VIRTUAL EVENT

Fixed Income Analysts Society & Bloomberg Intelligence Credit Research
March 29, 2023

Bloomberg
Intelligence   **BI**

Bloomberg Intelligence

500+
data contributors

135+
industries

2,000+
companies

15yrs
avg. analyst experience

Bloomberg Intelligence (BI) research delivers an independent perspective providing interactive data and investment research on companies, industries and global markets. Our team of 400 research professionals help our clients make informed decisions in the rapidly moving investment landscape.
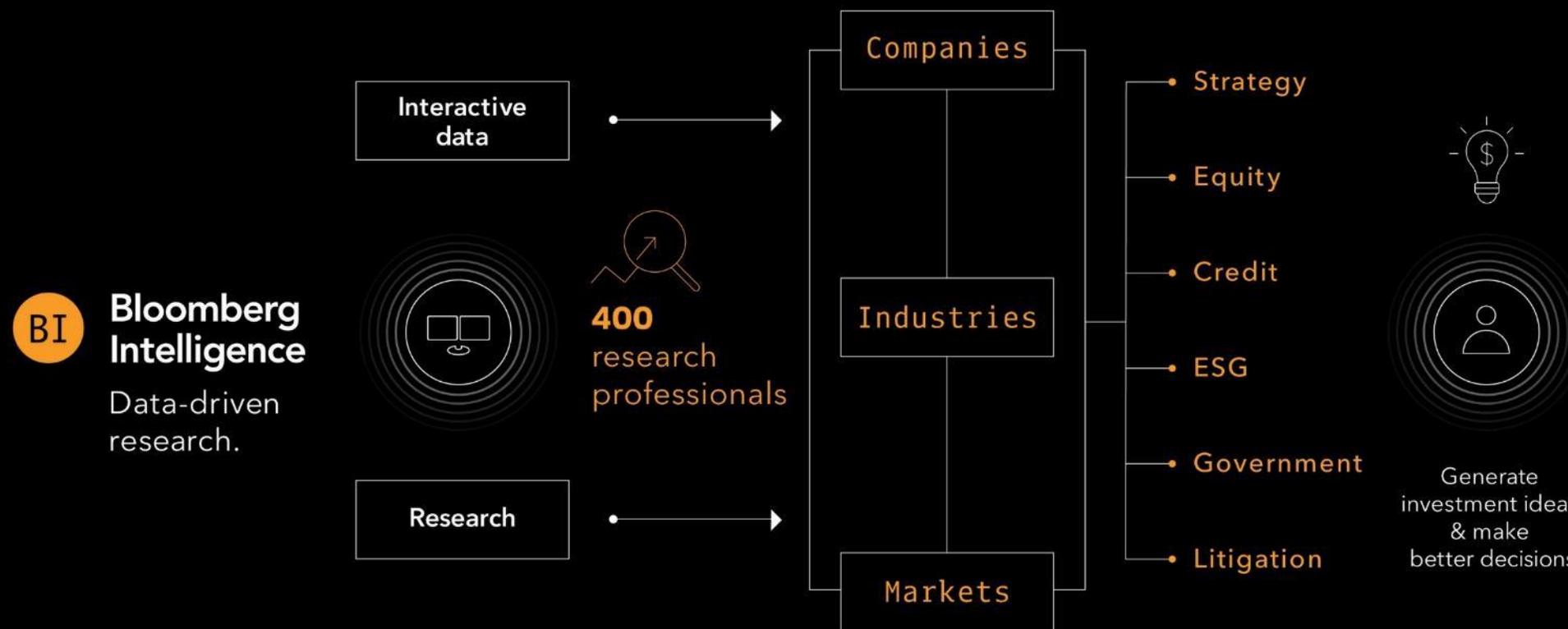
Agenda

➢ **Introduction to BI Credit Research**

➢ **Team Member Presentations:**

    1. Banking Turmoil and Ripple Effects Across Financials

    2. Health and Outlook of the Global Consumer with the impact on Consumer & Industrial Sectors

    3. Energy Discussion and important capital allocation decisions that need to be made

    4. Relative value update on the TMT sector, including how to optimize Bloomberg functionality and data

➢ **Q&A**

Banking Turmoil and Ripple Effects Across Financials

Arnold Kakuda

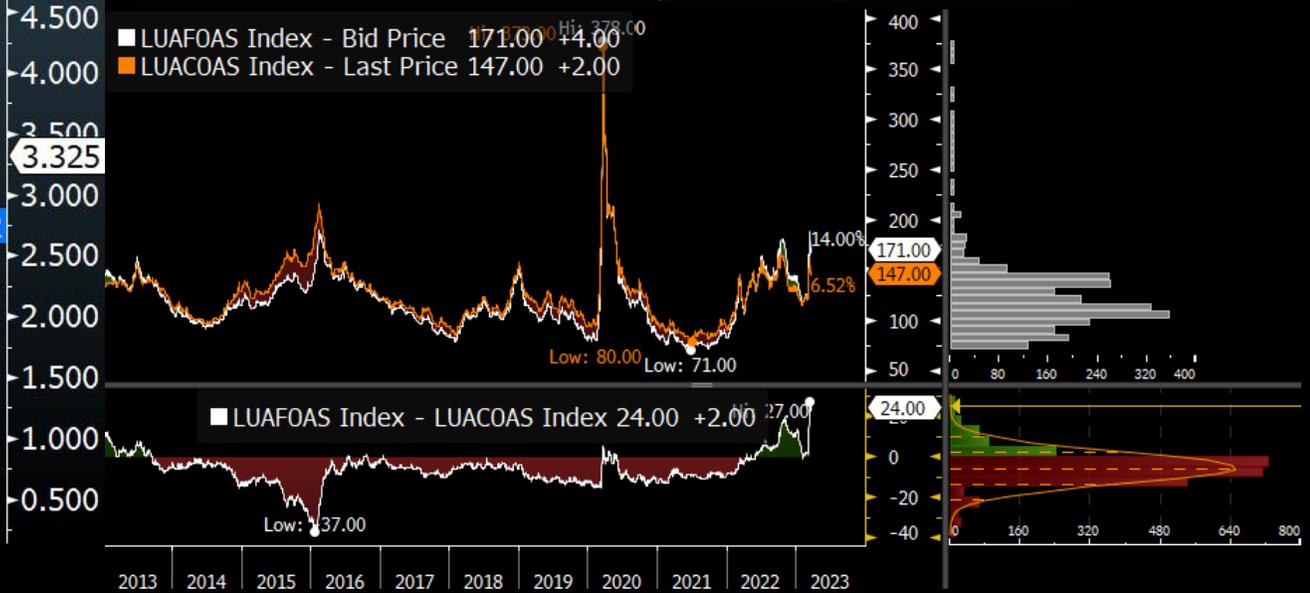US Banks Credit Analyst

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Financial Bonds (Excluding AT1/Preferreds) Over 20 Bps Wide Vs. Overall IG Index

Bank Stocks, Bond Spreads, S&P 500, 10Y UST

Fins Spreads Used to Be Tight to Corporate Index

Source: Bloomberg

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March Total Returns Positive While Excess Returns Negative

Big U.S. Banks March 23: Total & Excess Returns

(LUACTRUU) Bloomberg ▼	vs	Default (None) ▼	by	L1-4\Ticker ▼	in	USD ▼
Version Port	Unit Basis Points	Model	Excess Return (▼	Curve	Sovereign	

Name	Avg % Wgt	Tot Rtn ``	Excess Rtn
▣ (LUACTRUU) Bloomberg US...		261.63	
▾ Holdings	100.00	261.65 23	-116.15
▾ Corporate	100.00	261.65 23	-116.15
▸ Industrial	57.93	323.86 12	-71.00
▾ Financial Institutions	33.67	148.76 81	-191.71
▾ Banking	23.79	136.66 67	-187.74
▾ Banking	23.79	136.66 67	-187.74
▸ BAC	2.72	234.70 08	-117.31
▸ JPM	2.47	268.48 07	-79.05
▸ MS	1.83	235.41 05	-102.42
▸ C	1.67	216.08 05	-128.30
▸ GS	1.64	260.21 05	-85.67
▸ WFC	1.55	216.68 05	-143.25

Biggest US Banks Provide a Shelter From Regional Worries

Bank Index: 1 Month Stock Change

Negative Price Return	Members (22)	Return
	KBW BANK INDEX	-29.95%
	Best Performing	
	1) JPMORGAN CHASE & CO	-11.94%
	2) NORTHERN TRUST CORP	-13.38%
	3) CITIGROUP INC	-16.00%
	4) BANK OF NEW YORK MELLON CORP	-17.36%
	5) STATE STREET CORP	-19.79%
	6) CAPITAL ONE FINANCIAL CORP	-20.16%
	7) BANK OF AMERICA CORP	-22.62%
	8) WELLS FARGO & CO	-23.21%
	9) PNC FINANCIAL SERVICES GROUP	-23.91%
	10) REGIONS FINANCIAL CORP	-24.69%
	Worst Performing	
	11) M & T BANK CORP	-28.75%
	12) EAST WEST BANCORP INC	-30.30%
	13) HUNTINGTON BANCSHARES INC	-30.48%
	14) FIFTH THIRD BANCORP	-31.70%
	15) TRUIST FINANCIAL CORP	-32.09%
	16) KEYCORP	-40.58%
	17) COMERICA INC	-44.20%
	18) ZIONS BANCORP NA	-47.24%
	19) WESTERN ALLIANCE BANCORP	-58.55%
	20) FIRST REPUBLIC BANK/CA	-90.09%

USD Bank Bonds: 1 Month G-Spread Change

Change of G-Spread over the past 1 month

Groups: Ticker
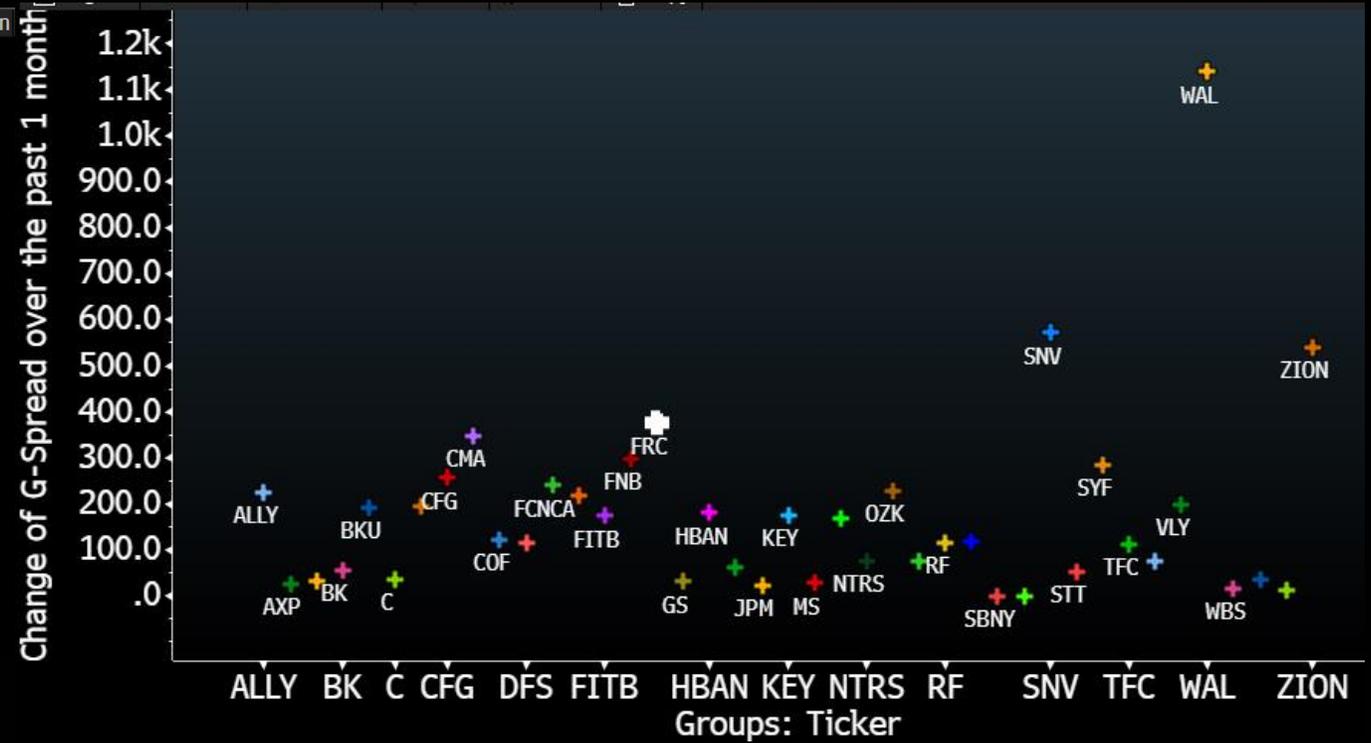
Select Regional Banks Faced Uninsured Deposit Outflow on Unrealized Loss Concerns; BTFP a One Year Band Aid

Unrealized Losses vs. Uninsured Deposits (% Total)
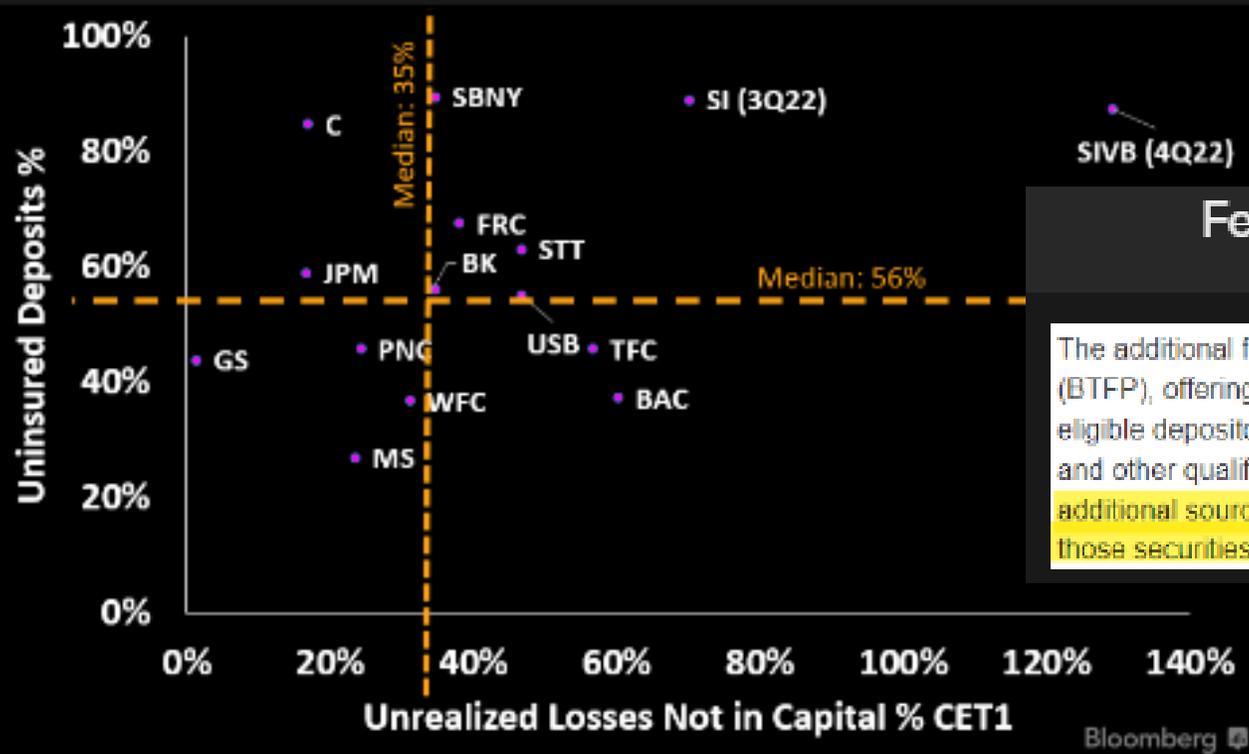
Federal Reserve Additional Funding Program

The additional funding will be made available through the creation of a new Bank Term Funding Program (BTFP), offering loans of up to one year in length to banks, savings associations, credit unions, and other eligible depository institutions pledging U.S. Treasuries, agency debt and mortgage-backed securities, and other qualifying assets as collateral. These assets will be valued at par. The BTFP will be an additional source of liquidity against high-quality securities, eliminating an institution's need to quickly sell those securities in times of stress.

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Potential Cure for Regional Bank Jitters May Be More Deposit Guarantees, Regulation (TLAC, AOCI), Lower Rates

Fed's 2019 Tailoring Rules for US Banks

	Category I	Category II	Category III
	U.S. GSIBs	≥ $700b Total Assets or ≥ $75b in Cross-Jurisdictional Activity	≥ $250b Total Assets or
Capital	**TLAC/Long-term debt**		
	Stress Testing • Annual company-run stress testing • Annual supervisory stress testing • Annual capital plan submission	**Stress Testing** • Annual company-run stress testing • Annual supervisory stress testing • Annual capital plan submission	
	Risk-Based Capital • GSIB surcharge • Advanced approaches • Countercyclical Buffer • No opt-out of AOCI capital impact	**Risk-Based Capital** • Advanced approaches • Countercyclical Buffer • No opt-out of AOCI capital impact	**Risk-Based Capital** • Countercyclical Buffer • Allow opt-out of AOCI capital impact
	Leverage capital • Enhanced supplementary leverage ratio	**Leverage capital** • Supplementary leverage Ratio	**Leverage capital** • Supplementary leverage ratio

2008 Temporary Liquidity Guarantee Program

Temporary Liquidity Guarantee Program

On October 14, 2008, as part of a coordinated response by the U.S. government to the disruption in the financial system and the collapse of credit markets, the FDIC implemented the Temporary Liquidity Guarantee Program (TLGP). By calming market fears and encouraging lending, the TLGP helped bring stability to financial markets and the banking industry during the crisis period. The TLGP consisted of two components: (1) the Transaction Account Guarantee Program (TAGP), an FDIC guarantee in full of noninterest-bearing transaction accounts; and (2) the Debt Guarantee Program (DGP), an FDIC guarantee of certain newly issued senior unsecured debt.

Source: FDIC

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Biggest US Banks Have Healthy Excess CET1, Which Include Unrealized Losses From AFS Securities, Unlike Regionals

G-SIB Capital Requirements

	JPMorgan	Citigroup	Bank of America	Morgan Stanley	Goldman Sachs	Wells Fargo
Base CET1 Requirement	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Prior: Capital Conservation Buffer	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Fed's G-SIB Buffer: 1Q23	4.0%	3.5%	2.5%	3.0%	3.0%	1.5%
1Q23 Advanced CET1 Hurdle	11.0%	10.5%	9.5%	10.0%	10.0%	8.5%
4Q21 CET1 Requirement	11.2%	10.5%	9.5%	13.2%	13.4%	9.1%
Base CET1 Requirement	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Stress Capital Buffer: 4Q22	4.0%	4.0%	3.4%	5.8%	6.3%	3.2%
Fed's G-SIB Buffer: 1Q23	4.0%	3.5%	2.5%	3.0%	3.0%	1.5%
1Q23: Fed's CET1 Requirement	12.5%	12.0%	10.4%	13.3%	13.8%	9.2%
CET1 Req. Increase / Decrease	1.3%	1.5%	0.9%	0.1%	0.4%	0.1%
3Q22 CET1	12.5%	12.3%	11.0%	14.8%	14.3%	10.3%
4Q22 CET1	13.2%	13.0%	11.2%	15.3%	15.1%	10.6%
Surplus/Deficit From Potential CET1 Hurdle	0.7%	1.0%	0.8%	2.0%	1.3%	1.4%

Source: Bloomberg Intelligence

Capital and Leverage Ratio Model: QoQ Difference

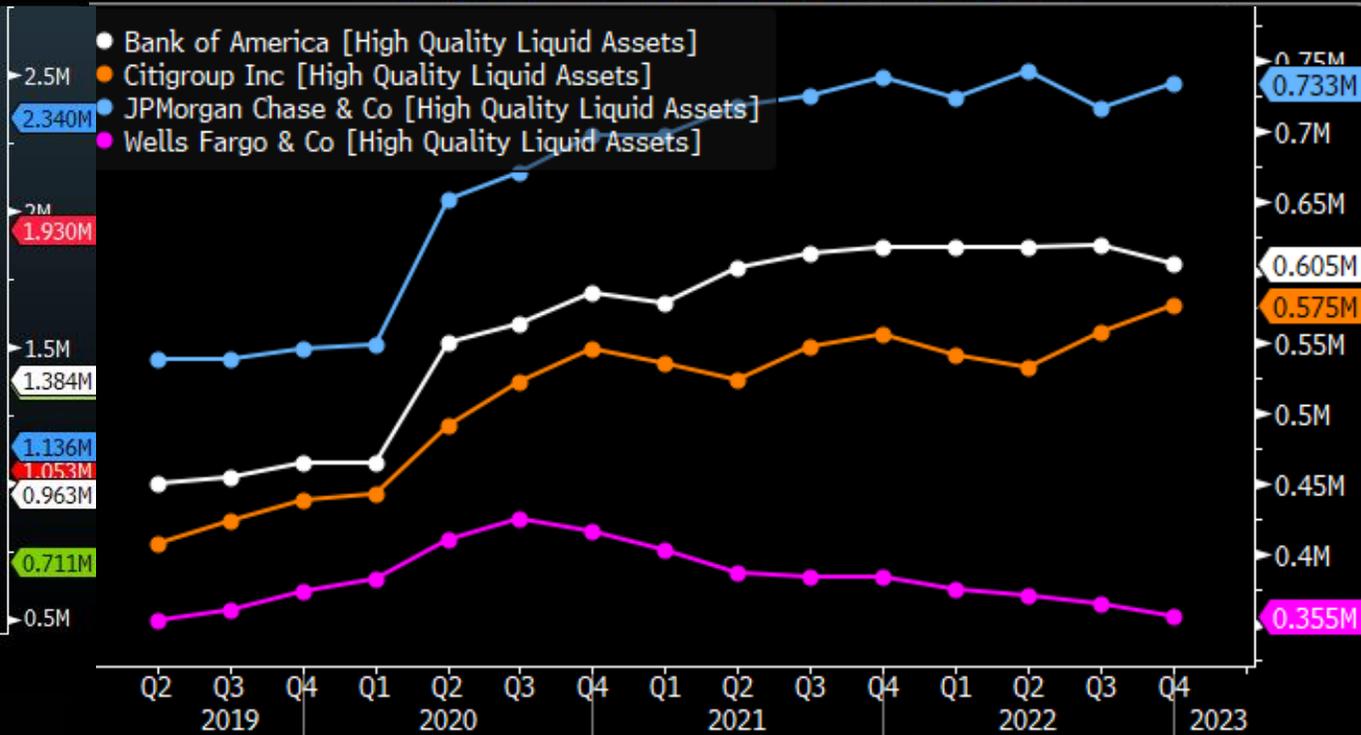|	4Q22: ProForma		3Q22: ProForma		Difference	
	Excess CET1	CET1	Excess CET1	CET1	Excess CET1	CET1
Bank of America	13	11.2%	9	11.0%	4	0.2%
Wells Fargo	18	10.6%	14	10.3%	3	0.3%
JPMorgan	12	13.2%	0	12.5%	12	0.7%
Morgan Stanley	9	15.3%	7	14.8%	2	0.5%
Citigroup	12	13.0%	3	12.3%	8	0.7%
Goldman Sachs	8	15.0%	4	14.3%	4	0.7%
BNY Mellon	4	11.2%	2	10.0%	2	1.2%
State Street	6	13.6%	6	13.2%	0	0.4%
Total	82		46		36	

