



US Consumer: What Data to Watch

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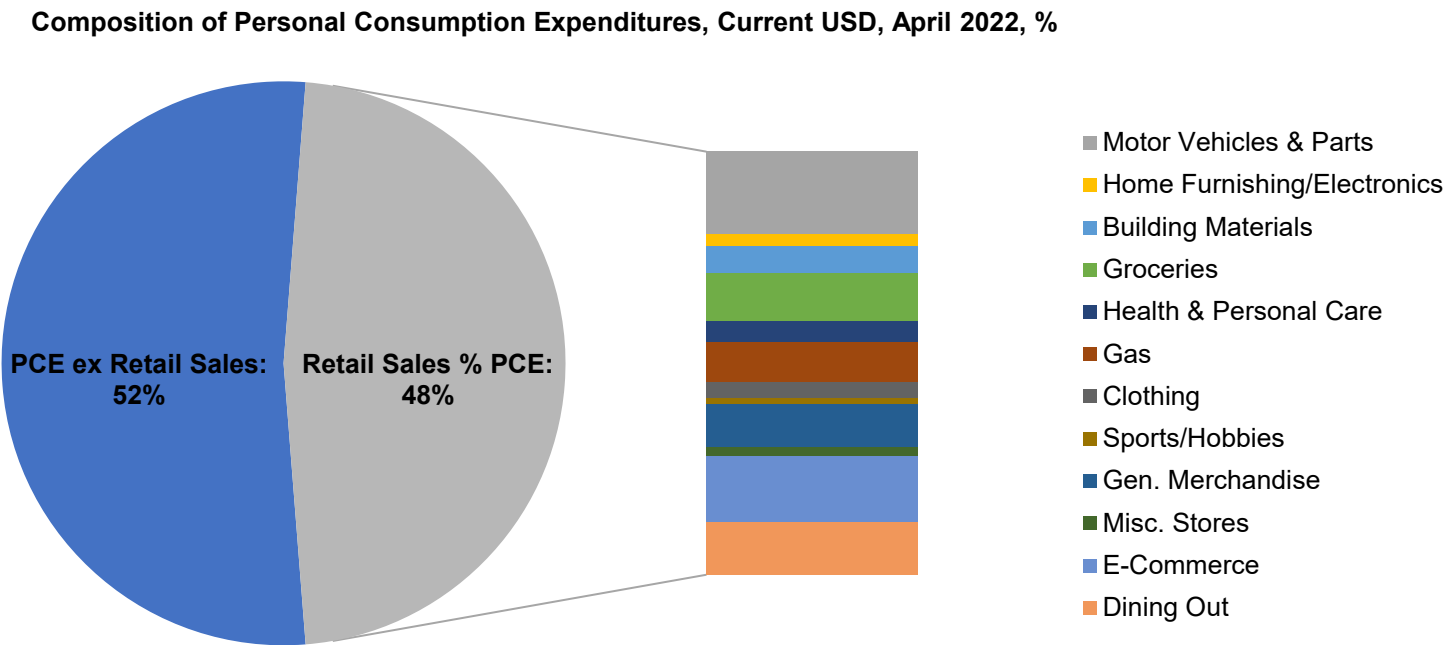
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All information as of July 18, 2022, unless otherwise stated.

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Retail Sales: Why It Matters

Retail Sales are released two weeks before the BEA Personal Income & Spending report and account for ~48% of nominal spending or 33% of nominal GDP. Spending on motor vehicles, gasoline, groceries, and dining out are key components of retail sales.



Source: Bureau of Economic Analysis, Census Bureau, Morgan Stanley Research

Retail Sales: Forecasting

Leverage high frequency data and data released early in the month to forecast retail sales. Pre-Covid, fundamental economic variables were strong predictors. During Covid, high frequency data became more useful. Now, fundamental variables are useful again, but should be supplemented with credit/debit card data.

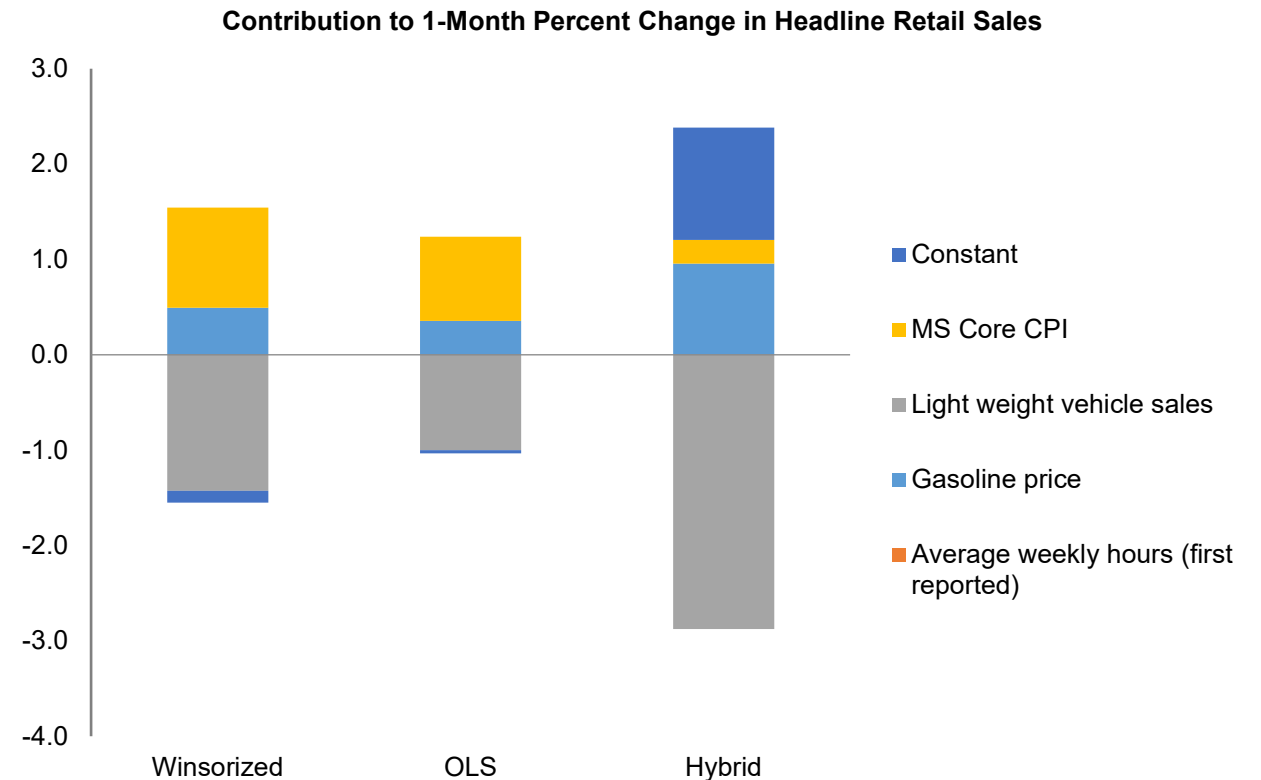
Pre-Covid Predictors:

- ISM New Orders
- VIX
- Retail Gasoline Prices
- Average Weekly Earnings
- Jobless Claims
- Light Weight Motor Vehicle Sales
- CPI Inflation

During Covid Predictors:

- Government Transfers via IRS
- OpenTable Dining Out
- Opportunity Insights Credit Card Spend
- BEA Credit/Debit Card Spend Tracker

