

Credit Watch

A Focus on the Consumer: Spending or Spent?

- **2H24 eyes on the consumer.** Our various strategy teams have recently rolled out their top-down, midyear outlooks. From a bottom-up perspective, we think the consumer will become an increasing focus as the second half of the year unfolds.
- **We use this edition of *Credit Watch* to offer a variety of perspectives on the consumer:** High end versus low end or whether the consumer is in fact “trifurcated”; paying for experiences versus seeking value; what’s the message from the consumer-related securitization-related space; and trends in the US versus those in Europe.
- **Identifying relative value opportunities for a flying or fading consumer.** Our analysts highlight choices across the US Consumer, Retail REIT, European Retail, Gaming and Leisure, US-European Airlines and Transportation, Auto, Securitized Product, and Consumer Finance sectors.
- **A basket-based approach.** Our derivative strategists highlight a 25-name CDS basket that allows investors to track or potentially trade changes in US consumer momentum.
- **US Consumer is resilient but “trifurcated”:** The consumer market is “trifurcated” with low-income consumers better off, high-income consumers strong, and middle-market consumers feeling financial strain.
- **Retail and real estate dynamics:** Retail real estate leasing remains strong despite consumer financial pressures.
- **UK and European consumer recovery:** These consumers are showing signs of recovery as inflation subsides and real wages rise. UK retail sales and consumer confidence are improving, with disposable income increasing. However, food retailing remains stagnant, and discretionary spending on big-ticket items is cautious.
- **Preference to spend on experiences and travel:** Spending on leisure and entertainment remains robust. Cruise lines, gaming, and lodging businesses are performing well, although there are pockets of weakness among low-end consumers in regional casinos and theme parks. Airline spending remains strong with consumers traveling at rates above pre-pandemic levels.
- **Auto consumer stretched but not broken:** The automotive sector shows consumer resilience with strong demand for light vehicles despite higher rates and elevated transaction prices. Automotive financing portfolios remain healthy, though delinquencies are rising. Dealers are experiencing a slowdown in retail demand, particularly among sub-prime borrowers.
- **Consumer debt and credit trends:** Perhaps it should come as no surprise, but Mortgages are performing better than Consumer ABS. On the delinquency front, they’re rising but there’s a debate to be had as to whether what we’re seeing represents *deterioration* or *normalization*.

Global Head of Credit, Securitized Products and Public Finance Research

Stephen Dulake ^{AC}
(1-212) 834-9671
stephen.dulake@jpmorgan.com

US High Grade Strategy

Silvi Mantri
(1-212) 834-7239
silvi.mantri@jpmchase.com
J.P. Morgan Securities LLC

See page 23 for analyst certification and important disclosures.

J.P. Morgan does and seeks to do business with companies 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.

Table Of Contents

Consumer credit relative value opportunities	3
Tracking and trading the US consumer.....	4
The US consumer is ‘tri’-furcated and looking for value	6
Experiential spending driving retail real estate growth	8
The European consumer	8
Travel and Leisure.....	11
The resurgence of leisure and entertainment spending post-pandemic ..	11
Airline spending soaring high with a shift towards premium travel experiences	11
European travellers are increasingly seeking ‘value for money’	13
Automotive.....	14
Automotive manufacturers and captives.....	14
Automotive dealers.....	15
Eyeing the consumer through a securitized lens... ..	19
Mortgage stability versus rental strain.....	21
...and then from an unsecured Consumer Finance perspective.....	22

Consumer credit relative value opportunities

Table 1: Spending or spent

Sector	Type	Analyst	Ticker	Company	Coupon	Maturity	Description	Ratings	Pricing			Rationale
									Price	Yield	STW	
US Consumer	Spending	Casella	ABIBB	ABI InBev	4.70%	2036	Sr Notes	A3/A-	\$97.0	5.00%	85bp	<ul style="list-style-type: none"> Global scale and diversification w/ upside in EM Alcoholic bevs demand is relatively inelastic Mgmt focused on delevering to ~2x (vs 3.4x today) No room for upside given tight levels
US Consumer	Spent	Casella	TGT	Target	4.40%	2033	Sr Notes	A2/A	\$97.5	4.76%	50bp	<ul style="list-style-type: none"> Discretionary categories under pressure Consumers trading down to WMT for value
US REITs	Spending	Streeter	EPR	EPR Properties	3.60%	2031	Sr Notes	Baa3/BBB-	\$83.8	6.40%	210bp	<ul style="list-style-type: none"> Experiential real estate focus; theater now <50% of rent and leases restructured Low leverage supports low BBB ratings with upside back to mid BBB Trades at BB yield/spread for IG risk
US REITs	Spent	Streeter	SPG	Simon Property Group	6.25%	2034	Sr Notes	A3/A-	\$105.7	5.46%	118bp	<ul style="list-style-type: none"> Premier owner of shopping, dining, entertainment and mixed-use destinations (high ends malls and outlets) Sector leading ~\$1.8bn annual retained cash flow Leading exposure to troubled mall-based retailers (several of which SPG and partners have rescued profitably) Balance sheet strength trumps depressed category sales Recent merger creates 2nd largest market player Conservative financial policy
Euro Retail	Spending	Keaney	MOBLUX	Mobilux	7.00%	2030	Sr Sec	B2/B+	\$101.3	6.70%	374bp	<ul style="list-style-type: none"> French Food retail market contracting Intense price competition pressuring margins Looks expensive vs px talk for Sr Sec issue (high 6%)
Euro Retail	Spent	Keaney	PICSUR	Picard	5.50%	2027	Sr Unsec	Caa1/CCC+	\$98.3	6.20%	307bp	<ul style="list-style-type: none"> Already concerns of a weakening low-end consumer Best in class balance sheet (2.7x net lev) Good relative value at 6.5% (wide to CZR/RRR) No Vegas exposure and full OpCo (no real estate) Brick and Mortar impotence given SB losses Heightened levq given SB losses (~7x net, peaking 8-9x)
US Gaming	Spending	Pace	BYD	Boyd Gaming	4.75%	2031	Sr Notes	B1/BB	\$90.3	6.51%	227bp	<ul style="list-style-type: none"> The blue-chip US airline, focused on premium product, loyalty, international, lounges S&P and Fitch should upgrade to low BBB within NTM, Moody's to Baa2 soon as well Best value in the secured recourse debt (loyalty, routes/slot/gates, EETCs)
US Gaming	Spent	Pace	PENN	Penn Entertainment	4.13%	2029	Sr Notes	B3/B-	\$86.3	7.46%	320bp	<ul style="list-style-type: none"> Guided down this week on unit revenue; still negative net debt so rating stable Activist Elliott attempting to force management turnover and product overhaul Incumbent management admits product offering has not kept up with consumer preferences
US Transport	Spending	Streeter	DAL	Delta Air Lines	7.38%	2026	Sr Notes	Baa3/BB+	\$102.0	5.93%	116bp	<ul style="list-style-type: none"> Benefits from traffic volumes without exposure to air fares Improved visibility on regulatory front Value in subordinated HoldCo paper vs. comps
US Transport	Spent	Streeter	LUV	Southwest Airlines	5.13%	2027	Sr Notes	Baa1/BBB	\$99.6	5.30%	78bp	<ul style="list-style-type: none"> Exposed to pricing softness Ex-fuel unit cost pressures are also squeezing margins Trades tight vs. higher-margin comps
Euro Transport	Spending	Ward	HTHROW	Heathrow			HoldCo Sec Notes	B1/-BB+	\$99.0	6.80%	291bp	<ul style="list-style-type: none"> A healthy consumer would help volumes, pricing, and financing Attained profitability amid cost reductions, operating leverage Focused on debt reduction w/open market buys funded w/eq ATM
Euro Transport	Spent	Ward	LHAGR	Lufthansa		5yr	CDS	Baa3/BBB-/BBB-			134bp	<ul style="list-style-type: none"> Low margin profile versus BBB rated OEMs Struggling to compete in China and in U.S. HEV market Elevated downgrade risk in a weaker auto environment Spreads in this sector continue to lag plain vanilla ABS asset classes
US Autos	Spending	Steiner	CVNA*	Carvana	14% PIK	2031	1st Lien	Ca / CCC+	\$111.1	8.88%	462bp	<ul style="list-style-type: none"> High quality and prime consumer credit exposure Limited supply driven by lower originations should provide technical support Elevated levels of idiosyncratic risks for a non-recession tested asset class Greater volatility given the lingering macro rate/recession uncertainty Early signs of performance stabilization for non-prime segments, recent delinquencies in prime trending higher Used car prices stabilizing
US Autos	Spent	Piascik	NSANY	Nissan	7.05%	2028	Sr Notes	Baa3/BB+	\$104.5	5.82%	154bp	<ul style="list-style-type: none"> Pref should trade to call date rather than perp Reserved for unemployment at 5% Bonds have tightened as late fee rules been challenged Pure play consumer unsecured exposure Recent vintages have been performing well.
Private Credit student Loan	Spending	Size				3-year		AAA		5.55%	105bp	
Unsecured Consumer Marketplace Lending	Spent	Size				3-year		BBB		6.95%	245bp	
US Financials	Spending	Caprihan	ALLY	ALLY	4.70%	Perp	Pref	Ba1/BBB	\$88.0	12.00%	450bp	
US Financials	Spent	Caprihan	SYF	Synchrony	5.15%	2029	Sr Notes	Baa3/BBB-	\$96.3	6.04%	160bp	

Source: J.P. Morgan.

Credit Derivative and Index Research

Saul Doctor
saul.doctor@jpmorgan.com
(44-20) 7134-1539

Pavan Talreja
pavan.talreja@jpmchase.com
(1-212) 834-2051

Tracking and trading the US consumer

For investors looking to gain exposure to the US consumer through credit markets, we propose a basket of liquid CDS names that are geared toward consumer spending. The basket comprises 25 current CDX.IG index names belonging to Autos, Home Builders, and Consumer Finance as well as cyclical segments of Retail and Consumer sectors (Table 2). The average daily volumes for the basket is \$19.4mn/day/name with an average spread of 66bp (~1.25x the CDX.IG index spread). Investors can trade the basket outright to take a view on the direction of credit spreads as well as the health of the US consumer or trade the basket versus the CDX.IG index to take a view on the relative health of the US consumer.

