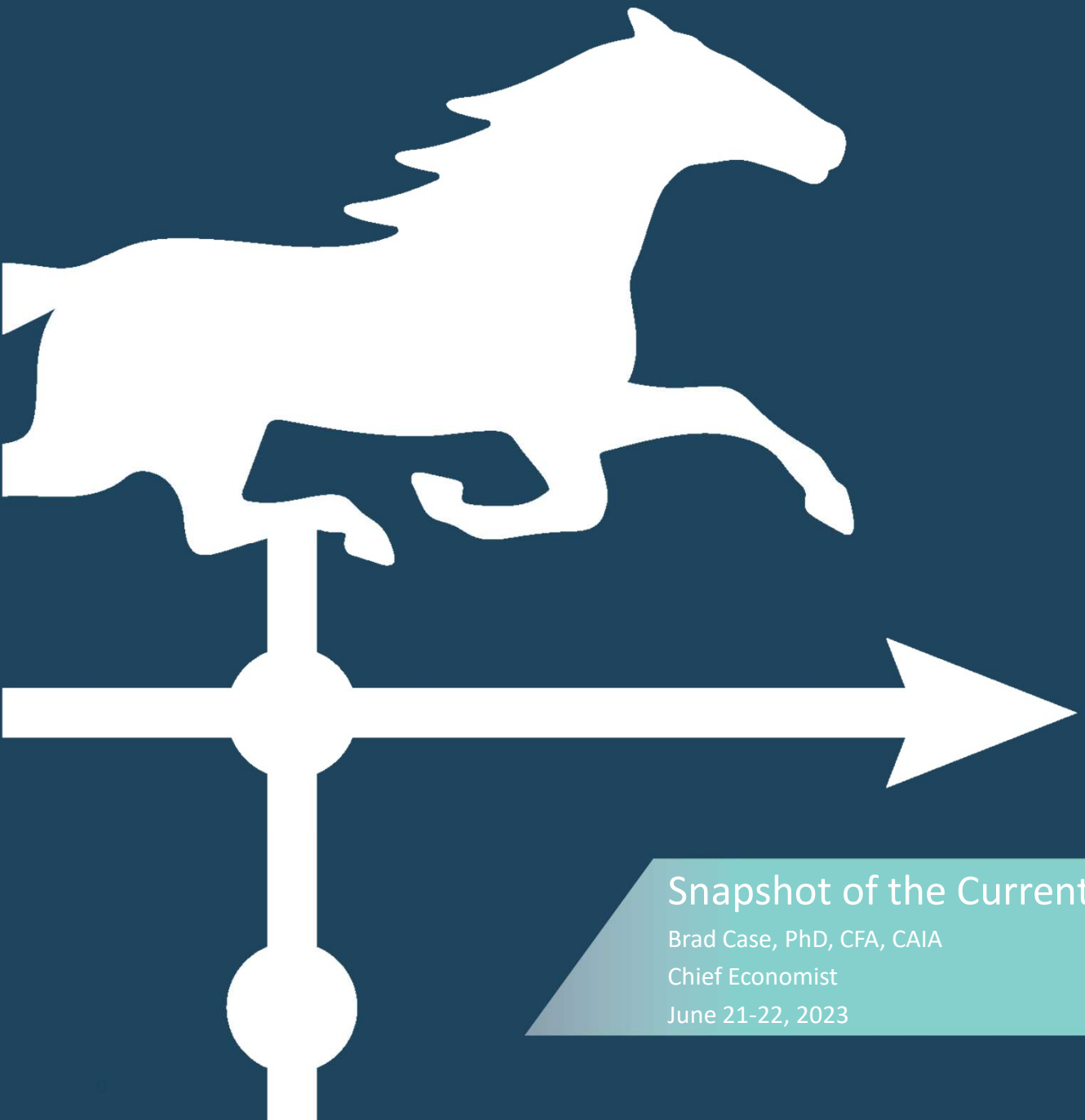
MIDDLEBURG COMMUNITIES



Snapshot of the Current Macro & Market Environment

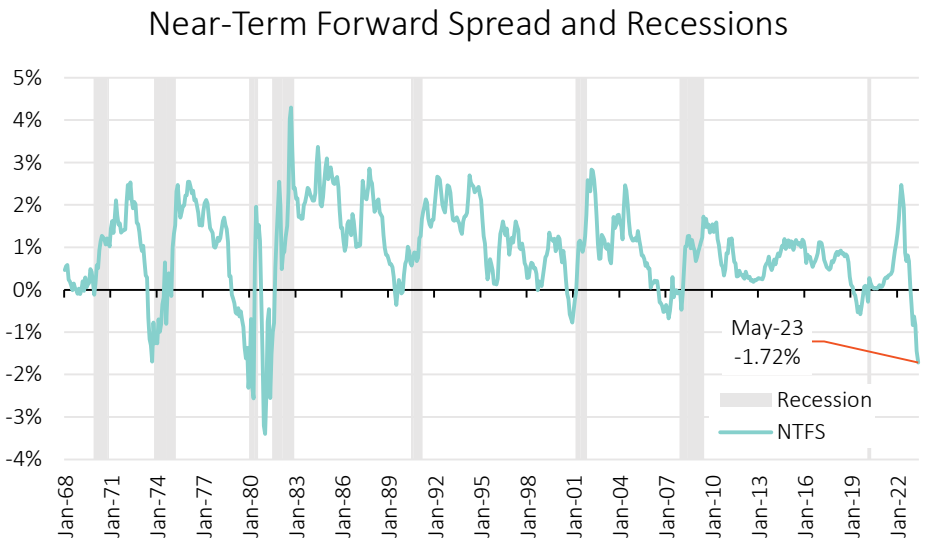
Brad Case, PhD, CFA, CAIA
Chief Economist

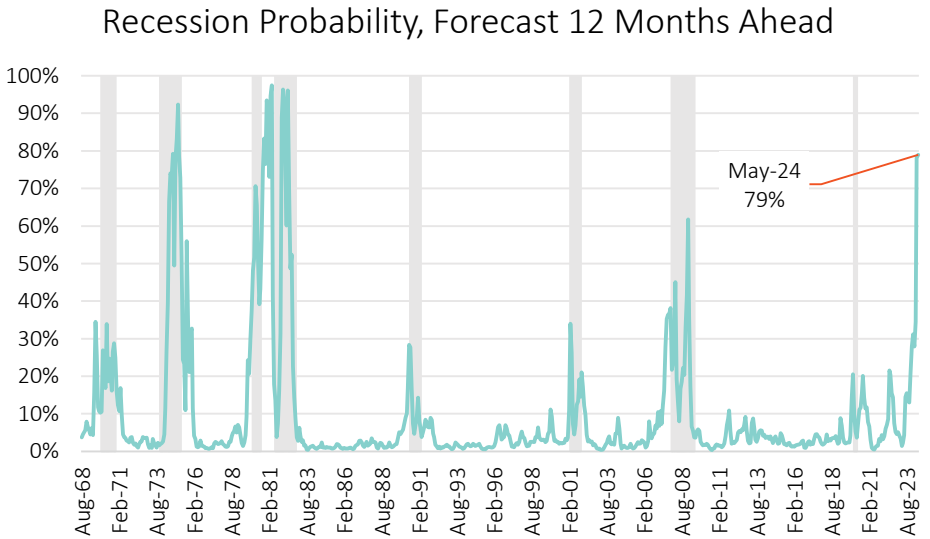
June 21-22, 2023

1. The Macroeconomic Environment

Is a Recession on its Way?

