Our View of Macroeconomic and Rental-Housing Market Conditions in 2022

THE FIRST STORY: Middleburg's Look Ahead

December 31, 2021

A note on sources: Middleburg Communities makes use of data collected and tabulated by data partners including Oxford Economics, CoStar, and RealPage, but we are responsible for the analysis of those data. Sources for specific analyses are typically noted on charts, but we are happy to provide additional detail regarding any of our analyses. For further information please contact the principal author of this report, Dr. Brad Case, at bcase@livemiddleburg.com.

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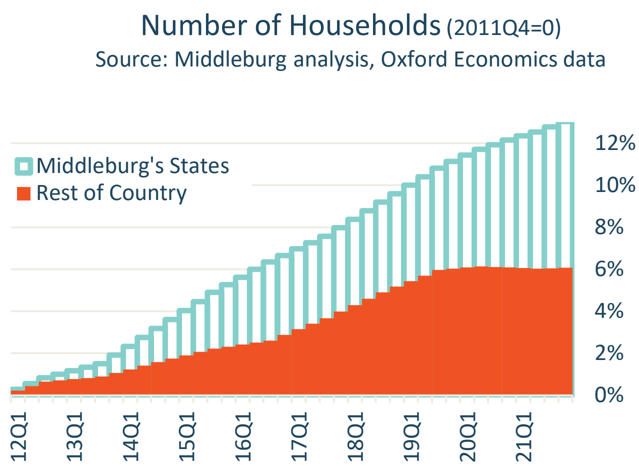
Foundation: 2021 Overview

The past year has been extraordinary for investors in rental housing. Apartment property values nationwide increased by some 39 percent, supported by both solid demand growth and constrained supply. That extraordinary return did not reflect solely a recovery from the worst of the covid-19 shutdown: in fact, apartment properties nationwide fully recovered their pre-shutdown values by June of this year, and *then* gained an additional 13 percent.

Rental apartment appreciation has been even stronger in Middleburg's territory, roughly the arc from Virginia south through the Carolinas and Georgia to Florida and west through Tennessee and Alabama to Texas. Our proprietary data analysis indicates that apartment property values in Middleburg's states had recovered to pre-shutdown levels by February of this year (a process that wasn't completed until July for properties in non-Middleburg states) and are now an astounding 52 percent higher than they were before the shutdown started, while property values in other parts of the country are now just eight percent higher than when the shutdown began.

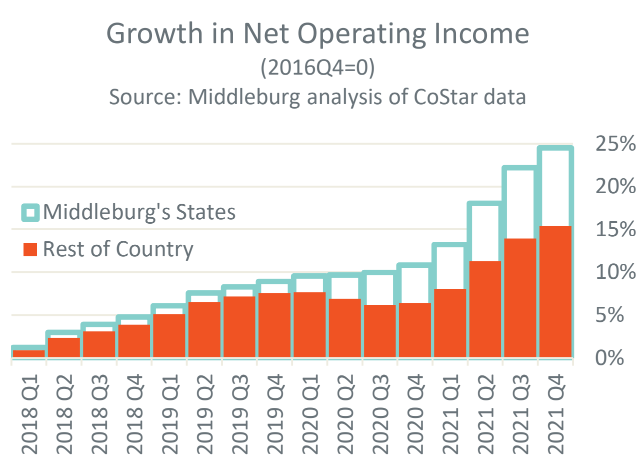
That rental housing markets in Middleburg's states outperformed those in other parts of the country should not be surprising given that, over the past decade, Middleburg's states have outpaced the rest of the country in *all* of the underlying forces that drive rental housing demand: growth in the number of households (1.07 percent per year compared with 0.60); total population (1.08 percent per year compared with 0.44), including the crucial household-forming 20-29 age group (0.68 percent per year compared with 0.01); and total nonfarm employment (1.73 percent per year compared with 0.96).



