Automotive Industry

Autos on collision course w/ tight credit & supply

Industry Overview

17 March 2023

Equity
Global
Autos/Car Manufacturers

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Recent market volatility poses several key risks

Recent banking sector volatility could lead to higher rates for loans/leases, which combined with a lack of confidence could drive consumers to postpone vehicle purchases. Additionally, with news reports of some ABS deals being paused, we highlight that there is risk financial institutions could further tighten lending standards, potentially restricting availability of credit to vehicle buyers.

Auto Credit analysis suggests several material headwinds

Used vehicle prices and interest rates/credit are the two key drivers of monthly payments on loans/leases, and the latest iteration of our Auto Credit series suggests both are starting to turn against the consumer. Recall, we rebalanced ratings in our 2023 Year Ahead (see report here), lowering our 2023 US auto sales forecast to 14.3mm (+4% YoY) from 15.3mm, which is the third year of scraping along at "normal" trough levels. We have encompassed tighter/more expensive credit in our estimate, but if a 2009-like market credit crunch ensues, there is risk that the decline from a "normal" trough of 13.2mm in 2008 to a "credit shock" trough of 10.4mm in 2009 could be repeated.

Affordability headwinds intensify, pressuring demand

Affordability dynamics are becoming increasingly unfavorable, driving monthly payments higher on loans/leases and encouraging some consumers to hold off on purchases. Data from the NY Fed also shows more loans are being given to consumers with better credit, reducing the number of qualifying buyers. This comes amid an increase in delinquencies. These factors pose a risk for auto finance companies, particularly those with material residual exposure, and OEMs and suppliers exposed to US sales and production trends.

Rising rates weigh on finance subsidiary CF & earnings

Captive auto finance subsidiaries (FinCos) are critical for major auto companies. As interest rates rise, net interest margins for FinCos compress, funding costs rise, and access to capital markets gets trickier. FinCos we cover have ample access to debt markets, but borrowing rates have increased in the last 2 years in the investment grade and high yield markets. As such, cash flow and earnings could soften meaningfully in 2023 after strong performance in 2021-2022. Unsecured bond market availability is deep for most FinCos, and we don't see liquidity issues plaguing high-quality FinCos.

Auto finance: Tale of Two

Auto loans performance is slightly better than pre-pandemic, but credit quality differs between prime and non-prime borrowers, and non-prime delinquencies are 20% above pre-pandemic levels. With weaker auto loan demand, banks are tightening underwriting standards. We note that retail auto loan losses for ALLY are expected to peak at ~2% in 4Q vs. a typical through-the-cycle range of 1.4-1.6%, but rising unemployment could increase severity. Auto-related reserves of those that disclose would be able to absorb 75% of losses incurred between 2009 and 2010.

Acronyms / Tickers Referenced:

ALLY (Ticker): Ally Financial

FinCo: Captive auto finance subsidiary

OEM: Original equipment manufacturer

SUV: Sport utility vehicle

Timestamp: 17 March 2023 06:05AM EDT

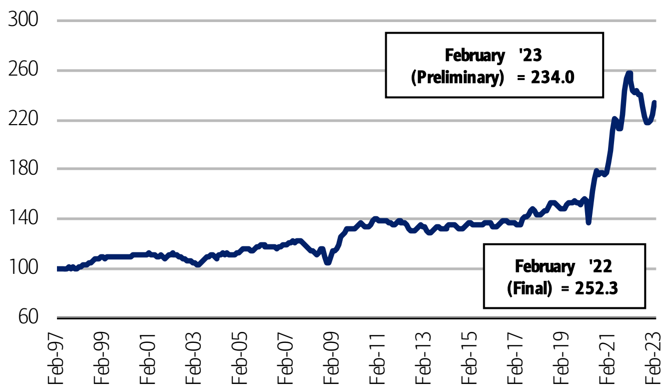
Auto credit metrics update

Used vehicle prices (and relatedly, trade-in/residual values) and interest rates/credit are the two most important drivers of monthly payments on vehicle loans/leases for consumers. As further detailed on the following pages, both have turned against the consumer, which is putting incremental pressure on New vehicle demand. However, we believe industry volumes are bottoming out, a capital goods replacement cycle is building, and the last missing pieces for a material cyclical recovery include: (1) improved consumer confidence; (2) increased supply; and (3) subsequent New vehicle pricing relief.

Used vehicle prices drop, but starting to stabilize

Exhibit 1: Manheim Used value index

Based on the Manheim index, Used vehicle prices are down from the record highs reached in early 2022



Source: Manheim

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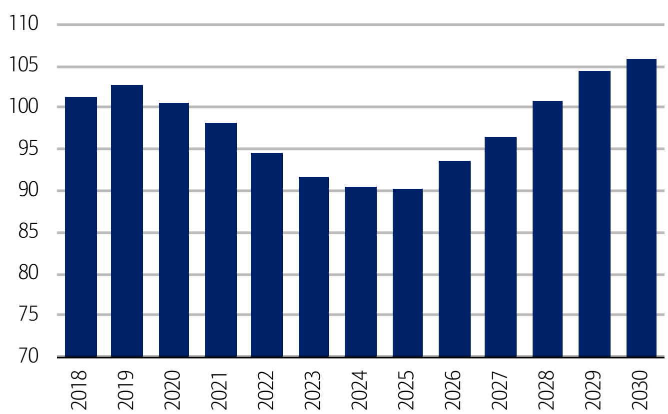
Used vehicle prices are down from the record highs reached in early 2022. Recall, Used prices climbed sharply during the COVID-19 pandemic as consumers became flush with cash and spent more time outside of urban areas. However, this trend started to reverse in early 2022 with improving supply of New vehicles and as inflation, higher rates and low consumer confidence impacted demand. Used pricing is expected to level off in the near-term with a more gradual normal decline in prices over 2023. That said, the downwards trend could reverse in 2024 if demand improves even slightly as the supply of Used vehicles (especially 1-6 year old vehicles) remains tight due to four+ years of depressed New vehicle sales.

