

Tracking the U.S. Consumer

Meter moves up in June as new home sales surge and real wages trend positive

Industry Overview

Meter up on new home sales strength and mostly stable-to-improving consumer metrics

Our Tracking meter is raised as Housing & Mortgages moves to YELLOW (from RED) as Earnings & Employment is still flashing GREEN while Spending & DPI, Confidence & Borrowing & Cost of Living are still flashing YELLOW.

KEY CONSUMER METRICS FLASHING 1 GREEN, 4 YELLOW, 0 RED:**Spending & DPI: Spending improves across cohorts ■**

According to BAC aggregated credit & debit card data, lower income retail spending (ex-auto & gas) (<\$50K) increased 1.9% in June (vs. -0.3% in May & +0.3% LY), spending growth for the middle (\$50-125k) income consumers increased 1.1% (vs. -0.3% in May & +1.5% LY), and spending growth for the upper (\$125K+) income consumer was flat at 0.0% (vs. -1.0% in May & +2.2% LY). The spread between spending growth of the lowest income cohort (<\$50K) and higher income cohorts (\$50K+) remains positive. See [BofA on USA](#) report for broader retail trends commentary & for methodology, disclaimers, and limitations of BAC card data.

Earnings & Employment: Wage growth remains resilient ▲

The economy added 209K jobs in June (the smallest gain since Dec. 2020) as the unemployment rate dropped to 3.6% (vs. 3.7% in May) and labor participation remained flat at 62.6%. US Average Hourly Earnings increased +4.4% in June (flat vs. May and down vs. +5.4% last year) indicating wage growth remains resilient in a tight labor market. The number of Full-Time Civilian Employees reaches an all-time high.

Confidence & Borrowing: Confidence accelerates in June ■

The Preliminary June UMich Survey of Consumer Sentiment reading rose 8.8% m/m to 63.9, its highest reading in four months. Bank surveys report tightening credit standards and weaker demand for consumer loans as new car loan rate reaches at its highest level since Dec. 2009. Personal interest payments as a % of DPI have moved above pre-COVID levels, but [Bank of America Institute's Consumer Checkpoint](#) report data suggests all income cohorts have time before median deposits fall to average 2019 levels.

Housing & Mortgages: Total home sales down vs. LY ■

New & existing home sales declined -15.3% in May (vs. -18.5% in Apr. & -8.1% LY) as new home sales surged, and existing home inventories remain low. Housing affordability remains unfavorable as mortgage rates (6.7% in June vs. 6.4% in May and 5.2% LY) and home prices remain elevated. Housing starts jump 21.7% m/m in May to their highest level since Apr. 2022 and builder confidence continues to improve (see [Homebuilders](#)).

Cost of Living: Inflation eases; gas prices down y/y ■

Inflation is easing with CPI up 3.0% y/y in June (vs. 4.0% in May & 9.1% LY) but above 20-year avg. of 2.5%. Gas prices averaged \$3.54 in July (thru 7/10) down slightly from \$3.57 in June & down -22.4% on a y/y basis. Trends are improving as real wages trend positive for the second consecutive month (+1.2% in June vs +0.2% in May & -3.2% LY).

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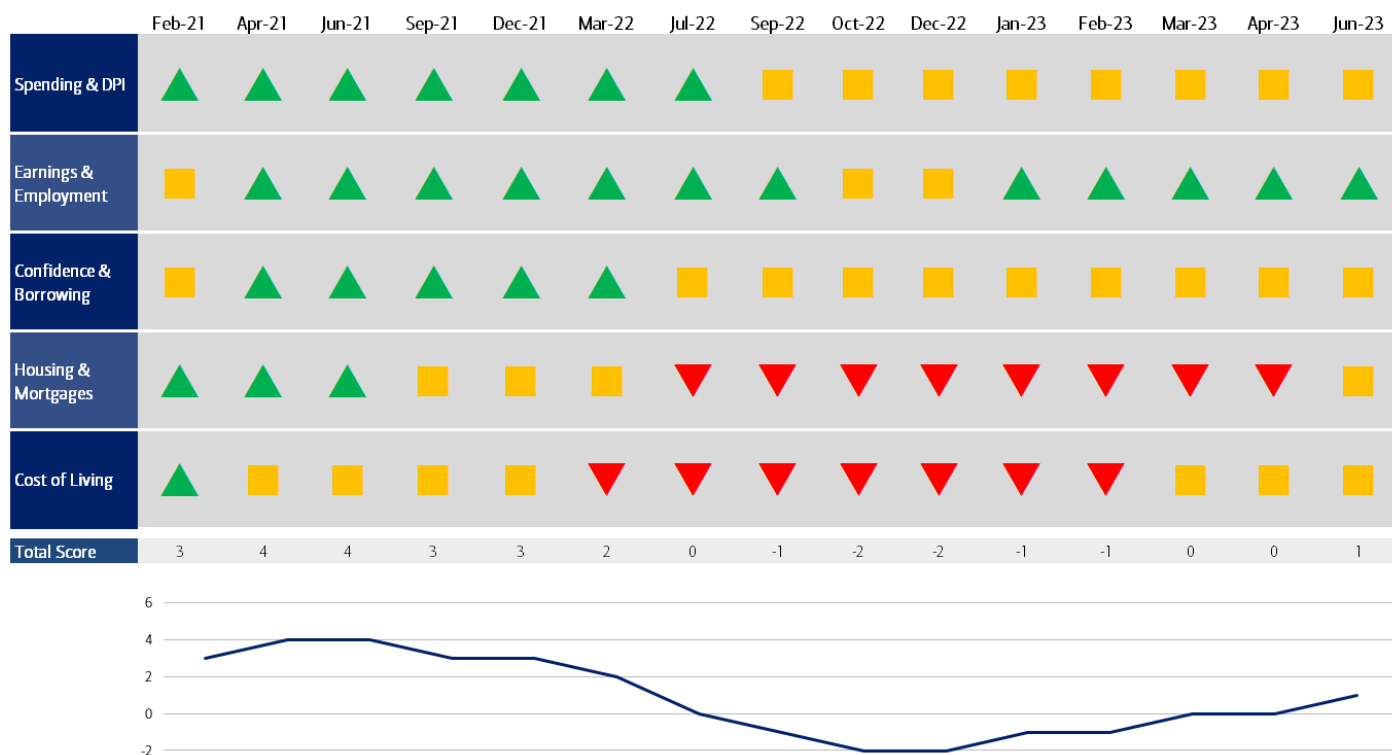
CPI – Consumer Price Index

DPI – Disposable Personal Income

LY – last year

Exhibit 1: Tracking the U.S. Consumer Meter

Our Tracking the U.S. Consumer Meter raises in June



Source: BAC Internal data, Haver Analytics, Bureau of Labor Statistics, Federal Reserve, Energy Information Administration, Consumer Conference Board, University of Michigan Survey Research Center, National Association of Realtors, Bureau of Economic Analysis, Bloomberg, BofA Global Research

Note: Green = +1, Yellow=0, and Red = -1 in total score. Please see Exhibit 2 for scoring methodology.

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Exhibit 2: Tracking the U.S. Consumer Calendar

Latest data points & report timing

Front Page Title	Description	Last Data Point	Last Year	Previous Point	Est. Date Reported	Report Timing	Source
Unemployment	Unemployment Rate (SA, %)	3.6%	3.6%	3.7%	7/7/2023	Monthly	www.bls.gov
Non-farm payroll	Non-Farm Payrolls (SA, thous, m/m chg)	209k	370k	306k	7/7/2023	Monthly	www.bls.gov
Consumer Confid	Conference Board: Consumer Confidence (SA, 1985=100)	109.7	98.4	102.5	6/27/2023	Monthly	www.conference-board.org
UMich Consumer	University of Michigan Consumer Sentiment (NSA, 1966=100)	64.4	50.0	59.2	6/30/2023	Bi-Monthly	www.sca.isr.umich.edu
Disposable Incm	Disposable Personal Income Per Capita (SA, y/y % chg)	7.4%	1.1%	7.5%	6/30/2023	Monthly	www.bea.gov
CPI	CPI-U: All Items (NSA, 1982-84=100, y/y % chg)	3.0%	9.1%	4.0%	7/12/2023	Monthly	www.bls.gov
Savings Rate	Personal Saving Rate (SA, %)	4.6%	3.4%	4.3%	6/30/2023	Monthly	www.bea.gov
Revolving	Revolving Consumer Credit Outstanding (EOP, SA, bn, y/y % chg)	12.9%	13.3%	13.2%	7/10/2023	Monthly	www.federalreserve.gov
Non-revolving	Non-revolving Consumer Credit Outstanding (EOP, SA, bn, y/y % chg)	4.1%	5.4%	4.7%	7/10/2023	Monthly	www.federalreserve.gov
Household nworth	Household Net Worth (y/y % chg)	-3.1%	11.7%	-3.4%	6/8/2023	Quarterly	www.federalreserve.gov
Home prices	NAR Median Sales Price: Existing 1-Family Homes, (y/y % chg)	-3.4%	15.0%	-2.9%	6/22/2023	Monthly	www.realtor.org
Housing affor	Composite Homebuyer Affordability Index (Qualifying Inc=100)	96.2	104.1	97.9	6/9/2023	Monthly	www.realtor.org
Mortgage Rates	Conventional 30-Yr Mortgages, FHLMC (NSA, %)	6.7%	5.5%	6.4%	6/29/2023	Monthly	www.federalreserve.gov
Home Sales	New 1-Family Houses Sold + Existing 1-Family Home Sales	-15.3%	-8.1%	-18.5%	6/27/2023	Monthly	www.realtor.org
Financial Obligat	Household Financial Obligation Ratio (SA)	14.28	14.25	14.45	6/15/2023	Quarterly	www.federalreserve.gov
Gas Prices	U.S. Regular Retail Gasoline Prices (c/gal)	\$3.54	\$4.56	\$3.57	7/10/2023	Weekly	www.eia.gov

Source: BofA Global Research, SA: Seasonally Adjusted, NSA: Not Seasonally Adjusted

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Exhibit 3: Tracking the U.S. Consumer Metrics Directional Update

Overall Tracking the U.S. Consumer Meter moves up in June

	Latest Data	Y/Y Direction	Sequential Direction	Direction Classification	Direction Explanation
1) Spending & DPI ■					
DPI	7.4%	Up	Down	■	Up y/y and down sequentially led by increases in compensation and personal income receipts
DPI-CPI	3.4%	Up	Up	■	Up y/y and sequentially as inflation eases
2) Earnings & Employment ▲					
Unemployment	3.6%	Flat	Down	▲	Unemployment rate remains at low levels
Average hourly earnings	4.4%	Down	Flat	■	Wages remain above the LT average of 3.0% y/y (back to '07) while real wages accelerated to +1.2% in June vs. +0.2% in May. & -3.2% LY)
Labor Participation Rate	62.6%	Up	Flat	▲	The labor participation rate continues to recover from pandemic lows
3) Confidence & Borrowing ■					
UMich Consumer Confidence	64.4	Up	Up	■	Consumer sentiment rose in June given greater optimism as inflation eases and debt ceiling crisis is resolved
Conf. Board Consumer Confidence	109.7	Up	Up	■	Reflects a y/y & sequential increase in Consumer Confidence in June
Revolving Consumer Credit	12.9%	Down	Down	■	Down y/y & sequentially, remains above the 10-year average of 3.6%
Non-Revolving Consumer Credit	4.1%	Down	Down	■	Down y/y & sequentially
Personal Interest Payments % of DPI	2.3%	Up	Up	■	Remain at depressed levels (avg. since 1990 = 2.3%) despite the y/y and sequential increase and implies a relatively un-burdened U.S. consumer with room for spending growth
Financial Obligations Ratio	14.28	Up	Down	▲	At increasing levels that remain below the 10-year average of 14.6, supporting a potentially stronger consumer spending outlook if the economy improves
4) Housing & Mortgages ■					
New & existing home sales	-15.3%	Down	Up	■	New & existing home sales accelerated y/y in May with new home sales jump; mortgage purchase apps declined -31% in May
Housing affordability	96.2	Down	Down	▼	Down y/y & sequentially and remains at historic lows vs. the 10 - and 20-year averages of 154.3 and 150.4, respectively
5) Cost of Living ■					
Gas prices	\$3.54	Down	Down	■	Down 22.4% y/y in July (through 7/10) and down 28.3% vs. 2022 high of \$4.93
CPI	3.0%	Down	Down	■	CPI decelerated to 3.0% y/y in June (vs. 9.1% last year) but remains above 10- year average of 2.63% and 20-year average of 2.54%

▼ Red = Unfavorable

■ Yellow = Mixed

▲ Green = Favorable

Source: BofA Global Research

Key: 75% or greater of metrics in category are favorable, overall category = ▲, if between 50% and 75% are favorable or entire category is neutral, overall category = ■, if <50% of metrics are favorable including some unfavorable rankings, overall category = ▼

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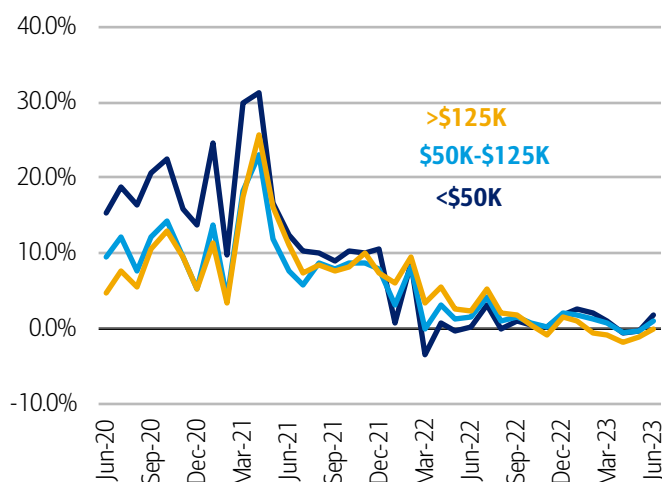
Spending & DPI

Spending growth improves across income cohorts

According to BAC aggregated credit & debit card data, retail spending (ex-auto & gas) growth for the lower income consumer (<\$50K) increased 1.9% in June (vs. -0.3% in May & +0.3% LY), while spending growth for the middle (\$50-125k) income consumers increased 1.1% (vs. -0.3% in May & +1.5% LY), and spending growth for the upper (\$125K+) income consumer was flat at 0.0% (vs. -1.0% in May & +2.2% LY). The spread between spending growth of the lowest income cohort and the higher income cohorts remains positive for the sixth consecutive month.

Exhibit 4: Monthly BAC card retail spending growth (ex-auto & gas), y/y % change, non-seasonally adjusted data

According to BAC credit & debit card data, spending growth improves across income cohorts in June

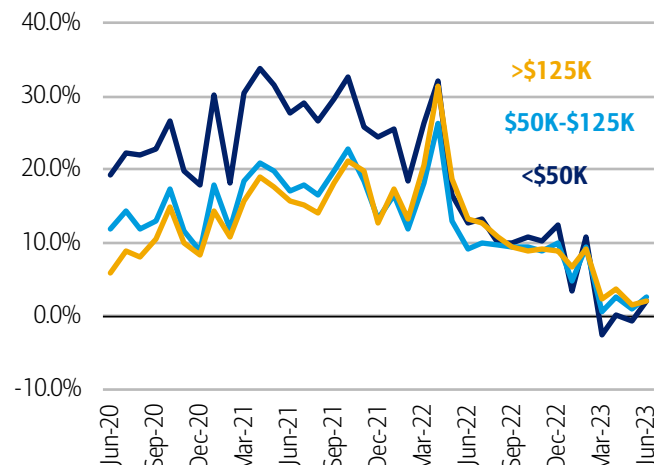


Source: BAC internal data

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Exhibit 5: Monthly BAC card retail spending growth (ex-auto & gas), 2-yr % change, non-seasonally adjusted data

According to BAC credit & debit card data, spending growth on a 2-year basis improves across income cohorts

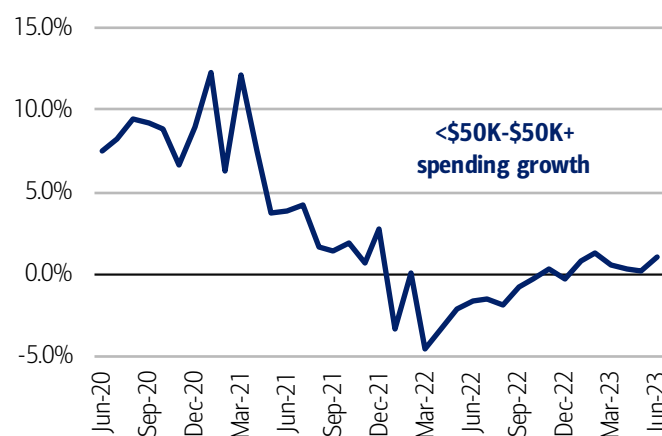


Source: BAC internal data

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Exhibit 6: Spread between spending growth (ex-auto & gas) of lower income cohort and higher income cohorts

Spread remains positive in June after flipping positive in January

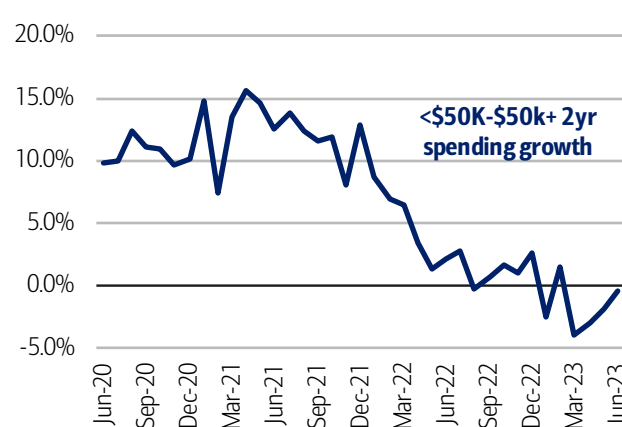


Source: BAC internal data

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Exhibit 7: Spread between spending growth (ex-auto & gas) of lower income cohort and higher income cohorts (2-year)

2-year spend spread improves in June



Source: BAC internal data

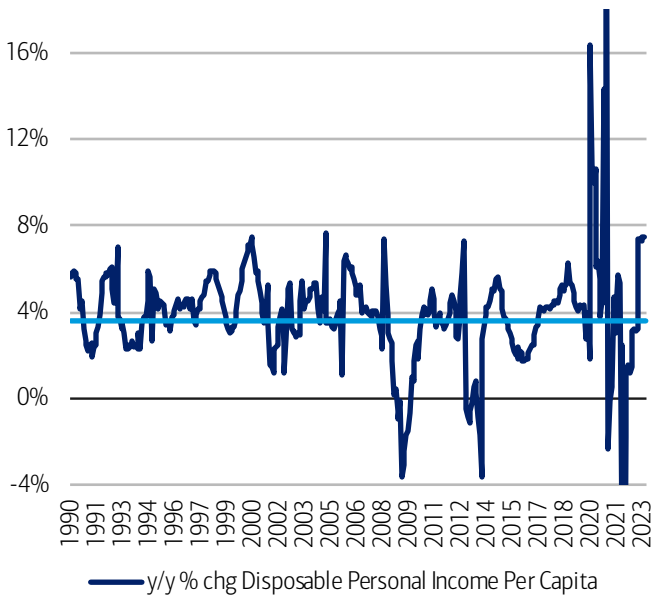
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- **Disposable income per capita.** DPI in May increased +7.4% on a y/y basis (down vs. +7.5% in April & up vs. +1.0% LY). According to the Bureau of Economic Analysis, the increase in current-dollar personal income in May reflected increases in compensation (led by private wages & salaries), personal current transfer receipts

(led by Medicaid payments), and personal income receipts on assets led by personal interest income.