Indeed, the gap between Middleburg's states and the rest of the country seems to be growing over time. For example, Oxford Economics estimates that almost all of the nation's growth in the **Number of Households** over the last two years occurred in Middleburg's states, as did essentially all of the country's population growth. Even more tellingly, the young adult population grew over the last five years by 30 thousand in Middleburg's states even while it *declined* by more than a million in the rest of the country.

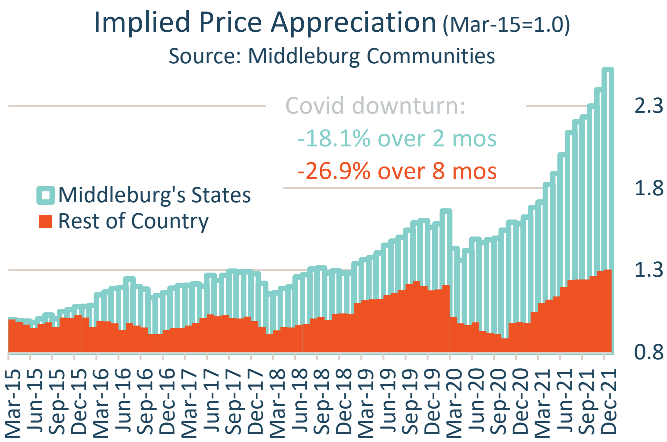
Ten years ago CoStar estimated that Middleburg's states accounted for 26.7 percent of the nationwide demand for new rental housing units; today that figure stands at 29.0 percent. Partly as a result of that difference in demand trends, the rent gap between Middleburg's states and the rest of the country has been closing: a decade ago CoStar estimated that the overall average effective rent in Middleburg's states was 16 percent less than the national average, but today's gap stands at just 8.7 percent.

CoStar estimates that **Growth in Net Operating Income** (NOI) was slightly stronger in Middleburg's states than in the rest of the country as far back as 2018, but NOI growth in the two regions diverged noticeably after the beginning of the covid shutdown in 2020Q1. During 2020Q2-Q4, CoStar estimates that NOI continued to grow in Middleburg's states while shrinking in the rest of the country, resulting in a cumulative outperformance of 4.4 percentage points by the end of 2020. Over the past year the recovery has been much stronger in Middleburg's states than in the rest of the country, boosting the cumulative outperformance since the end of 2017 to 9.1 percentage points (24.5 percent versus 15.4 percent).



Our own proprietary analysis is designed to pick up signals of relative performance in rental apartment markets earlier than they can be measured by CoStar, and recent years provide evidence of our success: I estimate that the **Implied Price**

Appreciation of apartment properties in Middleburg's states started exceeding appreciation in other parts of the country during 2016, when properties in our part of the country appreciated by eight percent while those in the rest of the country declined in value by nine percent.



That 17 percent gap in appreciation grew to 36 percent by February 2020, when the covid shutdown started. As a result of the covid shutdown, apartment properties in Middleburg's states lost 18 percent of their value in a downturn lasting two months, and didn't fully recover until February 2021—but the values of apartment properties in other parts of the country declined much more severely, by 27 percent over the course of eight months, and didn't fully recover until July 2021. Properties in Middleburg's arc are now worth approximately 52 percent more than they were in February 2020, while properties in the other 42 states have gained about eight percent.

Mosby Ingleside, North Charleston, SC

Elevation: 2022 Outlook

Macroeconomic conditions are inherently more difficult to predict when a major non-economic event disrupts the normal relationships among segments of the broad economy. Middleburg's outlook for 2022 is based on high-conviction forecasts regarding four of the performance metrics most important to investors in rental housing: Inflation, Interest Rates, Cap Rates, and Property Values.

Inflation

Price inflation has been prominent in news reports since the March reading of the Consumer Price Index (CPI) showed it exceeding two percent, on a year-over-year basis, for the first time since the pandemic started. As the year-over-year inflation rates reached four percent (April), five percent (June), and six percent (October), the Federal Open Market Committee (FOMC)—which sets interest rate policy to support a dual mandate of full employment and price stability—came under fire for calling high inflation rates "transitory" and suggesting that it would continue to support labor markets rather than rein in the pace of macroeconomic growth to control price growth.

