with rents.

In recent quarters, rent growth has started to normalize back to its 2-4% pre-pandemic range for both single-family and multifamily amid economic uncertainty and inflationary pressures. As of Q1 2023, single-family year-over-year rent growth remains about 100 bps higher than it was before 2020, though month-over-month growth for Amherst's seasonally adjusted single-family rent index suggests single-family rents did briefly dip between September and November of 2022. More recently, single-family rent growth has picked up 5% on a quarter-on-quarter annualized basis as of March 2023. multifamily rent growth showed a sharper decline, as year-over-year growth for Q1 2023 suggests it is now closer to the lower-end of its pre-pandemic range.

Section 1

Exhibit 1.
A comparison of single-family and multifamily rent growth (quality adjusted, year-on-year).
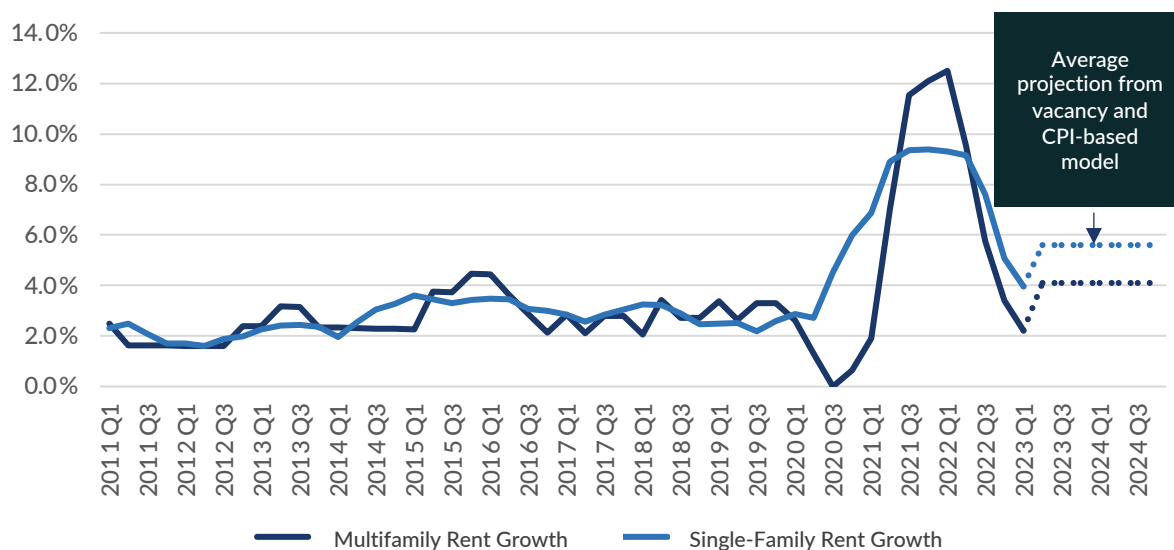
Source: CoStar, Amherst. As of Q1 2023.

To examine 2023 and 2024 rent growth forecasts, we analyze three key drivers of multifamily and single-family rents in the near term:

1. High cost of home ownership (tailwind)
2. Elevated overall inflation (tailwind)
3. Supply of housing (headwind, particularly for multifamily)

Section 2

Cost to own a home exceeds cost to rent by 21% for first-time buyers.

One critical component to sustained rents is the high cost of ownership today. For the first time since the GFC, a household seeking to own today will find that the economics overwhelmingly favor renting as the more affordable alternative.

As of April 2023, we estimate home ownership costs to be 21% more than renting for a first-time buyer. This does not factor in maintenance costs that homeowners experience on an ongoing basis, which amount to $950 each year, according to the 2019 American Housing Survey. Historically, mortgages have been less expensive to service; however, the cost of homeownership has inverted and moved higher than the cost to rent due to home price and mortgage interest rate growth through 2022. We estimate the current average cost of servicing a new mortgage using median home prices and mortgage rates and compare these costs to the average single-family lease costs in Exhibit 2.

This inversion, combined with high home prices, persistently high mortgage rates, and locked-in potential sellers should lead consumers to rent for longer. Furthermore, as additional households form and need more space, we expect families will rent that space instead of purchasing it.
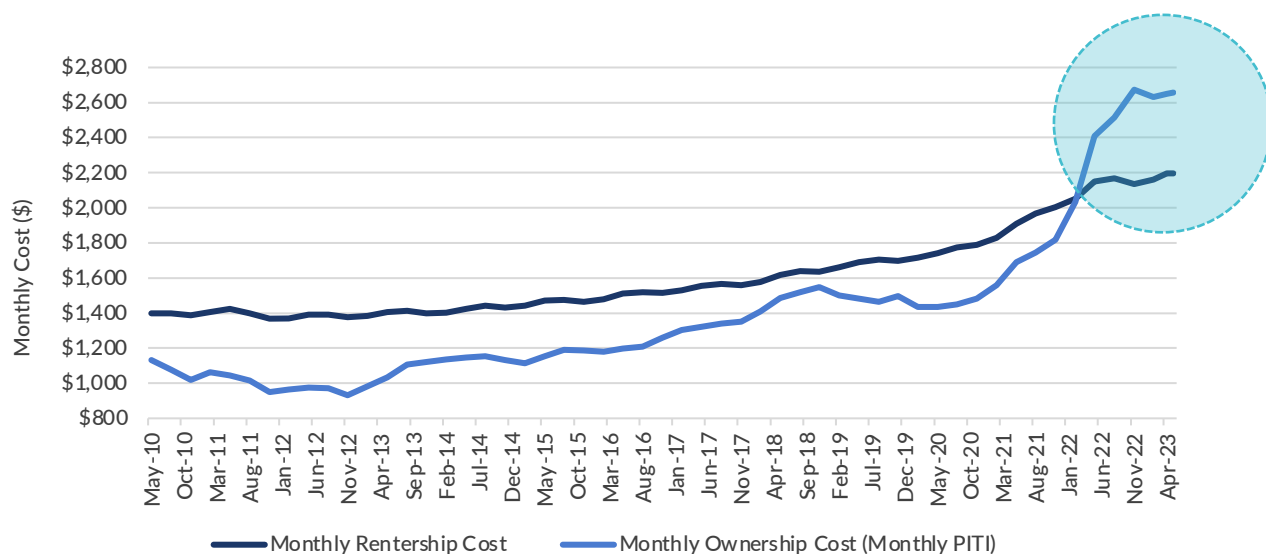
Section 2

Exhibit 2.

Renting is the most affordable relative to buying since 2010.

In April 2023, monthly ownership costs exceeded rentership costs by 21%.

Source: FHA. Freddie Mac, Amherst. As of Q1 2023.

Section 3

Rents historically outpace inflation.

Another tailwind to rents is the outlook for inflation. Inflation is an important driver of rent prices, as inflation impacts everything from the operator's cost of materials, labor, and land to the residents' ability to pay.

Per Exhibit 3, historically, CPI and shelter inflation, or housing cost inflation, tend to move up and down together. However, growth has not been one-to-one as shelter inflation has outpaced CPI over the last 70 years.