Exhibit 8: Disposable Income Per Capita y/y % change (long-term)

DPI has averaged 3.6% since '03, with gov't stimulus driving spikes

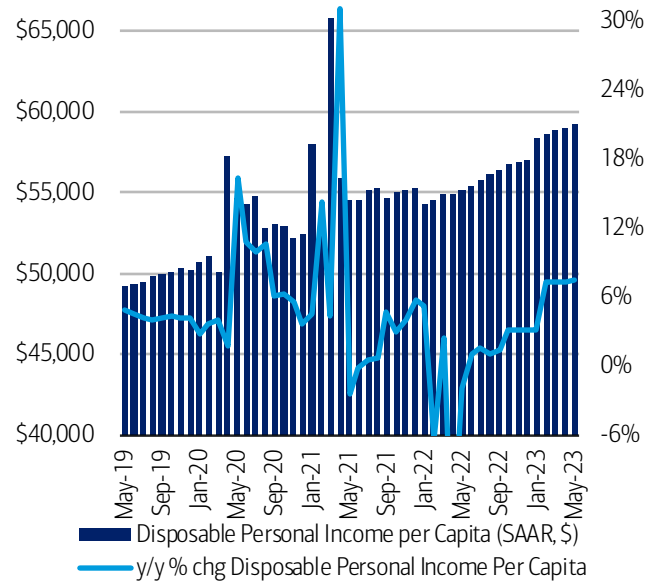


Source: BofA Global Research, Haver Analytics

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Exhibit 9: Disposable Income Per Capita y/y % change

DPI increased 7.4% in May vs. 7.5 % in Apr. & +1.0% LY

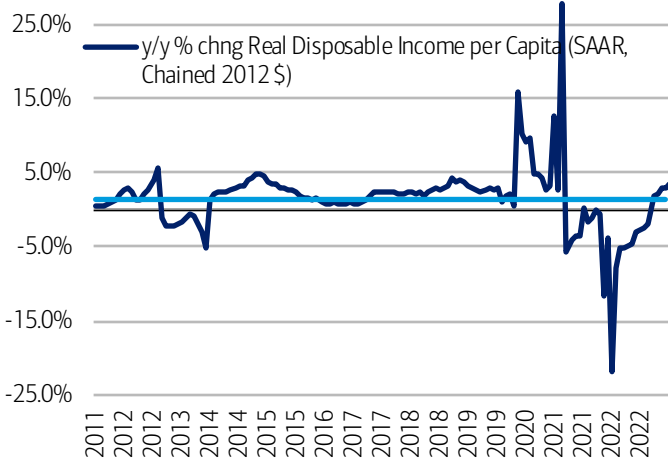


Source: BofA Global Research, Haver Analytics

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Exhibit 10: Real Disposable Income Per Capita y/y % change (long-term)

Real DPI has averaged 1.4% since '03

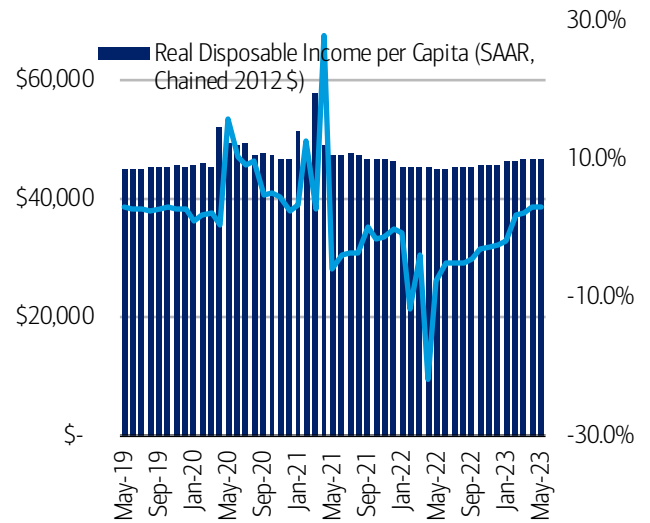


Source: BofA Global Research, Haver Analytics, based on seasonally adjusted figures

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Exhibit 11: Real Disposable Income Per Capita y/y % change

Real DPI accelerated to +3.5% in May from +3.0% in Apr.



Source: BofA Global Research, Haver Analytics, based on seasonally adjusted figures

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Earnings & Employment

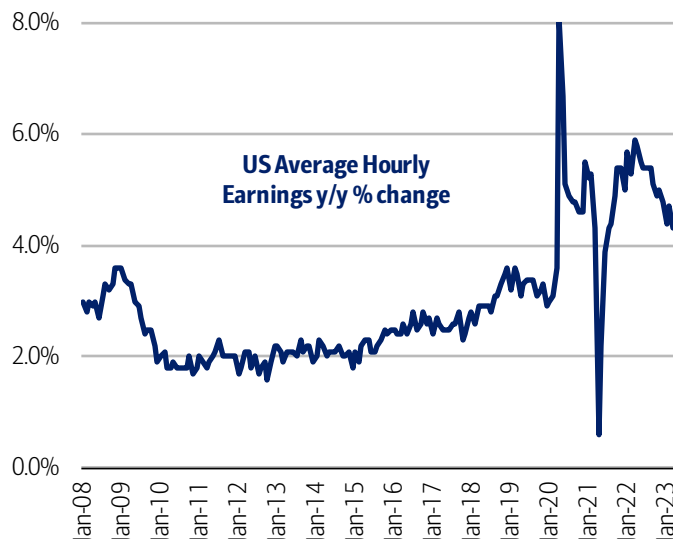
- **US Average Hourly Earnings** in June increased +4.4% (flat vs. May & below +5.4% LY). The Employee Cost Index (ECI)- quarterly measure of the change in the cost of labor free from the impact of employment shifts among industries / occupations- increased +4.8% y/y for the 12-month period ending 1Q23 (vs. +5.1% in 4Q22 & +4.5% in 1Q22). The Atlanta Fed Wage Tracker saw a +6.3% y/y increase in wages



as of May (flat vs. 6.3% in April). The composition of the Atlanta Fed data showed wage growth was mixed across income groups. Real wages increased 1.2% in June (vs. +0.2% in May & -3.2% vs. LY).

Exhibit 12: US Average Hourly Earnings y/y % change (Long-term)

US average hourly earnings (change in avg. hourly earnings for all employees) increased +4.3% in May vs. +5.5% LY

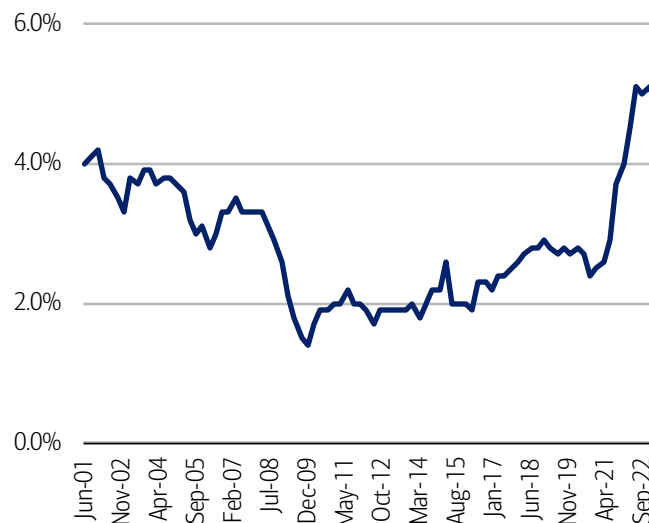


Source: BofA Global Research, Bureau of Labor Statistics

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Exhibit 13: Employment Cost of Civilian Workers y/y % change (12-month, non-seasonally adjusted data) current dollar

Compensation costs for civilian workers inc. 4.8% in 1Q23 vs. +5.1% in 4Q22 and +4.5% LY



Source: BofA Global Research, Bureau of Labor Statistics

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Exhibit 14: US Real Avg. Hourly Earnings y/y % change

US real avg. hourly earnings up +1.2% in June vs +0.2% in May & -3.2% LY

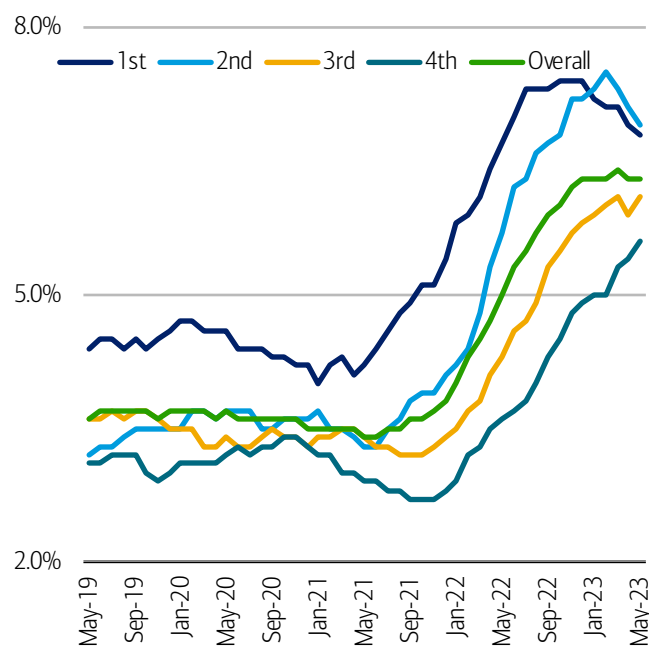


Source: BofA Global Research, Bureau of Labor Statistics

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Exhibit 15: Atlanta Fed Wage Tracker by Wage Level (12mo. MA)

Overall wage growth in May is 6.3% (flat vs. April)

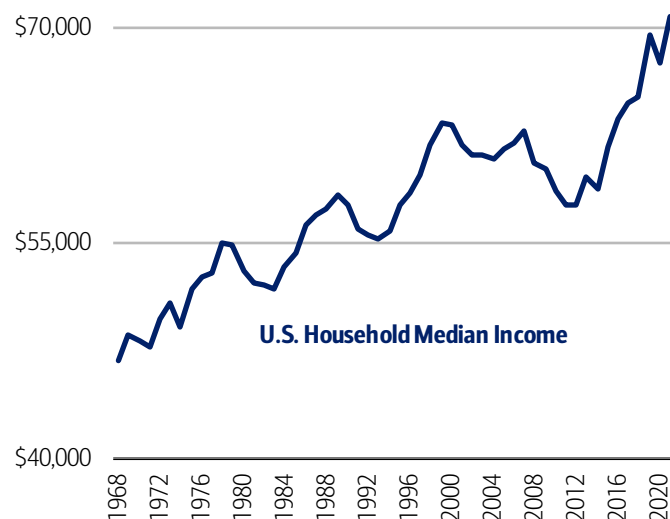


Source: Federal Reserve Bank of Atlanta, Current Population Survey, Bureau of Labor Statistics
Note: Those in the lowest 25% of average wages are in the 1st quartile and those in the highest 25% of wages are in the 4th quartile

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Exhibit 16: U.S. Household Median Income (Long-term chart)

All income received by households (wages, salaries, investments, rental, etc.)

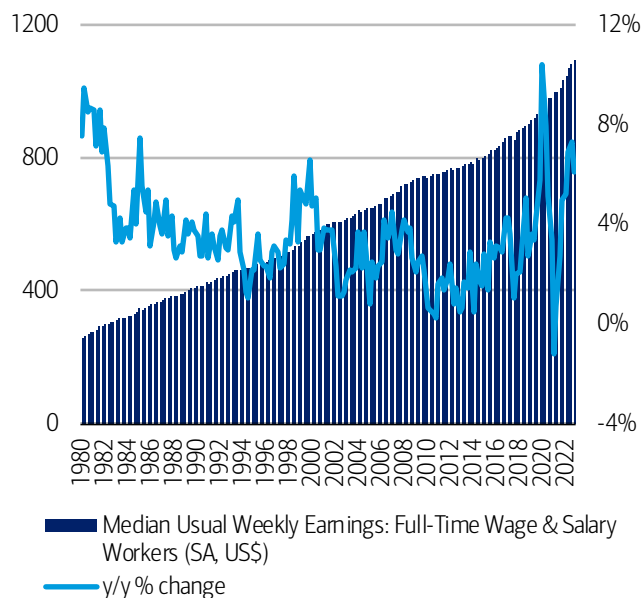


Source: U.S. Census Bureau; Real Chained 2016 dollars

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Exhibit 17: Median weekly earnings

Median weekly earnings (in current dollars) increased 6.1% y/y in 1Q23



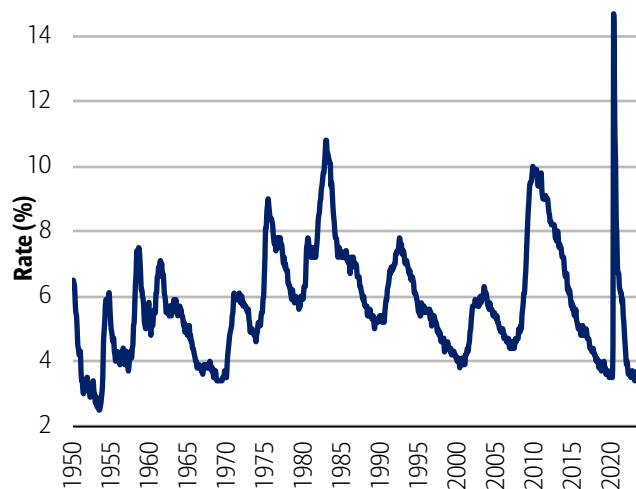
Source: Bureau of Labor Statistics, BofA Global Research

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- **Unemployment rate:** The unemployment rate decelerated slightly to 3.6% in June (vs. 3.7% in May & 3.6% LY) as labor participation remains flat.
- **Non-farm payrolls:** Non-farm payrolls increased by 209K in June, above +306K in May and below a +370K increase LY.
- **Labor Force Participation:** Labor participation was 62.6% in June (flat vs. May and above 62.2% LY) but still below the 67.2% peak in 1998. The labor force participation rate is the proportion of the working-age population that is either working or actively looking for work.