Source: Bloomberg Intelligence

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Biggest US Banks' Liquidity Remains Healthy as Balance Sheets "Normalize"

Big U.S. Banks: Loan, Deposit Growth Trends

WFC US Equity - Total Deposits 1.384M	BAC US Equity - Total Deposits 1.930M
WFC US Equity - Total Loans 0.963M	BAC US Equity - Total Loans 1.053M
JPM US Equity - Total Deposits 2.340M	C US Equity - Total Deposits 1.366M
JPM US Equity - Total Loans 1.136M	C US Equity - Total Loans 0.711M
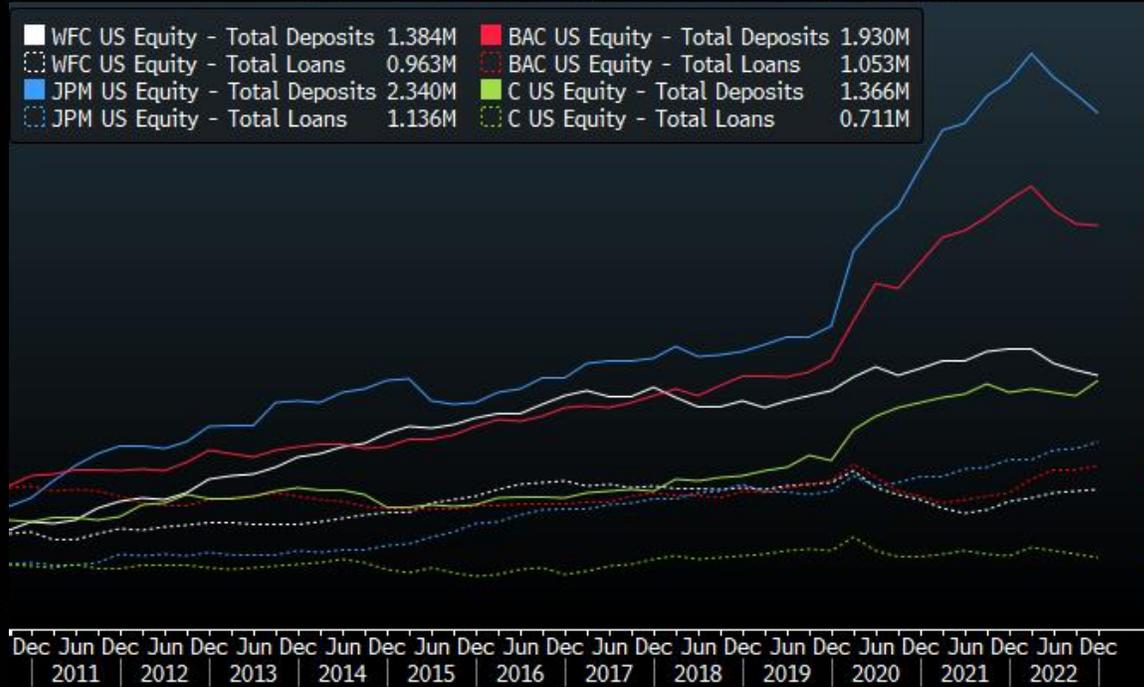
Big U.S. Banks' High-Quality Liquid Assets

- Bank of America [High Quality Liquid Assets]
- Citigroup Inc [High Quality Liquid Assets]
- JPMorgan Chase & Co [High Quality Liquid Assets]
- Wells Fargo & Co [High Quality Liquid Assets]

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For Alternative Asset Managers – A Double-edged Sword

■ Year-end 2022 Dry Powder ($Bn)

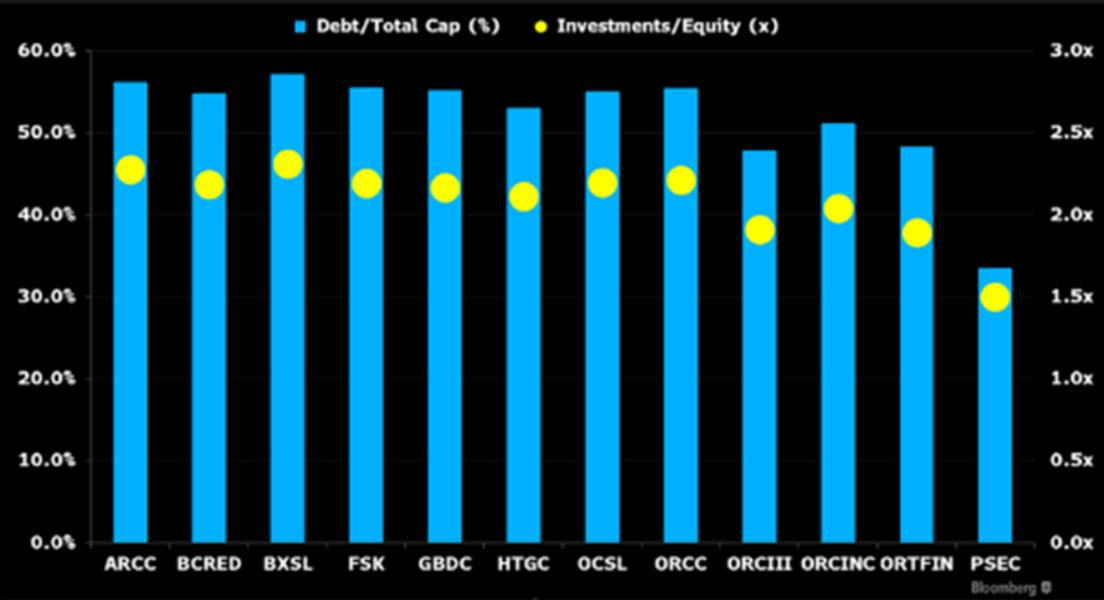| Company	Value
Ares	$85
Apollo	$50
Blackstone	$187
Blue Owl	$12
Brookfield	$87
Carlyle	$72
KKR	$108

Bloomberg
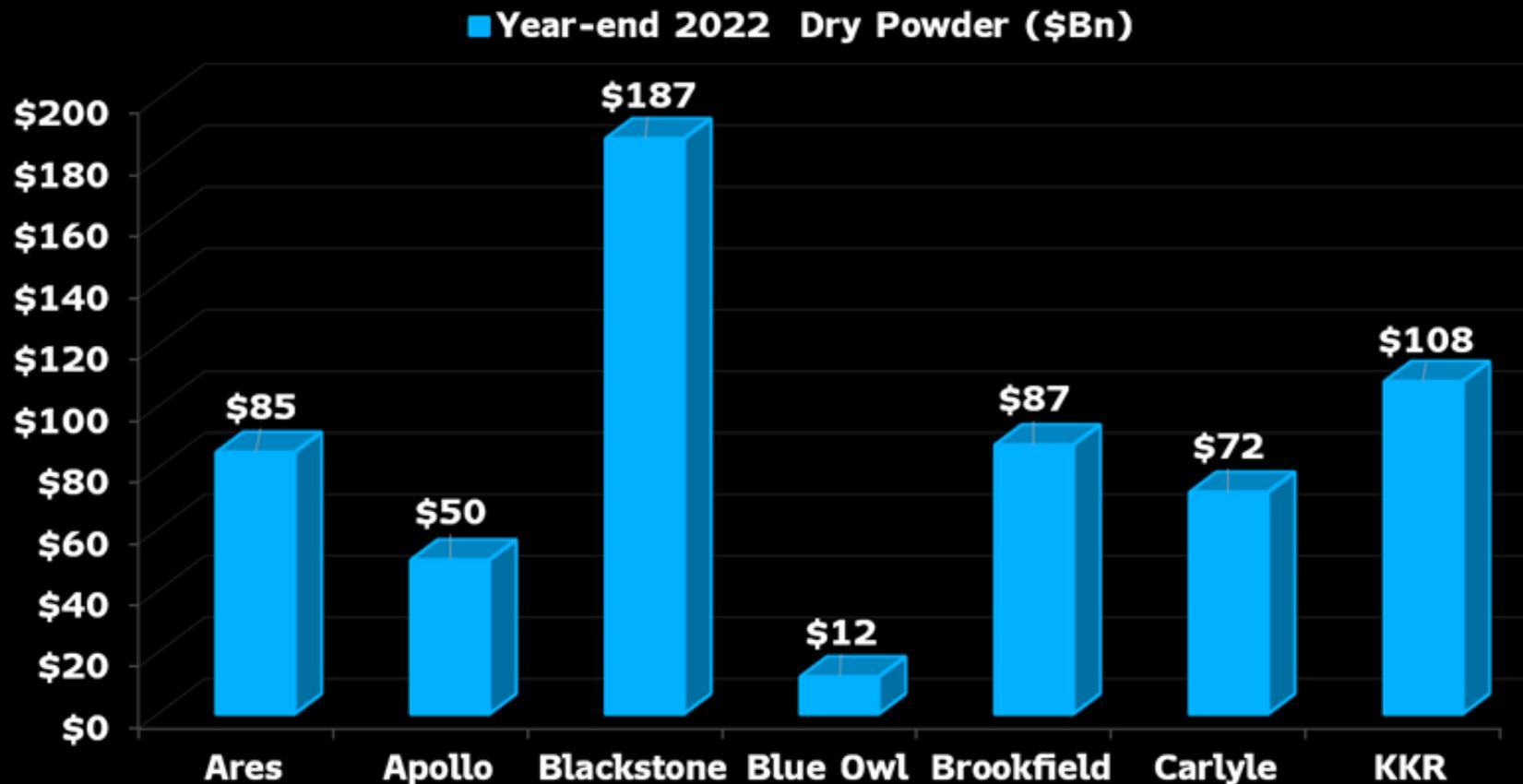
Bloomberg Intelligence

Alternative Asset Managers Trade Like BBBs, Or Worse
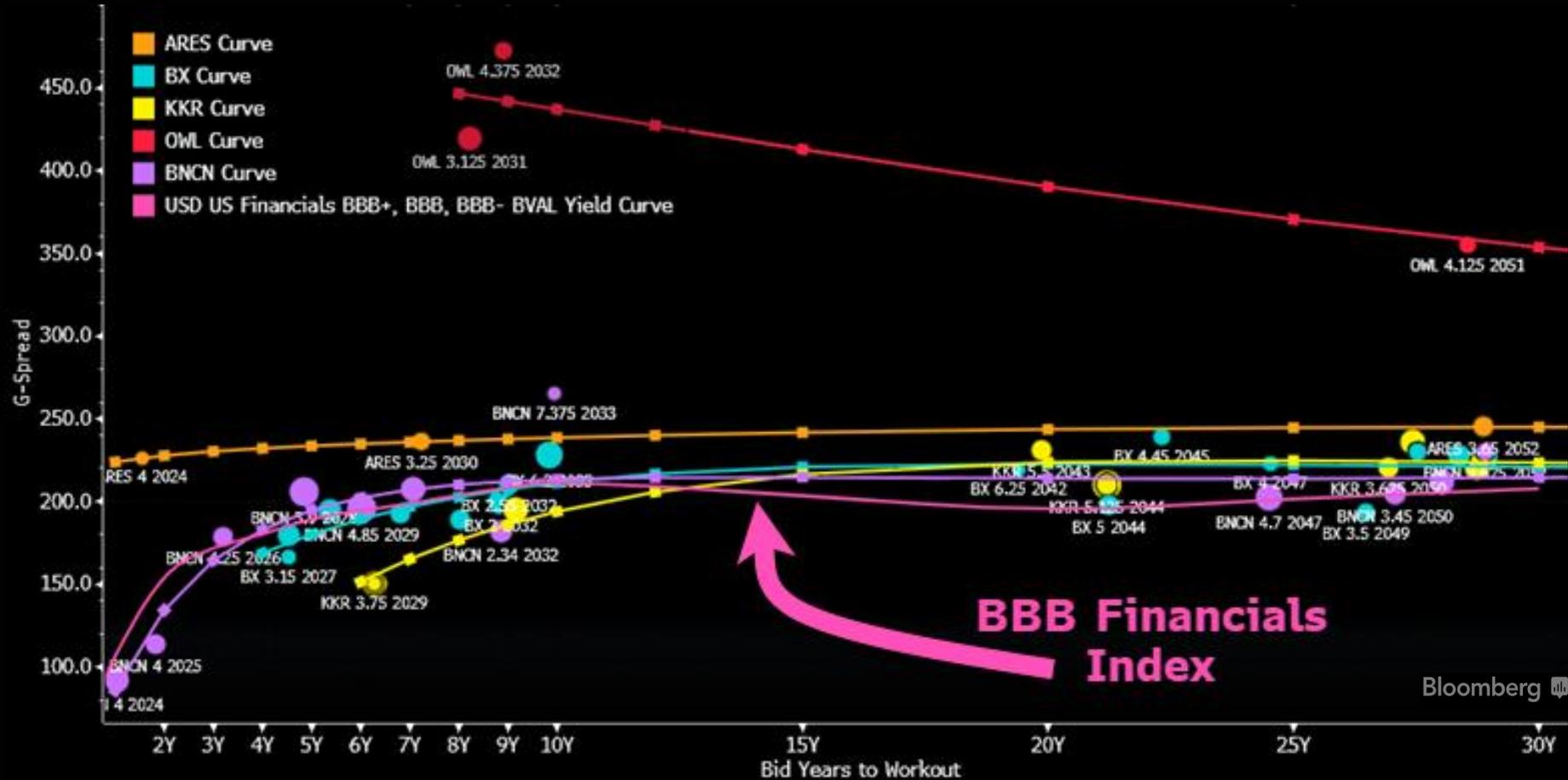
Dark Age or Golden Age for Private Credit?


Robust Operating Leverage Measures

Legend: ■ Debt/Total Cap (%) ● Investments/Equity (x)

Categories: ARCC, BCRED, BXSL, FSK, GBDC, HTGC, OCSL, ORCC, ORCIII, ORCINC, ORTFIN, PSEC

Source: Bloomberg Intelligence

Investment Holdings at Fair Value ($Mln)

Legend: ■ ARCC ■ BCRED ■ BXSL ■ FSK ■ GBDC ■ HTGC ■ OCSL ■ ORCC ■ ORCIII ■ ORCINC ■ ORTFIN ■ PSEC

X-axis: 1Q18, 3Q18, 1Q19, 3Q19, 1Q20, 3Q20, 1Q21, 3Q21, 1Q22, 3Q22

Source: Bloomberg Intelligence
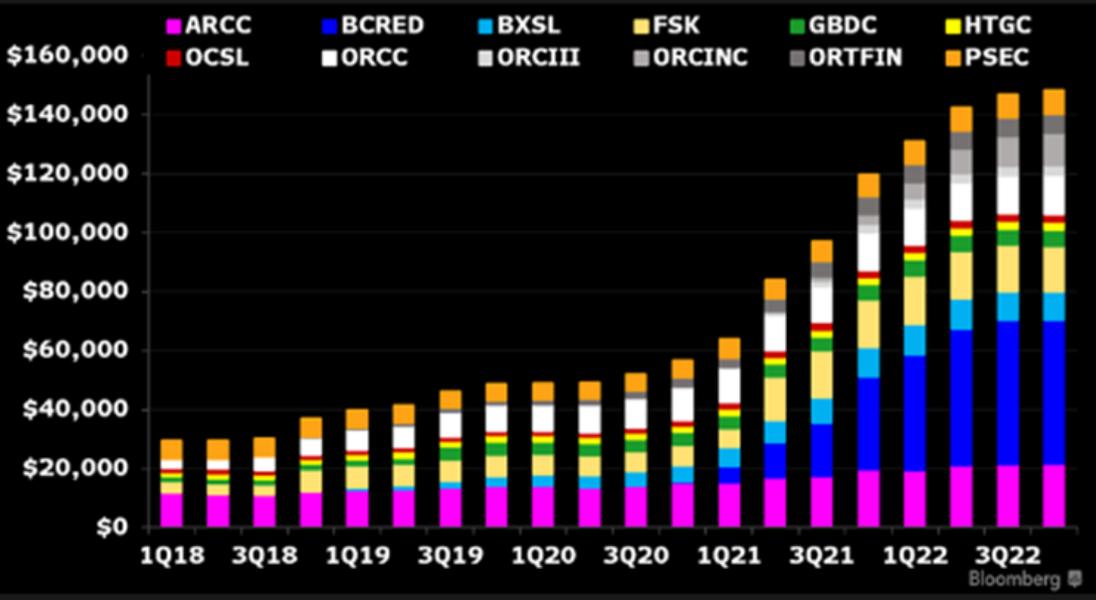
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Dark Age or Golden Age for Private Credit?

Nonaccrual Exposures as of 2021 and 2022 (%)
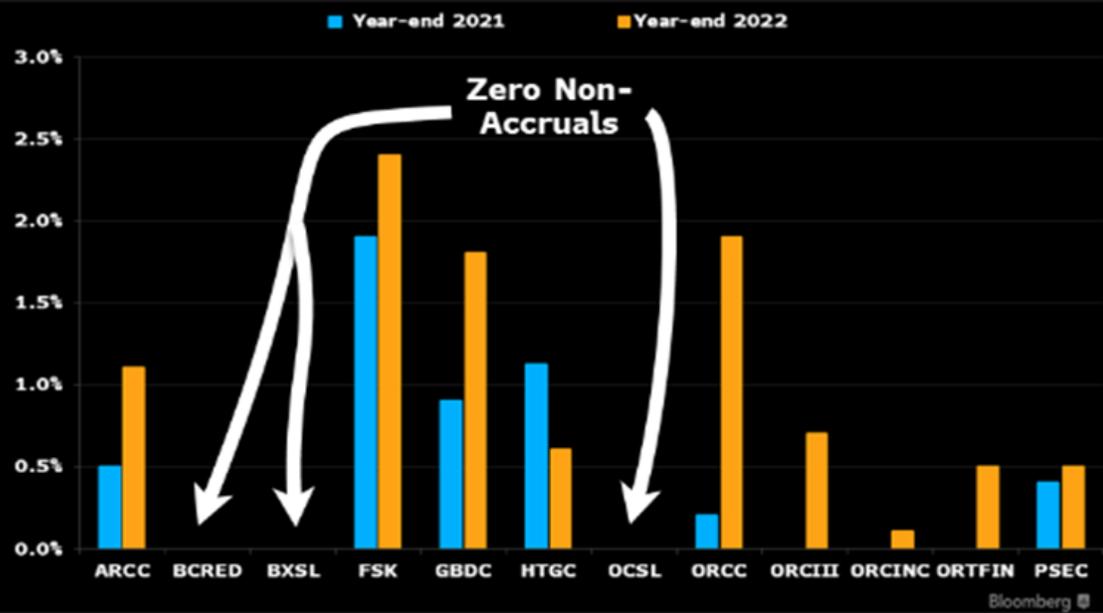
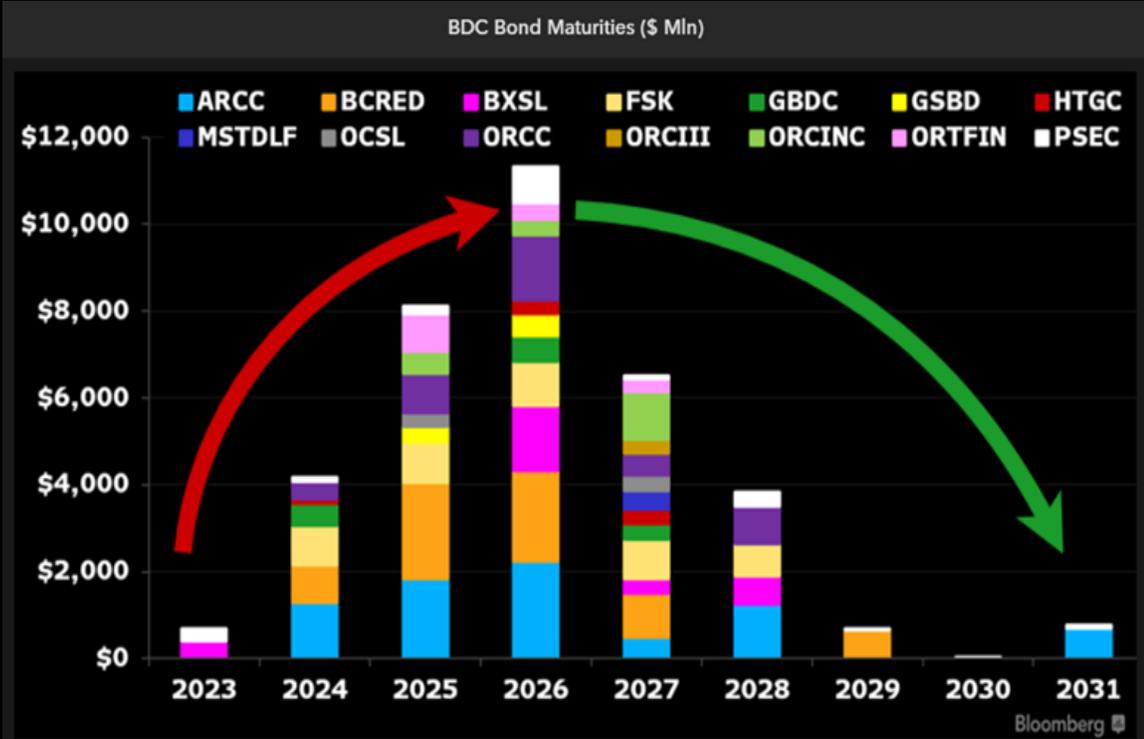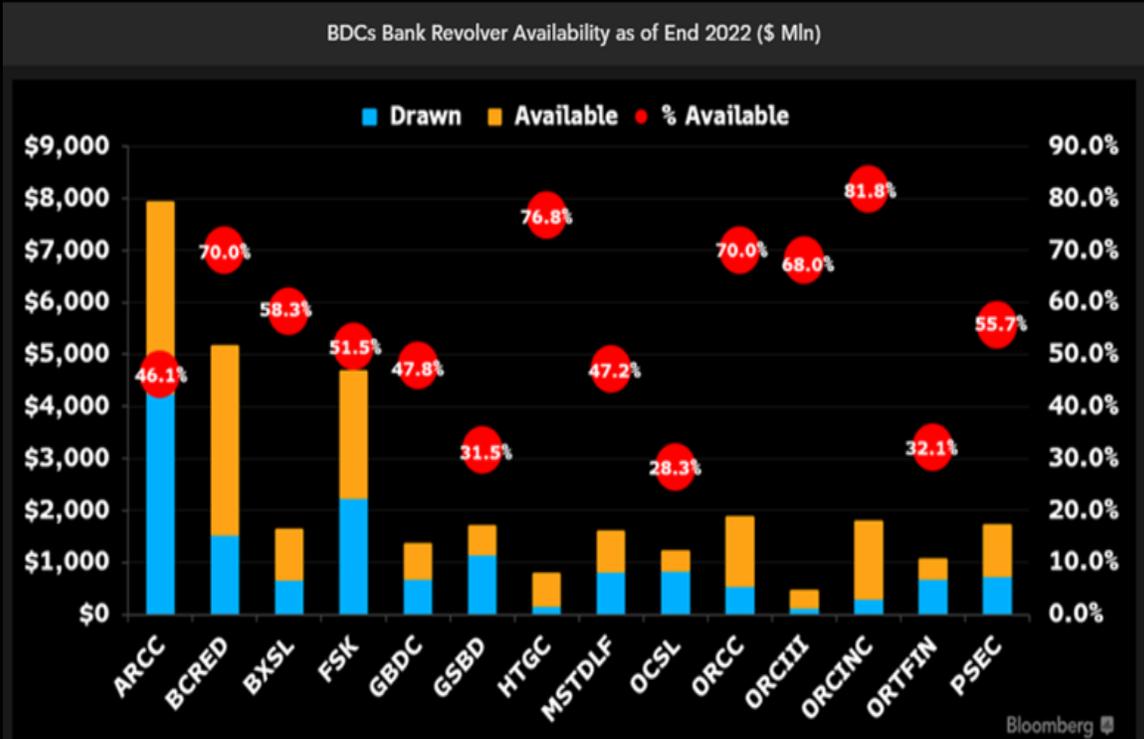BDC Holdings by Investment Structure
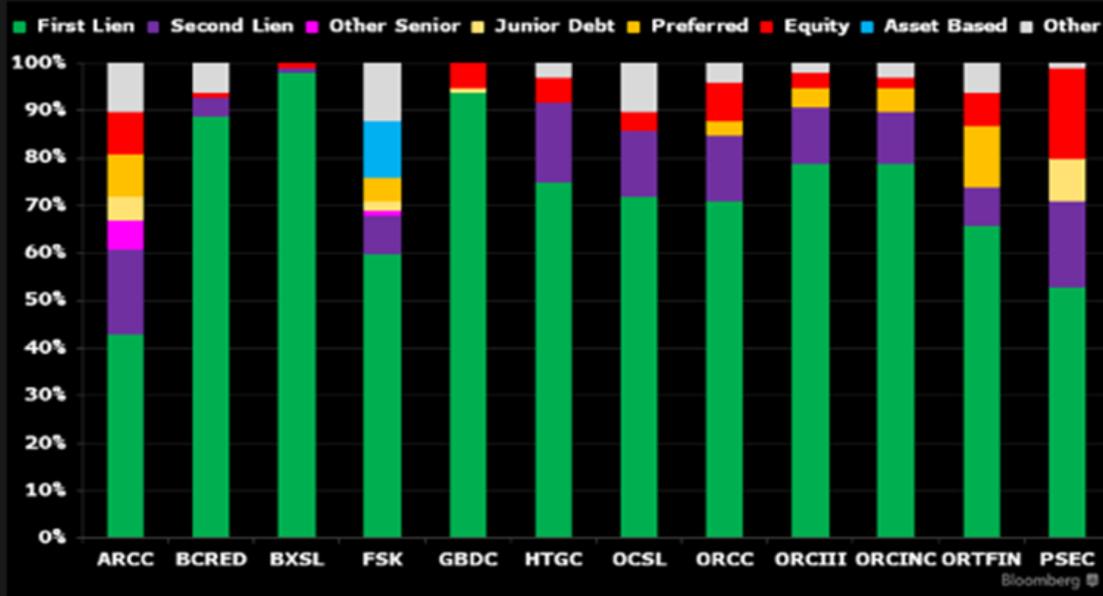
Source: Bloomberg Intelligence

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Dark Age or Golden Age for Private Credit?