Annualized growth between 1952 and 2022 was 3.5% for CPI and 4.1% for shelter, suggesting a beta of 1.2x. This historical trend and multiplier enables us to anticipate where rents will be in the future using CPI forecasts. With current 5-year breakevens at 2.12%, the 1.2x multiplier implies a 2.56% annual housing cost inflation in the next five years.[1]

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[1] Breakeven rates are a measure of market-implied inflation expectations. The 5-year breakeven rates is calculated as the difference between the 5-year Treasury rate and 5-year Treasury inflation-indexed security rate.

Section 3

Exhibit 3.
Shelter inflation and CPI growth.

Shelter inflation has outpaced CPI for 70 years.
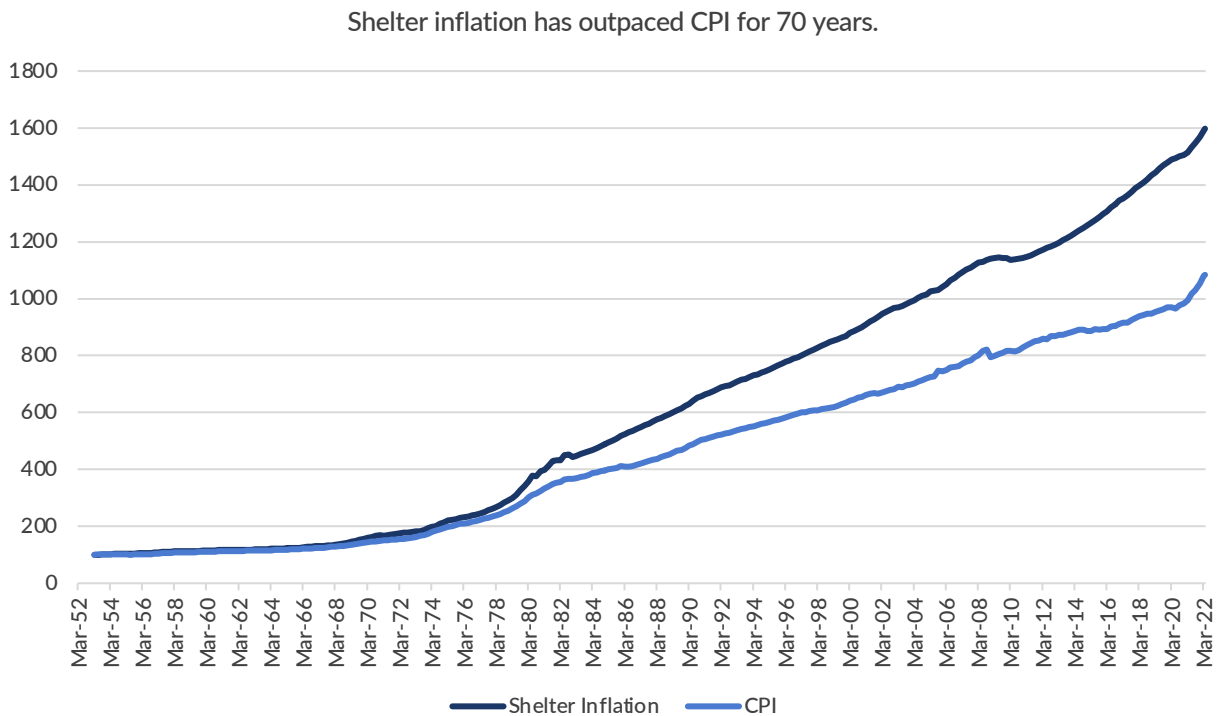
Source: BLS, Amherst estimates. As of Q1 2023.

Section 4

Supply concerns and favorable demographics support single-family growth potential.

The post-COVID-19 easing of financial conditions led to a boom in construction activity, a hangover that persists today. Exhibit 4 shows that single-family units under construction are at 716,000 units but has declined from the recent peak of 828,000 units in April 2022.

The prior peak was during the '04-'08 construction cycle, where single-family units under construction peaked at 1mn units. Multifamily supply in comparison is at 958,000 units with no peak yet in sight. This is far above the '04-'08 peak of 450,000 units.

Exhibit 4.
The multifamily pipeline is at an all time high...

Supply concerns are higher in multifamily ('000s).

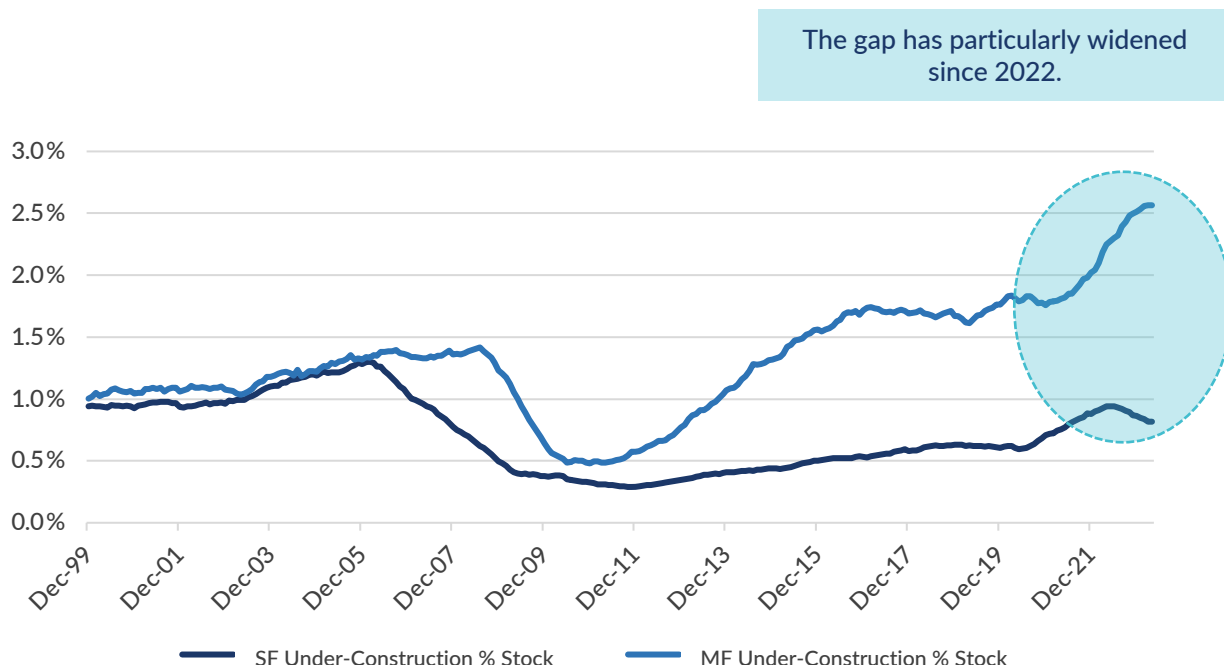Source: Census, Amherst estimates. As of Q1 2023.
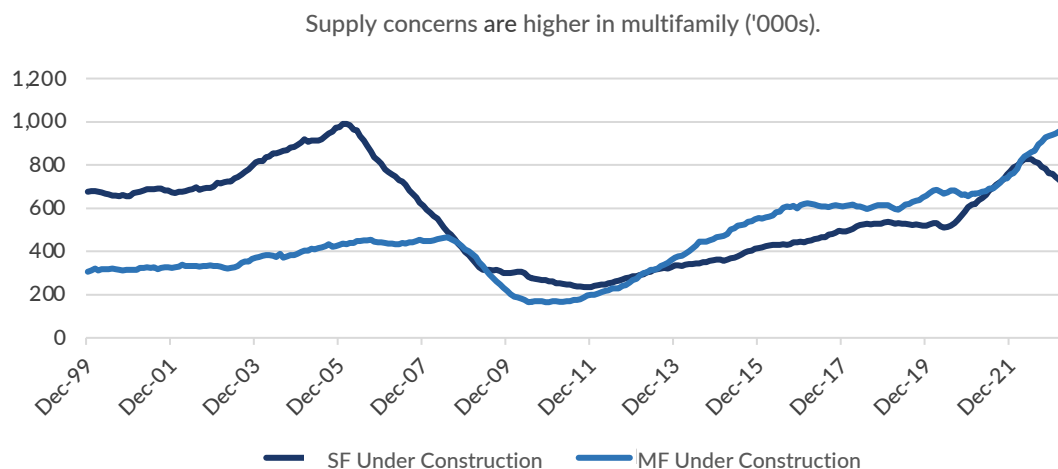
Section 4