Exhibit 18: Historical U.S. Unemployment Rate

The unemployment rate in 4/20 was the highest since the Great Depression

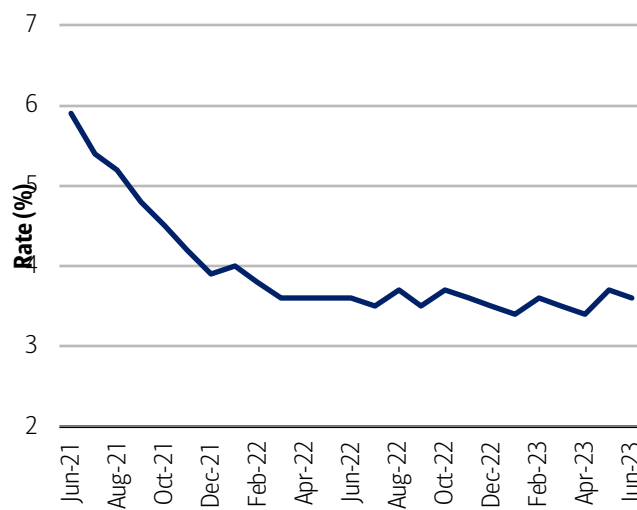


Source: Bureau of Labor Statistics, BofA Global Research

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Exhibit 19: U.S. Unemployment Rate (2-year history)

The unemployment rate was 3.6% in June vs. 3.7% in May

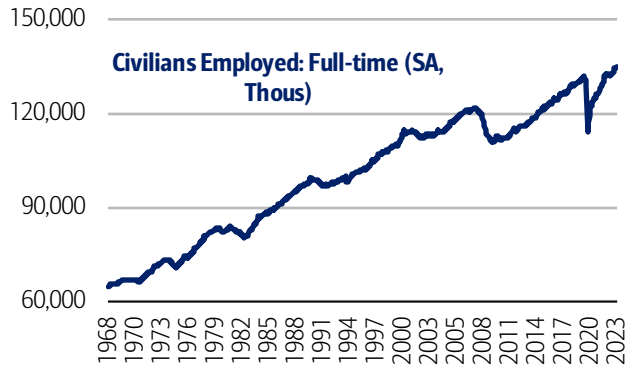


Source: Bureau of Labor Statistics, BofA Global Research

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Exhibit 20: Number of Full-Time Employees (Long-term chart)

Number of full-time employees increased 1.7% in June vs. 5.0% LY

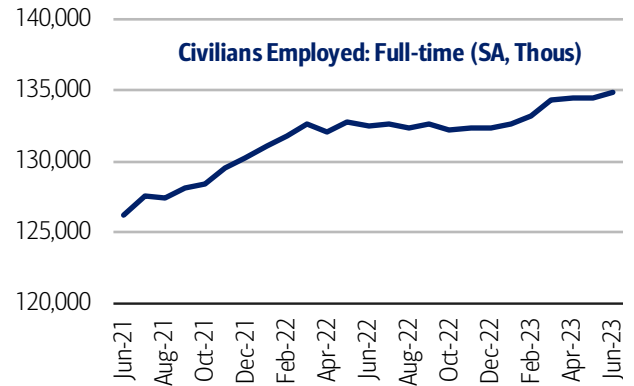


Source: Bureau of Labor Statistics

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Exhibit 21: Number of Full-Time Employees (2-year history)

Number of full-time employees increased 1.7% in June vs. 5.0% LY

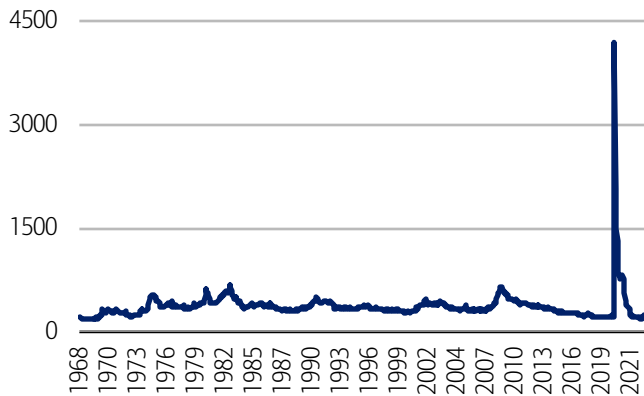


Source: Bureau of Labor Statistics

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Exhibit 22: Initial Jobless Claims (SA, thousands) (Long-term chart)

Initial jobless claims are up in June (254K) vs. 234K in May

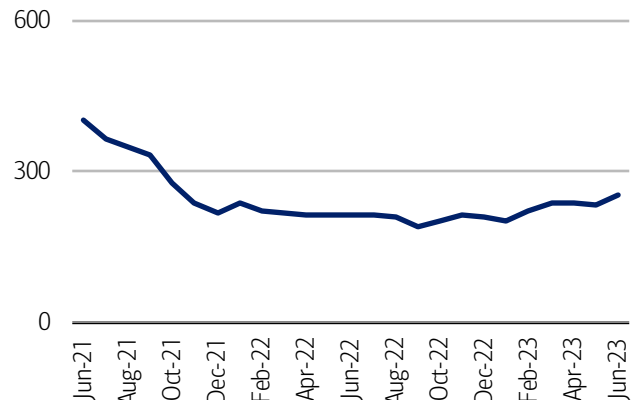


Source: Department of Labor, Haver Analytics

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Exhibit 23: Initial Jobless Claims (SA, thousands) (2-year history)

Initial jobless claims are up in June (254K) vs. 234K in May

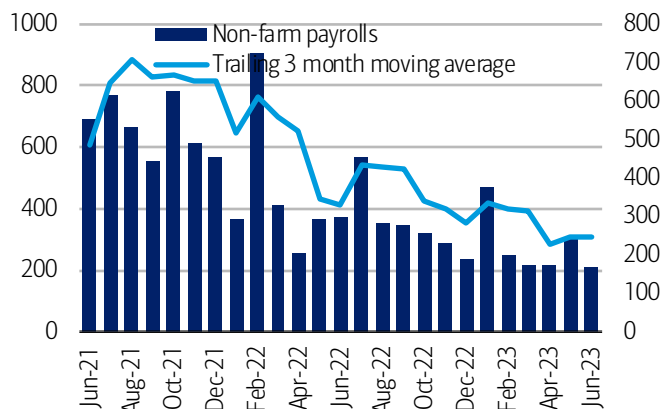


Source: Department of Labor, Haver Analytics

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Exhibit 24: Non-farm payrolls (2 yr. history)

Non-farm payrolls increased by +209K in June vs. +306K in May

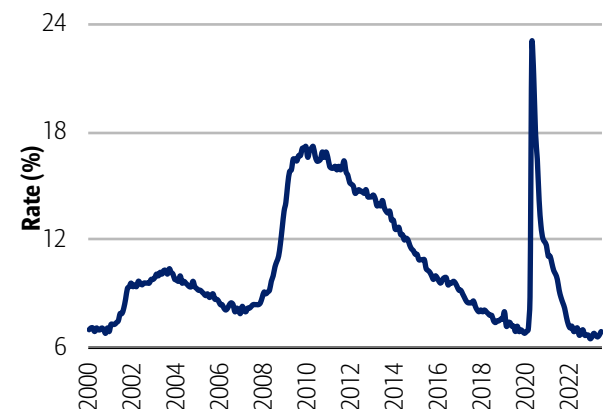


Source: Bureau of Labor Statistics

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Exhibit 25: Underemployment Rate

The underemployment rate was 6.9% in June vs. 6.7% LY

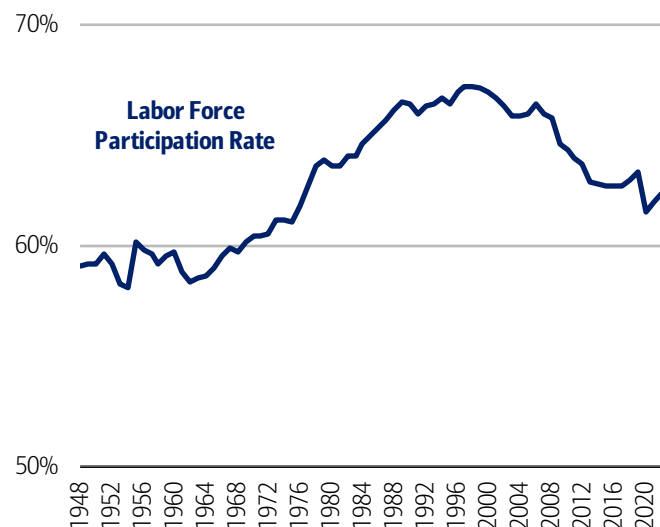


Source: Bureau of Labor Statistics

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Exhibit 26: Labor Force Participation Rate (Long-term history)

Labor participation still below pre-recession peak

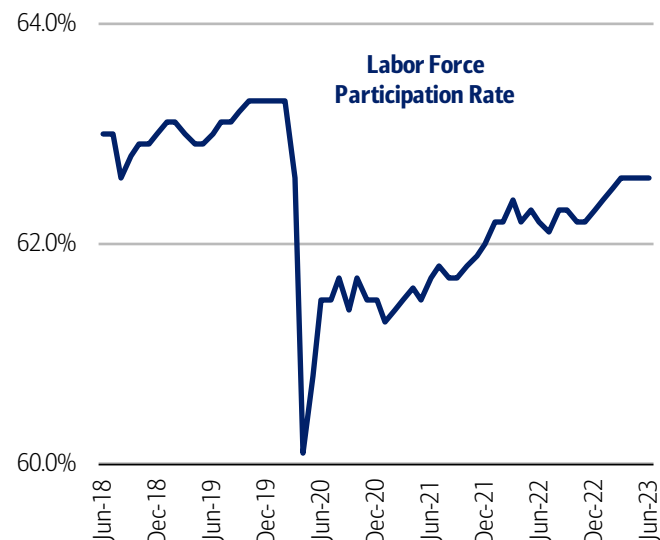


Source: Bureau of Labor Statistics

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Exhibit 27: Labor Force Participation Rate (4 yr. history)

The labor force participation rate was 62.6% in June



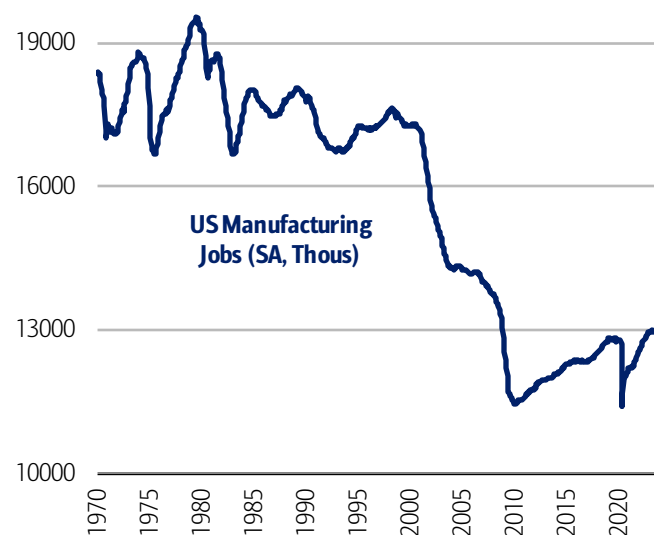
Source: Bureau of Labor Statistics

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- **US Manufacturing Jobs.** Manufacturing jobs declined in 2020 due to COVID-19 headwinds and remain below pre-recession levels and peak levels in 1979. In June manufacturing jobs increased 1.3%, down from 1.5% in May & 4.4% LY.

Exhibit 28: US Manufacturing Jobs (1970-present)

Manufacturing jobs increase in June vs. May

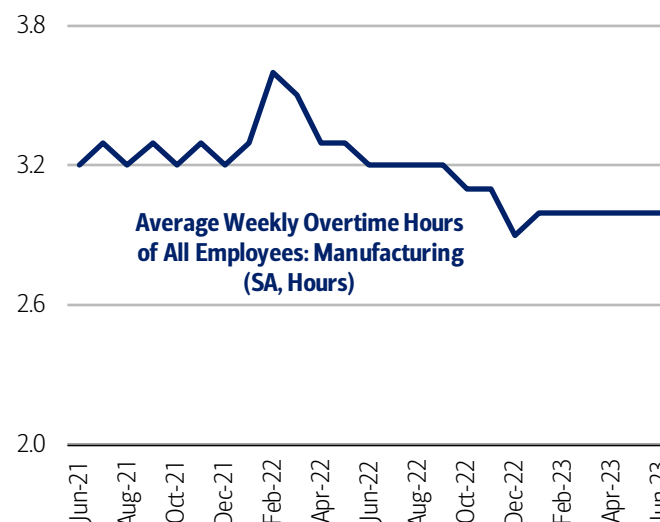


Source: Bureau of Labor Statistics

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Exhibit 29: Average weekly overtime hours for manufacturing employees

Avg. weekly overtime hours remained flat at 3.0 in June



Source: Bureau of Labor Statistics

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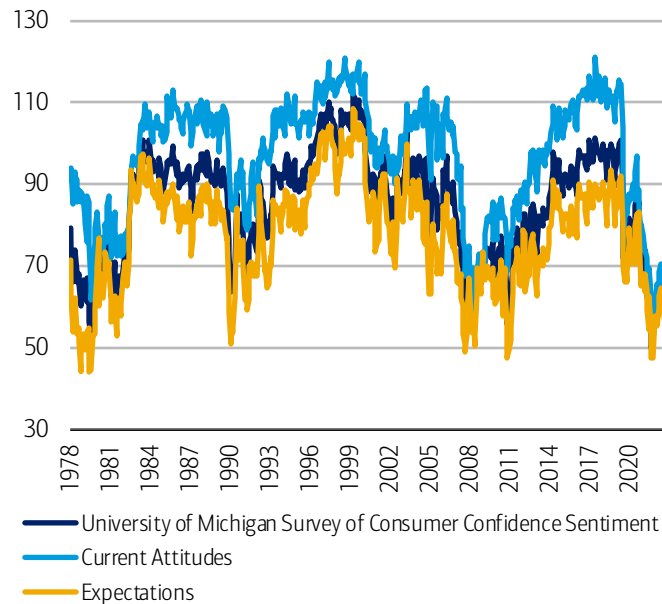
Confidence & Borrowing

- **Consumer Confidence.** The June Univ. of Michigan Survey of Consumer Sentiment improved to 64.4, up 8.8% from May). The June Conference Board Consumer Confidence rose to 109.7 in June vs. 102.5 in May & vs. 98.4 LY.



Exhibit 30: U of Michigan Survey of Consumer Confidence Sentiment (1978-2020)

Consumer confidence sentiment was 64.4 in June vs. 59.2 in May



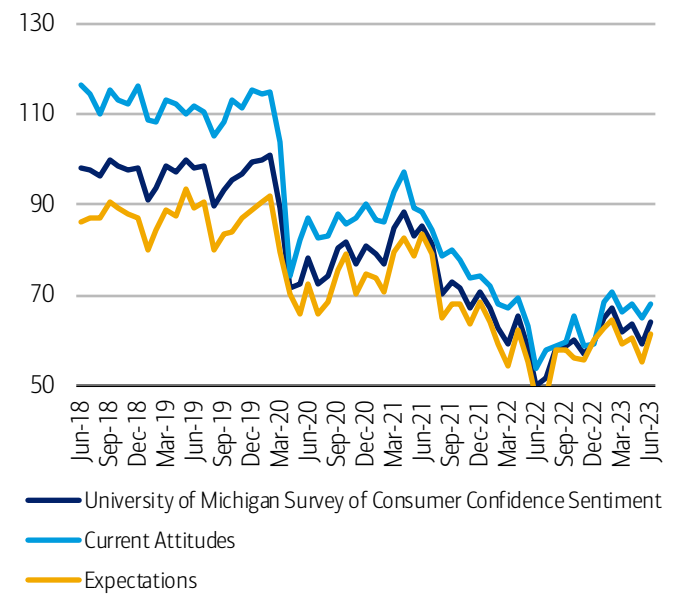
Source: BofA Global Research, University of Michigan Survey Research Center, Bloomberg 1966=100

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- The Univ. of Michigan Survey of Consumer Current Attitudes in June was 69.0, up from 64.9 in May and down vs. 53.8 LY. Current Expectations at 61.5 was up vs. 55.4 in May. and above 47.5 LY. The June Conference Board Consumer Confidence Present Situation at 155.3 was up vs. 148.9 in May and vs. 147.2 LY, and Consumer Expectations at 79.3 was up vs. 71.5 in May and below 65.8 LY.