BDC Bond Maturities ($ Mln)

BDCs Bank Revolver Availability as of End 2022 ($ Mln)

Source: Bloomberg Intelligence

Dark Age or Golden Age for Private Credit?

Banking Crisis All at Once, But Quiet on the Card Front, for Now

Credit-Card Delinquency Rates (Monthly)

- American Express
- Discover Financial
- Capital One Financial
- Synchrony

Source: Bloomberg Intelligence

Credit-Card Net Charge-Off Rates (Monthly)

- Discover Financial
- American Express
- Capital One Financial
- Synchrony (Adj.)

Source: Bloomberg Intelligence

Bloomberg Intelligence
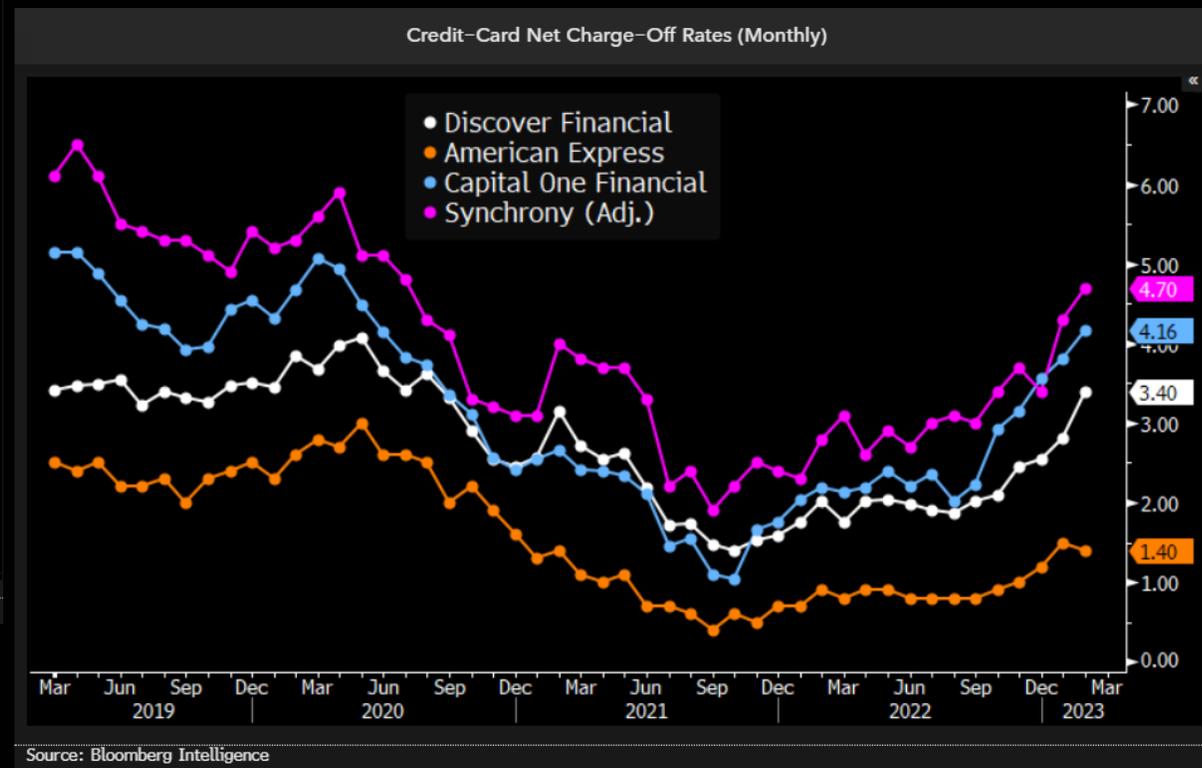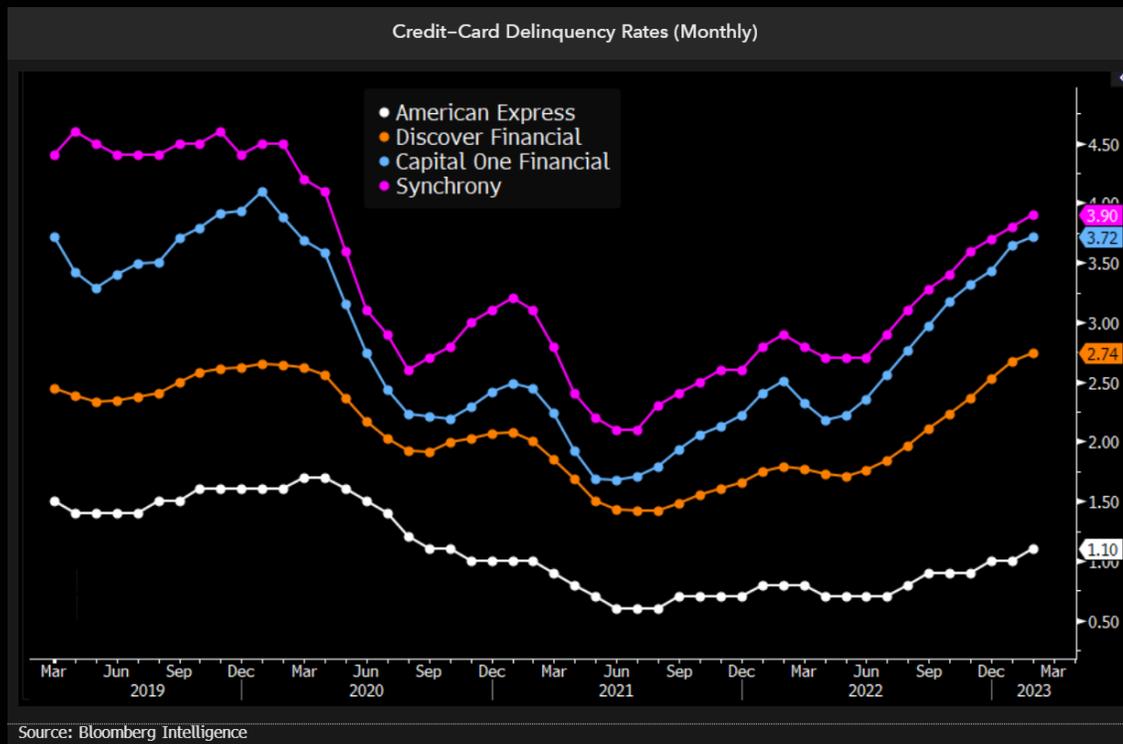
Card Issuers' Deposits Are Less Stable, But Flight Risk Is Low

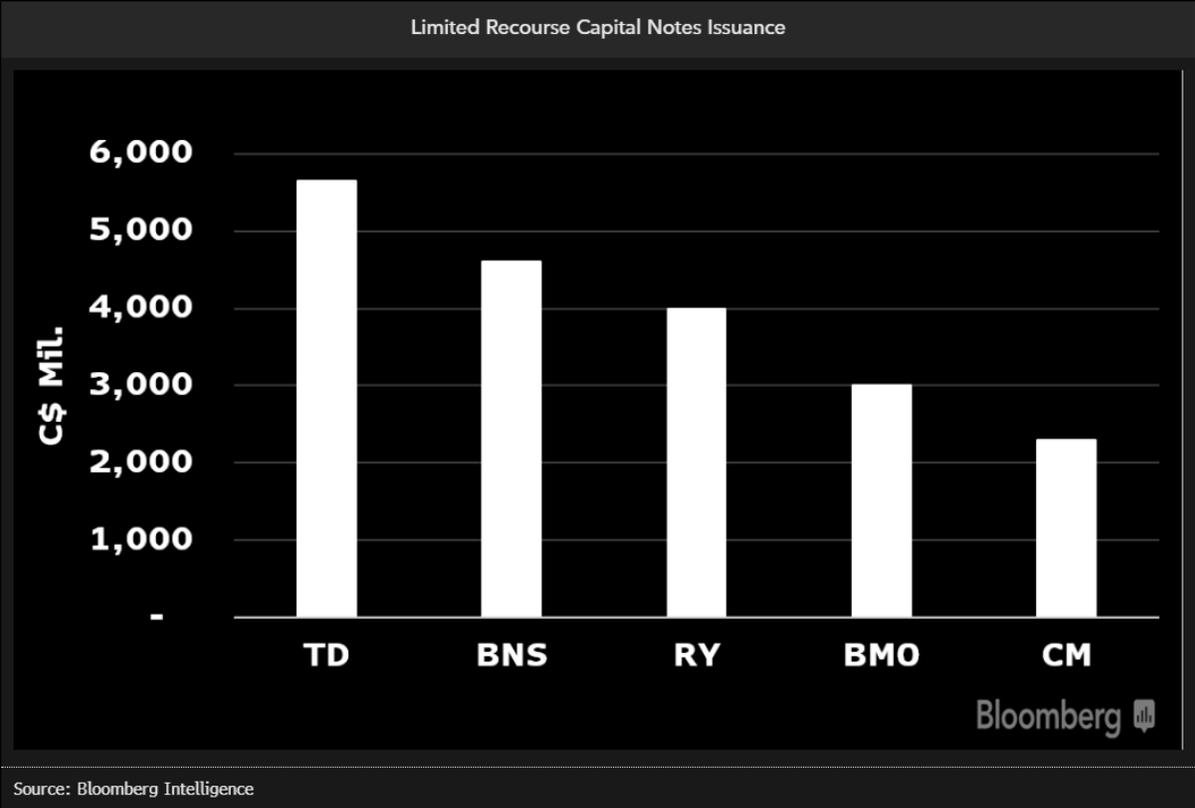Source: Company Filings, Bloomberg Intelligence
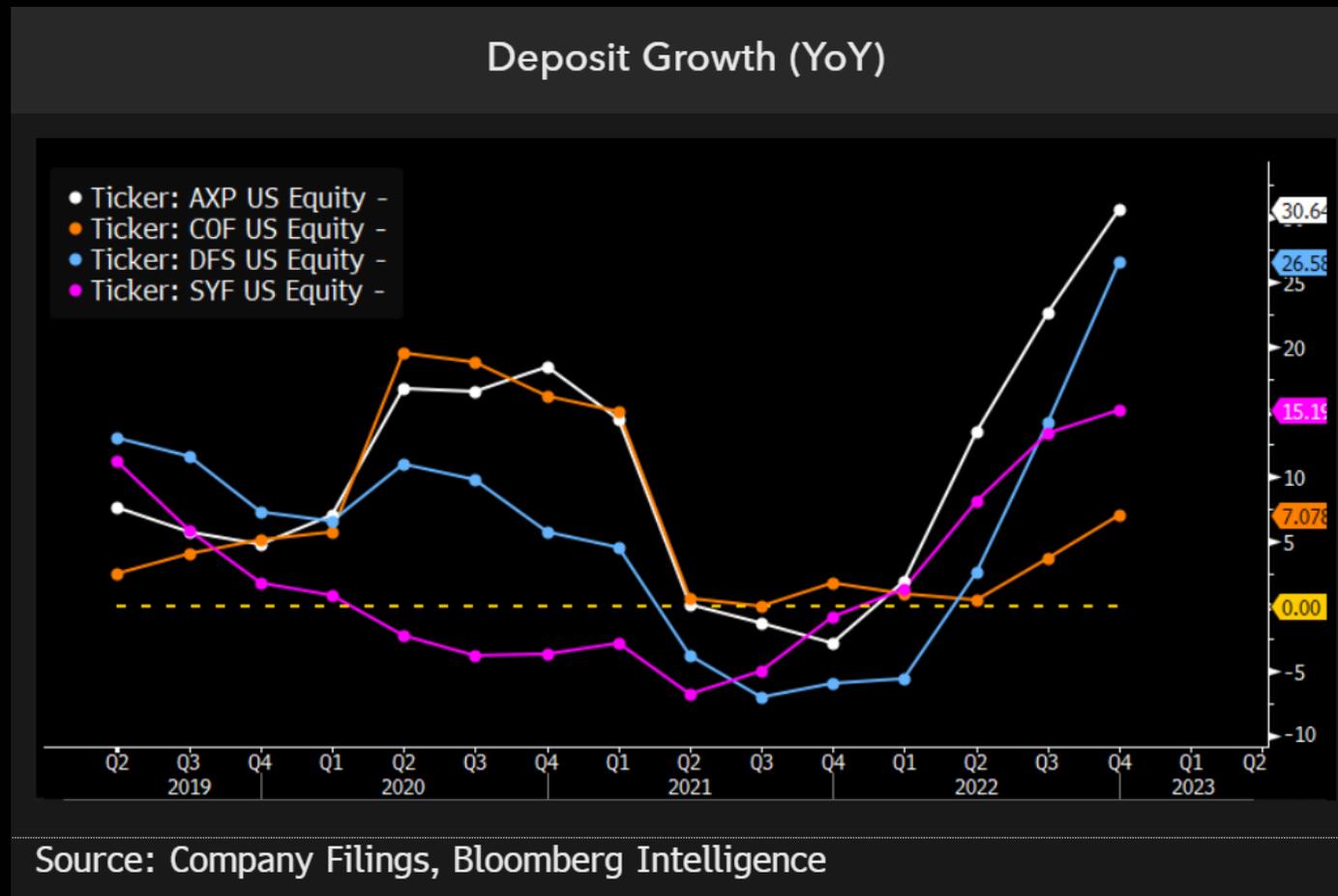
Canadian Banks' AT1 Wouldn't Meet Same Fate as at Credit Suisse

Statement

"Canada's capital regime preserves creditor hierarchy which helps to maintain financial stability. If a deposit-taking bank reaches the point of non-viability, OSFI's capital guidelines require Additional Tier 1 and Tier 2 capital instruments to be converted into common shares in a manner that respects the hierarchy of claims in liquidation. This results in significant dilution to existing common shareholders. Such a conversion ensures that Additional Tier 1 and Tier 2 holders are entitled to a more favorable economic outcome than existing common shareholders who would be the first to suffer losses."
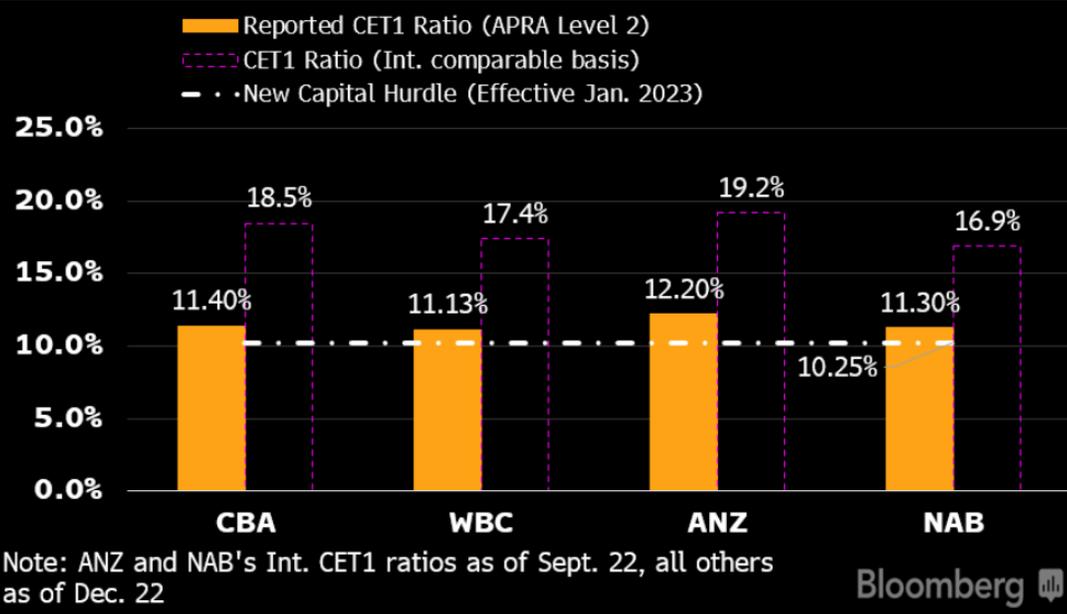
Office of the Superintendent of Financial Institutions
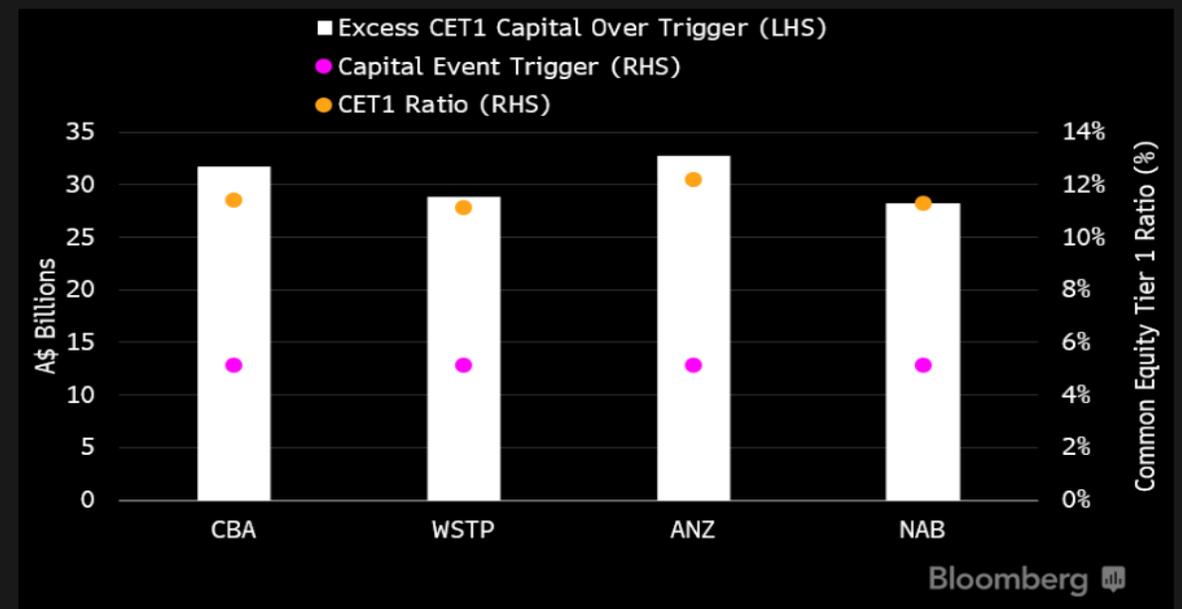OSFI's Website, March 20, 2023

Limited Recourse Capital Notes Issuance

(C$ Mil. bar chart with values for TD, BNS, RY, BMO, CM)

Source: Bloomberg Intelligence

Bloomberg Intelligence

CoCos Down Under? A$30 Billion AT1 Cushion for Australian Banks

CET1 Requirements and Ratios

- ■ Reported CET1 Ratio (APRA Level 2)
- ▯ CET1 Ratio (Int. comparable basis)
- – · New Capital Hurdle (Effective Jan. 2023)

CBA: 11.40%, 18.5%
WBC: 11.13%, 17.4%
ANZ: 12.20%, 19.2%
NAB: 11.30%, 16.9%, 10.25%

Note: ANZ and NAB's Int. CET1 ratios as of Sept. 22, all others as of Dec. 22

Source: Company Filings, Bloomberg Intelligence

CET1 Cushion Over CoCos' Trigger

- ■ Excess CET1 Capital Over Trigger (LHS)
- ● Capital Event Trigger (RHS)
- ● CET1 Ratio (RHS)

A$ Billions — Common Equity Tier 1 Ratio (%)

CBA, WSTP, ANZ, NAB

Source: Bloomberg Intelligence

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Health and Outlook of the Global Consumer with the impact on Consumer & Industrial Sectors

