Outlook for the US consumer

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Apollo Global Management

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Table of contents:

- Overview
- Leading indicators of consumer spending
- Health of the household sector balance sheet
- Outlook for spending on housing
- Outlook for spending on cars
- Outlook for spending on restaurants
- Outlook for spending on travel
- Outlook for spending on other consumer goods

Source: Apollo Chief Economist
Overview
October data shows weakness in retail sales after student loan payments restarted

Source: Census Bureau, Haver Analytics, Apollo Chief Economist
Consumer spending slowed down in October after student loan payments restarted.
The pace of job growth continues to slow

Fed starts raising rates

Consensus forecast

Source: BLS, Haver Analytics, Apollo Chief Economist
Retail sales slowing down since the Fed started hiking rates

Source: Census Bureau, Haver Analytics, Apollo Chief Economist
Personal consumer spending has been slowing down since the Fed started hiking.
Share of consumer spending on services still below pre-pandemic levels

Source: BEA, Haver Analytics, Apollo Chief Economist
Comparing the level of nominal retail spending today with February 2020 across sectors

<table>
<thead>
<tr>
<th></th>
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<td>Other General Merchandise Stores</td>
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<td>99</td>
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<td>Building Materials &amp; Supply Dealers</td>
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<td>Sporting Goods, Hobby, Book &amp; Music Stores</td>
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<td>Food &amp; Beverage Stores</td>
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<td>All Other Gen Merchandise Stores</td>
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Note: Nominal consumer spending shown. Source: Census Bureau/Haver Analytics, Apollo Chief Economist
Comparing the level of nominal retail spending today with February 2020 across sectors

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<tbody>
<tr>
<td>Total</td>
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<td>83</td>
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<td>120</td>
<td>130</td>
<td>132</td>
<td>132</td>
<td>133</td>
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<td>Building Materials, Garden Equipment &amp; Supply Dealers</td>
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<td><strong>Motor Vehicle Dealers</strong></td>
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<td>Motor Vehicle &amp; Parts Dealers</td>
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<td>Miscellaneous Stores Retailers</td>
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<td>Food Services &amp; Drinking Places</td>
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<td>Retail Sales &amp; Food Services Excl Motor Vehicles &amp; Parts Dealers</td>
<td>100</td>
<td>95</td>
<td>81</td>
<td>108</td>
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<td>Total Excl Motor Vehicle &amp; Parts Dealers</td>
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<td>88</td>
<td>112</td>
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<td>Automotive Parts, Acc &amp; Tire Stores</td>
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<td>86</td>
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<td>143</td>
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<td><strong>Nonstore Retailers/Online</strong></td>
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<td>137</td>
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<td>165</td>
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<tr>
<td>Electronic Shopping &amp; Mail Order Houses</td>
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<td>124</td>
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<td>147</td>
<td>167</td>
<td>168</td>
<td>178</td>
<td>180</td>
<td>183</td>
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Note: Nominal consumer spending shown. Source: Census Bureau/Haver Analytics, Apollo Chief Economist
Macro factors driving consumer spending
Total employment is now 4.5 mn jobs above February 2020 levels

Source: BLS, Apollo Chief Economist
Net worth of the US household sector is near record highs

Source: FRB, Haver, Apollo Chief Economist
US households running out of excess savings

Accumulated excess savings

Source: BEA, Haver Analytics, Apollo Chief Economist.

Note: Excess savings are calculated as the accumulated difference between actual personal savings and the trend implied by data for the 48 months leading up to the first month of each recession, as defined by the NBER.
Household savings across income groups

Deposits held by income percentile

Source: FRB, Haver Analytics, Apollo Chief Economist
Household debt service payments as a share of income

Source: FRB, Haver, Apollo Chief Economist
Inflation-adjusted income per capita below the pre-pandemic trend
Wage inflation sticky at 4.5%

Source: BLS, Apollo Chief Economist. Note: Low wage workers are defined as the bottom third percentile in the wage distribution, mid wage workers as the mid third percentile and high wage workers as top third percentile.
Wage growth still elevated across the income distribution

Source: Federal Reserve Bank of Atlanta, Haver, Apollo Chief Economist
Employment for workers, by education

Source: BLS, Haver, Apollo Chief Economist
The composition of employment, by skill

Source: BLS, Haver, Apollo Chief Economist

Note: High-skill occupational categories are management and financial operations and Professionals and related occupations; Medium-skill categories are sales and related occupations, office administrative support, construction, installation and repair, production occupations, and transportation and material moving; Low-skill categories are service occupations and farming, fishing, and forestry.
People age 55 and above account for 41% of total consumer spending

Source: BLS, Haver, Apollo Chief Economist
The US consumer makes up 17% of global GDP