In December the FOMC confirmed that it would end its "quantitative easing" policy of purchasing bonds to suppress market interest rates and influence the slope of the yield curve (that is, the difference between yields on longer- and shorter-term bonds). That decision has been reported as a significant "hawkish" shift away from supporting labor markets and toward fighting inflation. I, however, regard the FOMC's December statement as only a very slight change having more to do with semantic subtleties than with policy shifts.

The FOMC was, and is, correct to use the word "transitory" to describe the current high rates of inflation. The correct interpretation of the word "transitory" is this: high inflation is transitory if it can be expected to subside without significant intervention by the FOMC for the purpose of bringing it down. "Transitory" is not the same as "fleeting," though observers clearly misinterpreted it that way. In my opinion, high inflation *will* subside without FOMC policy intervention—almost certainly not during 2022, and perhaps not even in 2023, but not much later than that.

Inflation Components: Gasoline and Used Cars

During normal economic conditions there is nothing inherently misleading in reporting year-over-year changes in economic indicators such as inflation. The covid pandemic, however, had such a sudden and severe impact on the economy that year-over-year changes are inherently suspect. The price of gasoline has provided a vivid example. Over the last 12 months the price of gasoline has increased by a stunning 58%, higher than in any 12-month period since 1980. Over the 12 months from May 2019 to May 2020, however, the price of gasoline had *declined* by an almost equally stunning 34 percent. Given the severity of the pandemic-related disruptions, it is more useful to measure price changes relative to pre-pandemic conditions.

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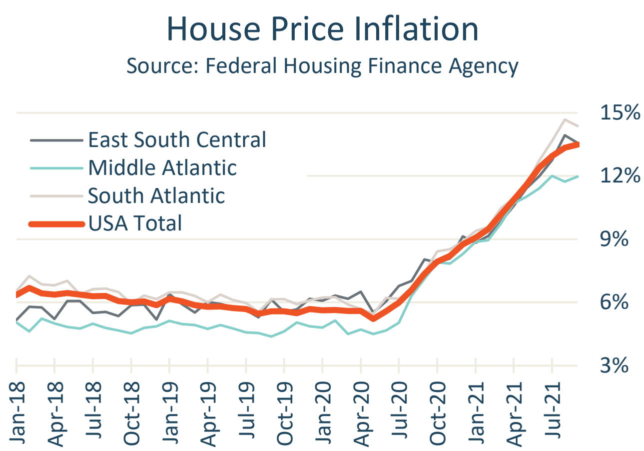
Over the past *two* years, gasoline prices have increased by 12.9 percent per year—still quite high (higher than three-quarters of historical two-year periods), but not nearly so shocking for this notoriously volatile component of total spending. Similarly, overall inflation over the past *two* years has averaged 4.0 percent per year, the highest two-year inflation average since 1992. For the purpose of making its policy decisions, however, the FOMC typically examines "core" inflation, excluding the volatile energy component (as well as the food component), and over the past two years the "core" CPI has increased by a still-high average of 3.3 percent per year.