The difference in the multifamily vs single-family supply pipelines looks even starker when considered as a percentage of housing stock (Exhibit 5). In the multifamily space, under-construction units are 2.5% of current stock, which will translate to a high number of units coming online over the next couple of years.

In contrast, the share is smaller for single-family units as under-construction units only constitute 0.8% of single-family stock. The issue of large pipelines and the gap between multifamily vs. single-family pipelines is likely going to be most apparent in the South due to a spate of construction activity over the last two years (Exhibit 6).

Exhibit 5.
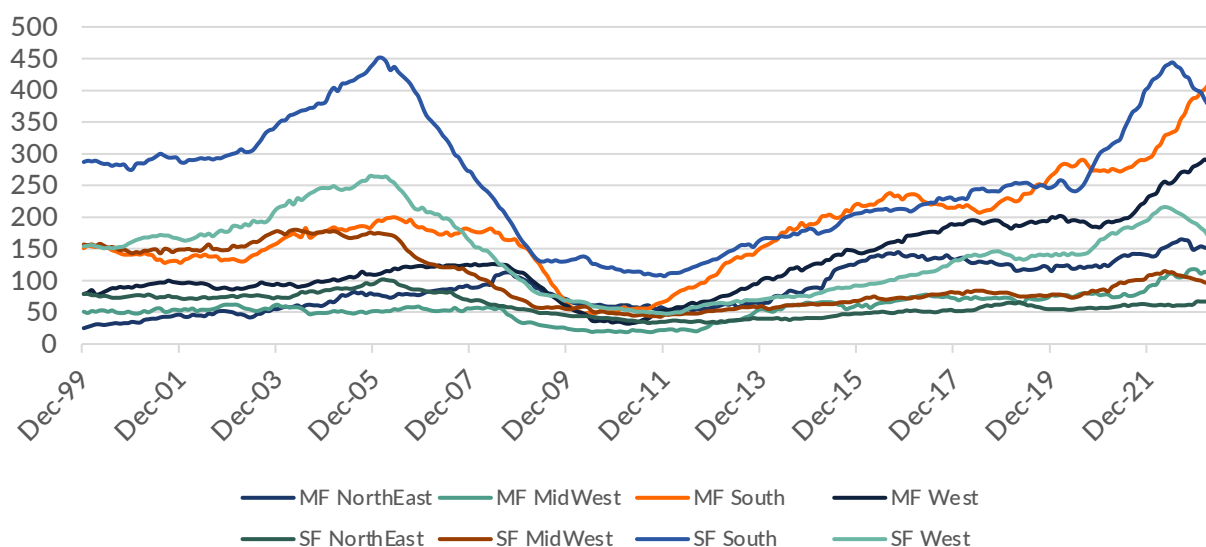...and appears worse when viewed as a percentage of stock.

The gap has particularly widened since 2022.

SF Under-Construction % Stock   MF Under-Construction % Stock

Source: Census, Amherst estimates. As of Q1 2023.

Section 4

Exhibit 6.
Under construction pipelines are larger in the South.

Source: Census, Amherst estimates. As of Q1 2023.

Permitting activity from the Census suggests that once we get past this batch of new construction activity, we may enter an era of prolonged low supply in the single-family space. 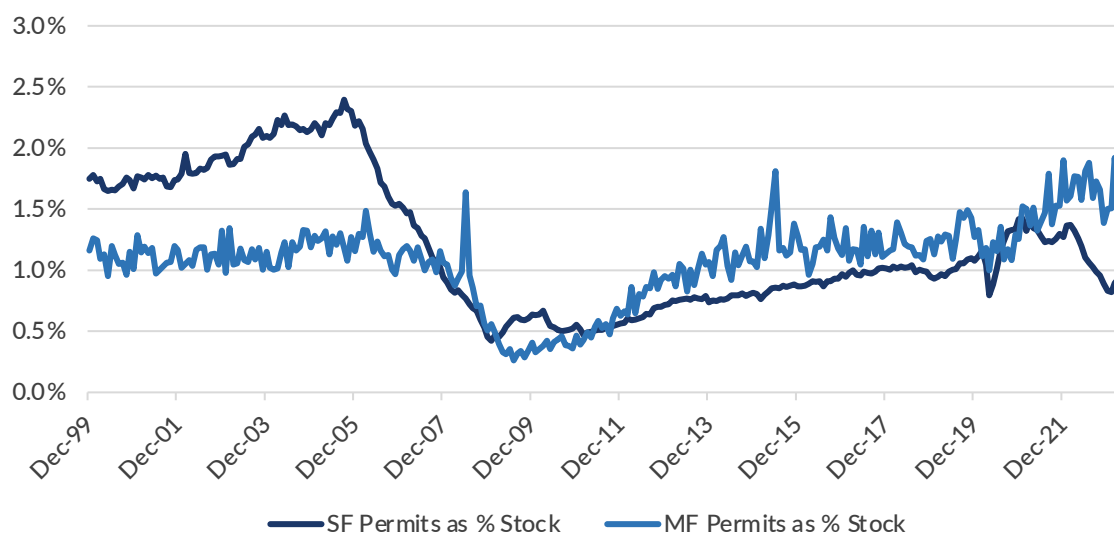Currently, permits are at about 0.9% of housing stock in single-family, a marked slowdown from 2021 levels of 1.3% (Exhibit 7). In contrast, multifamily permits are at 1.6% of stock, somewhat comparable to 2021 levels.

Section 4

Exhibit 7.
Permits have slowed in single-family homes.

Source: Census, Amherst estimates. As of Q1 2023.