Exhibit 31: U of Michigan Survey of Consumer Confidence Sentiment (2014-2019)

Consumer confidence sentiment was 64.4 in June vs. 59.2 in May

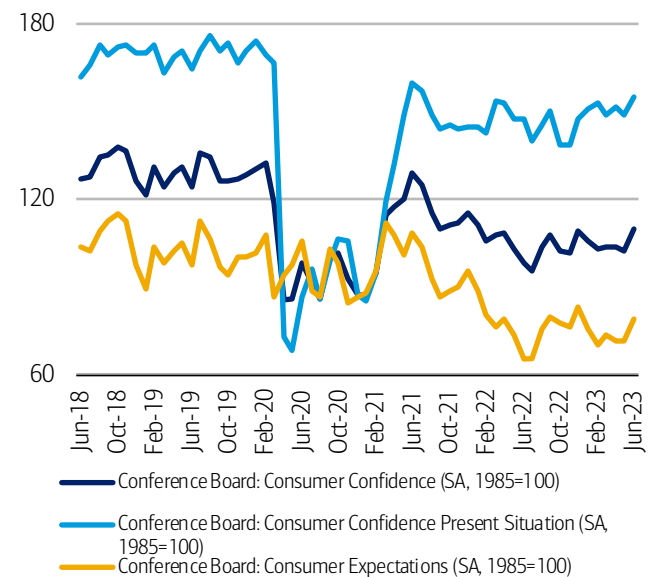


Source: BofA Global Research, University of Michigan Survey Research Center, Bloomberg 1966=100

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Exhibit 32: Conference Board Consumer Confidence (LT history)

Consumer confidence sentiment was 109.7 in June vs. 102.5 in May

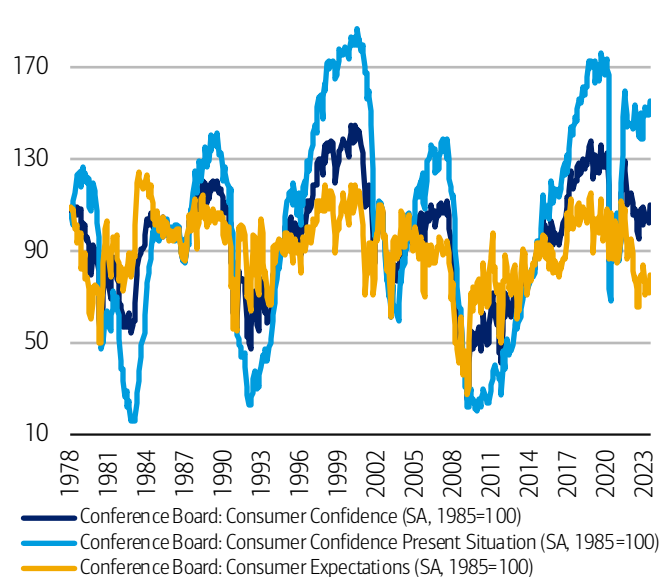


Source: Conference Board, Haver Analytics, BofA Global Research

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Exhibit 33: Conference Board Consumer Confidence (2018-2022)

Consumer confidence sentiment was 109.7 in June vs. 102.5 in May



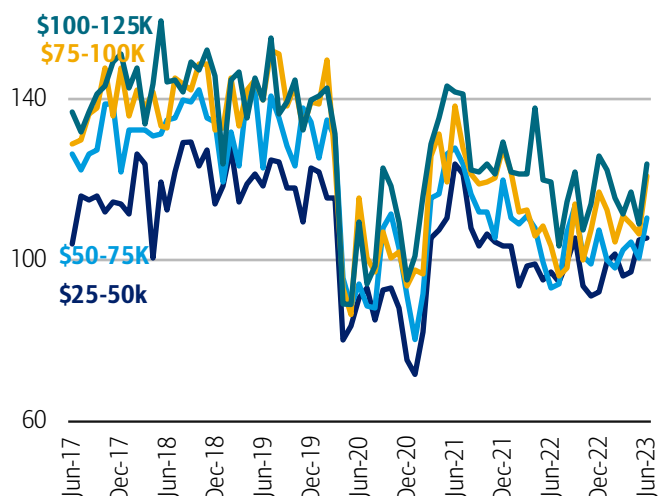
Source: Conference Board, Haver Analytics, BofA Global Research

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- **Consumer Confidence by household income.** In June 2023, confidence for households earnings \$100-125K was 123.8, up from 108.8 in May & vs. 119.2 LY. Households earning \$75-100K was 120.7, up vs. 106.7 in May & vs. 103.6 LY. Households earning \$50-75K was 110.5 up vs. 100.6 in May & vs. 93.3 LY. Households earning \$25-50K was 105.5, up vs. 105.1 in May & up vs. 96.9 LY.

Exhibit 34: Consumer Confidence by household income

Consumer confidence improves across household incomes

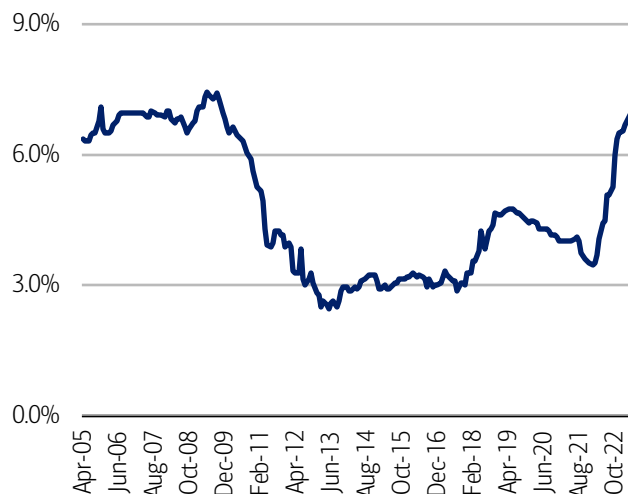


Source: BofA Global Research, Conference Board – Note: SA, 1985 = 100

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Exhibit 35: New car loan rate (48-month)

The average rate of new car loans accelerates to 7.3% in June, just below high of 7.4% in Dec. 2009



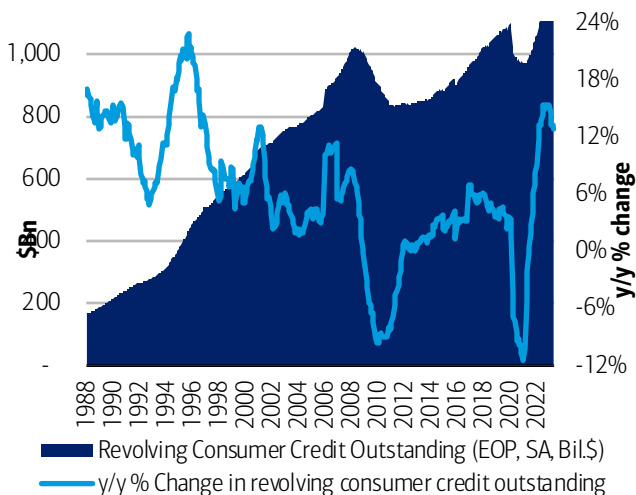
Source: Haver Analytics, bankrate.com - average of new car loan rates

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- **Consumer credit.** Revolving consumer credit increased +12.9% y/y in May (down from 13.2% in Apr. & down from 13.3% LY) and remains above 10yr avg of +3.6%. Non-revolving credit (auto-loans, and durable goods loans, excluding mortgages) grew 4.1% y/y in May, below 4.7% in Apr. & 5.4% LY. We est. that the avg. household currently carries \$9,363 in credit card debt as of May, continuing to exceed peak levels last seen in May '08 of \$8,396 and up \$1,748 from the 10-year avg. of \$7,615.

Exhibit 36: Revolving Consumer Credit Outstanding & y/y % Growth

Revolving consumer credit increased 12.9% in May vs. 13.3% LY

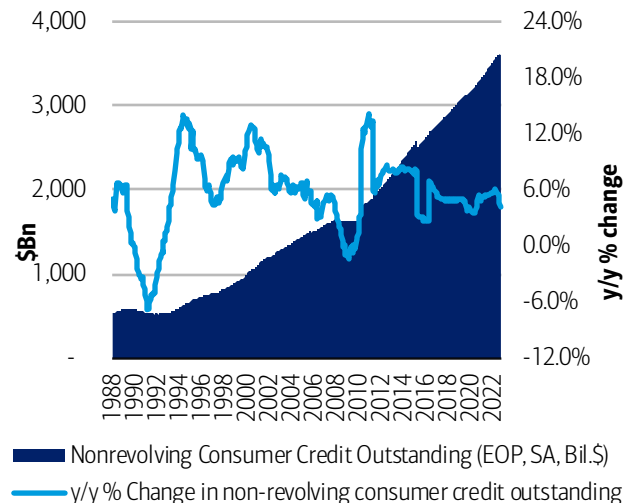


Source: Federal Reserve Board, Haver Analytics, BofA Global Research

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Exhibit 37: Non-Revolving Consumer Credit & y/y % Growth

Non-revolving consumer credit increased +4.1% y/y in May vs. +5.4% LY

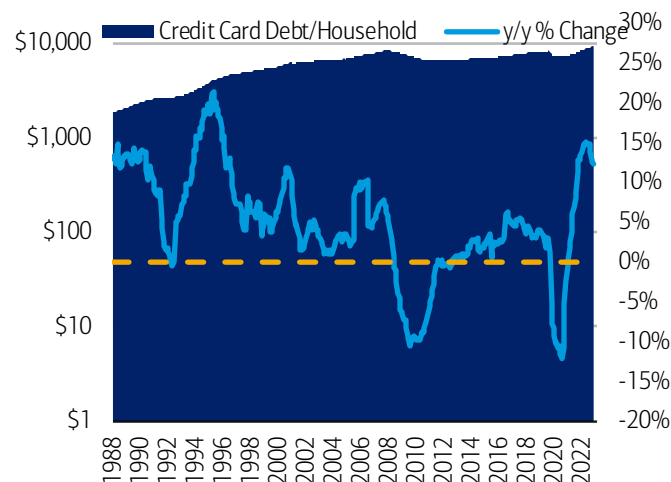


Source: Federal Reserve Board, Haver Analytics, BofA Global Research

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Exhibit 38: Est. credit card debt per US household (LT)

We est. the avg. household carries ~\$9.4k in credit card debt as of May

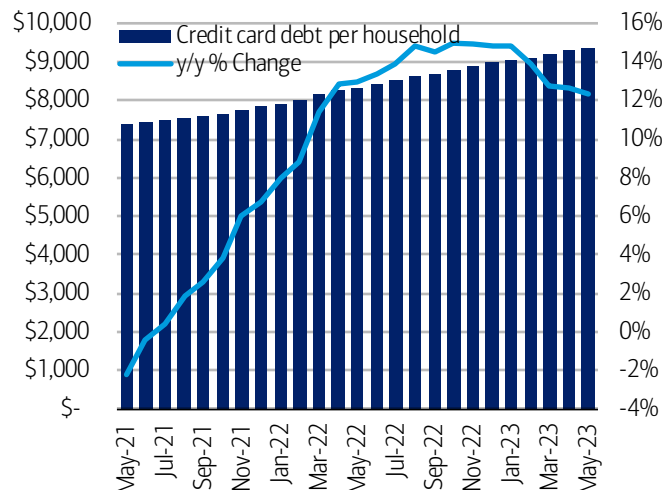


Source: Federal Reserve Board, BofA Global Research

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Exhibit 39: Estimated credit card debt per US household (2 yr.)

We est. the avg. household carries ~\$9.4k in credit card debt as of May



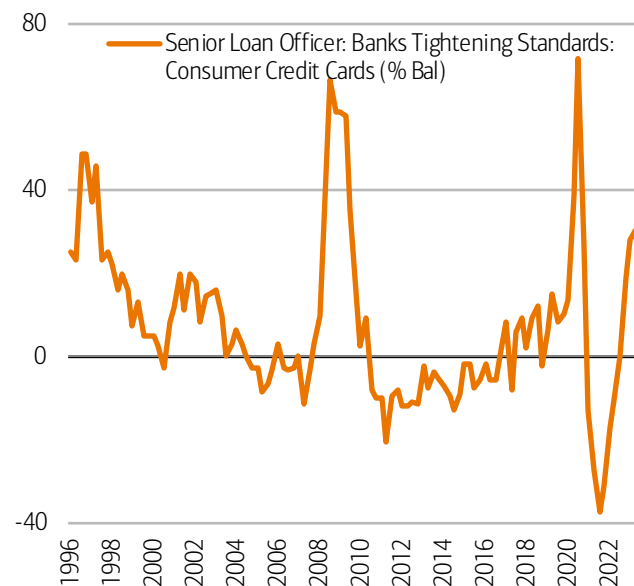
Source: Federal Reserve Board, BofA Global Research

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- **Lending standards for credit cards** tightened for 30.4% of net respondents in 2Q23 vs. 28.3% reporting net tightening in 1Q23 & 10.4% reporting loosening LY.
- **Demand for Consumer Loans**, the percentage of banks reporting **strengthening** demand for consumer installment loans was down -14.7% in 2Q23 vs. -26.0% in 1Q23 & +15.9% LY.

Exhibit 40: % of Bank survey respondents reporting tightening standards on credit cards

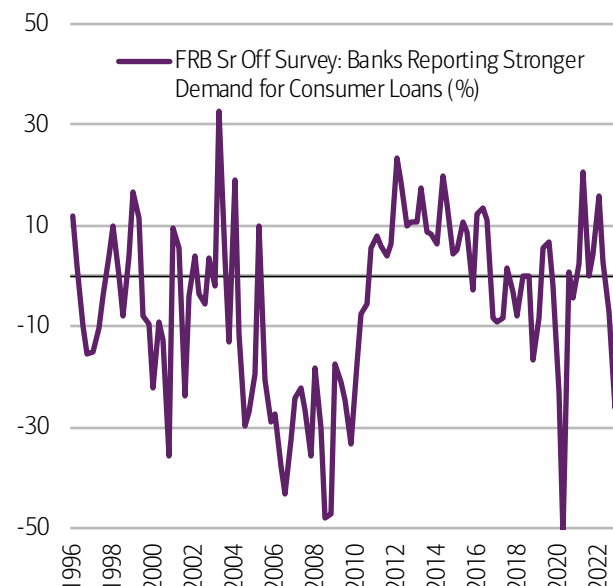
Lending standards on credit cards tightened for 30.4% of net respondents in 2Q23



Source: BofA Global Research, Haver Analytics, Federal Reserve Board Senior Loan Officer Survey
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Exhibit 41: % of bank survey respondents reporting stronger demand for consumer loans

The percentage of banks reporting strengthening demand for loans in 2Q23 was down -14.7%

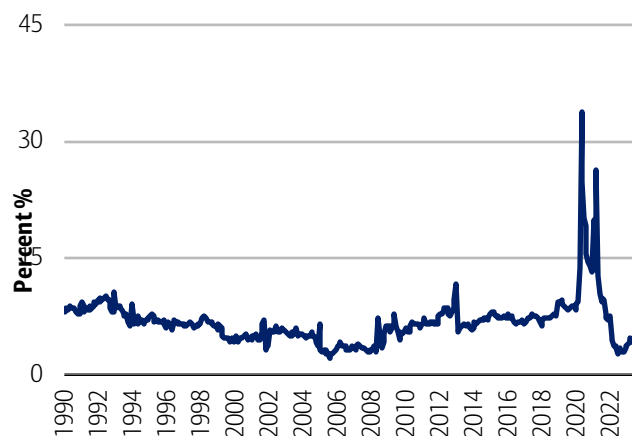


Source: Federal Reserve Board, Senior Loan Officer Survey, Haver Analytics, BofA Global Research
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- **Savings rate.** The savings rate was 4.6% in May, up from 4.3% in Apr. and 3.4% LY.

Exhibit 42: U.S. Personal Savings Rate (LT History)

The savings rate was 4.6% in May, below the 10yr avg of 8.3%

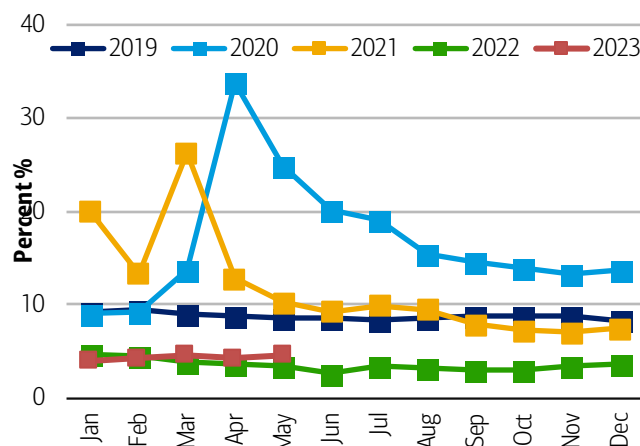


Source: Haver Analytics, BofA Global Research

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Exhibit 43: U.S. Personal Savings Rate (2019-2022)

The savings rate was 4.6% in May vs. 4.3% in Apr.



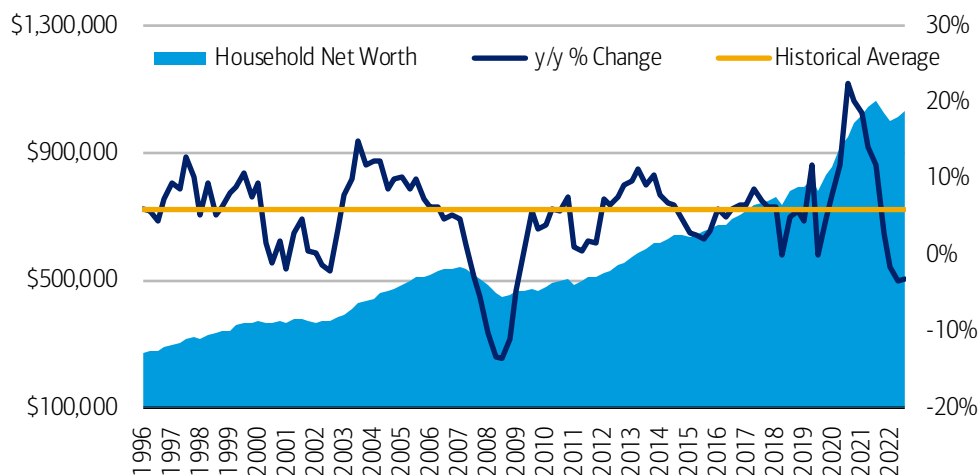
Source: Haver Analytics, BofA Global Research

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- **Household net worth.** Based on data from the Federal Reserve, total household and nonprofit organizations net worth totaled \$137.9 trillion as of 1Q23. Based on our estimates which exclude certain figures attributable to nonprofit assets and liabilities, we estimate total household net worth at approximately \$1,031,178 on average per household (assuming 2.5 people per household based on current population data).
- We estimate avg. **household net worth** decreased -3.1% y/y in 1Q23 (vs. -3.4% in 4Q22 and +11.7% LY). The historical average (since 1953) growth rate for household wealth is +5.9% (Note that prior figures are often revised modestly).

