

# Economic and Sector Summary & Outlook

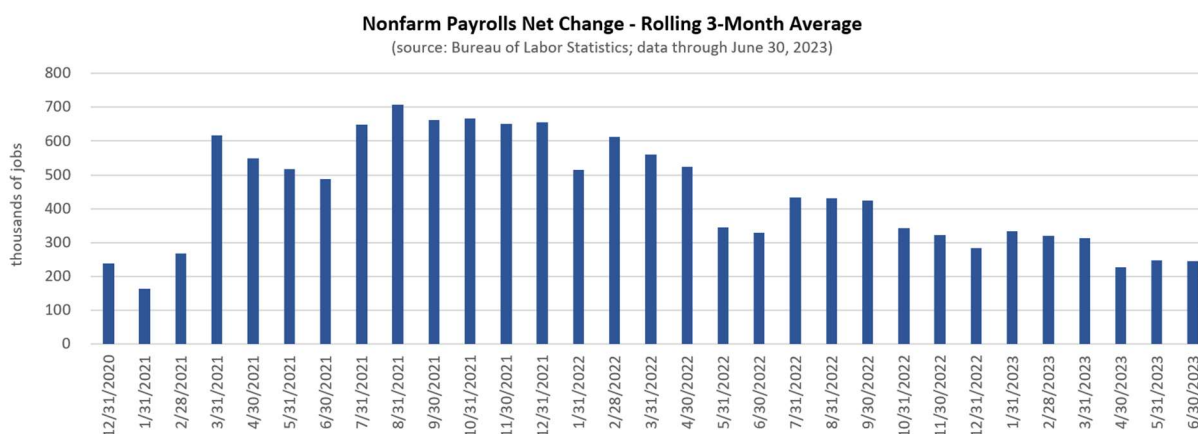
## Second Quarter 2023

## US Economy

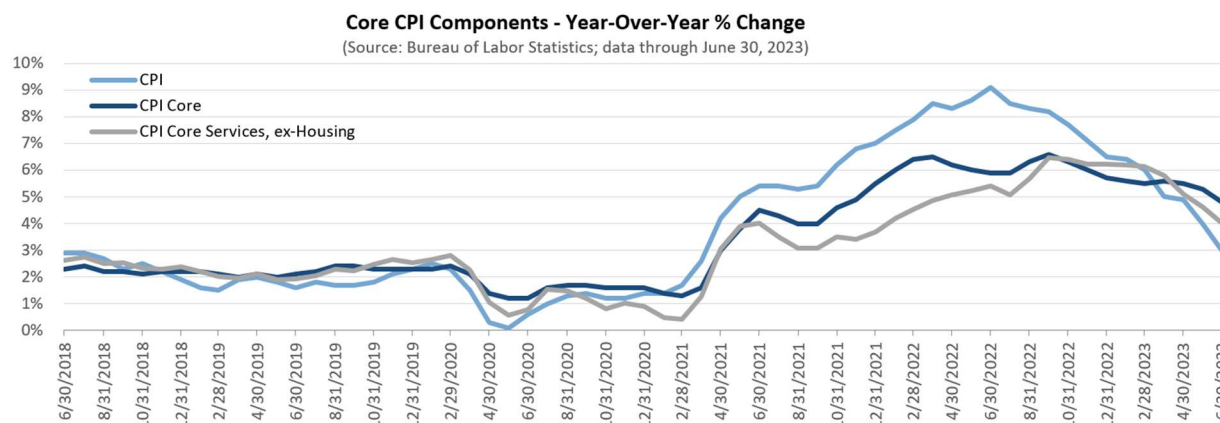
### Summary

Resilient economic growth and “sticky” inflation pressures dominated the major macro themes in the second quarter of 2023. US economic growth is slowing but remains supported by consumer spending and robust labor markets. Inflation pressures have receded dramatically from the post-pandemic highs, but progress has slowed, especially for core inflation, which excludes volatile food and energy prices.

