

BofA on USA

'Tis the season(al)

Card spending was solid during the holidays

Total card spending per household (HH), as measured by BAC aggregated credit and debit cards, was up 0.2% year-over-year (y/y) in December. Card spending per HH rose 0.1% month-over-month (m/m) in December on a seasonally adjusted (SA) basis. Spending was healthy throughout the holidays, particularly given ongoing disinflation, which supported inflation-adjusted spending. Total card spending in the five weeks after Thanksgiving was up 1.3% compared to the same period in 2022 (Exhibit 10).

Seasonality over signal

Our forecasts for the Census Bureau's retail sales report are typically predicated on the signal from the BAC card data. However, we see a risk that seasonal adjustments could swamp underlying spending patterns in the Dec 2023 report. Let's dig a little deeper.

Is December spending less important than it used to be?

Seasonally adjusted retail sales growth was weak in December of 2021 and 2022 (Exhibit 8). We think this was due to front-loading of holiday shopping, which in turn was because i) the pandemic accelerated the ongoing shift toward online shopping, and ii) consumers were concerned about supply chain disruptions. The question is whether or when seasonal adjustments will start to reflect this shift in consumer behavior.

Base case: robust December retail sales

The Census Bureau's estimated seasonal factor (i.e., the ratio of not seasonally adjusted (NSA) to SA retail sales) for Dec 2023 is far more favorable than the seasonal factors for prior Decembers (Exhibit 9). This suggests that seasonal adjustments have caught up to shifting spending patterns. Assuming that the Census Bureau's final seasonal factors are close to its estimates, we forecast above-consensus gains of 1.1% and 0.7% in retail sales ex-autos and the core control group, respectively, for December (Exhibit 1).

Risks: all over the map

However, we note that the seasonal adjustment to the BAC card data for December 2023 is only slightly more favorable than the prior year's adjustment. If the Census Bureau's final seasonal adjustments are in line with those of the BAC card data, we estimate that the retail sales report could come in around 1.5 percentage points weaker than our forecast, across the board. So plausible outcomes for the upcoming report range from very strong to very weak.

What goes up must come down

While seasonal factors can cause large monthly fluctuations in retail sales, they balance out over the course of a full year. The Census Bureau is also projecting unusually unfavorable seasonal factors for 1Q 2024, which would offset the favorable projection for December 2023. So if we do get strong retail sales numbers for December, we are likely to see payback in coming months. By equal measure, weak December data could be offset by strong 1Q data. Therefore, it is important to not miss the forest for the trees. The bottom line is that consumer spending remains on a healthy trajectory.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 11 to 12.

12644474

Timestamp: 11 January 2024 04:30AM EST

11 January 2024

Macro
United StatesBofA
Data
Analytics

Aditya Bhawe
US Economist
BofAS
+1 646 855 9929
aditya.bhawe@bofa.com

Shruti Mishra
US and Global Economist
BofAS
+1 646 855 1040
smishra44@bofa.com

US Economics
BofAS

[See Team Page for List of Analysts](#)

The month of December

Exhibit 1: BofA forecast and Bloomberg consensus for December Census Bureau retail sales

We expect strong gains in retail sales in December

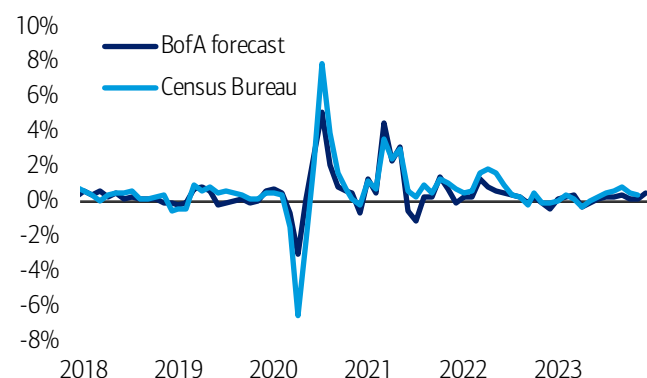
% m/m	BofA forecast	Bloomberg consensus
Retail sales	1.2%	0.4%
ex-autos	1.1%	0.2%
ex-autos and gas	1.0%	0.3%
Core control	0.7%	0.2%

Source: BAC internal data. The core control group is retail sales ex autos, gas, building supplies and restaurants.

BofA GLOBAL RESEARCH

Exhibit 3: Retail sales ex-autos: Census Bureau vs. BofA forecasts (%m/m, SA, 3-month moving average (ma))

We are expecting retail sales ex-autos to increase by 1.1% in December, which would raise the three-month average growth rate

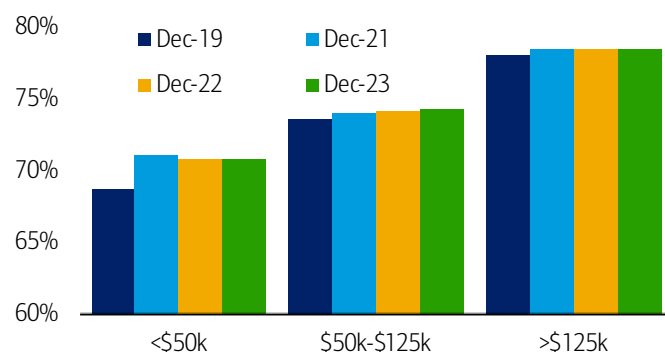


Source: BAC internal data, Census Bureau

BofA GLOBAL RESEARCH

Exhibit 5: Share of discretionary spending in total spending per HH by income (%)

Discretionary spending remained resilient across income cohorts in December, accounting for over 70% of spending by lower-income HHs



Source: BAC internal data. Discretionary spending is total spending ex gas, groceries and utilities. We exclude 2020 because the data were distorted by the pandemic.