Importantly, we expect the supply hangover in multifamily to persist due to the timeline for completions (Exhibit 8). On average, single-f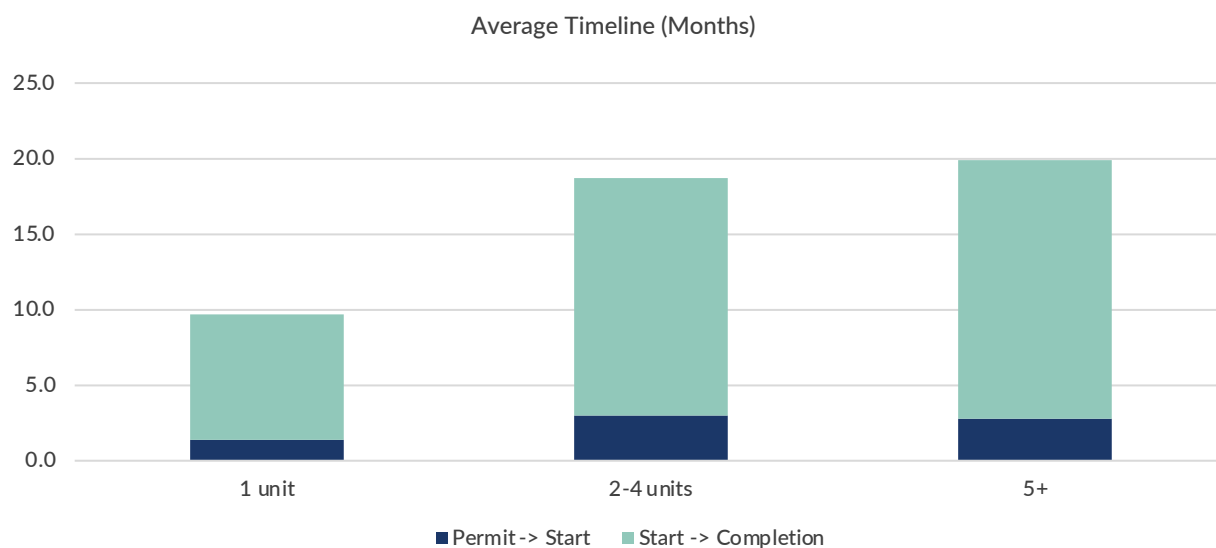amily homes take 1.4 months to start from the time of being authorized, and 8.3 months to complete after getting started, or about 10 months in total. In contrast, multifamily homes take twice as long, about 20 months.

Section 4

Exhibit 8.
Multifamily homes take twice as long to complete as single-family.

Average Timeline (Months)

■ Permit -> Start ■ Start -> Completion

Source: Census, Amherst estimates.

Leveraging the above timelines to forecast completions (supply) in single- and multifamily homes, we expect some normalization in under-construction units and comparable permitting activity to pre-pandemic levels.

Through 2023 and 2024, we expect permitting activity to normalize to 800,000 units in single-family and 550,000 units in multifamily annually through 2023 and 2024.
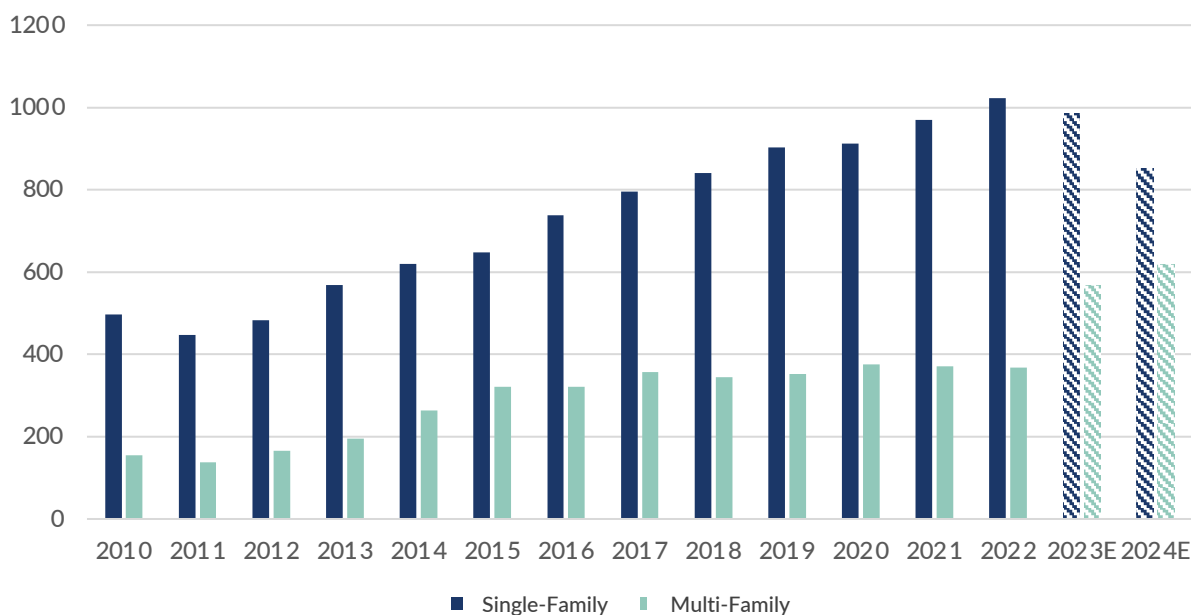
Section 4

As illustrated in Exhibit 9, investors should beware that supply in multifamily is projected to remain elevated in 2023 and rise further in 2024 to over 600,000 units.

In contrast, single-family units are likely past their peak supply already and should decline further in 2024 to about 825,000 units.

Exhibit 9.
Forecasted completions in single- and multifamily (000's).

Source: Census, Amherst estimates.

Section 5

Putting these trends together to inform our forecasts.

To put this all together, we construct a simple model for rent growth as a function of:

1. Vacancy rates
2. Year-over-year change in vacancy rate
3. Aggregate CPI

Unsurprisingly, there is an inverse relationship between rents, the level of and change in vacancy rates, and a direct CPI relationship.

We leverage separate models for single-family and multifamily. On the SF side, we use our proprietary Amherst single-family rent index, which has quality-adjusted prices for the homes that come to market. We obtain Metropolitan Statistical Area (MSA)-level vacancies from the American Community Survey (ACS) and use Urban Core CPI as a measure of inflation in a broader basket of goods and services. On the multifamily side, we obtain effective rents per square foot from CoStar and use their estimates for vacancies in each market.
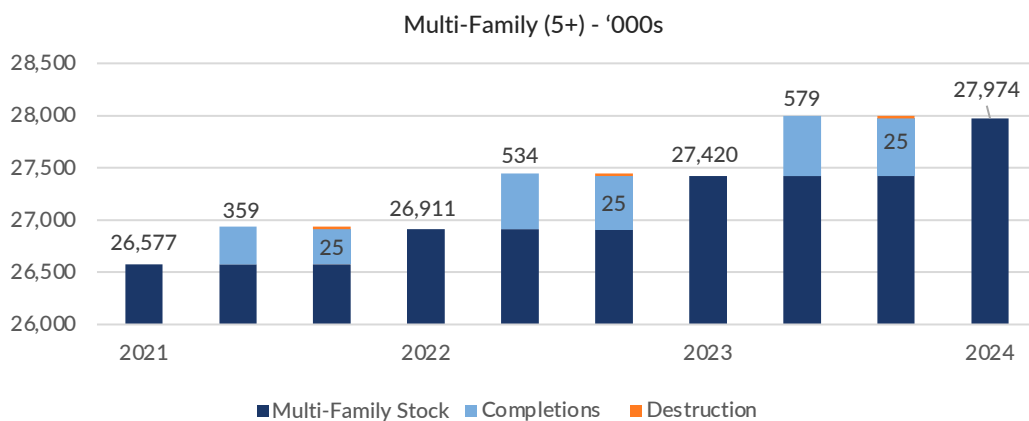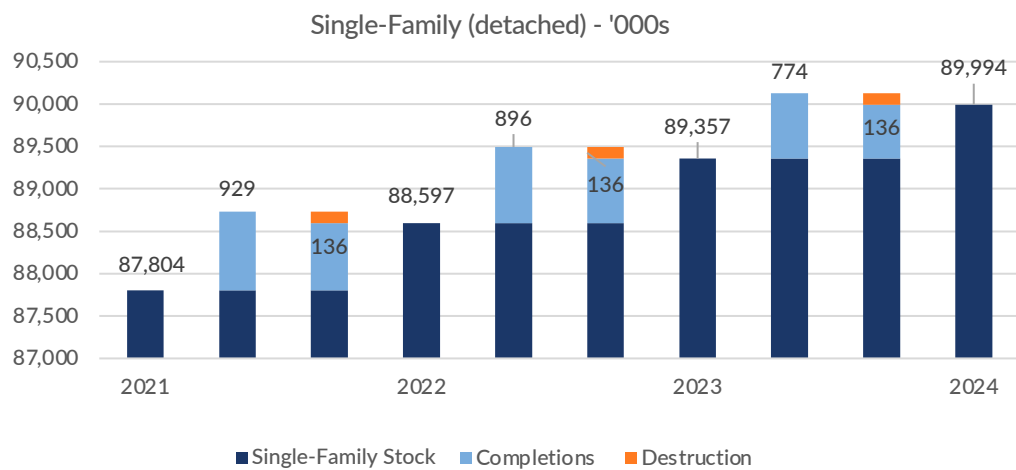
To estimate vacancy rates, we must first forecast housing stock:

*   As outlined in the previous section, we expect elevated supply through 2023 and 2024, particularly in multifamily, due to elevated supply. We estimate these will normalize to 2019 levels within 12 months for single-family and 24 months for multifamily.

*   We use completions as estimated in Section 3 to forecast housing-stock-growth.

*   For stock destruction, we assume about 200,000 homes will be permanently removed from housing stock each year, distributed between the various unit types.

*   In 2024, we expect single-family housing stock to grow to 90mn units, from 87.8mn in 2021, a 2.5% increase. Five-or-more-unit multifamily stock should grow a lot faster, at 5.3% (Exhibit 10).

Section 5

Exhibit 10.
Forecast for housing stock.

Single-Family (detached) - '000s

Legend: ■ Single-Family Stock ■ Completions ■ Destruction

Multi-Family (5+) - '000s

Legend: ■ Multi-Family Stock ■ Completions ■ Destruction

Source: Census, Amherst estimates.

Section 5

The next step is to estimate absorption.

- We expect household formation to slow from its 2020-2021 levels, because there are structural components to household formation (population growth by age bracket, race, and marital status) as well as cyclical components (employment and wage growth).

- Absent a recession, we believe steady-state household formation should be roughly 1mn each year. Based on previous Census data, this tends to be distributed 62%/38% to single-family/ multifamily units.

Based on our housing stock and absorption estimates, we expect vacancies in multifamily units to rise by 1 pp from 2022 to 2024, while single-family vacancy rates rise 0.3 pp in our base case.

Inflation is the other key factor in our rent model. We use market forecasts of 4.8% for 2023 and 2.5% for 2024 in our base case. As illustrated in Exhibit 11, we get to 2023 and 2023 aggregate rent growths of 6.5% & 4.7%, respectively, for single-family and 4.8% and 3.4% for multifamily.

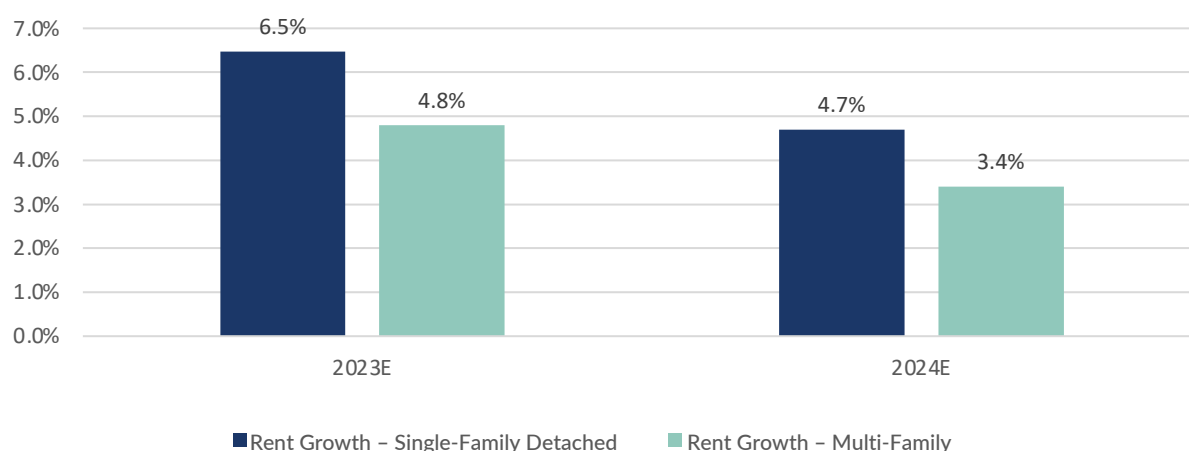## Exhibit 11.
Base case forecast: vacancy rate, CPI, and rents.
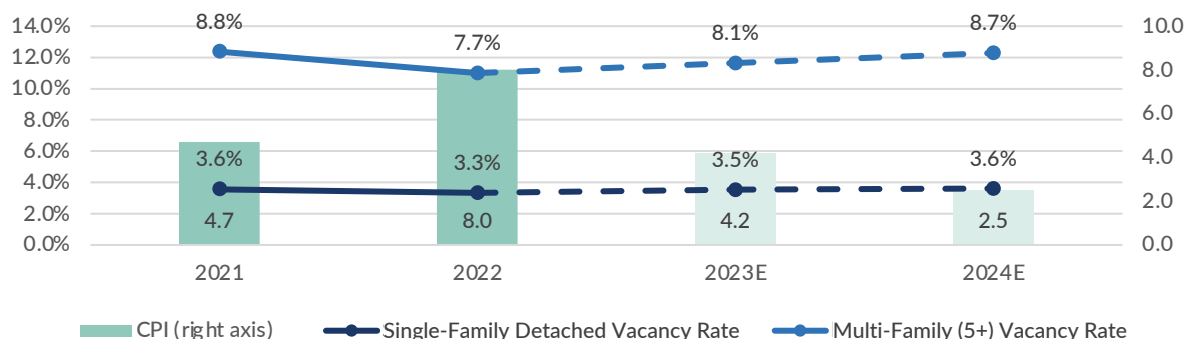
Source: Census, Amherst estimates.

Section 5

Exhibit 11. **(continued)**
Base case forecast: vacancy rate, CPI, and rents.

Source: Census, Amherst estimates.

