



Economic Perspectives

Have bond defaults been abolished?

Peter Warburton

May 2023

Summary

- Correction in corporate profitability is long overdue
- Tech margins contracted in 2022, but expect this to be the general experience in 2023-24
- Consumers under increasing budgetary pressure will obstruct profits progression
- Impossible to sustain pretence of near-zero bond default risk when profitability is under threat
- Corporate bankruptcies and insolvencies are surging again, signalling a new default cycle

Summary

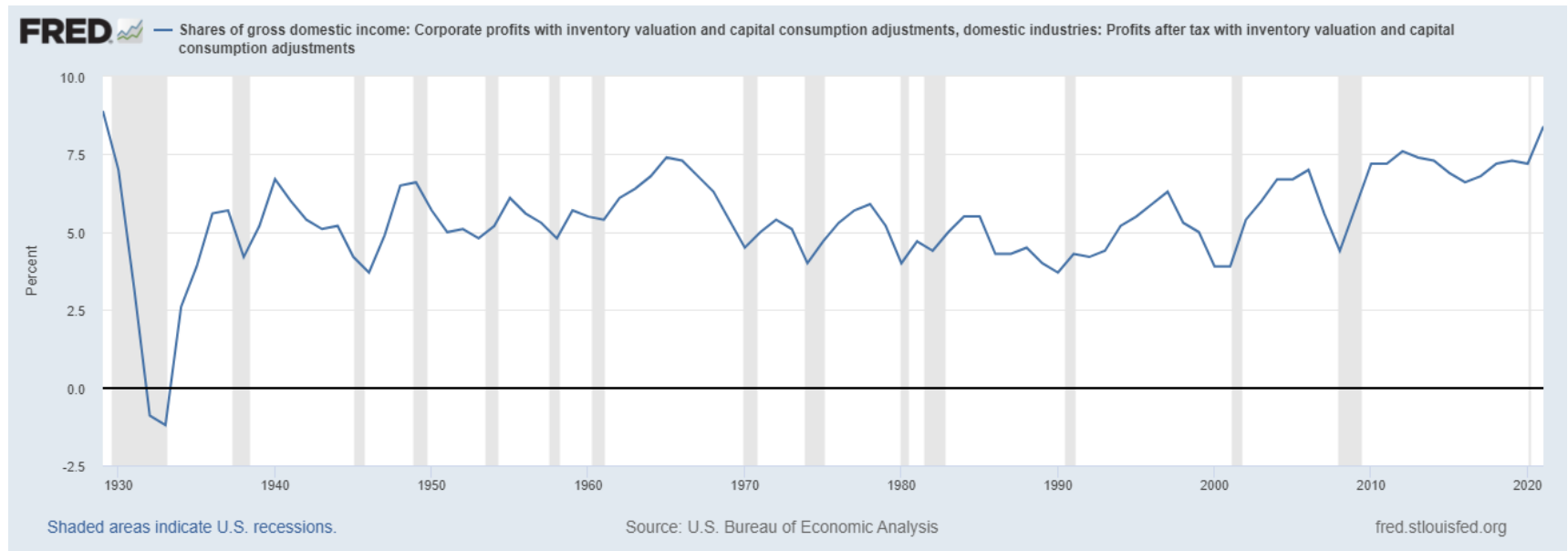
- Successful repression of interest rates over many years has created an illusion of credit market invincibility
- Resurgence of inflation triggered a delayed but eventually urgent response from central banks, punishing those who bought bonds on near-zero or even negative yields
- A parallel suppression of private bond default rates has yet to adjust to this dramatic shift in the financial landscape
- Now is the time!

The legacy of Covid

- As Huw Pill has remarked: “We have to accept that we are all poorer!”
- This includes the corporate sector
- The surge in inflation has not inflicted much damage on profitability. Companies with strong brands and franchises have held or even increased margins.
- The threat to profits is in the disinflationary phase where materials and labour costs cannot be passed on.
- Expect double-digit percentage erosion of profits

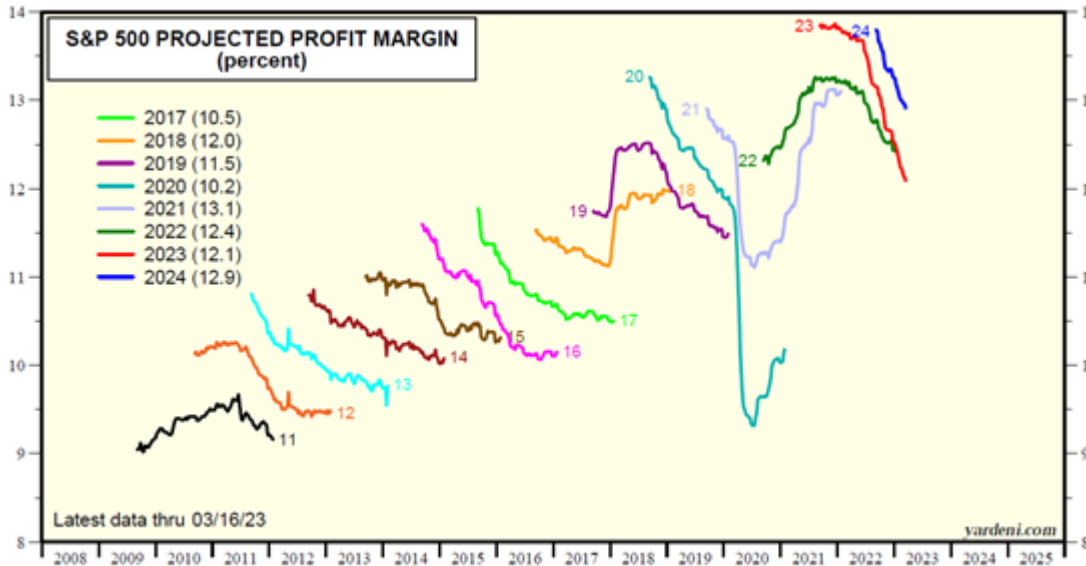
Profitability rebounded strongly in 2021 ...

- ... and remained buoyant well into 2022, but 2023-24 is a different story

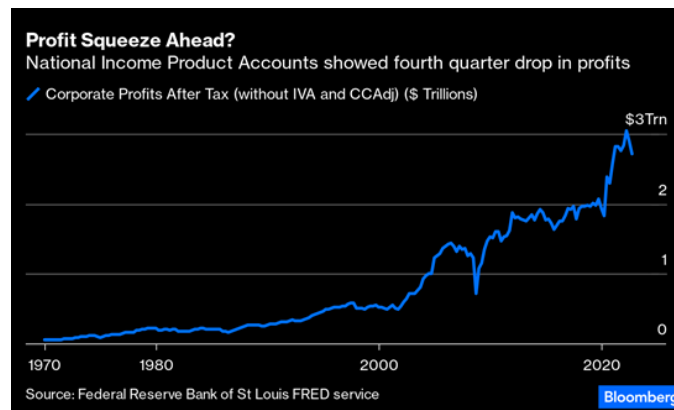


US profit margins are contracting sharply

- 23Q1 bounce in earnings expectations is a fake



Source: I/B/E/S data by Refinitiv.