As a reminder, the Manheim index for used vehicle prices is adjusted for vehicle mix, mileage, and seasonality, but not vehicle quality. Therefore, it would (theoretically) have an upward drift over time to account for the improvement in vehicle quality and price.

Exhibit 2: Total Number of 1-6 Year Old Light Vehicles (millions)

Used vehicle supply is expected to remain tight as the number of 1-6 year old light vehicles is expected to decline through 2025



Source: Cox Automotive, BofA Global Research estimates

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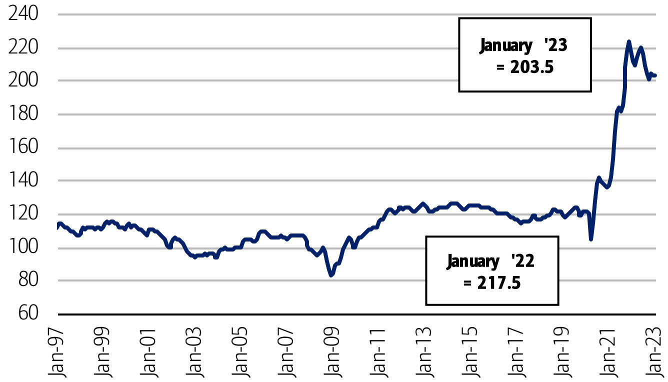
As mentioned above, used vehicle supply is expected to remain tight as the number of 1-6 year old vehicles is projected to decline through 2025 before increasing in the outer years. This is primarily due to the depressed level of sales from 2020 through 2023 as supply chains have disrupted production.

Exhibit 3: NADA Used vehicle price index

Similar to the Manheim index, NADA shows a decrease in Used vehicle prices off the record levels achieved in 2022



Source: NADA

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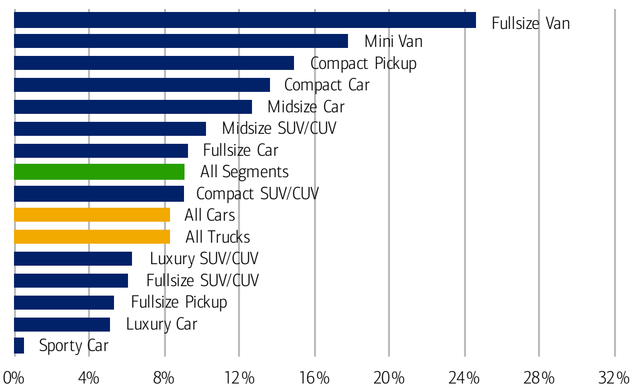
Similar to the Manheim index, Used vehicle prices as measured by the NADA index increased meaningfully during the COVID-19 pandemic, but corrected in 2022 with improving supply of New vehicles and the impact of inflation, higher rates and low consumer confidence, among other factors. We expect the downwards trend to continue through 2023, but similarly anticipate there could be a reversion higher in 2024.

As a reminder, the NADA index adjusts for vehicle quality, but not for other factors (such as mix, mileage, and seasonality).

Exhibit 4: 2022 % Δ in avg wholesale Used vehicle price by segment

Wholesale Used vehicle pricing was up in 2022, though YoY changes in pricing started to turn negative in September and have worsened since



Source: ADESA

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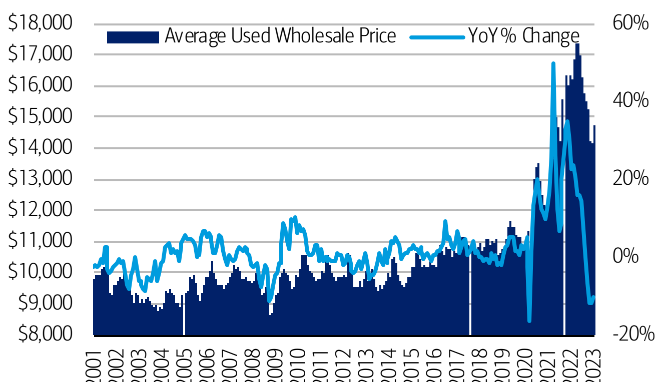
Beyond aggregated Used vehicle pricing (as measured by the Manheim and NADA indices), we believe it is also important to look at Used vehicle pricing in $ terms, as measured by ADESA, the wholesale auction business of KAR Auction Services. Aggregate Used vehicle pricing was up in 2022, though YoY changes in pricing started to turn negative in September and have generally worsened since then.

Exhibit 5: Average Used wholesale vehicle price & YoY % Δ

Average Used wholesale pricing is down from the early 2022 peak, but remains well above pre-pandemic levels.



Source: ADESA

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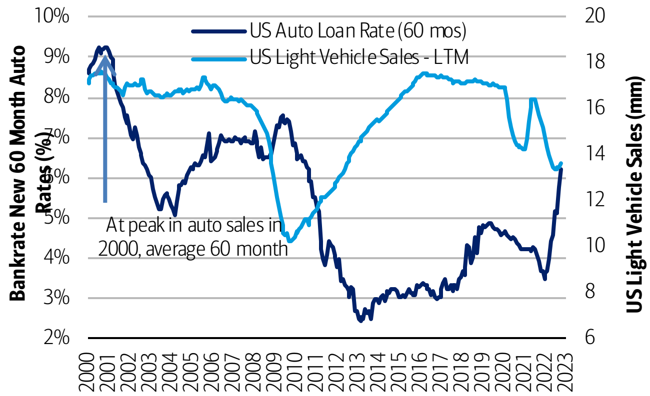
Despite the drop in prices off the early 2022 peak, wholesale prices remain well above pre-pandemic levels. There was some bounce back in January 2023 with total average wholesale prices jumping $600 MoM, but this is likely to be a blip, in our view, before prices resume moderate declines.