Mike Holland
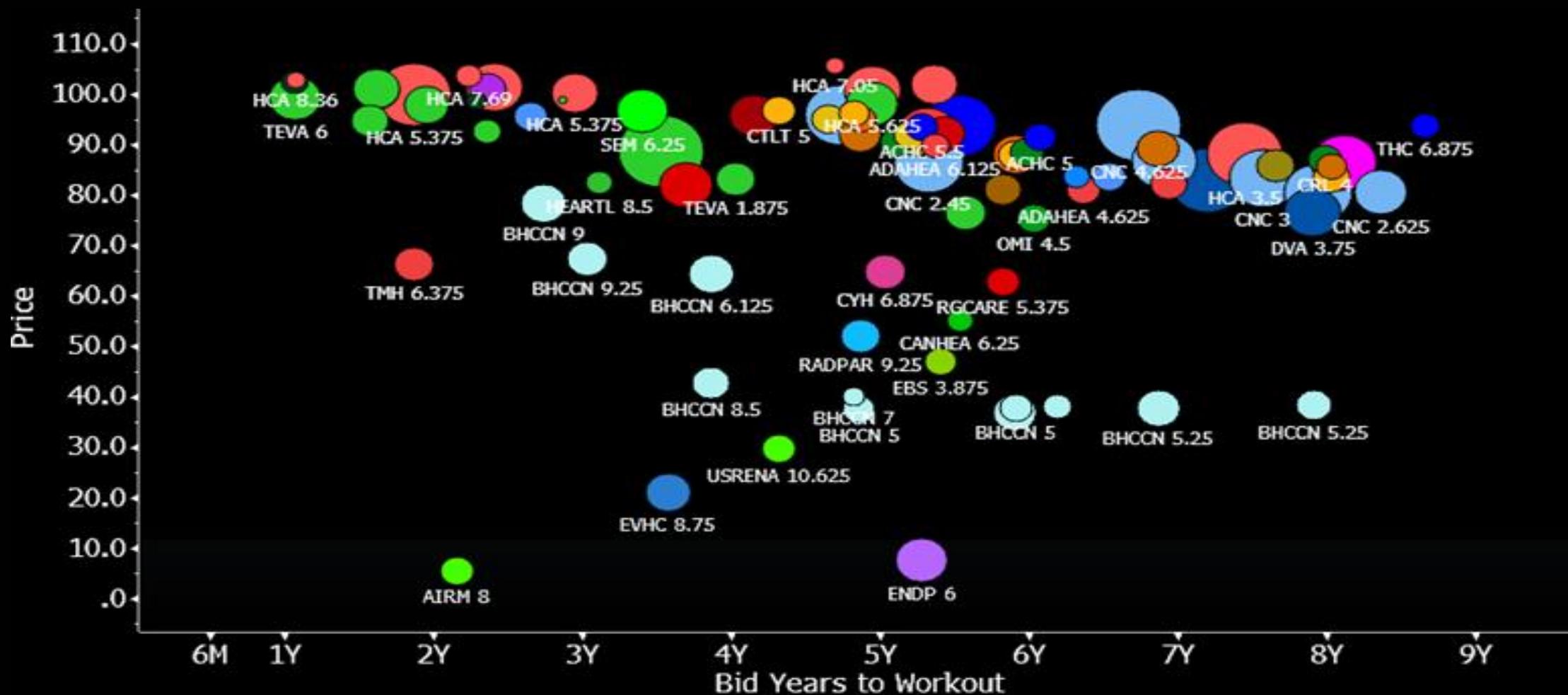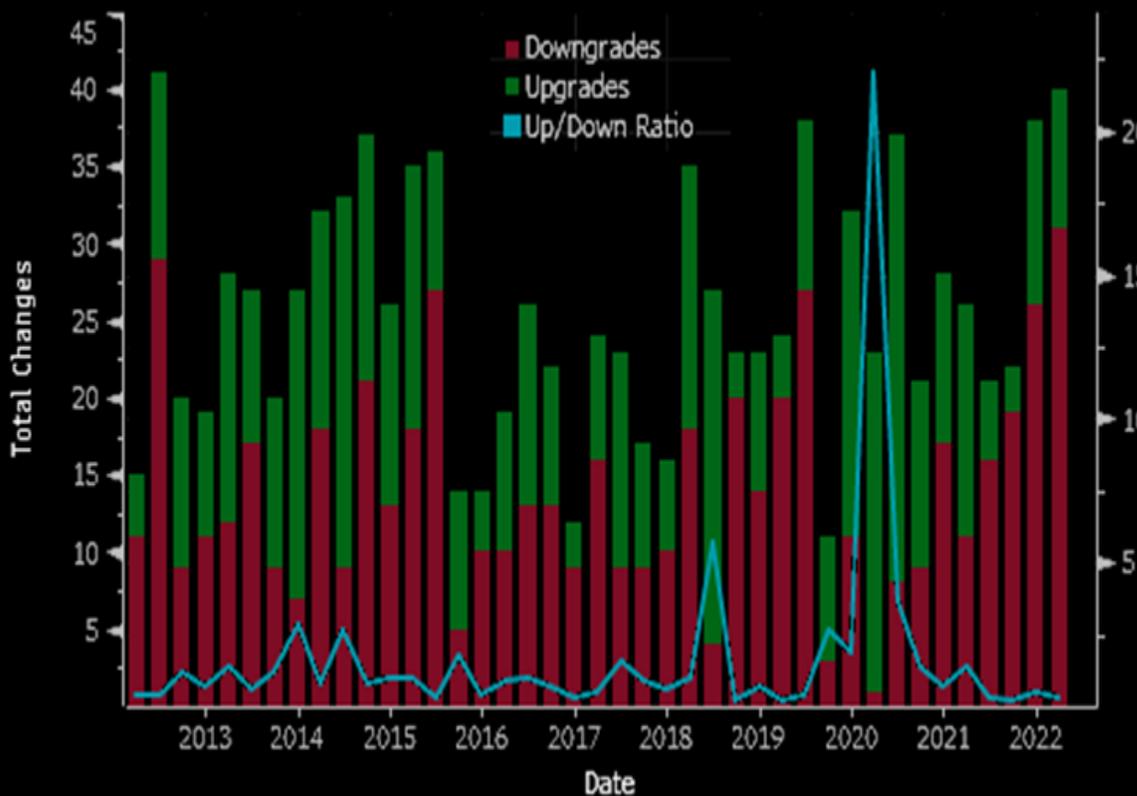Healthcare Credit Analyst
Bloomberg Intelligence

Bloomberg Intelligence

High Yield Bond Prices Still Heavy….
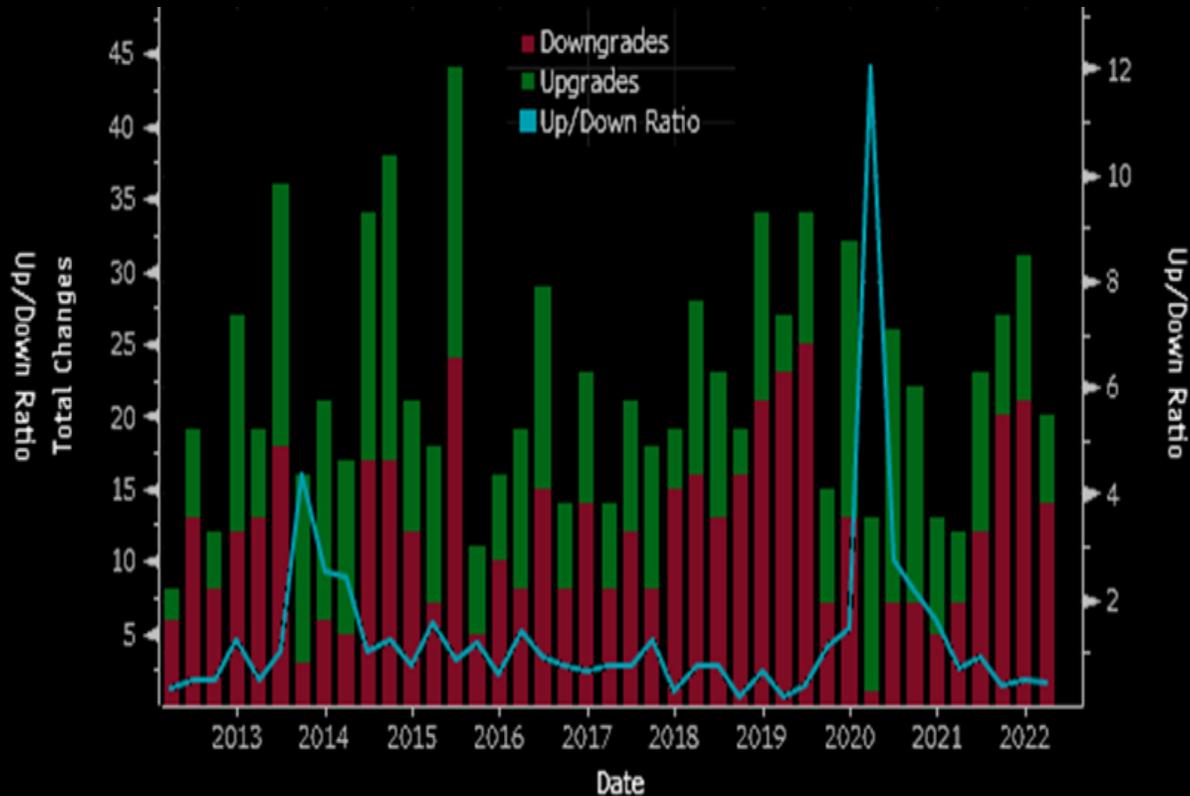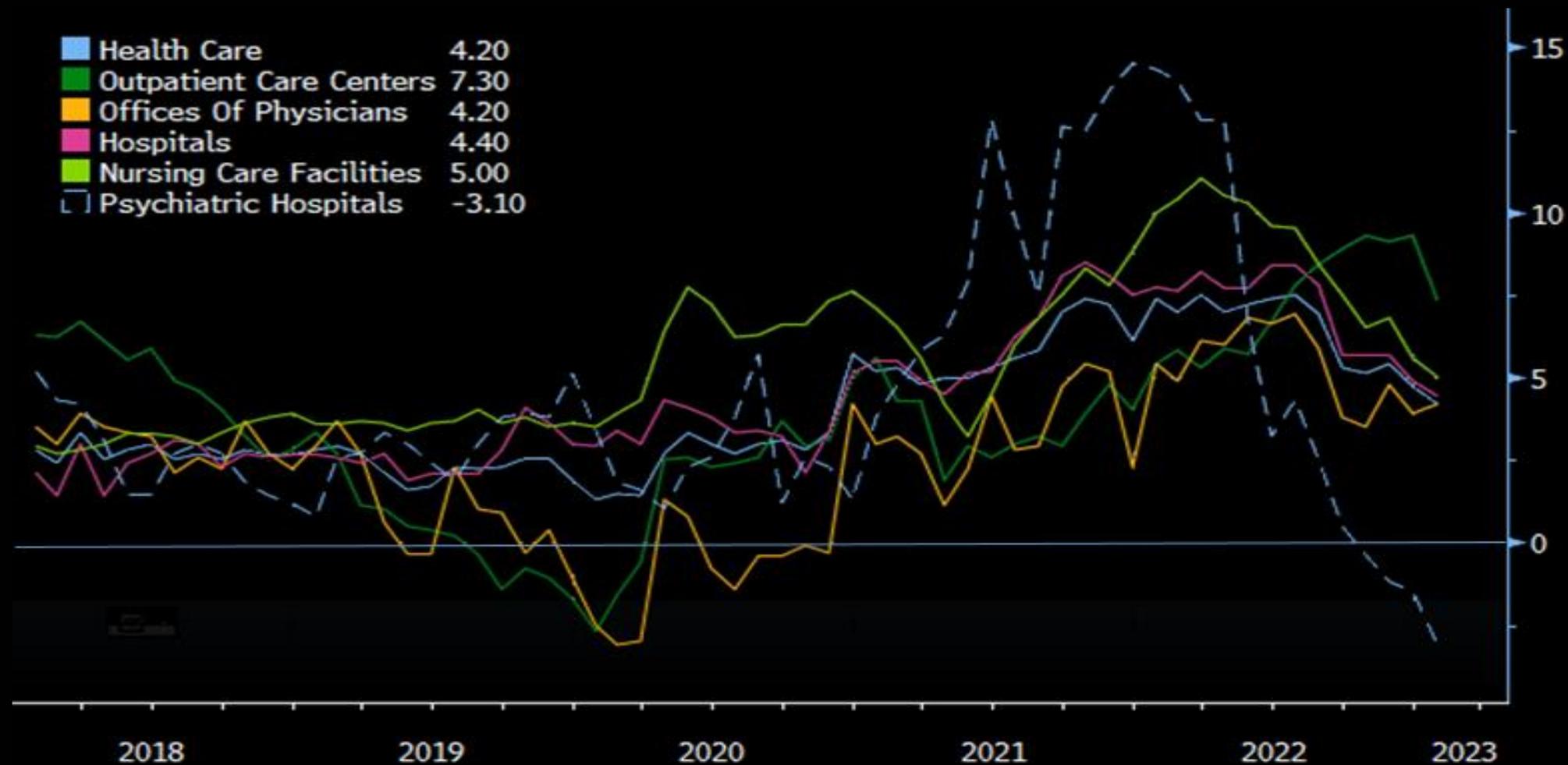
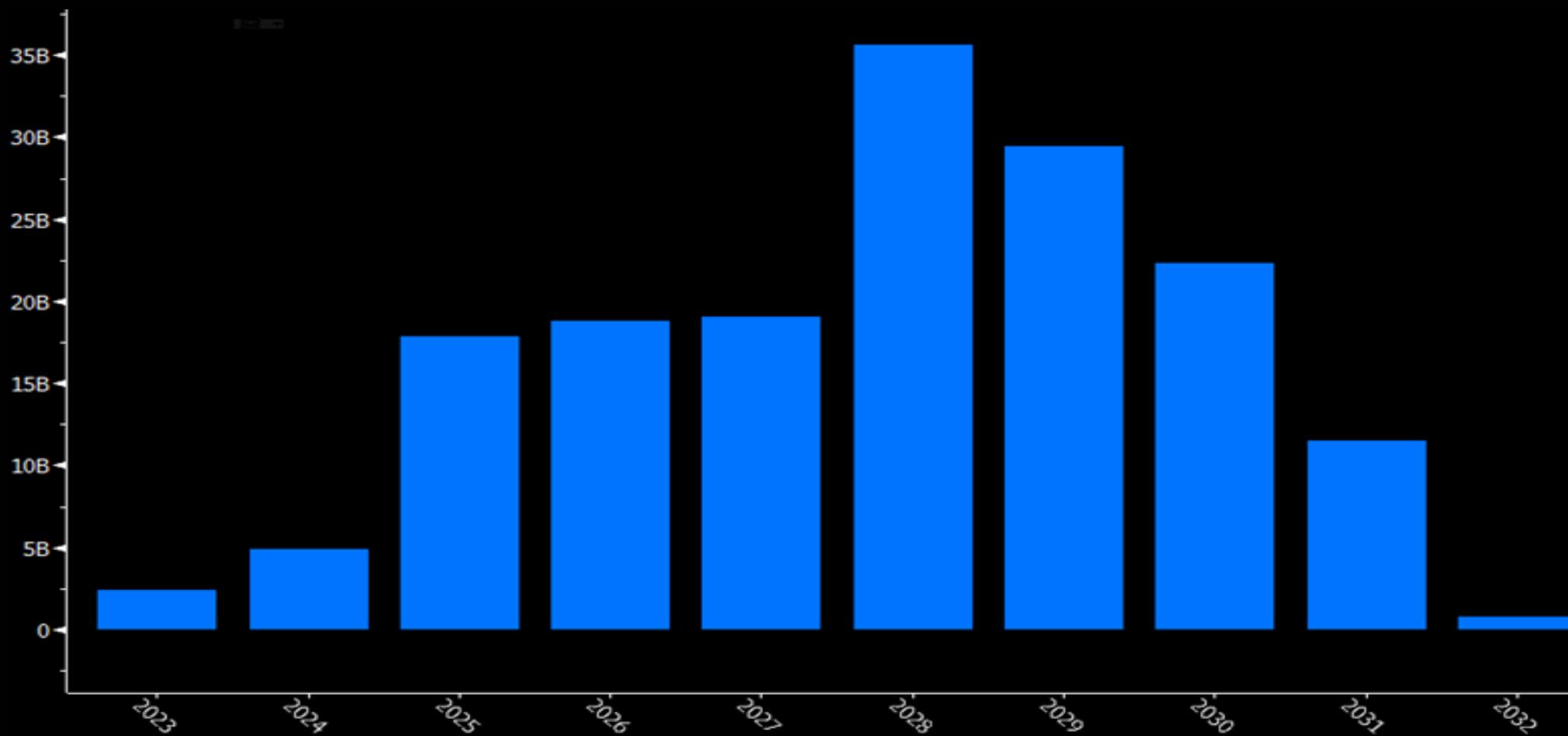# Negative Ratings Trends Across Both HY and IG…

Moody's Healthcare Trends

S&P's Healthcare Trends

Labor Costs Declining Off Peak…

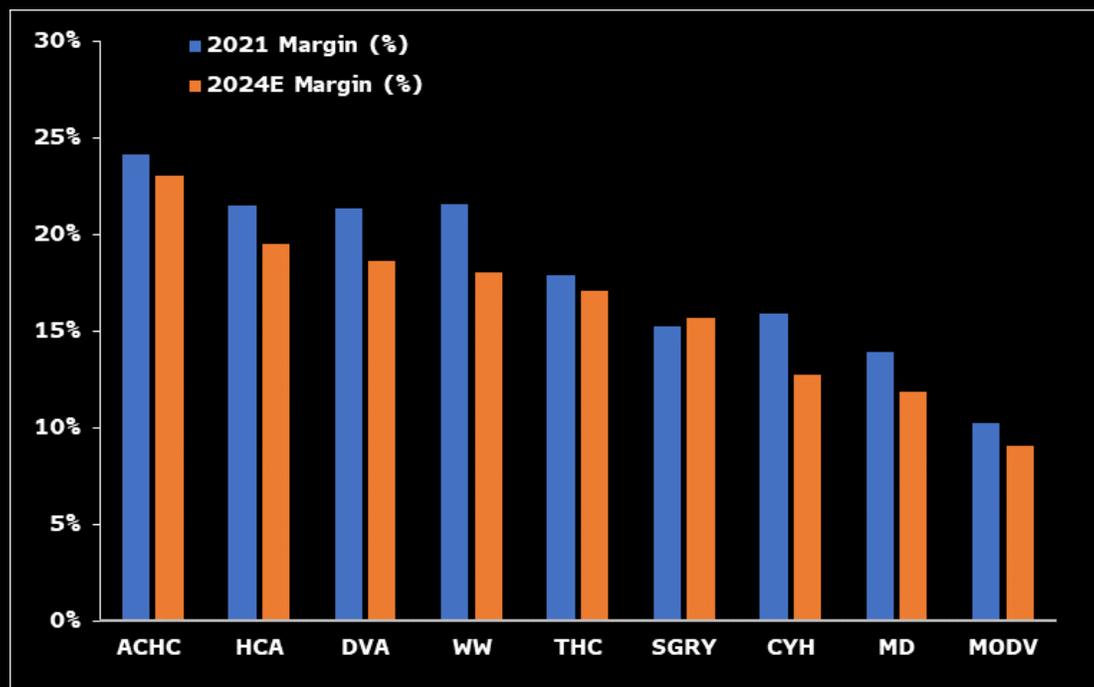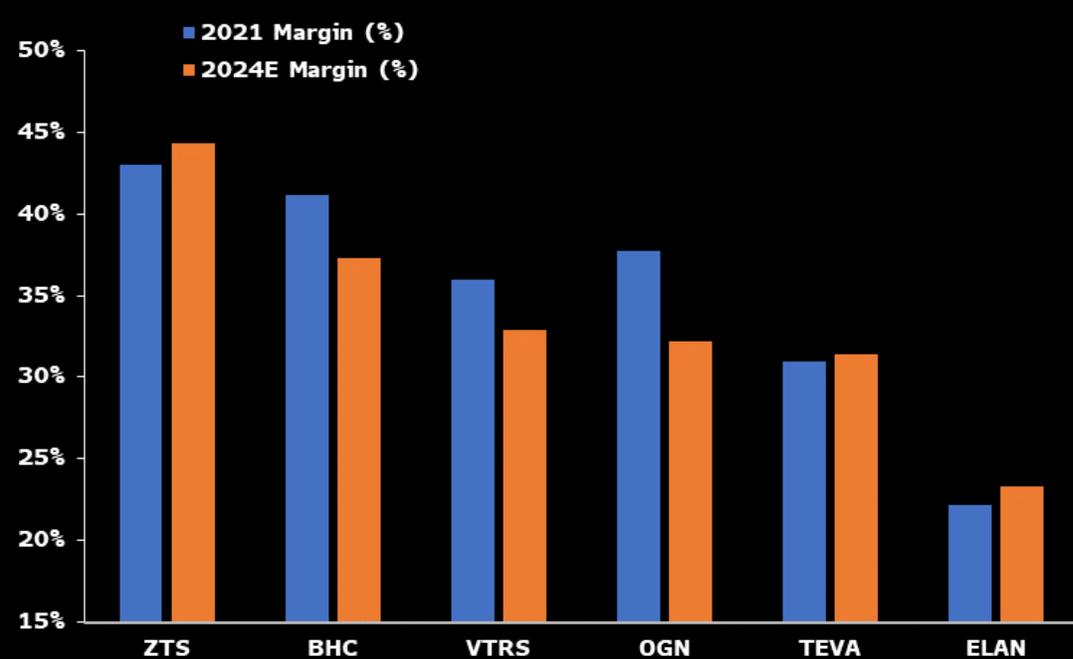| Legend	Value
Health Care	4.20
Outpatient Care Centers	7.30
Offices Of Physicians	4.20
Hospitals	4.40
Nursing Care Facilities	5.00
Psychiatric Hospitals	-3.10

Near-Term Refi Risk Low for High Yield Healthcare...

Thinning Margins for Providers, As Pharma's Mixed...
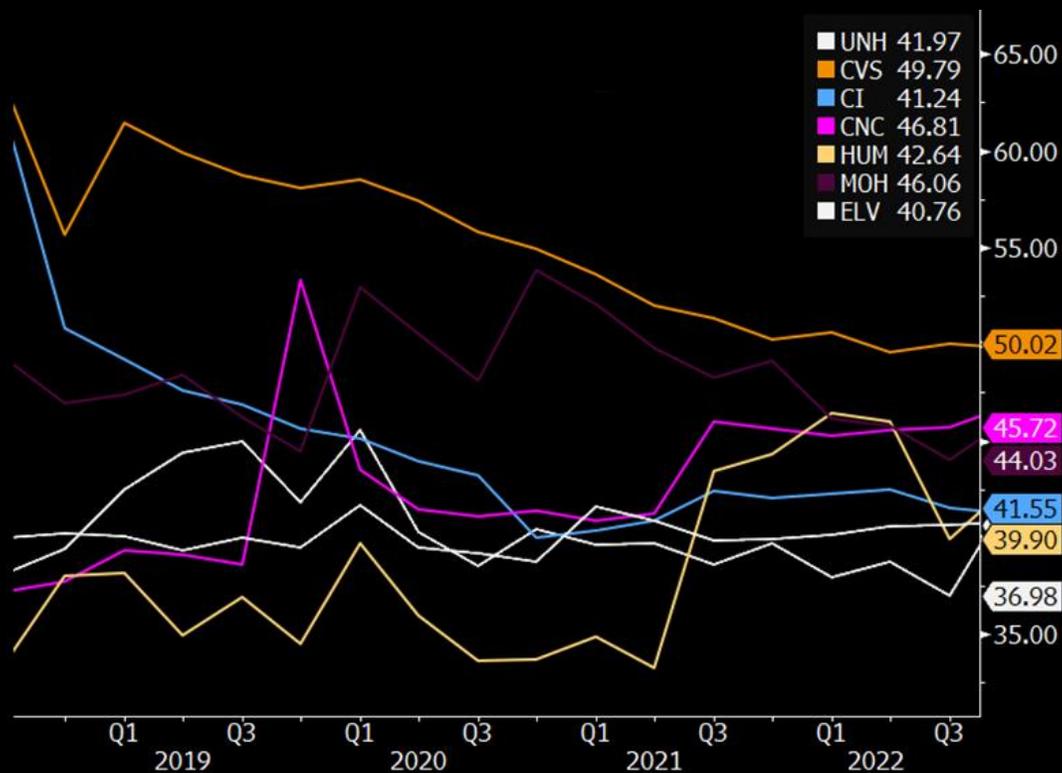
Provider Adjusted Ebitda Margins (%)

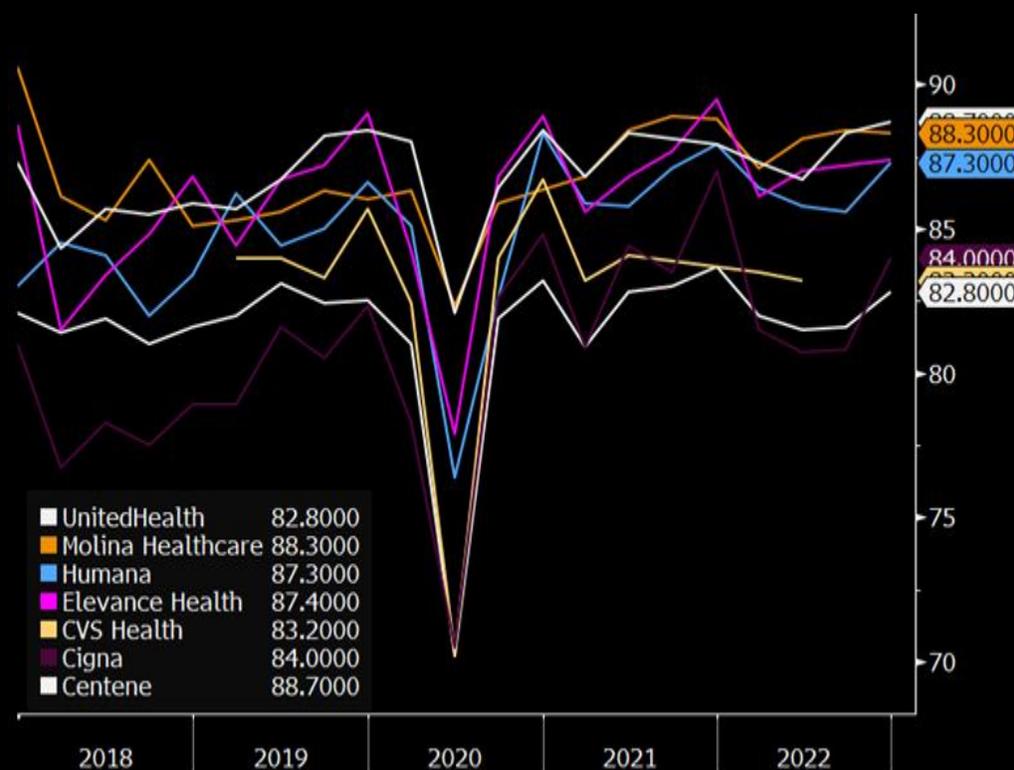## Pharma Adjusted Ebitda Margins (%)

Payors' Debt To Cap and MLRs Normalizing...