BofA GLOBAL RESEARCH

Exhibit 2: Aggregated monthly card spending per HH by major category (%m/m, SA)

Card spending was weak in furniture and clothing in December

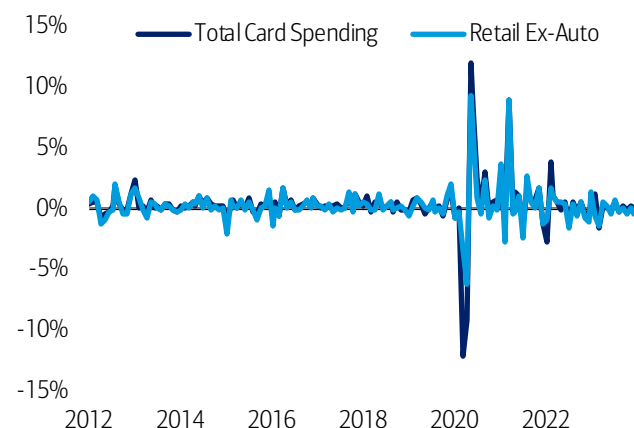
	Dec-23	Nov-23	Oct-23	Sep-23	Aug-23	Jul-23
Gas	1.0%	-3.9%	-3.1%	2.8%	5.9%	1.4%
Furniture	-4.3%	3.1%	-1.3%	-1.2%	-2.3%	-2.7%
Home improvement	-0.9%	-0.2%	0.5%	-1.3%	-1.0%	-0.1%
Clothing	-2.0%	2.4%	-1.7%	-1.3%	-1.8%	0.8%
Grocery	-0.1%	-0.4%	0.9%	-0.2%	0.1%	-0.3%
General Merchandise	0.2%	0.1%	0.3%	0.1%	-0.4%	0.8%
Department Store	-0.9%	1.3%	-1.3%	0.1%	-2.9%	0.3%
Restaurants	0.4%	0.4%	0.5%	0.1%	-0.4%	0.5%
Lodging	0.6%	0.0%	0.0%	-0.2%	-0.7%	-1.6%
Airlines	0.8%	2.9%	-2.9%	-1.1%	-1.3%	1.1%
Total online retail (card not present)	0.1%	-0.2%	-0.3%	0.9%	-0.6%	1.6%

Source: BAC internal data. Card not present is largely online but could include purchases made over the phone.

BofA GLOBAL RESEARCH

Exhibit 4: BAC aggregated monthly card spending per HH (%m/m, SA)

Total card spending per HH was up 0.1% m/m in December on a SA basis

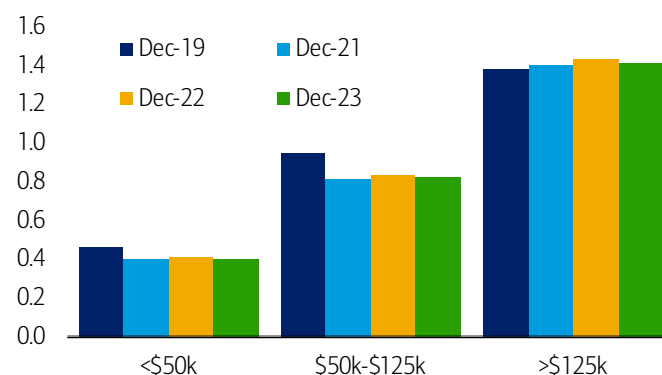


Source: BAC Internal Data

BofA GLOBAL RESEARCH

Exhibit 6: Ratio of credit card spending per HH to debit card spending per HH by income group

For lower- and middle-income HHs, we do not see signs of increased reliance on credit cards relative to 2019

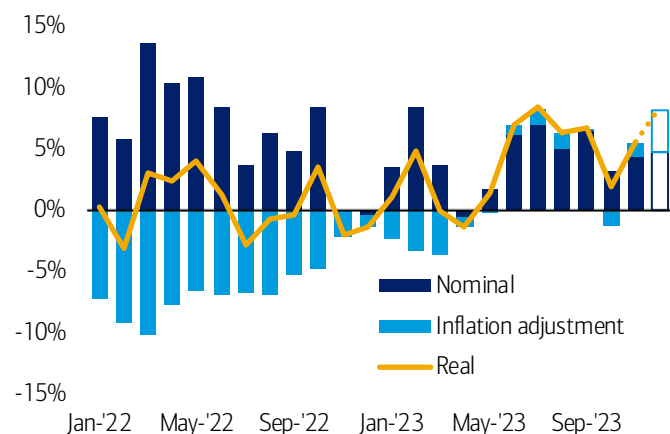


Source: BAC internal data. We exclude 2020 because the data were distorted by the pandemic.

BofA GLOBAL RESEARCH

Exhibit 7: Core control retail sales (3 month annualized % change)

Real core control retail sales increased 5.6% annualized from Aug to Nov 2023. The three-month growth rate could pick up in Dec



Source: BAC internal data, Bureau of Economic Analysis, Haver Analytics. The inflation adjustment uses a price index reported by Haver Analytics. It converts nominal spending into real spending, so it is negative when inflation is positive and vice versa. BofA Projections for December are represented by the dotted line and white boxes above. We assume nominal core control sales are in line with our forecasts, and inflation is the same as it was in November.

BofA GLOBAL RESEARCH

Exhibit 8: Census Bureau headline (total) and ex-auto retail sales in the month of December (%m/m SA)

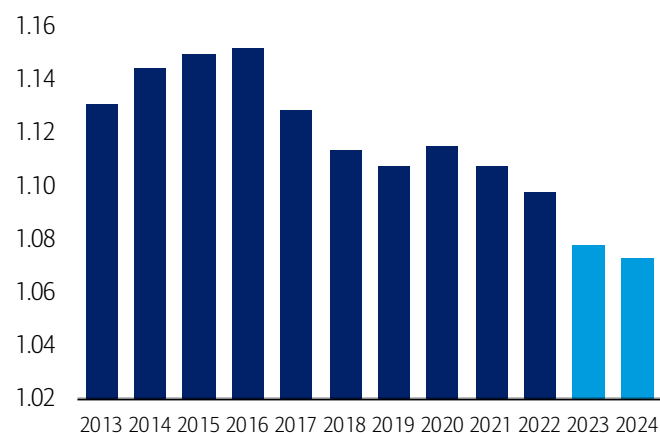
Seasonally adjusted retail sales growth was weak in December of 2021 and 2022. We think this is because holiday spending has become less concentrated in the month of December

**Source:** Census Bureau

BofA GLOBAL RESEARCH

Exhibit 9: Census Bureau seasonal factors for headline retail sales in the month of December

Relatively favorable (i.e., lower) estimated seasonal factors in December 2023 and 2024 suggest that the Census Bureau's seasonal adjustments are catching up to shifting spending patterns