Model Construct Critical

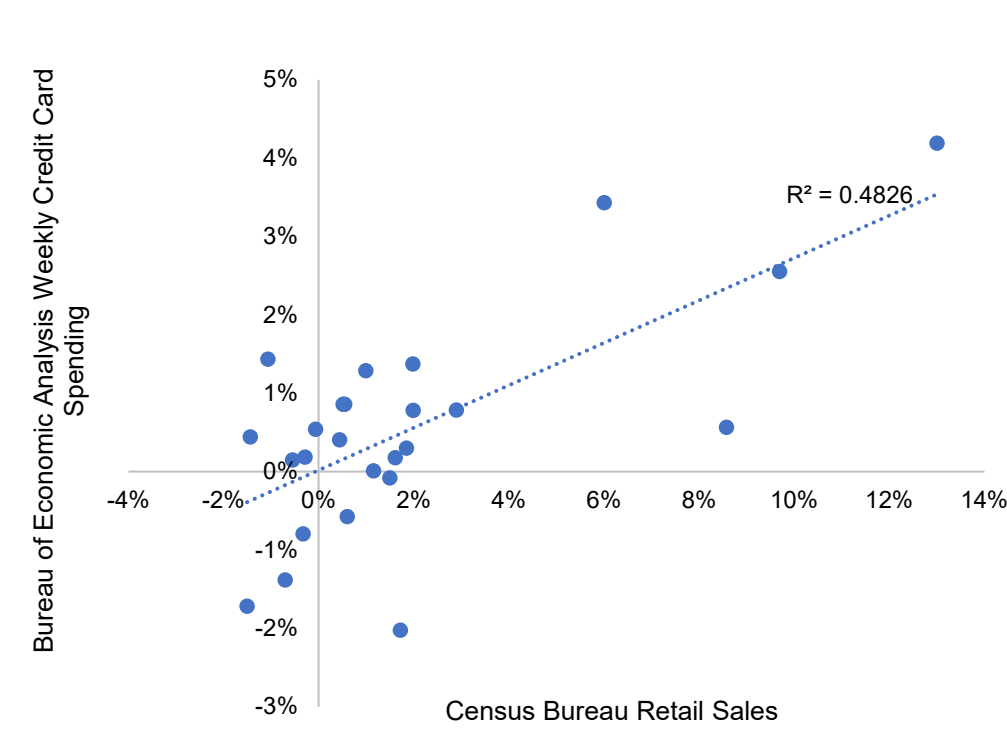


Source: Bureau of Economic Analysis, Census Bureau, Bureau of Labor Statistics, Morgan Stanley Research

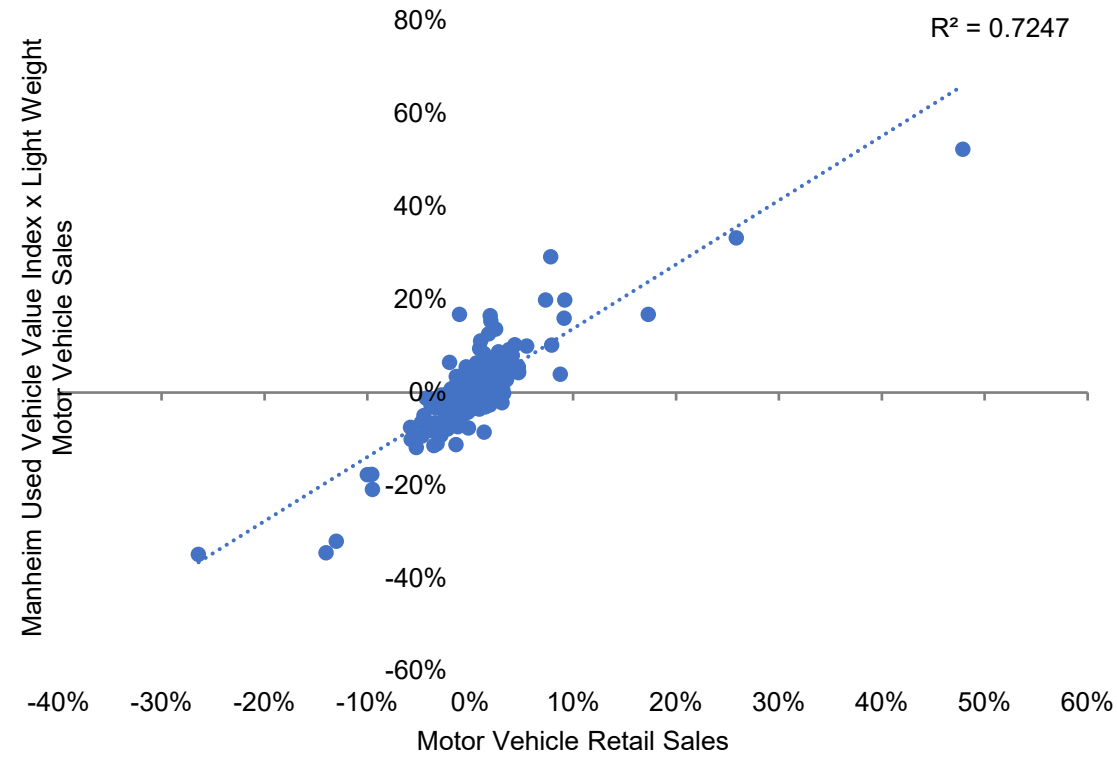
Retail Sales: Forecasting

The BEA estimates retail sales from weekly credit card transaction data, which directionally track retail sales ex autos well. Data on light weight vehicle sales and Manheim used vehicle value index tracks retail motor vehicle sales closely.

Retail Sales ex Motor Vehicles, 1-Month Percent Change



Tracking Motor Vehicle Sales, 1-Month Percent Change

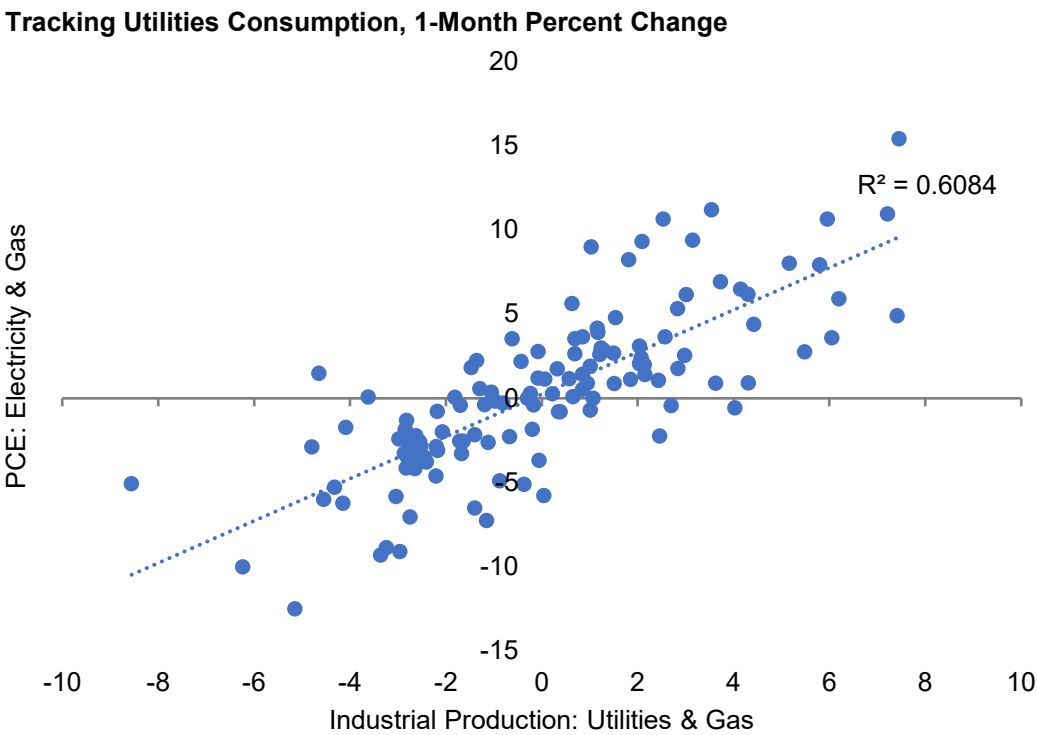


Source: Census Bureau, Bureau of Economic Analysis, Manheim, AutoData, Morgan Stanley Research