Auto financing unlikely to improve near-term; Rates have increased meaningfully

Exhibit 6: US New auto loan rate (60 months) vs. US SAAR – LTM
Auto loan rates have increased meaningfully



Source: Bloomberg, Bankrate.com, BofA Global Research

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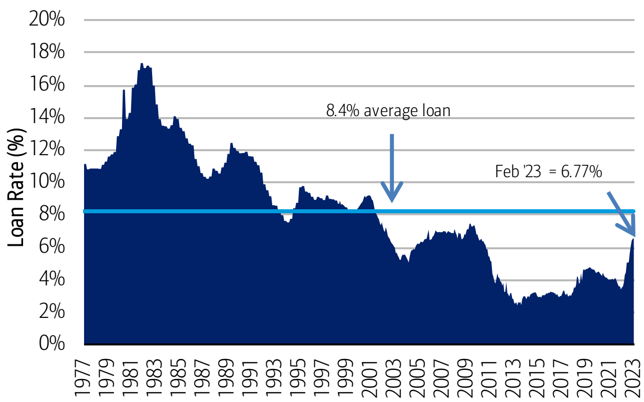
Growth in auto sales has historically had a strong correlation to the availability and attractiveness of credit. As such, with credit terms becoming less favorable for leases and loans, this could adversely impact US auto sales. That said, we'd note that with US auto sales holding near recessionary levels for longer due to ongoing supply chain constraints, this is building pent-up replacement demand.

Exhibit 7: US New auto 48-month national average loan rate
US New auto average loan rate is increasing, but at 6.8% remains below the historical average of 8.4%



Source: Bloomberg, Bankrate.com

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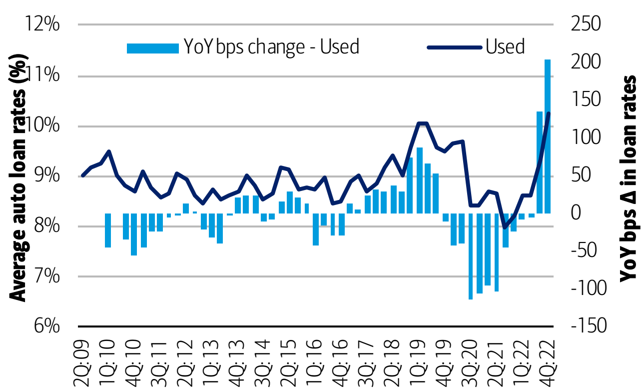
On that point, the national average 48-month New vehicle loan rate has increased meaningfully over the last year and is tracking around 6.8% currently, which compares to the historical average of 8.4%. Given current trends, auto financing is unlikely to improve in the near-term, and could serve as a headwind to growth for the automotive value chain.

Exhibit 8: Average Used auto loan rates (LHS) and YoY bps Δ (RHS)
Average Used auto loan rates are increasing



Source: Experian

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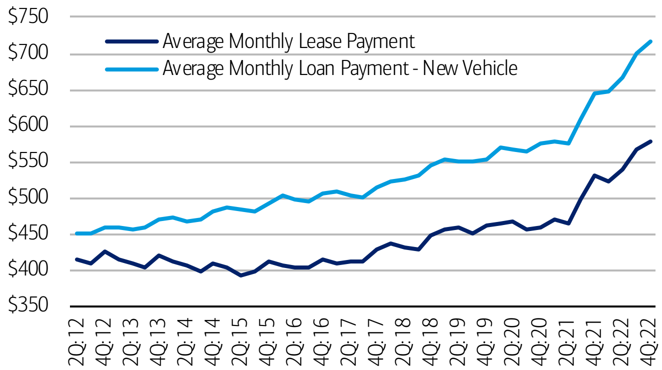
Based on Experian data, the average rates for Used vehicle loans are moving higher. Average loan rates (across all terms and borrowers' credit scores) on Used vehicles are now 10.3%. This is the highest level since 4Q:08 and above the recent peak of 10.1% reached in 2Q:19.

Affordability headwinds from rising rates and elevated ATPs drive monthly payments higher

Exhibit 9: Average monthly payment – New vehicle loan vs. lease
Rising average loan rates and still elevated ATPs have resulted in higher monthly payments for consumers on New vehicles



Source: Experian

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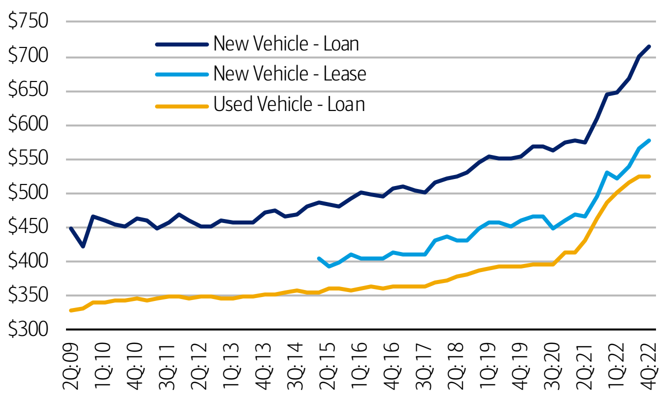
The above mentioned dynamics, combined with still elevated average transaction prices (ATPs) for vehicles has resulted in higher monthly payments for consumers on New vehicle loans/leases. However, leasing remains a relatively more affordable option for consumers (from a monthly payment perspective) than auto loans, in part given automakers' willingness to subsidize the lease transaction.