- I don't think so …even though the data say it's likely
- The most accurate single predictor of recession is the Near-Term Forward Spread (neartermforwardspread.com)
  - Defined as the difference between the expected 3-month interest rate 18 months from now minus the current 3-month yield
  - Indicates whether investors believe that market interest rates will soon decline, typically because of a softening economy
  - The monthly average value of the NTFS has turned negative before all eight recessions since June 1961, and has never turned negative otherwise
    - The slope of the yield curve gives frequent false signals
  - NTFS has been negative every day since November 10, 2023 and is currently more negative than at any time other than just prior to the 1980 and 1982 recessions
- Middleburg's best recession forecasting model shows 79% chance of recession starting in April-May 2024
  - Updated this month using employment, stock market, and NTFS figures through May
- I believe the NTFS is actually predicting a *soft landing*

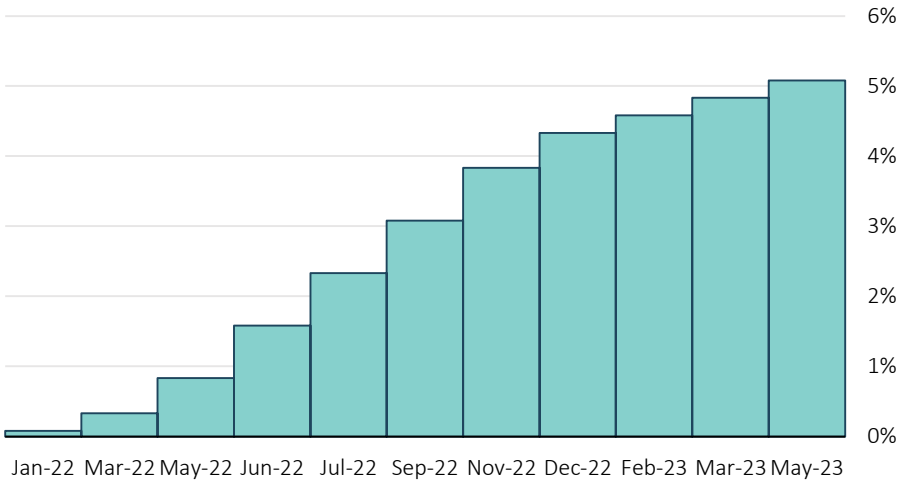


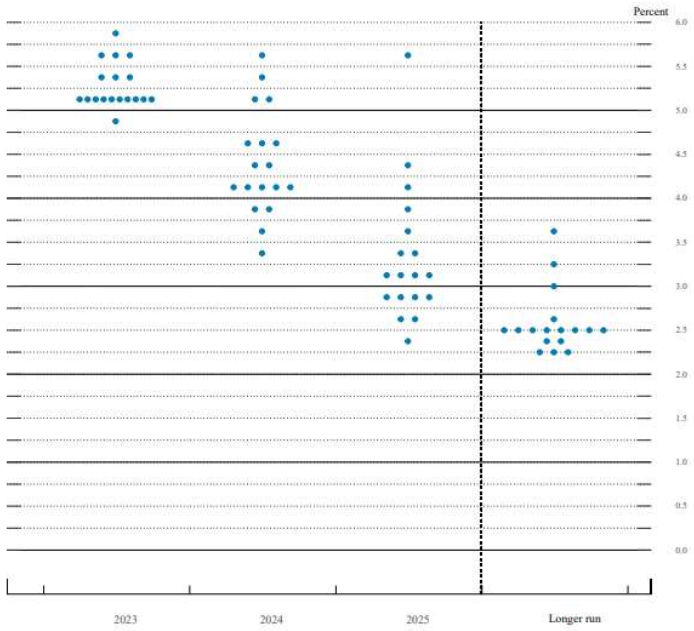


Course of the Federal Funds Rate

- The Federal Open Market Committee (FOMC) has hiked the key Fed Funds Rate 10 times in the past 14 months
- CME FedWatch Tool implies at least one more rate hike—most likely at the late July meeting-- and no chance of a rate cut until September
  - https://www.cmegroup.com/markets/interest-rates/cme-fedwatch-tool.html
- Both FOMC participants (dot plot) and market participants (CME FedWatch Tool) expect rates to decline sharply through 2024
- Pace and timing of decline depend on macro conditions

Hikes in the Federal Funds Rate So Far





MEETING PROBABILITIES

MEETING DATE	275-300	300-325	325-350	350-375	375-400	400-425	425-450	450-475	475-500	500-525	525-550	550-575
6/14/2023					0.0%	0.0%	0.0%	0.0%	0.0%	72.4%	27.6%	0.0%
7/26/2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.9%	52.0%	15.0%
9/20/2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	34.4%	49.1%	13.8%
11/1/2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	15.2%	40.2%	35.2%	8.4%
12/13/2023	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	7.6%	26.9%	37.9%	22.7%	4.5%
1/31/2024	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	4.8%	19.2%	33.5%	28.8%	11.8%	1.8%
3/20/2024	0.0%	0.0%	0.0%	0.0%	0.2%	3.4%	14.8%	29.2%	30.2%	16.9%	4.8%	0.5%
5/1/2024	0.0%	0.0%	0.0%	0.3%	3.7%	15.1%	29.2%	29.9%	16.6%	4.7%	0.5%	0.0%
6/19/2024	0.0%	0.0%	0.2%	2.2%	10.2%	23.2%	29.6%	22.3%	9.8%	2.3%	0.2%	0.0%
7/31/2024	0.0%	0.1%	1.8%	8.8%	20.8%	28.4%	23.6%	12.1%	3.7%	0.6%	0.0%	0.0%
9/25/2024	0.1%	1.4%	7.2%	18.0%	26.7%	24.7%	14.7%	5.6%	1.3%	0.2%	0.0%	0.0%
11/6/2024	1.1%	5.8%	15.4%	24.6%	25.2%	17.2%	7.8%	2.4%	0.5%	0.0%	0.0%	0.0%

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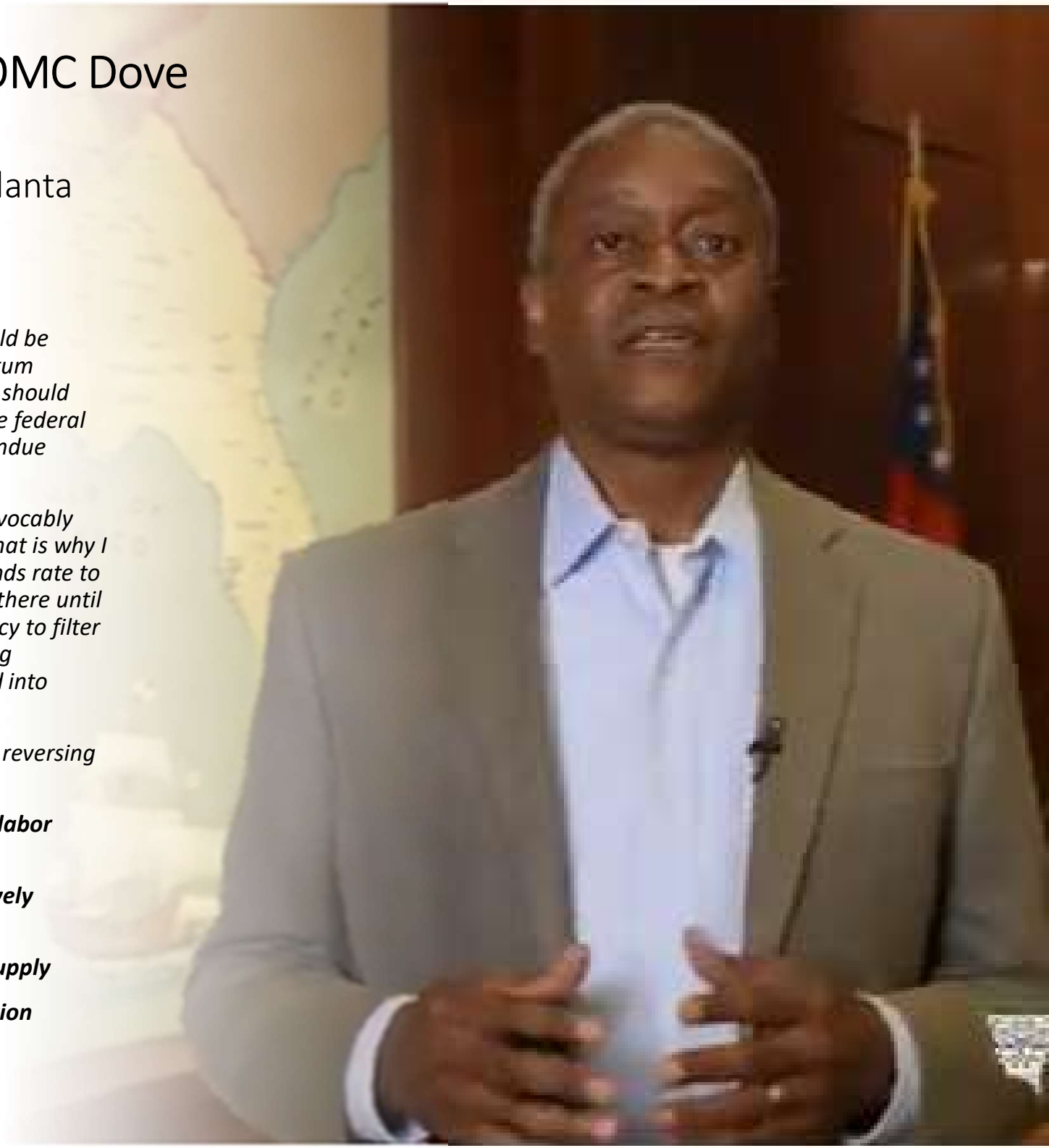
The Word from an FOMC Dove