Profitability matters for credit risk

- Covid's tidal wave of liquidity was very positive for credit pricing, and sustained the illusion of low default risk
- This tide is going out for individuals and SMEs, as a higher proportion of income is disappearing in energy and debt service costs
- The transition from ample liquidity to scarce liquidity is coinciding with a tightening of credit conditions as banks withdraw loan offers
- Businesses face sagging consumer discretionary spending and excess inventory

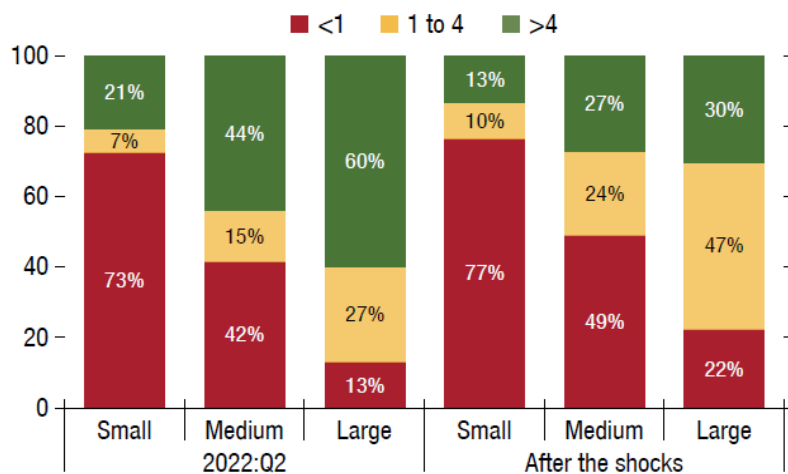
Advanced economies are very sensitive to a profits shock

- Simulation of -20% on earnings, +200bp on debt cost

Lower earnings and higher funding costs would further worsen leverage metrics, including those for large firms ...

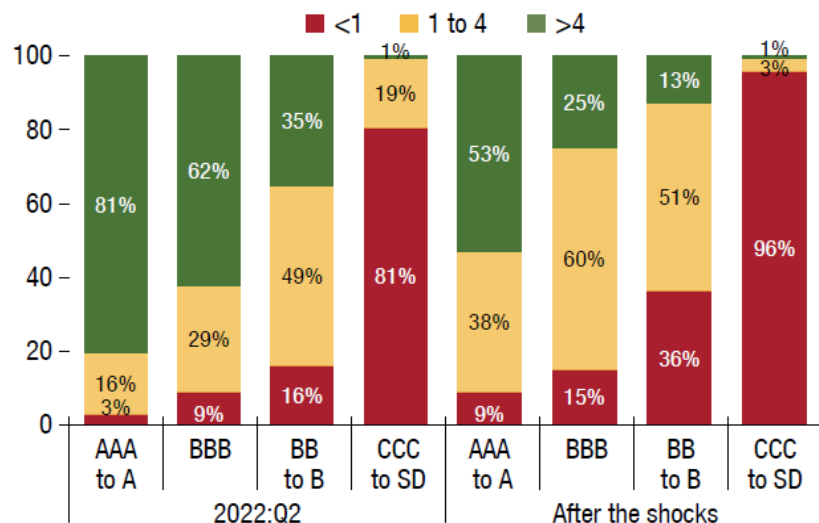
1. Share of Debt at Firms by Interest Coverage Ratio by Firm Size in Advanced Economies

(Percent of total debt, average across countries)



3. Share of Debt at Firms by Interest Coverage Ratio by Rating in Advanced Economies

(Percent of total debt, average across countries)



In advanced economies, more than 70 percent of triple BBB-rated investment-grade corporations could face a rating downgrade to speculative grade.

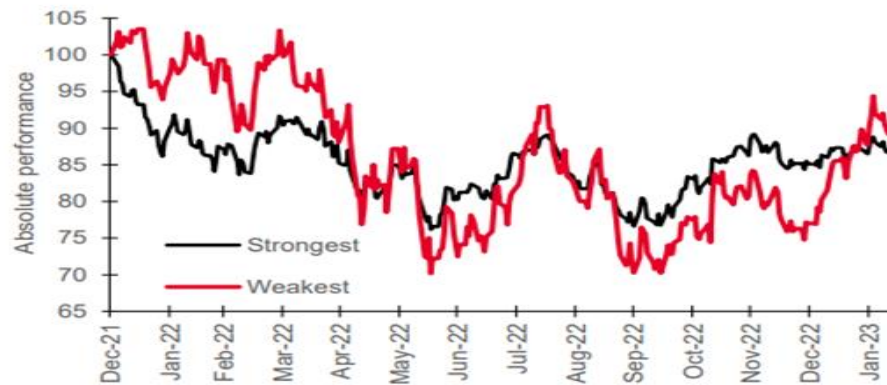
Sources: S&P Capital IQ; and IMF staff calculations.

Note: A partial sensitivity analysis was run to estimate the increase in debt at risk in response to a combined shock to earnings and interest expense. The shock scenario assumes that earnings before interest and taxes decline by 20 percent, and the effective interest rate on firms' total debt rises by 200 basis points. The earnings shock scenario was calibrated to the previous recession episodes. This time, seven more countries were added (Colombia, Hungary, Indonesia, Korea, Malaysia, South Africa, Thailand). A total of about 13,300 firms in 20 countries were analyzed (Brazil, Colombia, France, Germany, Hungary, India, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, Poland, Russia, South Africa, Spain, Thailand, Türkiye, United Kingdom, United States). Large, medium, and small firms are defined as those having assets greater than \$500 million, between \$500 and \$50 million, and less than \$50 million, respectively. In panel 4, high grade includes credit ratings between AAA and A, investment grade includes BBB-rated firms, and speculative grade includes BB- to B-rated firms. The ratings are given by S&P. ICR = interest coverage ratio.

Upside-down thinking on balance sheet strength

- Interest coverage ratios set to plunge for weakest

Balance Sheet Strength* performance - US



Balance Sheet Strength* performance - Europe



Source: SG Cross Asset Research/Equity Quant *as measured by Merton Distance to Default

Why do credit cycles matter?

- Rational expectations theories with financial frictions (Fisher, Bernanke and Gertler)
- Ability to borrow constrained by arbitrary debt limit, or dependent on borrower net worth or collateral value – leading to amplification and propagation effects via variations in the external finance premium
- Over-borrowing (in the aggregate) takes place because rational borrowers fail to consider the systemic implications of their actions: externalities in leverage choice

Why do credit cycles matter?

- Behavioural theories (Minsky and Kindleberger)
- Imperfectly rational investors sometimes become over-optimistic, driving credit spreads to unduly low levels; this optimism eventually reverses *endogenously*, leading to a tightening of credit conditions and negative macro impacts
- In periods of very low interest rates, intermediaries are more likely to reach for yield – ie accept lower premiums for bearing duration and credit risk

Rapid credit growth brings vulnerability; sentiment is the trigger

- Credit supply shocks matter for recessions and slowdowns as well as crises
- **Quantity of credit:** rapid growth in credit precedes adverse macro outcomes, but these impacts can take years to arrive
- **Credit market sentiment:** when sentiment is strong (tight spreads, high proportion of weaker-rated borrowers), the expected returns to bearing credit risk are low. Disappointment leads to sharp reversals in credit conditions (inward shift in credit supply). Economic impacts arrive quickly!