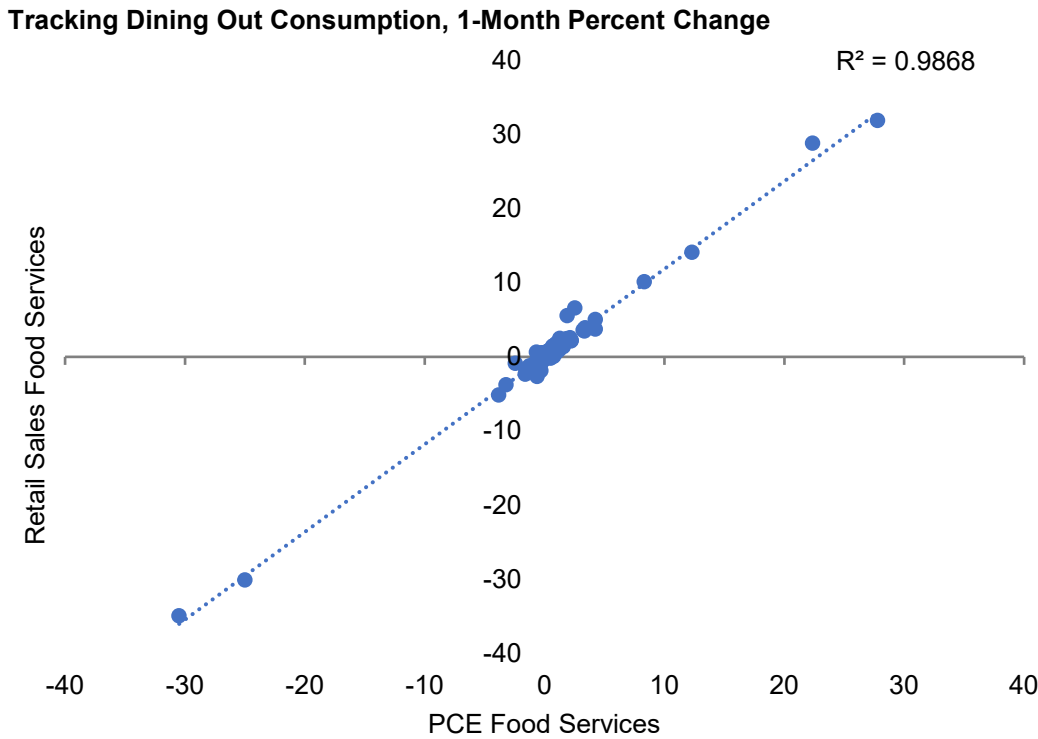
Tracking Goods vs. Services

Retail sales largely captures goods spending, making services spending harder to forecast. To track services spending, we would use food services from retail sales and utility output from industrial production, for example. Details of CPI inflation and employment can also be useful in tracking services demand, though the correlation is weaker.

Housing Services: Electricity & Gas



Food Services



Source: Federal Reserve Board, Census Bureau, Bureau of Economic Analysis, Morgan Stanley Research

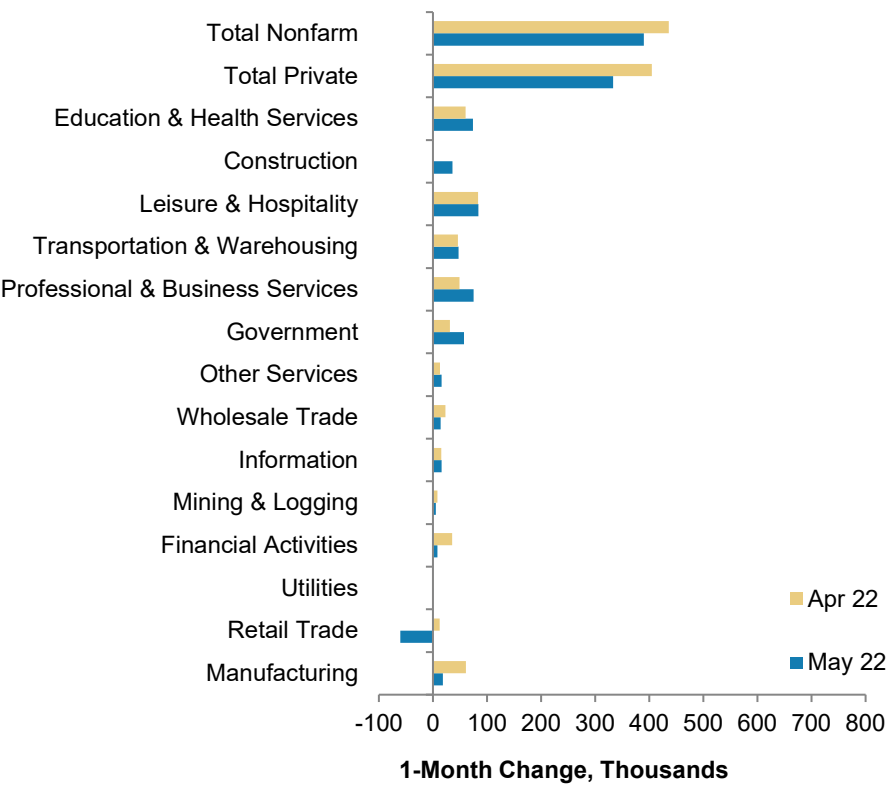
Key Indicators to Track the Health of the Consumer

- **Income**
- **Sentiment**
- **Interest Rates & Debt Service Costs**
- **Access to Credit**

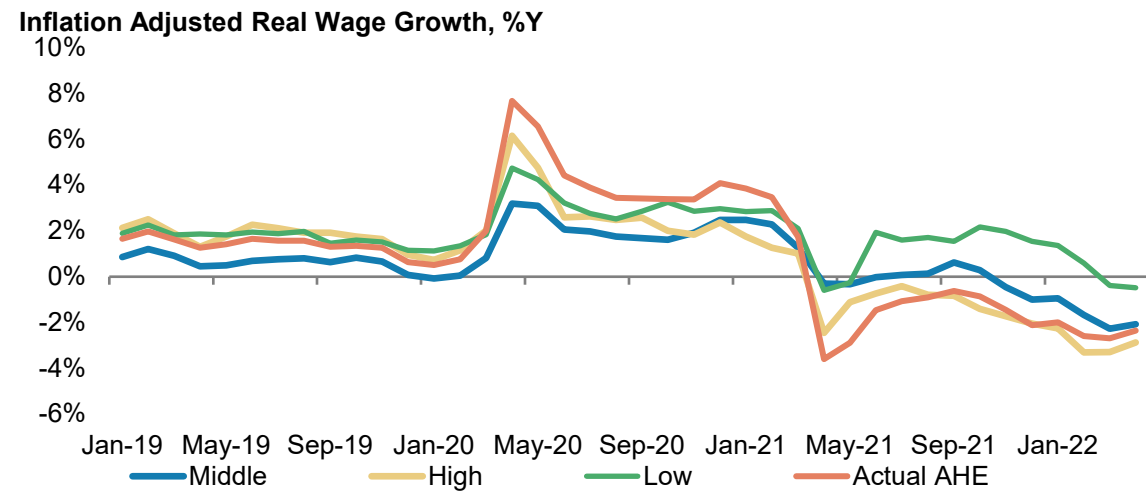
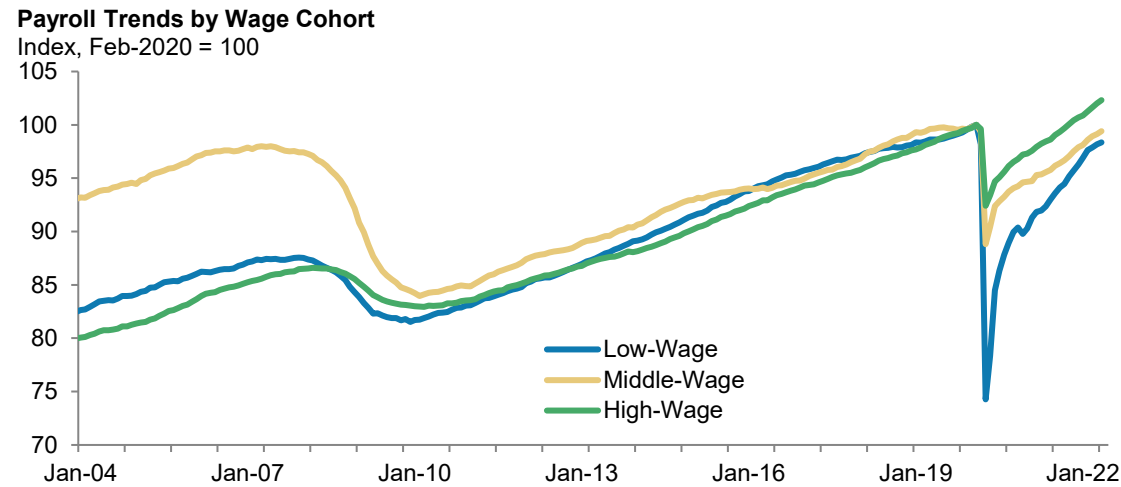
Labor Market