Debt to Capital Ratios

Legend (left chart):
- UNH 41.97
- CVS 49.79
- CI 41.24
- CNC 46.81
- HUM 42.64
- MOH 46.06
- ELV 40.76

Callout values: 50.02, 45.72, 44.03, 41.55, 39.90, 36.98

X-axis: Q1 2019, Q3, Q1 2020, Q3, Q1 2021, Q3, Q1 2022, Q3

Y-axis: 35.00, 50.00, 55.00, 60.00, 65.00

Medical Loss Ratios (%)

Legend (right chart):
- UnitedHealth 82.8000
- Molina Healthcare 88.3000
- Humana 87.3000
- Elevance Health 87.4000
- CVS Health 83.2000
- Cigna 84.0000
- Centene 88.7000

Callout values: 88.3000, 87.3000, 84.0000, 82.8000

X-axis: 2018, 2019, 2020, 2021, 2022

Y-axis: 70, 75, 80, 85, 90

Provider Spreads Reflect Fundamental Dispersion…
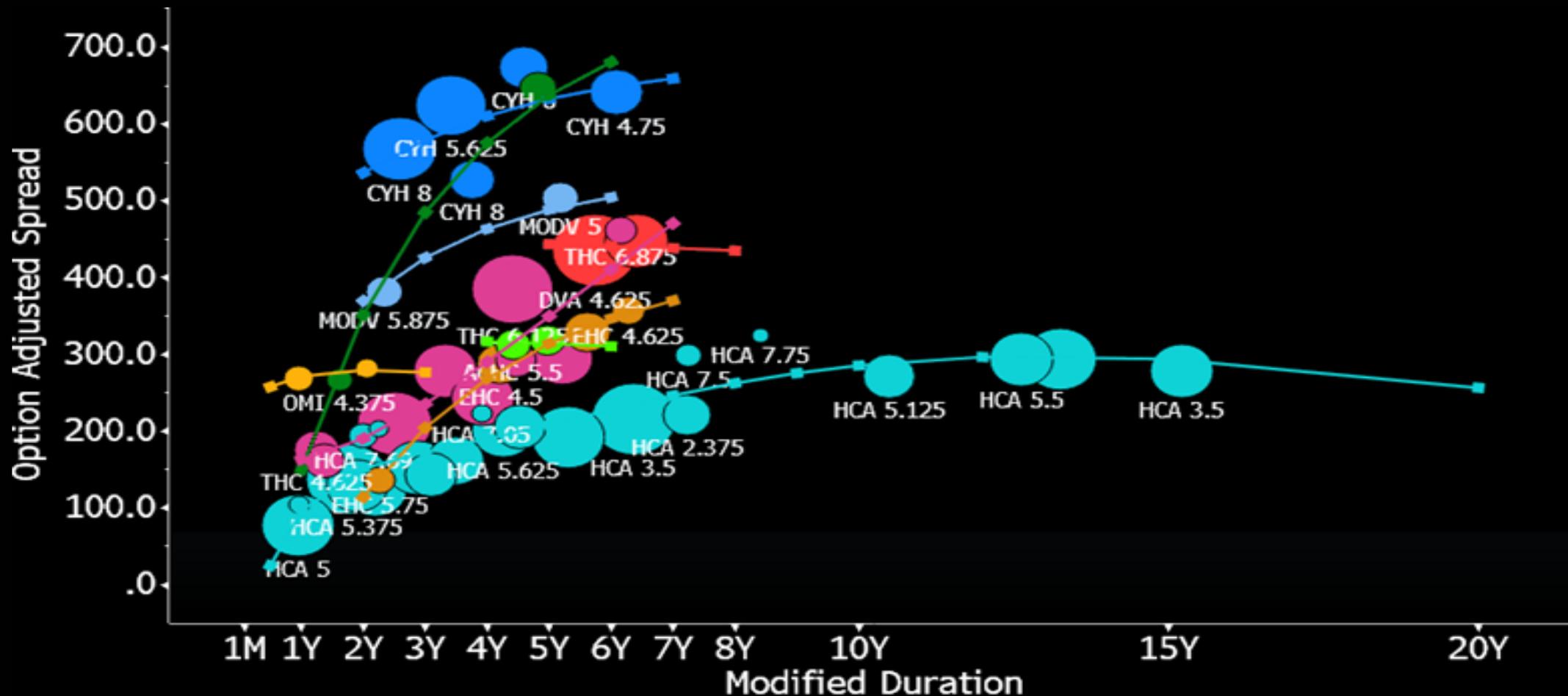
Pharma Spreads, Excluding Distressed Outliers…

Payor Spreads Relatively Resilient So Far in 2023
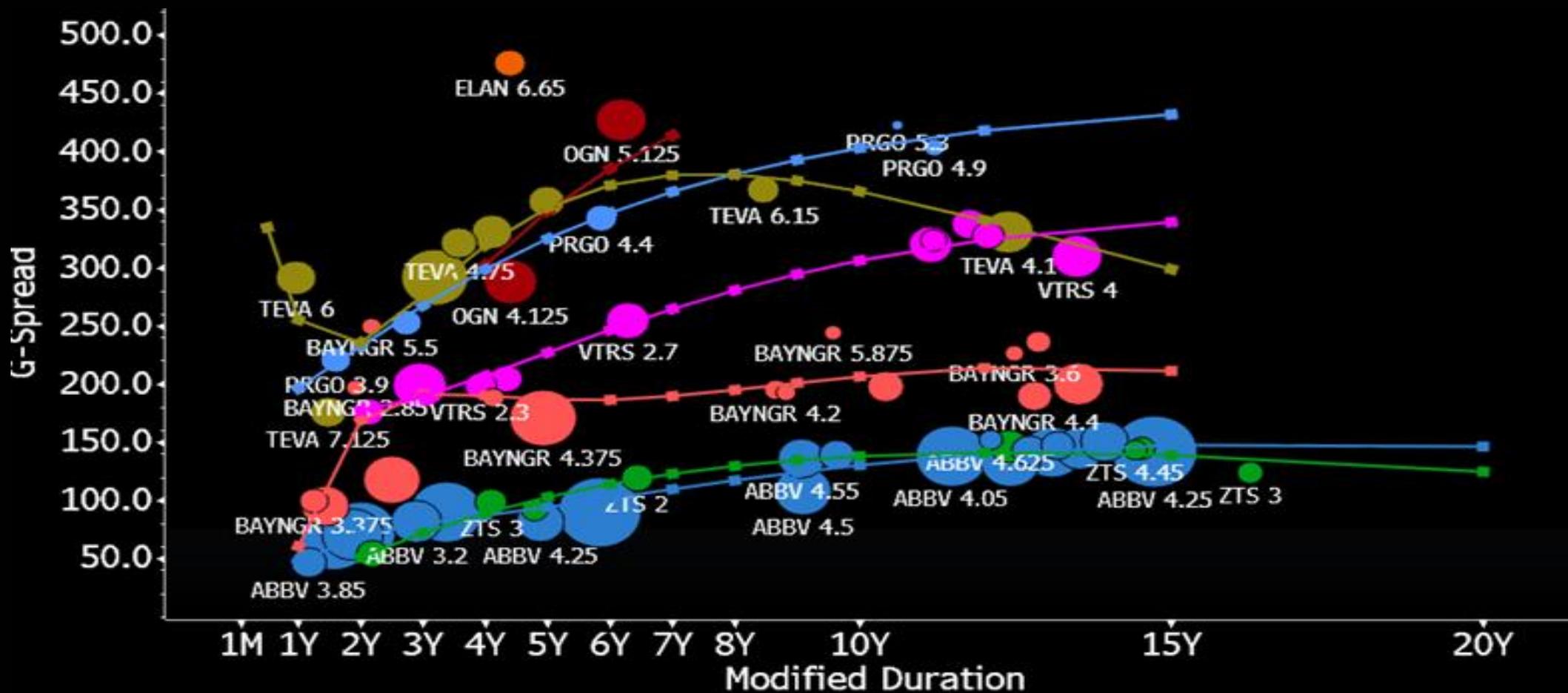
Health and Outlook of the Global Consumer with the impact on Consumer & Industrial Sectors
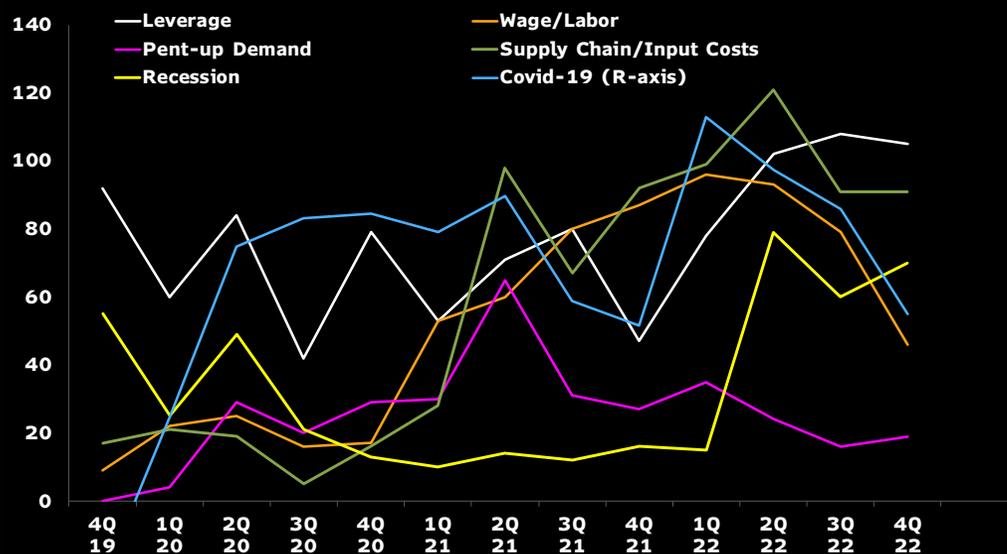
Jody Lurie

Leisure, Lodging, Gaming, Restaurants, & Rental Cars Credit Analyst
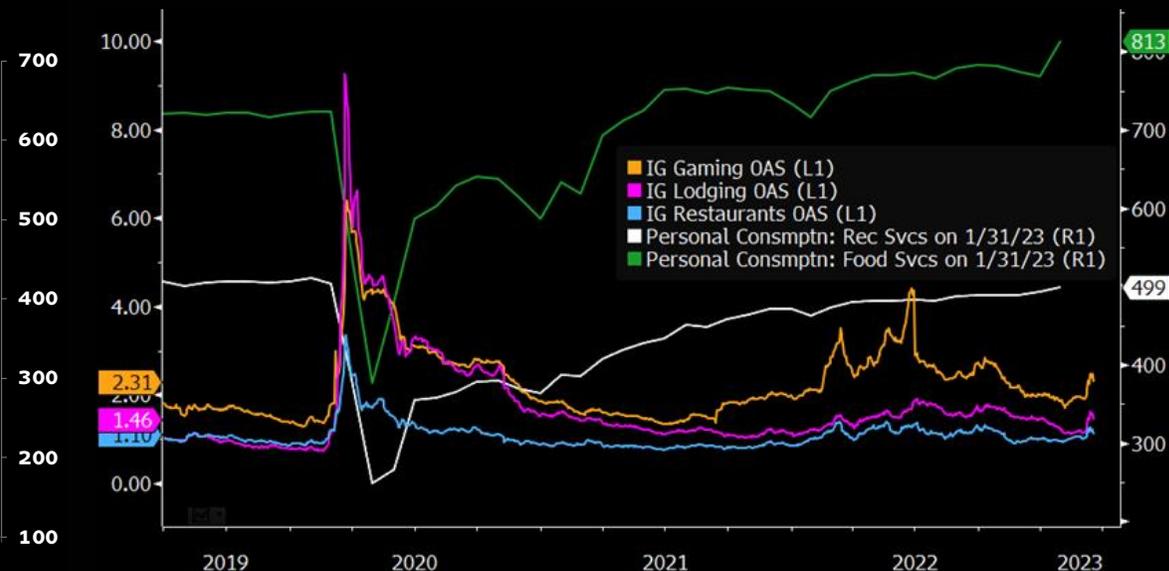
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Economic Backdrop: Company Thinking and the Consumer

Topics of Focus By Management Teams

Consumer Spending vs. Credit Spreads

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Labor Shortages and Wage Inflation

Leisure Hourly Earnings vs Job Openings

Leisure & Hospitality Unemployment

Universe Ratings Matrix

High Grade

High Yield

High Grade Universe Rating Matrix

Company	LT Issuer Rating			Recent Report			Outlook			Leverage
	Moody's / S&P / Fitch			Moody's	S&P	Fitch	Moody's	S&P	Fitch	
DARDEN RESTAURAN	Baa2 / BBB / BBB			View	View	View	🟡	🟡	🟡	1.3x
MCDONALDS CORP	Baa1 / BBB+ / WD			View	View	View	🟡	🟡	⚪	2.8x
STARBUCKS CORP	Baa1 / BBB+ / WD			View	View	View	🟡	🟡	⚪	2.1x
CHOICE HOTELS	Baa3 / BBB- / N.A.			View	View	View	🟡	🟡	⚪	2.3x
HYATT HOTELS-A	Baa3 / BBB- / BBB-			View	View	View	🟡	🟡	🔴	2.9x
MARRIOTT INTL-A	Baa2 / BBB / WD			View	View	View	🟡	🟡	⚪	2.4x

Source: Company Filings, Bloomberg
Note: Using Issuer LT rating unless otherwise noted.
* FFO Adjusted Leverage

Outlook Key: 🔴 Negative 🟡 Stable 🟢 Positive ⚪ Not Applicable

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High Yield Universe Rating Matrix

Company	LT Issuer Rating			Recent Report			Outlook			Leverage
	Moody's / S&P / Fitch			Moody's	S&P	Fitch	Moody's	S&P	Fitch	
AVIS BUDGET GROU	B2 / BB - / N.A.			View	View	View	🟡	🟡	⚪	9.9x
CAESARS ENTERTAI	B1 / B+ / N.A.			View	View	View	🟡	🟡	⚪	6.5x
CARNIVAL CORP	B2 / B / NR			View	View	View	🔴	🔴	⚪	8.3x
CEDAR FAIR LP	B2 / BB- / N.A.			View	View	View	🟡	🟡	⚪	4.0x
HERTZ GLOBAL HLD	Caa1 / B / N.A.			View	View	View	🟡	🟡	⚪	10.2x
HILTON WORLDWIDE	Ba2 / BB / N.A.			View	View	View	🟡	🟡	⚪	3.0x
LAS VEGAS SANDS	Baa3 / BB+ / BB+			View	View	View	🔴	🔴	🔴	5.9x
MGM RESORTS INTE	B1 / B+ / WD			View	View	View	🟡	🔴	⚪	2.1x
NORWEGIAN CRUISE	B2 / B / N.A.			View	View	View	🔴	🟡	⚪	7.1x
ROYAL CARIBBEAN	B2 / B / N.A.			View	View	View	🟡	🟡	⚪	6.4x
SEAWORLD ENTERTA	B2 / B+ / N.A.			View	View	View	⚪	⚪	⚪	2.8x
SIX FLAGS ENTERT	B2 / B+ / N.A.			View	View	View	🟡	🟡	⚪	4.5x
WYNN RESORTS LTD	B2 / B+ / N.A.			View	View	View	🔴	🟡	⚪	8.2x
YUM! BRANDS INC	Ba2 / BB+ / WD			View	View	View	🟡	🟡	⚪	4.6x

Source: Company Filings, Bloomberg
Note: Using Issuer LT rating unless otherwise noted.
* FFO Adjusted Leverage

Outlook Key: 🔴 Negative 🟡 Stable 🟢 Positive ⚪ Not Applicable

Bloomberg

Source: Bloomberg Intelligence

Margins: 2019 vs 2023-24 Estimates

Legend:
- FY19 Ebitda Margin
- FY23 Ebitda Margin (BEst)
- FY24 Ebitda Margin (BEst)

Categories: CAR, CCL, CHH, CZR, DRI, FUN, H, HLT, HTZ, LVS, MAR, MCD, MGM, NCLH, RCL, SBUX, SEAS, SIX, STAY, TNL, WYNN, YUM
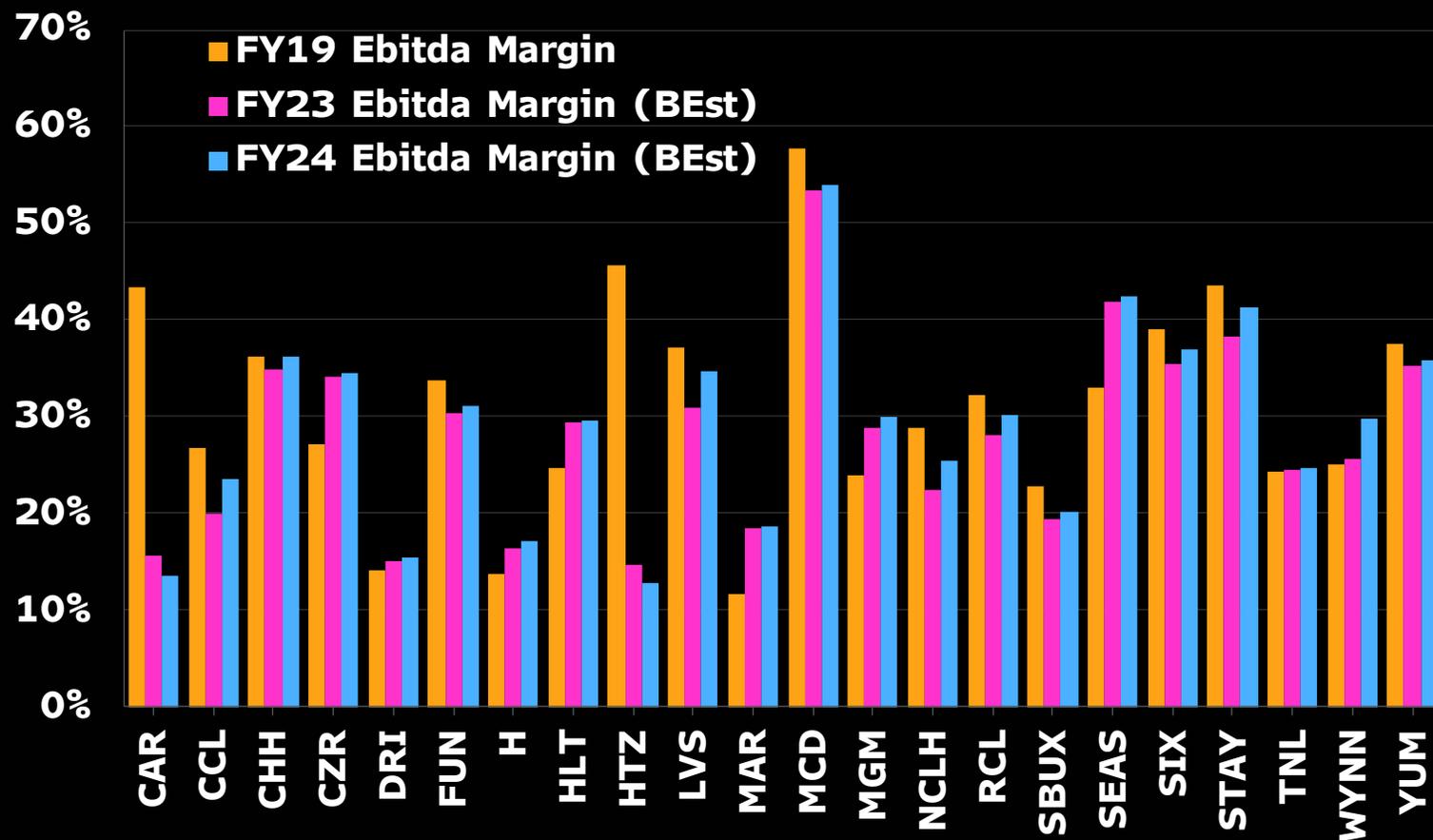
Source: Bloomberg Intelligence; EEO<GO> and MODL<GO> screens on the Terminal for BEst numbers

Bloomberg Intelligence

High Yield Credit Spreads Over Time

■ Leisure - HY	555.7
■ Gaming - HY	338.8
■ Lodging - HY	276.3
■ Restaurants - HY	341.9