Raphael Bostic, President,

Federal Reserve Bank of Atlanta

https://atlfed.org/3KL2kJe



Amid some signs that price pressures could be receding, a narrative has gained momentum among some commentators that the Fed should consider reversing its course of raising the federal funds rate lest we go too far and cause undue economic hardship.

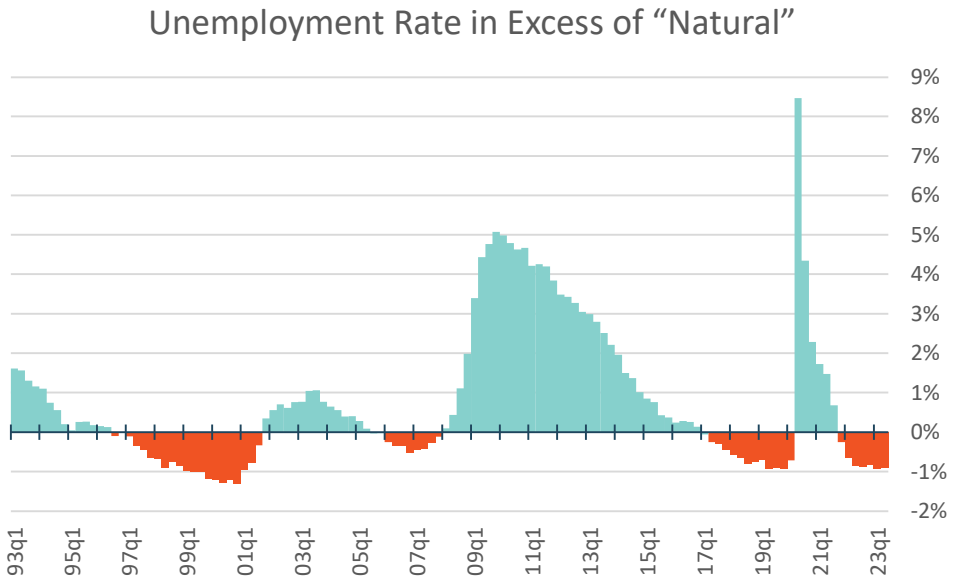
We must determine when inflation is irrevocably moving lower. We're not there yet, and that is why I think we will need to raise the federal funds rate to between 5 and 5.25 percent and leave it there until well into 2024. This will allow tighter policy to filter through the economy and ultimately bring aggregate supply and aggregate demand into better balance and thus lower inflation.

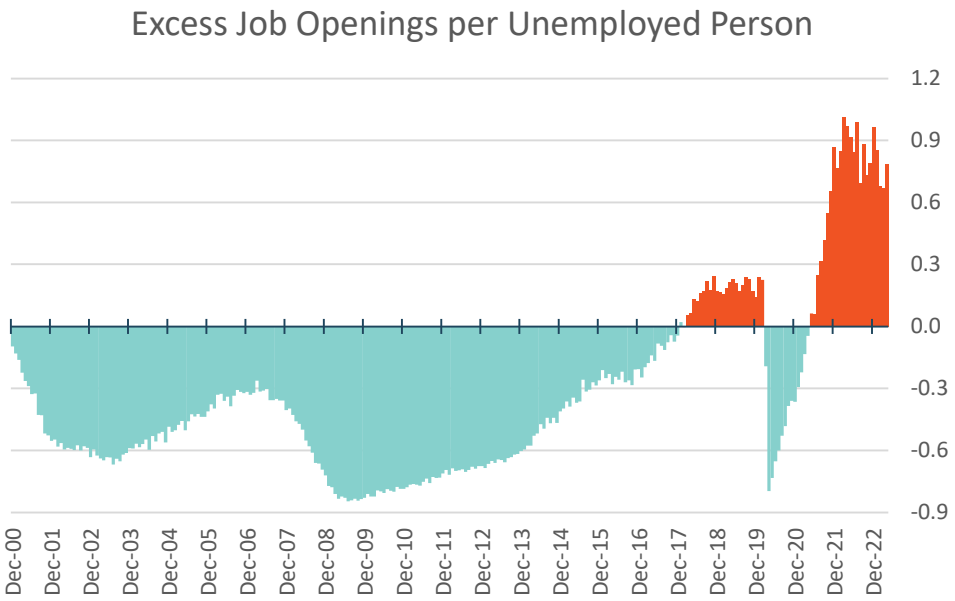
Here's what I will need to see to consider reversing the course of monetary policy:

- ***A narrowing of the gap between labor supply and demand***
- ***Higher interest rates more decisively affecting aggregate demand***
- ***Ongoing recovery in aggregate supply***
- ***Reduction in the breadth of inflation***
- ***Stable inflation expectations***

Supply/Demand Balance in Job Markets

- Labor market demand that consistently exceeds supply will tend to drive wage-price inflation
- Labor market slack can be measured by the difference between the actual unemployment rate and the *natural* long-term unemployment rate (also called the *noncyclical* unemployment rate or NAIRU)
    - By this measure, demand has exceeded supply since 2021Q4
- Excess labor market demand can be measured by the number of job openings per unemployed person, in excess of one per person
    - By this measure, demand has exceeded supply since October 2020