Running a stress scenario to gauge downside (Exhibit 12), we see single-family rents growing 3-5% over the next couple of years, outpacing multifamily rents (1-3% growth). Thi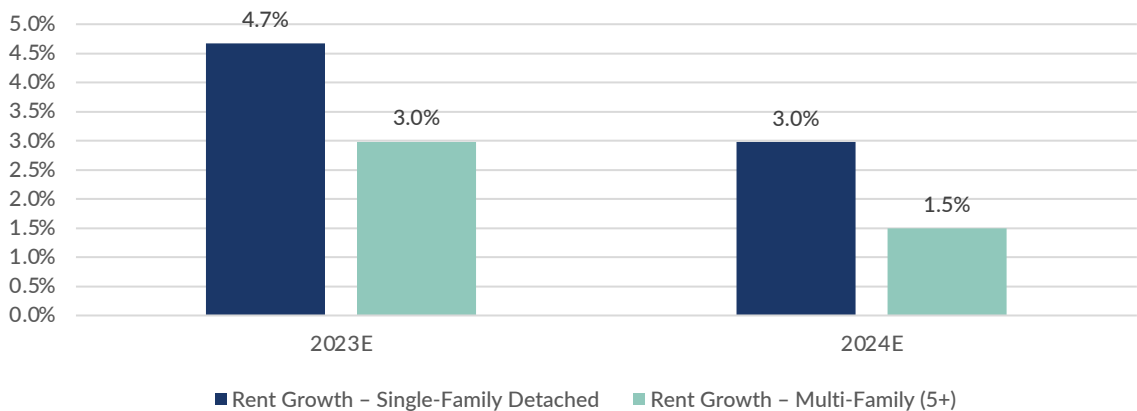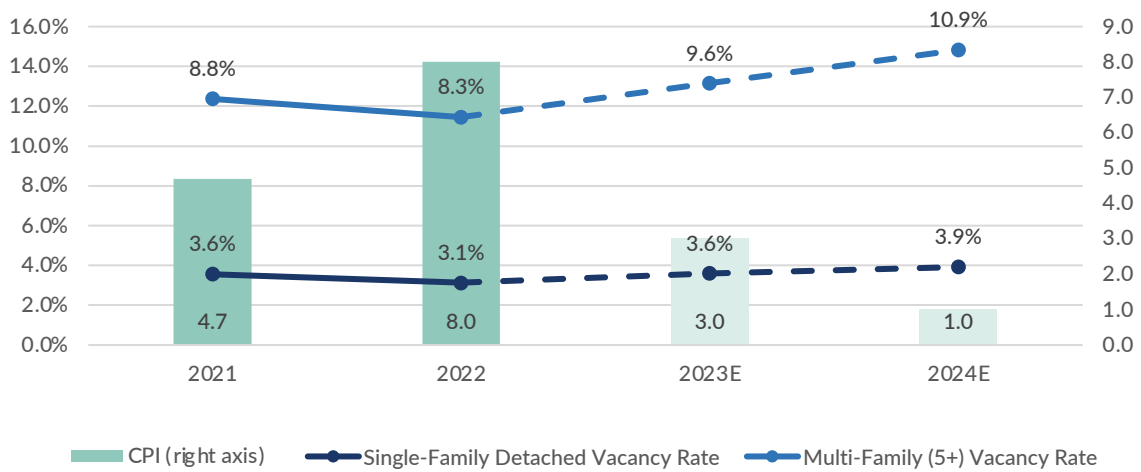s stress case assumes annual household formation of 500k units (versus 1mn in the base case), reflecting a partial giveback of the strong formation rates over the past two years. We then assume inflation declines more sharply to 3%/1% in 2023/2024.

Section 5

Exhibit 12.
Stress case forecast: vacancy rate, CPI, and rents.

Source: Census, Amherst estimates.

Section 5

Atlanta Case Study

We use Atlanta, GA, metropolitan area to show that the above-national-level conclusions have parallels at the market level. Our inflation and vacancy-based model estimates Atlanta single-family and multifamily rent growth to be 4.9% and 2.2% annually.

At a high level, Atlanta housing units are slightly more skewed towards single-family (Exhibit 13), which means more new households get allocated to single-family homes than the national average. Over the past decade, the Atlanta region added about 40,000 households each year, which are split roughly 80-20 between single- and multifamily.

Like many other regions in the South, Atlanta is facing a significant amount of new supply on the multifamily side. In 2022, permits were filed for 37,000 multifamily units, which is about 4.8x the annual, average absorption rate.

Consequently, vacancy rates are set to move significantly higher, and we project an increase to 15.0% by 2024 versus our estimate of 10.9% in 2022. By contrast, single-family vacancy rates should increase but to a more modest 5.0% in '24 vs 4.2% in '22.

Our model suggests that these vacancy rates should translate to a meaningful difference in rent growth between multifamily and single-family. We expect single-family rents to grow 4.9% annually over the next couple of years and multifamily rents to grow 2.2%.

Section 5

Exhibit 13.
Atlanta showcases the supply dynamic between single- and multifamily units.

Legend:
- Single-Family
- 2-4 Units
- Multi-Family 5+
- Mobile Homes / RV

United States / Atlanta donut chart values: 6%, 3%, 19%, 20%, 4%, 7%, 73%, 68%

Bar chart legend: 2022 Permits, Annual Absorption, Permits to Absorption
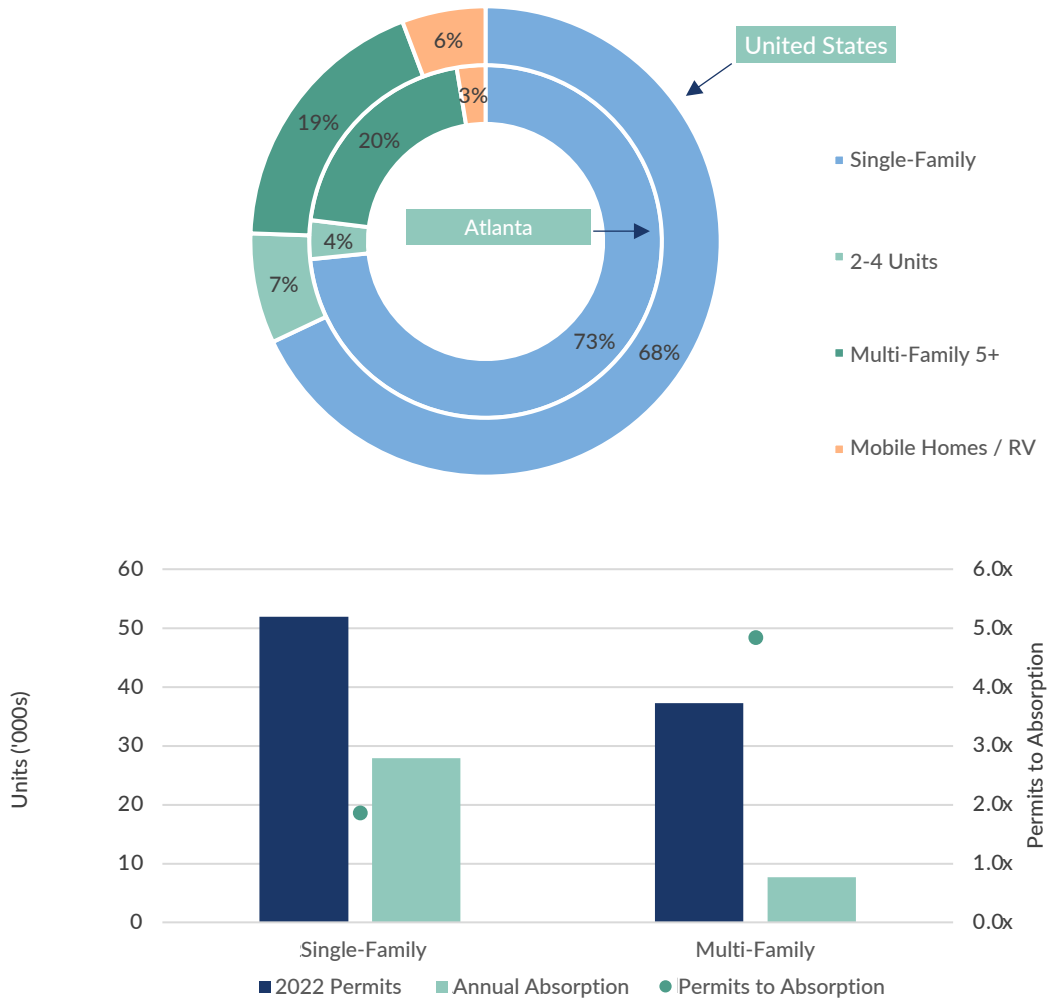
Section 6

Demographics favoring single-family units.