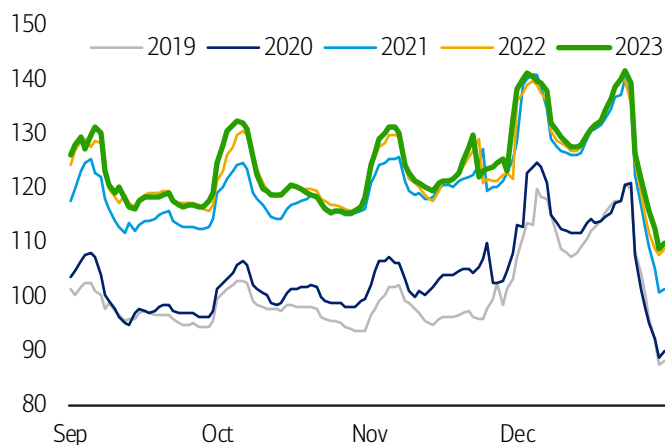
Source: Census Bureau. Note: The seasonal factors for 2023 and 2024 are estimates from the Census Bureau, which are subject to change.

BofA GLOBAL RESEARCH

Holiday spending update

Exhibit 10: Total card spending per HH, based on BAC aggregated credit and debit card data (7-day ma, index, average of last four weeks of Aug 2019 = 100)

Total card spending in the five weeks after Thanksgiving was up 1.3% compared to the same period in 2022

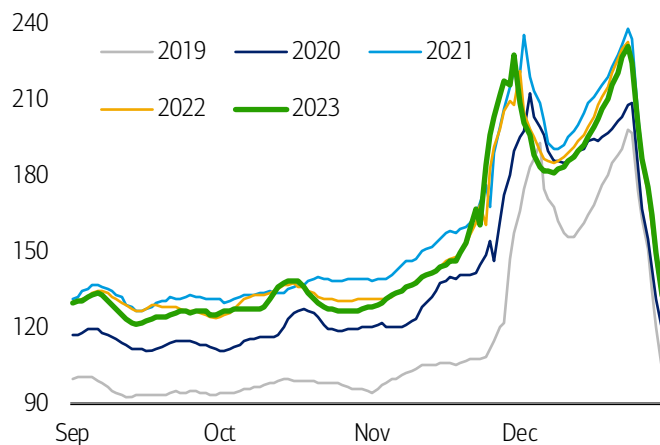


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 11: Spending per HH on holiday items, based on BAC aggregated credit and debit card data (7-day ma, index, average of last four weeks of Aug 2019 = 100)

In the five weeks after Thanksgiving, spending on holiday items was 0.2% higher than in the same period last year

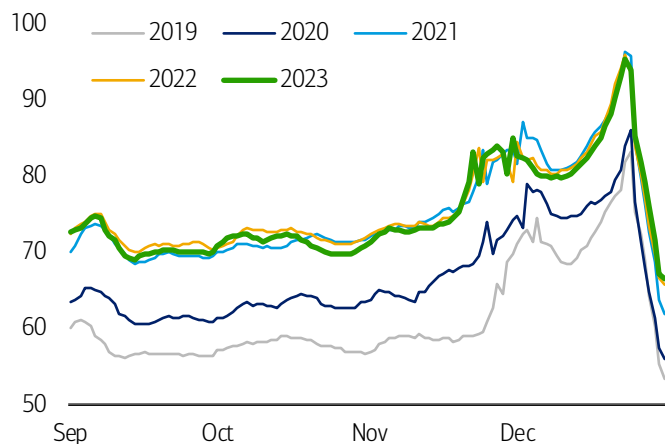


Source: BAC internal data. Holiday items include all MCC codes for which spending in Nov-Dec is at least 20% of total annual spending in the category

BofA GLOBAL RESEARCH

Exhibit 12: Retail ex autos spending per HH, based on BAC aggregated credit and debit card data (7-day ma, index, average of last four weeks of Aug 2019 = 100)

In the five weeks after Thanksgiving, retail ex autos spending was also 0.2% higher than in the same period last year

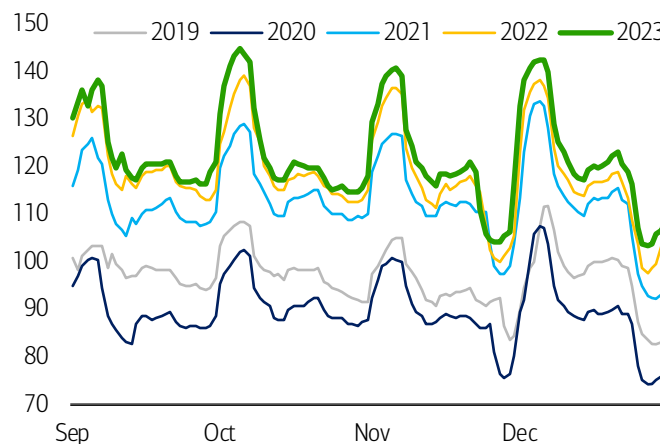


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 13: Spending per HH on services, based on BAC aggregated credit and debit card data (7-day ma, index, average of last four weeks of Aug 2019 = 100)

In the five weeks after Thanksgiving, services spending was 3.6% higher than in the same period last year



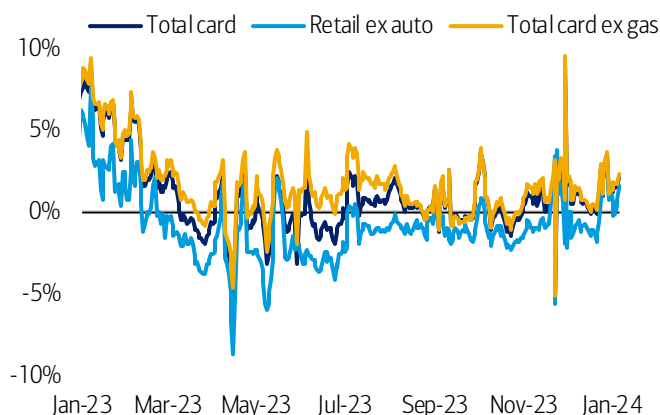
Source: BAC internal data

BofA GLOBAL RESEARCH

The big picture

Exhibit 14: Total card, retail ex auto and total card ex gas spending, per HH, based on BAC aggregated card data (y/y %change of the 7-day ma of spending levels)