Exhibit 10: Average monthly payments are reaching record highs
Average monthly payments on Used vehicle loans have increased as well



Source: Experian

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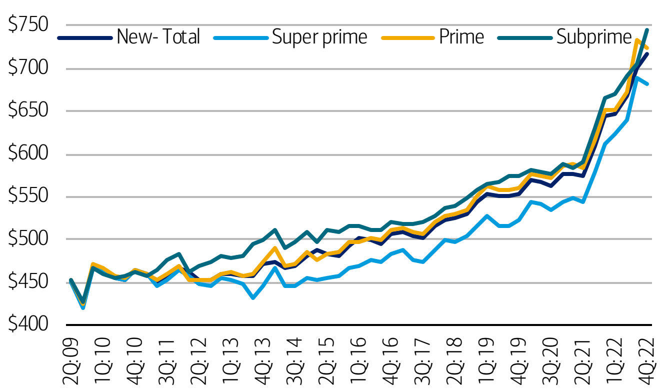
Average monthly payments on Used vehicle loans have been increasing as well, driven by higher interest rates and higher Used vehicle pricing, though the pace of increases on monthly payments has started to slow somewhat.

Exhibit 11: Avg. monthly payments on New vehicles, by credit score
Monthly loan payments for New vehicles are up across all loan types, but interestingly the average for subprime dipped below prime in 3Q:22



Source: Experian

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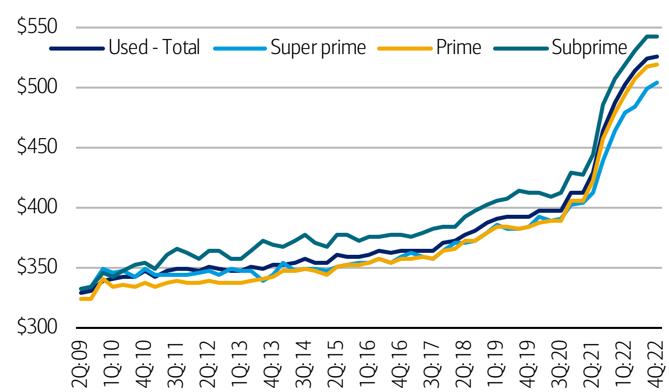
Exhibit 12: Avg. monthly payments on Used vehicles, by credit score
Monthly loan payments for Used vehicles are also up across all loan types



Source: Experian

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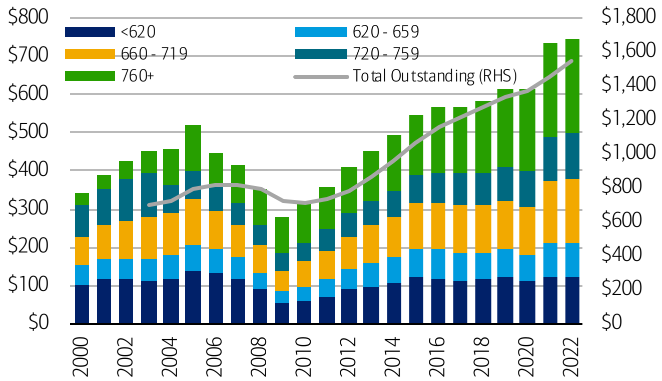
Weakness emerges at the low end of the credit spectrum

Exhibit 13: Originations by credit score (LHS) and total auto loans outstanding (RHS), in $bn
US auto loan originations reached an all-time high in 2022



Source: New York Fed Consumer Credit Panel and Equifax
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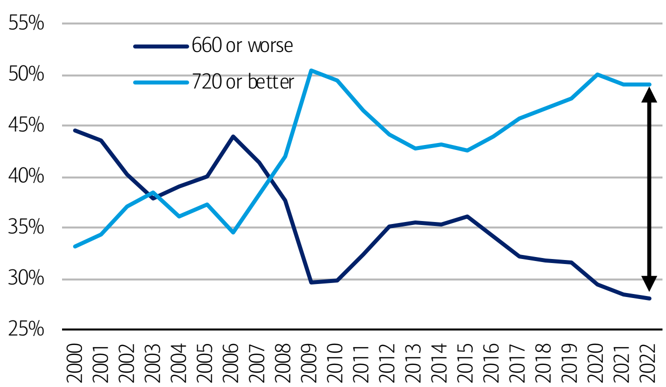
US auto loan originations have been gradually increasing since 2010 with a particularly notable jump in 2021 amidst the COVID-19 pandemic. Originations reached an all-time high of $747bn in 2022, for a total of nearly $1.6tn in outstanding auto debt.

Exhibit 14: % of US auto loan originations, by credit score of borrowers
Increasingly more loans are being originated to high quality borrowers



Source: New York Fed Consumer Credit Panel and Equifax
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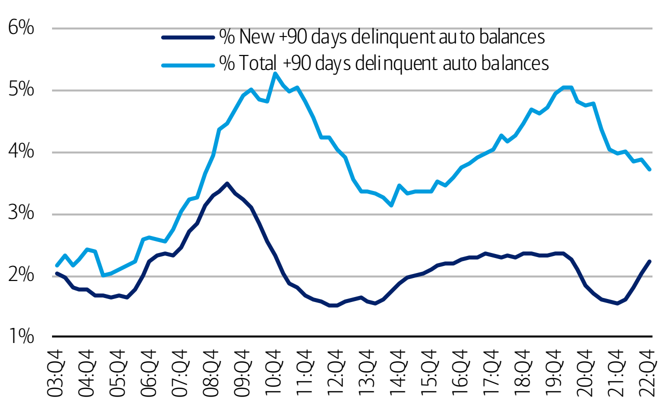
Encouragingly, the overall credit quality of automotive loans remains relatively strong, with increasingly more loans originated to high quality borrowers in recent quarters/years. In particular, nearly 50% of loans are originated to borrowers with credit scores of 720 or higher in 2022, versus less than 30% to consumers with credit scores 660 or lower, which is much more consistent with the levels seen during the trough in New vehicle sales in 2009. By comparison, in the past two peaks in 2001 and 2017 an average of about 40% of loans were originated to scores of 720 or higher and 38% to scores of 660 or lower.

