



## ZAIS Insights

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It's not over yet

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### It's not over yet

- Fed tightening expected to slow soon and then pause in early 2023
- ...but adverse economic impact to be felt for some time longer
- Tail credits remain vulnerable yet opportunities have emerged, as well

Financial markets have rallied in recent weeks on the hope that the Fed will slow the tightening pace soon.<sup>1</sup> We expect that the Fed will hike just 50bps at this month's FOMC meeting and at least pause the tightening cycle by the end of the first quarter of next year. However, we also think that the adverse impact of total Fed

tightening will be felt for longer, keeping the outlook for the economy highly uncertain.

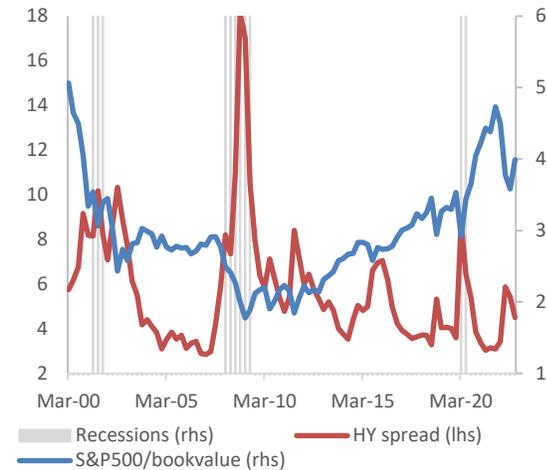
By March 2023, we forecast that the Fed will have hiked the funds rate by about 500bps within 12 months. This would be one of the fastest tightening cycles in Fed history.<sup>2</sup> As Fed Chair Powell has pointed out, the full effects of the tightening so far are yet to be felt and it is likely that restoring price stability will require holding policy at a restrictive level for some time.<sup>3</sup>

A soft landing is possible but not assured judging by past experience. In the nine inflation cycles since WWII, recession was avoided only once, in 1951.<sup>4</sup> Failure to land softly would be upsetting for financial markets. The S&P500 trades around 4 times book value and US high-yield bond spreads

are around 4.5% points, neither of which is an alarming level (see Chart 1).

### Chart 1: US equity and high-yield markets

% pts. p.a. (lhs) and multiple (rhs)

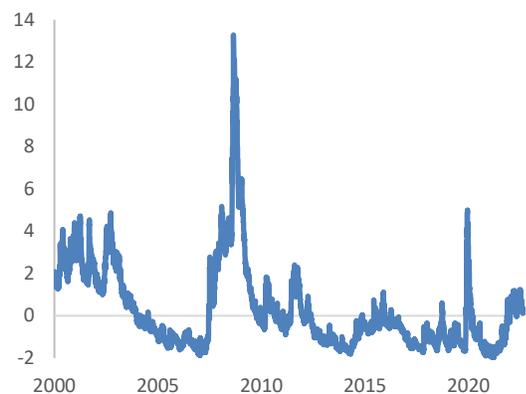


Source: S&P Global and ICE <sup>5</sup>

In our view, Fed tightening will primarily curtail spending, and eventually have some restraining impact on the labor market, undermining the economy's resilience. So far, serious financial stress has been avoided (see Chart 2) and we are not expecting a financial crisis as in 2008. That said, we think financial strain will increase in weak credit segments.

### Chart 2: US financial stress index

0 = normal



Source: US Treasury Office of Financial Research <sup>6</sup>

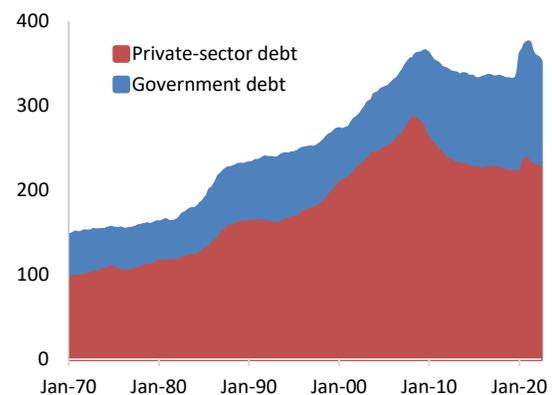
In this report, we review the impact of higher interest rates on the main sectors in the economy. We see parts of the corporate sector as vulnerable to financial stress, but we also see opportunities in structured credits, which have lagged the recent spread tightening or have become cheap on a relative-value basis.