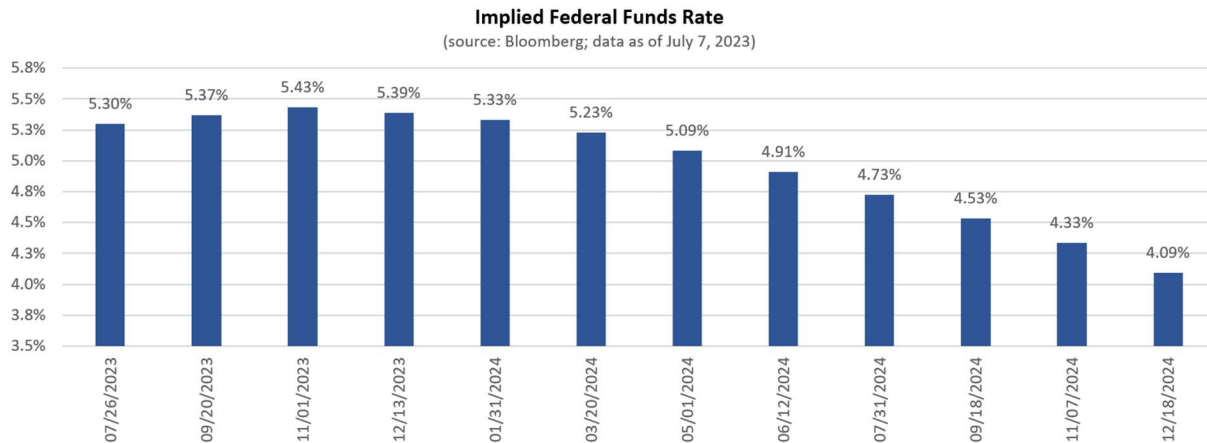
We expect second quarter US GDP growth to track closely with the first quarter result of 2.0%. Despite headwinds from rapid tightening in monetary policy and a domestic banking mini crisis, the US consumer continues to spend, especially on services, aided by healthy labor markets and wage gains. Consumer spending, however, hit a soft patch in the second quarter as real spending declined to a 0.8% pace compared to 4.2% in the first quarter. Labor markets remain very strong, but also showed some signs of rebalancing as the number of job seekers becomes more aligned with the number of job openings. Employment increased by 209,000 jobs in June 2023, the lowest level posted since December of 2020, bringing the second quarter average monthly jobs gain to 244,000 compared to a monthly average of 399,000 in 2022. Despite the slowdown, the unemployment rate still hovers near an historic low of 3.6% while wage gains track at a healthy rate of 4.4%.



Inflation pressures moderated over the quarter as June headline CPI and core CPI posted notable declines to 3.0% and 4.8%, respectively. While CPI pressures have abated, Core CPI appears more stubborn and remains well above the Federal Reserve’s 2% inflation target as used car and shelter prices remain elevated. Nevertheless, the Federal Reserve can take some comfort from the improvement in non-shelter services prices, which fell to 4.0% on an annual basis compared to a peak of 6.4% in September of 2022.



In June 2023, the Federal Reserve surprised investors with what analysts described as a “hawkish skip” by leaving interest rates unchanged for the first time in the hiking cycle while also reflecting a 50-basis point increase in the “dot plot” estimate for the future path of interest rates. Minutes from the June meeting highlighted a more divided Federal Reserve with some members advocating a pause in rate increases to assess the lagged impact of past policy actions and others expressing disappointment with the slow progress made toward the 2% inflation target and advocating additional rate hikes. Markets currently expect a 25-basis point hike in the federal funds rate in July and a slightly less than 50% chance for one additional hike in either September or November 2023.



## Outlook

Both consumer spending and job growth are moderating but a near-term contraction in overall economic growth seems unlikely. We still expect the combined effects of the Federal Reserve’s tighter monetary policy, softening labor markets, weaker corporate profits, and tighter bank lending standards to push the economy into a recession. We believe a shallow recession appears more probable given the relative strength of consumer and corporate balances sheets.