Source: Haver, World Bank, Apollo Chief Economist
Health of the household sector balance sheet
Foreclosures and bankruptcies starting to rise after the Fed raised rates

Number of consumers with new foreclosures and bankruptcies

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<thead>
<tr>
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<th>Foreclosures</th>
<th>Bankruptcy</th>
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<td>Q1-18</td>
<td>60</td>
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<td>Q2-18</td>
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<td>Q3-18</td>
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<td>220</td>
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<td>Q4-18</td>
<td>75</td>
<td>250</td>
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<td>Q1-19</td>
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<td>275</td>
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<td>Q2-19</td>
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<td>Q4-19</td>
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<td>350</td>
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<td>Q1-20</td>
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<td>Q3-23</td>
<td>170</td>
<td>725</td>
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Source: FRBNY, Equifax, Haver, Apollo Chief Economist
Credit card delinquency rates rising

Credit card Transitions to Serious Delinquency (90+), by age

Source: New York Fed Consumer Credit Panel / Equifax, Apollo Chief Economist
Auto loan transitions to serious delinquency at 2008 levels

Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist
Interest rate on auto loans

Source: FRB, Bloomberg, Apollo Chief Economist
Interest rate on credit cards at historical highs

Fed starts raising rates

Source: FRB, Haver Analytics, Apollo Chief Economist
Household sector leverage well below 2007 levels

Source: FRB, Haver, Apollo Chief Economist
Delinquency rates for auto loans and credit cards across the credit spectrum

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<tr>
<th>Credit Cards</th>
<th>+90 day delinquency rate</th>
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<td>Super Prime</td>
<td>0.00%</td>
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<td>Prime plus</td>
<td>0.01%</td>
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<td>Prime</td>
<td>0.20%</td>
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<tr>
<td>Near prime</td>
<td>1.26%</td>
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<tr>
<td>Subprime</td>
<td>20.39%</td>
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<tr>
<td>Total</td>
<td>2.39%</td>
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<table>
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<tr>
<th>Auto Loans</th>
<th>+60 day delinquency rate</th>
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<td>0.0%</td>
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<td>Prime plus</td>
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<td>Prime</td>
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<td>Near prime</td>
<td>0.62%</td>
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<tr>
<td>Subprime</td>
<td>12.69%</td>
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<td>Total</td>
<td>2.13%</td>
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<th>Mortgages</th>
<th>Distribution of Delinquency</th>
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<td>Current</td>
<td>94.6%</td>
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<td>30-59 DPD</td>
<td>3.1%</td>
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<td>60-89 DPD</td>
<td>1.5%</td>
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<td>90+</td>
<td>0.8%</td>
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<tr>
<td>Foreclosure</td>
<td>0.1%</td>
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Source: Transunion Monthly Industry Snapshot October 2023
Household liabilities to assets

Debt/Asset ratio of the household sector

Source: FRB, Haver, Apollo Chief Economist
Banks less willing to lend to consumers

Source: FRB, Haver, Apollo Chief Economist
Consumer confidence gradually lower since the Fed started raising rates

Source: Conference Board, Haver Analytics, Apollo Chief Economist
Consumer confidence across generations

Source: Conference Board, Haver Analytics, Apollo Chief Economist
Consumer sentiment across the income distribution

Source: University of Michigan, Haver Analytics, Apollo Chief Economist
Households a bit more worried about losing their jobs

Source: University of Michigan, Haver Analytics, Apollo Chief Economist
Higher income households starting to worry about whether they can make minimum debt payments.
Outlook for spending on housing
Home price inflation rebounding

Source: Haver, Apollo Chief Economist
Housing inflation

Source: Zillow, BLS, Haver Analytics, Apollo Chief Economist
Purchase and refi activity during the pandemic driven by households with high credit scores

Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist.
US mortgage credit originations, by credit score

Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist.
Mortgage origination has normalized across age groups
Households have less debt in their homes: Homeowner’s equity near highest level in decades

Source: FRB, Haver Analytics, Apollo Chief Economist
High house prices affecting consumer’s buying sentiment negatively
Outlook for spending on cars
Motor vehicle sales, from retail sales data
Interest rates on auto loans have increased

Charlotte Financial Companies: New Car Loans: Average Interest Rate (ls)

Finance Companies: Used Car Loans: Average Interest Rate (rs)

Source: FRB, Haver, Apollo Chief Economist
Average amount financed for new and used car loans

Source: FRB, Haver, Apollo Chief Economist
Sentiment deteriorating among car buyers

Current Conditions for Buying Vehicles: Bad Time

Source: University of Michigan, Haver Analytics, Apollo Chief Economist
Inflation impacting auto demand

Source: University of Michigan, Haver Analytics, Apollo Chief Economist
Outlook for spending on restaurants
Restaurant demand declining