Empirical results of credit impacts

- Using a sample of 30 advanced countries, data 1960-2012: a one standard deviation increase in growth of household credit to GDP in a 3-year interval leads typically to a 2.1% decline in real GDP over the following 3 years
- Exuberant credit market sentiment (tight spreads and high burden of low quality issuance) is associated with an immediate drop in net debt issuance and a decline in economic activity 2 and 3 years later (Lopez-Salido, Stein & Zakrajsek, 2017)

Jeremy Stein's dangerous credit research

Figure 11

Regressors	Dependent Variable: Δy_t				
	(1)	(2)	(3)	(4)	(5)
$\Delta \hat{s}_t$	-5.237*** (1.449)	.	.	-4.830*** (1.027)	-5.004*** (1.385)
\hat{r}_t^M	.	0.155 (0.145)	.	0.081 (0.113)	.
\hat{r}_t^{SP}	.	.	0.132* (0.072)	.	0.058 (0.062)
Δy_{t-1}	0.596*** (0.126)	0.524*** (0.103)	0.535*** (0.108)	0.598*** (0.123)	0.601*** (0.130)
R^2	0.398	0.342	0.336	0.404	0.402
<i>Auxiliary Forecasting Regressions</i>					
	Δs_t	r_t^M	r_t^{SP}		
$\log \text{HYS}_{t-2}$	0.077*** (0.026)	.	.		
s_{t-2}	-0.242*** (0.038)	.	.		
$\log [D/P]_{t-1}$.	0.105** (0.045)	.		
$\log \text{ES}_{t-1}$.	-0.083** (0.039)	.		
$\log [P/\bar{E}]_{t-1}$.	.	-0.136*** (0.039)		
R^2	0.095	0.072	0.086		

Source: Credit market sentiment and the business cycle (Lopez-Salido, Stein and Zakrajsek, 2015)

Jeremy Stein's dangerous credit research

Figure 12

	Forecast Horizon (years)		
	$h = 0$	$h = 1$	$h = 2$
<i>Dep. Variable: real GDP per capita</i>			
$\Delta \hat{s}_t$	-5.237*** (1.449)	-6.205*** (2.401)	-4.051* (2.524)
Cumulative effect (pct.) ^a	-1.409*** (0.390)	-3.068*** (1.125)	-4.173** (1.835)
<i>Dep. Variable: real business fixed investment</i>			
$\Delta \hat{s}_t$	-10.056*** (3.785)	-10.218** (5.267)	-0.470 (3.085)
Cumulative effect (pct.)	-2.705*** (1.018)	-5.368*** (2.050)	-5.560* (3.333)
<i>Dep. Variable: unemployment rate</i>			
$\Delta \hat{s}_t$	2.457*** (0.668)	2.371*** (0.798)	1.512* (0.863)
Cumulative effect (pps.)	0.661*** (0.180)	1.277*** (0.373)	1.686*** (0.599)

Source: Credit market sentiment and the business cycle (Lopez-Salido, Stein and Zakrajsek, 2015)

Explanation of the results in figures 11 and 12

The results are impressive. Starting at the lower panel of Figure 11, which looks at the first stage of the exercise, the authors predict the change in the corporate spread (BAA less Treasuries) by regressing this against the fraction of high yield-rated bonds (given by HYS) in year $t-2$ and the level of the corporate spread at the end of year $t-2$. This robust result denotes that the two variables are good at predicting future movements in credit spreads.

The authors use this predicted change in credit spreads (denoted ΔSt) to estimate its impact on economic activity (the business cycle) in the top panel. The results confirm that changes in credit spreads have a significant impact on economic activity. Since these results include two significant economic contractions (the great depression and the financial crisis) the authors repeat the exercise using two subsamples covering the periods 1952-2013 and 1952-2007. The exclusion of the two key events from the full sample results in only a modest reduction in the strong estimated coefficients. In other words, the removal of those two key episodes does not detract from the overall result.

The exercise is also extended to gauge whether the impact of credit spreads widening on economic activity is felt beyond the current year. Figure 12 shows the results of introducing a “shock” to ΔSt (Stein’s proxy for credit market sentiment) and seeing how GDP (per capita), the unemployment rate and business investment respond. In his example, a 30 basis point increase in ΔSt results in cumulative growth impact of -4.2 percentage points over two years. For the unemployment rate, a similar change to the credit market sentiment results in an increase of 1.7 percentage points over the period t to $t+2$ while the impact on business investment is a cumulative contraction of 5.6 percentage points. It needs to be emphasised that the results here show how real variables react over years t through $t+2$ in response to changes in sentiment in $t-2$.

Credit pricing is backward-looking

- Using a sample of 30 advanced countries, data 1960-2012: a one standard deviation increase in growth of household credit to GDP in a 3-year interval leads typically to a 2.1% decline in real GDP over the following 3 years
- Exuberant credit market sentiment (tight spreads and high burden of low quality issuance) is associated with an immediate drop in net debt issuance and a decline in economic activity 2 and 3 years later (Lopez-Salido, Stein & Zakrajsek, 2017)

Credit makes the world go round (EP results, Feb 2016)

- Quantum, spreads and yield curve changes

Estimated regression model

$$\begin{aligned} \Delta_4 \ln \text{WGDP}(t) = & 2.467 + 0.247 \Delta_4 \ln \text{WGDP}(t-1) \\ & (4.1) \quad (2.9) \\ & +0.103 \Delta_4 \ln \text{WRPRDEBT}(t) \\ & (2.5) \\ & +0.00169 \Delta_4 (\text{WBONDYLD} - \text{WSHORTRATE}) (t) \\ & (2.1) \\ & +0.883 \ln \text{WGDP}(t-2) - 0.356 \ln \text{WGDP}(t-3) \\ & (4.8) \quad (2.1) \\ & -0.732 \ln \text{WGDP}(t-4) + 0.0868 \ln \text{WRPRDEBT}(t-4) \\ & (8.6) \quad (5.0) \\ & -0.0328 \ln \text{WRPUBDEBT}(t-3) + 0.0586 \ln \text{WRPUBDEBT}(t-4) \\ & (1.3) \quad (2.1) \\ & -0.00188 \text{PCSPREADS}(t) \\ & (3.8) \end{aligned}$$