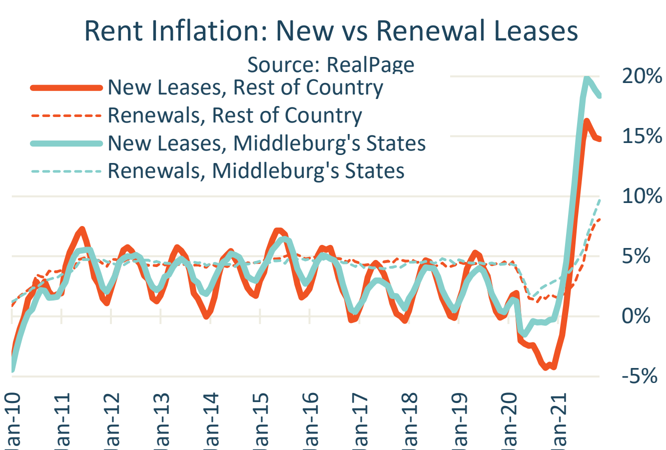
The largest contributor to high core inflation over the last two years has been prices for used cars and trucks, which have increased by 21 percent per year over, the highest two-year average since 1982. The price surge in *used* cars and trucks has been driven primarily by the difficulty in bringing *new* cars and trucks to the market, in large part as a result of pandemic-related capacity constraints at major ports that have limited imports of both foreign-assembled cars and trucks and imported parts for domestic-assembled vehicles. It's worth noting that prices for used cars and trucks have historically been among the most volatile components of core inflation—almost three times as volatile, for example, as food, even though food is excluded in measuring core inflation. As port facilities work through the pandemic-related backlog and make both new vehicles and vehicle parts available, I expect the used-vehicle component of core inflation to subside—and, in fact, to show a "transitory" dip considerably below its long-term average as people who have delayed buying new cars or trucks begin to put their used vehicles on the market.

Inflation Components: Housing

The housing component of inflation presents an entirely different story: the "shelter" component of the CPI, which includes both rent and "owner's equivalent rent" of owner-occupied housing, has actually held the overall inflation rate *down*, with prices increasing at an annualized rate of just 2.9 percent per year over the past two years. The low reported inflation in the price of housing is, however, misleading for two reasons, both related to the method used by the Bureau of Labor Statistics (BLS) to estimate the price of housing. The first is that the BLS estimates are *smoothed* relative to actual housing costs: that is, when actual housing costs increase the BLS measures only part of the increase, and when actual housing costs decline the BLS measures only part of the decline. The second is that the BLS estimates are *lagged* by about a year: that is, when actual housing costs change, the BLS doesn't measure it until about a year later.



In fact, other sources show that housing costs have surged since shortly after the start of the pandemic. Data from the Federal Housing Finance Agency shows that two-year average rates of **House Price Inflation** have increased from a relatively steady six percent per year to around 13 percent per year. And data from RealPage shows that **Rent Inflation** in renewal leases for existing apartment renters has increased from a relatively steady five percent per year to 9.7 percent in Middleburg's states (and 8.1 percent in the rest of the country) while rents on new leases have surged by 18.4 percent in Middleburg's states (and 14.8 percent in the rest of the country after dipping sharply during the early part of the pandemic.



During 2022 I expect to see a significant increase in the housing component of the CPI. In fact, I expect that the increase in measured housing costs will more than make up for what I expect to be a significant decline in the cost of both gasoline and used vehicles; as a result, I expect that core inflation will remain high during 2022 at about four percent when measured on a year-over-year basis.

> **How long housing cost inflation remains high depends in large part on how quickly Middleburg Communities and other developers can supply additional housing.**

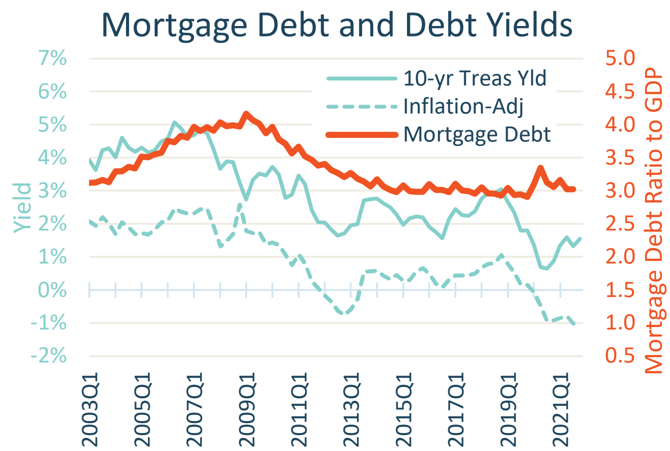
The primary reason that house prices and rents have increased so sharply is the strong increase in household formation, especially in Middleburg's part of the country, coupled with shifts in preferences for housing amenities. How long inflation will remain high depends in large part on how quickly Middleburg Communities and other developers of rental and for-sale housing can provide adequate additional supply to meet the increased nationwide demand for housing units, especially in Middleburg's states. As supply catches up with demand, however, the rate of increase of both house prices and rents will certainly slow—and, with a lower inflation rate in housing costs, overall inflation will subside as well. Even if high inflation is not "fleeting"—even if it remains high through 2022 and into 2023—it is, indeed, "transitory."