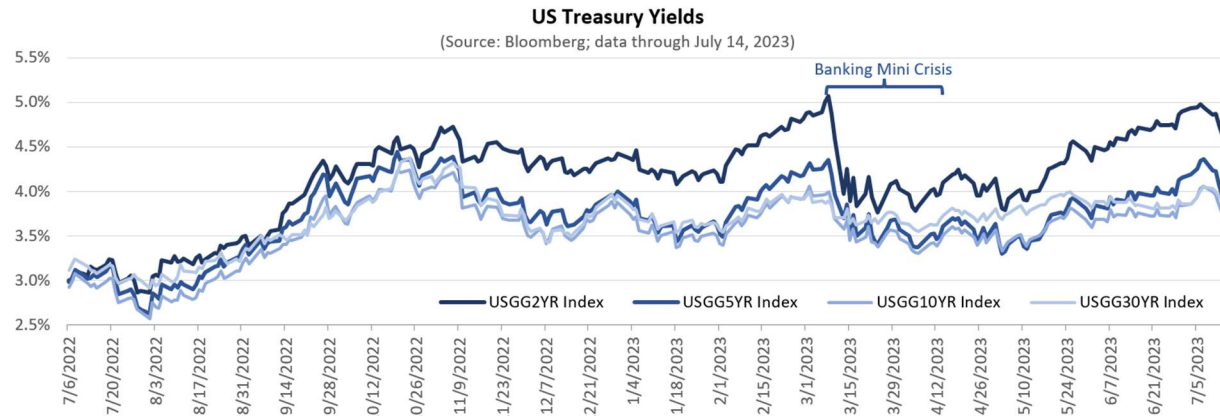
Inflation is trending lower but still has a long way to go to reach the Federal Reserve’s 2% target. We expect core CPI to fall from May’s reading of 4.8% to 4.0% by year-end. Near-term declines in used car prices and gradual shelter and service sector disinflation should push inflation lower over the remainder of the year. Ultimately, the Federal Reserve will need to rebalance supply and demand in the labor markets to cool spending and bring inflation back to the 2% target. As Chairman Powell warned in August 2022, softer labor market conditions will bring down inflation, but they will also bring some pain to households and businesses.

We believe the Federal Reserve will raise rates at the July meeting, bringing the federal funds rate to 5.25%, and then remain on hold for an extended period. As we expected, the market has priced out rate cuts for 2023 but still anticipates up to four cuts in 2024. We still disagree with these near-term rate cut expectations as interest rates will likely need to stay higher for longer to combat stubbornly high inflation.

## Sector Analysis

### US Interest Rates

Like a mirror image reflection, the second quarter of 2023 entirely reversed the severe yield decline seen in the US Treasuries complex in the previous quarter (see chart, below). As stress in the regional banking sector began to abate and concerns of further bank deposit flight waned in April, the Federal Reserve took the opportunity to increase the federal funds rate by another 25 basis points in May to 5.0%.



US money market futures now price in almost 50 basis points of additional hikes by December 2023 versus over 100 basis points of rate cuts expected previously. Together, the combination of continued Federal Reserve hawkishness and improved financial conditions helped to drive a large “bear-flattening” of the Treasury yield curve this quarter. US Treasury 2-Year Note yields surged 85 basis points in the second quarter to 4.85%, while 10-Year Note yields increased 35 basis points to 3.80%, leaving the 2s-10s yield curve further inverted by an additional 50 basis points. This segment of the yield curve is now deeply inverted at -105 basis points (as of June 30, 2023) and represents the most inverted quarter-end close since the 1980s. An inverted yield curve suggests that businesses will have to borrow at high short-term rates to fund lower-returning, long-term projects. For this and other reasons, the yield curve inversion represents a strong signal of weak macroeconomic conditions that could unfold over the next six to nine months.

It’s important to consider the quantity of fiscal stimulus added in recent periods (e.g., the Coronavirus Aid, Relief, and Economic Security Act; the CHIPS and Science Act, and the Inflation Reduction Act of 2022) and the record pace of monetary tightening put into place in the past 16 months (i.e., ten Federal Reserve rate hikes totaling 5.0% and approximately \$40 billion per month of quantitative tightening from the Federal Reserve’s balance sheet run-off). Additionally, it’s likely that the effect of these measures continues to lag their actual implementation dates. Consequently, it’s possible that the Federal Reserve has put too much tightening in place and the ultimate effect may exceed expectations and bring unintended consequences (e.g., a “hard landing” recession). Also, some argue that the Federal Reserve is managing monetary policy in overly restrictive territory when the federal funds rate (now at 5.0%) exceeds the five-year forward, five-year interest rate (currently 3.45%). Finally, we observe a recent divergence between recent Gross Domestic Income and Gross Domestic Product, a relationship which usually precedes a period of economic contraction. We believe the Federal Reserve recognizes these issues, hence its choice to adopt a “hawkish pause” and hold rates unchanged in its June 2023 meeting.

Last quarter, we noted that the 3.45% 10-year US Treasury Note yield appeared locally overvalued and had declined a bit “too far, too fast.” As the 10-year US Treasury Notes yield increased to end the second quarter at 3.83%, we maintained our disciplined approach and lengthened portfolio durations accordingly via Treasury Note purchases while remaining underweight duration relative to benchmarks in the front end of the yield curve. This “bull-flattener” positioning continues to protect against adverse price movement in the front end related to further potential rate hikes, while also exploiting the decelerating growth and disinflationary forces at work on the long end. Finally, as the Federal Reserve’s tightening cycle wanes, our strategy will continue to selectively focus on rotating the duration overweight into the front-end of the yield curve, where the risk-reward profile is beginning to look asymmetrically favorable. As late-stage economic cycle dynamics continue to emerge, our year-end 10-year US Treasury Note yield target range remains firm at 3.00% to 3.25%.