Adjusted R-squared: 0.973

Standard error: 0.26%

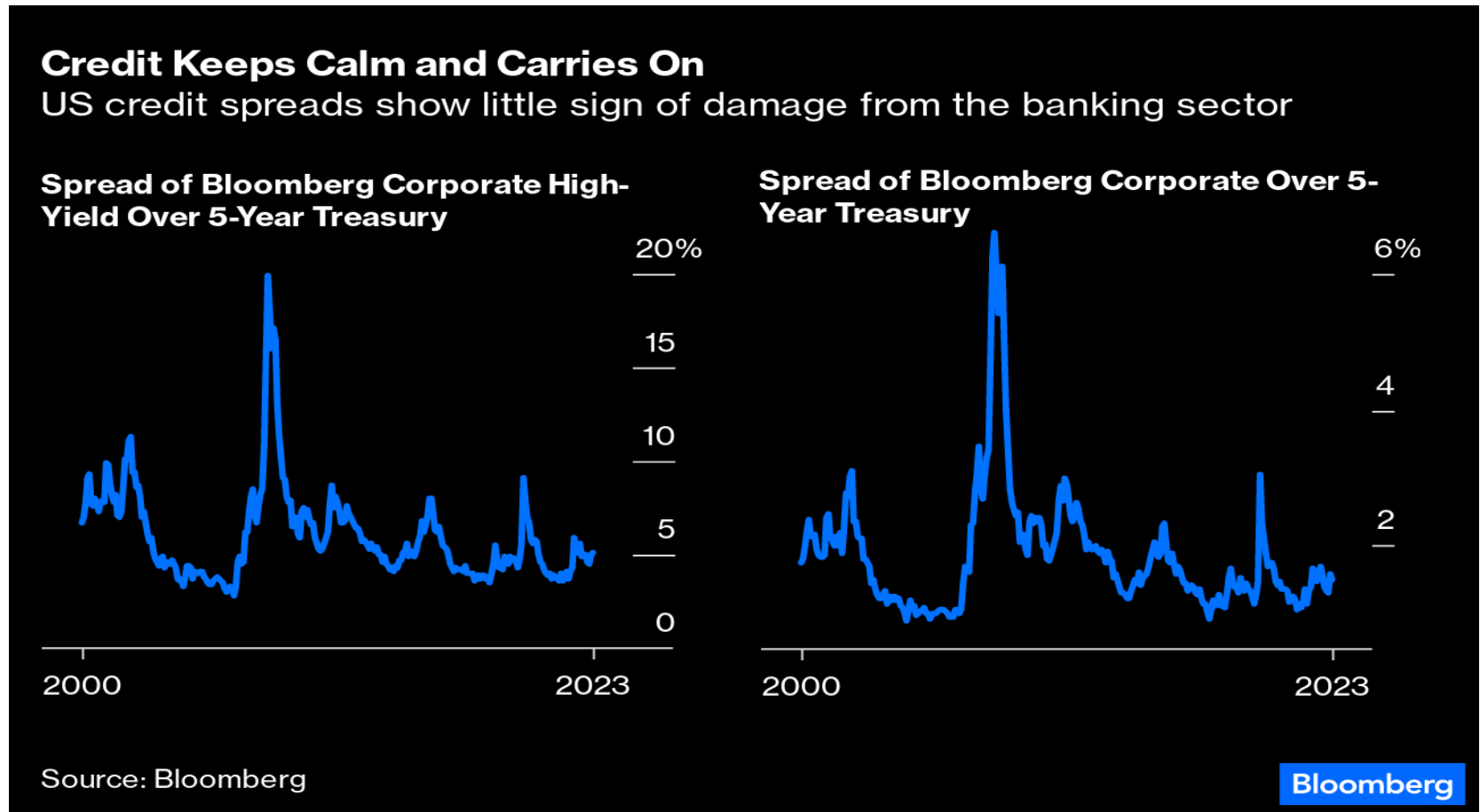
1997q2 to 2015q3

Implied steady state:

$$\ln \text{WGDP} = 0.422 \ln \text{WRPRDEBT} + 0.125 \ln \text{WRPUBDEBT} - 0.0091 \text{PCSPREADS}$$

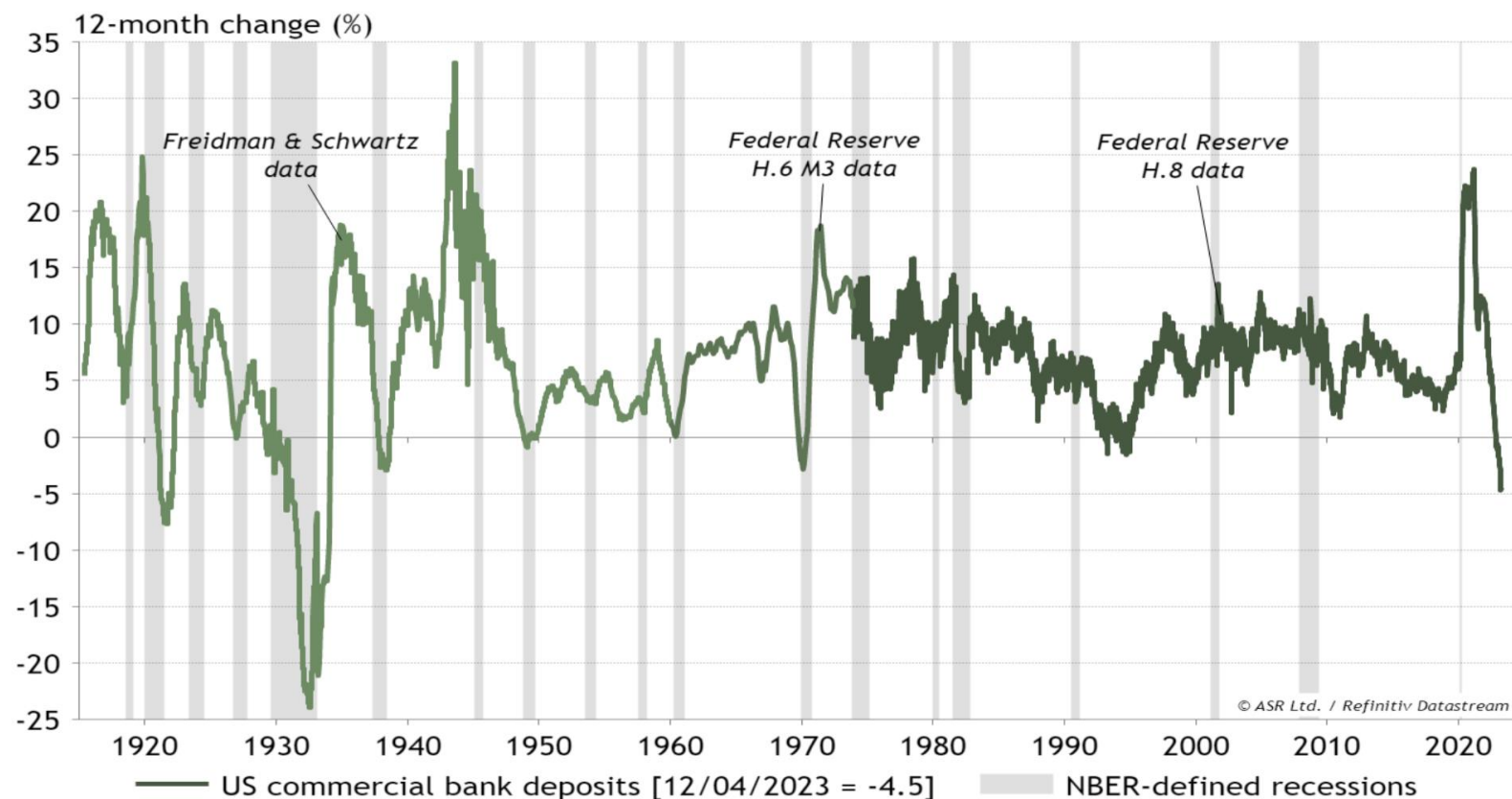
Credit pricing has not adjusted to banking tremors