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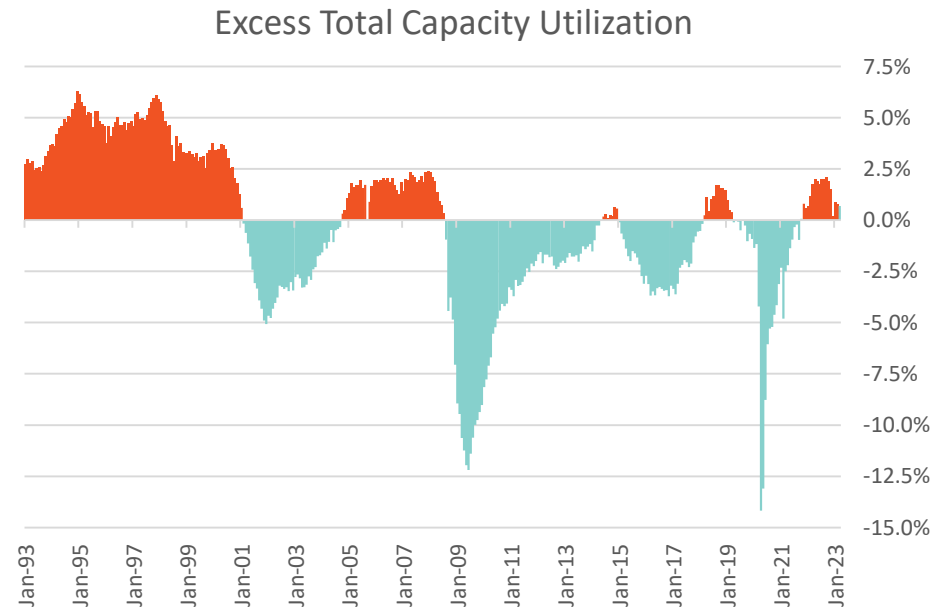
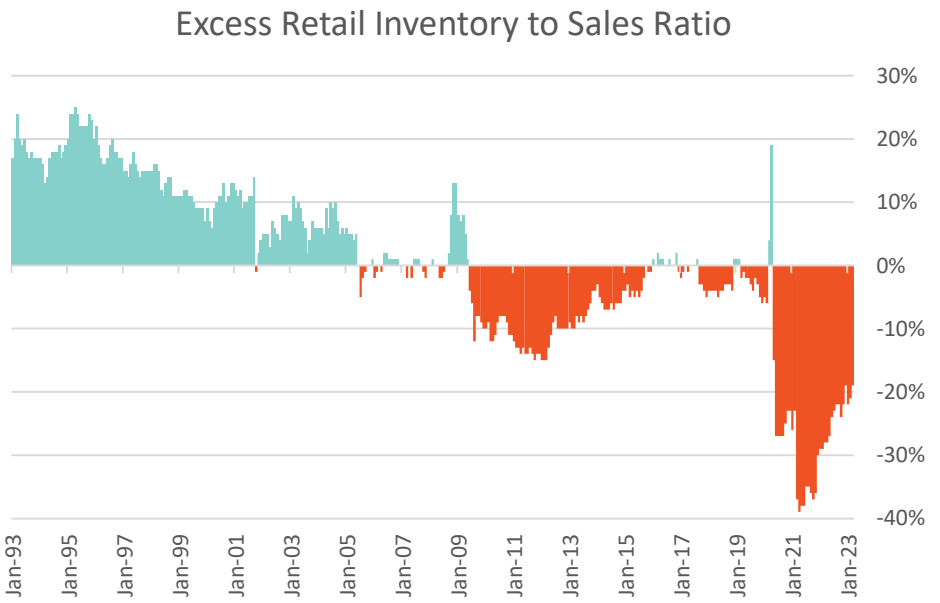
Supply/Demand Balance in Economy

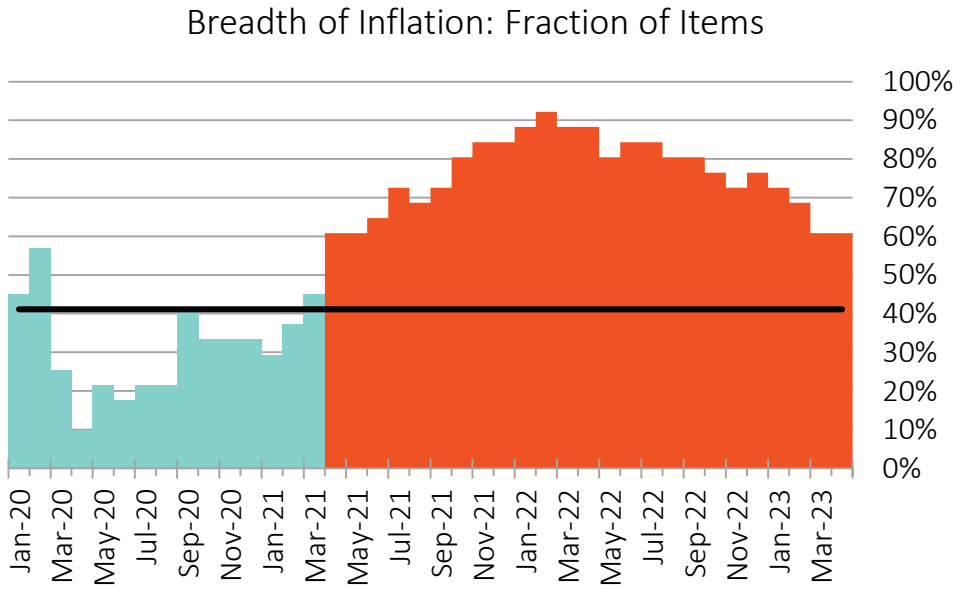
- As with labor markets, aggregate demand that puts consistent stress on production capacities will tend to drive higher inflation
- Supply/demand balance can be evaluated using capacity utilization, which measures production activity as a share of its maximum possible value, relative to its long-term value of about 77 percent
    - By this measure, the economy has been running “hot” since June 2021
- Other measures of supply/demand balance include the ratio of retail inventories to sales relative to its long-term value of around 1.42
    - By this measure, the economy has been running “hot” since May 2020

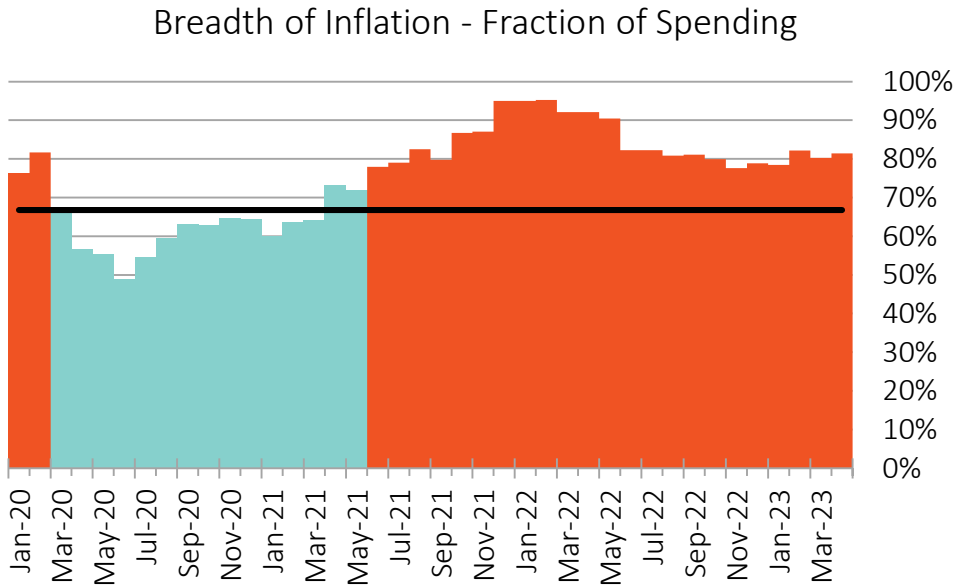




Reduction in Breadth of Inflation

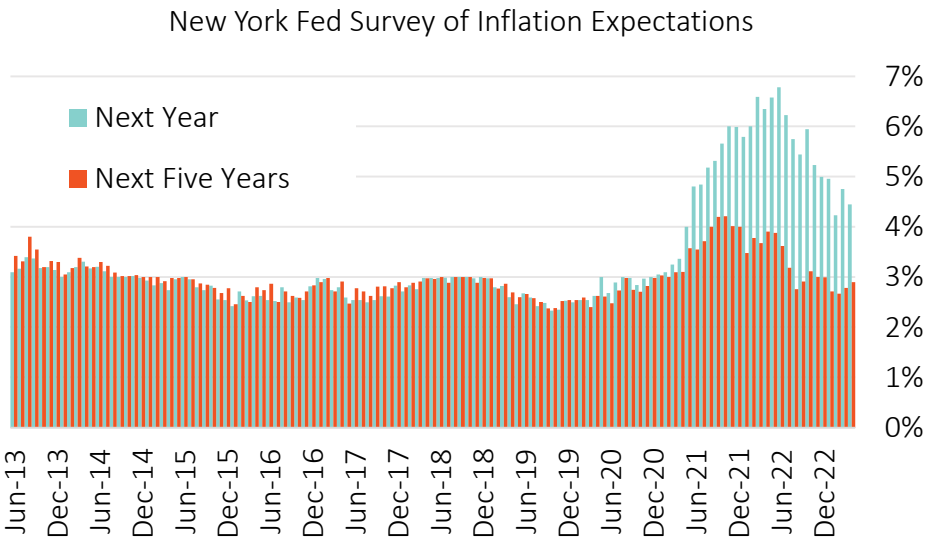
- Breadth (or dispersion) of inflation is measured by the fraction of items for which prices increased minus the fraction for which prices declined
    - Forty percent is about normal since the beginning of 1993, so data through March suggest that breadth of inflation is still higher than the norm
- Alternatively, fraction of spending on items for which prices increased *vs* declined
    - Sixty-seven percent is about normal, so breadth is still a little higher than the long-term norm
- Source: San Francisco Fed
    - https://www.frbsf.org/economic-research/indicators-data/pce-personal-consumption-expenditure-price-index-pcepi/