Exhibit 44: Average net worth per U.S. household

We est. avg. household net worth decreased -3.1% in 1Q23 (vs. -3.4% in 4Q22 & +11.7% LY)



Source: Federal Reserve, Haver Analytics, BofA Global Research

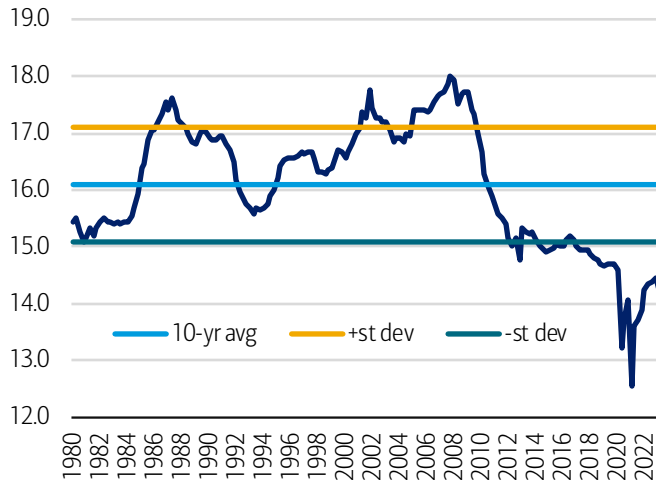
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- **Financial obligations ratio.** The ratio of financial obligation payments to DPI decreased to 14.28 in 1Q23 from 14.45 in 4Q22, and up from 14.25 LY. It also remains below the long-term average of 16.09, implying continued room for the consumer to increase borrowing & spending from current levels if the economy improves.



Exhibit 45: Financial Obligations Ratio (1980-Current)

Financial obligations payments as % of disposable personal income

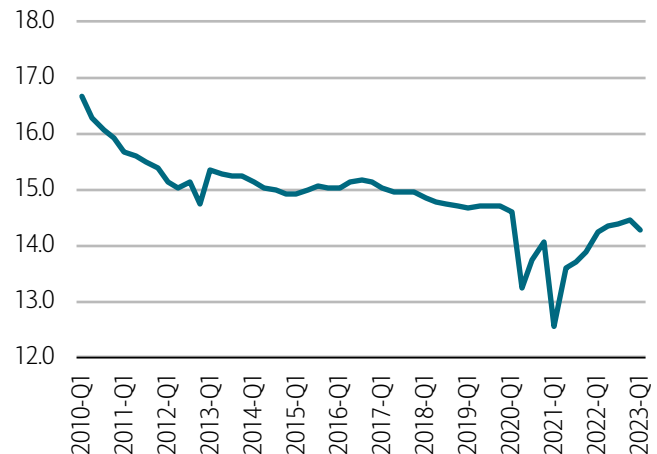


Source: BofA Global Research, Federal Reserve Board/Haver Analytics Note: The financial obligations ratio is an estimate of the ratio of debt payments to disposable income and includes estimated debt payments on outstanding mortgage & consumer debt (includes student loans), automobile lease payments, rental payments on tenant-occupied property, homeowners' insurance, and property tax payments

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Exhibit 46: Financial Obligations Ratio (2007-Current)

Financial obligations payments as % of disposable personal income



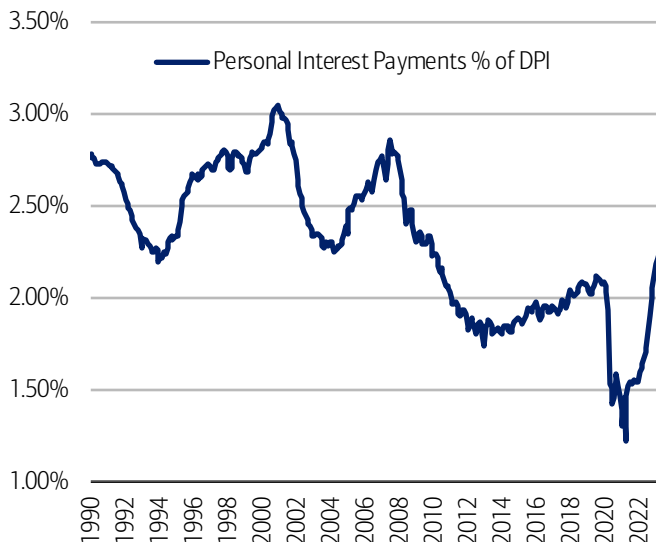
Source: BofA Global Research, Federal Reserve Board/Haver Analytics

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- **Personal Interest Payments % of DPI (excludes mortgages)** are below pre-2008 recession levels but rising. The indicator leads the financial obligations ratio and signals pressure on growth of discretionary spending on smaller ticket (e.g. apparel & footwear) items in favor of larger ticket (e.g. home appliances) purchases.

Exhibit 47: Personal Interest Payments % of DPI (Long-term history)

Personal interest pmts as a % of DPI are rising but still below pre-2008 recession levels

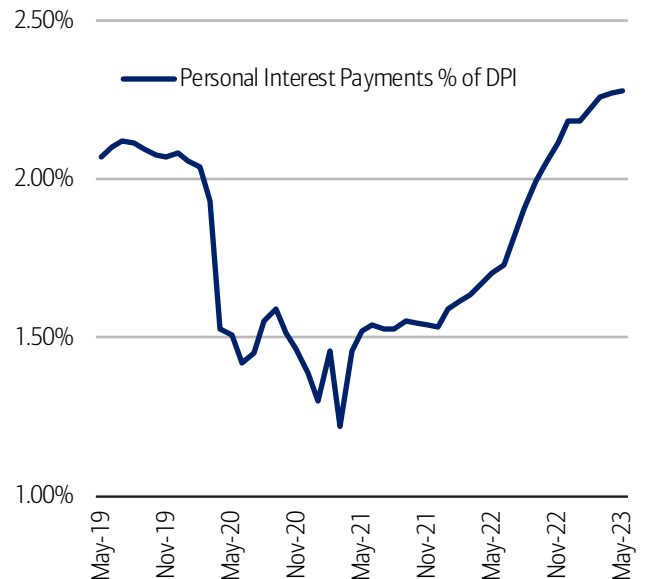


Source: BofA Global Research, Bureau of Economic Analysis

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Exhibit 48: Personal Interest Payments % of DPI (4-year history)

Personal interest pmts as a % of DPI was 2.3% in May vs. 1.7% LY

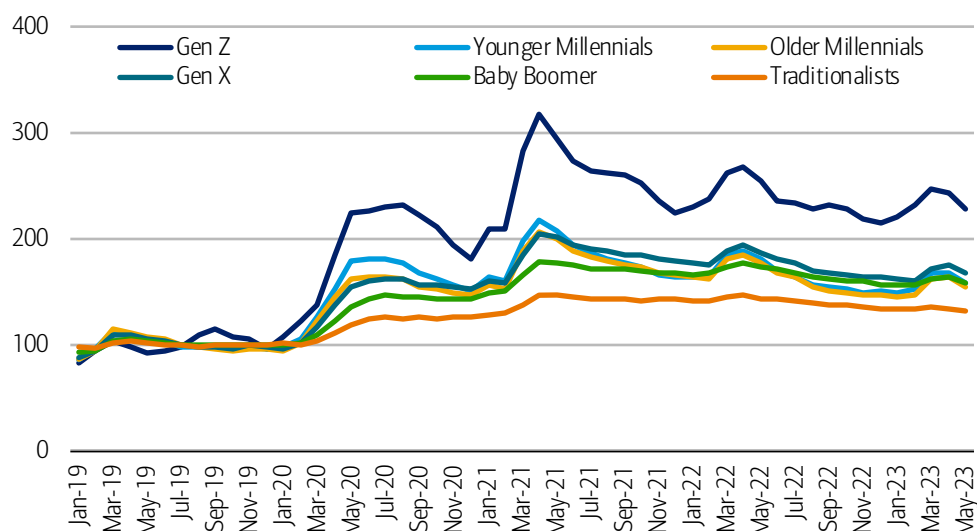


Source: BofA Global Research, Bureau of Economic Analysis

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Exhibit 49: Monthly median household savings and checking balances by age generation (2019=100) for a fixed group of households

Median deposits remain well up on pre-pandemic levels across generations



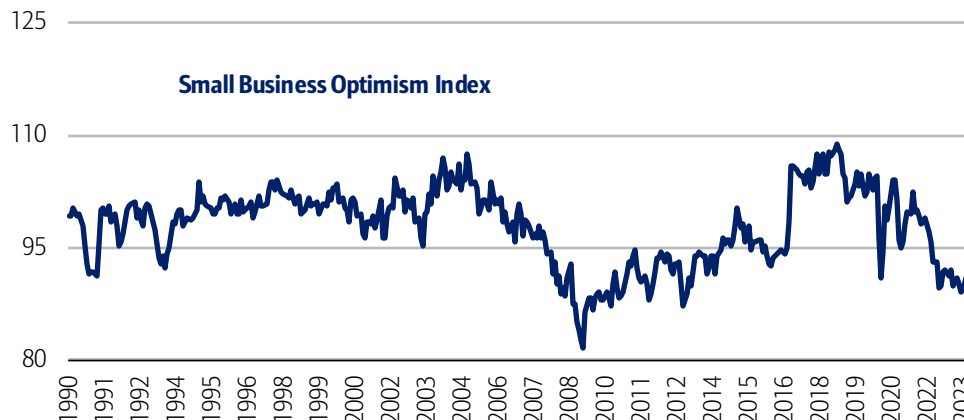
Source: Bank of America Institute

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- Small Business Optimism.** According to the National Federation of Independent Business's Small Business Optimism index, optimism was 91.0 in June, up from 89.4 in May and up vs. 89.5 LY. The index is currently below the long-term average of 97.8 and the 5-year average of 98.6.

Exhibit 50: Small Business Optimism Index

Small Business Optimism rose to 91.0 in June vs. 89.4 in May and 89.5 LY



Source: BofA Global Research, National Federation of Independent Business

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Housing & Mortgages

Home Sales. According to Census Bureau data, new home sales account for about 16.5% of total home sales while existing home sales account for roughly 83.5% of homes sold. Existing home sales are tracking below elevated 2021 levels as well as below 2019 levels. Total home sales (new + existing) decreased -15.3% y/y in May vs. -18.5% in Apr. and -8.1% last year. New family home sales increased +20.0% y/y in May (up vs. +11.3% in Apr. and vs. -11.0% last year) while Existing home sales decreased -20.0% in May (up vs. -22.2% in Apr. & down vs. -7.7% last year).



Exhibit 51: Change in total monthly home sales

New & existing home sales decreased -15.3% in May vs. -8.1% LY

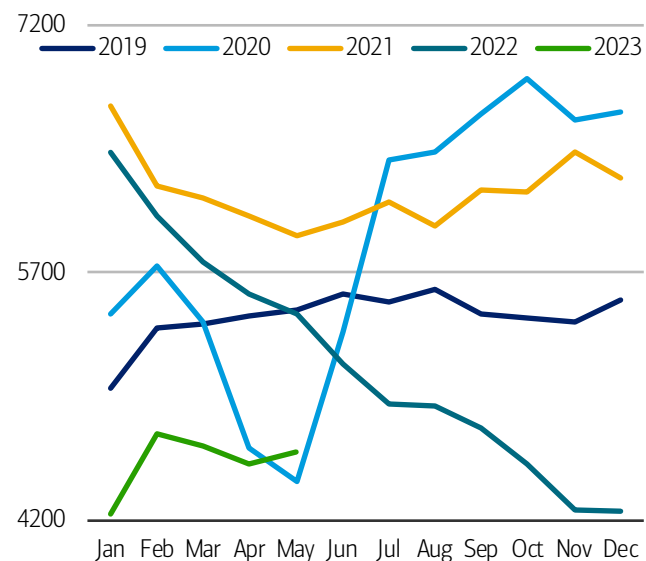


Source: Census Bureau, BofA Global Research

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Exhibit 52: New & existing home sales (in 000's)

New & existing home sales decreased -15.3% in May vs. -8.1% LY

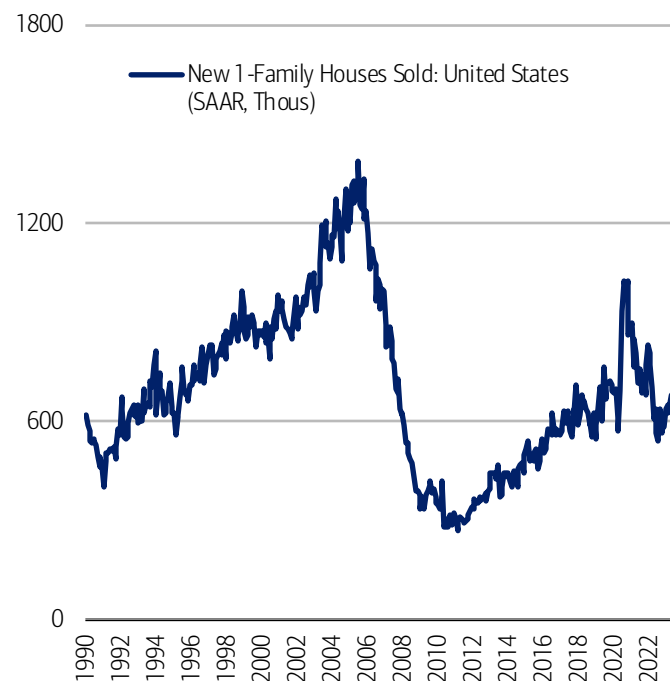


Source: Census Bureau, BofA Global Research

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Exhibit 53: New home sales

New home sales +20.0% y/y in May vs. +11.3% in Apr. & -11.0% LY

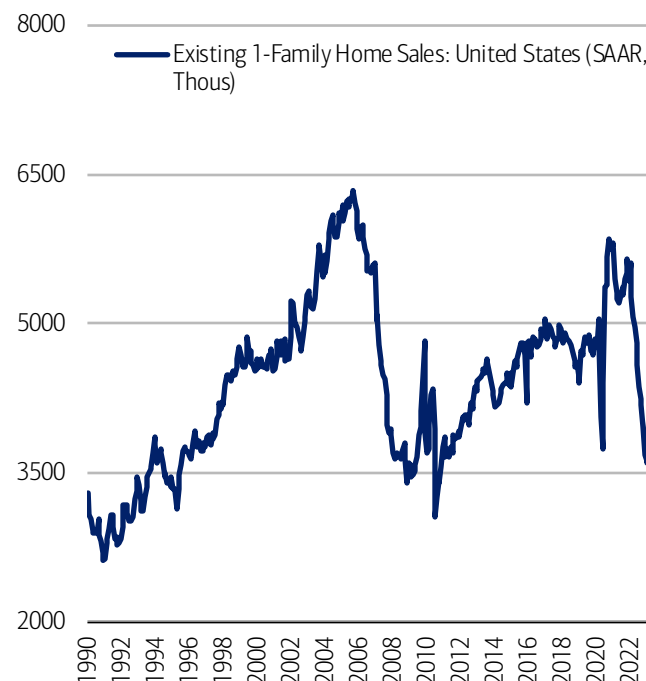


Source: Census Bureau, BofA Global Research

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Exhibit 54: Existing home sales

Existing home sales -20.0% in May vs. -22.2% in Apr. & -7.7% LY

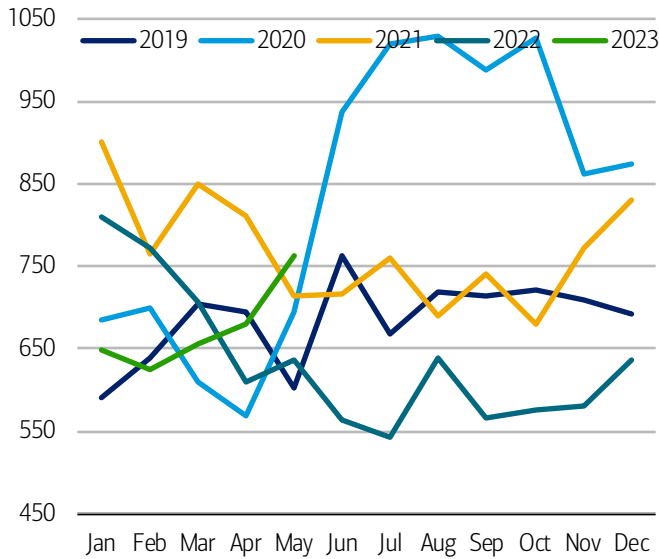


Source: Census Bureau, BofA Global Research

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Exhibit 55: New home sales

New home sales +20.0% y/y in May vs. +11.3% in Apr. & -11.0% LY

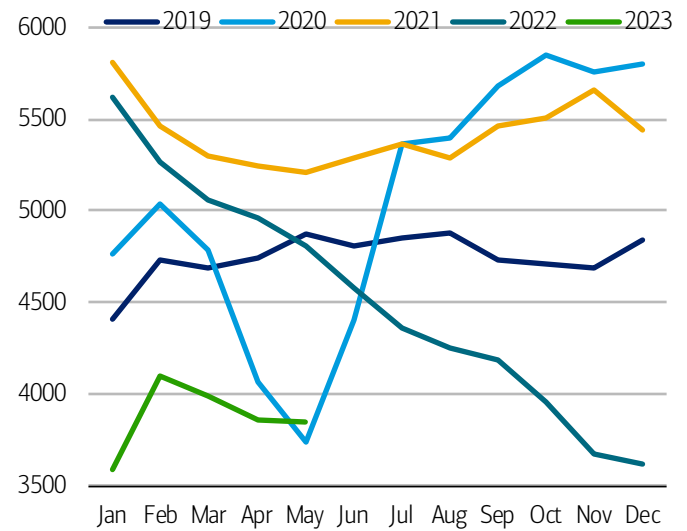


Source: Census Bureau, BofA Global Research

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Exhibit 56: Existing home sales