### Overall leverage is still high

Overall US domestic debt stands currently at around 350% of GDP, which is about the same as at the start of the financial crisis in 2008, but the composition has changed (see Chart 3). Private-sector debt has declined by more than 50% of GDP since the financial crisis, while government debt has increased by roughly the same amount.

### Chart 3: US domestic debt by sectors

% of GDP



Source: Board of Governors of the Federal Reserve and Bureau of Economic Analysis <sup>7</sup>

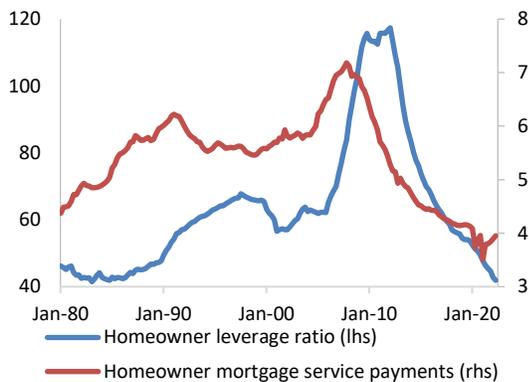
That means to us that the private sector is less vulnerable than it was in the financial crisis. Still, we see pockets of increased vulnerability in certain sectors, which we will outline below. Furthermore, we note that the overall level of private-sector debt remains high by past standards – much higher for example than it was in the late 1970s when Paul Volker started to clamp down on inflation.

## Households restrained but not stressed

In our view, higher interest rates are restraining household spending but are unlikely to create serious financial stress. This is most visible in housing. New homebuyers face high affordability hurdles, given the rise in mortgage rates, but existing homeowners are unlikely to run into solvency problems quickly.<sup>8</sup> Homeowners have reduced their leverage ratio and locked in low, fixed mortgage rates (see Chart 4). Moreover, the credit quality of home-buyers has improved significantly since the financial crisis.<sup>9</sup>

**Chart 4: Homeowner leverage & payments**

% both scales



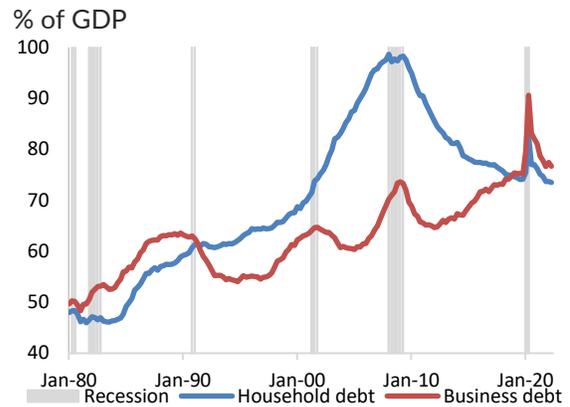
Source: Board of Governors of the Federal Reserve System<sup>10</sup>

Consumption is more sensitive to income growth and employment. Still, we expect the restraining impact of higher interest rates to be felt in consumption as well. Car sales, for example, are likely to decline, judging by the latest Senior Loan Officer Survey.<sup>11</sup> We also think that delinquencies and defaults in consumer loans will rise. There has been more subprime lending in consumer loans, especially in auto loans, and delinquencies are already rising among young and lower-income people, albeit from very low levels.<sup>12</sup> Overall, however, we think that credit dislocations in consumer loans will be limited and not lead to broad-based financial stress.