Total card spending ex gas came in at 2.4% y/y in the week ending Jan 6

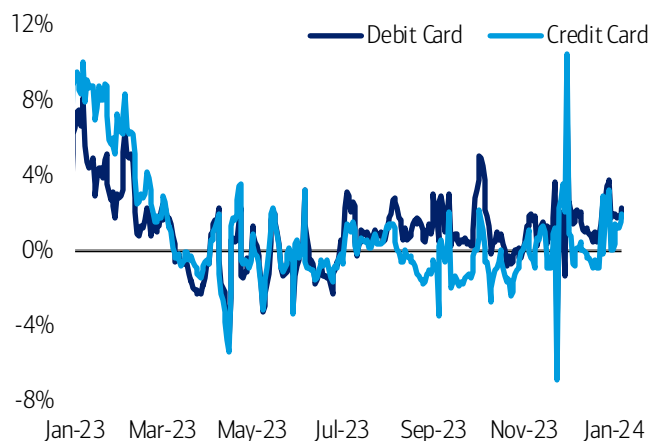


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 16: Total credit card and total debit card spending, per HH, based on BAC aggregated card data (y/y %change of the 7-day ma of spending levels)

Debit and credit card spending growth were 2.3% y/y and 2.0% y/y, respectively, in the week ending Jan 6

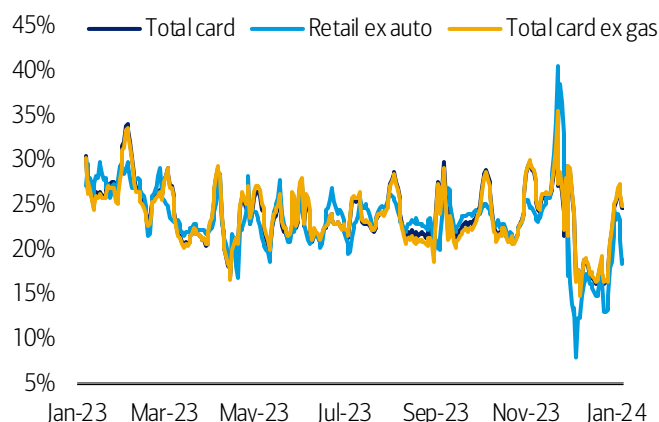


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 15: Total card, retail ex auto and total card ex gas spending, per HH, based on BAC aggregated card data (four-year %change of the 7-day ma of spending levels)

Total card spending growth was 24.6% on a four-year basis in the week ending Jan 6

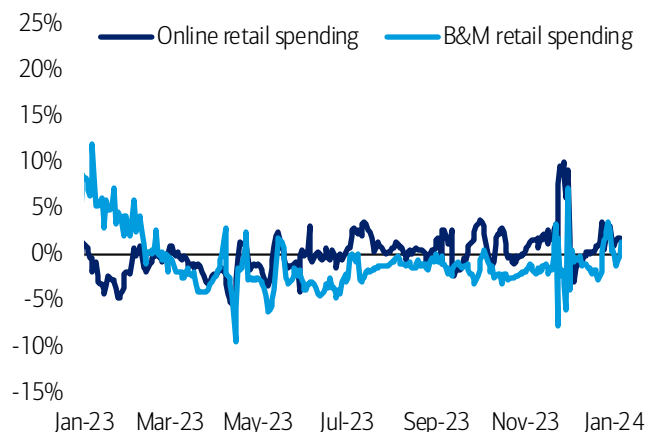


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 17: Online (card not present) and B&M retail spending, per HH, based on BAC aggregated card data (y/y %change of 7-day ma of spending levels)

Both B&M and online retail spending were up around 1.0% on a y/y basis in the week ending Jan 6



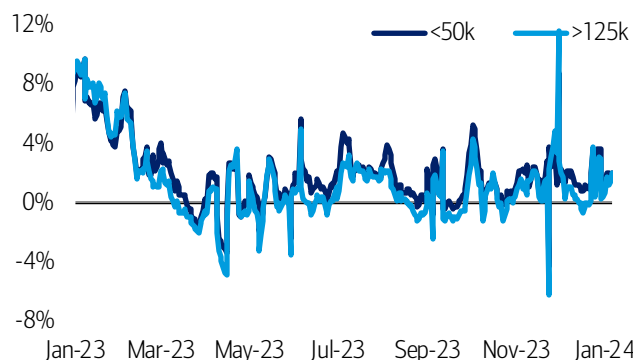
Source: BAC internal data. Note: B&M retail means retail purchases at the store. Card not present is largely online but could include purchases made over the phone.

BofA GLOBAL RESEARCH

Income-based trends

Exhibit 18: Total spending ex groceries and gas, per HH by income group, based on aggregated BAC card data (y/y % change of the 7-day moving average of spending levels)

Total card spending ex groceries and gas was at 2.0% y/y for both income groups in the week ending Jan 6

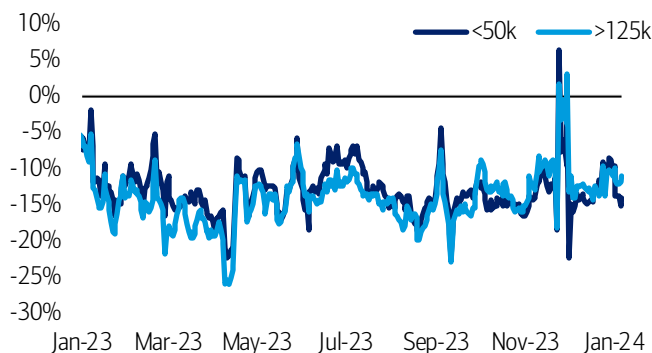


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 20: Furniture spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Furniture spending growth was largely negative on a y/y basis for both income groups in 2023

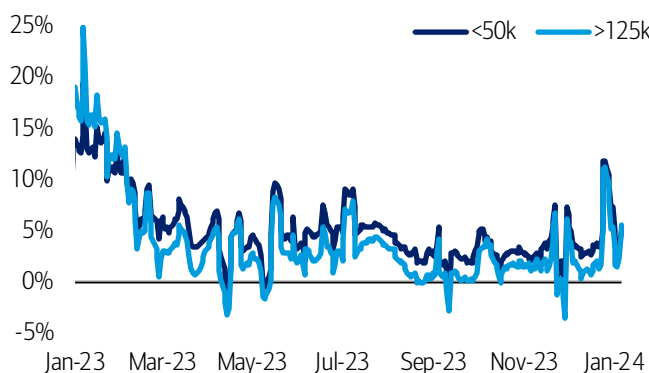


Source: BAC internal data.