- Oblivious to the profits threat



The draining away of US bank deposits is remarkable

- Indicative of further financial instability



Corporate insolvency is grabbing headlines again

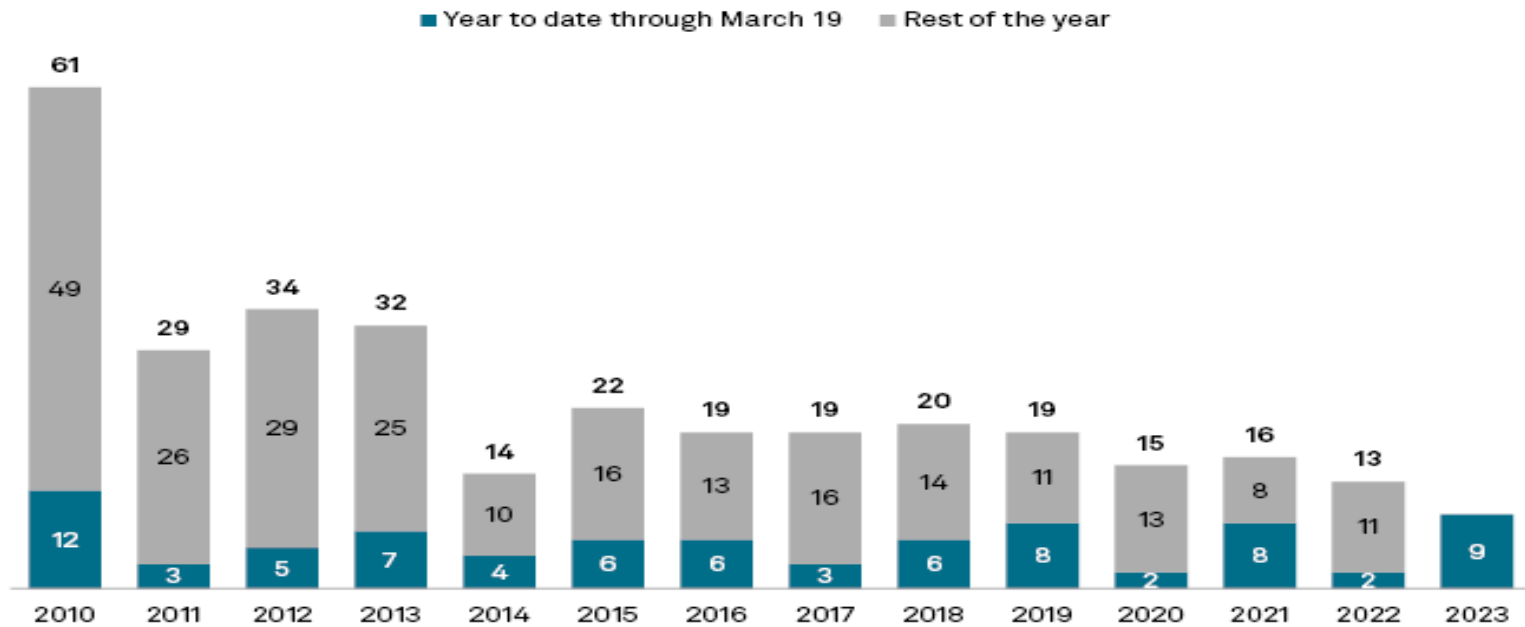
- World's largest bankruptcies in past 12 months

		Liabilities (US\$bn)
AIG Financial Products Corp.	US	37.3
Garuda Indonesia	Indonesia	13.4
Modern Land Ltd	China	10.7
Cineworld Group	UK	10.4
Talen Energy Supply	US	10.0
FTX Trading Ltd	US	10.0
Reverse Mortgage Investment Trust Inc.	US	10.0
OI S.A.	Brazil	9.8
Endo International	Ireland	9.5
Americanas S.A.	Brazil	6.4
MIE Holdings Corporation	China	5.8
Celsius Network	US	5.5
Avata Inc.	US	5.1
Altera Infrastructure	UK	3.7
Revlon	US	3.7
Silicon Valley Bank Financial Group	US	3.7

Source: Global Finance

Early days, but US bankruptcies are making a comeback

US financial bankruptcy filings by year



Data compiled March 20, 2023.

Includes S&P Global Market Intelligence-covered US financial companies that announced a bankruptcy between Jan. 1, 2010, and March 19, 2023.

Excludes four bankruptcy filings — With Purpose Inc. in January 2023, Aliera Healthcare Inc. in December 2021, Future Income Payments LLC in January 2019 and BH Investment & Management Inc. in January 2023 — due to each company filing a second time within a short period.

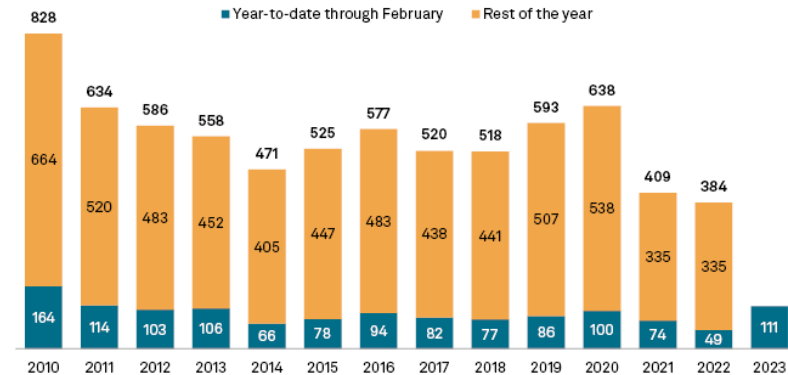
S&P Global Market Intelligence's bankruptcy coverage is limited to public companies or private companies with public debt where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$2 million or private companies where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$10 million.

Source: S&P Global Market Intelligence.

© 2023 S&P Global.

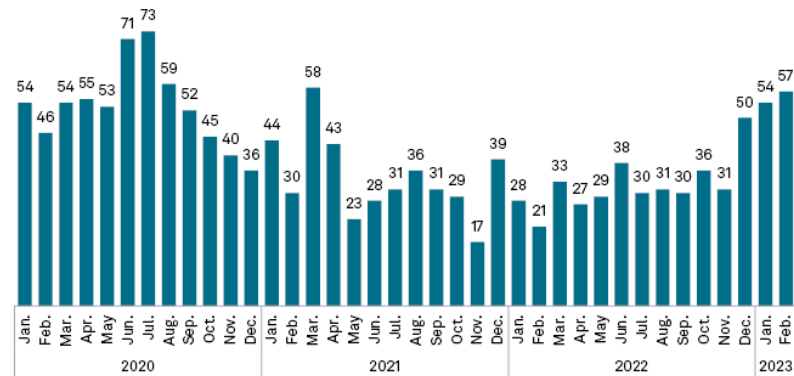
Composition of US bankruptcy filings

US bankruptcy filings by year



Includes S&P Global Market Intelligence-covered U.S. companies that announced a bankruptcy between Jan. 1, 2010, and Feb. 28, 2023.