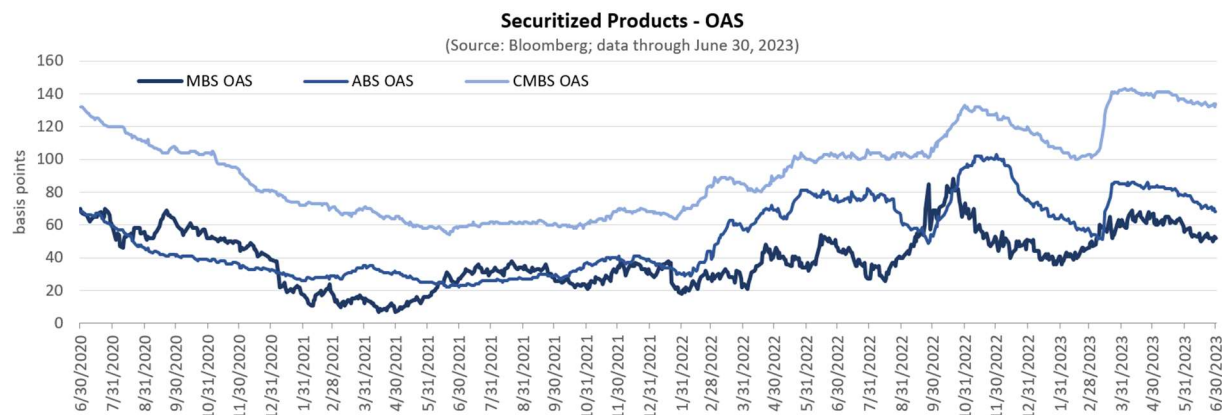
### Securitized Products

It may seem like ancient history now, but the first half of the year was defined by the collapse of three US banks and Credit Suisse, concerns that further contagion could spread to other banks, and the effect of these events on Federal Reserve policy. Risk spreads widened significantly in late first quarter and early second quarter 2023, and

Federal Reserve rate tightening expectations receded as investors anticipated the potential negative effect on economic trends. Notably, expectations for the year end 2023 federal funds rate dropped from 5.55% to 3.75%, implying a significant easing. Concerns regarding the banking sector faded in the second quarter of 2023 as stronger than expected economic data supported a recovery in risk asset spreads from the widest levels experienced in March 2023.

The US Treasury 10-year Note yield increased 37 basis points in the second quarter of 2023, resulting in negative total returns for most fixed income indices. During the period, the MBS Index recovered from widening and underperformance in the first quarter, tightening 11 basis points in OAS and generating 76 basis points of excess return versus Treasuries, but generated a total return of -0.64%. Relative performance benefitted from a decline in implied volatility from the extreme post bank failure spike and the orderly disposition of the failed bank assets seized by the FDIC and liquidated by Blackrock Mortgage. The ongoing run-off of the Federal Reserve's System Open Market Account MBS holdings continues as a function of quantitative tightening with \$57 billion of mortgages rolling off from the balance sheet in the quarter. At almost \$20 billion per month, the rate of roll-off fell well short of the Federal Reserve's stated maximum of \$35 billion per month. Recent surveys show that money managers reverted back to neutral in their MBS exposure versus the Bloomberg US Aggregate Bond Index (the "Aggregate Index"). Further positioning increases will likely be driven by relative value versus investment grade credit and volatility expectations.

We reduced our portfolio underweights in MBS relative to benchmark indices over the course of the quarter but remain modestly underweight. We expect to return to neutral exposure in the coming weeks as mortgages look relatively attractive versus investment grade credit on a historical basis. Furthermore, as the Federal Reserve's terminal federal funds rate becomes better defined, we anticipate that interest rate volatility could decline significantly, lending a tailwind to MBS performance. We continue to prefer conventional MBS versus Ginnie Mae issues. We positioned portfolios in production coupons and the belly of the stack, avoiding the deep discount 2% and 2.5% coupons. These discount coupons comprise approximately 8.5% of the Aggregate Index, by far its biggest components. We prefer holding lower coupon 20-year pools as an alternative to their 30-year counterparts.