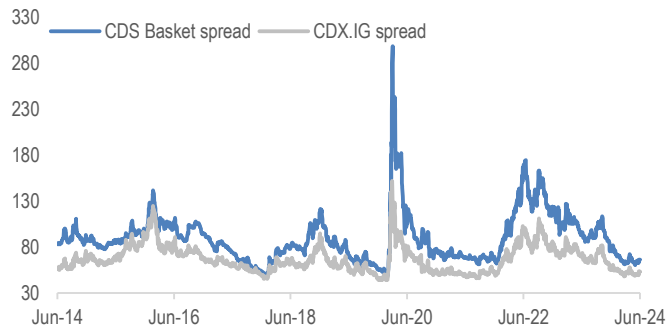
Table 2: Consumer exposure CDS basket

Issuer	Rating	Sector	Analyst	Analyst rating	CDS Liquidity (\$mn/day)	5y CDS spread
Ally Financial Inc.	BBB-	Fin Cos	Kabir Caprihan	OW	20.3	138
American Express Co	A	Fin Cos	Kabir Caprihan	UW	16.8	32
AutoZone, Inc.	BBB	Retail	Carla Casella	OW	13.3	31
BorgWarner Inc.	BBB+	Automotive	Evan Piascik	UW	11.5	70
D.R. Horton, Inc.	BBB+	Home Builders	Arjun Chandar	UW	14.5	51
Darden Restaurants	BBB	Retail	-	-	11.9	49
Expedia Group, Inc.	BBB	Consumer	Christian Crosby	N	16.9	77
Ford Motor Company	BBB-	Automotive	Evan Piascik	OW	57.0	155
General Motors Co	BBB	Automotive	Evan Piascik	OW	42.7	113
Host Hotels & Resorts	BBB-	Consumer	-	-	13.5	87
Lennar Corporation	BBB	Home Builders	Arjun Chandar	UW	21.6	74
Lowe's Companies	BBB+	Retail	Carla Casella	N	26.9	37
M.D.C. Holdings, Inc.	BBB-	Home Builders	Arjun Chandar	N	28.1	45
Marriott International	BBB	Consumer	-	-	7.1	47
McDonald's Corporation	BBB+	Retail	Carla Casella	UW	14.8	28
Mondelez International	BBB	Consumer	Carla Casella	UW	8.5	38
Netflix, Inc.	BBB	Technology	Christian Crosby	N	8.7	39
Omnicom Group Inc.	BBB+	Media	Christian Crosby	UW	13.2	41
PulteGroup, Inc.	BBB	Home Builders	Arjun Chandar	UW	21.9	74
Southwest Airlines Co.	BBB+	Transport	Mark Streeter	N	15.3	96
Target Corporation	A	Retail	Carla Casella	UW	20.8	38
The Home Depot, Inc.	A	Retail	Carla Casella	UW	14.3	33
Toll Brothers, Inc.	BBB-	Home Builders	Arjun Chandar	N	21.6	87
Walmart Inc.	AA	Retail	Carla Casella	N	23.9	31
Whirlpool Corporation	BBB	Consumer	-	-	19.7	154
Basket avg	BBB+				19.4	66

Source: J.P. Morgan.

The basket typically exhibits a similar spread performance to the CDX.IG index though it tends to outperform/underperform based on shifts in consumer discretionary spending trends. As shown in Figure 2, the spread ratio of the basket relative to the CDX.IG index tends to decompress when Consumer Discretionary equity prices fall relative to an equally-weighted S&P 500 index and compress during periods of consumer strength. The current spread ratio of the basket relative to the CDX.IG index is at 1.25x, modestly below the long-term median of 1.32x. We would expect the spread ratio to continue to compress toward its pre-Covid lows of 1-1.05x if US consumer spending trends continue. On the flip side, the spread ratio for the basket vs CDX.IG index spreads increased to 1.75x during the summer of 2022 when markets were concerned regarding the health of the consumer against the backdrop a rising rates environment and crossed 2x during the peak of the Covid crisis.

Figure 1: CDS basket spread history



Source: J.P. Morgan.

Figure 2: The basket vs CDX.IG spread ratio tracks the equity market price action for Consumer Discretionary names



Source: J.P. Morgan.

US Credit Research

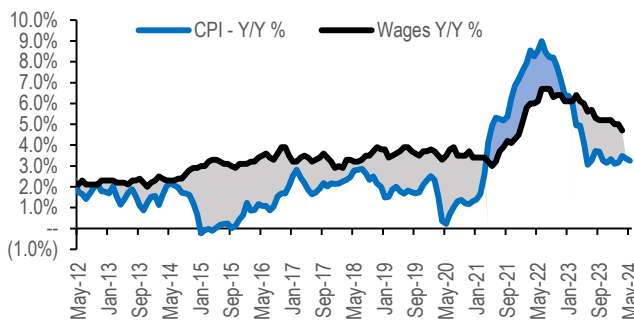
Carla Casella
 carla.casella@jpmorgan.com
 (1-212) 270-6798

Yaakov Musheyev
 yaakov.a.musheyev@jpmorgan.com
 (1-212) 834 5865

The US consumer is “trifurcated” and looking for value

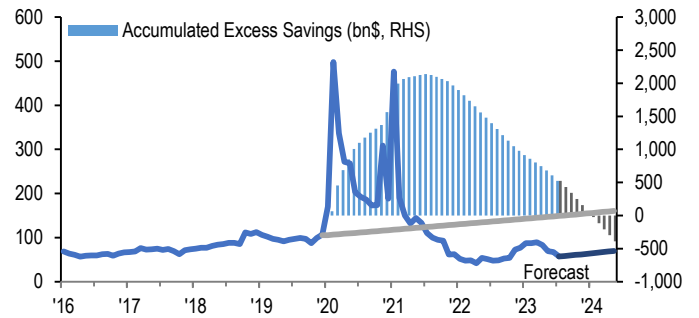
The US Consumer has held in better than expected as we work toward a level of “normalcy” post pandemic. We expect that headwinds from inflation, rates, and exhausted COVID surplus savings will temper spending in the back half of 2024 but not drive a full consumer retrenchment. We call the consumer “trifurcated” because the *low-income consumer is better off than pre-pandemic* with respect to jobs and wages. The *high-end consumer is strong and unwavering*, supported by wealth, real estate, and the markets, but the *middle-market consumer is feeling the strain* of inflation, student loan payments, rates, and healthcare and is making daily, weekly, or monthly choices on where to spend.

Figure 3: Wage growth > CPI inflation



Source: FRED, U.S. Census Bureau of Economics

Figure 4: Excess savings is exhausted as of mid-'24



Source: J.P. Morgan Macro Equity Research

The consumer is seeking value. We are seeing the most weakness in discretionary spend. Chase card data shows the most dramatic slowing in Lodging, Airlines, Supermarkets, and Other Retail. Walmart, Costco, and Off-Price stores are gaining share as consumers trade down from traditional grocery into Walmart for better prices or Costco for value in buying bulk. Apparel and home shoppers are trading down from department stores into Walmart and off price. The middle-market consumer is making choices in monthly spend but still spending. For example, the family may choose to eat out at a casual dining option like Chili’s (3 for Me menu starting at \$10.99) and “fund” that by eating out one fewer time that month, or forgoing another discretionary purchase. We’ve heard retailers from mass merchants to home centers to the dollar stores, department stores, and specialty *all* discuss consumer uncertainty and value-seeking behavior. They are spending more of their paychecks on non-discretionary categories, leaving less for discretionary. They are trading down to private brands, putting off home projects, and shopping sale events. **We believe this could have a modest impact on 2Q24 margins as retailers increase promotions to drive consumers through the doors.**

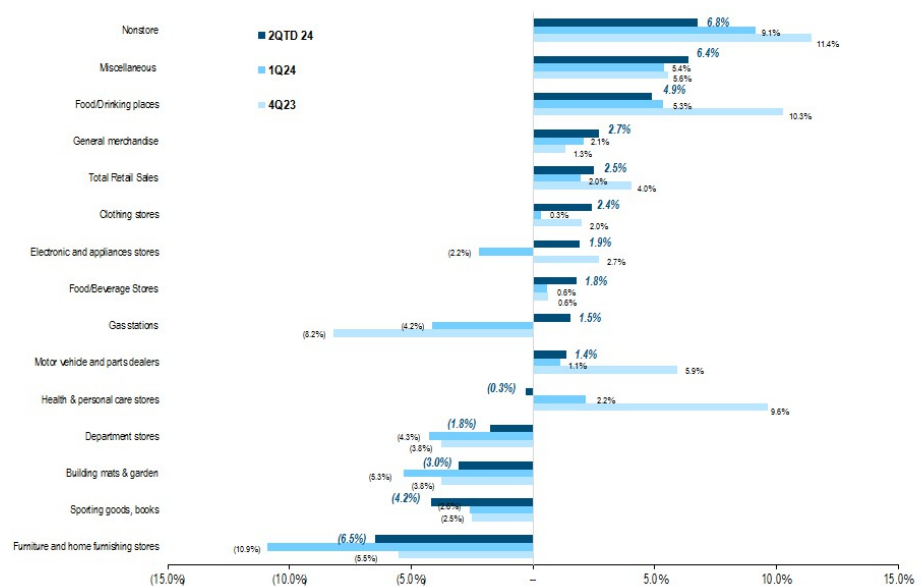
Figure 5: Chase Card data shows spending slowing, with discretionary spend in decline

	YOY											
	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24
	7/23	8/23	9/23	10/23	11/23	12/23	1/24	2/24	3/24	4/24	5/24	6/24
Discretionary	5.6%	3.5%	2.3%	2.1%	3.5%	2.8%	0.1%	1.0%	2.4%	1.0%	0.5%	-1.1%
Nondiscretionary	1.1%	3.5%	4.2%	2.7%	2.7%	3.4%	2.9%	2.3%	3.5%	1.7%	1.9%	1.5%
Other Retail	3.2%	1.0%	0.2%	-0.2%	3.5%	0.2%	-1.3%	-0.2%	2.2%	-0.9%	-0.1%	-2.3%
Wholesale Clubs & Discount Stores	5.2%	4.3%	2.8%	3.7%	5.0%	3.7%	5.7%	2.0%	3.7%	1.3%	2.1%	4.7%
Supermarkets	3.7%	2.8%	2.4%	2.0%	2.1%	2.5%	4.0%	2.8%	4.2%	-0.1%	0.7%	-2.6%
Airlines	5.2%	4.8%	-0.5%	-6.5%	-2.1%	0.8%	5.1%	-0.6%	-1.7%	-3.1%	-3.7%	-2.8%
Lodging	-0.6%	-3.9%	-5.3%	-1.6%	-2.8%	-4.7%	-5.6%	-4.8%	-3.3%	-3.0%	-1.7%	-4.7%
T&E	7.2%	4.0%	2.3%	2.0%	1.5%	4.1%	-0.9%	0.0%	0.9%	0.4%	0.5%	-1.0%
Restaurants	6.6%	3.5%	2.2%	3.0%	2.8%	5.6%	-2.4%	0.1%	1.4%	1.9%	1.8%	-0.1%

Source: J.P. Morgan Chase
 Note: See [here](#) for Chase Card data disclaimers and methodology.