US bankruptcy filings by month

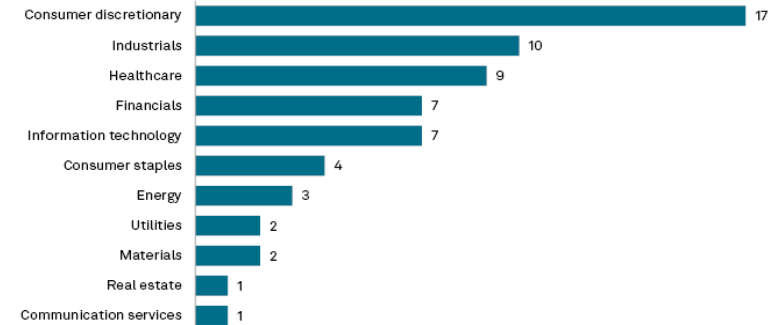


Data compiled Mar. 2, 2023. Includes S&P Global Market Intelligence-covered U.S. companies that announced a bankruptcy between Jan. 1, 2020, and Feb. 28, 2023.

S&P Global Market Intelligence's bankruptcy coverage is limited to public companies or private companies with public debt where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$2 million, or private companies where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$10 million. Source: S&P Global Market Intelligence.

© 2023 S&P Global.

2023 bankruptcy filings by primary sector



Data compiled Mar. 2, 2023.

Includes S&P Global Market Intelligence-covered U.S. companies that announced a bankruptcy between Jan. 1, 2023, and Feb. 28, 2023.

S&P Global Market Intelligence's bankruptcy coverage is limited to public companies or private companies with public debt where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$2 million, or private companies where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to \$10 million. Primary sector not available for 48 bankruptcies filed in 2023.

Source: S&P Global Market Intelligence.

© 2023 S&P Global.

New Bankruptcy Filings

All Chapters, March 2022 vs 2023

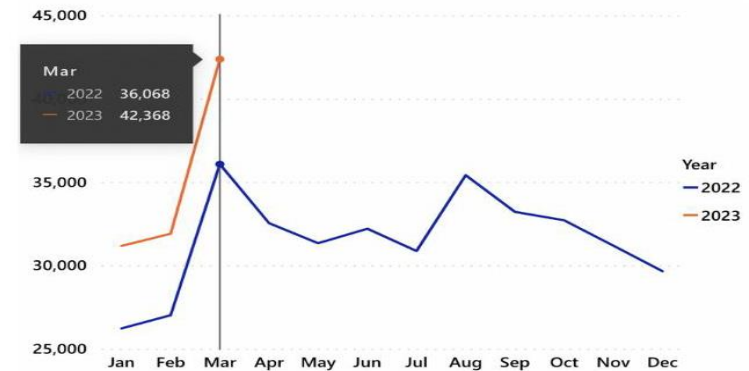
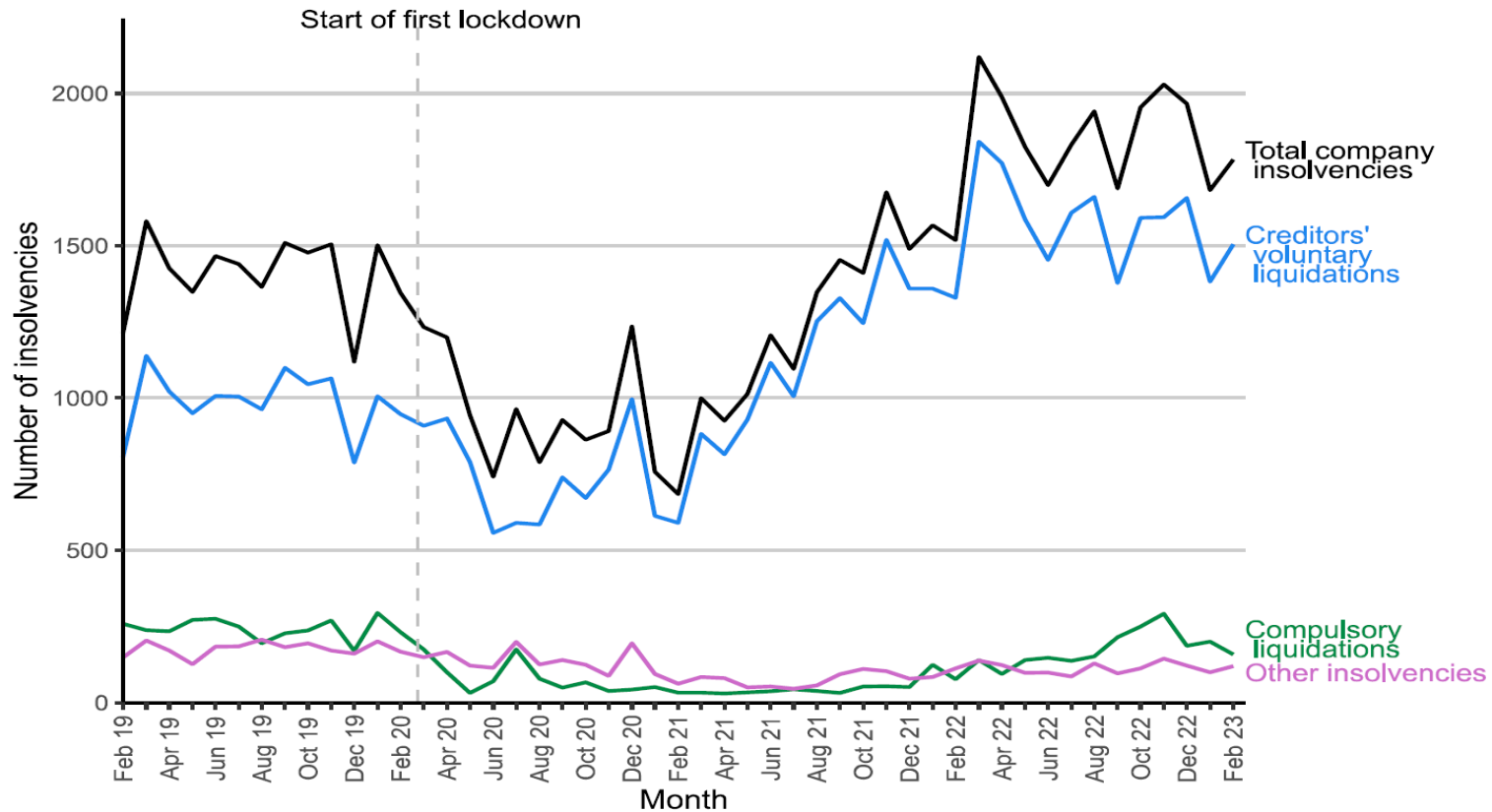