Bloomberg Intelligence

Sector Issuance Volumes Since 2017
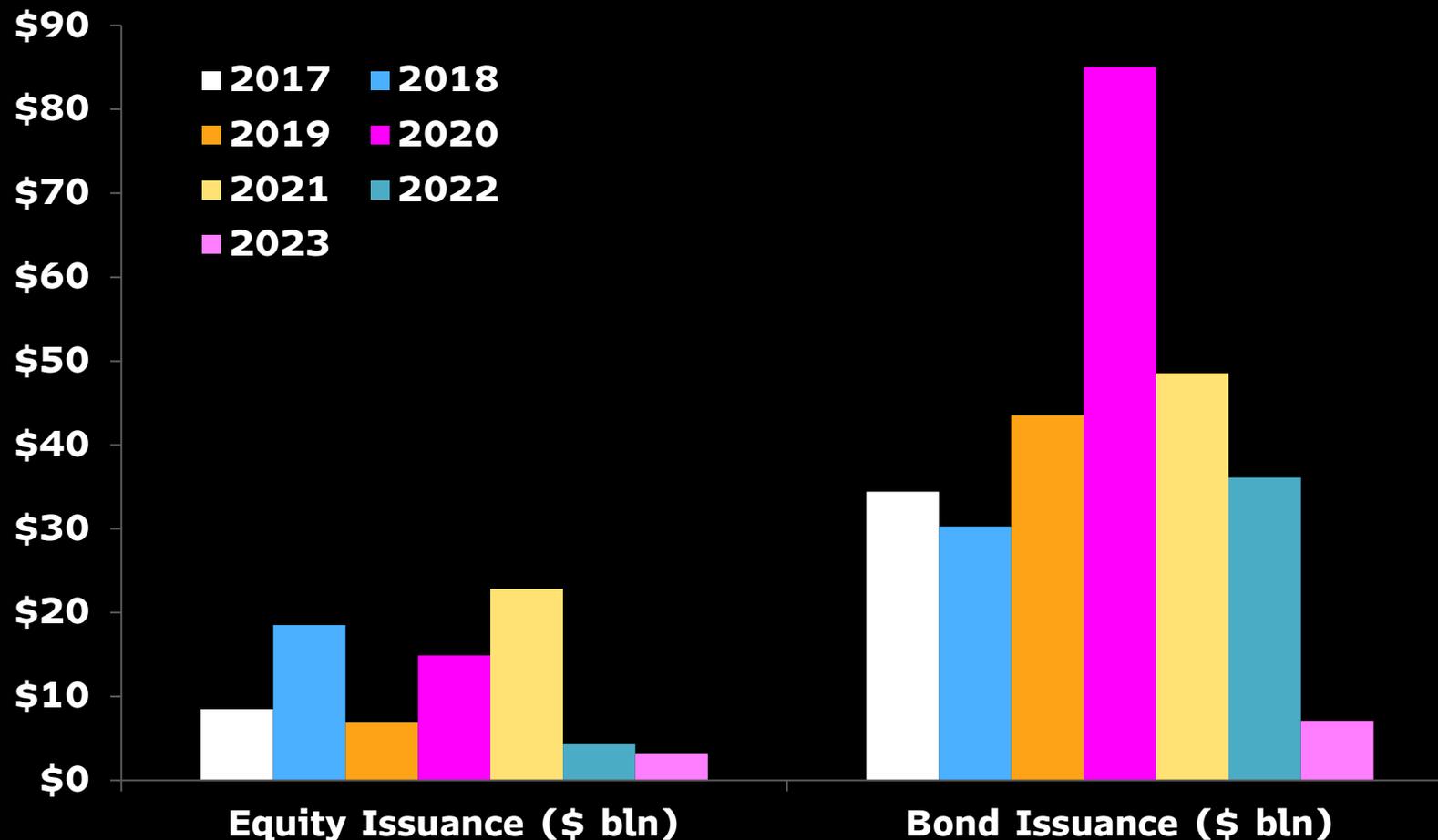
Legend:
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023

Equity Issuance ($ bln)

Bond Issuance ($ bln)

Bloomberg Intelligence BI

Cash Sources and Uses

Subsector Cash Sources/Uses: 2022 (Above), 2020 (Below)
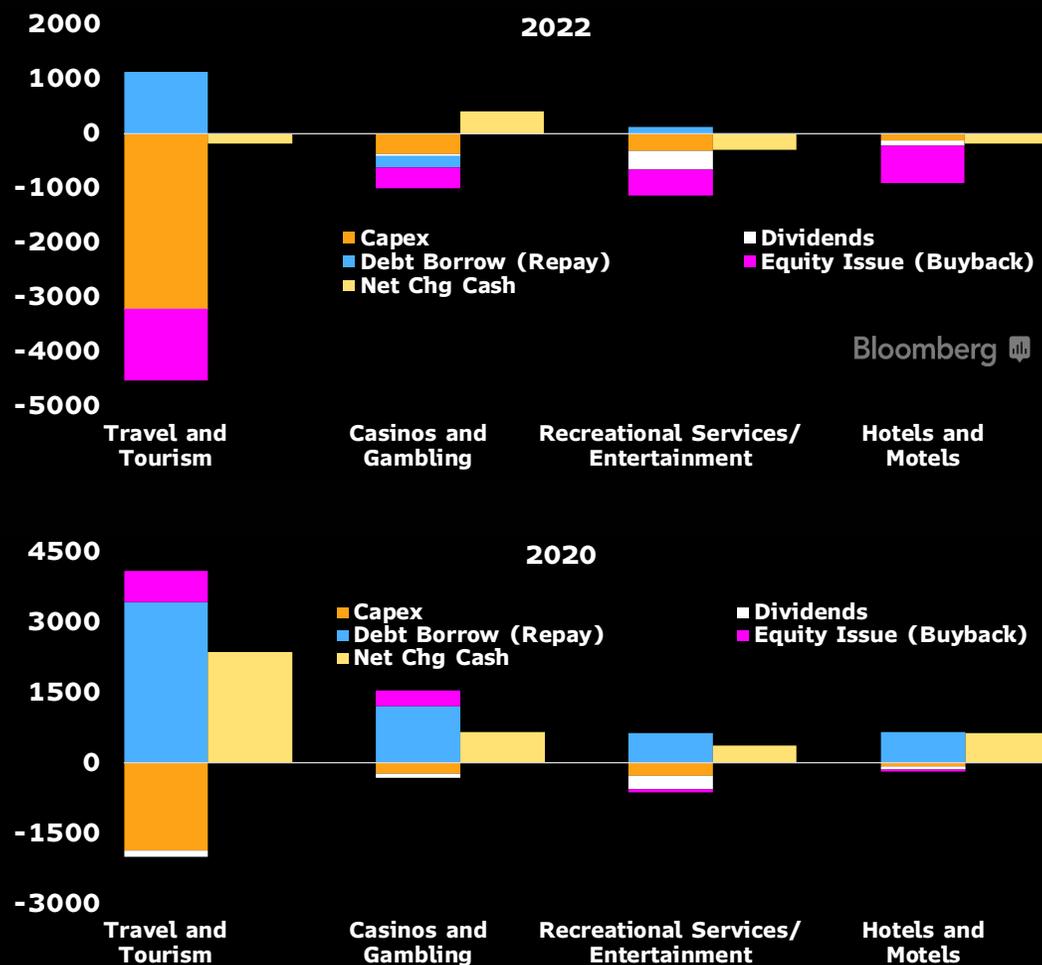
Average Leisure Sector Cash Sources/Uses

Legend (left chart):
- Capex
- Dividends
- Debt Borrow (Repay)
- Equity Issue (Buyback)
- Net Chg Cash

Left chart y-axis: 2000, 1500, 1000, 500, 0, -500, -1000, -1500, -2000

Left chart x-axis: 2022, 2021, 2020, 2019, 2018

2022

Right top chart y-axis: 2000, 1000, 0, -1000, -2000, -3000, -4000, -5000

Legend:
- Capex
- Debt Borrow (Repay)
- Net Chg Cash
- Dividends
- Equity Issue (Buyback)

Right top chart x-axis: Travel and Tourism, Casinos and Gambling, Recreational Services/Entertainment, Hotels and Motels

2020

Right bottom chart y-axis: 4500, 3000, 1500, 0, -1500, -3000

Legend:
- Capex
- Debt Borrow (Repay)
- Net Chg Cash
- Dividends
- Equity Issue (Buyback)

Right bottom chart x-axis: Travel and Tourism, Casinos and Gambling, Recreational Services/Entertainment, Hotels and Motels
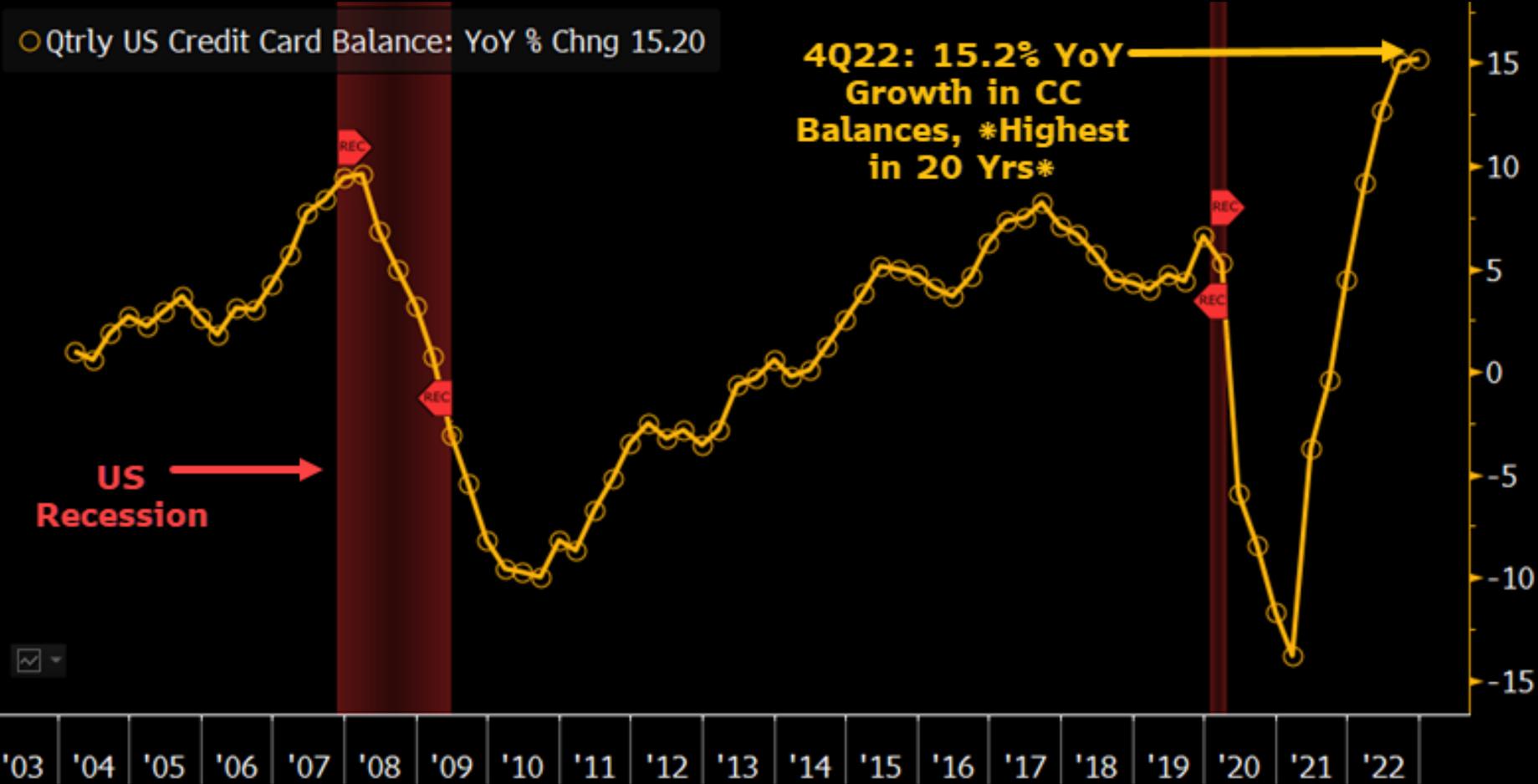
Bloomberg Intelligence

Credits Under Coverage

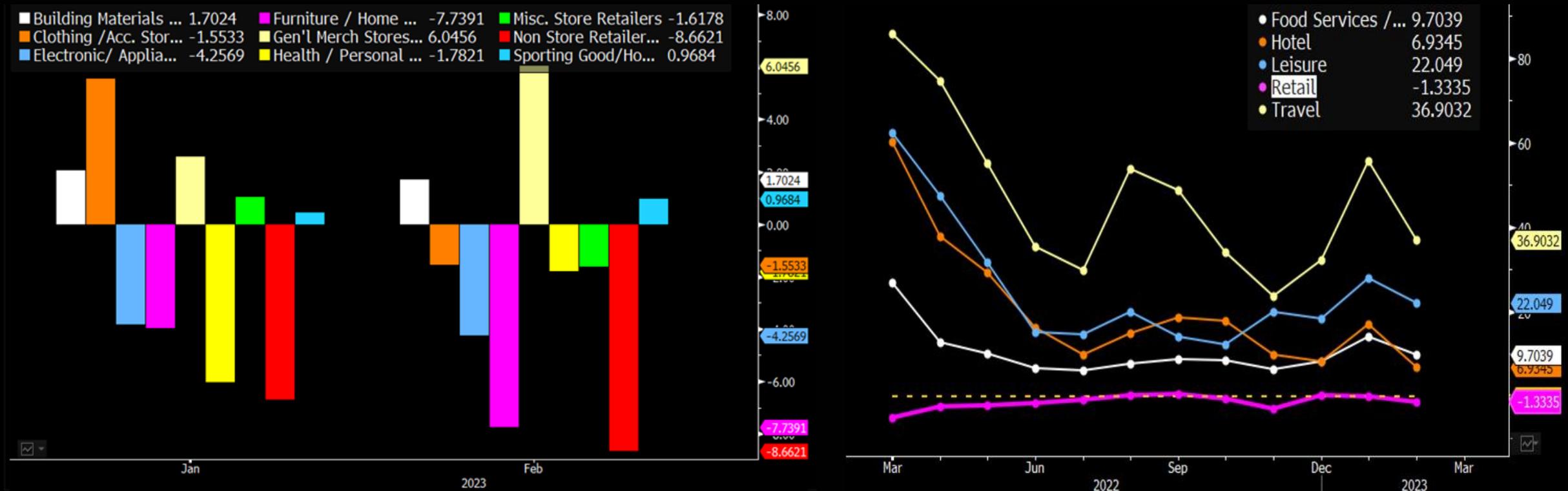# Health and Outlook of the Global Consumer with the impact on Consumer & Industrial Sectors

Mike Campellone

US Retail Credit Analyst

Bloomberg Intelligence

Health of US Consumer: US Credit Card Debt: Quarterly Change

Qtrly US Credit Card Balance: YoY % Chng 15.20

4Q22: 15.2% YoY Growth in CC Balances, *Highest in 20 Yrs*

US Recession

Credit Card Transaction Data Shows a Shift in Spending
(Dollar Volume Growth YoY% - SSS by Industry)

Legend (left chart):
- Building Materials ... 1.7024
- Clothing /Acc. Stor... -1.5533
- Electronic/ Applia... -4.2569
- Furniture / Home ... -7.7391
- Gen'l Merch Stores... 6.0456
- Health / Personal ... -1.7821
- Misc. Store Retailers -1.6178
- Non Store Retailer... -8.6621
- Sporting Good/Ho... 0.9684

Legend (right chart):
- Food Services /... 9.7039
- Hotel 6.9345
- Leisure 22.049
- Retail -1.3335
- Travel 36.9032

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Excess Inventory a Risk to Retailer Profitability

IG or HY Index?	Ticker	Most Rec Per End Dt	Inv	3yr Avg Inv	Diff vs Avg ($)	Diff vs Avg (%) ↓	Inv Turnover	Inv/T12M Sales (Current = blue dot vs 3 Yr Avg)
	Average	0	8,210	6,478	+1,731	+34%	4.3	19.1%
HY	CROX US	09/30/2022	514	175	+338	+193%	4.0	16.1%
HY	WWW US	10/01/2022	881	385	+496	+129%	2.4	33.2%
IG	VFC US	12/31/2022	2,592	1,309	+1,283	+98%	2.8	22.2%
HY	GIII US	10/31/2022	901	520	+381	+73%	3.0	28.9%
HY	LEVI US	11/27/2022	1,417	867	+550	+63%	2.3	23.0%
IG	NKE US	11/30/2022	9,326	6,265	+3,061	+49%	3.4	19.0%
IG	HD US	10/30/2022	25,719	17,483	+8,236	+47%	4.5	16.4%
HY	KTB US	09/30/2022	678	462	+216	+47%	2.7	26.3%
IG	TSCO US	12/31/2022	2,710	1,859	+851	+46%	3.8	19.1%
IG	DG US	10/28/2022	7,145	4,940	+2,204	+45%	4.0	19.7%
IG	DLTR US	10/29/2022	5,658	3,997	+1,661	+42%	3.8	20.4%
HY	UAA US	12/31/2022	1,218	867	+351	+41%		21.0%
IG	TJX US	10/29/2022	8,329	5,969	+2,360	+40%	4.7	16.9%
IG	RL US	12/31/2022	1,238	900	+338	+38%	2.1	19.3%
IG	TPR US	12/31/2022	976	710	+266	+37%	2.3	14.8%
IG	DKS US	10/29/2022	3,361	2,461	+900	+37%	2.6	27.7%
IG	AMZN US	12/31/2022	34,405	25,644	+8,761	+34%	8.6	6.7%
HY	FL US	10/29/2022	1,685	1,266	+419	+33%	3.9	19.2%
HY	ANF US	10/29/2022	742	560	+182	+32%	2.4	20.3%
IG	JD US	09/30/2022	71,757	54,552	+17,205	+32%	13.4	7.0%
IG	TGT US	10/29/2022	17,117	13,022	+4,095	+31%	5.1	15.7%
HY	CRI US	10/01/2022	899	697	+202	+29%	2.2	26.7%
IG	LOW US	10/28/2022	19,817	15,371	+4,446	+29%	3.5	20.7%
HY	VSCO US	10/29/2022	1,242	1,000	+242	+24%	4.9	19.1%

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US Retail Bond Spreads Spike as Spending Slows
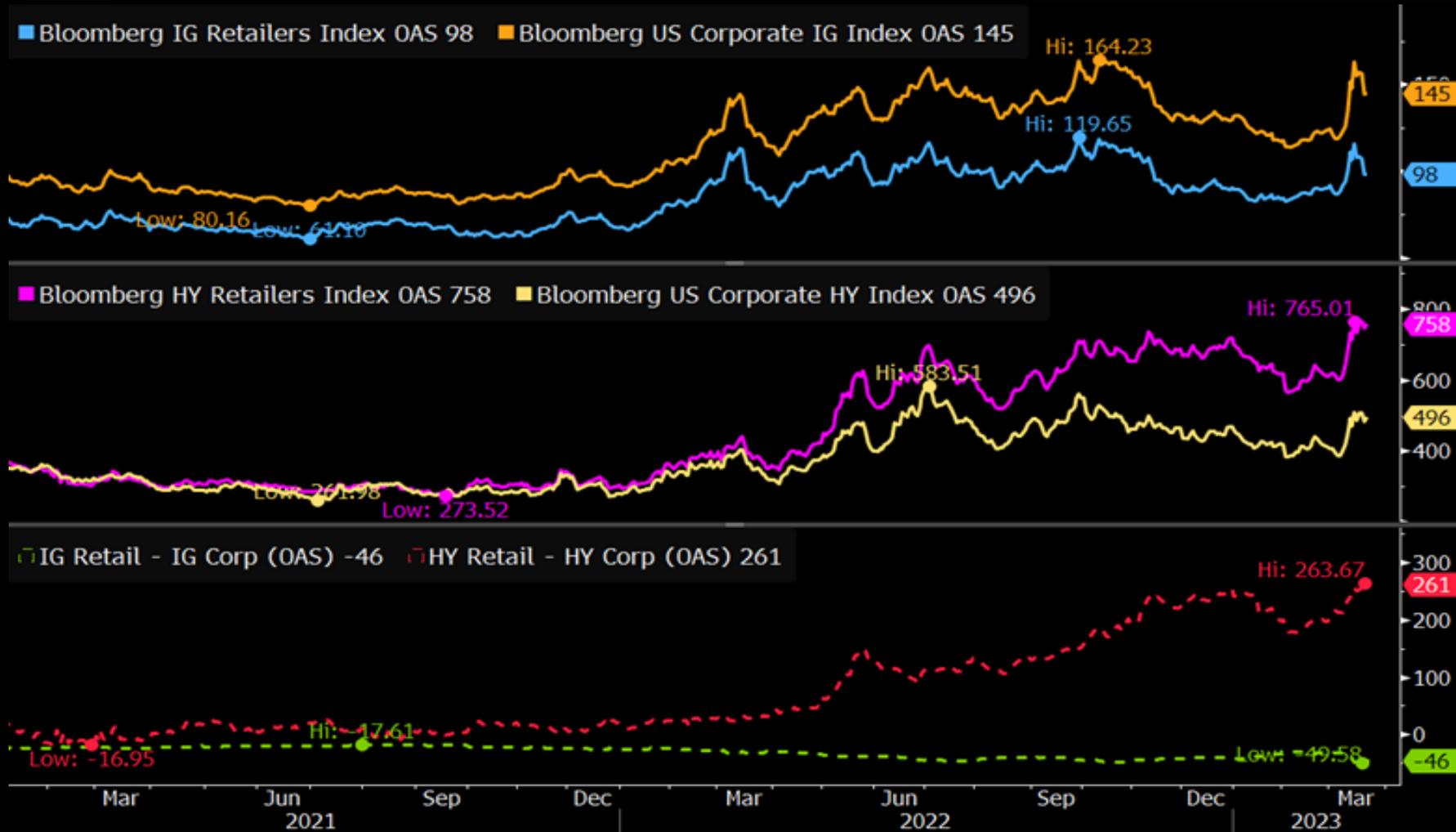
■ Bloomberg IG Retailers Index OAS 98   ■ Bloomberg US Corporate IG Index OAS 145

Hi: 164.23
145
Hi: 119.65
98
Low: 80.16 Low: 61.10

■ Bloomberg HY Retailers Index OAS 758   ■ Bloomberg US Corporate HY Index OAS 496

Hi: 765.01
758
Hi: 583.51
800
600
496
400
Low: 261.98
Low: 273.52

□ IG Retail – IG Corp (OAS) –46   □ HY Retail – HY Corp (OAS) 261

Hi: 263.67
300
261
200
100
Hi: 17.61
0
Low: –16.95
Low: –49.58
–46

Mar | Jun 2021 | Sep | Dec | Mar 2022 | Jun | Sep | Dec | Mar 2023

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Aerospace

Chart 1: Global air passengers, RPK billion

Industry RPKs (billion per month)