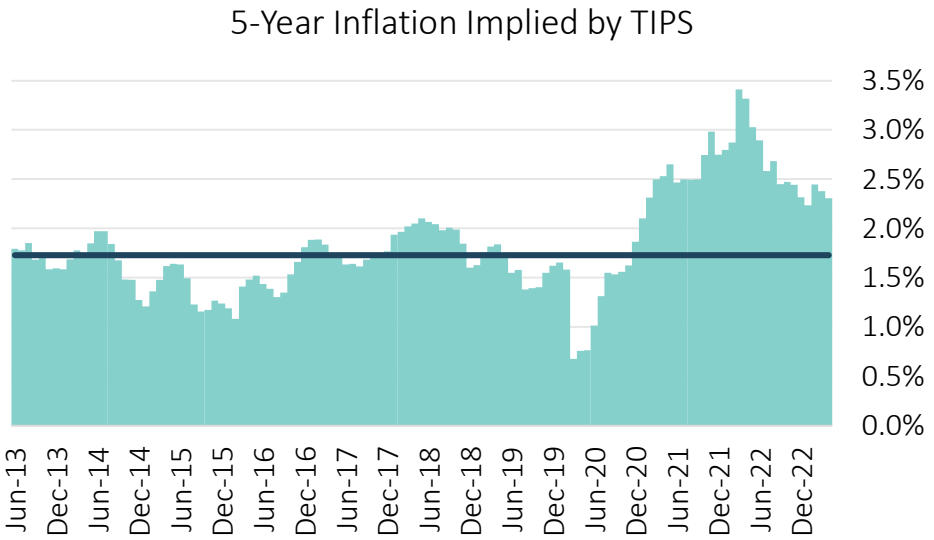


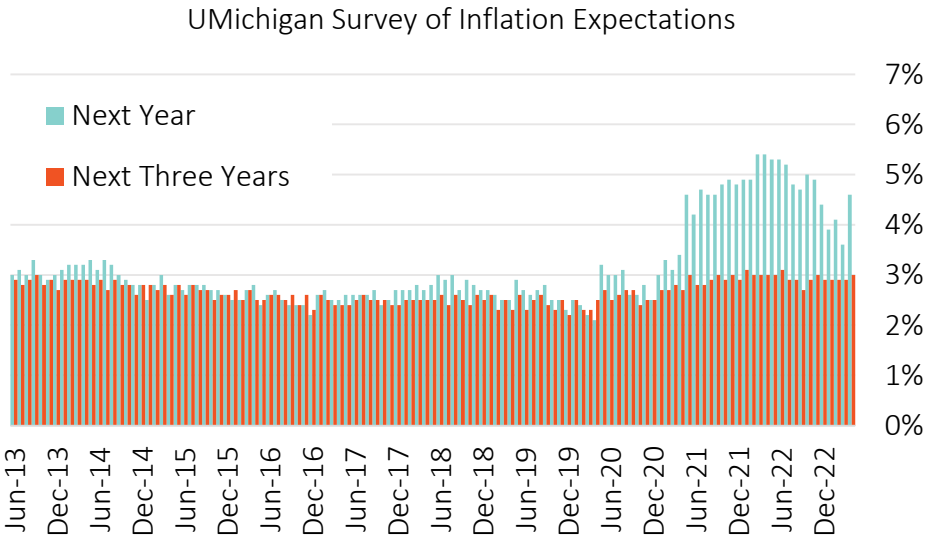


Moderation in Inflation Expectations

- Stubbornly high consumer inflation expectations are perhaps the single most important barrier to reducing interest rates
- Investor-implied five-year expectations have already returned to the two percent level—but inflation pressures typically come from consumers, who are also workers
- Sources:
  - New York Fed: https://www.newyorkfed.org/microeconomics/sce#/inflexp-3
  - UMichigan: https://data.sca.isr.umich.edu/data-archive/mine.php
  - Five-year breakeven inflation: https://fred.stlouisfed.org/series/T5YIE







2. The Rental Housing Investment Environment

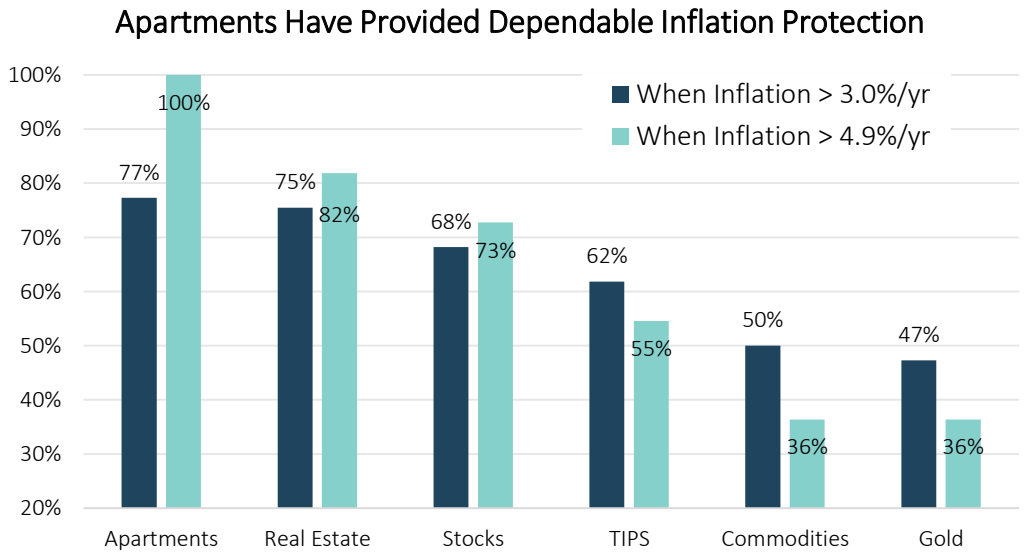
Rental Housing Investment: The Long-Term Advantage

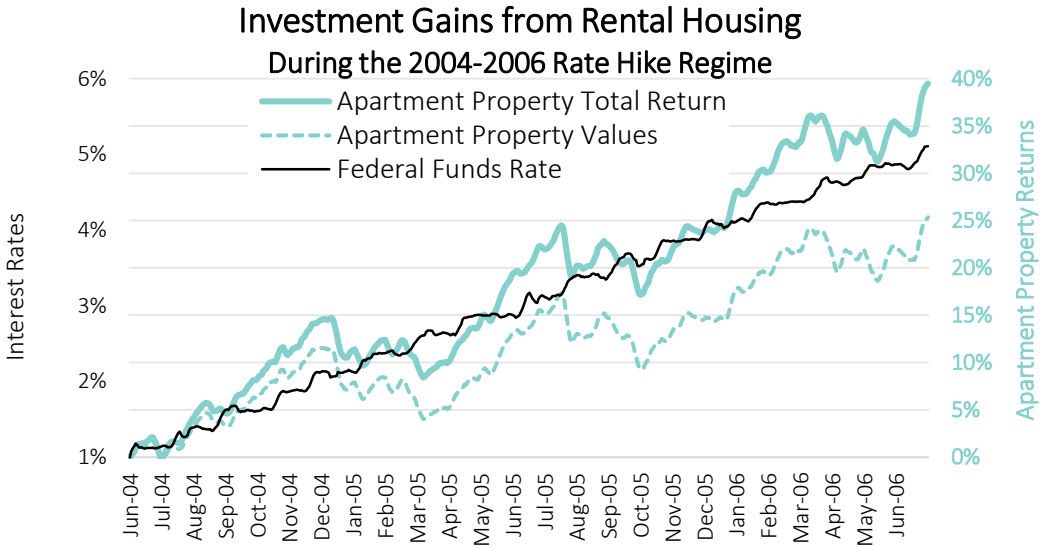
High Inflation

- Rental housing has typically been among the best-performing assets during periods of high inflation
- High inflation typically means high wage growth, high demand growth, and high rent growth
- High rent growth puts upward pressure on rental housing property values