Image provided by [bankruptcy analytics](https://www.bankruptcyanalytics.com)

Lockdowns may only have postponed business closures

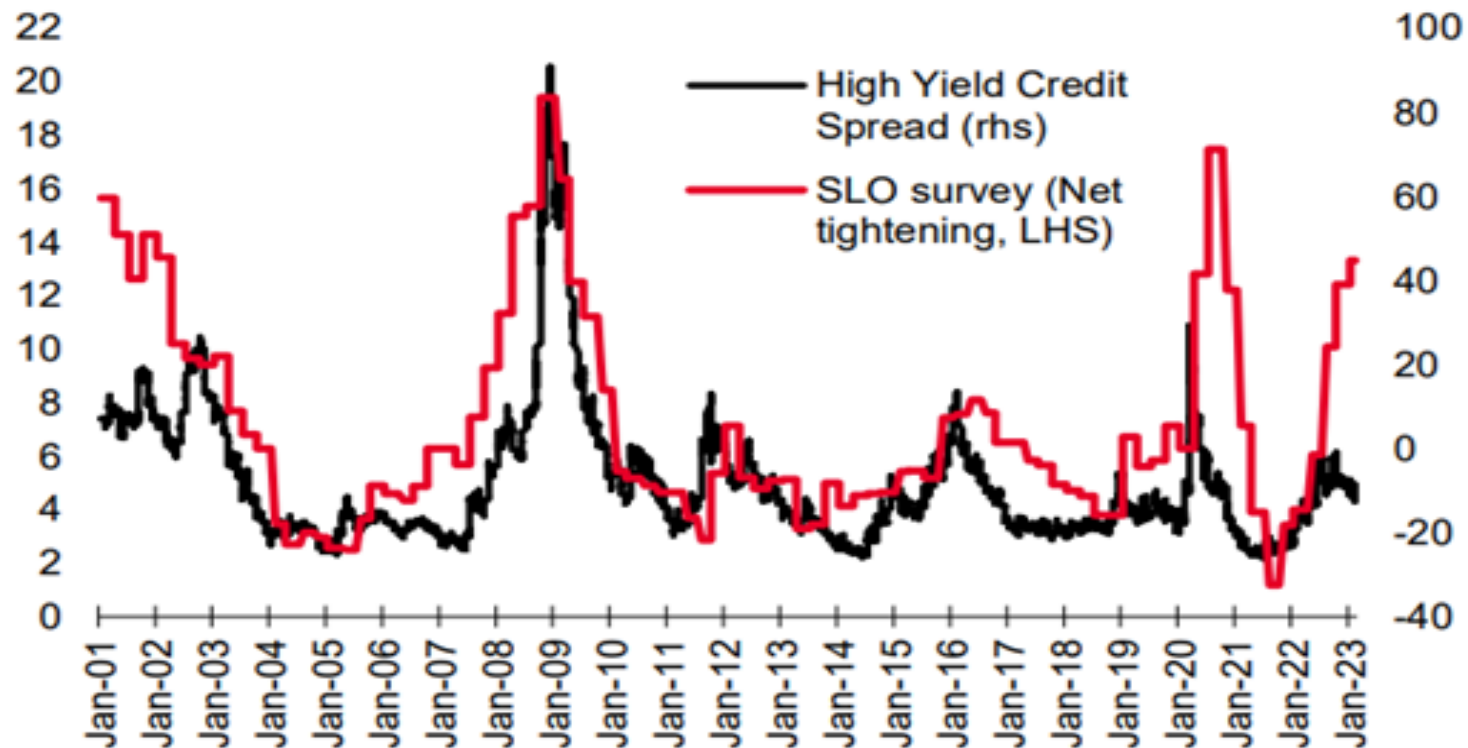
- UK registered company insolvencies



Tight HY spreads are inconsistent with February SLOOS

- New survey due this month

Senior Loan Office survey suggests tightening credit conditions; high yield credit spreads disagree



Source: SG Cross Asset Research/Quant Research, Factset

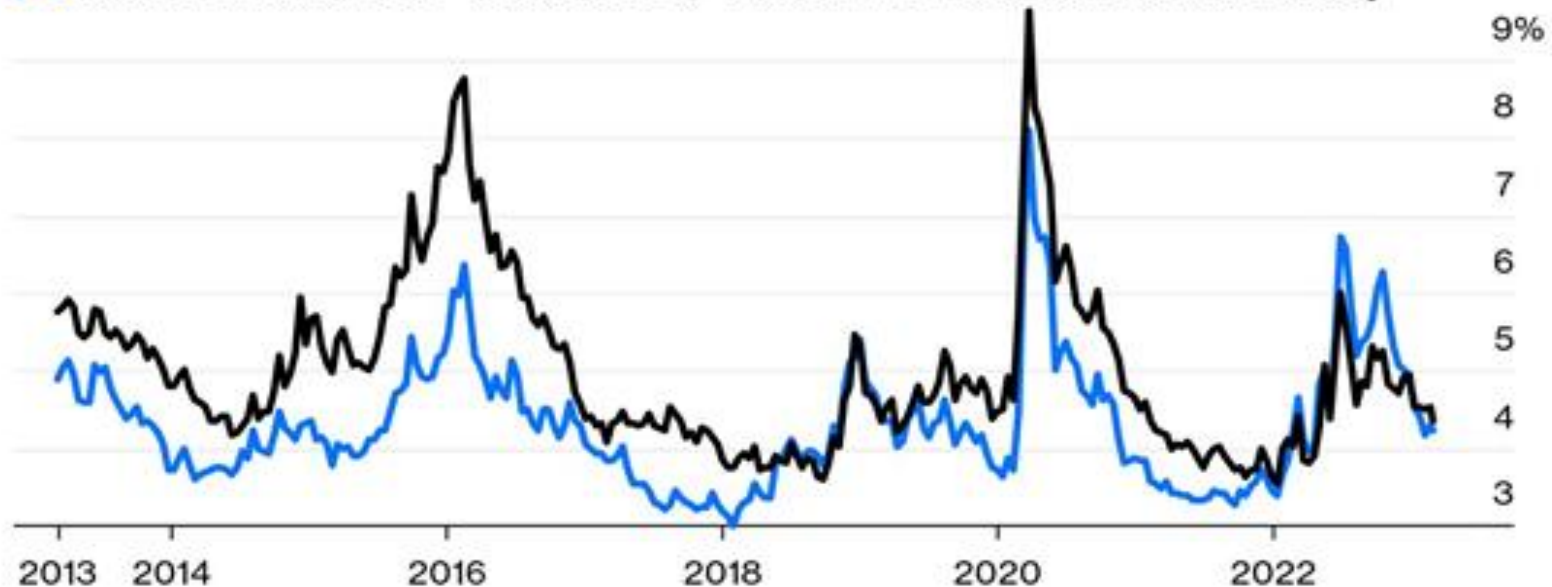
Euro area HY spreads have tracked US HY spreads