The ABS Index generated a total return of -0.12% in the second quarter, due to a front end sell-off in yield and 17 basis points of spread tightening. The ABS Index OAS ended the period at 68 basis points, which remains above the 10-year average of 54 basis points. Since widening in March as a result of the banking mini crisis, ABS spreads have been grinding tighter but still reside wide of the 51-basis point tight registered on March 13, 2023.

Fundamentals in the ABS sector remain supportive due to healthy employment and consumer creditworthiness trends. On the margin, we observe some deterioration in lower credit quality borrowers, and this is showing up in delinquency data for "marketplace lending" consumer loans (i.e., fintech originated) and in the deepest subprime auto segment. We view ABS supply as very manageable and note that the inverted yield curve has made the short average life profile of ABS very desirable, creating a positive technical backdrop. Our expectation of continued slowing in the economy and a likely recession has us positioned defensively and focused on higher quality, more liquid ABS investments. Broadly speaking, we favor senior classes from auto and equipment deals, as well as AAA

CLO classes that have begun to amortize. During the quarter we modestly reduced our target allocation to the sector but remain overweight.

All segments of the commercial real estate (CRE) space continue to struggle with poor fundamentals. CRE loans are often securitized via traditional conduit CMBS, single-asset single-borrower (SASB), and CRE CLO structures. Since the beginning of the pandemic, origination volumes have focused on SASB and CRE CLO at the expense of conduit issuance as their structures offer great loan structuring flexibility. This reflects the view that borrowers anticipated a quick return to “normal” once the economy opened post-COVID, at which point they could enter into more traditional long-term financing. However, a return to normalcy hasn’t occurred as the work from home trend persist and has negatively affected the office segment of CRE the most, but retail continues to struggle, while central business district hotel fundamentals also remain problematic. During the second quarter, the CMBS index experienced a modest 8 basis points of tightening during the quarter. This tightening, combined with the interest rate move during the quarter, contributed to a -60-basis point second quarter total return for the CMBS Index. We continue to view the CMBS sector negatively and have reduced portfolio exposure to less than 1%.

### Credit Spotlight

#### Real Estate – In Focus Again, But It’s Not Like 2008

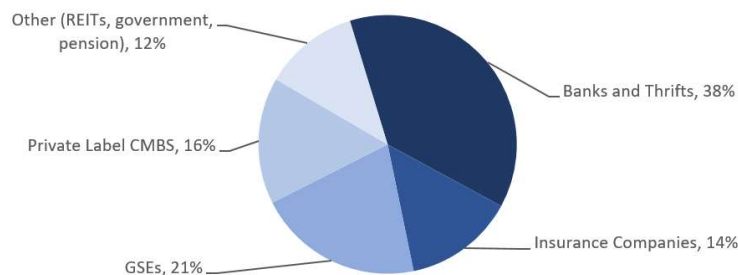
The mini-banking crisis and failure of three US banks in March 2023 focused investor attention on banks in general. As the situation developed, investors began to question the credit quality of bank loan portfolios. Even prior to that, however, investors were already aware of weakness in certain categories of real estate, namely commercial office properties. Initial fears regarding the quality of bank real estate loan portfolios further pressured bank common stock and bond valuations. As investors reviewed the landscape, they also targeted other holders of large commercial real estate loan portfolios, such as insurance companies and securitizations. However, recall that in 2008 residential real estate was the root of the problem, and that spread the pain of falling market values and over-leveraged properties to a large proportion of families and individuals who drive consumer spending and almost 70% of GDP. While commercial office properties still present a unique risk to investors, it appears that the current weakness in commercial real estate loan portfolios won’t meaningfully influence broad economic trends in the manner that residential mortgages did during the 2008 credit crisis.

The work-from-home trend fueled by the COVID pandemic sent commercial office space utilization (i.e., employee attendance and visitor foot traffic) to levels as low as 30% of the pre-COVID period. In addition, retail property traffic also suffered as consumers avoided eating out and increased their propensity to shop online. Property owners didn’t suffer immediately, as the long-term nature of commercial office and retail property leases (i.e., five to seven-year lease terms for smaller footprints and often ten or more years for larger footprints or anchor retail locations) forced tenants to pay rent regardless of occupancy and utilization trends. Ultimately, however, owners of commercial office and certain retail properties as well as lenders on those properties must look forward to the point of earliest lease expiration and assume that existing tenants will reduce their square footage requirements and / or negotiate reduced rents. Since commercial real estate valuations and lender underwriting work rely heavily on a property’s cash flow, lower rents and reduced square footage under lease directly affects real estate prices and the willingness of lenders to extend credit. The precipitous decline in commercial office and certain retail property utilization suggests that valuations on these properties may decline significantly. This has led investors to question who owns the loans secured by these properties as well as the property equity ownership interests.