Major measures to track are the breadth of job gains, prime-age labor force participation, employment-population ratio, and wage growth.

Breadth of Job Gains



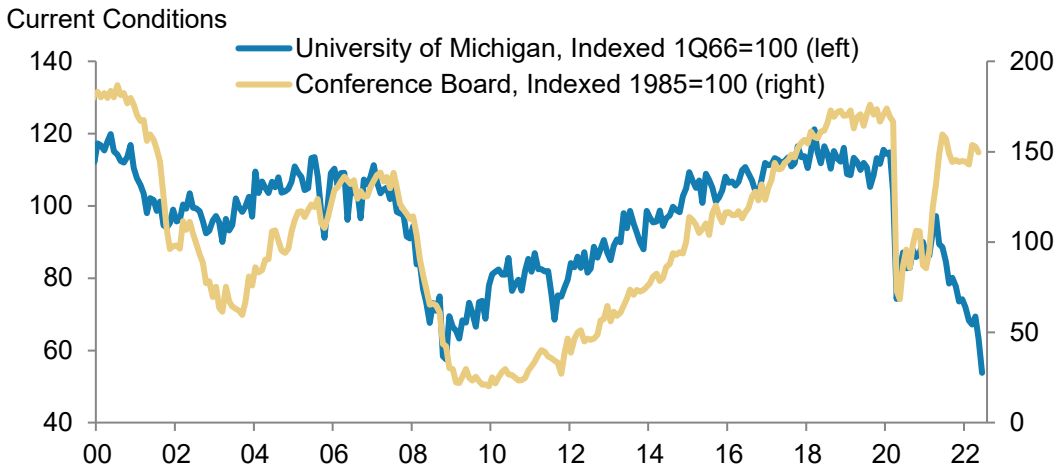
Payroll & Wage Gains by Income



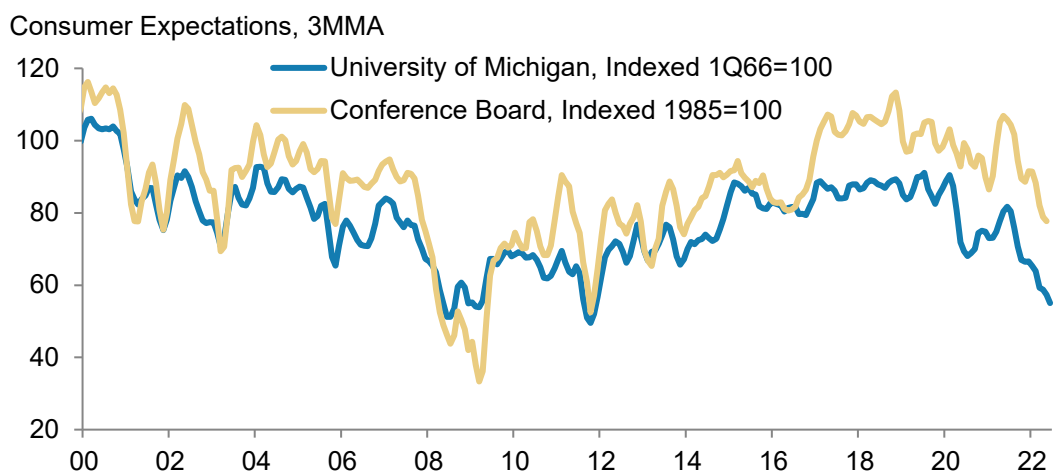
Source: Bureau of Labor Statistics, Morgan Stanley Research

Consumer Sentiment

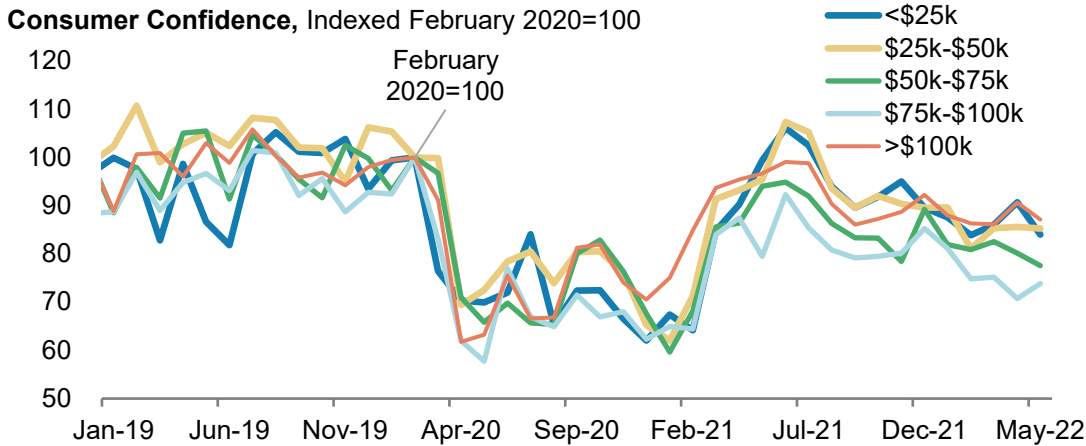
Divergence in Current Conditions for Confidence vs. Sentiment