Existing home sales -20.0% in May vs. -22.2% in Apr. & -7.7% LY

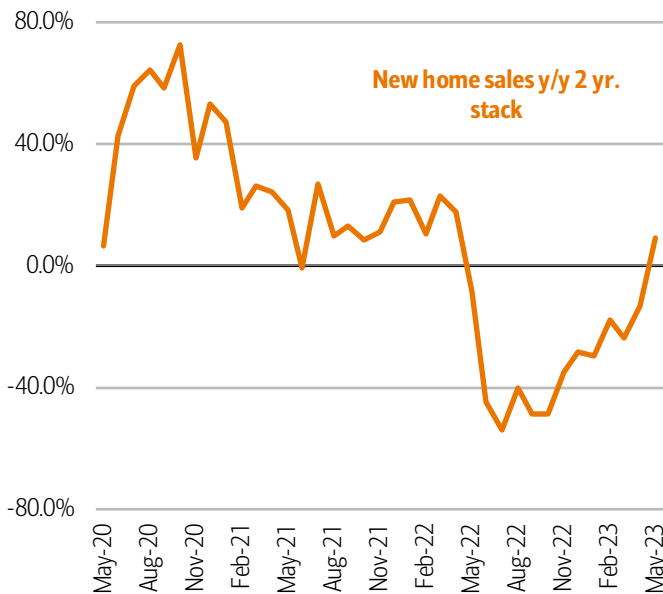


Source: Census Bureau, BofA Global Research

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Exhibit 57: New home sales y/y 2 yr. stack

New home sales +8.9% on a 2 yr. stack-basis in May vs. -8.3% LY

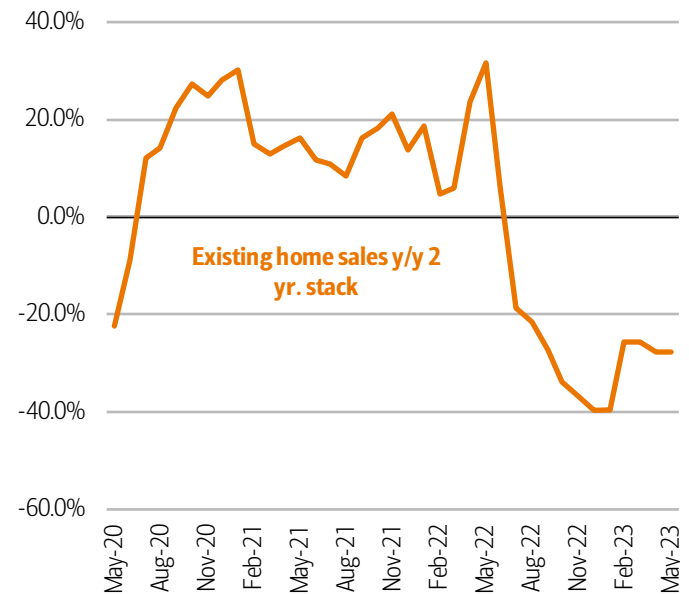


Source: Census Bureau, BofA Global Research

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Exhibit 58: Existing home sales y/y 2 yr. stack

Existing home sales -27.6% on a 2 yr. stack-basis in May vs. +31.6% LY



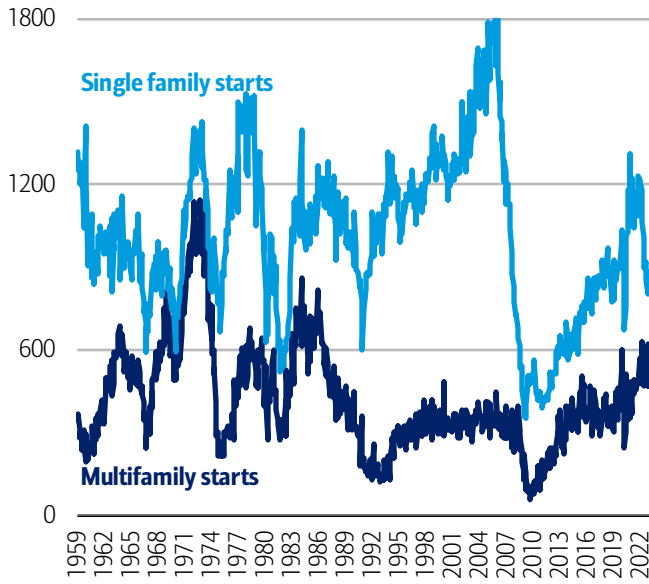
Source: Census Bureau, BofA Global Research

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- Housing starts.** According to Census Bureau data total housing starts (multi-family & single-family) increased 5.7% y/y in May (up vs. -25.7% in Apr. & up vs. -3.6% LY). Single family starts decreased -6.6% (up vs. -28.5% in Apr. and down vs. -3.8% LY). Multi-family starts increased 33.2% in May (up vs. -20.4% in Apr. and up vs. -3.1% LY).

Exhibit 59: Composition of construction (000s, SAAR)

Total housing starts up +5.7% in May (vs. -25.7% in Apr. & -3.6% LY)

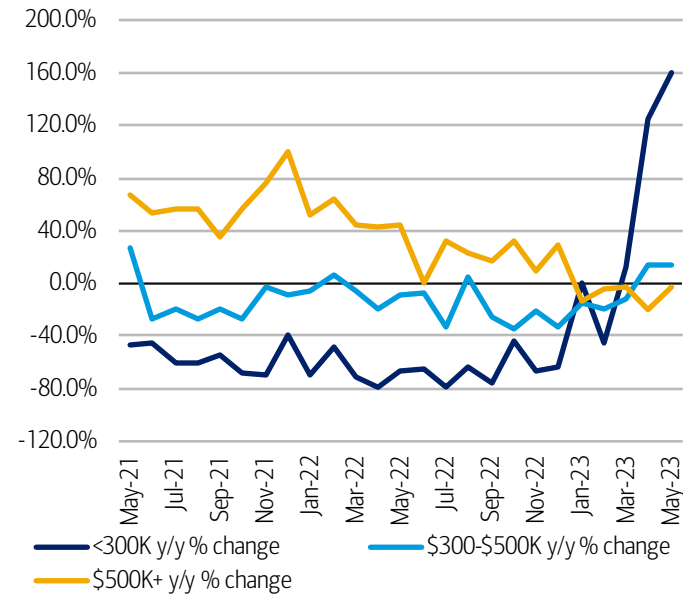


Source: Census Bureau, BofA Global Research

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Exhibit 60: Y/Y % change in new home sales by price point (NSA)

New home sales priced <\$300K and \$500K+ improved in May



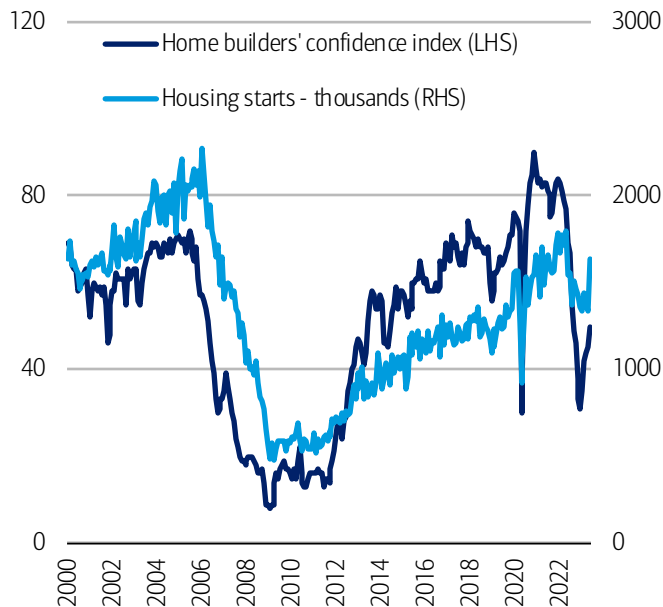
Source: Census Bureau, BofA Global Research

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- **Mortgage Debt (one to four family houses)** increased in 1Q23 to \$13.4tn (from \$12.7tn last year).

Exhibit 61: Homebuilders Confidence vs. Housing Starts

Homebuilders Confidence was 50 in May vs. 45 in Apr. & 69 LY

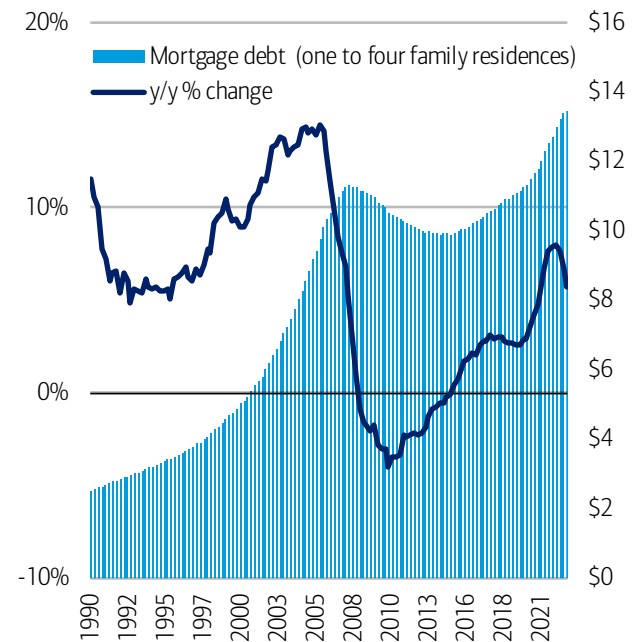


Source: BofA Global Research, Census Bureau

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Exhibit 62: Mortgage Debt (\$tn, one to four family houses) has returned to growth

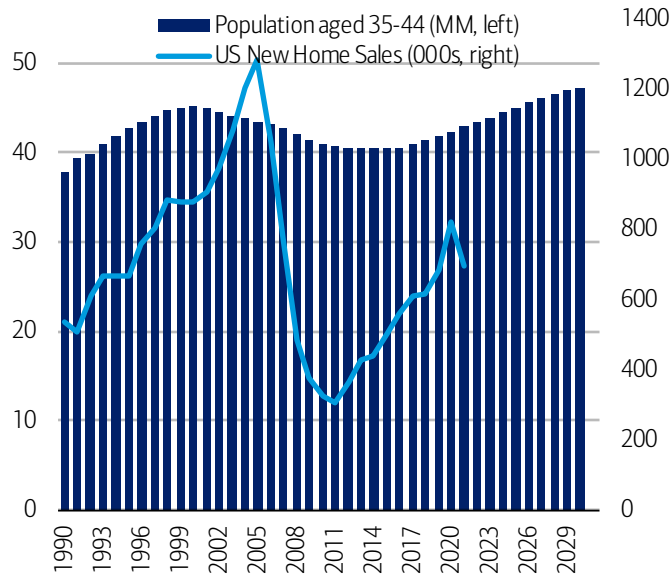
Mortgage debt increased 5.7% in 1Q23



Source: BofA Global Research, Federal Reserve Board Note: Personal MDO includes: Mortgages on 1 to 4 family residences, excludes: multifamily residences, nonfarm non-residential, and farms
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Exhibit 63: US population aged 35-44 vs. US New Home Sales

An increase in population aged 35-44 should support new home sales

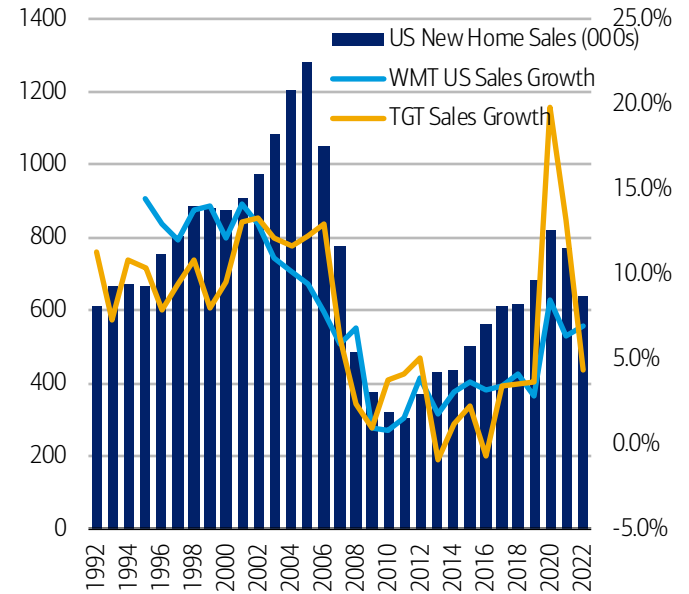


Source: US Census Bureau, BofA Global Research

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Exhibit 64: US New Home Sales vs. WMT & TGT US sales growth

New home sales have ~70% correlation w/ WMT & TGT US sales growth



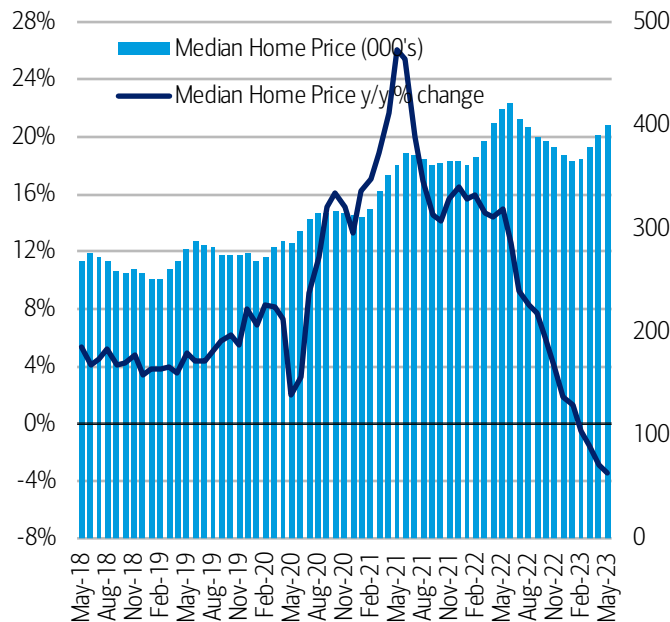
Source: Company filings, US Census Bureau, BofA Global Research

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- **Median home sales price.** The National Association of Realtors estimates prices of existing homes declined -3.4% y/y May (down vs. -2.9% in Apr. and +15.0% LY). The price of new family homes dropped -7.6% in May (up vs. -12.2% in Apr. and down vs. +15.4% LY).

Exhibit 65: Median sales price (000's) of all existing single-family homes (y/y % change)

Prices of existing homes decreased -3.4% in May (vs. -2.9% in Apr. & +15.0% LY).

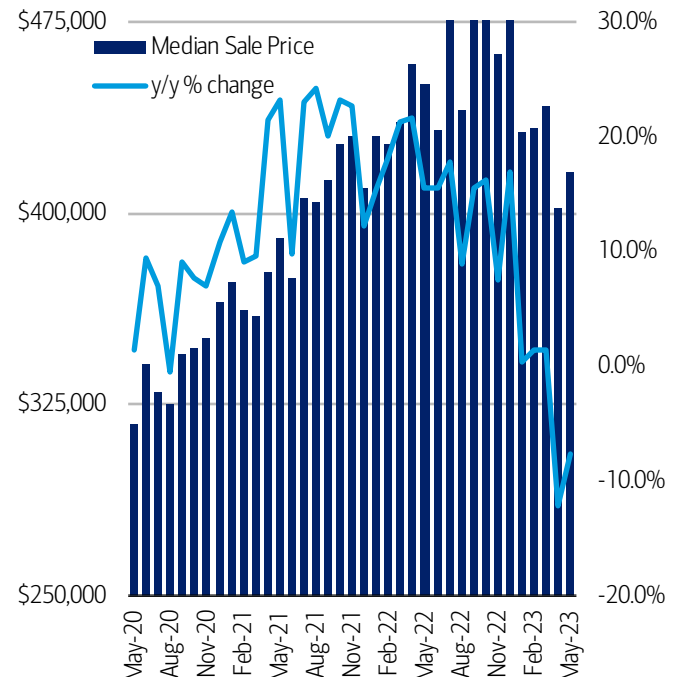


Source: BofA Global Research, Haver Analytics, National Association of Realtors

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Exhibit 66: Median sales price of all new single-family homes

Price of new family homes -7.6% in May (vs. -12.2% in Apr. & +15.4% LY).