Exhibit 15: Seriously delinquent (+90 days) auto loans as a % of total
The % of auto balances that has become seriously delinquent has climbed sharply over the last year



Source: New York Fed Consumer Credit Panel and Equifax
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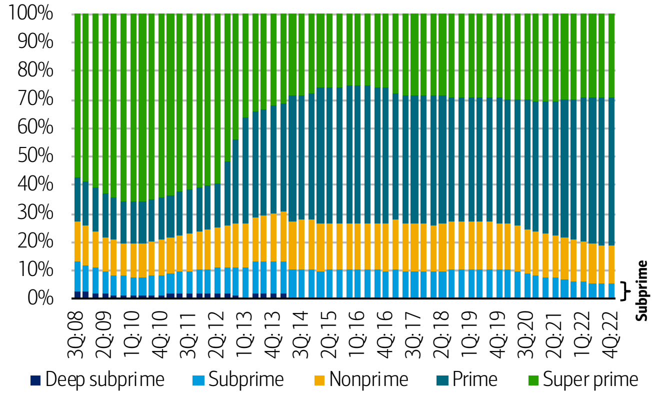
The performance of auto loans improved during the COVID-19 pandemic as consumers built up savings, but there are early signs that the credit health of auto consumers may be weakening. On that note, the % of auto balances that has become seriously delinquent climbed sharply over the last year to 2.2% in 4Q:22 from the recent low of 1.6% in 4Q:21. While the trend in total % of auto loans +90 days delinquent has countered this trend (decreasing to 3.7% in 4Q:22 from 4.0% in 4Q:21), we expect that may change over the coming quarters.

Exhibit 16: % of New vehicle loans by risk segment - LTM

Subprime borrowers account for ~5-6% of total New loan originations



Source: Experian

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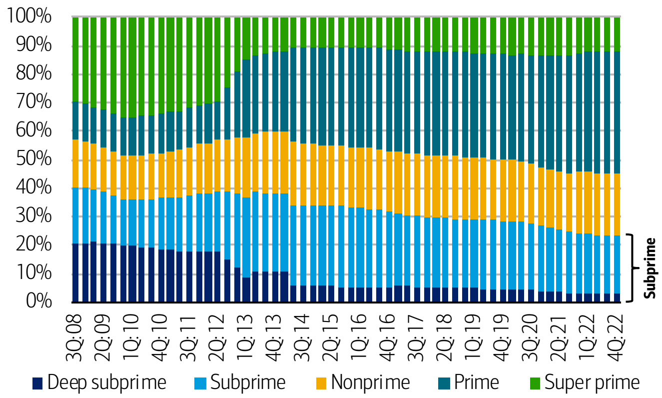
The recent deterioration in the health of low-credit borrowers could be a pressure point for New vehicle sales, but it will likely be more impactful for the Used vehicle market, in which subprime borrowers account for ~20-25% of total Used loan originations, well above ~5-6% of New.

Encouragingly, the percentage of subprime borrowers for both New and Used vehicles has declined meaningfully over the last few years.

Exhibit 17: % of Used vehicle loans by risk segment - LTM

Subprime borrowers account for ~20-25% of total Used loan originations



Source: Experian

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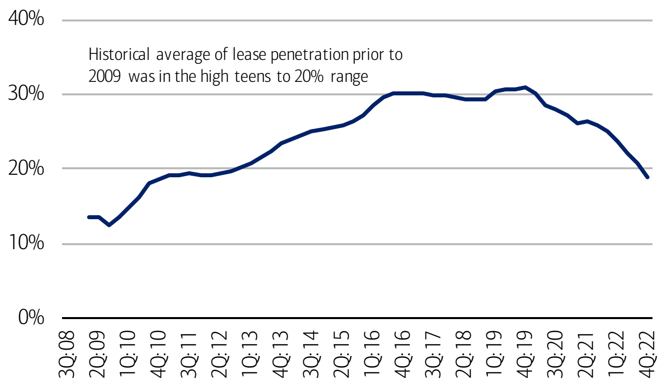
More specifically, we expect this will be particularly crucial for Used vehicles in the older age category, where easy subprime credit has propped up demand and ultimately Used pricing.

Other credit metrics: Lease penetration trending lower & banks continue to tighten standards for auto loans

Exhibit 18: Leasing penetration as a % of total New vehicle sales - LTM
Lease penetration as a % of New vehicle sales has trended lower since the start of the COVID-19 pandemic



Source: Experian

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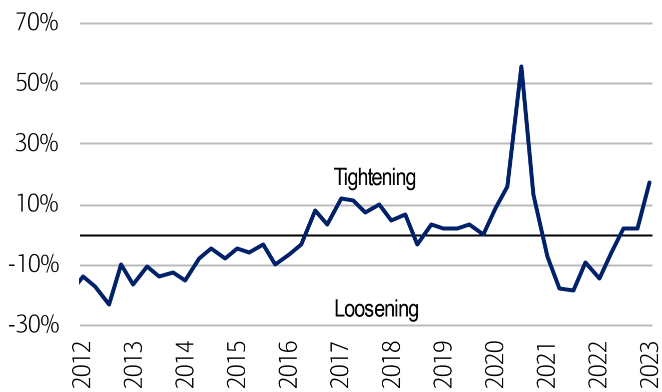
Lease penetration as a % of New vehicle sales has trended lower since the start of the COVID-19 pandemic, primarily reflecting a combination of improved consumer savings and as automakers weren't pushing lease deals given tight inventory. This also may reflect some normalization. Lease penetration was in the high-teens to 20% range before 2009, but climbed to 30%+ in 2019. We believe the rate of lease penetration has increased since 2009 in part due to OEMs utilizing low rates and high residual values to get consumers into a New vehicle for an affordable monthly payment.