Demographic trends in household formation suggest growing demand for single-family in the long run. Demand for space rises with age, and households have been increasingly forming at later ages. The demographic groups with the highest demand for large housing units (either now or in the near future) are 25–54-year-olds, who constitute nearly 40% of the U.S. population (or 130 million people). This population is seeking three or more-bedroom units, which single-family is better poised to accommodate.

The age cohorts that demand the largest residential spaces have a distinct peak. Exhibit 14 shows that as of 2021, households headed by a person aged 35-54y lived in a house with an average of three bedrooms (and 70% of these households lived in a unit with three-or-more bedrooms). By contrast, the average 24–35-year-old household consumed 2.4 bedrooms (and only 49% of these households occupied a unit with three-or-more bedroom units.) As the 24-35 cohort ages into the 35-54 range, their demand for three-or-more bedroom units will likely rise to match the current 35-54 cohort.

Exhibit 14.
The demand for space rises with age and peaks in the 45-54 age cohort.
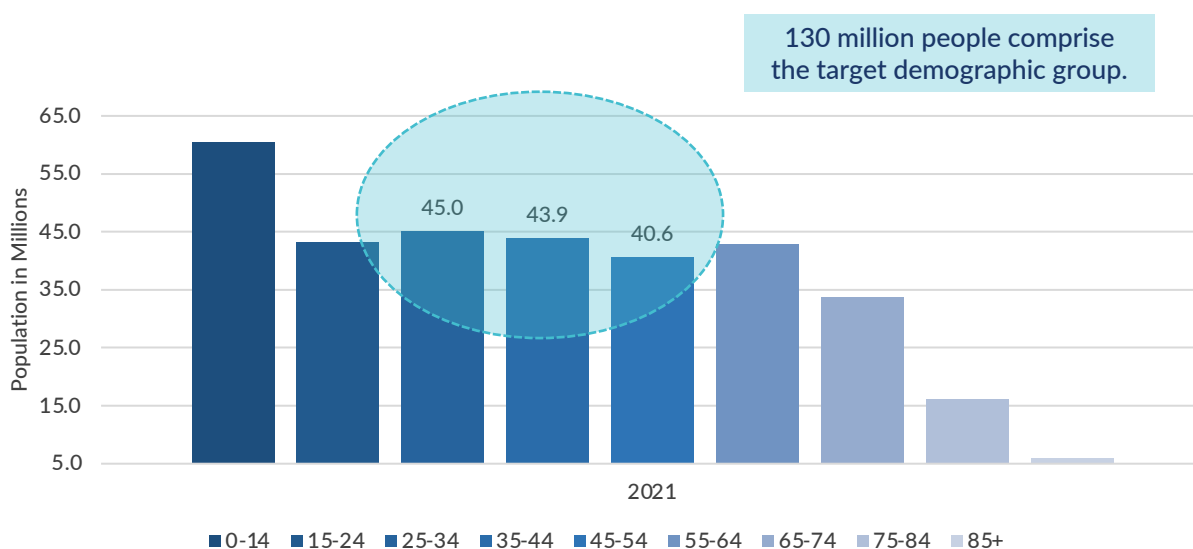

Source: Census, Amherst estimates.
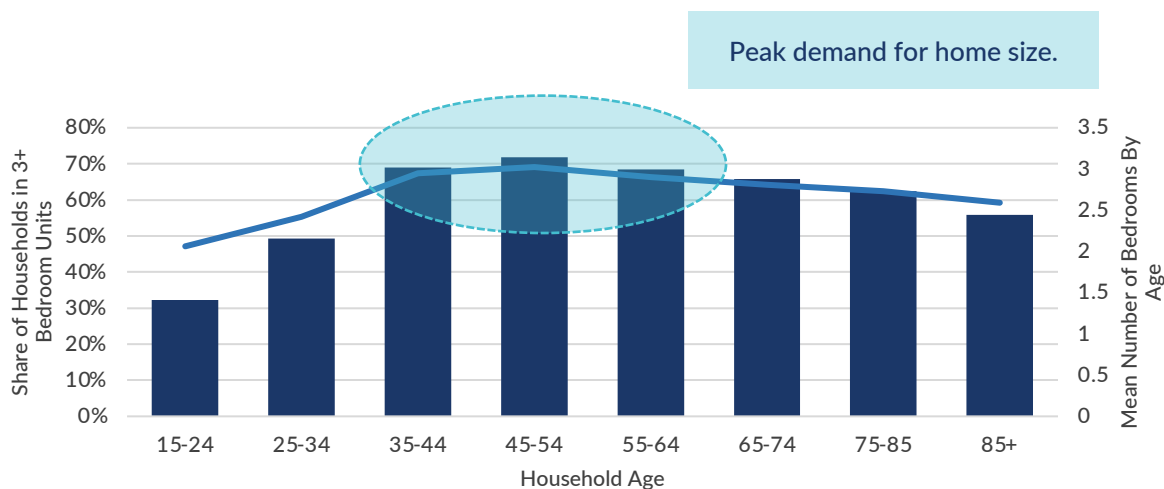
Section 6

The age cohorts that drive the demand behind larger residences and for-lease, single-family homes constitute a large share of U.S. households. Per Exhibit 15, there are nearly 85 million people in the 35–54-year-old cohort who are in their peak demand for consumption of 3+ bedroom units. Furthermore, there are 45 million 24–34-year-olds whose demand and consumption for 3+ bedroom units will soon peak within the next decade, while 3+ bedroom consumption of the 55+ cohorts is expected to taper slowly as they age (per Exhibit 14). Combined, these cohorts command 39% of the U.S. population or approximately 130 million people.

Exhibit 15.
2021 U.S. age distribution.

130 million people comprise the target demographic group.

45.0   43.9   40.6

Population in Millions

2021

■ 0-14 ■ 15-24 ■ 25-34 ■ 35-44 ■ 45-54 ■ 55-64 ■ 65-74 ■ 75-84 ■ 85+

Source: Census, Amherst estimates.

Section 6

Clearly, there will be demand for three-or-more bedrooms from current and new households. As seen in Exhibit 16, multifamily is not equipped to handle this increased demand as only 13% of multifamily homes have three or more bedrooms. By contrast, 82% of single-family units have three-or-more bedrooms.

Consequently, unless the products being supplied by multifamily quickly increase in size (and there is no evidence this is happening), the bulk of demand for three-or-more bedroom units will need to be met by single-family units.