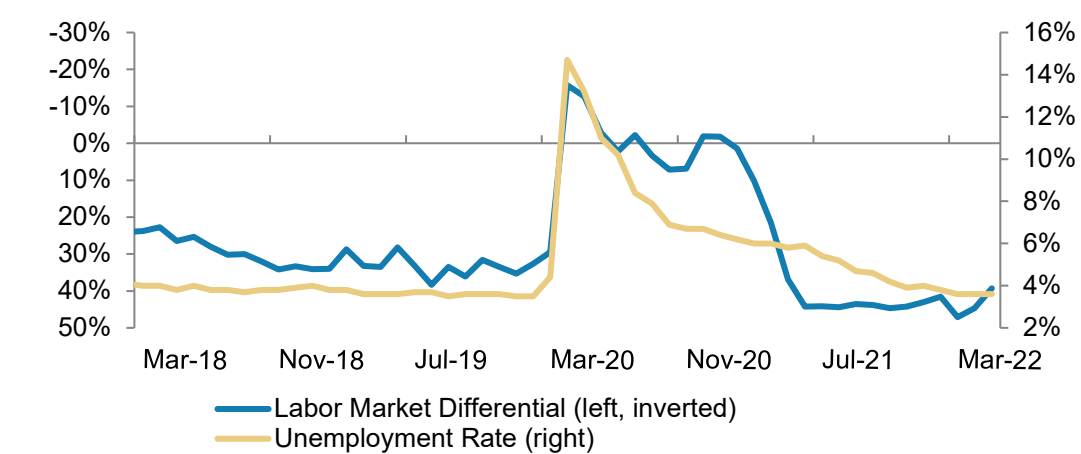
Future Conditions



Sentiment Across by Income Group



Employment Expectations

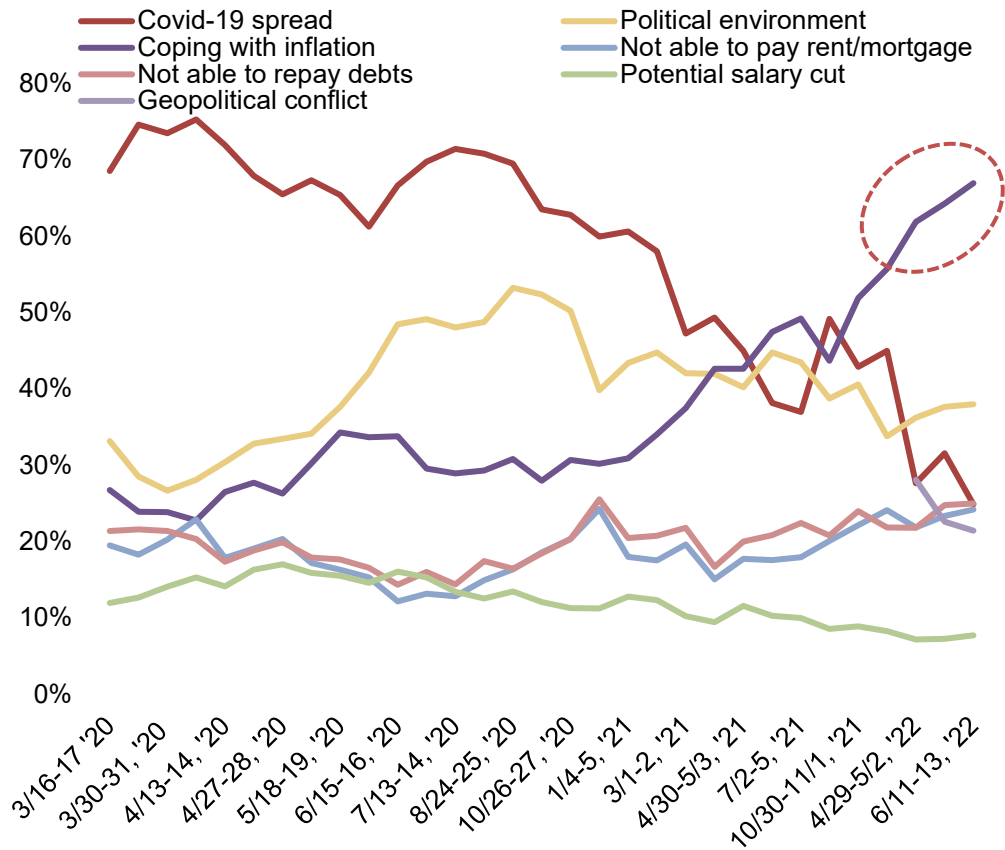


Source: University of Michigan, Conference Board Consumer Confidence, Morgan Stanley Research

AlphaWise Consumer Pulse Surveys

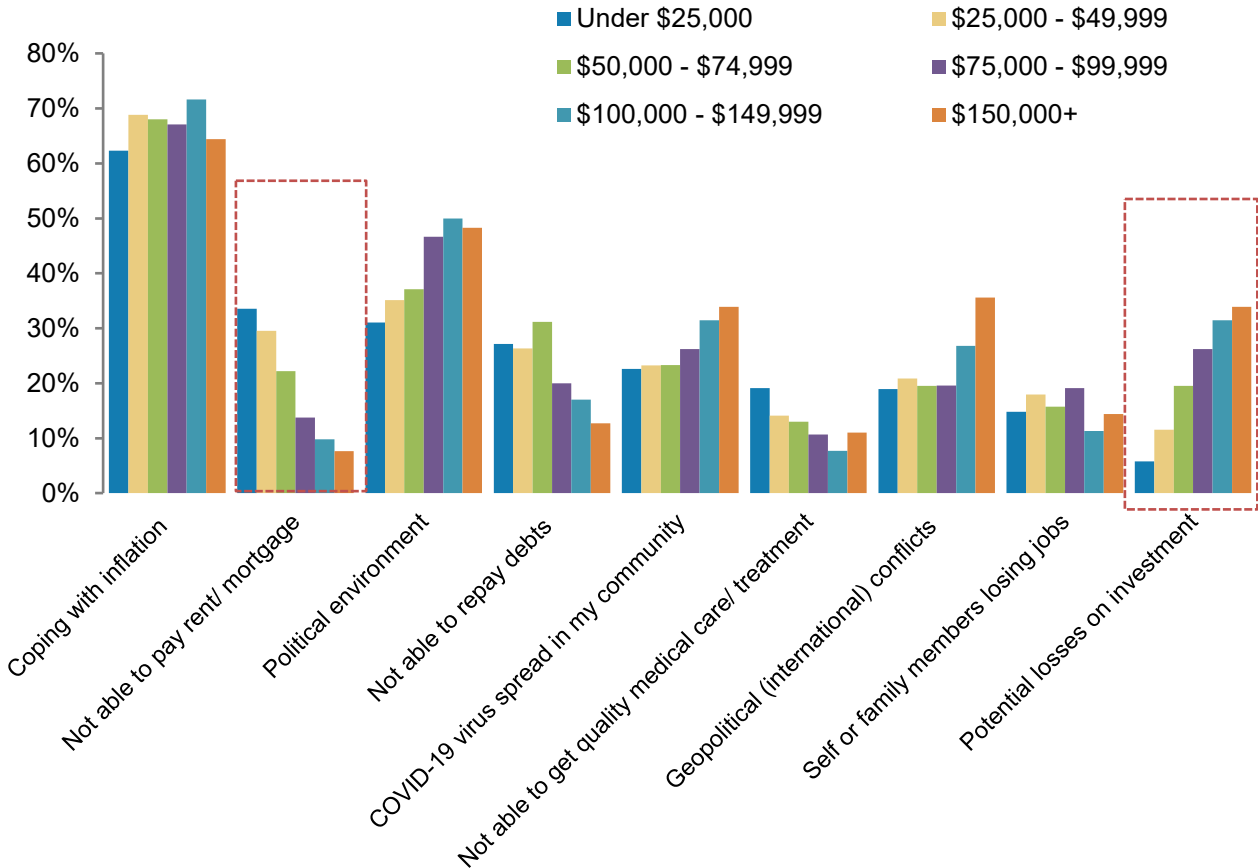
Inflation Remains Top Concern

Top Concerns for 2022 (Among Total)



Top Concerns by Income

Top Concerns by Income, June 2022



Source: AlphaWise Consumer Pulse Survey, Morgan Stanley Research. Morgan Stanley's AlphaWise provides proprietary evidence-based investment research.