- These rallies presume a Fed 'put' option

High-Yield Spreads Show Little or No Stress

In the US and euro zone, spreads have dropped sharply since last summer

BBG EU HY Index Yield - 5-Year Bund BBG US HY Index Yield - 5-Year Treasury



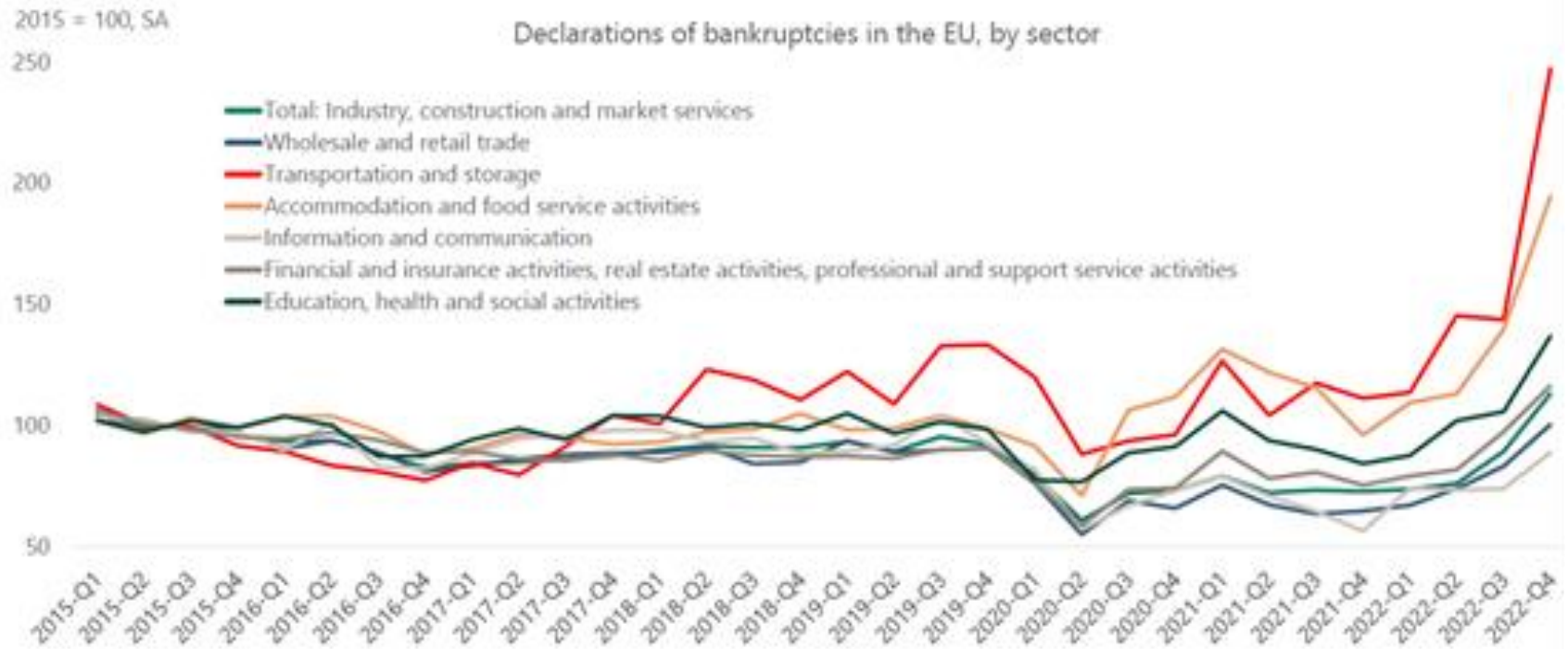
Source: Bloomberg

BloombergOpinion

But bankruptcies are taking off in Europe also

- Possibly a delayed reaction post-pandemic

Bankruptcies rising in Europe



Source: Eurostat, Apollo Chief Economist

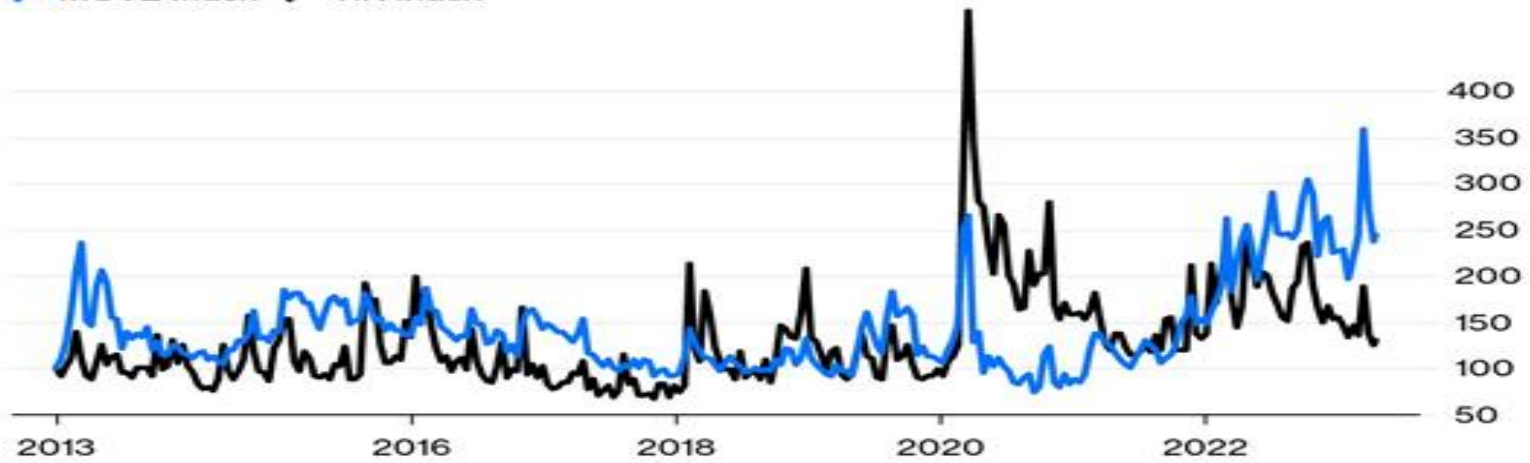
Back to the 'Powell put', if it exists

- The options sellers are out in force

Volatile Divergence

While equities are calm, bonds aren't - and that shouldn't happen

MOVE Index VIX Index



Source: Bloomberg

Bloomberg



The noose is tightening on economic growth

- Central banks can't afford to capitulate to market pressures for lower rates ... yet
- Budget deficits are spiralling out of control on both sides of the Atlantic, keeping funding issues alive
- Benchmark bond yields have been too quick to rally: beware of snapbacks
- Watch corporate profits and insolvencies very closely for trigger events in credit sentiment
- Expect credit to underperform government bonds for up to 3 years



Economic Perspectives

Peter Warburton

Peter@EconomicPerspectives.co.uk

+44 1525 792144

www.EconomicPerspectives.co.uk