Investors broadly categorize commercial real estate loans by property type and end use as follows: office, retail, industrial, lodging, and others. These loans, or groups of loans packaged into securitizations (CMBS), reside in portfolios held mostly by banks and thrifts, insurance companies, government agencies (Freddie Mac and Fannie Mae) and others (see chart, below).

#### US Commercial Real Estate - Debt Outstanding by Holder

(source: Bank of America; as of Fourth Quarter 2022)





### Credit Spotlight (continued)

Combined, banks, thrifts, and insurance companies in aggregate appear heavily exposed to commercial real estate loans. The exposure of individual banks and insurance companies to commercial real estate loans varies greatly, but we can generalize that insurance companies hold a smaller percentage of their assets in commercial real estate than banks. Further, within the banking sector, the largest national banks hold a smaller percentage of commercial real estate loans as a percentage of total assets than regional banks. Defining large banks as the top 25 banks by assets held and small as everything else, on average the large banks hold 13% of their assets in commercial real estate loans versus 43% for small banks. This factor is important for our purposes, because smaller banks aren't materially represented in the Bloomberg US Aggregate Bond Index, our primary benchmark index.

Some investors question if the downturn in the commercial real estate market is like the 2008 downturn in the residential mortgage market; we do not believe that is the case. The differences between the commercial and residential mortgage loan markets are significant, both in size and structure. Analysts estimate that commercial real estate loans could total between \$4.5 trillion and \$5 trillion, whereas the residential market is more than twice that size. Importantly, the structure of CRE loans allows for quite a bit of latitude in restructuring and delaying forced sales, which extends timelines dramatically. Finally, we note that consumers don't generally own commercial real estate in the same magnitude as residential properties. Consequently, we believe any financial hardship experienced by owners of commercial real estate today or lenders on those properties won't directly and negatively affect consumer spending as much as the residential real estate meltdown that occurred in 2008.

### Investment Grade Credit

During the second quarter of 2023, diminishing fears regarding the stability of the US banking sector, resilient corporate fundamentals, and a host of supportive technicals drove a narrowing of IG spreads. After beginning the period at 138 basis points wide of comparable US Treasuries, the OAS on the Bloomberg US Corporate index widened out to 148 basis points in early May only to steadily tighten 25 basis points through the latter half of the quarter to 123 basis points on June 30, 2023. Spread tightening was pervasive across most industries and sectors, except for a notable underperformance in banks versus industrials. Much of this underperformance, acutely seen amongst regional banks, can be attributed to lingering questions regarding deposit stability and pricing, commercial real estate loan exposures, and the potential need for outsized debt issuances to meet expected future strengthened regulatory capital requirements. While investment grade spreads tightened in the quarter, investment grade credit generated negative total returns as yields widened 41 basis points from 4.40% to 4.81%.

Investment grade corporate bond primary issuance in the second quarter totaled \$316 billion, 3% higher than the past four-year second quarter average of \$308 billion. Overall year-to-date new issuance appears in-line with expectations, but there has been considerable month-to-month volatility in supply this year. After a very robust start to the year, the new issue market came to a near halt in March and much of April due to turmoil in the banking sector. New issuance quickly bounced back in May as companies priced \$155 billion of new paper (39% above trailing 4-year average for the month) while June primary market activity tracked relatively flat with prior year trends. After factoring in maturities, net supply for the first six months of 2023 totaled \$290 billion, down 9% versus the comparable period last year. Limited net new issuance has been a tailwind for the asset class.

Despite ongoing fears of an economic slowdown and looming recession, corporate credit fundamentals have proven to be remarkably durable. While valuations, especially from a spread perspective appear particularly stretched, technical tailwinds (e.g., attractive yields, limited net new issuance, positive fund flows, etc.) dominated the pricing rubric and provided strong support for corporate investment grade bonds.

The best-performing industries and sub-segments on an excess return basis included diversified media, technology, tobacco, and food and beverage. Independent energy, utilities, autos, and midstream comprise some of the most significant laggards during the quarter.

Halfway through 2023, investment grade credit markets appear to be pricing in a soft-landing based on resilient economic growth, a relatively patient Federal Reserve, and moderating inflation. From our perspective, this appears as somewhat of an unstable and precarious position where too much positive momentum can heighten the risks of a policy mistake and too little momentum can quickly tip the scales toward a sharp recession. Future Federal Reserve policy continues to be a critical variable and hot topic of contention amongst market participants. Inflationary pressures seem to have peaked and appear to be receding somewhat, but core inflation trends remain far from the Federal Reserve's 2% target. The longer it takes for inflation to subside, the higher the odds grow for

an economic hard landing. Despite attractive overall yields, we remain cautious on credit spreads and maintain an underweight position as we wait for more suitable entry points.