AlphaWise Consumer Pulse Surveys

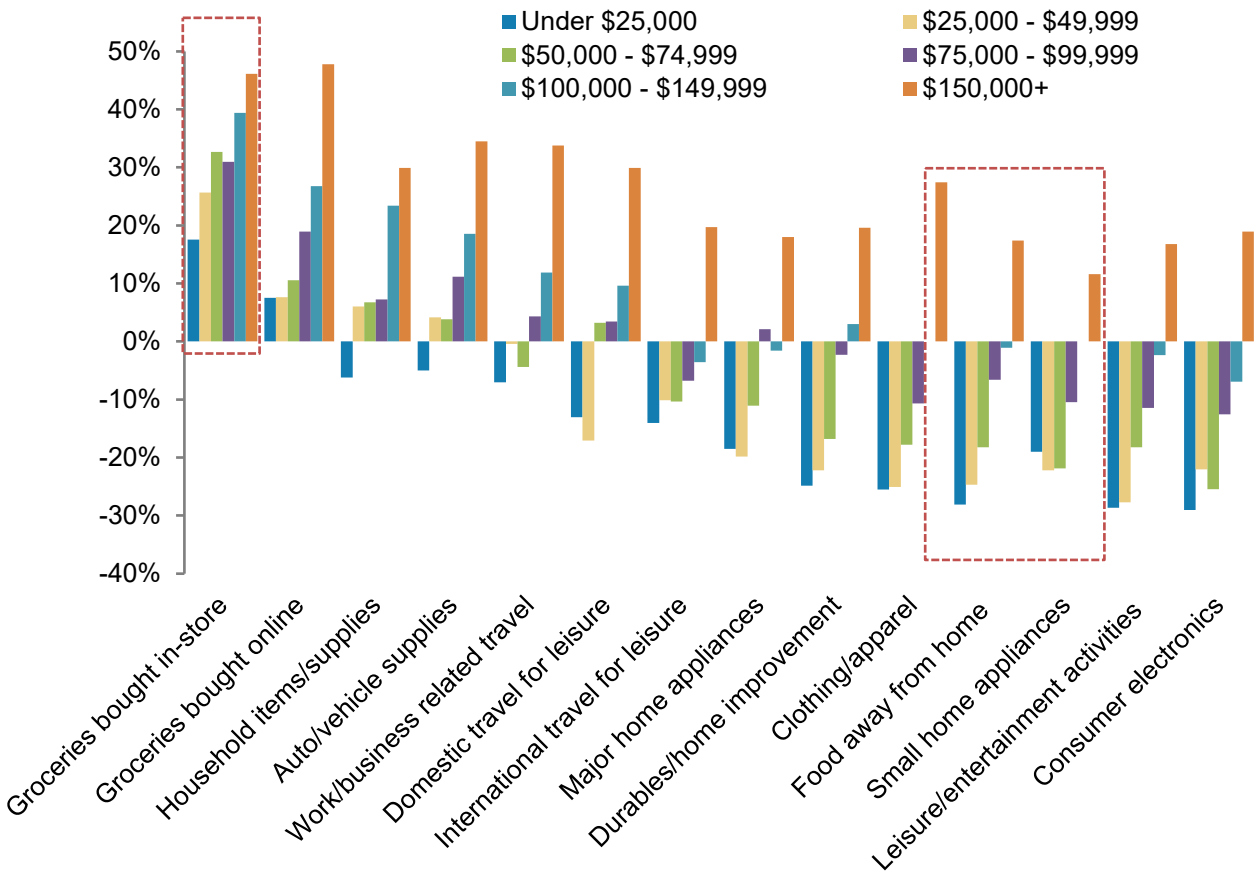
Spending Intentions by Income

NET (More - Less) Overall Household Dollar Spending Over Next Month by Income



Impact of Inflation on Spending Intentions

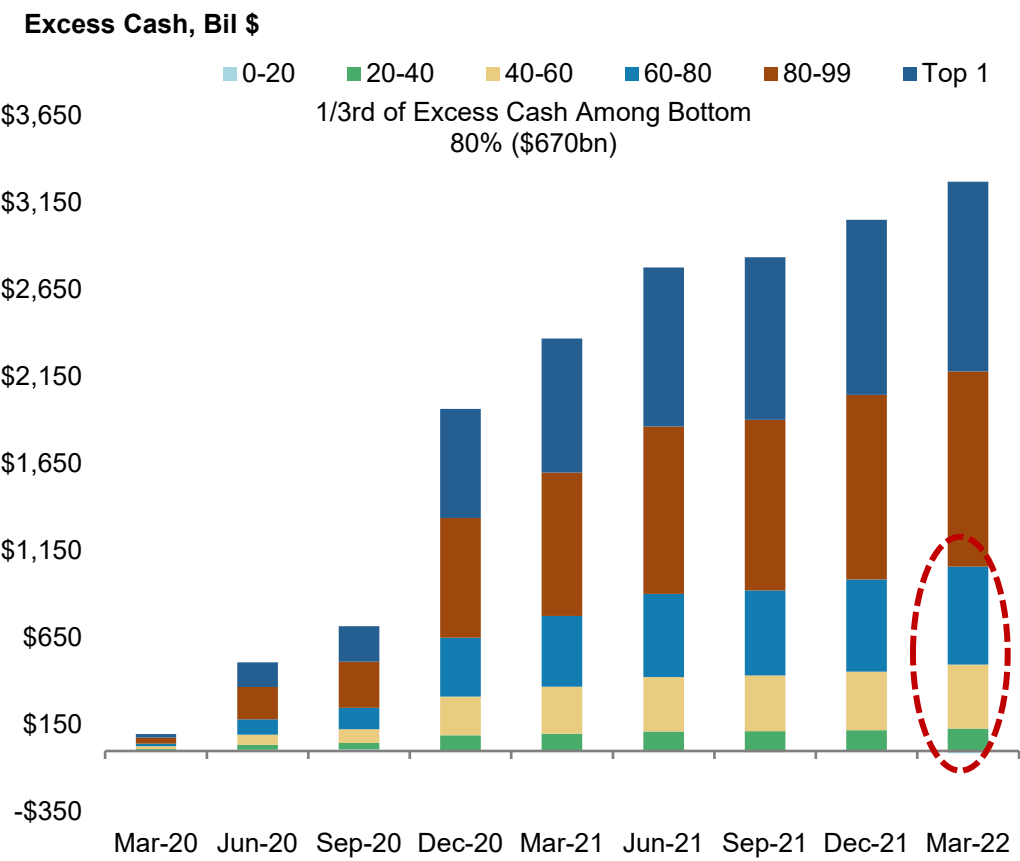
NET Category Spend Over Next 6 Months, June 2022



Source: AlphaWise Consumer Pulse Survey, Morgan Stanley Research. Morgan Stanley's AlphaWise provides proprietary evidence-based investment research.