Interest Rates

If, as I believe, the current high rate of inflation is transitory, then the most significant risk associated with it is that policymakers (particularly, though not exclusively, the members of the FOMC) may accede to mounting pressure to fight inflation by raising interest rates too aggressively, with the goal of throttling back the pace of economic growth. But interest rates will certainly rise—first as the natural outcome of the FOMC's decision to end its monetary stimulus program this spring, and then as a result of likely decisions to increase the target range for the federal funds rate.

> **Real estate is often described as "interest-rate-sensitive," but that is flatly untrue: the value of real estate is driven much more by net cash flows.**

The FOMC reported following its December meeting that participants expect the target range for the federal funds rate to increase from its current level of around 0.1 percent to around 0.9 percent in 2022, 1.6 percent in 2023, and 2.1 percent in 2024. Other interest rates are likely to increase too: for example, if the FOMC's projection for the federal funds rate holds true, then it is reasonable to expect the market yield on Baa-rated corporate bonds to average around 4.4 percent in 2022, 4.7 percent in 2023, and 4.9 percent in 2024. Those expected increases should not throttle back the pace of economic growth: in fact, the same report shows that FOMC members expect the nationwide unemployment rate to hold at 3.5 percent throughout that three-year period, and the real GDP growth rate to return only gradually to its long-run norm of slightly less than two percent per year.



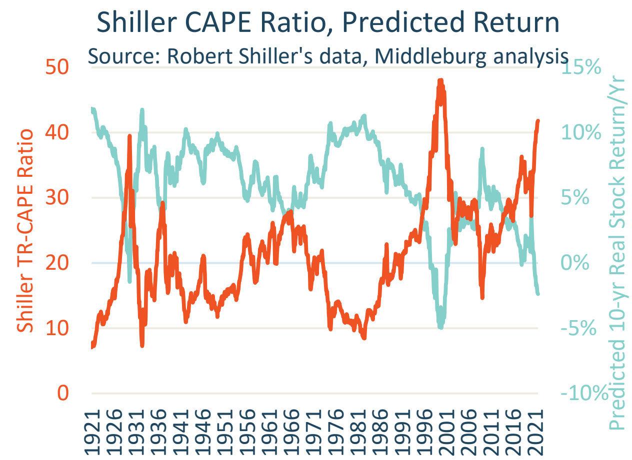
I do not expect rate increases to have any significant negative effects on the housing market, even though rate increases will raise the cost of construction debt for developers and the cost of mortgage debt for both owner-occupants and owners of rental housing. Although real estate is often described as an "interest-rate-sentitive" asset, that is flatly untrue: the value of real estate is driven much more forcefully by the expected net cash flows accruing to the owner of the asset (or the imputed net cash flows, for owner-occupied properties) than by the cost of capital.

This attribute of real estate is reflected in data on **Mortgage Debt and Debt Yields** over the last two decades. Prior to 2009 the total outstanding mortgage debt (relative to GDP) increased steadily—not because the cost of debt was declining in either nominal or real terms, but because both individual and institutional investors were optimistic about the value (financial or implicit) of real estate ownership. In contrast, from 2009 through 2014 total outstanding mortgage debt steadily declined not because the cost of debt was increasing but because investors diverted their capital toward what they considered to be better investments.

> I expected a continued shift in preferences toward more and better-amenitized housing.