### High Yield

With the US economy remaining resilient and the “soft landing” narrative gaining credence, the US high yield market posted its third consecutive quarterly gain in the second quarter of 2023. After generative a total return of 4.2% in the fourth quarter and 3.6% in the first quarter, a continued recovery in lower-rated bonds drove a 1.7% gain in the second quarter, pushing 2023 year-to-date returns to 5.4%. CCC-rated bonds, which underperformed the high yield market last year, posted a robust 9.4% return in the first half, while BBs and Bs returned 4.4% and 5.4%, respectively. In the second quarter, high yield spreads rallied 65 basis points to 390 basis points, ending June just 5 basis points off the year-to-date tights of 385 basis points (reached in early February) and 125 basis points inside the wides reached during the height of volatility in March which emanated from the banking sector. Higher Treasury yields offset the spread tightening, leaving the Bloomberg US High Yield Corporate Index yield-to-worst essentially unchanged at 8.50%. At the sector level, performance continued to vary widely in the second quarter, with retailers (6.4% total return) and leisure (5.5%) outperforming on the back of a strong US consumer, while wireless telecommunications was the notable underperformer (-2.7%).

Recent data suggest that high yield credit fundamentals have peaked for this cycle, yet remain in benign territory on an historical basis. First quarter revenue and EBITDA posted modest sequential declines (-6%) for the second consecutive quarter, although on a year-over-year basis, growth still remains slightly positive. Leverage declined marginally to 3.9x, its lowest level since 2012 and down significantly from its recent peak of 6.2x in the first quarter of 2021. Additionally, ratings upgrades continued to outpace downgrades in the second quarter. Conversely, high yield default rates continue to climb, reaching 1.64% at the end of June, still well below the long-run average but up from 0.84% at the end of 2022. Leading indicators, such as the Federal Reserve’s Senior Loan Officer Survey (SLOOS) suggest that this trend will continue in the second half of 2023 and likely into 2024 as well. We expect that earnings for the second quarter of 2023 will show further fundamental deterioration as a result of continued profit margin pressure, sequential earnings declines, and more restrictive access to credit. Defaults will likely climb and could approach the long-term average of approximately 3% by year-end 2023.

Against a supportive market backdrop, primary high yield issuance accelerated to \$55 billion in the second quarter, up from \$41 billion in the first quarter and just \$17 billion in the fourth quarter of 2022. Year-to-date issuance is now up 35% versus last year but with much of the proceeds used for refinancing net new supply actually declined year-over-year. This trend, combined with a \$3.6 billion second quarter retail fund inflow and \$42 billion of rising stars in the quarter, created a strong technical backdrop for the high yield market. With all-in yields still well above 8%, we expect that issuance in the second half of 2022 will remain focused on addressing near-term maturities and highly dependent on market conditions. For now, the high yield maturity wall appears manageable given the wave of refinancings completed in 2021, but as we move into 2024, this should become more front and center in investors’ minds.

Although our thesis has yet to play out as high yields spreads continue to grind tighter, we remain unconvinced that valuations reflect the potential earnings downside and credit deterioration that could materialize in coming quarters. High yield bond spreads are back to the 400 basis point area, a level that has proven to be a floor since the Federal Reserve initiated the current hiking cycle. We acknowledge that the tightening phase is coming to an end, but remain cautious as spreads reside well inside those of historical recessionary periods. We continue to prefer higher-rated credits (including an allocation to BBBs) and less-cyclical sectors. As we wait for more clarity on when the Federal Reserve might take its foot off the brakes and whether the economy can continue to remain resilient, we are content to be relatively light on risk and ready to add should spreads widen and offer a more attractive entry point for high yield investors.

### Leveraged Loans

For the US leveraged loan investors, the second quarter of 2023 looked a lot like the first quarter, as another 3.1% quarterly return pushed year-to-date gains to 6.3% (nearly a full 1% ahead of the US high yield market), as measured by the Credit Suisse Leveraged Loan Index. Lower-quality loans led performance, with Bs and BBs gaining 7.0% and 4.9% year-to-date, respectively. Average loan prices finished the quarter up nearly a full point at



93.55, while spreads (3-year discount margin) tightened 28 basis points in the quarter (and 71 basis points year-to-date) to 581 basis points. Despite spread tightening, the outlook for additional rate increases drove the average loan yield 31 basis points higher to 10.31%. Consumer-oriented cyclical sectors led gains in the second quarter, with gaming / leisure (4.4%), consumer durables (4.4%), and housing (4.1%) outperforming, while broadcasting posted the only negative return (-0.5%).