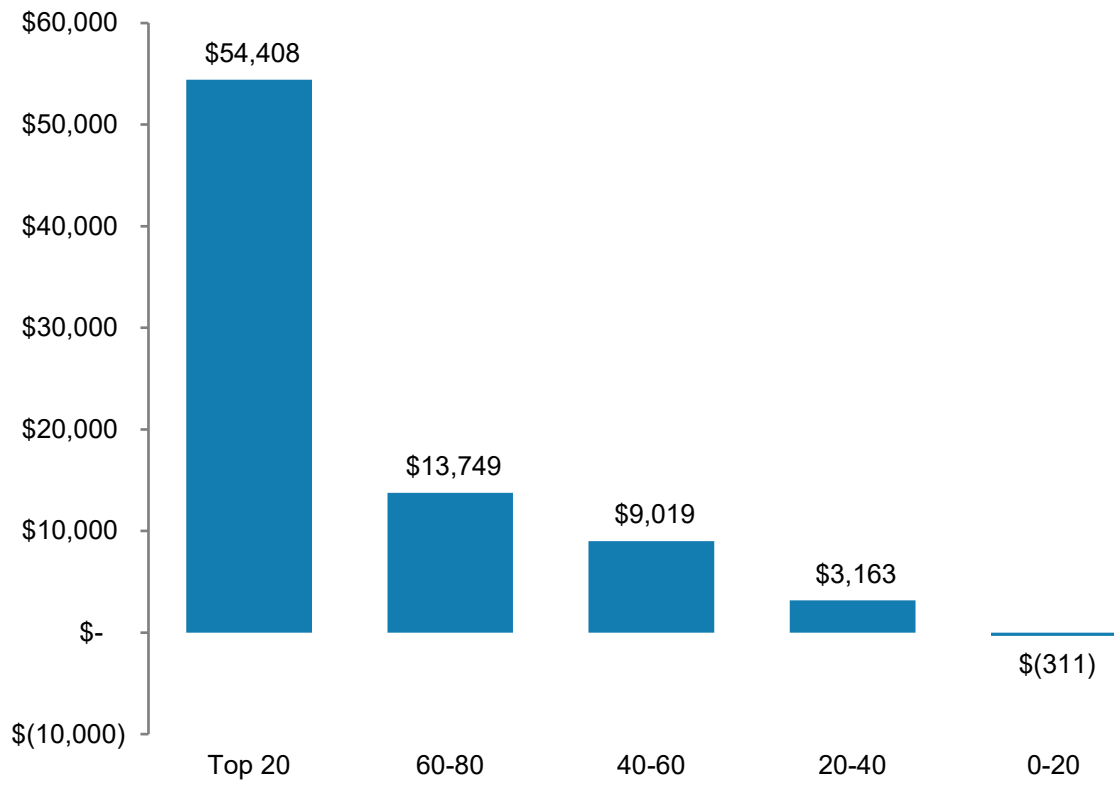
Excess Savings

Excess Cash from the Fed’s Distributional Financial Accounts



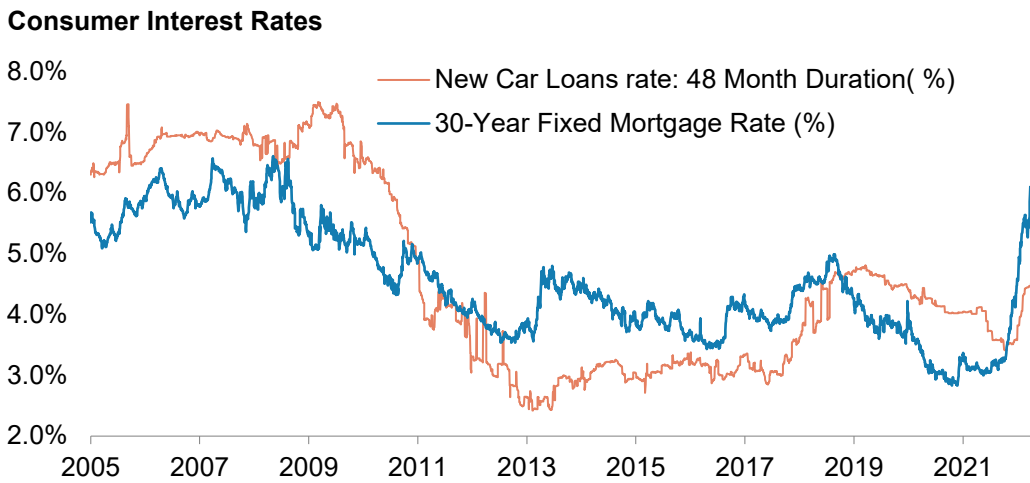
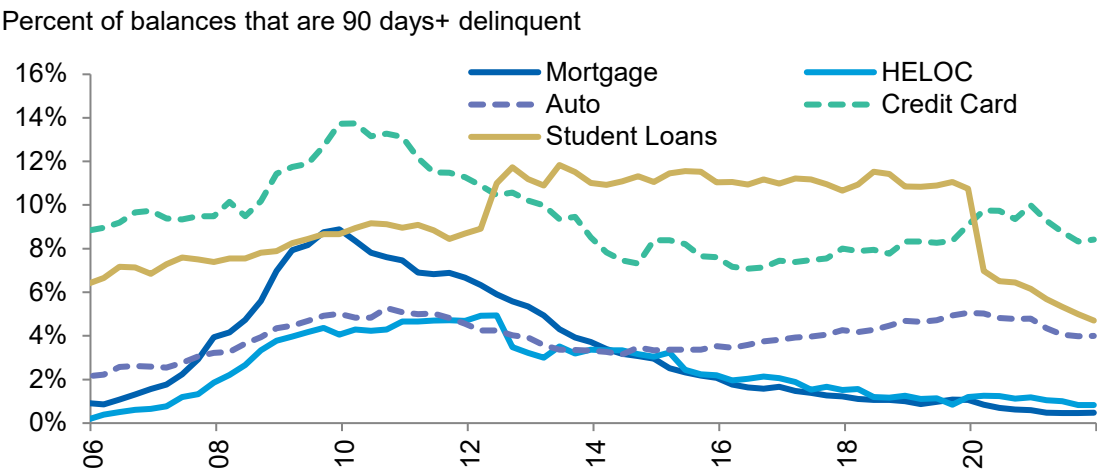
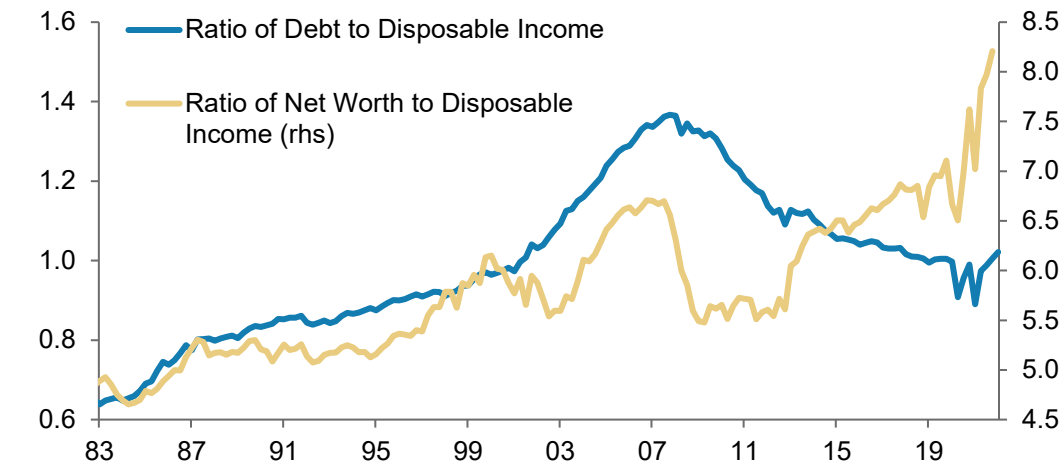
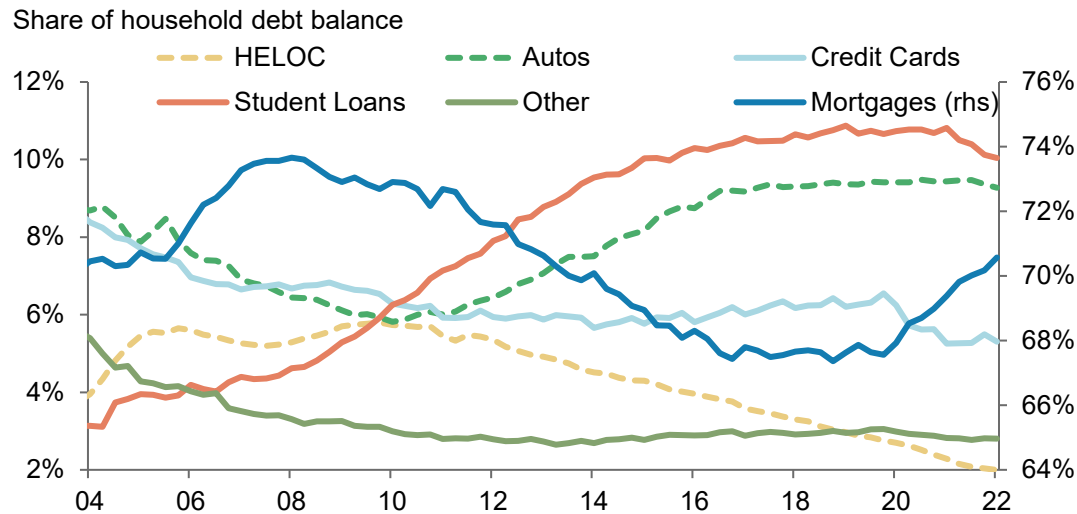
On a Per Household Basis