## Business sector faces more credit risks

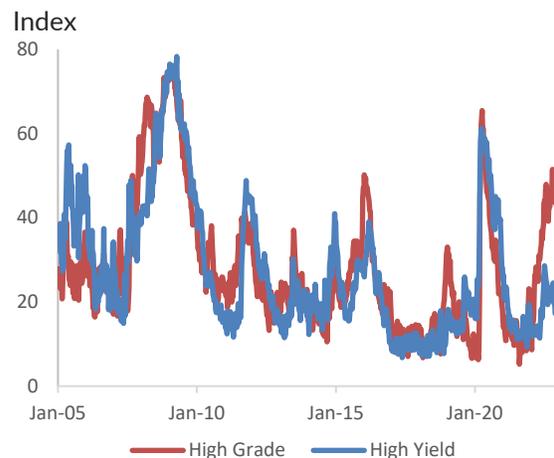
We believe the business sector is more likely to experience some financial stress due to higher interest rates than the household sector. First, the business sector has increased its leverage since the financial crisis (see Chart 5). Second, there has been a deterioration in issuer quality, especially in the high-grade sector.<sup>13</sup> The NY Fed's Corporate Bond Market Distress Index shows more strained market conditions in high-grade than in high-yield (see Chart 6).

**Chart 5: Business and household debt**



Source: Board of Governors of the Federal Reserve System and US Bureau of Economic Analysis<sup>14</sup>

**Chart 6: Corporate bond market distress**



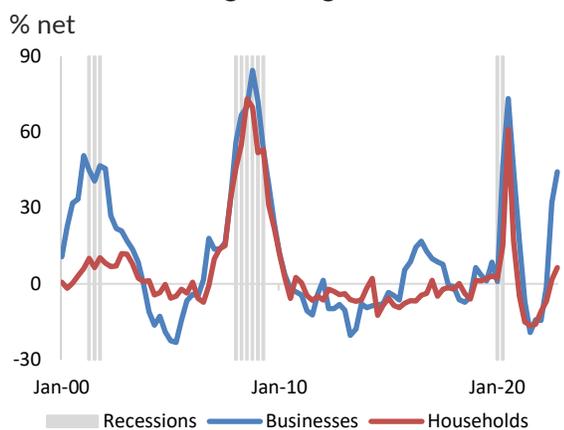
Source: Federal Reserve Bank of New York<sup>15</sup>

Third, leveraged and private loan markets, which have increased strongly in size,<sup>16</sup> feel the impact of rising interest rates quickly,

given the floating rate nature of the loans. We do not think that the leveraged and private loan markets are in deep trouble, but we believe it is the tail credits that are likely to come under more pressure from rising interest rates and falling margins. In particular, we expect that higher interest rates will increase the share of issuers with poor interest coverage ratios.<sup>17</sup>

Fourth, banks have become much more restrictive toward the business sector than toward the household sector. The Fed's latest Senior Loan Officer Survey shows that banks have tightened their lending standards for the business sector to levels that are typically associated with recession (see Chart 7).

**Chart 7: Banks tightening loan standards**



Source: Board of Governors of the Federal Reserve System<sup>18</sup>

The tightening is particularly strong in CRE loans except for multifamily.<sup>19</sup> In our view, CRE companies with less attractive properties will increasingly struggle to pass on rising operating and interest expenses to tenants. We believe this pressure will become most visible in lower-quality office space, which also faces reduced demand from increased remote working arrangements.

As a result, we expect tail credits in the business sector to come under increased

stress, leading to more defaults than the historic average. However, we believe that the rise in interest rates is more likely to depress business activity and new investment than to trigger a debt crisis as in 2008. Business investment in structures and equipment excluding transportation is already declining<sup>20</sup> and funding demand by the business sector has dropped, as well.<sup>21</sup>

### The financial sector has deleveraged

The financial sector has done the most deleveraging since the financial crisis and so is least likely to cause financial stress, in our view. The nearby table shows the financial sector's debt exposure at the start of the financial crisis and most recently. The deleveraging by ABS issuers, which were at the center of the financial crisis, is striking. The only sectors with increased leverage are REITs and financial holding companies, which includes private equity firms.