We are keeping a keen focus on jobs and wages, which are the biggest underlying consumer drivers. A softer consumer that is looking for value and making choices with their monthly paycheck can still prove a healthy backdrop (maybe not robust, but healthy) for retailers that manage the balance sheet well. We would be cautious on big-ticket discretionary or home-related spending until we see a better rate backdrop or job growth. It may be late 2025 before we see these COVID beneficiaries rebound, keeping us cautious discretionary home players like Target (TGT) and Newell (NWL). **We are most comfortable holding defensive categories like alcoholic beverages, which are relatively inelastic (I guess we drink in good times and in bad) like ABI InBev (ABIBB) or Constellation Brands (STZ), food/bev like JBS and Pilgrim’s Pride (PPC), or any undervalued Consumer/Retail credits with a solid balance sheet.**

Figure 6: Retail sales are slowing, but still growing overall; big ticket discretionary declining



Source: U.S. Census Bureau of Economics

US Credit Research

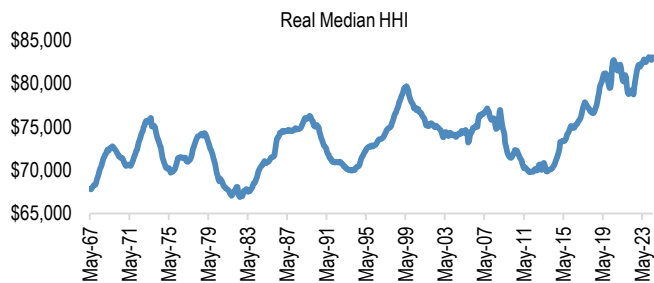
Mark Streeeter, CFA
 mark.streeeter@jpmorgan.com
 (1-212) 834-5086

Tyler Schachner
 tyler.schachner@jpmchase.com
 (1-212) 834-2238

Experiential spending driving retail real estate growth

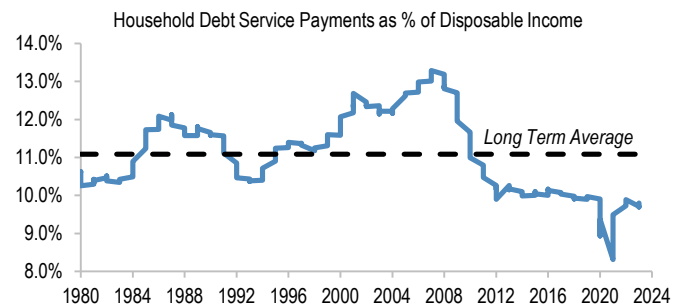
Retail real estate leasing remains strong despite more stretched consumer, experiential spending garners more share of the wallet: Consumers are earning more than ever (Figure 7) and debt payments are not yet impeding consumers’ ability to spend (Figure 8). Spending on food services, drinking places, and the general category of “experiences” is outpacing the growth of the traditional “bricks and mortar” channel (Figure 9). But it is fascinating to note the growth of brick and mortar real estate in terms of omnichannel real estate share (Figure 10). The percentage of sales involving a physical store has increased substantially over the last decade. Many retail REITs under our coverage are the resulting beneficiaries of these trends, specifically those with centers focused around services and necessities, as well as a select subset of higher end malls and outlets. Given the muted retail supply pipeline and lower vacancies, tenants are now more willing to rent less favorable configurations at higher prices. Benefitting from the current strength of the leasing pipeline, landlords are now leveraging this dynamic to push for higher rent bumps in new leases and are looking past any near-term volatility to address openings for 2025 and beyond.

Figure 7: Consumers are earning more than ever



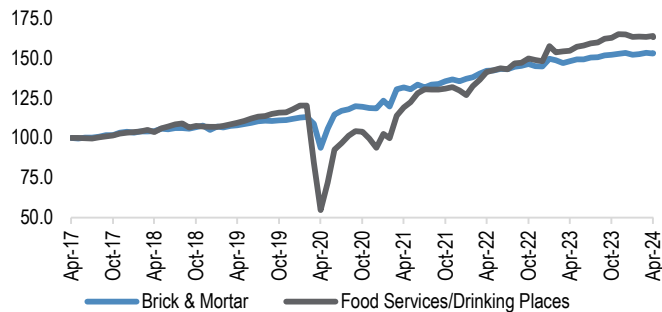
Source: – U.S. Bureau of Economic Analysis (BEA), JPMAM as of 3/31/2024

Figure 8: Household debt burden



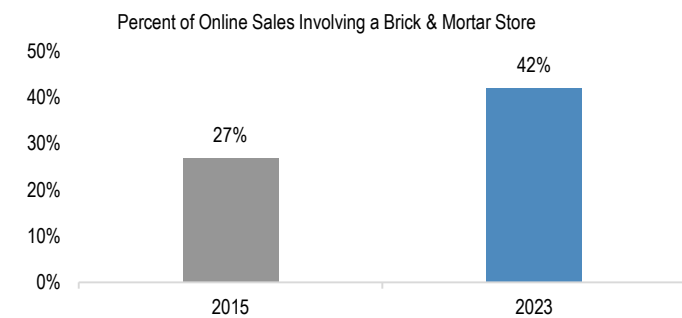
Source: St. Louis Fed, Board of the Federal Reserve System, JPMAM as of 12/31/23

Figure 9: Consumers are favoring experiential spending



Source: Census Bureau, JPMAM as of 5/31/24

Figure 10: Growing brick & mortar online share



Source: GlobalData, JPMAM as of 12/31/23

European Credit - Consumer & Retail

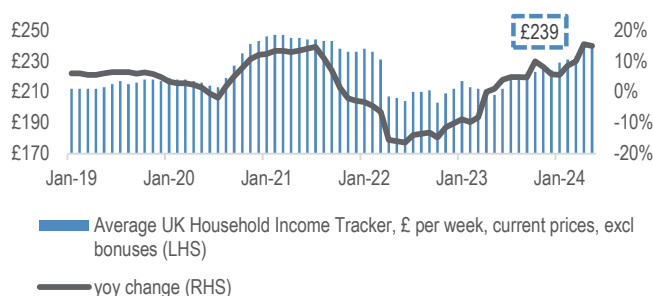
Neill Keaney
 neill.keaney@jpmorgan.com
 (44 20) 7134-2002

The European consumer

The UK and Continental European consumer are both showing signs of life as inflation subsides and real wages rise. However, as we go on to explain, we do not necessarily expect this to be a boon for all issuers under coverage.

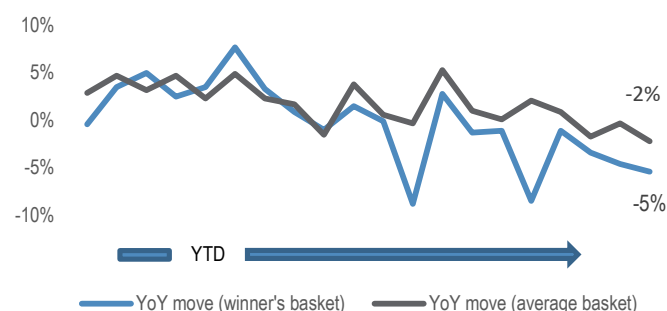
UK retail sales (by volume, ex automotive fuel, SA) inflected positive in May, delivering a strong beat of consensus estimates and compared to three consecutive months of annualised declines since February. Consumer confidence too has risen steadily from the lows, hitting its highest level in June since November '21. Perhaps the strongest indicator comes in the form of the Asda Income Tracker, which presents compelling evidence of real wage growth: average disposable income for UK households rose by 15% yoy in May to hit a 32-month high. Whilst gains were not equal, they were broad based with even the lowest quintile of households seeing a 13% rise whilst the top 40% of UK households saw their disposable income exceed their pre-cost-of-living-crisis peak.

Figure 11: UK Household weekly disposable income



Source: CEBR Asda Income Tracker

Figure 12: UK Grocery Retail: 2024 Basket price move (yoy)



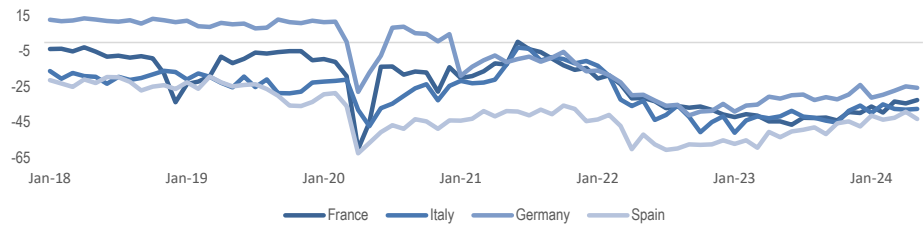
Source: Grocer 33

However, when it comes to categories which display little in the way of demand elasticity, most notably food retailing, the renewed purchasing power of the consumer is having little in the way of positive impact. In fact, as rapidly decelerating inflation is met with little in the way of a consequent customer volume response, price investment and promotional activity on the part of players to defend and take market share is compounding the problem and threatening incumbents' top lines. Data from Kantar shows market-level growth fell to just 2.3% (total value sales) in the four weeks to 9 June, with Kantar's own measure of inflation sitting at just 2.1%. Several market players slipped into negative growth territory led by Asda which posted a 5.4% yoy decline. As we have discussed previously, those retailers with higher market shares, greater scale across formats and stronger balance sheets display more pricing power and greater wherewithal for investment in their respective customer value proposition. Consequently, we have seen Tesco and Sainsbury's, the UK's two largest operators, grow their combined market share by almost a full percentage point – principally at the expense of Asda, Morrison's and, for the first time, discounter Aldi. Whilst it may be too early to tell, this trend may also represent a level of "up-trading" toward branded and premium private label product after two years of down-trading and private label gains. Further, we think wage inflation (which has tracked the increase in the UK's minimum wage rate at almost 10%) presents a significant headwind to margins, personnel costs being the single biggest opex line for most retailers and averaging at c.12% of top line across the UK grocery retail space.