Rising Interest Rates

- Interest rates typically increase because overall macroeconomic conditions are strong
- Strong macro conditions—especially strong labor markets—typically mean increasing demand for housing
- Historical analogy: June 2004 – June 2006
  - 17 interest rate increases totaling 4.25%
  - Apartment property values increased by 24.6% or 11.62% per year
  - Income contributed another 13.8% or 6.03% per year
  - Total returns averaged 17.65% per year





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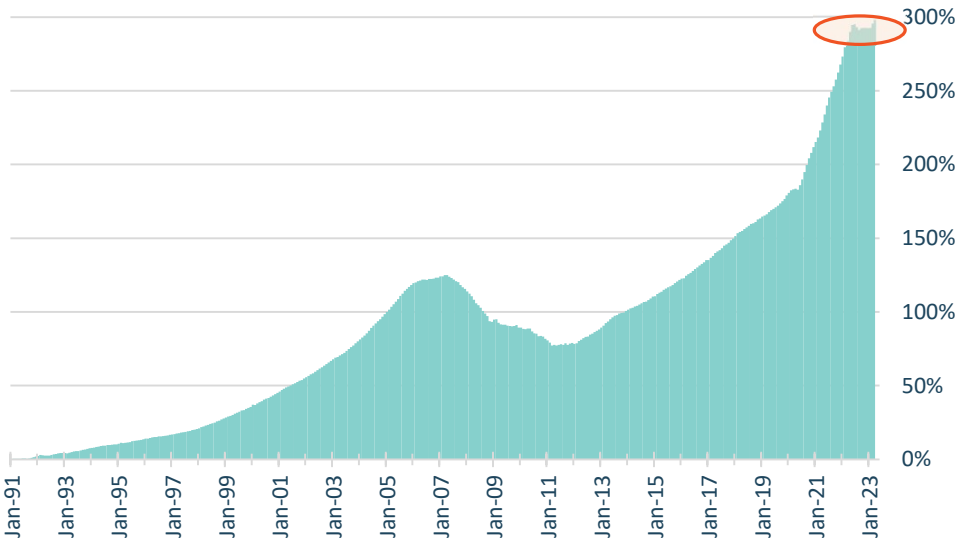
Current Rental Housing: The Affordability Advantage

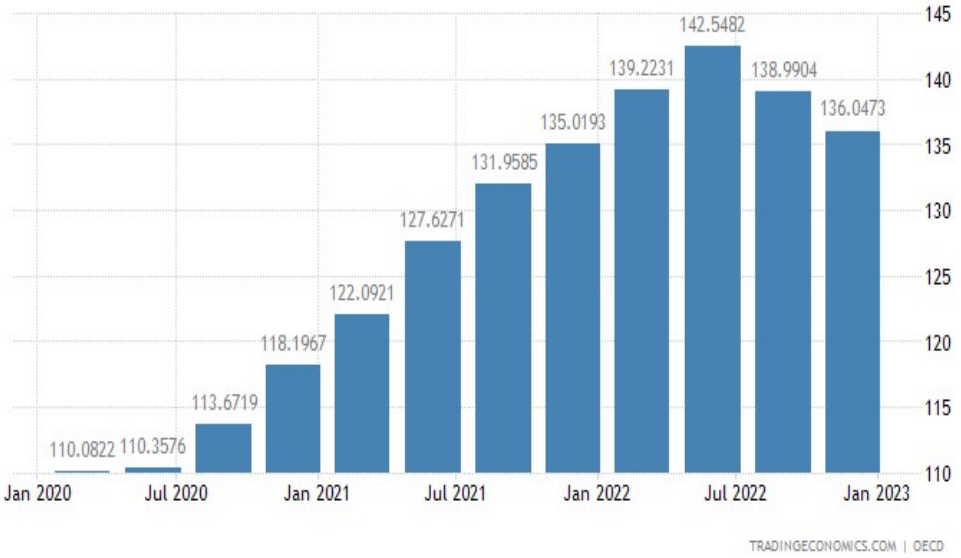
- House prices nationwide surged by more than 40 percent from January 2020 through June 2022
- As a result, the price-to-rent ratio surged from just over 100 percent in January 2020 to more than 142 percent before falling as house prices languished while rents increased
- Mortgage rates surged from just 2.8 percent in August 2021 to 6.9 percent in October 2022 before moderating to around 6.4 percent since then

Constant-Quality House Price Increase since 1990



Average Rate on 30-year Fixed-Rate Mortgages

House Price to Rent Ratio (%)



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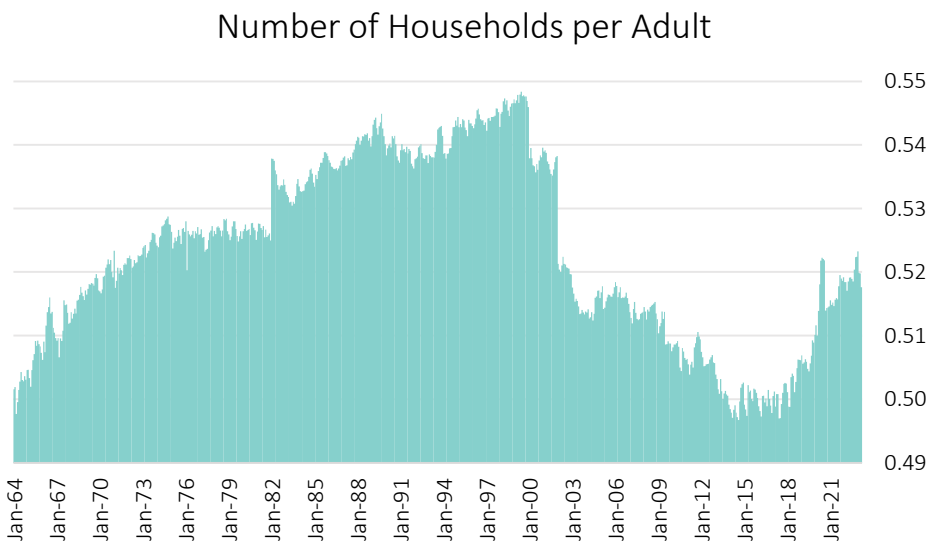
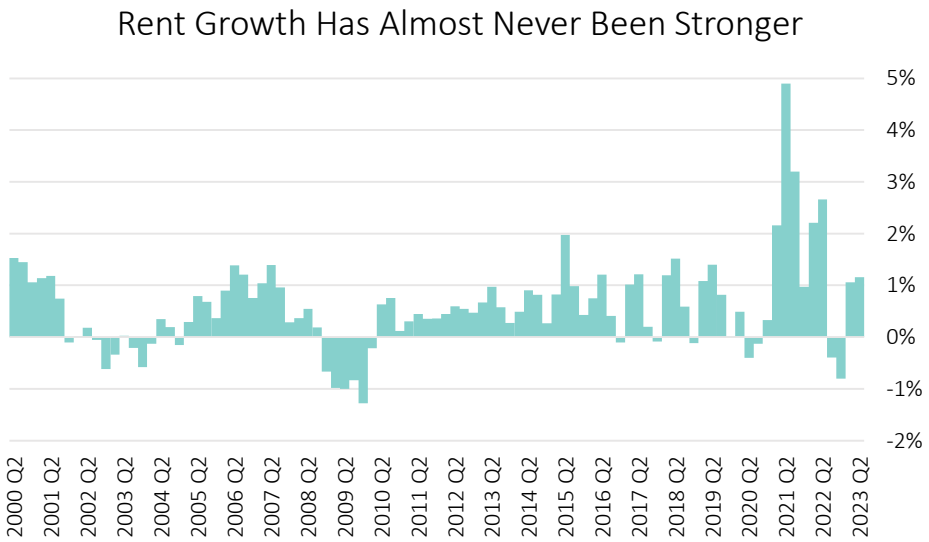
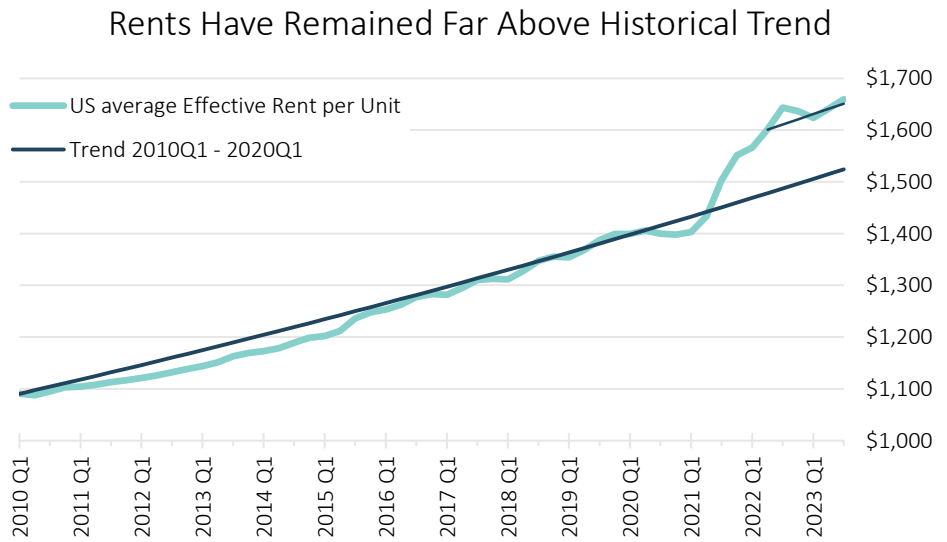
Strong Demand Growth Drives Strong Rent Growth