**Table: Financial sector debt**

	2007-Q4	2022-Q2
GSEs	50.9	45.7
Banks	7.1	3.3
Finance comp.	8.8	3.8
Broker	7.1	6.2
REITs	2.9	3.9
ABS issuers	32.1	5.9
Holding comp.	4.6	6.2
Other	5.9	2.0
<b>Total</b>	<b>119.4</b>	<b>77.3</b>

Source: Board of Governors of the Federal Reserve System and US Bureau of Economic Analysis<sup>22</sup>

The GSEs remain by far the largest debt issuers in the financial sector. In our judgment, the reforms since the financial crisis have made the GSEs more robust. And, we think delinquencies and defaults on the GSEs' asset side are far less likely, given

improved household sector financial health, as discussed above.

Overall, we think rising interest rates are unlikely to cause the financial sector much stress on the liability side; we believe pressure on the asset side will be limited, with financial institutions having enough capital and reserves to ride out losses. In fact, rising interest rates are an opportunity to raise margins, especially for banks.<sup>23</sup> On the other hand, the financial sector has become cautious, as the bank lending standards show. That can be expected to add to the overall restraining impact of interest rate increases on the economy.

### Watch the labor market

In summary, we think the risk of credit dislocations is highest in the corporate sector and this should become visible in higher than expected default rates. However, we do not believe these pressures are enough to lead to an overall debt crisis. Instead, we expect higher interest rates to weigh more heavily on household and business spending.

In our view, the restraining impact of higher interest rates is likely to spread further and also to affect the labor market. Some first signs are emerging in the form of slowing employment and rising jobless claims.<sup>24</sup> The main risk for financial stability and the economy in general, in our view, would be a sharp rise in unemployment, as this would in particular create stress for the household sector. This risk cannot be ruled out but we think the probability is low. The demand for labor has some way to fall before it is exceeded by the limited supply of workers and boosts the unemployment rate to uncomfortable levels.<sup>25</sup>

### Emerging investment opportunities

Recession remains a clear and present danger and we think markets currently underestimate this risk, especially for low-quality corporate credits. However, we also believe that structured credits have lagged since the market has begun to price in a Fed pivot, creating relative-value investment opportunities. Spreads in some structured product subsectors appear to sit at wider than expected levels in light of the tightening seen in more liquid markets. Following are examples that we view as attractive.

### CLOs

We anticipate that 2023 will bring an increase in both downgrades and defaults in leveraged credit as macroeconomic factors impact corporate balance sheets. Concerning CLOs, we notice significant dispersion in deal quality and we believe this will only be amplified as losses and downgrades increase.

We are of the opinion that this environment will create very significant headwinds for equity tranches of CLOs (particularly those with limited reinvestment capacity) as they are exposed to idiosyncratic defaults and are most sensitive to trigger erosion, which can be precipitated by downgrades to CCC in the collateral pool. In our view, this is likely to bring a wide range of outcomes for first loss pieces, making broad-based investments difficult.

Instead, we favor CLO debt, high quality BB tranches in particular, as they offer compelling carry and price convexity married with significant credit enhancement and structural protections which we think make them loss remote. In our view, they are little impacted by idiosyncratic defaults and are unlikely to have an interruption of cash flow even if significant portions of the single B-loans in the portfolios are downgraded to

CCC. At this juncture, we prefer pools that have small CCC buckets, ample trigger cushion and lower B- minus concentrations.

In our analysis, bonds of this profile can withstand significant stress in difficult macroeconomic situations including recession. Additionally, CLO tranche spreads have lagged liquid markets and appear cheap on a relative basis: they presently trade approximately 600bps wider than comparably rated corporate loans (see Chart 8).

**Chart 8: Leveraged loan and CLO spreads**

Basis points over Libor



Source: S&P Morning Star and JPMorgan <sup>26</sup>

## CRE

As we have pointed out before, we have credit concerns about office CRE. We expect structural headwinds caused by limited return-to-office, and flexible work solutions will broadly cause tenants to reevaluate office space requirements. This dynamic will weigh on leasing activity for years to come and result in a rationalization of total office square footage in many markets across the country. While we acknowledge the many headwinds, we think that spread widening for best-in-market, newly built or renovated offices is overdone. We believe that high-grade SASB<sup>27</sup>-compliant, sustainable office-

backed securities offer double digit return opportunities with remote risk of loss.