Similar dynamics are driving the behaviour of the continental European consumer. French grocery retail, for example, remains stagnant, at best, with the latest Kantar print indicative of a shrinking market (-1%). With inflation having disappeared almost completely, this points to no pickup in volumes, in turn, driving self-help from the likes of Carrefour and Auchan in the form of price investment to help arrest recent share

donation to market leader, and most keenly priced, LeClerc. Absent a pickup in volumes however, margins are likely to become pressured and profitability challenged.

Figure 13: Europe Consumer Confidence: The climate for major purchases remains subdued



Source: European Commission

When it comes to discretionary retail, the European consumer appears reticent to make big ticket purchases. As shown below, the climate for major purchases has barely improved. This is correlated with weakness in housing starts and recent commentary from those retailers linked to residential construction and home improvement indicates no inflection point in big ticket demand. Within this sub-sector we express our preference for larger, better capitalised issuers capable of investing in price and capable of withstanding WC swings. Here we note French furniture retailer Mobilux and pan-European DIY retailer Hornbach, both of which have been growing market share despite cautious consumer sentiment and consequently challenging market backdrop.

US Credit Research

Michael Pace
michael.pace@jpmorgan.com
(1-212) 270-6530

Mark Streeeter, CFA
mark.streeeter@jpmorgan.com
(1-212) 834-5086

Stanislav R Van Genderen
stanislav.vangenderen@jpmchase.com
(1-212) 834-5481

Tyler Schachner
tyler.schachner@jpmchase.com
(1-212) 834-2238

Travel and Leisure

The resurgence of leisure and entertainment spending post-pandemic

Spending on Leisure and Entertainment has remained strong following the closure and reopening of these businesses due to the Covid pandemic. In fact, most Leisure segments are performing better now than pre-pandemic, which we attribute to both the continued (and somewhat surprising) strength of the consumer *and* their desire to prioritize spending on “experiences” vs physical goods. Undoubtedly, initial strength post-pandemic was pent-up demand, but continued strength is likely a fundamental change in consumer behavior. Cruise line demand remains the strongest (debatable vs concerts), as can be seen from Carnival’s recent fiscal 2Q24 results, increased full-year 2024 guidance, and strong forward booking commentary (see note [<here>](#)). Gaming/Lodging businesses also remain good overall as can be seen from record (or near-record) results recently, driven largely from strength in Vegas for casinos (particularly adjusting for weather) and pricing power at hotels.

However, not all Leisure segments or consumers are created equal. We have seen some pockets of weakness, particularly at the low-end consumer for regional casino properties. Although these hints of potential weakness have yet to materialize into a real/sustained shift, certain markets have been impacted. During its 2Q23 earnings call, Boyd Gaming first highlighted some pullback in visits, particularly softness in unrated players and the low end of its database. Other operators noted similar observations since then, including recently regrading 1Q24 when MGM noted “some signs of fatigue at the lower-end of the market” in Las Vegas. We suspect part of this low-end pressure at both regional and strip properties is due to difficult comparables, particularly when stimulus checks were being spent. We also believe high-end customer strength (higher spending per visit) has masked some of the low-end weakness. Regional theme parks (typically not high end) have also been somewhat mixed as attendance levels at some operators are still below pre-pandemic levels, although we attribute much of this to the conscious decision to focus on pricing over volume; ticket prices and in-park spending (F&B) are both at record levels.

Net/net, we believe the overall consumer is fine, particularly in the Leisure and Entertainment segments. Again, we believe there has likely been a fundamental shift toward experiential spending and away from material items. However, our base-case modeling for most Leisure sectors includes some increasing consumer headwinds. **Our top pick in an improving consumer backdrop is BYD 4.75s '31** given historical consumer concerns, the strength of the balance sheet (2.7x net lev), and trading levels (~90/6.5%/+227bp). We do note some recent M&A risk/noise in the latter. **Our top pan in a weakening consumer environment is PENN 4.125s '29** due to the importance of its brick and mortar casino business given late-to-market and cash deficits at its ESPN partnership, heightened leverage due to the latter (7x net lease adj now, peaking 8-9x), offset in part by above-average yields/spreads.

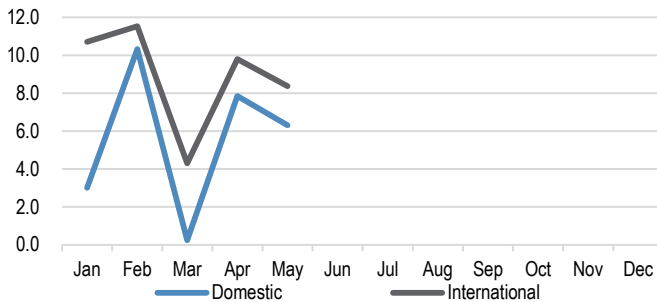
Airline spending soaring high with a shift toward premium travel experiences

Airline spending remains strong with consumers traveling at rates above pre-pandemic levels, increasing preferences for full-service experience: Demand for air

travel continues to be robust, at least for airlines that lean into the products consumers increasingly look for: international destinations, premium experiences, and benefits tied to their loyalty ecosystems. Largely for these reasons, airlines like Delta and United have now claimed the margin high ground once controlled by low-frill, egalitarian airlines such as Spirit. Recent data from Airlines for America (A4A) suggests that 78% are expecting to use a premier airline brand with more meaningful loyalty programs (ALK, AAL, DAL, HA, JBLU, LUV, UAL) while only 9% of customers are expecting to fly ULCCs for most of their domestic travel during 2024. Admittedly, the low-end consumer is showing signs of economic strain, though this only manifests toward down-market airlines. Just as some consumers are cutting back at McDonald's, the aforementioned egalitarian airlines are suffering from weak demand and low fares, of the type captured by CPI. To wit, CPI is a sample of an established subset of markets, where only the lowest offered fare is tracked, without regard to the number of seats sold. As such, **there's no meaningful correlation between CPI and what airlines ultimately capture from consumers.**

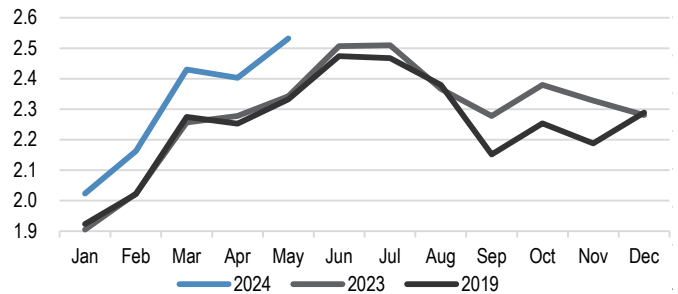
While ticket price/value remains the number one consideration for consumers when choosing from multiple airlines, the Chase card data (Figure 16) and the A4A Change in US Personal Consumption Expenditures (Figure 17) both further demonstrate that spending on air travel remains well above the 2019 comparable level. And there does not seem to be an immediate slowdown anytime soon with daily TSA volume up 5.8% y/y through the first five months of 2024 – a record start that remains above pre-pandemic levels (TSA is setting almost daily records for travels these days). Studies done by McKinsey ([Consumer Trends](#) and [Loyalty Programs](#)) affirm our thesis on the industry: **premium products not only improve brand loyalty, but customers are increasingly willing to participate in the programs and trade up into premium selections.**

Figure 14: Change (%) in US ticket sales - '24 vs. '23



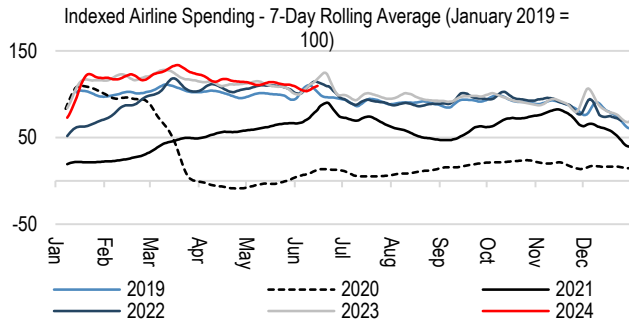
Source: A4A analysis of data from Airlines Reporting Corporation (ARC)

Figure 15: Daily average TSA throughput (millions)



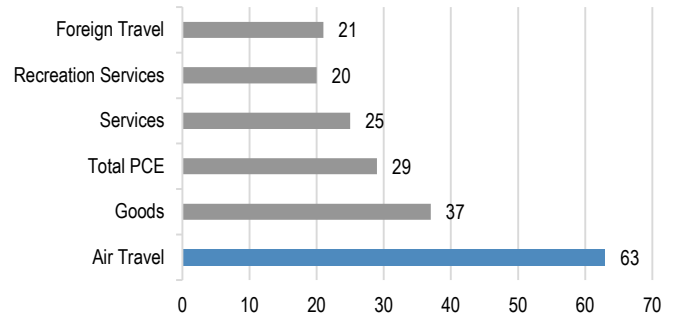
Source: A4A analysis of data from the Transportation Security Administration

Figure 16: Chase card spending data



Source: J.P. Morgan, DataQuery. Click [here](#) for disclaimers and methodology for Chase Card Tracker Data

Figure 17: Change (%) in personal consumption '19 - '23



Source: Bureau of Economic Analysis

European Credit - Transportation and Healthcare

Danielle Ward, CFA
 danielle.x.ward@jpmorgan.com
 (44-20) 7742-7344

European travellers are increasingly seeking “value for money”

Sector data points show appetite for travel remains intact, with **record traffic prints in May at several UK airports** (including Heathrow, Stansted, Manchester) and European airport passenger traffic continuing to close the gap with pre-pandemic activity levels. **Concerns have begun to emerge about the outlook for peak summer air fares**, however, with low cost carrier Ryanair trimming its pricing growth expectation to 0-5% from its prior +5-10% assumption, and other UK travel operators observing that the pricing environment has become more competitive. Lufthansa similarly pared back its yield expectations for FY24 (now expecting passenger unit revenues to decline low single digits, in part due to impacts from strike activity earlier in the year) while other network carriers have provided limited guidance commentary.