Excess Cash per Household by Income Quintile



Note: Charts are updated through 1Q22.
Source: Federal Reserve, Morgan Stanley Research

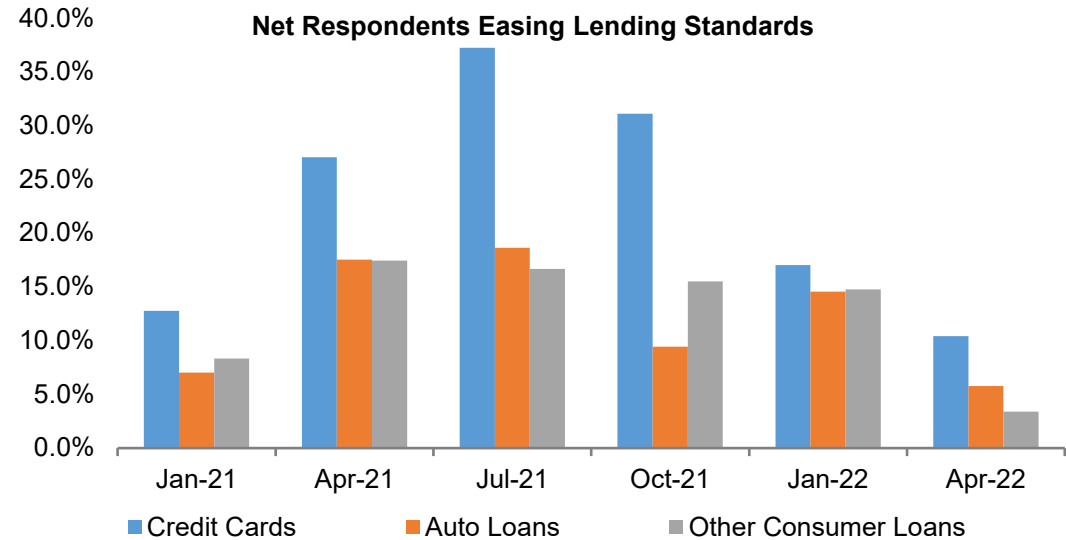
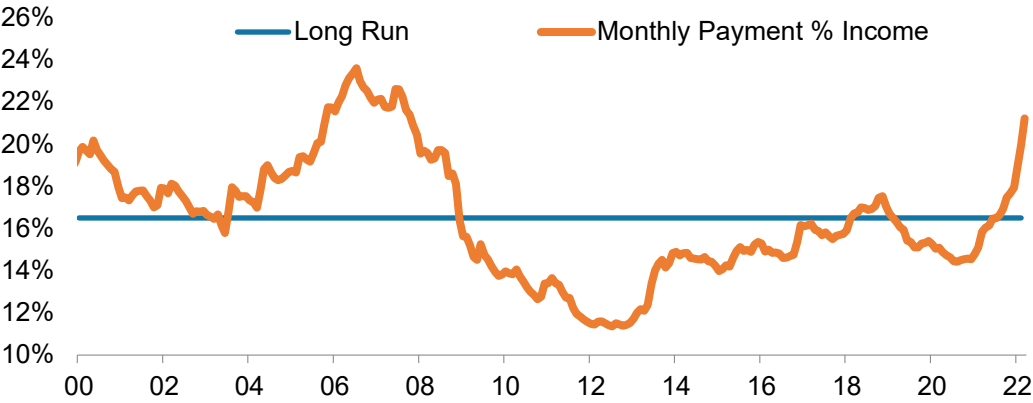
Credit & Balance Sheet



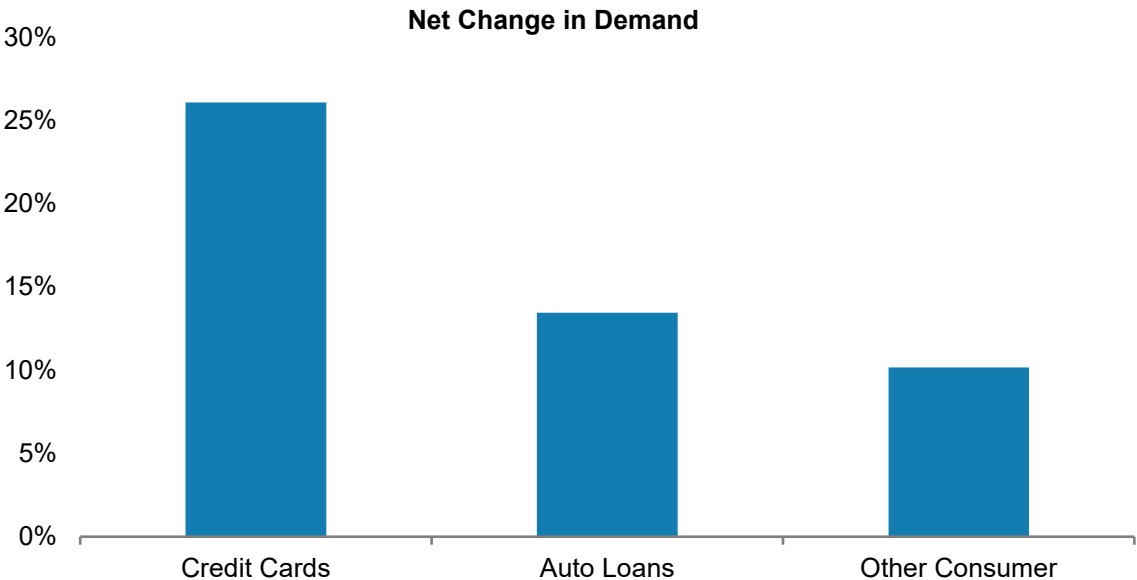
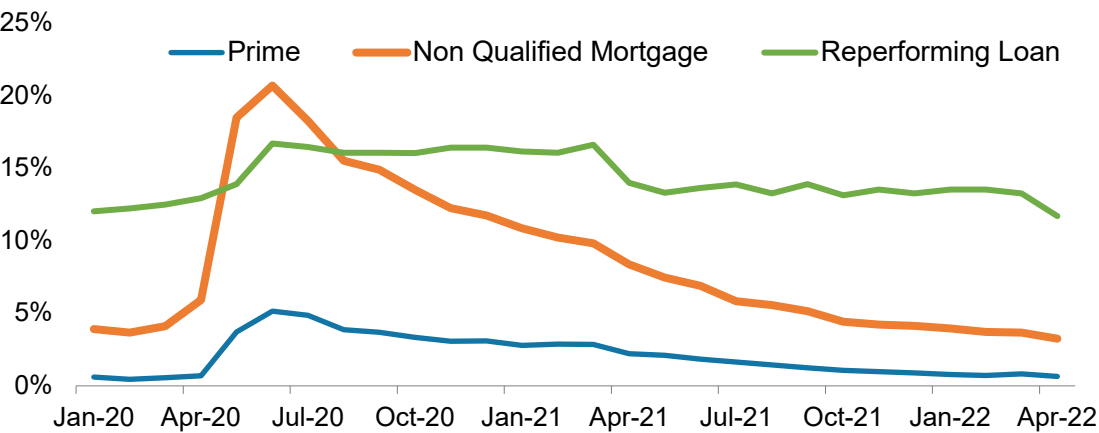
Source: Federal Reserve, New York Fed, Mortgage Bankers Association, Morgan Stanley Research

Credit & Balance Sheet

Mortgage Payment as % of Income



Total Delinquencies Across Residential Credit



Source: Intex, Morgan Stanley Research

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