BofA GLOBAL RESEARCH

Exhibit 22: Restaurant spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Y/y restaurant spending growth was slightly stronger among higher-income HHs than lower-income HHs in the week ending Jan 6

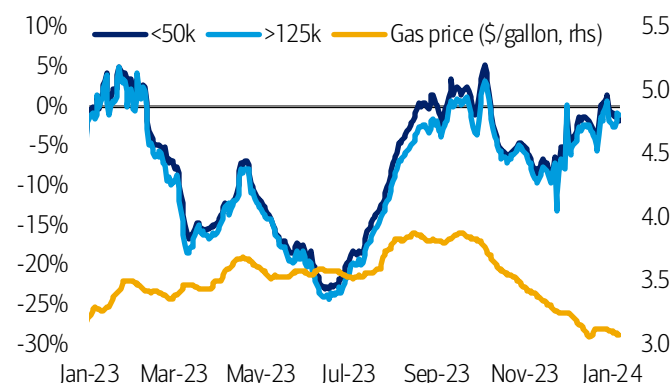


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 19: Gas spending per HH by income group vs. retail gas price per gallon (y/y % change of the 7-day ma of spending levels)

With the ongoing decline in gas prices, y/y gas spending remained negative for both income cohorts

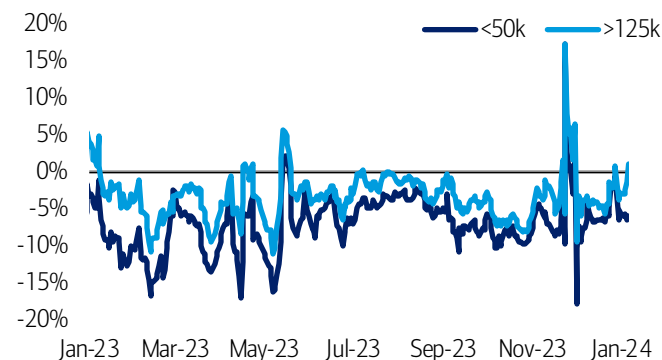


Source: BAC internal data, American Automobile Association

BofA GLOBAL RESEARCH

Exhibit 21 Clothing spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Y/y clothing spending growth was also mostly negative for both income cohorts in 2023

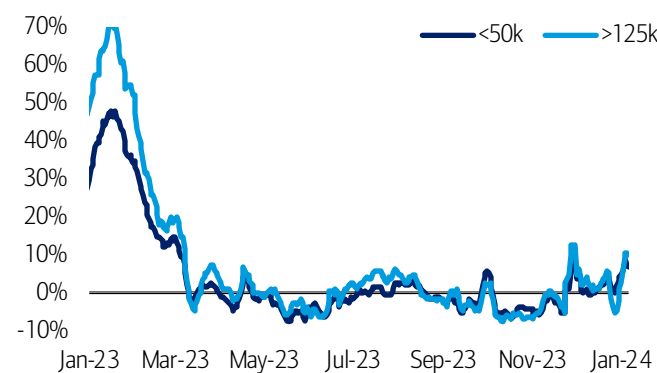


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 23: Airline spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Y/y airline spending growth surged to 10.2% and 6.7% for higher and lower income HHs, respectively in the week ending Jan 6

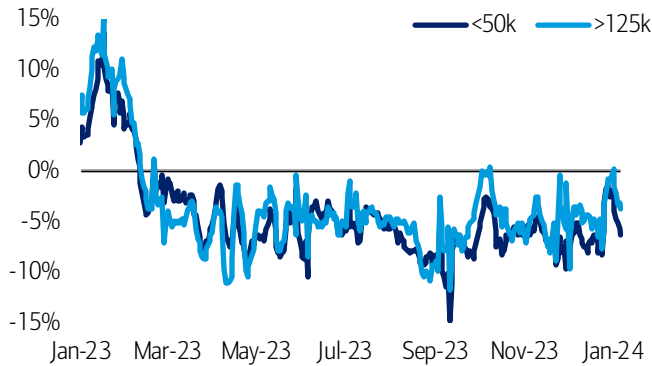


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 24: Lodging spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Y/y lodging spending growth has largely been negative for both income cohorts since early 2023



Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 26: Cruise spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Cruise spending growth for higher-income HHs outpaced that for lower-income HHs in the week ending Jan 6

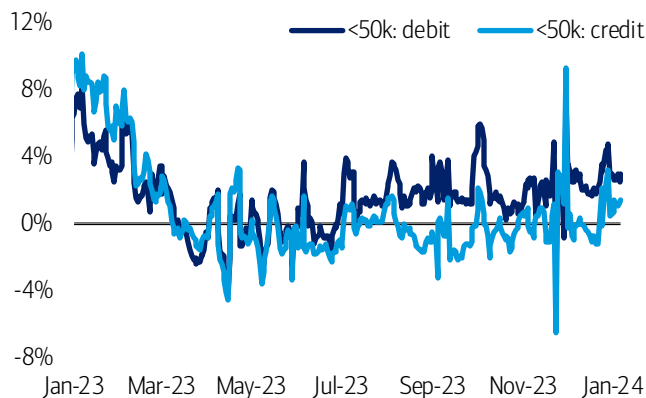


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 28: Total credit card and total debit card spending per HH for lower-income group (y/y % change of the 7-day ma of spending levels)

Lower-income debit card spending growth significantly outpaced credit card spending growth on a y/y basis in the week ending Jan 6

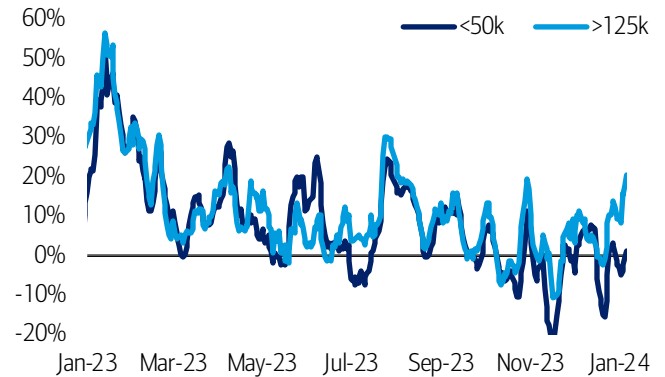


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 25: Entertainment spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Y/y entertainment spending rose to 20.4% for higher-income HHs in the week ending Jan 6