Numerous sources suggest **consumers are increasingly seeking value**, whether at the premium end (TUI Cruises cited the “significant value for money” offered by cruises as a factor behind the “exceptionally strong” demand it has witnessed) or at the budget end (Ryanair has seen strong volume performance on the back of price stimulation), while **UK holiday makers are increasingly opting for all-inclusive options** (c. 46% of summer holiday bookings this year, increasing from 42% in 2023, according to the UK’s Advantage Travel Partnership). There is some evidence that **consumers with lower purchasing power are pulling back more so than those purchasing higher-end products**, with UK tour operator On The Beach seeing a clear disparity between growth patterns in Premium vs. Value transactions. In contrast to the US landscape, **Europe is not seeing such a divide between its budget airlines and network carriers**, however: even in a slightly more muted pricing environment, European low-cost carriers such as Ryanair and easyJet remain relatively well positioned from a demand and unit cost perspective, cushioned too by strong balance sheets (solid IG ratings, unencumbered fleet value).

US Credit Research

Avi Steiner, CFA
avi.a.steiner@jpmorgan.com
(1-212) 270-5512

Evan Piascik
evan.piascik@jpmchase.com
(1-212) 834-4432

William O’Gorman
william.ogorman@jpmchase.com
(1-212) 622-8859

Automotive

We have long viewed the broader Automotive sector, and the Manufacturer and Dealer segments specifically, as key barometers of consumer health, given they are largely reliant on a retail customer base for revenue, which in turn is driven by the level of employment, financing costs and availability, and the microeconomic backdrop.

Overall, **our view from the Automotive lens is that consumer health is increasingly strained, but nevertheless has proven resilient, though we expect still elevated transaction prices and interest rates to continue to weigh and test this resiliency.**

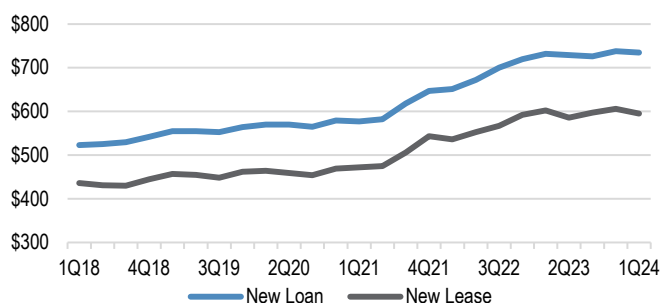
Below we discuss the state of the consumer from the perspective of the Automotive Manufacturers, and specifically their captive finance subsidiaries, and the Automotive Dealer groups.

Automotive manufacturers and captives

The auto consumer, in our view, is stretched but not broken. Consumer demand for light vehicles has been resilient despite the impact of higher rates on monthly car payments. YTD light vehicle sales SAAR was 15.5 million, in line with a solid 2023 (15.5 million) with expectations for full-year light vehicle sales to total ~16.0 million, or up ~3% y/y (per S&P Global Mobility). Meanwhile, average transaction prices have moderated downward (~2% y/y) over the past several months, net of incentives from OEMs to dealers, which continue to climb back toward pre-pandemic levels (but remain well below the 2019 average).

We believe the modest y/y declines in pricing could support light vehicle consumer demand and are absorbable by the OEMs, in our view, given the supportive auto industry outlook. That said, ATPs remain elevated on an absolute basis (~\$45k in May v. ~\$35k average in 2019), which have contributed to a ~\$160 increase in average monthly loan payments compared to 2021 (to \$735/month v. \$688/month in 1Q21) when combined with higher auto loan rates that largely reflect the Fed’s interest rate hikes. That said, the impact to auto consumer demand is muted so far, and average monthly payments have started to stabilize recently, albeit at elevated levels (see Figure 19). Overall, we maintain a level of caution as risks to the auto consumer outlook are prevalent, particularly if auto loan rates remain elevated in a “higher-for-longer” interest rate environment leading to a deterioration in the automotive consumer health with already-elevated average monthly payments.

Figure 18: Average Auto Monthly Payments



Source: Experian.

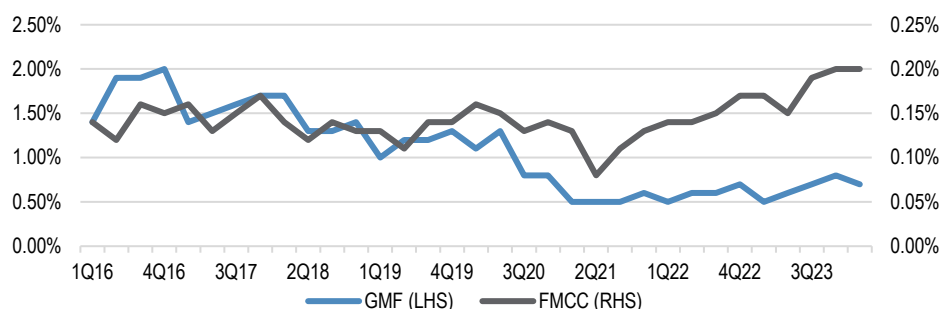
Figure 19: Effect of Higher Interest Rates on Monthly Payments

	May-23	Jan-24	May-24
Average New Vehicle Loan ¹	\$45,838	\$45,106	\$45,033
Average Interest Rate ²	7.00%	7.10%	7.10%
Term (Months) ³	68	68	68
JDP Avg. Monthly Payment (Reported)	\$736	\$721	\$727
Increase in monthly payment in \$s YTD			\$6
Increase in monthly payment in % YTD			0.8%
Increase in monthly payment in \$s Y/Y			(\$9)
Increase in monthly payment in % Y/Y			-1.2%

Source: J.D. Power, Experian, J.P. Morgan. Note: 1) JDP estimated average transaction price. 2) average interest rate for loans per JDP. 3) Average new vehicle loan term per Experian.

Automotive captive financing portfolios tell a similar story, and portfolio quality is largely healthy in our view. 30+ and 60+ delinquencies have risen from post-pandemic lows (including at Ford and GM) but are only modestly above 2019 levels (2.72% 30-day delinquencies in 1Q24 v. 2.66% in 1Q19). Meanwhile, captive portfolio quality has improved meaningfully in the same period. The share of overall Prime and above risk grew to ~69% in 1Q24 compared to 60% in 1Q19, while Subprime and below has declined to ~16% versus 23% in 1Q19. Note these metrics include all financing sources for autos, which includes banks (~27.5% share in 1Q24), captives (~23.7% share), credit unions (22.9% share) among other lending entities. To gauge captive-specific portfolio quality, GM’s prime loan originations were 82% of total loan originations in 2023 (and over 75% of the retail portfolio at March 31), and Ford Motor Credit’s “higher risk” portfolio mix was only 4% of the retail and lease portfolio at March 31.

Figure 20: General Motors Financial and Ford Motor Credit 60+ Day Delinquencies



Source: Company reports.

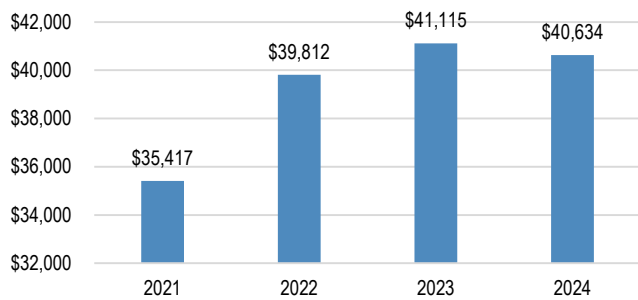
Automotive dealers

Within the Automotive sector, the health of the consumer is most acutely felt within the Dealer segment, where the vast majority of revenue (excluding fleet) is retail based, including new vehicle sales, used vehicle sales, finance and insurance, and parts and service. Though the pandemic and resulting supply chain shortages have boosted dealer-level earnings through the start of 2023, profitability since that time has begun to normalize, in part driven by slowing retail demand, amid an increasingly uneven economic backdrop, higher rates, and signs of growing consumer strain.

To level set, retail (ex fleet) sales of new light vehicles have increased just 1% year to date through the month of May, a notable decline from the 8% growth seen in 2023. We believe the meaningful slowdown in growth largely reflects the impact of higher interest rates as the vast majority of new car purchases are acquired with some form of financing (~80% per Experian). Moreover, while average new car transaction prices have begun to decline, they remain well above pre-pandemic levels, which in combination with higher rates have led to elevated loan balances and higher monthly payments.

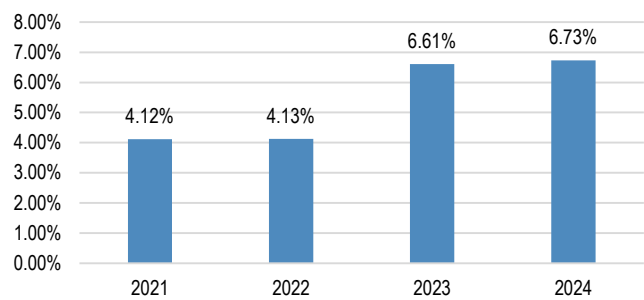
As can be seen in the accompanying charts below (and Figure 11 above), based on first quarter Experian data, the average amount financed for a new car remains near the highs, while the average new loan rate and average monthly payment are at the highs.

Figure 21: Average New Amount Financed



Source: Experian.