Source: U.S. Census Bureau

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Exhibit 67: US Existing Home Sales Months' Supply NSA

Existing home Months' Supply remains well below historical averages

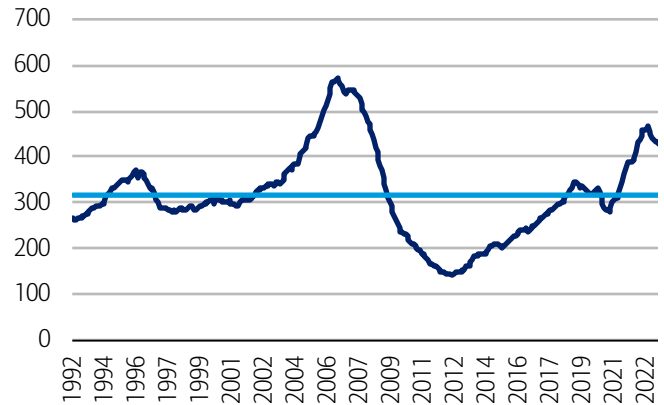


Source: Bloomberg, BofA Global Research

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Exhibit 68: Inventories of single-family homes for sale (SAAR, thous)

New single family home inventories remain above pre-pandemic levels



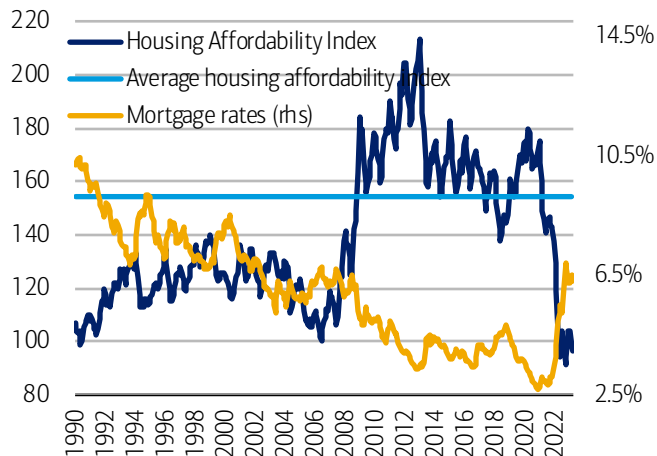
Source: Census Bureau, Haver Analytics, BofA Global Research

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- Housing affordability index.** The NAR's **housing affordability index** was 96.2 in April (down from 97.9 in March & vs. 104.1 LY). Housing affordability is below the long-term average of 139.2 and the 10-year and 20-year averages of 154.3 and 150.4, respectively. The National Association of Realtors factors in median price existing single-family homes, mortgage rates, estimated principal and interest payments, payments as a % of income, and incomes levels to calculate whether or not a typical family could qualify for a mortgage loan when calculating its housing affordability index. A value of 100 means that a family with a median income, as defined by the U.S. Census Bureau, has exactly enough income to qualify for a mortgage on a median-priced home (assuming a 20% down payment). In July 2006, the index bottomed out at 101.1 & peaked at 214.5 in Jan. '13.

Exhibit 69: Housing affordability index vs. mortgage rates

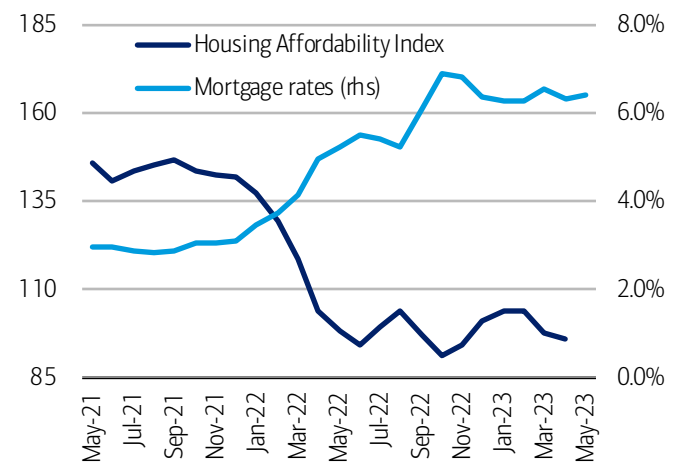
Housing affordability index was 96.2 in Apr., below the LT avg. of 139.2



Source: BofA Global Research, Haver, Federal Home Loan Mortgage Corporation Note: Contract interest rates on commitments for 30-year fixed-rate first mortgages. Prime mortgages only
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Exhibit 70: Housing affordability index vs. mortgage rates

Housing affordability index & the 30-yr. fixed mortgage rate have a -77% correlation



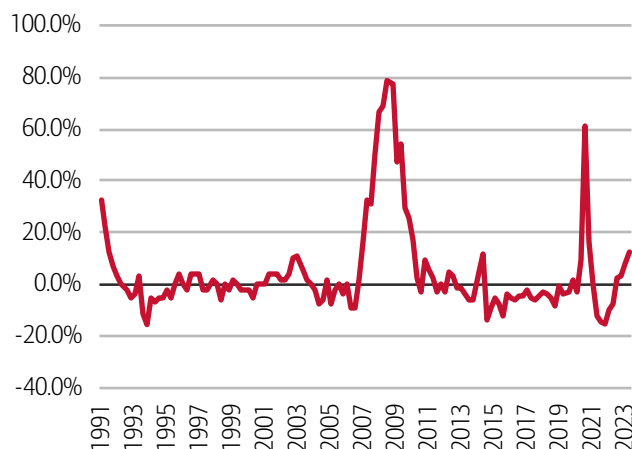
Source: BofA Global Research, Haver, Federal Home Loan Mortgage Note: Contract interest rates on commitments for 30-year fixed-rate first mortgages. Prime mortgages only
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- Mortgage rates** were 6.7% in June, above 6.4% in May & 5.5% LY.
- Mortgage lending standards** According to the 2nd quarter 2023 Senior Loan Officer Survey from the Federal Reserve, trends in lending standards for consumers were tightening for residential mortgages.

- **Lending standards for residential mortgages** experienced 12.9% net tightening in 2Q23 vs. 7.2% net easing in 2Q22.

Exhibit 71: % of Bank survey respondents reporting tightening standards on residential mortgages

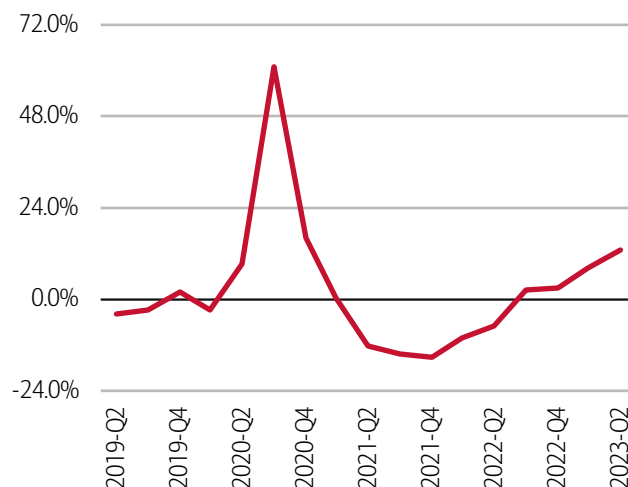
12.9% reported net tightening in 2Q23 vs. 7.2% reporting net easing LY



Source: BofA Global Research, Haver Analytics, Federal Reserve Board Senior Loan Officer Survey
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Exhibit 72: Residential mortgage lending standards (4-yr history)

12.9% reported net tightening in 2Q23 vs. 7.2% reporting net easing LY

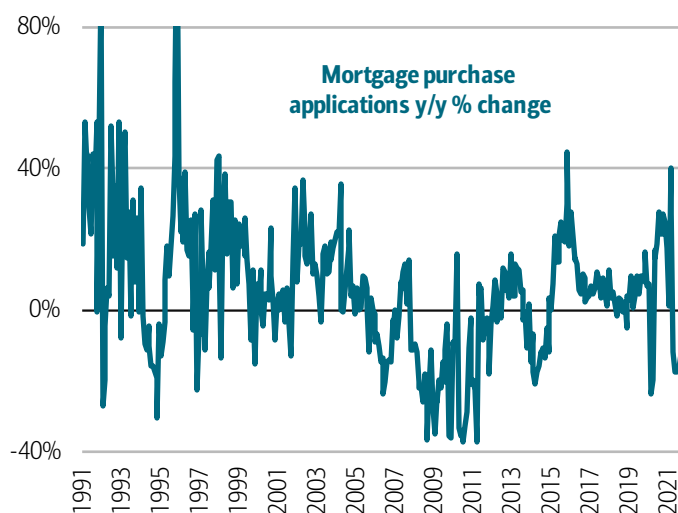


Source: BofA Global Research, Haver Analytics, Federal Reserve Board Senior Loan Officer Survey
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- **Mortgage applications.** The mortgage refinancing application index of the Mortgage Bankers Association was lower at 412.5 in May vs. 461.2 in Apr. and was down -45.1% vs. 751.6 LY. The mortgage purchase application index was 154.4 in May, down vs. 165.8 in Apr. & vs. 224.1 LY.

Exhibit 73: Mortgage Purchase Applications (y/y % change)

Mortgage purchase application index was down -31% y/y in May

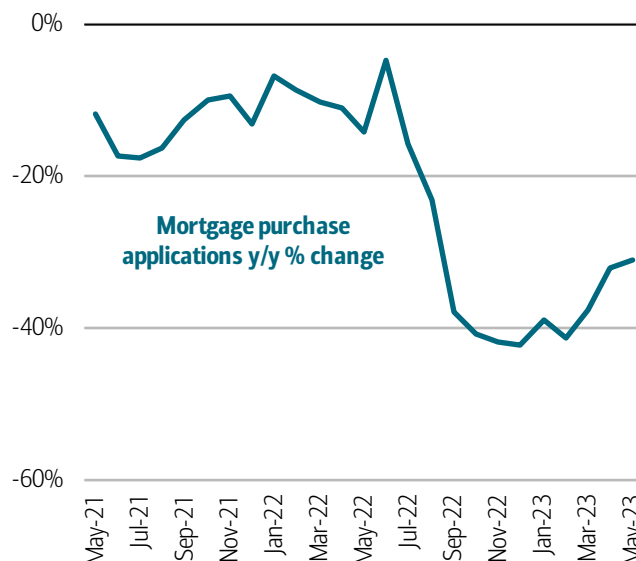


Source: BofA Global Research, Mortgage Bankers Association

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Exhibit 74: Mortgage Purchase Applications (y/y % change)

Mortgage purchase application index was down -31% y/y in May



Source: BofA Global Research, Mortgage Bankers Association

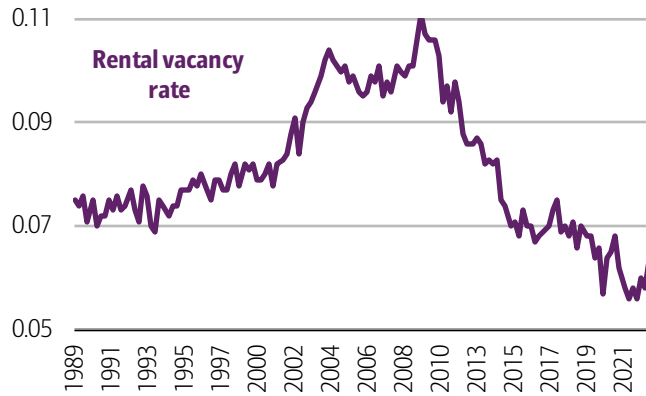
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- **Vacancy rates.** According to Census Bureau data, rental vacancy rates were 6.4% in 1Q23, up vs. 5.8% in 4Q22 and vs. 5.8% LY. Homeowner vacancy rates were 0.8% in 1Q23, flat vs. 4Q22 and 0.8% LY. The homeownership rate was 66% in 1Q23, slightly above 65.9% in 4Q22 and above 65.4% LY.



Exhibit 75: Rental vacancy rate (%)

Rental vacancy rates were 6.4% in 1Q23, up vs. 5.8% in 4Q22 & 5.8% LY

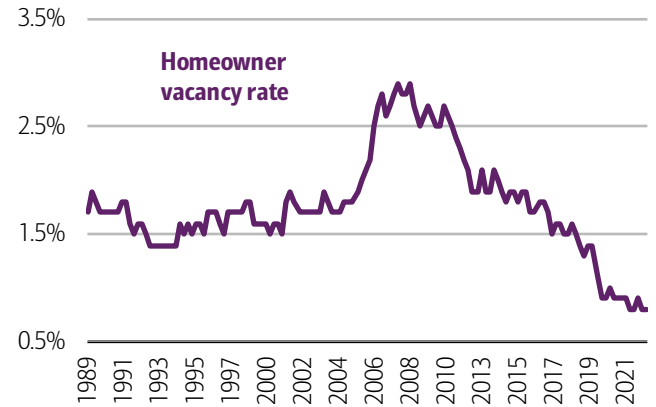


Source: BofA Global Research, US Census Bureau

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Exhibit 76: Homeowner vacancy rate (%)

Homeowner vacancy rates were 0.8% in 1Q23 flat vs. 4Q22

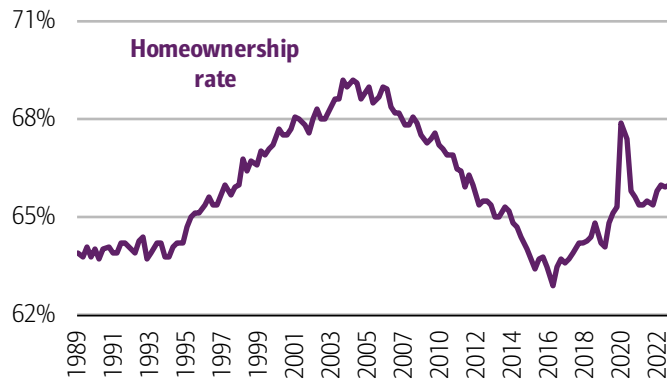


Source: BofA Global Research, US Census Bureau

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Exhibit 77: Homeownership rate

The homeownership rate was 66% in 1Q23

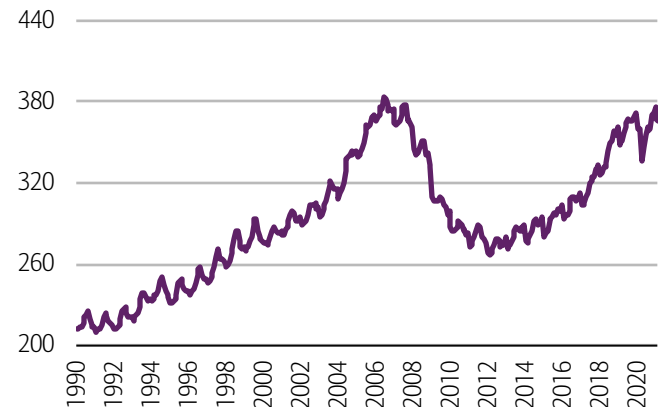


Source: BofA Global Research, US Census Bureau

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Exhibit 78: Real estate agents and brokers employed LT chart (000s)

Number of employees on business payrolls (NSA)



Source: Bureau of Labor Statistics, BofA Global Research

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Cost of Living Trends

- CPI:** CPI was 3.0% in June (vs. 4.0% in May & 9.1% LY), which is above the long-term (since 1982) average of 2.91% and the 10-yr average of 2.63%.