Actual

Seasonally adjusted
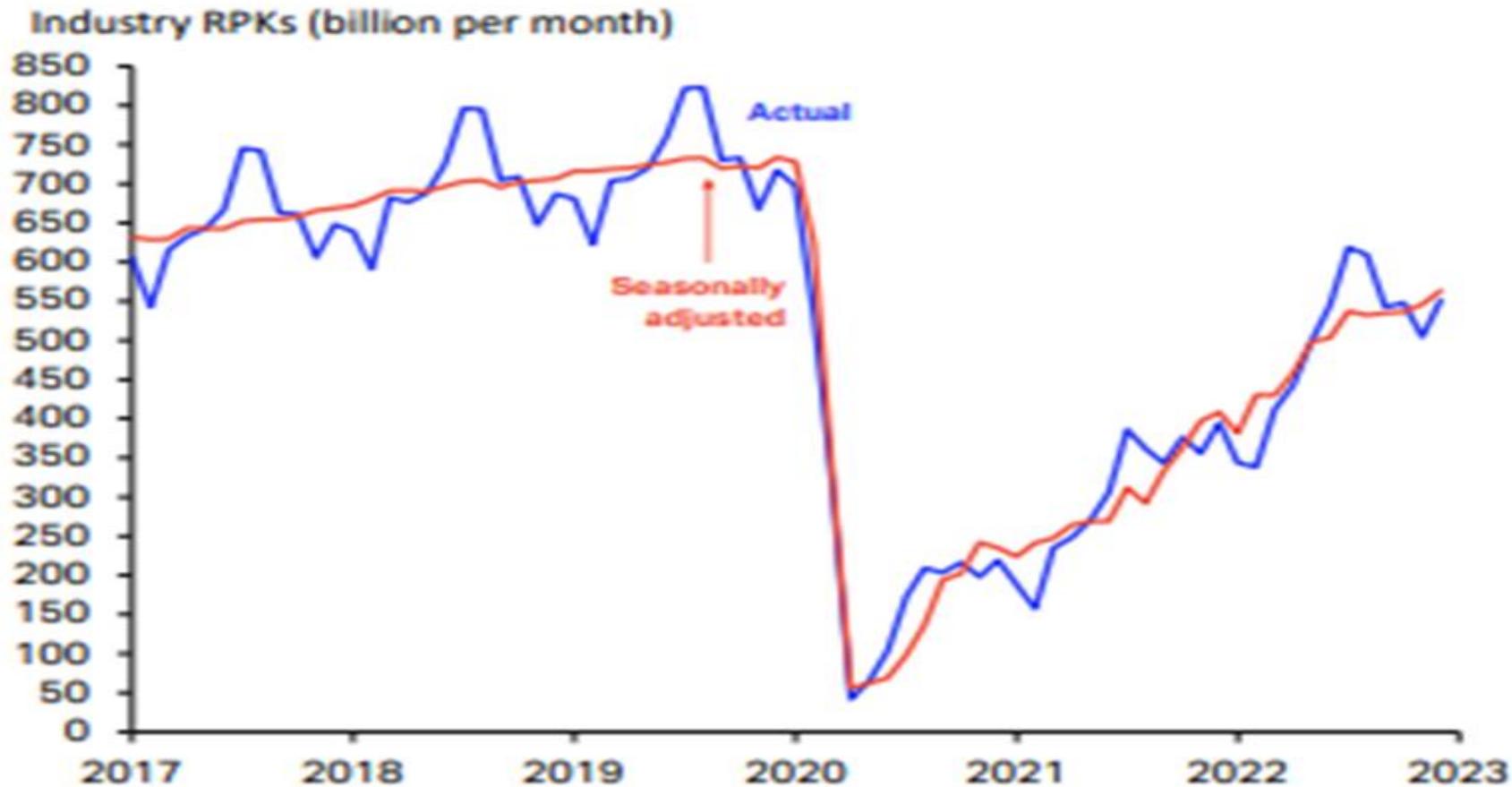
Sources: IATA Economics, IATA Monthly Statistics

Boeing
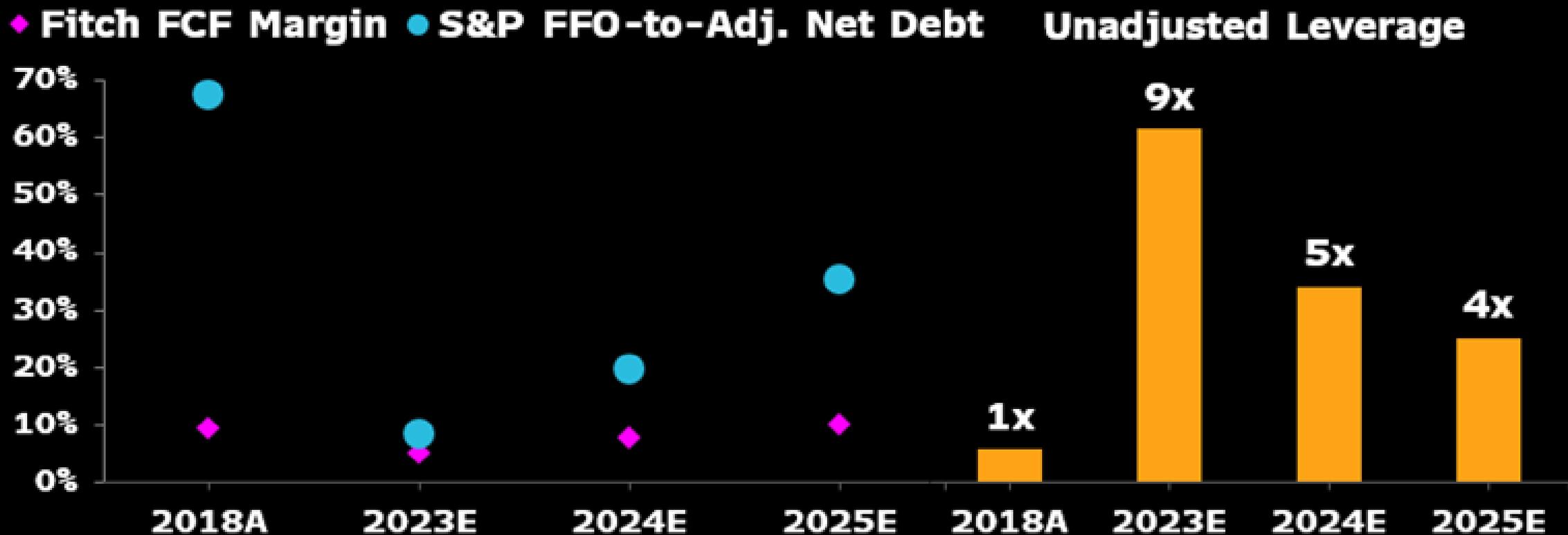
◆ **Fitch FCF Margin** ● **S&P FFO-to-Adj. Net Debt** **Unadjusted Leverage**

Categories on x-axis: 2018A, 2023E, 2024E, 2025E, 2018A, 2023E, 2024E, 2025E

Leverage bars: 1x (2018A), 9x (2023E), 5x (2024E), 4x (2025E)

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Boeing

Legend: ■ CapEx ■ Dividends ■ Buybacks ■ CFO   Maturities:

Y-axis: 20,000 / 15,000 / 10,000 / 5,000 / 0 / -5,000 / -10,000 / -15,000 / -20,000

X-axis: FY16, FY17, FY18, FY19, FY20, FY21, FY22, BEst FY23*, BEst FY24*, BEst FY25*

Moody's/S&P/Fitch - Cash Deployed for Significant Debt Cuts. No BBK or Divs. Until Such Time
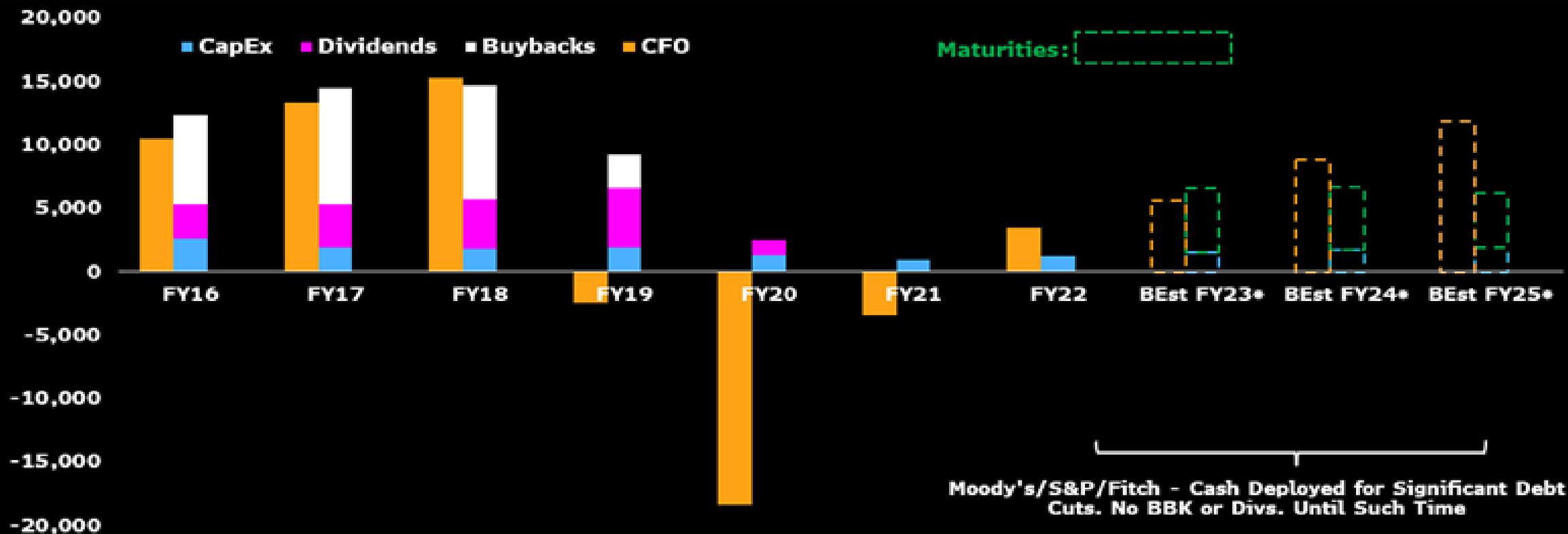
Note: In $ Millions. *BEst FY23-25 data is from MODL.

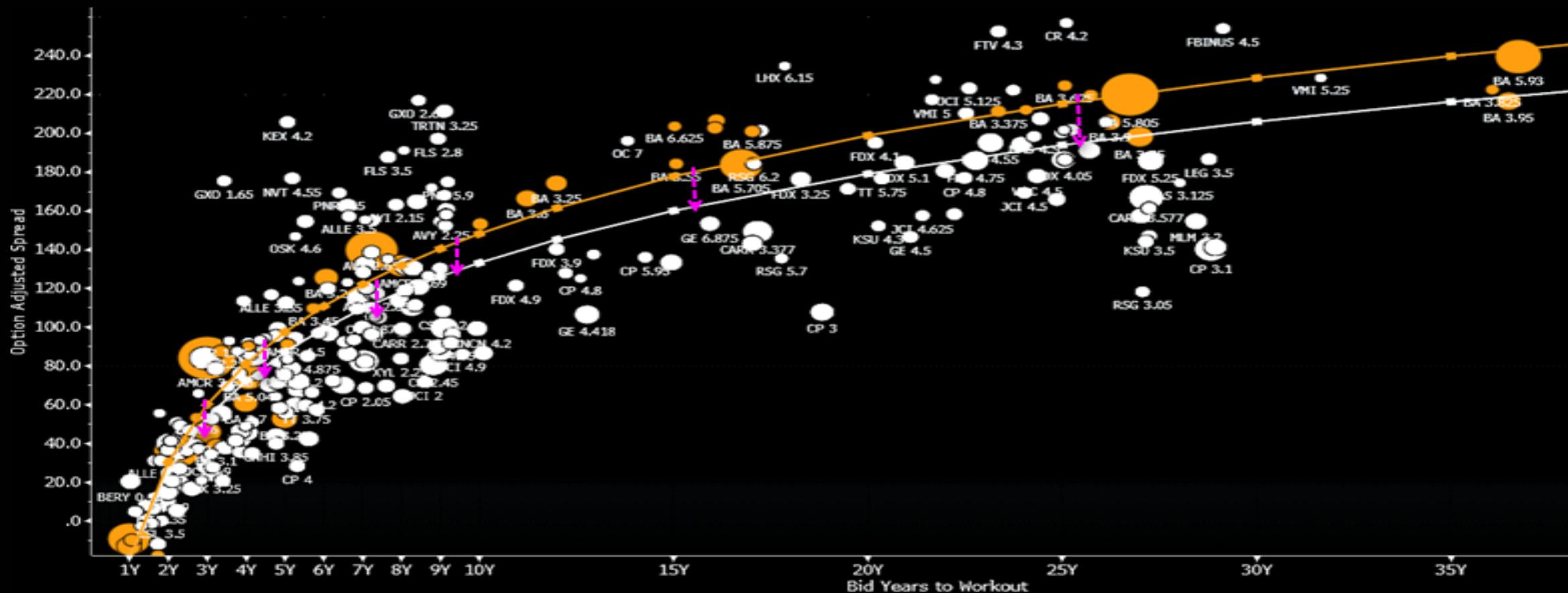Bloomberg

Source: Bloomberg Intelligence, Bloomberg Estimates

Bloomberg Intelligence BI

Boeing

2023 Cash Walk 2024 Cash Walk

Bond Maturities

Moody's & Fitch Balance Sheet Cash > $10B

| Beg. Cash | 1Q FCF | 2Q FCF | 3Q FCF | 4Q FCF | Maturities | End Cash | 1Q FCF | 2Q FCF | 3Q FCF | 4Q FCF | Maturities | End Cash |
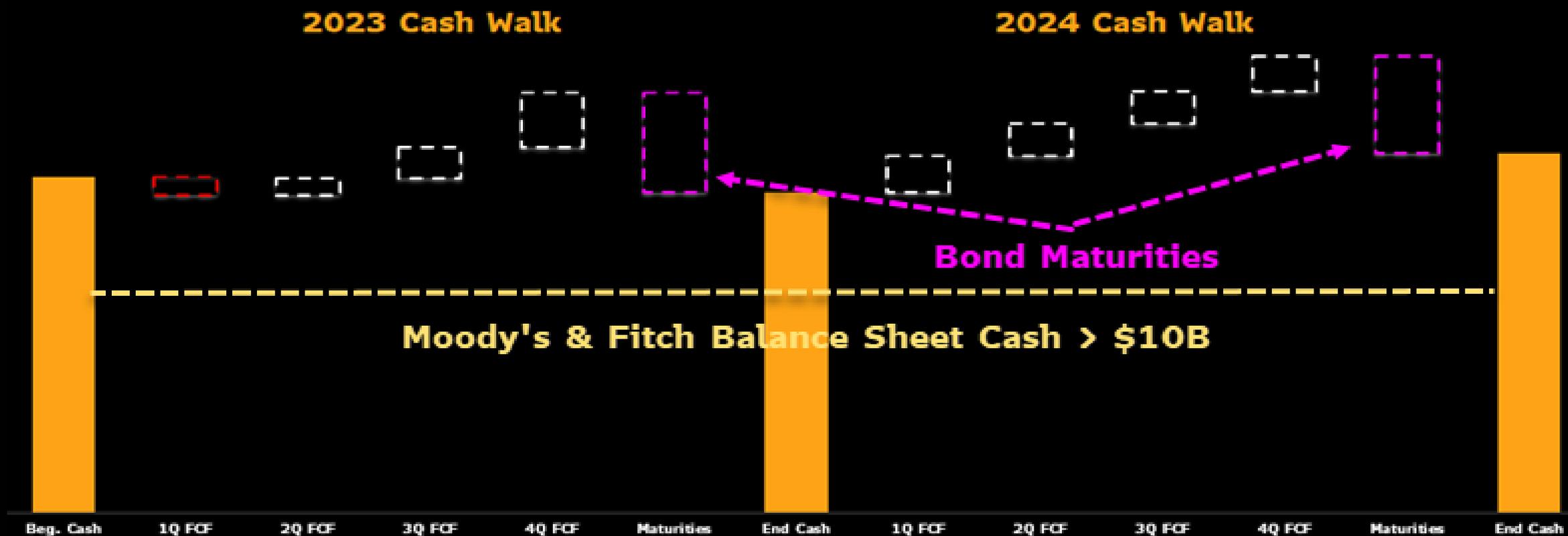
*Assumes Boeing Pays Down Maturities in-line w/'23 and '24 schedule.

Boeing

Howmet

Legend: Total Debt/Ebitda · Adjusted Total Debt/Ebitda · Adj. Net Leverage · FFO-to-Adj. Debt

	2020A	2021A	2022A	2023E	2024E
Total Debt/Ebitda	4.7x	3.7x	3.3x	2.9x	2.6x
Adjusted Total Debt/Ebitda	5.4x	4.3x	3.7x	3.3x	2.9x
Adj. Net Leverage	4.0x	3.7x	3.1x	2.7x	2.1x
FFO-to-Adj. Debt	16%	18%	22%	26%	34%
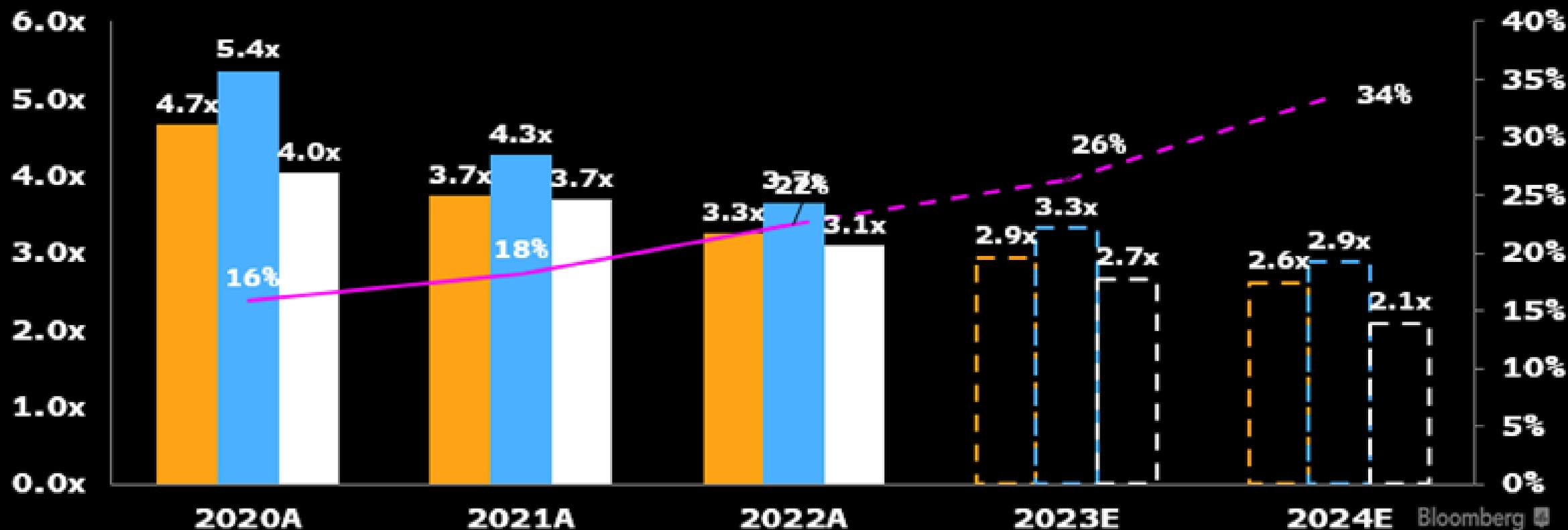
Howmet

Energy Discussion and important capital allocation decisions that need to be made

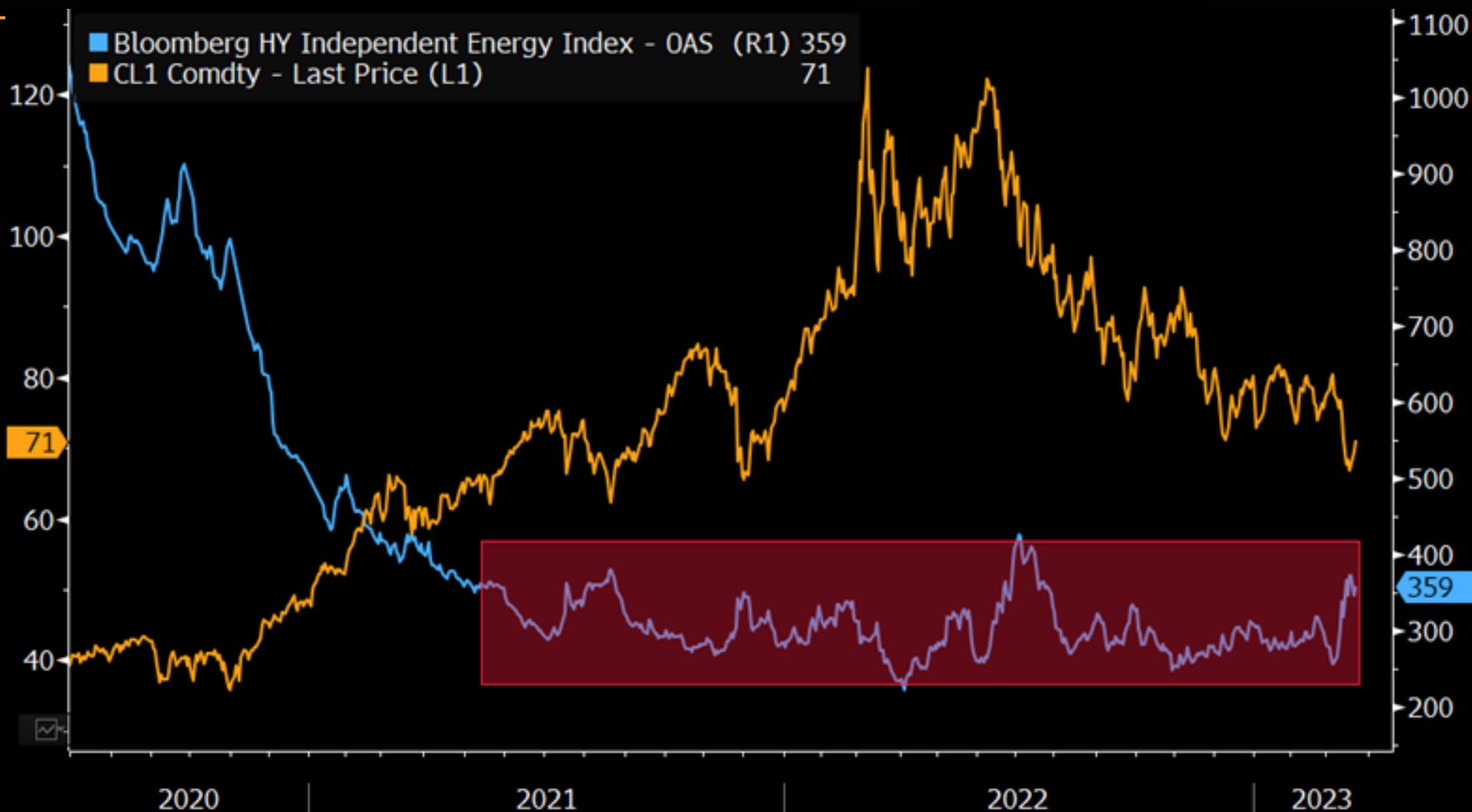Spencer Cutter
Energy Credit Analyst
Bloomberg Intelligence

2008 GFC – Oil Plunged, Spreads Widened, but…

Legend:
- Bloomberg HY Energy Index - OAS (R1) 413
- NYMEX Oil - Last Price (L1) 66

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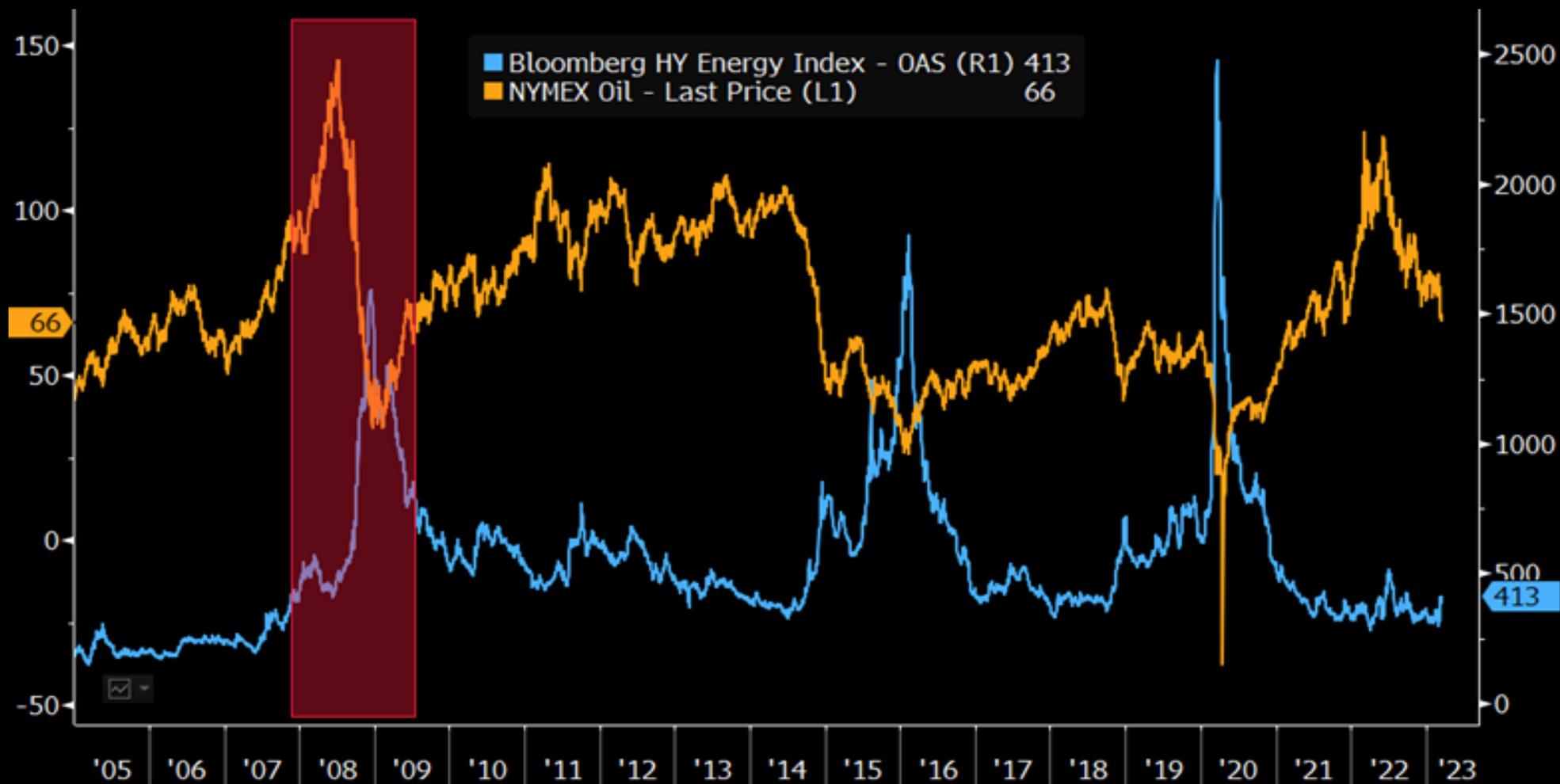
2008 GFC – Energy Was Still A "Safe Haven"

Independent Energy - Where Is The Market Today?