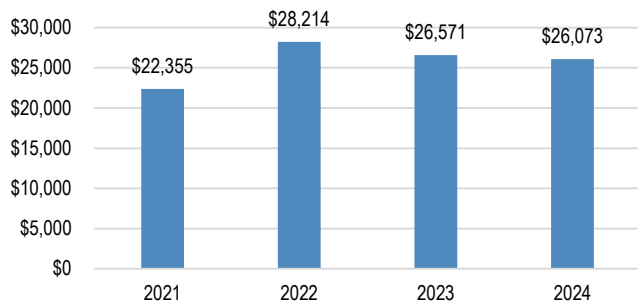
Figure 22: Average New Auto Loan Rate



Source: Experian.

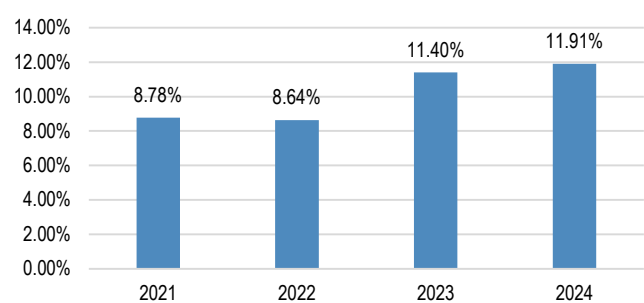
Used vehicle data show similar trends, with the average used loan amount only modestly lower YoY, offset by higher rates, which drives the average used monthly payment higher.

Figure 23: Average Used Amount Financed



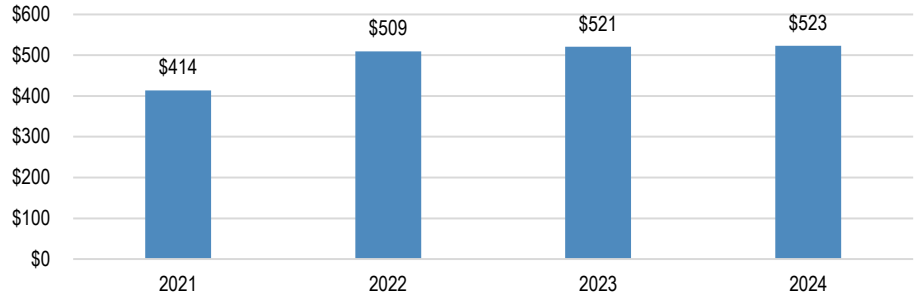
Source: Experian.

Figure 24: Average Used Loan Rate



Source: Experian.

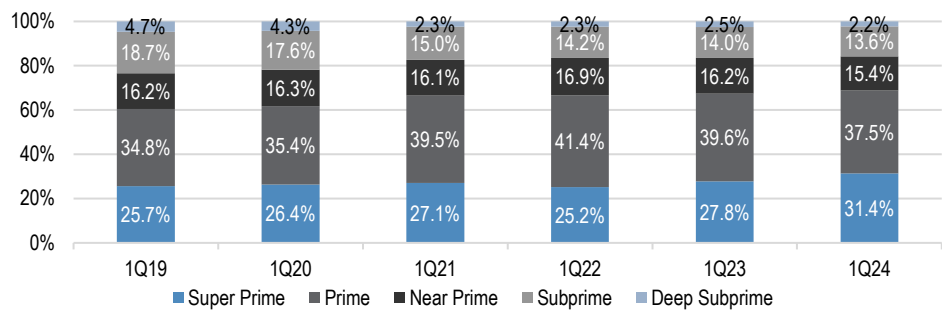
Figure 25: Average Used Monthly Payment



Source: Experian.

The impact of higher interest rates can also be seen through the lens of borrower type as higher rates typically impact the lower credit score sub-prime borrower most acutely. To this end, we note that through the first quarter of 2024, both new and used vehicle sub-prime loans accounted for just ~17.5% of total Automotive loans (per Experian), which compares to ~25% immediately prior to the pandemic and ~18% in 2023. The impact of higher rates can more easily be seen when looking at used loans in isolation, where subprime borrowers accounted for ~22.5% of total loan risk distribution in the first quarter of 2024 compared to ~33% in 2019 and ~24% in 2023. The skew toward higher quality borrowers is even more stark when looking at new loan originations, with loans to prime and super prime borrowers now accounting for nearly 84% of all originations compared to ~76% in the year immediately preceding the pandemic.

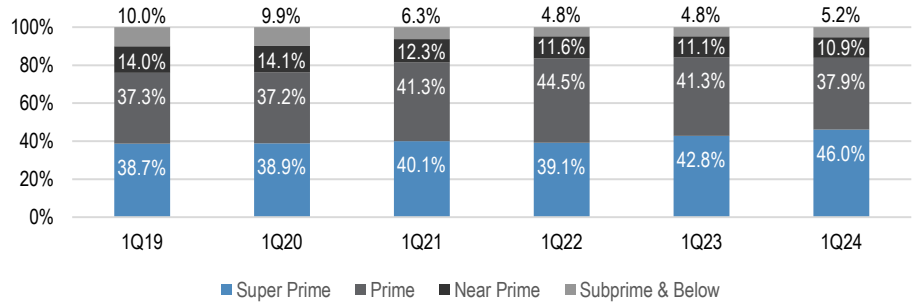
Figure 26: Total Automotive Risk Distribution



Source: Experian. Note: includes both loans and leases for new and used vehicles.

Figure 27: New Loan Risk Distribution

Note: Deep subprime <1%.



Source: Experian

Securitized Products Research

Amy Sze
 amy.sze@jpmorgan.com
 (1-212) 270-0030

Akshit R Jaisinghani, CFA, FRM
 akshit.r.jaisinghani@jpmorgan.com
 (1-212) 834-7041

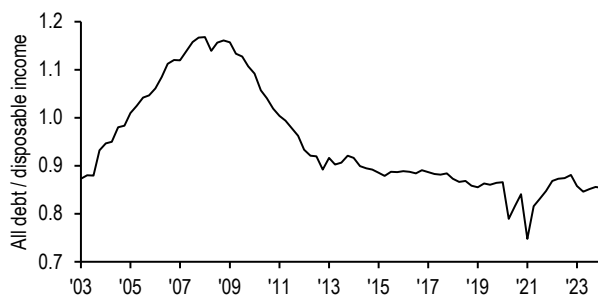
Chong Sin
 chong.c.sin@jpmorgan.com
 (1-212) 834-2611

Eyeing the consumer through a securitized lens...

U.S. consumer debt relative to income hit a low, post-COVID, as legislative fiscal [stimulus](#) of roughly \$6 trillion was distributed to consumers either directly or indirectly. Now, we see normalization with the ratio of debt to disposable income at 85%, in line with post-GFC levels. More importantly, however, is not how much debt consumers have but if they are making payments on it (Figure 28).

Figure 28: Post-COVID debt to income has normalized

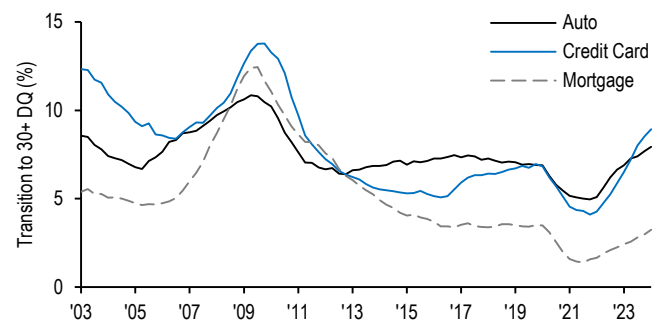
All consumer debt / disposable income in the U.S.



Source: J.P. Morgan, New York FED, BEA

Figure 29: Auto and credit card delinquencies are rising above pre-COVID levels, while mortgage delinquencies increase at a slower pace

% of 30+ delinquencies by consumer debt category

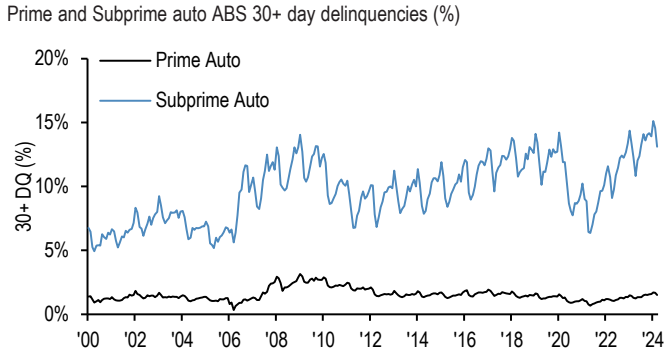


Source: J.P. Morgan, New York FED, Consumer Credit Panel/Equifax

Certainly, delinquencies are on the rise. As we can see, both auto and credit card delinquencies have been quickly rising post fiscal stimulus (Figure 29). Current levels are higher than pre-COVID but still not quite GFC levels. Mortgages are performing the best, where delinquencies have barely returned to pre-COVID norms. This suggests that, perhaps, there is more stress for lower end consumers. A high share of low-end consumers do not have a mortgage. Their debt is more often in the form of auto and credit cards. Moreover, within the auto segment, we find that subprime auto delinquencies have risen to higher levels than observed during the GFC, while prime has remained low. **Clearly there is some pain for the low-end consumer** (Figure 30).

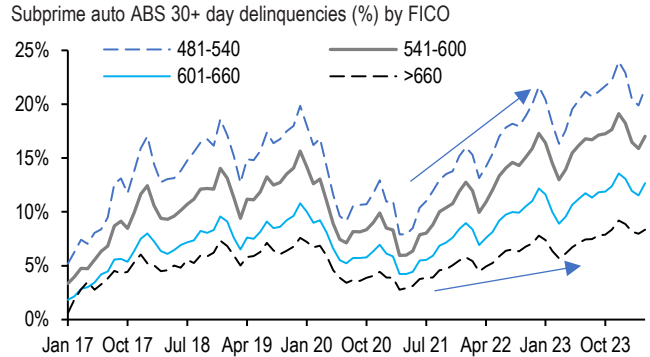
Taking this one step further and looking at the subprime auto sector by FICO, we see lower FICO borrowers are deteriorating at a faster pace than higher FICO borrowers (Figure 31). Additionally, while not shown, we have observed more recent vintages ('22/'23) performing worse than older vintages when normalizing for loan age. In other words, all else equal, recent vintages are becoming delinquent sooner. Initially, this trend started appearing in lower FICO segments, but recently the trend has also shown up in higher FICO bands.