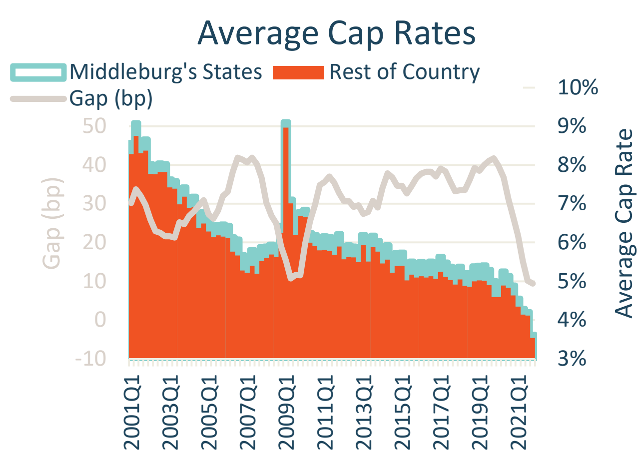
In short, during 2022 I expect a continued shift in preferences toward more and better-amenitized housing to drive an increase in the total volume of mortgage debt outstanding, from both individual and institutional real estate investors, in spite of what I expect to be steady increases in the cost of mortgage capital.

The shift of investor capital toward owner-occupied and rental housing may see an added boost from increasing concern regarding the returns that can be expected from other investments, particularly equity investments (public or private) in assets other than real estate. Historical research by Nobel prize-winning economist Dr. Robert Shiller shows that his **TR-CAPE Ratio** (for "total return version, cyclically-adjusted price/earnings") has provided a dependable signal as to expected real **Returns** to stock market investments over the next 10 years.



The sustained increase in stock prices over the last 10 years (relative to company earnings) have taken the TR-CAPE ratio above 40—a level exceeded only once before in the 140-year history of Shiller's research, during the dot-com bubble of 2000, and more than twice its long-term average of 20.6. Regressing subsequent 10-year real returns on TR-CAPE values suggests that today's ratio implies real stock market returns over the next 10 years averaging 2.4 percent per year *less* than the rate of inflation. (It should be noted that there is a tight, but poorly measured, relationship between returns to stock market investments and returns to investments in private equity, so private equity investors are likely to realize equally poor results over the next 10 years.)

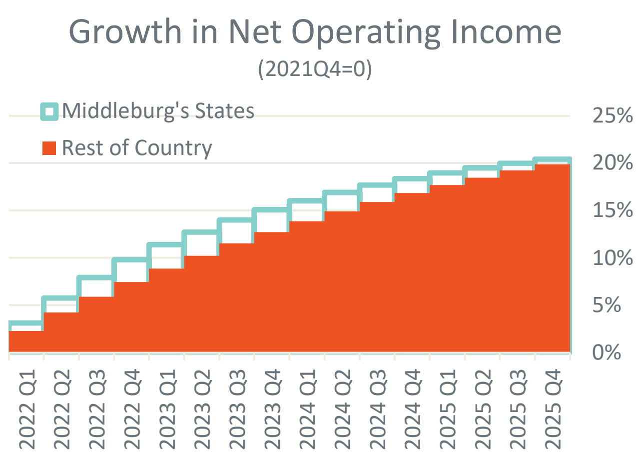
Cap Rates



The cap rate for a stabilized individual property is equal to its total net operating income (NOI) over the coming year divided by its market value, while the cap rate for a market or a portfolio equals aggregate coming-year stabilized NOI divided by aggregate market value. Historically the cap rates for multifamily properties in Middleburg's part of the country have typically been about 26-37 basis points higher than cap rates in other parts of the country.

It is useful to keep in mind the three essential drivers of cap rates: the opportunity cost of capital, the expected growth rate of NOI, and expected downside risk to NOI (especially relative to expected downside risk in other investments). The first component—the opportunity cost of capital—is most closely tied to the yields available on other investments. For example, holding the other two components constant, if the federal funds rate increased, as FOMC members predict, to around 0.9 percent in 2022, 1.6 percent in 2023, and 2.1 percent in 2024, then I would expect cap rates in Middleburg's part of the country to increase to around 5.0 percent in 2022, 5.1 percent in 2023, and 5.2 percent in 2024.