## CRT

In residential CRT, we think there are attractive opportunities in seasoned collateral (mostly backed by agency mortgage loans originated between 2019 and the first half of 2021) and in the tranches positioned higher in the capital structure (BBB- to B as well as B2s and B1s) which we believe are adequately insulated from downside risk in housing.

## ABS

We believe consumer performance is going to be very tiered and dispersed by subsector (i.e., prime versus subprime, timeshare and small business versus marketplace lending), issuers and collateral attributes like vintage. In our view, the deterioration in performance especially across lower income borrowers will keep subsectors like marketplace lending under pressure.

That said and despite the headwinds facing the economy, we view the public ABS space offers attractive risk-adjusted return opportunities for short duration profiles; subsector and security selection remain key. As examples, some of the areas we think are interesting include investment grade paper in near-prime credit cards and select sub-investment grade opportunities in prime and sub-prime auto.

## More information

As always, we are available to discuss our views with you. Please contact your Client Relations representative at +1 732 978 9722 or [zais.clientrelations@zaisgroup.com](mailto:zais.clientrelations@zaisgroup.com)

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<sup>1</sup> The S&P500 rallied 14.5% over the last 2 months. S&P500 (SPX); Investing.com; December 5, 2002.

<https://de.investing.com/indices/us-spx-500>.

Fed Chair Jerome Powell said in a speech on November 30<sup>th</sup>, “it makes sense to moderate the pace of our rate increases as we approach the level of restraint that will be sufficient to bring inflation down”.

Fed Chair Jerome Powell; Inflation and the labor market; At the Hutchins Center on Fiscal and Monetary Policy, Brookings Institution, Washington, D.C.; November 30, 2022.

<https://www.federalreserve.gov/newsevents/speech/powell20221130a.htm>

<sup>2</sup> Board of Governors of the Federal Reserve System (US), Federal Funds Effective Rate [DFF], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/DFE>

<sup>3</sup> Fed Chair Jerome Powell; Inflation and the labor market; November 30, 2022.

<https://www.federalreserve.gov/newsevents/speech/powell20221130a.htm>

<sup>4</sup> Inflation reached 9.6% in April 1951 at the start of the Korean war as people stockpiled food and goods in fear of shortages. Inflation dropped to 2.1% over the following 12 months, while the economy slowed but stayed clear of recession.

The American Economy in 1951; The Economic Weekly; May 24, 1952.

[https://www.epw.in/system/files/pdf/1952\\_4/21/the\\_american\\_economy\\_in\\_1951.pdf](https://www.epw.in/system/files/pdf/1952_4/21/the_american_economy_in_1951.pdf)

U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCSL], retrieved from FRED, Federal Reserve Bank of St. Louis; December 1, 2022.

<https://fred.stlouisfed.org/series/CPIAUCSL>

Federal Reserve Bank of St. Louis, NBER based Recession Indicators for the United States from the Period following the Peak through the Trough [USREC], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/USREC>

<sup>5</sup> S&P500 Earnings and Estimate Report; S&P Global

<https://www.spglobal.com/spdji/en/documents/additional-material/sp-500-eps-est.xlsx>

Ice Data Indices, LLC, ICE BofA US High Yield Index Option-Adjusted Spread [BAMLH0A0HYM2], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/BAMLH0A0HYM2>

<sup>6</sup> Office of Financial Research. “OFR Financial Stress Index.” OFR, updated daily; (accessed Tue. Dec. 06, 2022).

<https://www.financialresearch.gov/financial-stress-index/>

<sup>7</sup> Board of Governors of the Federal Reserve System (US), Households and Nonprofit Organizations; Debt Securities and Loans; Liability, Level [CMDEBT], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/CMDEBT>

Board of Governors of the Federal Reserve System (US), Nonfinancial Business; Debt Securities and Loans; Liability, Level [TBSDODNS], retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/TBSDODNS>

Board of Governors of the Federal Reserve System (US), Domestic Financial Sectors; Debt Securities and Loans; Liability, Level [DODFS], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/DODFS>

Board of Governors of the Federal Reserve System (US), Federal Government; Debt Securities and Loans; Liability, Level [FGSDODNS], retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/FGSDODNS>

Board of Governors of the Federal Reserve System (US), State and Local Governments; Debt Securities and Loans; Liability, Level [SLGSDODNS], retrieved from FRED, Federal Reserve Bank of St. Louis; November 30, 2022.