Figure 30: Subprime auto delinquencies are worse than during the GFC. Prime is starting to rise, but slowly



Source: J.P. Morgan, Intex

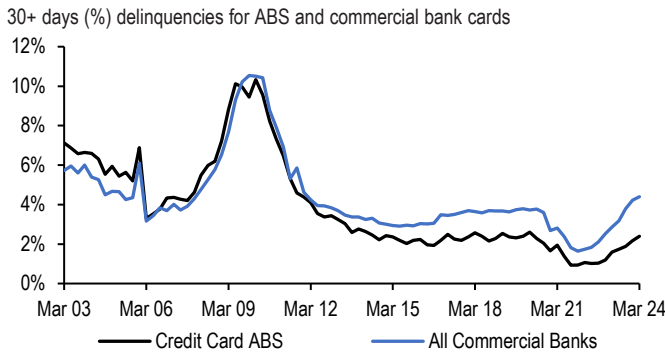
Figure 31: Lower FICO subprime auto has been deteriorating more quickly than higher FICO



Source: J.P. Morgan, ABS-EE via 1010data

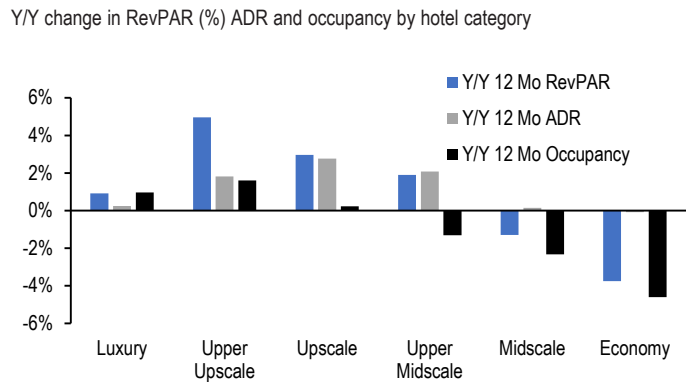
Moreover, aggregate performance in ABS is often much better than what sits on bank balance sheets (Figure 32). Securitized pools represent only a small slice (approximately 10% across autos, credit cards, and student loans) of aggregate consumers and are heavily concentrated in prime accounts. For example, credit card ABS outstanding is approximately \$80bn versus household credit card debt at \$1.11 trillion. Furthermore, the bulk of credit card ABS trust receivables are concentrated with prime borrowers in very seasoned accounts. Credit quality and underwriting standards are the main drivers of divergence in performance between the aggregate and ABS data. ABS delinquencies and charge-offs have consistently tracked inside of aggregate (all commercial banks) since the GFC. The main takeaway here is that the consumer is doing a little worse than what is implied by ABS data.

Figure 32: Credit Card ABS delinquencies are better than the rest of the market, notably commercial bank card portfolios



Source: J.P. Morgan, ABS deal documents, FFIEC

Figure 33: Revenues for economy hotels are declining the most



Source: J.P. Morgan, CoStar

Turning to commercial real estate, data shows that revenues for economy hotels has been declining more than other segments. This implies that low-end consumers are not traveling as much (Figure 33). So it's pretty clear that the low-end consumer segment is both deteriorating more quickly, with respect to making debt payments on time, than the higher-end and pulling back on their spending.

Securitized Products Research

John Sim
 john.sim@jpmorgan.com
 (1-212) 834-3124

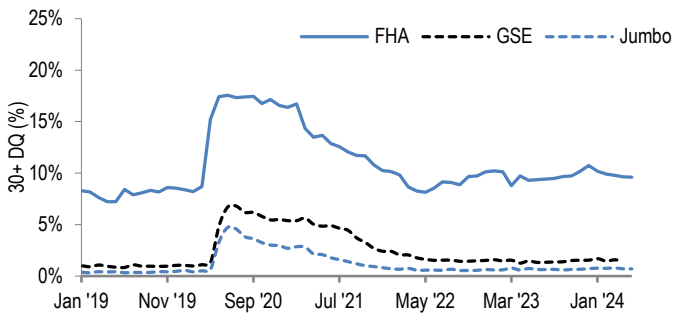
Nick Maciunas
 nicholas.m.maciunas@jpmorgan.com
 (1-212) 834-5671

Mortgage stability versus rental strain

One consumer segment, as pointed out earlier, that is holding up better is mortgages. We look at how delinquencies stack up for mortgage holders by tier. Federal Housing Administration (FHA) and Veteran (VA) borrowers are traditional low FICO, high LTV, and high DTI. These are government-run affordable lending platforms, with roughly 20% of all mortgage falling into this segment. Generally, we see FHA, GSE, and jumbo loans all pretty stable (Figure 34). Low mortgage rates continue to support borrowers who likely find it more expensive to move than to stay in place. More than 70% of all mortgage holders have a rate below 4%. Existing mortgage holder payments represent just over 20% of their monthly income. Consumers with a mortgage are likely to prioritize mortgage payments over all else to preserve their low rate. Alternatively, renters are in a much more challenging situation; at current mortgage rates, it would cost more than 50% of their income to make monthly payments, whereas renting is around 40% (Figure 35). This segment has less disposable income after paying rent, relative to homeowners. Here is where stress is likely to emerge in a weaker labor market.

Figure 34: Stable delinquencies for mortgages

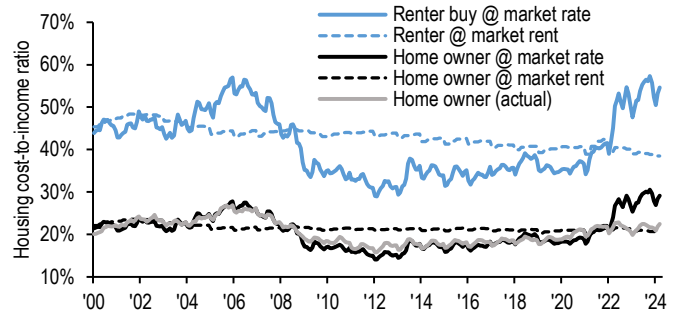
30+ day (%) delinquencies for various mortgage segments



Source: J.P. Morgan, CoreLogic, Fannie Mae, Freddie Mac, Ginnie Mae

Figure 35: Mortgage holders have a housing cost to income of just over 20%, while renters have a cost of nearly 40% of income

Renter/ homeowner cost-to-income vs cost-to-rent



Source: J.P. Morgan, Case-Shiller, CoStar, Optimal Blue, Bloomberg Finance L.P.

US Credit Research

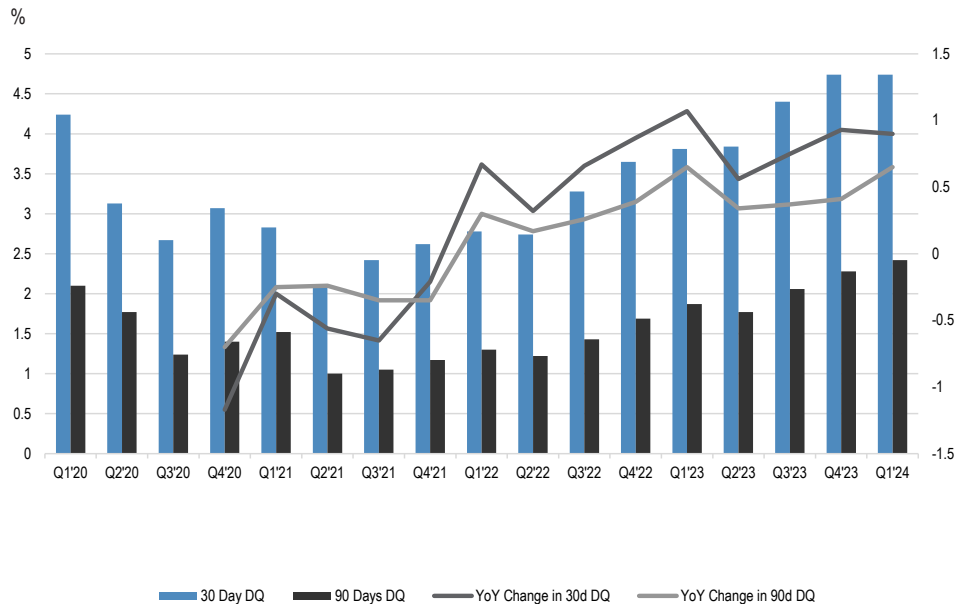
Kabir Caprihan, CFA
 kabir.x.caprihan@jpmorgan.com
 (1-212) 834-5613

...and then from an unsecured Consumer Finance perspective

Commentary from credit card issuers like Capital One Financial and Synchrony Financial remain sanguine. While delinquencies and net charge-offs are trending higher on the credit card portfolio, the companies see it more as “normalization” rather than deterioration. In short, credit outperformed during COVID, and we are now getting back to what should be normal levels of delinquency and charge-offs. Capital One expects that charge-offs are settling in 15% higher than 2019 levels. **What gives the management teams comfort despite delinquencies rising 82bp in Q1’24 from a year ago and net charge-offs rising 59bp? Answer: the roll rate!**

Issuers are seeing a steady deceleration in credit trends as the sequential pace of delinquencies and net-charge offs continues to improve. In term of spending patterns, Synchrony mentioned that they have seen the consumer focus more on non-discretionary items in the quarter and shifted out of certain discretionary items like home furnishings, travel, and entertainment. Spend from non-prime consumer has slowed, and the purchase volume is being driven by higher credit grade consumers. Payment rates also continue to moderate and were about 15.8% for the company, which is about 90bp lower than a year ago but still 60bp higher than rates observed in 2015-2019. Trends in payment rates as well as asset quality trends suggest that the portfolio is reverting to metrics that are more consistent with pre-pandemic norms.

Figure 36: 30- and 90-Delinquency Trends for Synchrony Financial



Source: Company reports and J.P. Morgan estimates.