- Nationwide housing demand comes from two sources:
  - Adult population growth
  - *Headship rate expansion*, or change in the number of households per adult
- The headship rate has recovered about half of the loss due largely to economic and housing-market turmoil from the start of the dot-com bust through the post-GFC stagnation
  - Adults formed additional households strongly during the prosperous period 1964-1999, adding to demand by 9.7 million units
  - Multiple economic crises took the headship rate back down to 1964 levels, but partial recovery has added demand for 6.5 million units
- Rent growth recovered in 2023 to a pace that has been higher than 85% of available quarterly rent growth rates
- As a result, national-average rents jumped far above their historical trend but then resumed trending upward at their pre-pandemic historical pace

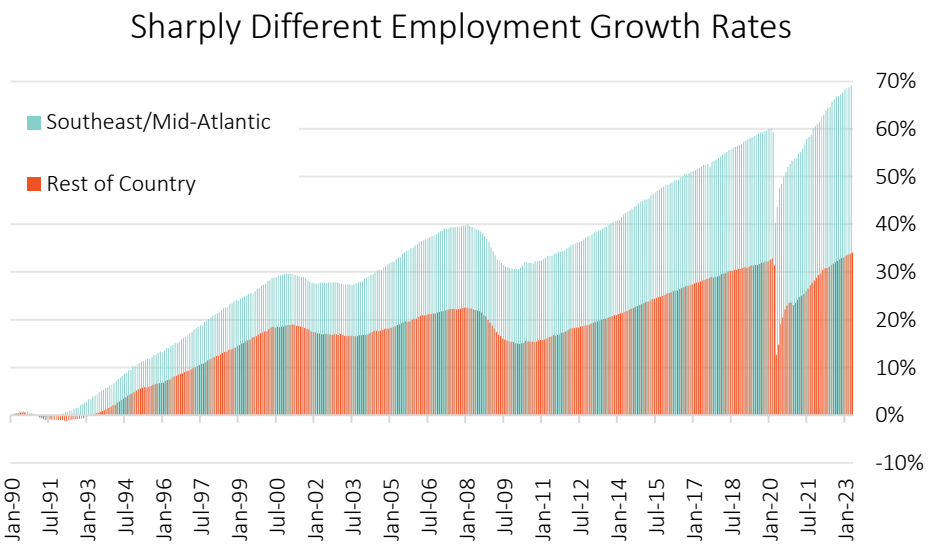


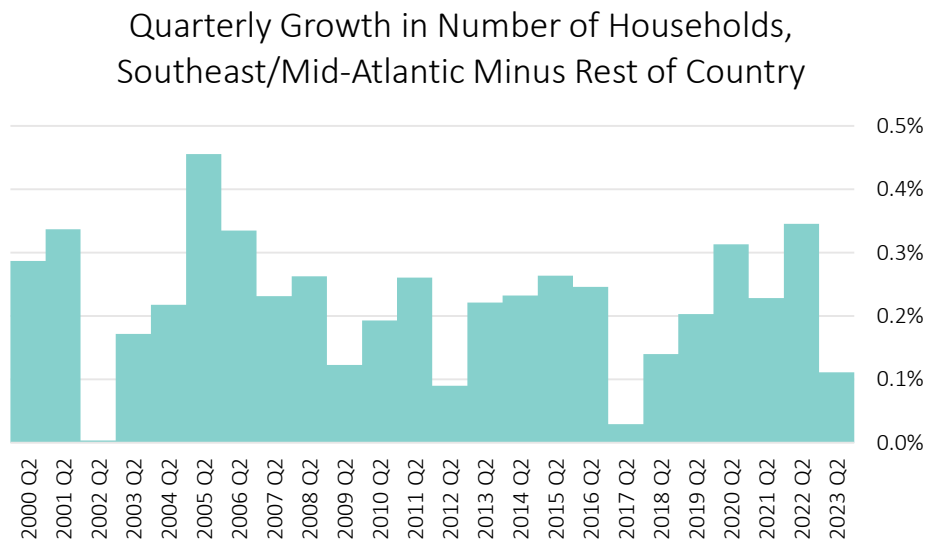




Rental Housing Investment: The Southeast/Mid-Atlantic Advantage

- Regional differences in non-retiree housing demand come from growth in employment and growth in the number of households
- Employment has grown by 1.6% per year for 33 years in the Southeast/Mid-Atlantic, but by just 0.9% per year in the rest of the country
    - The Southeast/Mid-Atlantic region suffered less pandemic-related job loss and much more rapid recovery
- Growth in the number of households has been stronger in the Southeast/Mid-Atlantic region than in the rest of the country during every single quarter since 2000