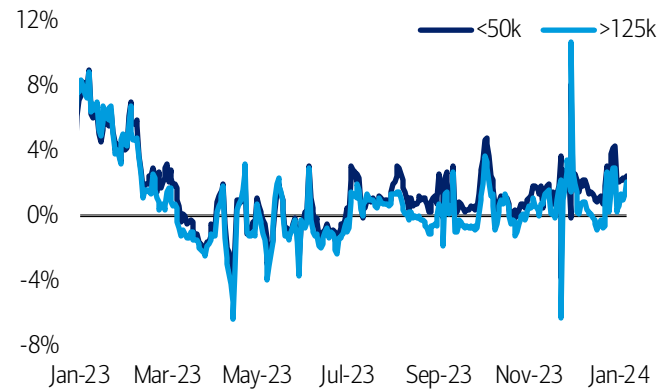


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 27: Total card spending per HH by income group (y/y % change of the 7-day ma of spending levels)

Total card spending growth for lower-income HHs (2.5% y/y) outpaced higher-income HHs (2.1% y/y) in the week ending Jan 6

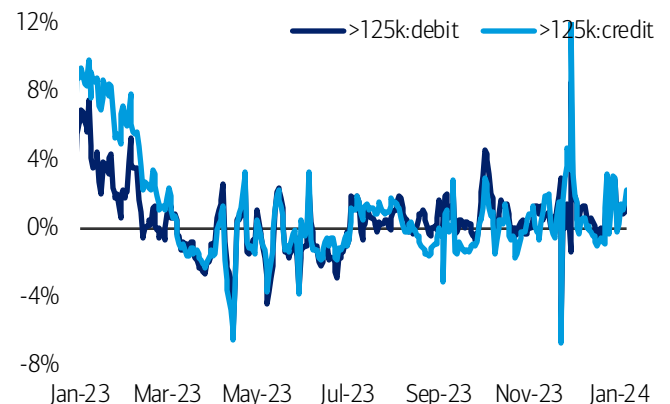


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 29: Total credit card and total debit card spending per HH for higher-income group (y/y % change of the 7-day ma of spending levels)

Y/y higher-income credit card spending growth slightly outpaced debit card spending growth in the week ending Jan 6



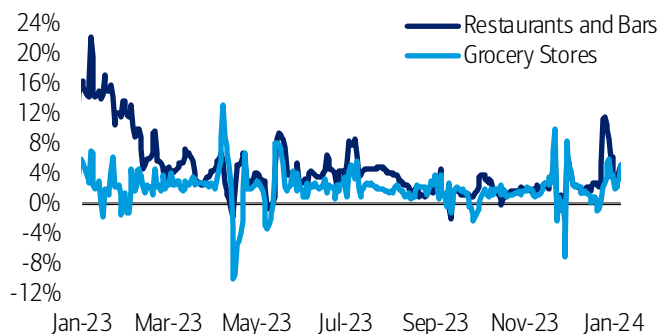
Source: BAC internal data

BofA GLOBAL RESEARCH

Sector trends

Exhibit 30: Spending per HH at restaurants and bars and grocery stores, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Spending growth at restaurants & bars as well as grocery stores was at 5.1% y/y in the week ending Jan 6

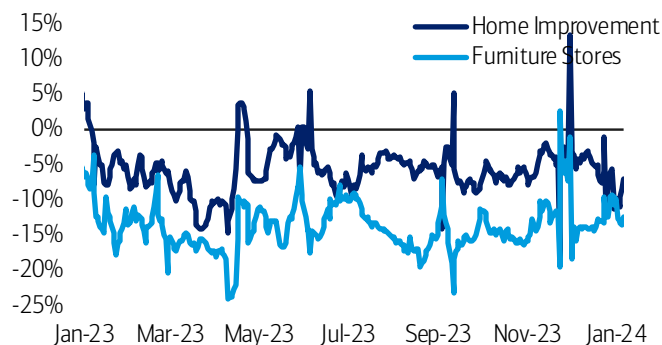


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 31: Spending per HH at home improvement and furniture stores, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Furniture and home improvement spending growth remained negative on a y/y basis in the week ending Jan 6

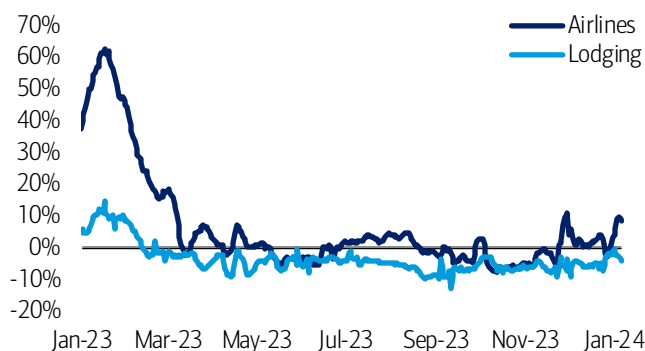


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 32: Spending per HH on airlines and lodgings, based on BAC aggregated card data, (y/y % change of the 7-day ma of spending levels)

On a y/y basis, lodging spending growth remained negative, while airline spending growth increased 8.3% in the week ending Jan 6

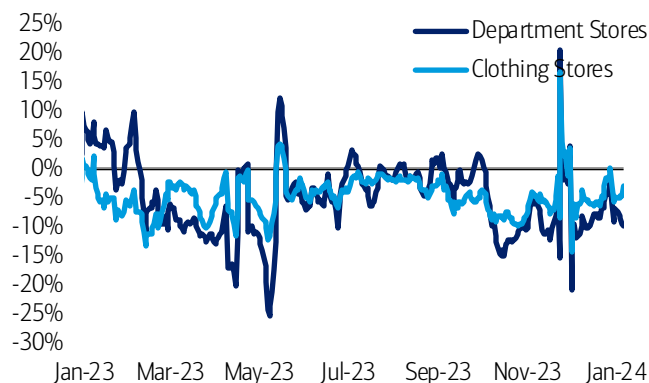


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 33: Spending per HH at department and clothing stores, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Y/y clothing spending growth was largely negative in 2023