Restaurant Performance Index (>100=Expansion)

- Expectations
- Current situation

Source: National Restaurant Association, Haver, Apollo Chief Economist
Daily data for restaurant bookings

Source: OpenTable, Apollo Chief Economist
Daily data for restaurant bookings, selected cities

Source: OpenTable, Apollo Chief Economist
Employment in restaurants and bars at pre-pandemic levels

Source: BLS, Haver, Apollo Chief Economist
Employment growth for Eating and Drinking places

Eating and Drinking place employment, thous

Source: BLS, Haver, Apollo Chief Economist
Growth in restaurant employment, by type of restaurant

Restaurant Employment by Segment, NSA

- Full-Service Restaurants
- Cafeterias, Grill Buffets & Buffets
- Snack & Nonalcoholic Beverage Bars
- Food Service Contractors
- Caterers & Mobile Food Services
- Drinking Places, Alcoholic Beverages
- Limited-Service Restaurants

Source: BLS, Haver, Apollo Chief Economist
Service sector spending significantly above pre-pandemic levels
Stock price index for restaurants and bars

Source: Bloomberg, Apollo Chief Economist
Outlook for spending on travel
TSA: US air travel still strong

Source: TSA, Apollo Chief Economist
US air travel still strong
Global air traffic still high

Source: Flightradar24.com, Apollo Chief Economist
Vacation intentions: Within the US

% respondents, SA

Vacation intended within 6 months:
- Domestic

Source: Conference Board, Apollo Chief Economist
Vacation intentions to a foreign country

% respondents, SA

Vacation intended within 6 months:

- Foreign country

Source: Conference Board, Apollo Chief Economist
Vacation intentions: By plane

Source: Conference Board, Apollo Chief Economist
Vacation intentions: By car

% respondents, SA

Vacation intended within 6 months:

- By automobile

Source: Conference Board, Apollo Chief Economist
Air travel during holidays, comparing 2023 with previous years

Source: TSA, Apollo Chief Economist
Las Vegas visitor volumes

Source: Las Vegas Convention and Visitors Authority, Apollo Chief Economist
NYC mobility indicators

NYC: Transit Volume

% of 2019

Source: MTA, Apollo Chief Economist
Weekly data for hotel demand has been softening
Weekly data for hotel demand

Source: STR, Haver Analytics, Apollo Chief Economist
Weekly data for hotel demand

Hotels: average daily rate

Source: STR, Haver Analytics, Apollo Chief Economist
Weekly data for hotel demand

Hotels: revenue per available room (US$)

Source: STR, Haver Analytics, Apollo Chief Economist
New York hotel prices are now significantly above pre-pandemic levels.

Source: TimeSquareNYC.org, Apollo Chief Economist.
Outlook for spending on other consumer goods
Tightening lending standards will weigh on consumer spending

Source: FRB, Haver, Apollo Chief Economist
US consumer still ok, some weakness starting to emerge

Source: BEA, Haver analytics, Apollo Chief Economist. Note: The weekly values represent the predicted percentage difference from the typical level of spending (prior to the pandemic declared by the World Health Organization on March 11, 2020) after adjusting for day-of-week, month, and year effects, based on daily data. The typical level corresponds to a value of zero.
US consumer credit card spending

Source: BEA, Haver analytics, Apollo Chief Economist. Note: The weekly values represent the predicted percentage difference from the typical level of spending (prior to the pandemic declared by the World Health Organization on March 11, 2020) after adjusting for day-of-week, month, and year effects, based on daily data. The typical level corresponds to a value of zero.
US consumer credit card spending

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Source: BEA, Haver analytics, Apollo Chief Economist. Note: The weekly values represent the predicted percentage difference from the typical level of spending (prior to the pandemic declared by the World Health Organization on March 11, 2020) after adjusting for day-of-week, month, and year effects, based on daily data. The typical level corresponds to a value of zero.
Some signs of slowdown in Broadway show attendance

Source: Internet Broadway Database, Apollo Chief Economist
Movie theatre visits in line with past years

Source: Boxofficemojo.com, Apollo Chief Economist
Health care spending at pre-pandemic trend

Real Household consumption expenditures

- Hospitals (lhs)
- Health Care (rhs)
- Outpatient Services (rhs)

Source: BEA, Haver, Apollo Chief Economist
Retail sales across different spending categories

Source: Census Bureau, Haver, Apollo Chief Economist
Some slowdown in sales of furniture, likely because this requires financing.
E-commerce retail sales stabilizing
Online shopping as a share of total consumer spending

Source: Census Bureau, Haver, Apollo Chief Economist
Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade, including #1 in 2019. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and has studied at the University of Copenhagen and Princeton University.