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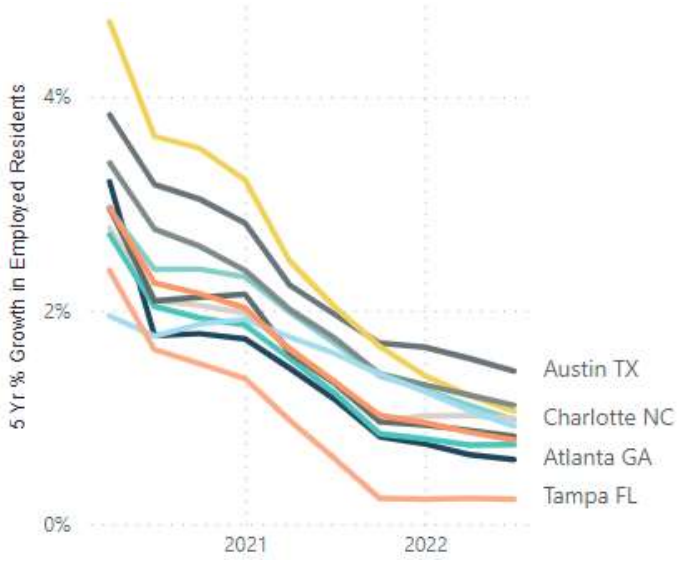
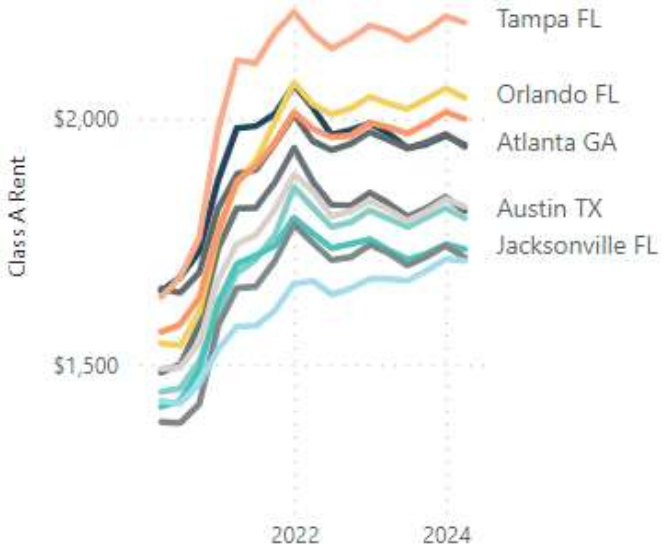
Middleburg's Approach to Market Targeting

- Forecast growth in *demand drivers* at the metro level
  - Young adult population
  - Employment
  - Employed renter households
- Forecast growth in *supply drivers*
  - Rental unit inventory change
- Forecast *supply/demand balance*
- Forecast growth in *rental housing fundamentals*
  - Standardized effective rents
  - Cap rates
- *Score* each metro area taking into account current estimates, recent improvement, and momentum
- *Target* opportunities in selected markets

Metro	Market Rank	Overall Score	Current Score	Improvement	Momentum
Nashville TN	1	1.60	8.7	4.5	-0.1
Austin TX	2	1.55	8.7	4.6	-0.2
Miami FL		1.48	8.1	5.0	-0.1
Orlando FL	3	1.37	8.3	5.0	-0.4
Dallas-Fort Worth TX	4	1.36	8.0	5.0	-0.2
Raleigh NC	5	1.05	6.6	4.9	0.0
Charlotte NC	6	0.99	6.8	4.5	0.0
Ft Lauderdale FL	7	0.95	6.7	5.0	-0.2
Northern VA	8	0.91	6.1	4.8	0.1
Atlanta GA	9	0.78	6.3	4.7	-0.2
Houston TX		0.64	5.2	4.9	0.1
Richmond VA	10	0.64	5.2	4.9	0.1
Tampa FL	11	0.59	5.2	4.9	0.0
Jacksonville FL	12	0.45	5.0	4.8	0.0





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Key Takeaways

Macroeconomic conditions are stronger than many observers credit

Interest rates will probably increase further before declining substantially

Soft landing is more likely than recession

Rental housing investments are supported by strong demand growth

Extraordinarily high cost of homeownership

- Risk of languishing or declining house prices
- Extraordinarily high house price to rent ratio even after unprecedented rent growth

Increasing headship rate (households per adult) with far more to go

Continued strong, resilient employment growth

Rental housing has performed especially well during market environments similar to the current situation

High inflation

- Inflation has continued to be high because employment and income growth has continued to support spending

Rising interest rates

- Interest rates are rising because of the same conditions that result in strong rental housing investment performance

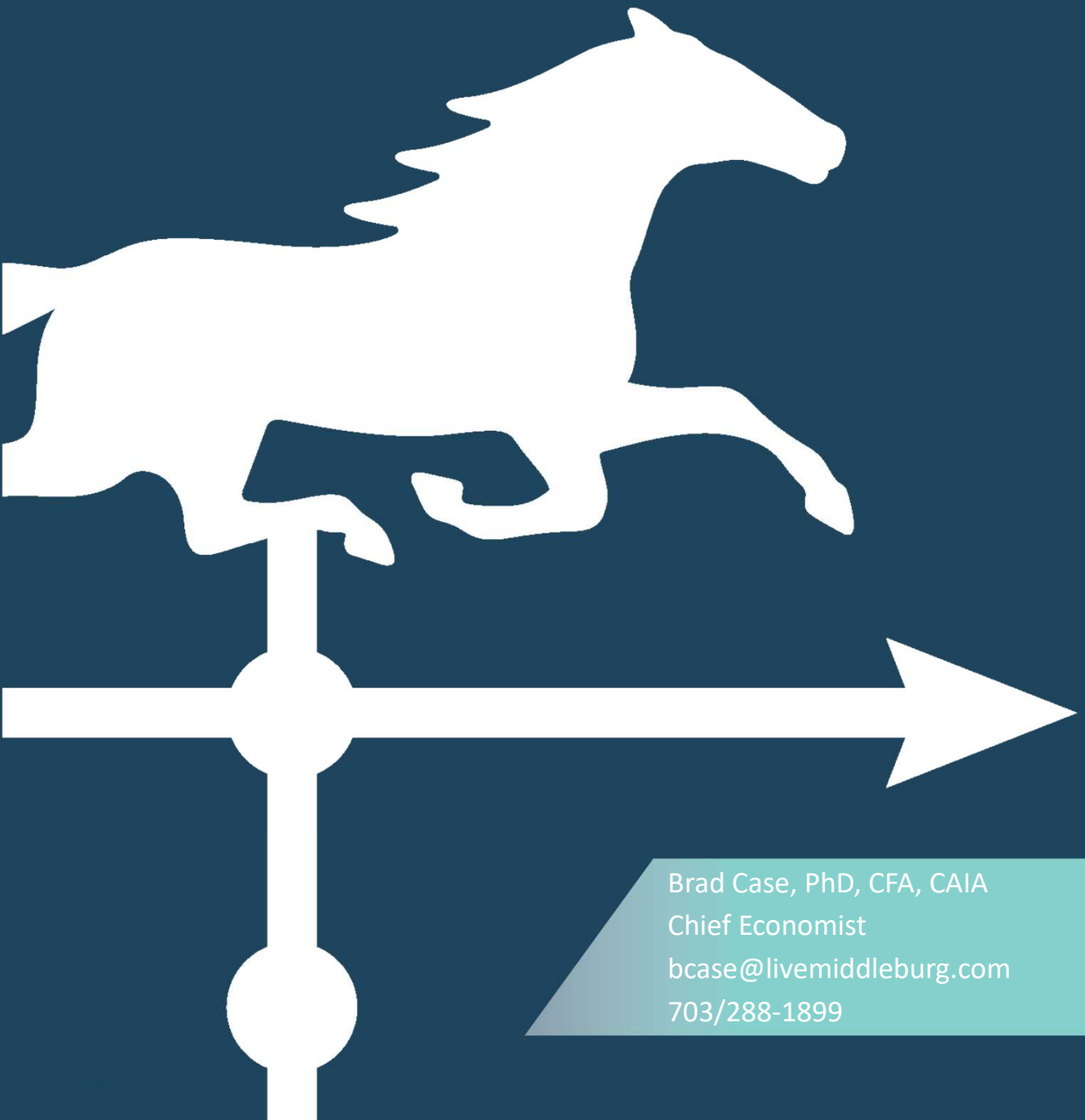
Rental housing demand in the Southeast/Mid-Atlantic region is likely to continue outpacing the rest of the country

Substantially stronger employment growth is unlikely to let up

Migration of young adults following jobs, cost of living, and amenities

Disproportionate growth in the number of households

MIDDLEBURG COMMUNITIES



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