Analyst Certification: The Research Analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple Research Analysts are primarily responsible for this report, the Research Analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the Research Analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect the Research Analyst’s personal views about any and all of the subject securities or issuers; and (2) no part of any of the Research Analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the Research Analyst(s) in this report. For all Korea-based Research Analysts listed on the front cover, if applicable, they also certify, as per KOFIA requirements, that the Research Analyst’s analysis was made in good faith and that the views reflect the Research Analyst’s own opinion, without undue influence or intervention.

All authors named within this report are Research Analysts who produce independent research unless otherwise specified. In Europe, Sector Specialists (Sales and Trading) may be shown on this report as contacts but are not authors of the report or part of the Research Department.

Important Disclosures

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan–covered companies, and certain non-covered companies, by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request.

A history of J.P. Morgan investment recommendations disseminated during the preceding 12 months can be accessed on the Research & Commentary page of <http://www.jpmorganmarkets.com> where you can also search by analyst name, sector or financial instrument.

Explanation of Credit Research Valuation Methodology, Ratings and Risk to Ratings:

J.P. Morgan uses a bond-level rating system that incorporates valuations (relative value) and our fundamental view on the security. Our fundamental credit view of an issuer is based on the company's underlying credit trends, overall creditworthiness and our opinion on whether the issuer will be able to service its debt obligations when they become due and payable. We analyze, among other things, the company's cash flow capacity and trends and standard credit ratios, such as gross and net leverage, interest coverage and liquidity ratios. We also analyze profitability, capitalization and asset quality, among other variables, when assessing financials. Analysts also rate the issuer, based on the rating of the benchmark or representative security. Unless we specify a different recommendation for the company’s individual securities, an issuer recommendation applies to all of the bonds at the same level of the issuer’s capital structure. We may also rate certain loans and preferred securities, as applicable. This report also sets out within it the material underlying assumptions used. We use the following ratings for bonds (issues), issuers, loans, and preferred securities: Overweight (over the next three months, the recommended risk position is expected to outperform the relevant index, sector, or benchmark); Neutral (over the next three months, the recommended risk position is expected to perform in line with the relevant index, sector, or benchmark); and Underweight (over the next three months, the recommended risk position is expected to underperform the relevant index, sector, or benchmark). J.P. Morgan Emerging Markets Sovereign Research uses Marketweight, which is equivalent to Neutral. NR is Not Rated. In this case, J.P. Morgan has removed the rating for this particular security or issuer because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating no longer should be relied upon. An NR designation is not a recommendation or a rating. NC is Not Covered. An NC designation is not a rating or a recommendation. For CDS, we use the following rating system: Long Risk (over the next three months, the credit return on the recommended position is expected to exceed the relevant index, sector or benchmark); Neutral (over the next three months, the credit return on the recommended position is expected to match the relevant index, sector or benchmark); and Short Risk (over the next three months, the credit return on the recommended position is expected to underperform the relevant index, sector or benchmark).

J.P. Morgan Credit Research Ratings Distribution, as of April 06, 2024

	Overweight (buy)	Neutral (hold)	Underweight (sell)
Global Credit Research Universe*	27%	56%	17%
IB clients**	65%	59%	63%

*Please note that the percentages may not add to 100% because of rounding.

**Percentage of subject companies within each of the "Overweight," "Neutral" and "Underweight" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.

For purposes of FINRA ratings distribution rules only, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. The Credit Research Rating Distribution is at the issuer level. Issuers with an NR or an NC designation are not included in the table above. This information is current as of the end of the most recent calendar quarter.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Registration of non-US Analysts: Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of J.P. Morgan Securities LLC, may not be registered as research analysts under FINRA rules, may not be associated persons of J.P. Morgan Securities LLC, and may not be subject to FINRA Rule 2241 or 2242 restrictions on communications with covered companies, public

appearances, and trading securities held by a research analyst account.

Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

UK MIFID FICC research unbundling exemption: UK clients should refer to [UK MIFID Research Unbundling exemption](#) for details of J.P. Morgan's implementation of the FICC research exemption and guidance on relevant FICC research categorisation.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

J.P. Morgan Research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

Any digital or crypto assets discussed in this research report are subject to a rapidly changing regulatory landscape. For relevant regulatory advisories on crypto assets, including bitcoin and ether, please see <https://www.jpmorgan.com/disclosures/cryptoasset-disclosure>.

The author(s) of this research report 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.

Exchange-Traded Funds (ETFs): J.P. Morgan Securities LLC ("JPMS") acts as authorized participant for substantially all U.S.-listed ETFs. To the extent that any ETFs are mentioned in this report, JPMS may earn commissions and transaction-based compensation in connection with the distribution of those ETF shares and may earn fees for performing other trade-related services, such as securities lending to short sellers of the ETF shares. JPMS may also perform services for the ETFs themselves, including acting as a broker or dealer to the ETFs. In addition, affiliates of JPMS may perform services for the ETFs, including trust, custodial, administration, lending, index calculation and/or maintenance and other services.

Options and Futures related research: If the information contained herein regards options- or futures-related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <https://www.theocc.com/components/docs/riskstoc.pdf> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or http://www.finra.org/sites/default/files/Security_Futures_Risk_Disclosure_Statement_2018.pdf for a copy of the Security Futures Risk Disclosure Statement.

Changes to Interbank Offered Rates (IBORs) and other benchmark rates: Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

Private Bank Clients: Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

Legal entity responsible for the production and distribution of research: The legal entity identified below the name of the Reg AC Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

Legal Entities Disclosures and Country-/Region-Specific Disclosures:

Argentina: JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by the Australian Securities and Investments Commission and is a Market Participant of ASX Limited, a Clearing and Settlement Participant of ASX Clear Pty Limited and a Clearing Participant of ASX Clear (Futures) Pty Limited. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting <https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations,

etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / 0800-7700810 (For Hearing Impaired) / ouvidoria.jp.morgan@jpmorgan.com. **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Canadian Investment Regulatory Organization and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan SE ("JPM SE"), which is authorised as a credit institution by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). JPM SE is a company headquartered in Frankfurt with registered address at TaunusTurm, Taunustor 1, Frankfurt am Main, 60310, Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions ("EEA professional investors"). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong Branch (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. Where the distribution of this material is a regulated activity in Hong Kong, the material is distributed in Hong Kong by or through J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai - 400098, is registered with the Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number - INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: <http://www.jpmipl.com>. JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/ CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. Compliance Officer: Spurthi Gadamsetty; spurthi.gadamsetty@jpmchase.com; +912261573225. Grievance Officer: Ramprasadh K, jpmipl.research.feedback@jpmorgan.com; +912261573000.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Indonesia: PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is registered and supervised by the Otoritas Jasa Keuangan (OJK). **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to "wholesale clients" (as defined in the Financial Markets Conduct Act 2013). JPMSAL is registered as a Financial Service Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 030/08/2023 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore), both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of "accredited investors," "expert investors" or "institutional investors," as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Conduct Authority (FSCA). **Taiwan:** J.P. Morgan Securities

(Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the "Important Disclosures" in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan Securities plc ("JPMS plc") which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 ("the FPO"); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as "UK relevant persons". This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc's policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). U.S.: J.P. Morgan Securities LLC ("JPMS") is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

General: Additional information is available upon request. The information in this material has been obtained from sources believed to be reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. There may be certain discrepancies with data and/or limited content in this material as a result of calculations, adjustments, translations to different languages, and/or local regulatory restrictions, as applicable. These discrepancies should not impact the overall investment analysis, views and/or recommendations of the subject company(ies) that may be discussed in the material. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. This material may include views on structured securities, options, futures and other derivatives. These are complex instruments, may involve a high degree of risk and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not involved in the preparation of this material may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

Confidentiality and Security Notice: This transmission may contain information that is privileged, confidential, legally privileged, and/or exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or use of the information contained herein (including any reliance thereon) is STRICTLY PROHIBITED. Although this transmission and any attachments are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by JPMorgan Chase & Co., its subsidiaries and affiliates, as applicable, for any loss or damage arising in any way from its use. If you received this transmission in error, please immediately contact the sender and destroy the material in its entirety, whether in electronic or hard copy format. This message is

subject to electronic monitoring: <https://www.jpmorgan.com/disclosures/email>

MSCI: Certain information herein (“Information”) is reproduced by permission of MSCI Inc., its affiliates and information providers (“MSCI”) ©2024. No reproduction or dissemination of the Information is permitted without an appropriate license. MSCI MAKES NO EXPRESS OR IMPLIED WARRANTIES (INCLUDING MERCHANTABILITY OR FITNESS) AS TO THE INFORMATION AND DISCLAIMS ALL LIABILITY TO THE EXTENT PERMITTED BY LAW. No Information constitutes investment advice, except for any applicable Information from MSCI ESG Research. Subject also to [msci.com/disclaimer](https://www.msci.com/disclaimer)

Sustainalytics: Certain information, data, analyses and opinions contained herein are reproduced by permission of Sustainalytics and: (1) includes the proprietary information of Sustainalytics; (2) may not be copied or redistributed except as specifically authorized; (3) do not constitute investment advice nor an endorsement of any product or project; (4) are provided solely for informational purposes; and (5) are not warranted to be complete, accurate or timely. Sustainalytics is not responsible for any trading decisions, damages or other losses related to it or its use. The use of the data is subject to conditions available at <https://www.sustainalytics.com/legal-disclaimers>. ©2024 Sustainalytics. All Rights Reserved.

"Other Disclosures" last revised April 06, 2024.

Copyright 2024 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan. It is strictly prohibited to use or share without prior written consent from J.P. Morgan any research material received from J.P. Morgan or an authorized third-party (“J.P. Morgan Data”) in any third-party artificial intelligence (“AI”) systems or models when such J.P. Morgan Data is accessible by a third-party. It is permissible to use J.P. Morgan Data for internal business purposes only in an AI system or model that protects the confidentiality of J.P. Morgan Data so as to prevent any and all access to or use of such J.P. Morgan Data by any third-party.

Completed 27 Jun 2024 09:07 PM EDT

Disseminated 28 Jun 2024 06:16 AM EDT