We estimate an average of 2.6mm units will be returning off-lease over each of the next three years (2023, 2024, 2025), which compares with the average of 2.9mm units going back to 2000. This is well below the average of 4mm units over the last 5 years and could provide support to Used vehicle prices and residual/ trade-in values, and relatedly, New vehicle demand.

Exhibit 19: Net % of banks tightening standards for auto loans
Number of domestic banks that tightened standards for auto loans in 4Q:22 was at one of the highest levels seen over the last decade



Source: Federal Reserve

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According to the Federal Reserve, the number of domestic banks that tightened standards for auto loans in 4Q:22 were higher than the number of banks loosening standards (~17%). We'd also note that this is among the highest levels seen over the last decade and continues the tightening trend that began in 2Q:22 after a period of loosening from 4Q:20 to 1Q:22.

To read more on our macro/cycle view, please see our 2023 Year Ahead report, **Five Auto themes & top stock picks in difficult macro environment**

Captive auto finance dynamics

Captive automotive finance subsidiaries are very often critical partners for almost every major automotive parent company. Names like Ford Motor Credit, Nissan Motor Acceptance, Toyota Motor Credit, or General Motors Financial embody the symbiotic relationship between a motor company and a finance subsidiary. The finance subsidiary (FinCo) is often an extension of the motor company's go-to-market strategy and does the heavy lifting of arranging financing for car customers.

Strategic importance of the FinCo

The FinCo and motor company relationship is strategic in many ways. The FinCo not only collects vital customer information, but also offers customer loans and is the point of contact with the debt capital markets. The finance subsidiary almost always has responsibilities to raise a tremendous amount of debt capital to fund customer loans and leases, as well as dealer floor plan inventory. Under a higher interest rate environment, it is certainly worth evaluating the finance subsidiary's earnings potential, cost of capital, and access to the corporate bond market and ABS markets. Like most finance companies, automotive FinCos are very sensitive to a rising rate environment. As interest rates rise, net interest margins compress, funding costs rise, and access to capital markets gets a little trickier.

Access to capital mkts still very open - but coupons double

Luckily, most of the major captive finance companies we follow currently have ample access to the debt capital markets, including investment grade, high yield and ABS. But the borrowing rate has certainly increased over the last two years in the investment grade and high yield market. For example, in 2021 Ford Motor Credit issued bonds with 3% coupons; now borrowing costs have risen about 350 basis points, and coupons are in the 6%-7% range. Captive finance companies have met success in placing paper and raising funds, but the cost of capital has gone up substantially.

Finance subsidiary earnings, cash flow fall on leaner times

Not surprisingly, prior to the extreme move in interest rates in 2022, automotive finance subsidiaries generated very strong cash flow and earnings. For example, Ford Motor Credit generated 2021 EBIT of $4.73bn and sent $7.5bn in cash dividends up to Ford Motor Co in the calendar year. In 2022, due partly to rising rates, Ford Motor Credit generated EBIT of $2.44 billion, and sent up a much smaller dividend of $2.1bn. In 2023, Ford Motor Credit expects EBIT to be down about $1.4bn, and most investors are modeling little to no upstream cash dividend to the parent motor company this year.

The higher interest rate story is priced in

The weaker earnings from captive auto finance companies have been well priced-in at this point. It is typical, that as interest rates rise, margins at the automotive finance companies thin out, and consequently, contribute less earnings and cash dividends to the motor company parent. This concept is certainly known by the market, but the significance of the support from finance subsidiaries is worth monitoring, especially during times like this. In 2023, the market should be prepared for finance subsidiary earnings to be materially down, and cash dividends to the motor company parent of potentially close to zero.

Asset mix

Unsecured bond market availability is deep for most automotive finance companies as the market is well seasoned and very liquid. Auto finance companies obviously need to raise a lot of capital to support customer financing and dealer floorplan inventory. Typically, auto finance companies will issue about 40% of capital in the ABS market, and about 60% in the unsecured bond market. In Ford Motor Credit's case, they guided for a 2023 funding plan to be closer to 50/50, probably due to higher corporate bond rates relative to ABS rates. The funding plan calls for $10bn to $13bn of unsecured bonds issuance and $10bn to $13bn in securitizations, for a total of $20bn to $26bn. We don't see liquidity issues plaguing the high-quality captive automotive finance companies.

FinCo and motor company bonds trade about flat

In the unsecured bond market, due to their strategic importance relative to the parent motor company, FinCo bonds and motor company bonds trade close to one another. For example, Ford Motor Co 7.45% due 2031 are offered at a yield of 6.89%, compared to Ford Motor Credit 3.625% due 2031 offered at a yield of 6.96%. The dollar prices are different due to the difference in coupon, but valuations are very similar.

Support agreements

Additional to the strategic relationship, finance subsidiaries enjoy a legal written support agreement or keepwell agreement with the parent, but in most cases the agreements do not constitute a guarantee of the FinCo debt. However, the support agreements are written to require the parent company to meet various credit ratios and leverage measures to ensure the financial health of the finance subsidiary, as such, the bonds of both entities typically trade near one another. The relative value trading relationships only seem to break down during a very deep crisis, when the FinCo bonds typically trade higher than the motor company bonds due to the likelihood of higher recoveries at the FinCos in a Chapter 11 bankruptcy. Since a Chapter 11 scenario is very remote, one should expect FinCo and motor company bonds to trade about flat.