The gap in cap rates between Middleburg's states and the rest of the country stood at 42 basis points in 2019Q4 with cap rates averaging 5.01 percent in Middleburg's arc compared with 4.60 percent in other parts of the country, but two years later at the close of 2021 the gap was just nine basis points, with cap rates averaging 3.63 and 3.53 percent, respectively. Shifts in the other two components of cap rates—differences in expected growth and differences in expected downside risk—explain this dramatic closing of the historical cap rate gap, and explain why I expect cap rates in Middleburg's territory to continue to decline relative to cap rates in the rest of the country.



We believe that expected growth in NOI is clearly stronger in Middleburg's part of the country than in other states, which should continue to push down cap rates in our arc. We saw earlier, for example, that NOI had increased over the last four years by 24.5 percent cumulatively in Middleburg's part of the country versus just 15.4 percent in the rest of the country. CoStar forecasts that Middleburg's states will continue to outpace other states in terms of **Growth in NOI** for at least the next five years.

Beyond direct forecasts of operating performance, there is little doubt that trends in the demographic forces driving demand for rental housing are stronger in Middleburg's states than in the rest of the country. We saw earlier, for example, that the **Number of Households** has grown much more robustly over the past decade in Middleburg's states

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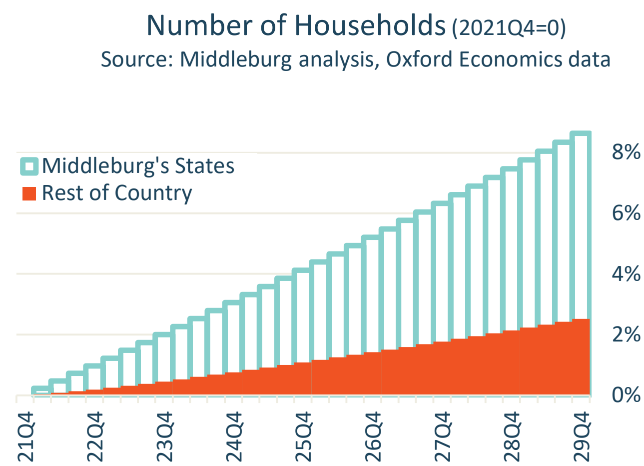
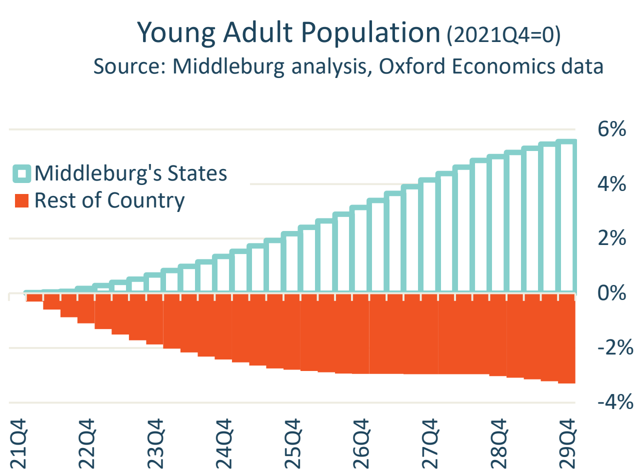
than it has in the rest of the country: in fact, over that period the growth rate in Middleburg's part of the country (1.3 percent per year) was more than twice as high as in other states (0.6 percent per year). Oxford Economics forecasts, however, that through the remainder of this decade the difference will be even greater, with the average growth rate in Middleburg's states (1.0 percent per year) more than triple the rate in the rest of the country (0.3 percent per year).