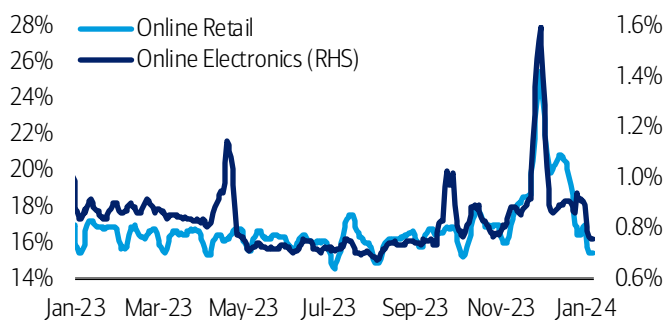


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 34: Online retail and online electronic (card not present) spending per HH as a share of total card spending (% , 7-day moving average)

The share of online retail spending was 15.4% in the week ending Jan 6

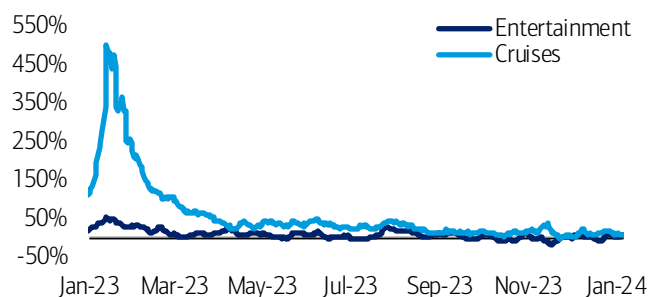


Source: BAC internal data

BofA GLOBAL RESEARCH

Exhibit 35: Spending per HH on entertainment and cruises, based on BAC aggregated card data (y/y % change of the 7-day ma of spending levels)

Spending growth on cruises has been stable after the reopening spike



Source: BAC internal data

BofA GLOBAL RESEARCH

Heat Map

Exhibit 36: Aggregated daily card spending growth per HH by major category, Dec 24–Jan 6 (1-year and 4-year %change of the 7-day ma of spending levels)
Total card spending per HH was up 2.2% y/y in the week ending Jan 6. The 4-year growth rate was 24.6% in the week ending Jan 6

	1/6	1/5	1/4	1/3	1/2	1/1	12/31	12/30	12/29	12/28	12/27	12/26	12/25	12/24
Total card spending														
1-yr % change	2.2%	1.7%	1.6%	1.5%	1.7%	1.2%	1.2%	1.0%	3.5%	3.5%	3.0%	2.2%	1.0%	2.8%
4-yr % change	24.6%	24.6%	26.0%	27.0%	26.6%	25.3%	24.7%	24.3%	22.3%	20.7%	17.8%	16.3%	16.4%	16.3%
Retail ex auto														
1-yr % change	1.6%	0.8%	0.3%	-0.1%	-0.2%	0.6%	1.2%	0.7%	2.8%	3.6%	2.7%	2.0%	1.6%	0.7%
4-yr % change	18.8%	18.5%	21.0%	23.3%	24.0%	23.4%	24.7%	21.5%	18.7%	18.1%	14.8%	13.3%	13.1%	13.0%
Airlines														
1-yr % change	8.3%	9.1%	9.8%	9.0%	6.1%	4.2%	3.2%	1.1%	-1.0%	-1.8%	-2.7%	-1.4%	-0.1%	2.7%
4-yr % change	18.6%	20.1%	19.1%	17.1%	13.4%	12.7%	12.6%	12.7%	12.6%	12.2%	11.9%	11.6%	11.8%	11.5%
Lodging														
1-yr % change	-3.8%	-3.3%	-3.0%	-2.5%	-2.0%	-0.5%	-1.3%	-1.9%	-1.5%	-1.8%	-2.4%	-3.2%	-5.3%	-7.3%
4-yr % change	3.9%	4.6%	6.5%	7.2%	7.6%	8.9%	7.8%	7.7%	7.7%	7.4%	7.5%	8.3%	7.4%	9.0%
Entertainment														
1-yr % change	10.6%	8.6%	6.5%	5.4%	1.9%	3.4%	3.6%	4.2%	6.4%	8.0%	8.0%	5.9%	5.6%	1.4%
4-yr % change	4.5%	0.2%	-0.2%	0.4%	-2.0%	-2.7%	-4.6%	-4.5%	-5.5%	-6.6%	-8.8%	-10.6%	-9.5%	-7.5%
Restaurants & bars														
1-yr % change	5.1%	4.3%	2.8%	2.2%	2.3%	4.0%	6.2%	6.1%	8.6%	10.0%	10.6%	11.5%	11.4%	5.2%
4-yr % change	22.5%	20.6%	22.1%	25.1%	26.8%	27.5%	28.3%	26.8%	25.0%	24.4%	22.8%	21.3%	19.9%	19.8%
Transit														
1-yr % change	2.3%	2.4%	2.4%	3.1%	3.3%	3.2%	3.9%	3.7%	5.5%	6.0%	5.8%	0.7%	1.5%	4.6%
4-yr % change	9.3%	8.5%	8.5%	10.2%	10.3%	9.9%	10.1%	10.4%	9.7%	9.0%	5.3%	2.4%	2.9%	4.7%
Gas														
1-yr % change	-1.2%	-0.7%	-1.1%	-1.6%	-1.5%	-1.3%	-1.1%	-0.8%	1.4%	1.1%	0.4%	0.0%	-1.1%	-0.3%
4-yr % change	17.5%	18.2%	19.1%	19.0%	19.1%	18.8%	18.3%	18.3%	17.9%	18.6%	17.8%	15.7%	14.1%	13.1%
Clothing														
1-yr % change	-3.1%	-4.6%	-4.7%	-5.1%	-5.1%	-5.0%	-4.7%	-5.6%	-2.8%	0.1%	-0.8%	-2.1%	-1.7%	-2.9%
4-yr % change	9.6%	9.1%	12.2%	13.6%	12.5%	10.2%	12.8%	7.8%	5.4%	4.2%	-1.9%	-3.2%	-1.9%	-2.3%
Furniture														
1-yr % change	-12.4%	-13.5%	-13.2%	-13.1%	-12.6%	-10.0%	-10.6%	-9.6%	-9.4%	-9.6%	-10.4%	-12.5%	-12.4%	-9.7%
4-yr % change	-8.8%	-9.8%	-6.0%	-0.8%	0.5%	-0.3%	2.1%	0.6%	-6.2%	-10.0%	-14.2%	-16.6%	-16.0%	-15.5%
Department store														
1-yr % change	-9.8%	-9.5%	-8.3%	-8.1%	-7.4%	-7.0%	-6.7%	-9.3%	-6.0%	-2.1%	-2.9%	-4.2%	-4.3%	-5.5%
4-yr % change	-29.3%	-27.9%	-24.3%	-21.9%	-21.3%	-22.8%	-15.9%	-17.8%	-14.3%	-11.9%	-15.5%	-15.6%	-14.0%	-13.7%
Home improvement														
1-yr % change	-7.0%	-8.4%	-9.5%	-10.9%	-9.8%	-11.2%	-11.3%	-9.9%	-5.5%	-6.3%	-6.7%	-8.6%	-11.4%	-1.0%
4-yr % change	20.6%	18.4%	19.3%	19.6%	20.3%	17.2%	19.3%	26.4%	27.5%	26.3%	24.6%	23.3%	28.0%	26.0%
Online electronics (card not present)														
1-yr % change	-9.4%	-8.1%	-8.1%	-7.4%	-7.3%	-7.3%	-8.1%	-8.2%	-8.3%	-10.1%	-14.6%	-16.9%	-20.1%	-18.7%
4-yr % change	16.8%	16.6%	18.2%	19.3%	18.5%	15.6%	15.3%	17.0%	15.3%	13.9%	11.8%	10.9%	9.8%	8.2%
Grocery														
1-yr % change	5.1%	3.2%	2.8%	2.3%	2.1%	3.6%	4.0%	3.7%	5.9%	5.5%	3.6%	2.7%	2.2%	0.3%
4-yr % change	12.9%	13.0%	16.5%	18.7%	19.6%	19.4%	19.9%	16.2%	13.7%	14.5%	12.0%	10.9%	10.6%	11.2%
General Merchandise														
1-yr % change	5.1%	3.9%	3.5%	2.8%	2.6%	4.1%	4.9%	2.9%	3.9%	5.5%	4.0%	2.3%	2.1%	1.0%
4-yr % change	30.3%	29.7%	34.4%	38.8%	40.2%	38.6%	42.4%	33.6%	28.9%	27.5%	21.5%	19.5%	19.4%	19.6%
Total B&M retail														
1-yr % change	1.3%	-0.1%	-0.7%	-1.2%	-1.2%	0.0%	0.6%	0.2%	2.5%	3.5%	2.5%	1.8%	1.6%	0.2%
4-yr % change	7.8%	7.2%	9.9%	12.3%	13.0%	12.7%	13.6%	10.8%	8.7%	9.1%	6.0%	4.7%	4.4%	4.4%
Total online retail (card not present)														
1-yr % change	1.2%	1.7%	1.7%	1.5%	1.5%	0.9%	1.3%	1.6%	3.1%	3.0%	2.5%	1.8%	0.4%	3.4%
4-yr % change	64.3%	66.3%	68.3%	69.8%	70.8%	70.4%	72.2%	74.7%	71.2%	66.5%	63.7%	61.0%	58.3%	55.6%
Total card debit														
1-yr % change	2.3%	1.7%	1.9%	1.7%	1.9%	1.8%	2.0%	1.7%	3.8%	3.7%	3.4%	2.6%	1.8%	2.6%
4-yr % change	28.3%	29.0%	30.8%	31.8%	31.4%	30.1%	29.2%	28.0%	25.9%	23.9%	20.5%	18.7%	18.6%	18.7%
Total card credit														
1-yr % change	2.0%	1.5%	1.2%	1.2%	1.4%	0.4%	0.1%	0.1%	3.1%	3.2%	2.5%	1.5%	-0.1%	2.9%
4-yr % change	19.9%	19.1%	20.0%	21.0%	20.6%	19.4%	19.2%	19.7%	17.6%	16.4%	14.1%	13.2%	13.5%	13.1%