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<https://fred.stlouisfed.org/series/SLGSDODNS>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/GDP>

<sup>8</sup> See also ZAIS Insight; The big Housing Correction; September 2022.

<https://www.zaisgroup.com/the-big-housing-correction.html>

<sup>9</sup> Federal Reserve Bank of New York; Household Credit and Debt Report; Q3-2022; Page 6.

[https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC\\_2022\\_Q3](https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC_2022_Q3)

<sup>10</sup> Board of Governors of the Federal Reserve System (US), Mortgage Debt Service Payments as a Percent of Disposable Personal Income [MDSP], retrieved from FRED, Federal Reserve Bank of St. Louis; November 30, 2022.

<https://fred.stlouisfed.org/series/MDSP>

Homeowner leverage is the ratio of homeowners' mortgage debt to homeowners' equity in real estate.

Board of Governors of the Federal Reserve System (US), Households; Owners' Equity in Real Estate as a Percentage of Household Real Estate, Level [HOEREPHRE], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/HOEREPHRE>

Board of Governors of the Federal Reserve System (US), Households; Owners' Equity in Real Estate, Level [OEHRENWBSHNO], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/OEHRENWBSHNO>

<sup>11</sup> The balance of banks reporting increased demand for auto loans -28% in October 2022.

Senior Loan Officer Opinion Survey on Bank Lending Practices; Board of Governors of the Federal Reserve System; November 07, 2022.

<https://www.federalreserve.gov/data/sloos/sloos-202210.htm>

<sup>12</sup> Federal Reserve Bank of New York; Household Credit and Debt Report; Q3-2022; Pages 26/27.

[https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC\\_2022\\_Q3](https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC_2022_Q3)

<sup>13</sup> JPMorgan JULI ex EM Market Value and Prices; JPMorgan JULI ex EM BBB Market Value and prices.

<https://markets.jpmorgan.com/#dataquery>

<sup>14</sup> Board of Governors of the Federal Reserve System (US), Households and Nonprofit Organizations; Debt Securities and Loans; Liability, Level [CMDEBT], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/CMDEBT>

Board of Governors of the Federal Reserve System (US), Nonfinancial Noncorporate Business; Debt Securities and Loans; Liability, Level [TCMILBSNNB], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/TCMILBSNNB>

Board of Governors of the Federal Reserve System (US), Nonfinancial Corporate Business; Debt Securities and Loans; Liability, Level [TCMILBSNNCB], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/TCMILBSNNCB>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; November 29, 2022.

<https://fred.stlouisfed.org/series/GDP>

<sup>15</sup> Federal Reserve Bank of New York; Corporate Bond Market Distress Index Report; November 30, 2022.

<https://www.newyorkfed.org/research/policy/cmdi>

<sup>16</sup> The outstanding of leveraged loans rose 179% over the last 10 years, while high grade and high yield bonds rose 105 and 46% respectively.

Board of Governors of the Federal Reserve System (US), Nonfinancial Corporate Business; Corporate Bonds; Liability, Level [CBLBSNNCB],

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retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/CBLBSNNCB>

S&P Global; S&P/LSTA Leveraged Loan Index; SPBDAL - S&P-LSTA Leveraged Loans Index.

<https://www.lcdcomps.com/lcd/idx/index.html?id=10>

S&P Global; US HY; Interactive High Yield Report - WEB - HY US.

<https://www.lcdcomps.com/lcd/n/home.html?hy>

<sup>17</sup> See also ZAIS Insight: “Corporates under pressure”; June 2022.

<https://www.zaisgroup.com/corporates-under-pressure.html>

<sup>18</sup> Senior Loan Officer Opinion Survey on Bank Lending Practices; Board of Governors of the Federal Reserve System; November 07, 2022.