Auto Finance: Tale of Two

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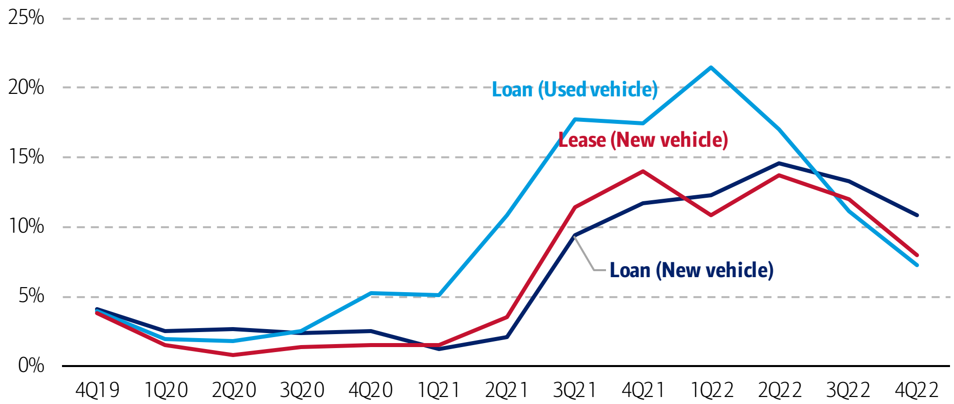
Auto loans on bank balance sheets have largely remained stable vs. the historical average. As of 4Q22, auto loans comprise 4.5% of total loans. Meanwhile, auto loans – second largest burden to mortgage debt – represent 9% of US household debt (also relatively consistent with history), according to the Federal Reserve Bank of New York's (FRBNY) report on household debt and credit. However, investors have grown increasingly concerned about the risk of rising credit losses in this asset class, citing higher interest rates and used vehicle prices vs. pre-pandemic levels (+52% vs. YE2019).

Exhibit 20: Monthly auto loan payments nearly 30% higher than those in 2019
YoY increases in monthly auto loan payments



Source: BofA Global Research, Experian

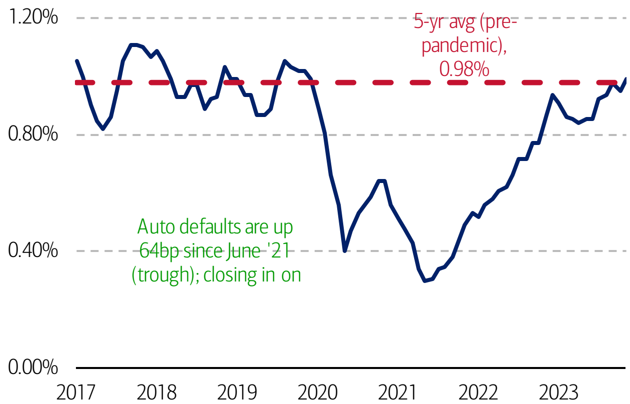
BofA GLOBAL RESEARCH

> Unfavorable conditions negatively affecting used vehicle or other collateral values could affect the amount and timing of recoveries. Expectation of the residual value of a vehicle subject to an automotive operating lease contract is a critical element used to determine the amount of the operating lease payments under the contract at the time the customer enters into it. To the extent that the actual residual value of the vehicle – as reflected in the sale proceeds received upon remarketing at lease termination – is less than the expected residual value for the vehicle at lease inception, a bank would incur additional depreciation expense and lower profit on the operating lease transaction than priced expectations.

Since bottoming out in June 2021, auto loan delinquency (DQ) rates have continued to normalize toward pre-pandemic levels. According to S&P/Experian Auto Default Index, defaults have increased 64bp over this time to 94bp as of Jan 2023 (Exhibit 21), modestly below the 5-year pre-pandemic average (98bp). Similarly, industry-wide auto loan net charge-offs increased 38bp YoY to 58bp of loans (Exhibit 22). While auto loan performance remains slightly healthier than it had pre-pandemic, younger borrowers are struggling relatively more, according to the FRBNY. However, credit quality differs between prime and non-prime borrowers. DQ rates of non-prime auto loans are 20%

above pre-pandemic average. Most banks under coverage principally lend to prime/super-prime borrowers. Although credit metrics among this group have remained relatively benign, owing to elevated cash balances, banks decided to slow the pace of growth in this asset class due to narrow margins. Ally Financial (ALLY) and Capital One (COF), on the other hand, are more full-spectrum lenders. As of 4Q22, exposure to non-prime borrowers represented 11% and 47%, respectively.

Exhibit 21: Auto defaults are up 64bp since June '21
S&P/Experian Auto Default Index



Source: BofA Global Research, S&P Indices and Experian

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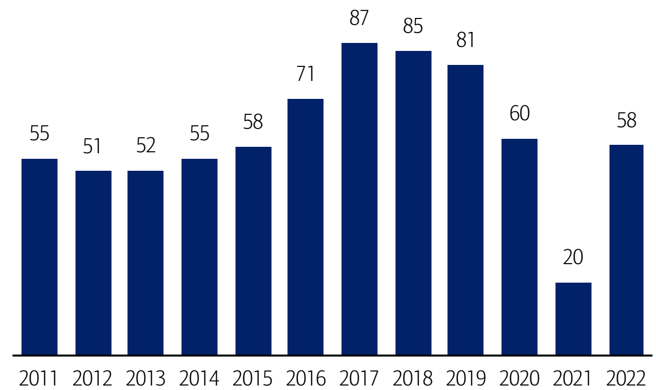
Exhibit 22: Auto loan losses more than doubled in 2022
Net charge-off rate; basis points



Source: BofA Global Research, FDIC

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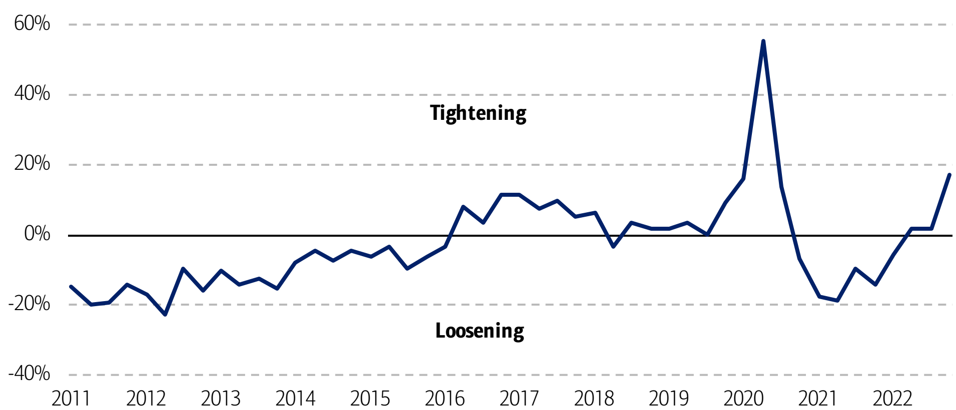
In the current backdrop, banks reported a tightening in underwriting standards for auto loans while demand weakened (similar results for other consumer loans), according to the latest Senior Loan Officer Survey.