The difference in growth prospects is even starker for the **Young Adult Population** that is especially crucial in supporting demand for rental housing units. We noted earlier that the young adult population grew in Middleburg's states over the past five years even while it declined in the rest of the country. As with the number of households, Oxford Economics forecasts that the difference will be much starker in the future, growing at an average rate of 0.7 percent per year in our part of the country even while it continues to *decline* at -0.4 percent per year in other states.



Finally, cap rate compression in Middleburg's arc is likely to receive additional impetus from an increasing recognition that residents of large metro areas in other parts of the country—especially the Northeast, parts of the Midwest, and the far West—face significant risks associated with state and municipal fiscal conditions as well as public decision-making processes. Two examples stand out. First, it is increasingly clear that several large public pension plans not only are underfunded but have taken on significant additional investment risk in their attempts to improve funding ratios without asking for supplemental funding from state or local governments. Second, electorates in many of the same areas have continued to support policies—including suppressing new construction of residential units as well as providing additional public services—that are likely both to raise housing costs and to weaken their governments' fiscal stability.

Even if neither of those tenuous situations causes a fiscal crisis, it seems clear that the downside risks—both for residents and for investors in housing markets—have increased sharply in significant areas of the Northeast, Midwest, and West. In short, downside risks now appear more substantial in those parts of the country, resulting in a slight upward pressure on cap rates in those rental housing markets as investors seek higher yields to compensate for higher risks.

I expect cap rates to remain stable in Middleburg's states, with growth prospects and lower downside risks outweighing the upward pressure associated with rising interest rates.

Considering all three drivers of cap rates—the opportunity cost of capital, the expected growth rate of NOI, and expected downside risk—I expect cap rates to remain stable in Middleburg's states, with wider recognition of both growth prospects and lower downside risks outweighing the upward pressure associated with rising interest rates. In contrast, in other parts of the country I expect an increase in the opportunity cost of capital, coupled with wider recognition of the risks associated with fiscal conditions in many (non-Middleburg) parts of the country, to drive cap rates up modestly.

Property Values

As noted, property values (and therefore returns) are driven much more forcefully by changes in net cash flows—primarily NOI—than by changes in interest rates. I expect NOI to see healthy growth throughout the country, driven both by increased household formation and by a continued shift in preferences toward more amenitized rental housing. It seems without question, however, that NOI growth will be stronger in Middleburg's states than in the rest of the country, as both employers and households continue to migrate from the Northeast, Midwest, and West toward the Southeast and Southwest. Given the continued strength of the economic recovery from the covid pandemic, I believe it is reasonable to expect NOI growth of around 11 percent in Middleburg's states and seven percent in other parts of the country. Those predictions for NOI growth, coupled with my forecasts for stable cap rates in Middleburg's part of the country and a modest increase elsewhere, suggest that apartment property values will likely increase by around 11 percent in Middleburg's arc and six percent in the rest of the country.

Summary: Middleburg's Forecast for 2022

INFLATION	Inflation to remain elevated during 2022, with core inflation of about four percent outpacing total inflation as the housing component increases while prices for gasoline and used vehicles subside.
INTEREST RATES	FOMC to raise federal funds rate target to close to 1.0 percent in 2022, and to end monetary stimulus. Market yield on Baa-rated corporate bonds to rise to around 5.5 percent.
NET OPERATING INCOME	Net operating income to continue rising by around 11 percent in Middleburg's states, driven by new leasing activity and strong rent increases on new leases as well as continued solid rent growth on renewal leases.
CAP RATES	Middleburg's states: no increase as improved growth expectations and reduced risk premium outweigh increases in opportunity cost of capital. Other states: modest increase driven by increases in the opportunity cost of capital and risk premium.
PROPERTY VALUES	Middleburg's states: property values to increase by around 11 percent, driven by NOI growth. Other states: property values to increase by around six percent, with NOI growth partly offset by slight increase in cap rates.

If you are interested in exploring investment opportunities with Middleburg Real Estate Partners, please contact us at 703.291.0300