<https://www.federalreserve.gov/data/sloos/sloos-202210.htm>

<sup>19</sup> By October 2022, banks have tightened lending standards (net of tightening, unchanged and easing) for industrial and commercial loans to 39.1% and 31.8% respectively for large/medium firms and small firms and for CRE loans to 57.6%, 52.9% and 39.7% respectively for construction and development, nonfarm nonresidential and multifamily.

Senior Loan Officer Opinion Survey on Bank Lending Practices; Board of Governors of the Federal Reserve System; November 07, 2022.

<https://www.federalreserve.gov/data/sloos/sloos-202210.htm>

<sup>20</sup> Gross Domestic Product, Third Quarter 2022 (Second Estimate), Table 2; Bureau of Economic Analysis; November 30, 2022.

[https://www.bea.gov/sites/default/files/2022-11/gdp3q22\\_2nd.pdf](https://www.bea.gov/sites/default/files/2022-11/gdp3q22_2nd.pdf)

<sup>21</sup> Corporate bond issuance has dropped 40% over the six months to October 2022 relative to the same period a year earlier. US Corporate Bond Statistics; sifma; November 2, 2022.

<https://www.sifma.org/resources/research/us-corporate-bonds-statistics/#:~:text=YTD%20statistics%20include%3A,%2C%20%2B0.8%25%20Y%2FY>

By October 2022, the balance of banks reporting stronger demand for industrial and commercial loans was -8.8% and -21.9% respectively for large/medium firms and small firms and for CRE loans -47.0%, -45.6% and -26.5% respectively for construction and development, nonfarm nonresidential and multifamily.

Senior Loan Officer Opinion Survey on Bank Lending Practices; Board of Governors of the Federal Reserve System; November 07, 2022.

<https://www.federalreserve.gov/data/sloos/sloos-202210.htm>

<sup>22</sup> Financial Accounts of the United States - Z.1; Board of Governors of the Federal Reserve System; September 9, 2022.

<https://www.federalreserve.gov/releases/z1/>

U.S. Bureau of Economic Analysis, Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; November 30, 2022.

<https://fred.stlouisfed.org/series/GDP>

<sup>23</sup> According to the latest Senior Loan Officer Survey, a net balance of 30% of banks have reported increases in interest rate spreads.

Senior Loan Officer Opinion Survey on Bank Lending Practices; Board of Governors of the Federal Reserve System; November 07, 2022.

<https://www.federalreserve.gov/data/sloos/sloos-202210.htm>

<sup>24</sup> Private-sector employment increases have more than halved since the beginning of the year until November.

U.S. Bureau of Labor Statistics, All Employees, Total Private [USPRIV], retrieved from FRED, Federal Reserve Bank of St. Louis; December 5, 2022.

<https://fred.stlouisfed.org/series/USPRIV>

The 4-week moving average of initial jobless claims has increased from the low of 206,250 in September 2022 to 228,750 in November 2022.

U.S. Employment and Training Administration, 4-Week Moving Average of Initial Claims [IC4WSA], retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/IC4WSA>

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<sup>25</sup> U.S. Bureau of Labor Statistics, Job Openings: Total Nonfarm [JTSJOR], retrieved from FRED, Federal Reserve Bank of St. Louis; November 30, 2022.

<https://fred.stlouisfed.org/series/JTSJOR>

U.S. Bureau of Labor Statistics, Labor Force Participation Rate [CIVPART], retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/CIVPART>

U.S. Bureau of Labor Statistics, Unemployment Rate [UNRATE], retrieved from FRED, Federal Reserve Bank of St. Louis; December 6, 2022.

<https://fred.stlouisfed.org/series/UNRATE>

<sup>26</sup> PitchBook LCD; US Leveraged Loan Index as of December 5, 2022; Daily Spreads.

<https://www.lcdcomps.com/lcd/idx/index.html?id=10>

JPMorgan CLOIE; CLO BB Unhedged (USD) Discount Margin (LIBOR To-Worst) as of December 5, 2022.

<https://markets.jpmorgan.com/#dataquery>

<sup>27</sup> Sustainability Accounting Standards Board.

<https://www.sasb.org/>

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