Exhibit 23: Number of banks that tightened standards in 4Q22 was at one of the highest levels seen over the last decade
Net % of banks tightening standards for auto loans



Source: BofA Global Research, Federal Reserve

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During its 4Q22 earnings call, ALLY management indicated early loss performance in the retail auto lending portfolio is trending higher compared to expectations at the time of origination for loans originated between 3Q21 and 2Q22. As a result, retail auto loan losses are expected to peak in 4Q23 at/around 2% vs. typical through-the-cycle range of 1.4-1.6%. At Dec 31, 2022, $302mn of nonprime consumer automotive loans were considered nonperforming vs. $294mn at Dec 31, 2021.

Exhibit 24: Early loss indicators rising across all vintages
Shading based on comparison of categories (by origination year) as % of total

		Origination year						
		2022	2021	2020	2019	2018	2017	Total
2022	Current	36,127	22,102	10,341	6,451	3,237	1,890	80,148
	30-59 days	707	878	370	284	165	120	2,524
	60-89 days	207	324	135	99	55	38	858
	90+ days	73	111	47	38	23	24	316
	Total	37,114	23,415	10,893	6,872	3,480	2,072	83,846
2021	Current	-	35,222	17,218	11,512	6,692	5,314	75,958
	30-59 days	-	424	353	334	226	240	1,577
	60-89 days	-	115	114	108	70	69	476
	90+ days	-	41	51	56	40	53	241
	Total	-	35,802	17,736	12,010	7,028	5,676	78,252
2020	Current	-	-	27,255	19,204	12,129	12,504	71,092
	30-59 days	-	-	281	466	376	535	1,658
	60-89 days	-	-	66	165	129	175	535
	90+ days	-	-	32	108	96	147	383
	Total	-	-	27,634	19,943	12,730	13,361	73,668

Source: BofA Global Research, company filings

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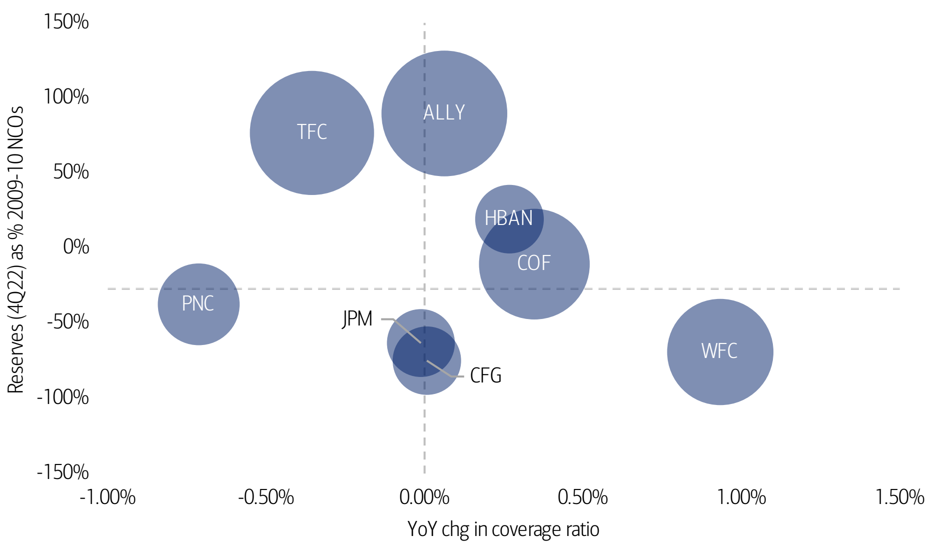
That said, a rising US unemployment rate could increase the severity of loan losses. Most banks assume a 5% unemployment rate as part of their reserve methodology; however, of the banks that disclose auto-related allowance, coverage represents 27% shortfall vs. total auto-related loan losses incurred between 2009-10. (Note: ALLY's shift to a full credit spectrum retail auto finance portfolio over the past several years has resulted in additional increases in the allowance for loan losses and could result in additional increases in the future).

Exhibit 25: Auto reserves up YoY but would only absorb 3/4ths of losses incurred in 2009-10
Size of bubble denotes auto loan loss reserves as % of auto loans



Source: BofA Global Research, company filings

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While COF doesn't give guidance on loss rates, it has struck a cautious tone on auto loans in recent quarters. COF has noted that auto loan losses are normalizing and it has increased its reserves for losses on auto loans. COF is also concerned about margins (as it does not believe higher rates have been fully priced in). Auto loan balance growth decelerated to 3% YoY in 4Q22 vs. 17% YoY at the start of the year as COF pulled back on originations.

COF called out lower margins, losses normalizing, and tighter underwriting in the Auto segment during its earnings call: "So we also, in terms of the credit metrics, we have seen more degradation in the very, very low and mostly below where we play in the auto business, but we have trimmed a little bit around the edges at our own low end. But basically, we continue to feel very good about our originations from a credit point of view. The biggest issue in auto is the margin pressure that has come from the rising interest rates that have not been fully passed through by the competition. So we continue to feel really good about the auto opportunity, but our pullback is really not a credit-driven pullback, so much as it is a margin-driven pullback. But we certainly do see the – we can see the normalization in the auto business."

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