Exhibit 79: CPI by category (y/y change)

CPI increased 3.0% in June vs. 4.0% in May & 9.1% LY

CATEGORY	June	July	August	September	October	November	December	January	February	March	April	May	June
Food	10.0%	10.5%	10.9%	10.8%	10.6%	10.3%	10.1%	9.9%	9.2%	8.3%	7.5%	6.6%	5.7%
Housing	7.3%	7.4%	7.8%	8.0%	7.9%	7.8%	8.1%	8.2%	8.2%	7.8%	7.5%	6.8%	6.3%
Apparel	5.2%	5.1%	5.1%	5.5%	4.1%	3.6%	2.9%	3.1%	3.3%	3.3%	3.6%	3.5%	3.1%
Transportation	19.7%	16.4%	13.4%	12.6%	11.2%	7.8%	3.9%	3.8%	2.6%	-1.0%	0.2%	-2.0%	-5.1%
Medical Care	4.5%	4.8%	5.4%	6.0%	5.0%	4.2%	4.0%	3.1%	2.3%	1.5%	1.1%	0.7%	0.1%
Recreation	4.6%	4.4%	4.1%	4.1%	4.1%	4.7%	5.1%	4.8%	5.0%	4.8%	5.0%	4.5%	4.3%
Education	0.8%	0.5%	0.5%	0.2%	0.0%	0.7%	0.7%	1.0%	1.0%	1.4%	1.6%	1.5%	1.1%
Other	6.7%	6.3%	6.6%	6.9%	6.5%	7.0%	6.4%	6.2%	6.1%	6.1%	6.6%	6.7%	6.3%
Total CPI	9.1%	8.5%	8.3%	8.2%	7.7%	7.1%	6.5%	6.4%	6.0%	5.0%	4.9%	4.0%	3.0%

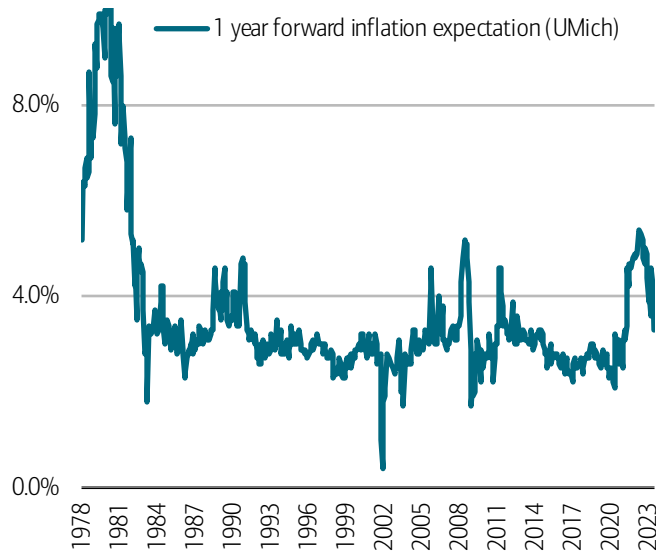
Source: Bureau of Labor Statistics

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Exhibit 80: 1 yr forward inflation expectation (UMich Survey)

The 1 yr forward inflation expectation was 3.3% in June, below 4.2% in May

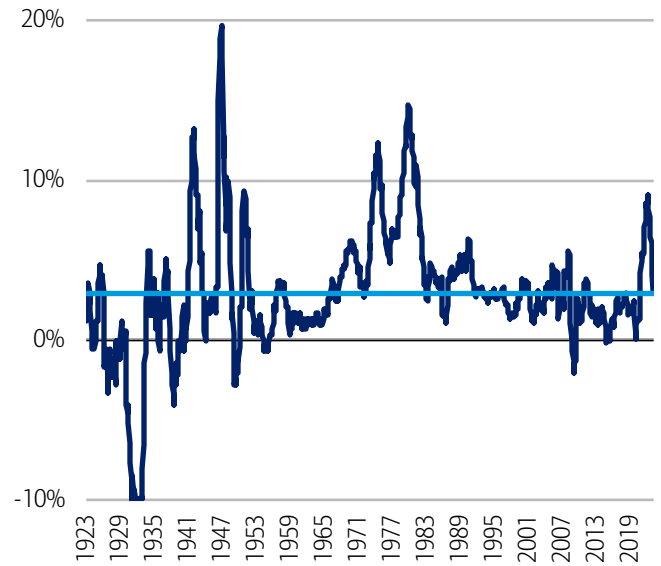


Source: University of Michigan

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Exhibit 81: Historical Consumer Price Index

CPI dropped to 3.0% in June and remains slightly above LT average of 2.9%



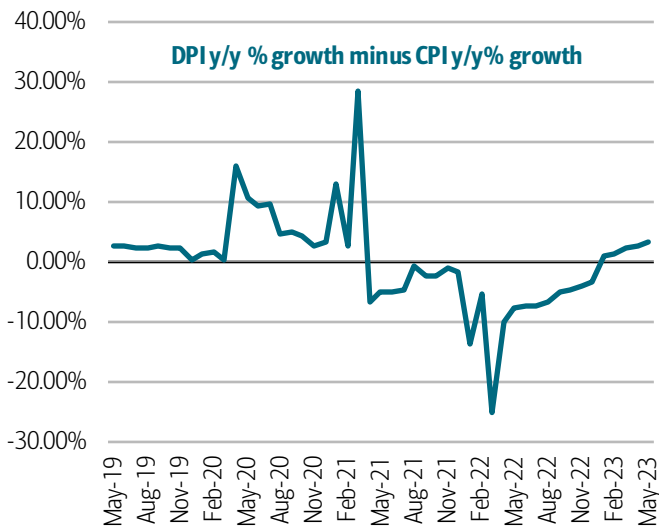
Source: BofA Global Research, Bureau of Labor Statistics

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- **Federal Funds Rate.** The Federal Funds rate was 5.06% in May, up from 4.83% in Apr. and above 0.77% LY.

Exhibit 82: DPI y/y % growth minus CPI y/y % growth (4 yr. history)

Real DPI after subtracting CPI including gas & food

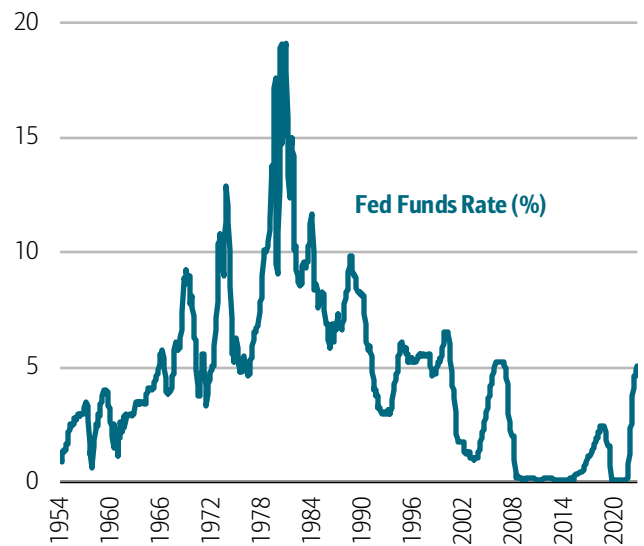


Source: BofA Global Research, Haver Analytics, BEA.gov, based on seasonally adjusted figures

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Exhibit 83: Fed Funds Rate (Long-Term)

The Federal Funds rate was 5.06% in May above 0.77% LY



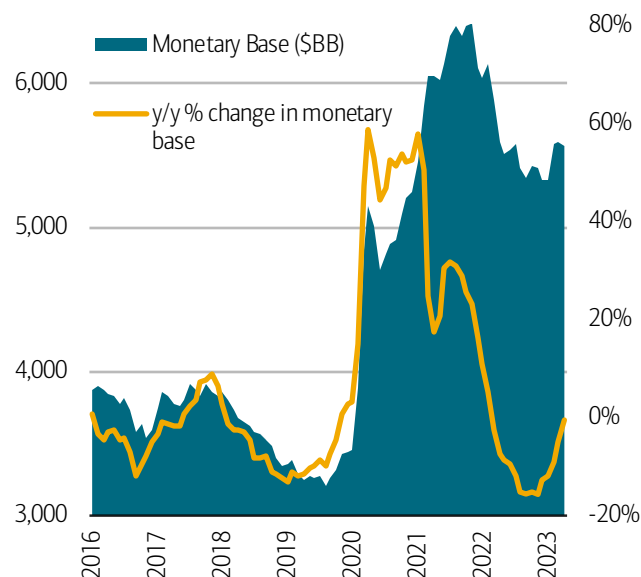
Source: Federal Reserve

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- **Monetary Base.** The monetary base decreased -0.4% y/y in May up vs. -5.0% in Apr. and down from -7.5% LY.

Exhibit 84: Monetary Base 5-year history

The monetary base decreased -0.4% in May vs. -5.0% in Apr. & -7.5% LY

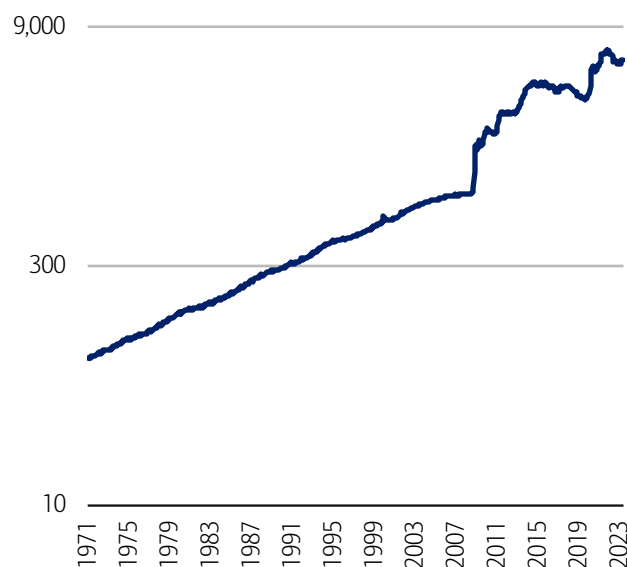


Source: Federal Reserve

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Exhibit 85: Monetary Base (LT history – log scale)

The monetary base has seen a fairly steady increase over the last 50 years

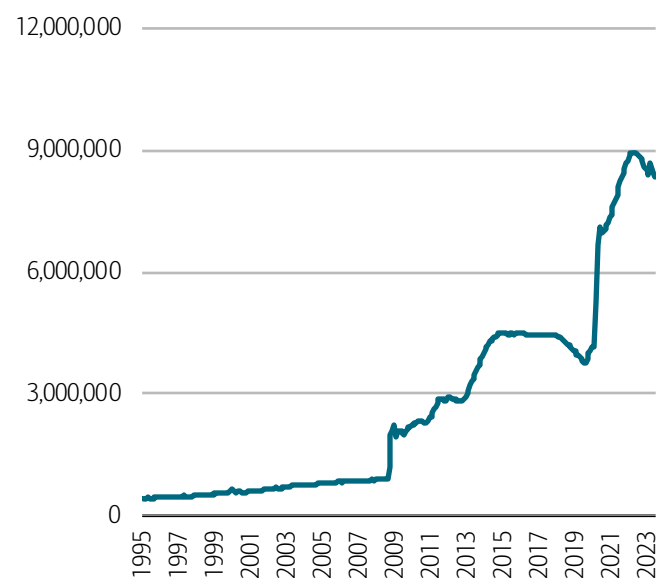


Source: Federal Reserve

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Exhibit 86: All federal reserve banks total assets (\$MM)

All federal reserve banks total assets decreased 6% y/y in June

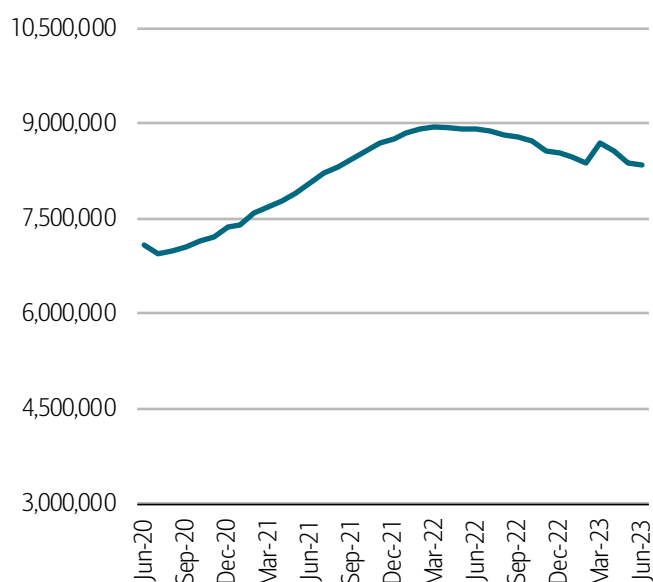


Source: Federal Reserve

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Exhibit 87: All federal reserve banks total assets (\$MM) (3 yr. history)

All federal reserve banks total assets decreased 6% y/y in June



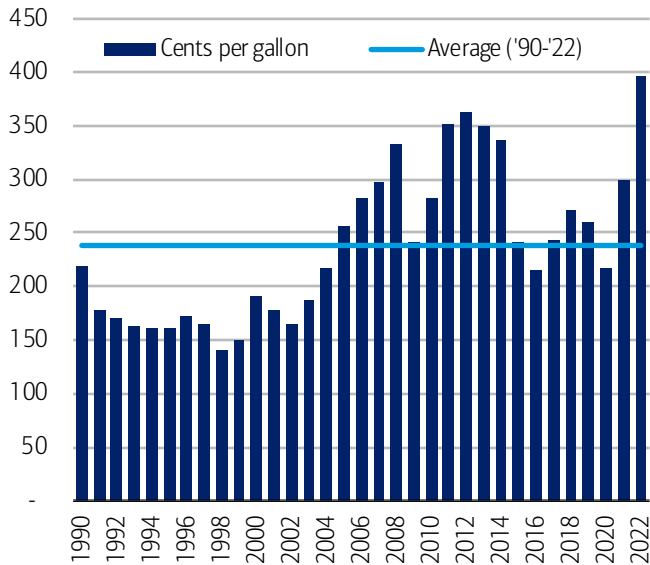
Source: Federal Reserve

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- **Gas prices.** US retail gas prices are \$3.54 in July (through 7/10) down slightly from \$3.57 in June and down -22.4% y/y vs. \$4.56 last year.

Exhibit 88: US Yearly Average Regular Retail Gas Prices

Gas prices were up ~32% y/y in 2022

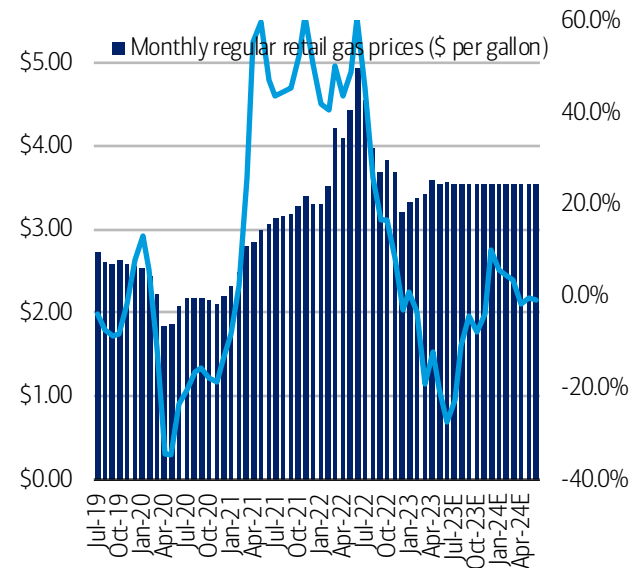


Source: Energy Information Administration, BofA Global Research; 2023 represents YTD average through 2/13

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Exhibit 89: Y/Y retail gas price change forecast

Assuming gas prices hold at July prices, lower gas prices should be a tailwind until Dec. 2023

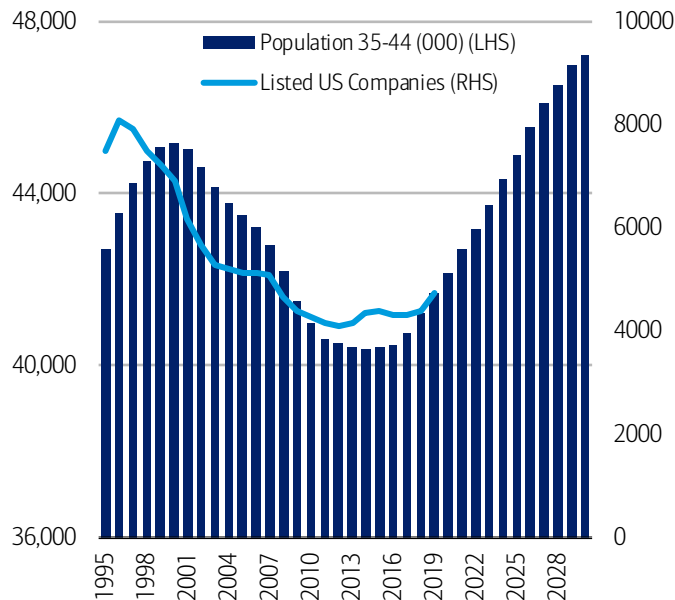


Source: Energy Information Administration, BofA Global Research

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Exhibit 90: Population 35-44 vs. Listed US Companies

Population 35-44 is correlated with # of U.S. listed public companies

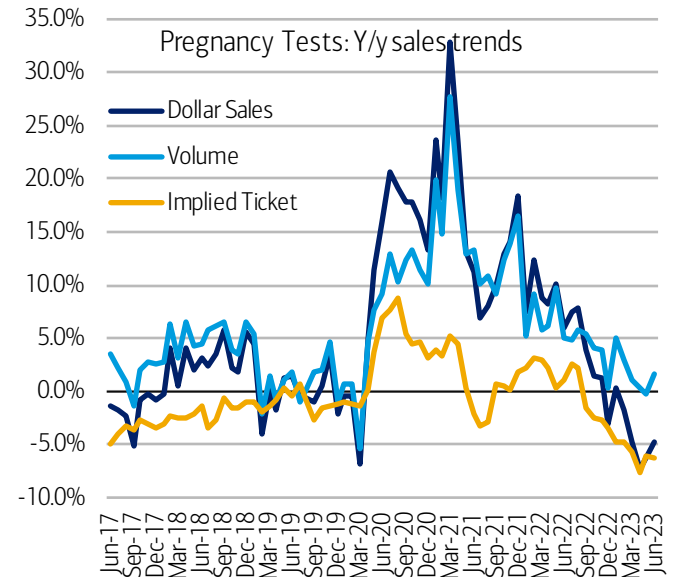


Source: Federal reserve bank of St. Louis, Euromonitor

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Exhibit 91: All Outlets Combined pregnancy tests monthly y/y % sales trends

Pregnancy test dollar sales & volume improve in June



Source: Nielsen, BofA Global Research

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