Fundamental credit trends in the leveraged loan market mirror those of high yield issuers, with results from first quarter earnings season showing a sequential decline in revenue (-3%) and EBITDA (-7%). Despite those trends, leverage metrics continued improving to 4.6x in the first quarter of 2021 from 4.8x at the end of the fourth quarter of 2022 and 7.8x at the end of the first quarter 2021. The Federal Reserve's rate increases are starting to impact coverage metrics, however, as interest expense increased 14% in the second quarter (a record increase), leading to a deterioration in interest coverage from 4.7x to 4.6x (still above the 4.1x average in recent years). This figure is likely to continue deteriorating in coming quarters, possibly driving cash flow and liquidity issues for highly-leveraged loan issuers. Rating agencies already recognize this risk, with downgrades outpacing upgrades by more than a 2-to-1 margin in the second quarter. Similarly, the leveraged loan default rate continues to climb faster than the high yield default rate, pushing to 2.41% at the end of June, up from 1.72% at the end of the first quarter and 0.97% at year-end 2022. We expect the default rate to continue rising in coming quarters as the loan market appears particularly at risk of deteriorating fundamentals, given its concentration of highly-leveraged, lower-rated issuers.

Primary loan issuance slowed in the second quarter, matching declining demand from both the CLO market and retail funds. CLO issuance dropped to a 3-year low in the second quarter with just \$22 billion pricing as compared to \$34 billion in the first quarter of 2023. Similarly, retail fund outflows continued in the second quarter (\$7.6 billion), albeit at a somewhat slower pace than in recent periods (e.g., \$11.0 billion in the first quarter of 2021). Primary market activity remained slow in the quarter, with \$16 billion in loans priced, up slightly from \$14 billion in the first quarter, but the combined two-quarter period proved to be the slowest since early 2010. Excluding refinancings, which have dominated the primary market, supply is down over 75% year-over-year. We anticipate more refinancing transactions in coming quarters due to the larger loan market maturity wall versus high yield. This could present a challenge for weaker credits if financial market conditions deteriorate.

With the market still anticipating another Federal Reserve rate hike or two (and an extended hold after that), the case for leverage loans over high yield may have more runway, although the trade-offs are clearly more balanced now than for much of 2022. The loan market continues to offer a yield and spread advantage of approximately 175 basis points, but with most loans still trading near par, caution appears warranted in coming quarters as a possible recession poses significant risk to loan market fundamentals. Compared to the high yield market, the loan market comprises a higher concentration of lower-rated issuers much more susceptible to higher interest burdens and deteriorating operating earnings trends. Therefore, we remain focused on higher-quality loan issuers with ample cash flow to manage higher interest rates for an extended period.

## Disclaimers

This report is prepared for informational purposes only. It does not consider the specific investment objective, financial situation or particular needs of any recipient. Ducenta Squared Asset Management is not soliciting any action based on this report, and the report is not to be construed as an offer to sell or solicit investment management or any other services. The information and opinions contained herein have been compiled or arrived at based on information obtained from sources believed to be reliable and in good faith, but we do not represent that it is accurate or complete and it should not be relied upon as such. Opinions expressed are our current opinions as of the date appearing on the material only and are subject to change without notice. Index returns do not reflect the effect of management fees. No part of this publication may be copied, photocopied or duplicated in any form or by any means without Ducenta Squared Asset Management's prior written consent.

### **Past performance is no guarantee of future results.**

The MOVE Index is a measure of US interest rate volatility that tracks the movement in US Treasury yield volatility implied by current prices of one-month over-the-counter options on 2-year, 5-year, 10-year and 30-year Treasuries.

The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency).

The Bloomberg US Credit Index measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

The Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

The Bloomberg US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1 / BB+ / BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Bloomberg EM country definition, are excluded.

The Credit Suisse Leveraged Loan Index tracks the investable market of the US dollar denominated leveraged loan market. It consists of issues rated "5B" or lower, meaning that the highest rated issues included in this index are Moody's / S&P ratings of Baa1 / BB+ or Ba1 / BBB+. All loans are funded term loans with a tenor of at least one year and are made by issuers domiciled in developed countries.