Exhibit 16.
Single-family homes are better suited for families.

| Bedroom Count Distribution		
Bedrooms	Multi-Family	Single-Family
0	8%	0%
1	34%	2%
2	45%	16%
3+	13%	82%

Source: 2021 PUMS/ACS 1-year.

Section 7

Public markets price in sustained single-family rent growth.

There are some indications that differential rent growth between single-family and multifamily is emerging in reported metrics of publicly traded REITs. In Exhibit 17 below, we show new lease spreads reported by six apartment REITs and two single-family REITs[2]. Broadly, we see that leasing spreads are holding up relatively better at Invitation Homes and American Homes 4 Rent (6-8% in 1Q 2023) when compared to apartment REITs (0-2%). A part of this may be attributed to longer lease terms in the single-family space, but we believe the positive spread differential likely holds even adjusted for this. AVB, EQR, ESS, UDR, CPT, and MAA are multifamily REITs. INVH and AMH are single-family REITs.

Exhibit 17.
New Lease Spreads are holding up better in single-family REITs.

New Lease Spreads
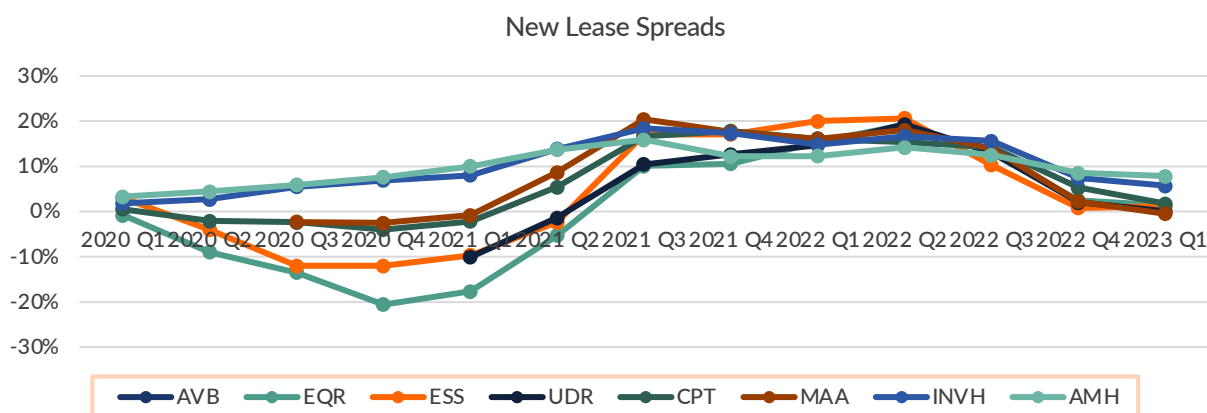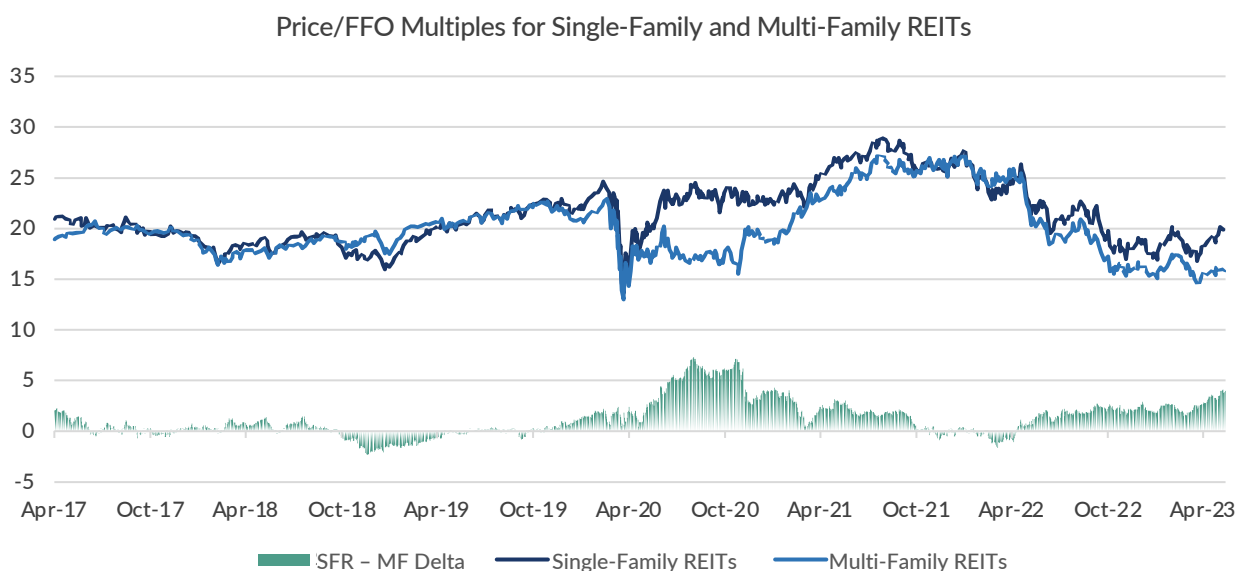
Source: Census, Amherst estimates.

Section 7

Public markets appear to be pricing these REITs differently as well. On a blended-forward P/FFO metric, single-family REITs trade at a 4x multiple premium to the average apartment REIT (Exhibit 18). This is close to the widest it has been since 2017 (except for late 2020) when the market preferred single-family rental over apartments due to COVID-19 concerns.

We believe the present premium is justified given our expectations of structurally higher rent growth in single-family REITs versus multifamily.

The ratio of stock price to funds from operations (FFO) is a commonly used valuation metric for REIT equities.

Exhibit 18.
Valuation differential between single- and multifamily REITs.

Price/FFO Multiples for Single-Family and Multi-Family REITs

Source: Census, Amherst estimates.

Section 8

Conclusion

Based on our findings, we believe that residential rent growth will stay positive over the next two years, as the twin tailwinds of high cost of ownership and elevated inflation should offset supply pressures. Supply pressures are particularly acute in multifamily, particularly in the South, and should serve to keep rents relatively depressed. Consequently, we expect multifamily rents to grow 3-5% in 2023 and 2024 while single-family rents are expected to grow 5-7% (or 200 bps higher than multifamily).

Over the longer term, the age composition of U.S. households should support single-family growth potential. Households in the 35-54y age bracket strongly prefer 3+ bedroom housing, something that is not available in the multifamily market. The market valuations of single-family and multifamily REITs suggest that single-family is already being priced at a premium in anticipation of its structurally higher rent growth.

Data Details and Important Disclosures

The Amherst Rent index is generated and maintained by Amherst. The index tracks rent price changes of single-family detached properties in 250 core-based statistical areas (CBSA) and 49 states in the US. The index is published quarterly and is based on the Case Shiller repeated sales methodology. The rent index relies on tracking rent price changes of the same house over time. For each lease, a search is conducted to find rent price from the previous lease of the same house. If an earlier lease is found, the two leases are paired into a "lease pair." Lease pairs are designed to track rent price changes over time for the same house, while holding the quality and size of each house constant. After pairs are formed, the index is calculated under a weighted least square framework, in which weights are based on rent price anomalies and time interval within pairs. The index is based on re-leases on the same properties that are put on the market and therefore does not include any repeat leases which are renewals.

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