Source: BAC internal data. Note: The 1-yr % change shows the change between the current date at the head of the table column and its comparable date a year ago and the 4-yr % change shows the percentage change with the comparable date four years ago. Total card spending includes total BAC card activity, which captures retail sales and services that are paid with cards. Does not include ACH payments. B&M (Brick & Mortar) retail means retail purchases at the store. Card not present is largely online but could include purchases made over the phone.

BofA GLOBAL RESEARCH



Disclaimer

Selected Bank of America ("BAC") transaction data are used to inform the macroeconomic views expressed in this report and should be considered in the context of other economic indicators and publicly available information. In certain instances, the data December provide directional and/or predictive value. The data used are not comprehensive; they are based on aggregated and anonymized selections of BAC data and December reflect a degree of selection bias and limitations on the data available.

Methodology explained

Readers should be aware that although the BAC datasets utilized in our analysis represent a significant number of data points, they nevertheless present a degree of selection bias, including but not limited to income levels and geographies. In addition, the data is limited to debit and credit cards and does not include other payment methods such as cash or checks.

Data regarding merchants who receive payments are identified and classified by the Merchant Categorization Code (MCC) defined by financial services companies. The data are mapped using proprietary methods from the MCCs to the North American Industry Classification System (NAICS), which is also used by the Census Bureau, in order to classify spending data by subsector. Spending data December also be classified by other proprietary methods not using MCCs.

BAC data used in this report include spending from active US households (HHs) only. Spending from corporate cards are excluded.

Our methodology for calculating the growth rates for daily data: we calculate the %y/y growth rate and the 4-year % change by matching calendar days (Jan 1 2024 is matched to Jan 1 2023, and Jan 1 2020, respectively). The % change is calculated based on the 7-day moving average of spending levels.

Unless otherwise noted, the monthly subsector data are adjusted to control for seasonality and other factors.

Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations.

Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofamli.com/BofASEDisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options,



futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

US Economics

Michael Gapen

US Economist

BofA

michael.gapen@bofa.com

Aditya Bhawe

US Economist

BofA

aditya.bhawe@bofa.com

Stephen Juneau

US Economist

BofA

stephen.juneau@bofa.com

Shruti Mishra

US and Global Economist

BofA

smishra44@bofa.com

Jeseo Park

US Economist

BofA

jeseo.park@bofa.com