Strong Balance Sheets Entering 2023

Largest High Yield E&P Debt Issuers 2014

($1,000s)	Production (Mboe/Day)	Total Debt	EBITDA	Debt / EBITDA	Debt / Mboe Produced	Free Cash Flow
CHESAPEAKE ENERGY CORP	707	$ 11,535	$ 5,128	2.25x	$ 45	($1,984)
LINN ENERGY LLC-UNITS	202	$ 10,296	$ 2,069	4.98x	$ 140	($2,412)
CALIFORNIA RESOURCES CORP	159	$ 6,360	$ 2,616	2.43x	$ 110	$351
CONCHO RESOURCES INC	112	$ 3,562	$ 1,915	1.86x	$ 87	($843)
EP ENERGY CORP-CL A	98	$ 4,533	$ 2,374	1.91x	$ 127	($847)
DENBURY RESOURCES INC	74	$ 3,571	$ 1,353	2.64x	$ 131	$144
ANTERO RESOURCES CORP	168	$ 4,363	$ 1,022	4.27x	$ 71	($3,088)
WHITING PETROLEUM CORP	115	$ 5,602	$ 2,089	2.68x	$ 134	($1,153)
OVINTIV INC	479	$ 7,399	$ 3,668	2.02x	$ 42	$141
MEG ENERGY CORP	71	$ 4,366	$ 921	4.74x	$ 168	($522)
Average (equal weight)				2.98x	$ 106	($1,021)

Largest High Yield E&P Debt Issuers 2023

($1,000s)	Production (Mboe/Day)	Total Debt	Est. 2023 EBITDA(X)	Debt / EBITDA	Debt / Mboe Produced	Est. 2023 Free Cash Flow
OCCIDENTAL PETROLEUM CORP	1150	$ 23,066	$ 16,620	1.39x	$ 55	$8,096
APA CORP	385	$ 5,527	$ 5,785	0.96x	$ 39	$1,726
SOUTHWESTERN ENERGY CO	801	$ 5,274	$ 2,817	1.87x	$ 18	$497
CHESAPEAKE ENERGY CORP	688	$ 3,046	$ 3,345	0.91x	$ 12	$1,012
COMSTOCK RESOURCES INC	227	$ 2,619	$ 1,376	1.90x	$ 32	($88)
RANGE RESOURCES CORP	346	$ 2,385	$ 1,556	1.53x	$ 19	$958
MURPHY OIL CORP	173	$ 3,143	$ 2,237	1.40x	$ 50	$976
CALLON PETROLEUM CO	101	$ 2,516	$ 1,576	1.60x	$ 68	$426
PERMIAN RESOURCES CORP	70	$ 859	$ 2,322	0.37x	$ 33	$740
SM ENERGY CO	147	$ 1,571	$ 1,832	0.86x	$ 29	$644
Average (equal weight)				1.28x	$ 36	$1,499

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Sustainable Free Cash Flow at $50 Oil

	OXY (U.S. Assets) 2022	APA (U.S. Assets) 2022	MUR 2022	CPE 2022
Production (Boe)	342,005,000	77,382,555	63,931,940	38,052,710
Capital Spending	$ 3,082,000,000	$ 843,000,000	$ 1,183,200,000	$ 841,500,000
All-In Cash Costs ($/Mcfe)				
Capital Spending	$ 9.01	$ 10.89	$ 18.51	$ 22.11
Lease Operating/Production Exp.	$ 8.92	$ 6.66	$ 10.61	$ 7.63
Gathering, Transportation	$ 3.87	$ 4.07	$ 3.33	$ 2.55
Exploration Exp.	$ 0.33	$ 0.31	$ 2.08	
General & Administrative	$ 1.93	$ 4.16	$ 2.05	$ 1.51
Interest Expense	$ 1.66	$ 2.86	$ 2.36	$ 4.61
Production Taxes	$ 3.61	$ 3.42	$ 0.89	$ 4.20
Total Cash Cost	$ 29.33	$ 32.37	$ 39.82	$ 42.62
FY 2022				
Realized Oil Px ($/Bbl)	$ 94.12	$ 94.48	$ 94.89	$ 95.72
Realized NGL Px ($/Bbl)	$ 35.69	$ 31.54	$ 33.85	$ 34.84
Realized Nat Gas Px ($/Mcf)	$ 5.48	$ 5.16	$ 6.04	$ 5.59
Ave. Realized Px ($/Bbl)	$ 65.71	$ 53.51	$ 63.17	$ 72.42
Ave. NYMEX Oil ($/Bbl)			$94.23	
Ave. NYMEX Nat Gas ($/Mcf)			$6.35	

What About Natural Gas?

Legend (top panel):
- AR 5⅜% 2030 – Spread (bp) 390
- CRK 5⅞% 2030 – Spread (bp) 602
- RRC 4¾% 2030 – Spread (bp) 396
- SWN 5⅜% 2030 – Spread (bp) 389
- CHK 6¾% 2029 – Spread (bp) 437

602
500
437
390
300

NYMEX Nat Gas – Price 2.24

10.00
8.00
6.00
4.00
2.24

Jul Aug Sep Oct Nov Dec Jan Feb Mar
2022   2023

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Credit Metrics Expected to Remain Solid

($ Millions)	Moody's Long Term	S&P Long Term	Total Debt	Est. 2023 EBITDA(X)	Est. 2023 Debt/EBITDA(X)
Southwestern Energy	Ba1	BB+	$ 4,903	$ 2,817	1.74x
Comstock Resources	B1	B+	$ 2,300	$ 1,376	1.67x
Range Resources	Ba2	BB	$ 2,360	$ 1,556	1.52x
EQT	Ba1	BBB-	$ 4,769	$ 3,989	1.20x
Gulfport Energy	B2	B	$ 729	$ 791	0.92x
SM Energy	B1	B+	$ 1,571	$ 1,832	0.86x
Ovintiv	Baa3	BBB-	$ 3,687	$ 4,328	0.85x
Chesapeake Energy	Ba2	BB	$ 2,717	$ 3,345	0.81x
Antero Resources	Ba1	BB+	$ 1,708	$ 2,225	0.77x
Matador Resources	Ba3	BB-	$ 1,193	$ 1,993	0.60x
Coterra Energy	Baa2	BBB	$ 2,354	$ 4,587	0.51x

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Borrowing Base Breathing Room

Company ($1,000s)	Borrowing Base	Lender Commitments	Amount Out	Letters of Credit	Available
SOUTHWESTERN ENERGY CO	$ 3,500,000	$ 2,000,000	$ 250,000	$ 110,000	$ 1,640,000
ANTERO RESOURCES CORP	$ 3,500,000	$ 1,500,000	$ 34,800	$ 504,000	$ 961,200
CHESAPEAKE ENERGY CORP	$ 3,500,000	$ 2,000,000	$1,050,000	$ 35,000	$ 915,000
COMSTOCK RESOURCES INC	$ 2,000,000	$ 1,500,000	$ -	$ -	$ 1,500,000
RANGE RESOURCES CORP	$ 3,000,000	$ 1,500,000	$ 19,000	$ 307,400	$ 1,173,600
GULFPORT ENERGY CORP	$ 1,000,000	$ 700,000	$ 79,000	$ 113,400	$ 507,600
W&T OFFSHORE INC	$ 50,000	$ 100,000	$ -	$ 4,400	$ 45,600
MATADOR RESOURCES CO	$ 2,250,000	$ 775,000	$ -	$ 45,600	$ 729,400

Source: Bloomberg Data

Bloomberg Intelligence

Netflix: Bond Spreads Tight or Just Right?

Netflix: Credit Summary

- Netflix has $8.9 billion of US$ denominated unsecured bonds due 2024-30
- Notes are rated Ba1 (Positive) by Moody's, BBB (Stable) by S&P
- Low net leverage at ~1.3x
- Returned to Subscriber Growth in 2H22
- Conservative balance sheet goals
  - Within gross debt target of $10-$15 billion
  - Above preferred minimum cash balance of ~$5.4 billion

Moody's press release (April 21, 2022)
"As a result, we will likely observe a few more quarters to determine the new trend lines and reset more specific expectations as well as evaluate Netflix's fresh new levers to grow revenue and free cash flows before considering raising the company's credit ratings to investment grade."

Netflix Bonds Tight to Ba1-Ba3 HY Index Peers FIW <GO>

Netflix vs. Sector Notes Rated BBB- to BBB+

SRCH <GO>

Export to FIW

Netflix In-Line With Sector Notes Rated BBB- to BBB+

SRCH <GO>

Export to FIW

Relative value update on the TMT sector, including how to optimize Bloomberg functionality and data

Robert Schiffman
Technology Credit Analyst
Bloomberg Intelligence

What is Technology and has it Outperformed the Market?

Tech Beats IG Index YTD or Does It? PORT <GO>

Name	Avg % Wgt	Tot Rtn	Excess Rtn	OASD	Spd Chg	CTR
(LUACTRUU) Bloomberg US Cor...	100.00	2.13	-1.35	7.29	0.19	2.13
▸ Banking	23.88	1.11	-1.61	5.07	0.33	0.25
▸ Basic Industry	2.68	2.26	-1.43	7.91	0.19	0.06
▸ Brokerage Assetmanagers...	1.35	1.05	-2.17	6.30	0.35	0.01
▸ Capital Goods	5.29	2.76	-0.73	7.14	0.10	0.14
▸ Communications	8.61	3.27	-0.73	8.93	0.08	0.28
▸ Consumer Cyclical	6.85	2.05	-1.29	6.77	0.19	0.14
▸ Consumer Non-Cyclical	14.87	2.73	-1.09	8.32	0.13	0.42
▸ Electric	7.49	2.34	-1.67	9.09	0.19	0.18
▸ Energy	6.84	1.87	-1.75	7.74	0.23	0.13
▸ Finance Companies	1.22	0.84	-1.57	3.69	0.43	0.01
▸ Insurance	4.63	2.11	-1.80	8.72	0.21	0.10
▸ Natural Gas	0.62	2.76	-1.29	9.32	0.14	0.02
▸ Other Financial	0.06	1.93	-0.71	4.73	0.13	0.00
▸ Other Industrial	0.47	4.85	-0.70	14.09	0.05	0.02
▸ Other Utility	0.19	2.33	-1.85	9.44	0.20	0.00
▸ REITs	2.76	1.90	-1.20	5.77	0.21	0.05
▸ Technology	9.89	2.42	-1.21	7.60	0.16	0.25
▸ Transportation	2.29	2.52	-1.63	9.60	0.17	0.06

Bloomberg Intelligence BI

Returns for Largest IG Technology Issuers

Name	Avg % Wgt	Tot Rtn	Excess Rtn	OASD	Spd Chg	CTR
(LUACTRUU) Bloomberg US Cor...	100.00	2.13	-1.35	7.29	0.19	2.13
▼ Technology	9.89	2.42	-1.21	7.60	0.16	0.25
▶ AAPL	1.26	2.80	-1.08	8.48	0.12	0.04
▶ ORCL	1.10	2.04	-1.82	8.48	0.22	0.02
▶ MSFT	0.66	3.40	-1.27	10.91	0.11	0.02
▶ INTC	0.58	2.01	-2.06	9.15	0.22	0.02
▶ AVGO	0.56	3.17	-0.47	7.47	0.06	0.02
▶ IBM	0.51	1.25	-2.19	6.83	0.32	0.00
▶ DELL	0.28	1.83	-1.04	5.37	0.20	0.00
▶ V	0.26	2.08	-1.80	8.55	0.21	0.01
▶ QCOM	0.24	2.83	-1.14	8.77	0.13	0.01
▶ FISV	0.20	1.32	-1.63	5.35	0.31	0.00
▶ MA	0.18	2.33	-1.43	8.20	0.18	0.00
▶ NXPI	0.16	2.49	-0.68	6.02	0.12	0.00
▶ GPN	0.16	1.79	-1.22	5.64	0.22	0.00
▶ GOOGL	0.16	3.26	-1.09	9.46	0.11	0.00
▶ EQIX	0.16	1.78	-1.36	6.01	0.24	0.00
▶ HPQ	0.15	2.87	-0.30	5.90	0.05	0.00
▶ PYPL	0.15	2.51	-0.89	6.96	0.13	0.00
▶ SPGI	0.14	3.09	-0.81	8.35	0.10	0.00
▶ NVDA	0.14	3.59	-0.20	8.14	0.02	0.00
▶ CSCO	0.13	2.52	-0.89	7.04	0.13	0.00
▶ CRM	0.13	3.10	-1.00	9.61	0.10	0.00
▶ TXN	0.12	1.90	-1.89	8.18	0.23	0.00

Largest Technology Issuers   PORT <GO>

Name	#	% Wgt	Mkt Val
(LUACTRUU) Bloomberg US Cor...	7,491	100.00	6,154,539,368
▼ Technology	633	9.98	614,519,588
▸ AAPL	47	1.23	75,848,512
▸ ORCL	38	1.15	70,729,511
▸ INTC	38	0.72	44,056,032
▸ MSFT	23	0.62	38,385,582
▸ AVGO	23	0.56	34,166,859
▸ IBM	30	0.50	30,885,285
▸ DELL	15	0.29	17,770,358
▸ V	11	0.26	15,787,859
▸ QCOM	14	0.24	15,053,202
▸ FISV	10	0.22	13,705,559
▸ MA	14	0.18	11,021,694
▸ NXPI	15	0.16	10,019,112
▸ GPN	14	0.16	9,731,608
▸ HPQ	10	0.15	9,474,474
▸ EQIX	15	0.15	9,461,437
▸ PYPL	10	0.15	9,175,108
▸ GOOGL	7	0.15	9,121,649
▸ NVDA	8	0.14	8,563,719
▸ CSCO	6	0.13	8,008,005
▸ CRM	7	0.13	7,729,158
▸ TXN	14	0.12	7,506,292

As of 03/20/23

Who, What, Where Can I Find What I'm Looking For?

Bloomberg Intelligence
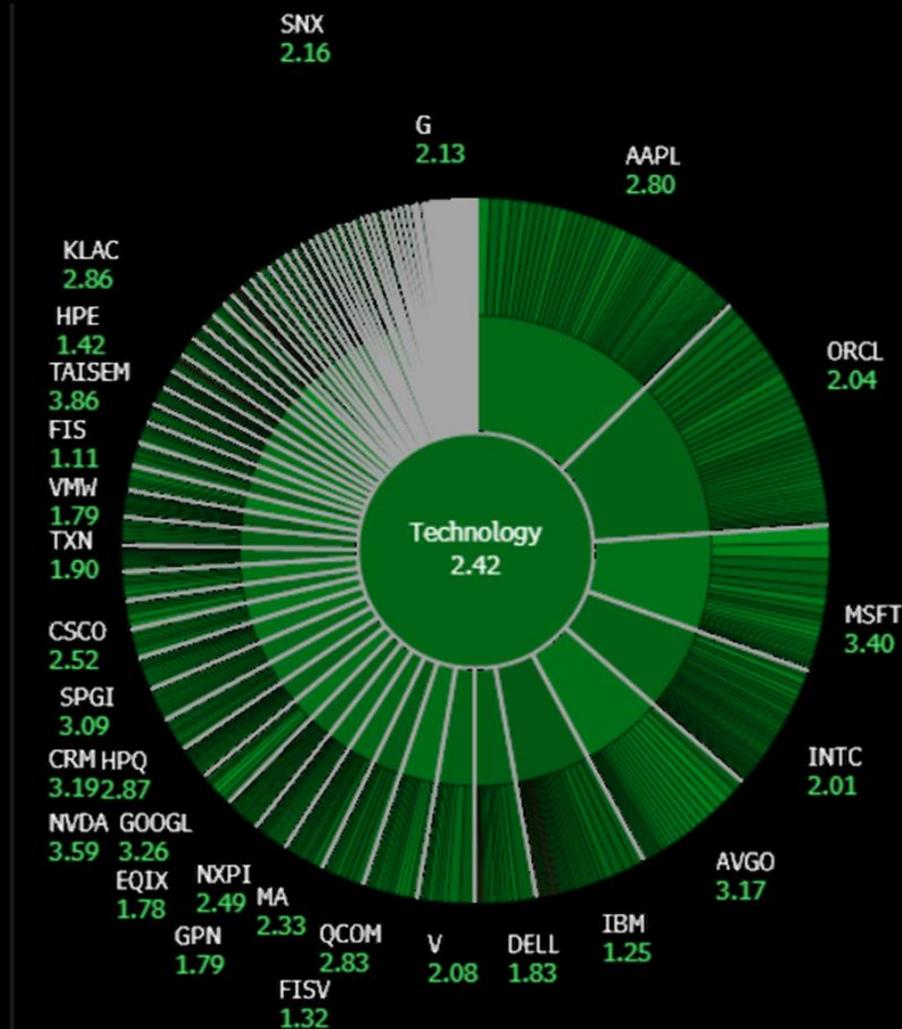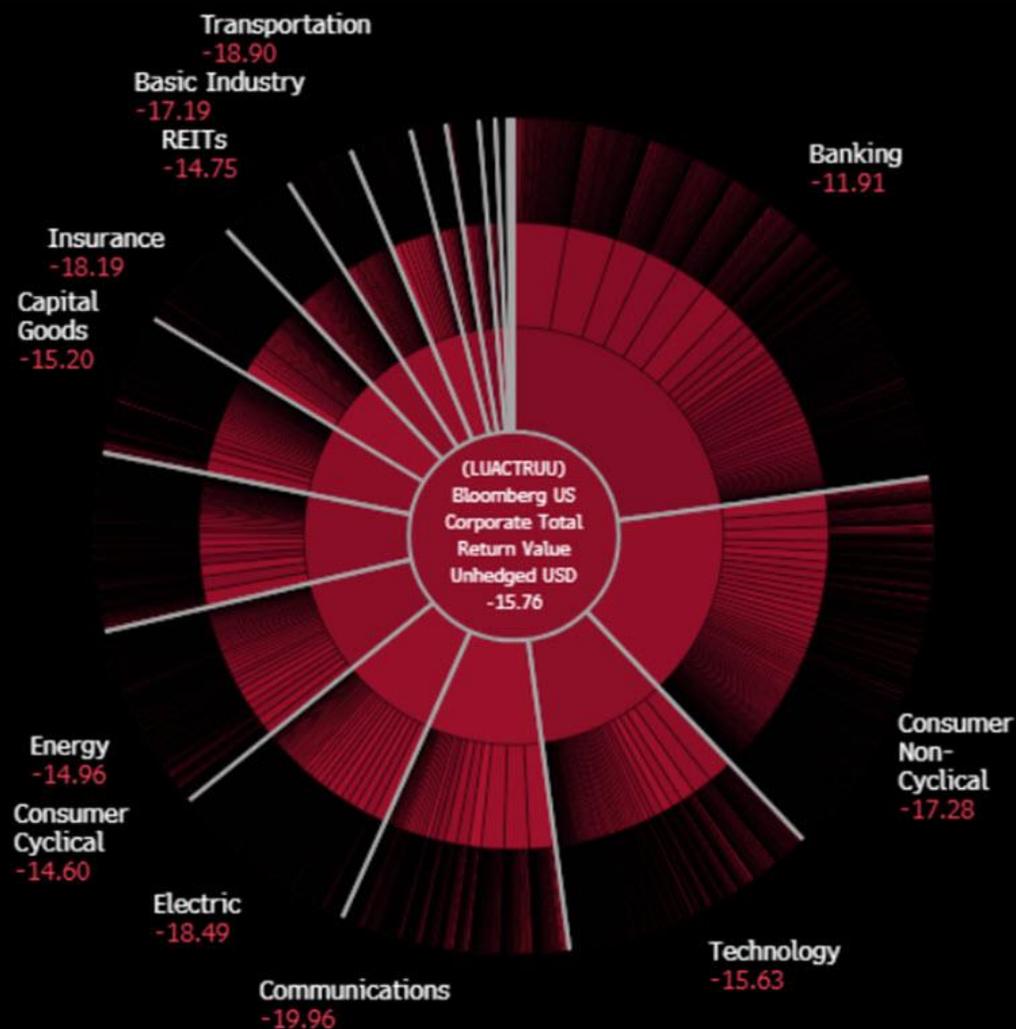
What if I'm Interested in Convertibles?   PORT <GO>

Name	#	% Wgt	Mkt Val
(LUCCTRUU) Bloomberg US Co...	558	100.00	269,114,384
▸ Technology	146	28.36	76,321,243
▸ Consumer Cyclical	88	17.45	46,959,452
▸ Consumer Non-Cyclical	115	16.77	45,134,015
▸ Communications	52	10.47	28,189,374
▸ Electric	18	5.66	15,241,966
▸ Banking	12	4.20	11,297,103
▸ Capital Goods	25	3.47	9,346,183
▸ Transportation	13	2.67	7,183,008
▸ Energy	15	2.45	6,593,985
▸ Basic Industry	12	2.11	5,666,582
▸ REITs	32	2.09	5,632,877
▸ Other Industrial	6	1.21	3,268,989
▸ Brokerage Assetmanagers...	8	1.15	3,100,683
▸ Finance Companies	7	0.91	2,443,832
▸ Other Financial	5	0.54	1,443,401
▸ Natural Gas	2	0.40	1,066,790
▸ Insurance	2	0.08	224,898

(LUCCTRUU) Bloomberg   vs   Default (None)   by   BCLASS3 -> T   in   USD   As of 03/20/23

○ Date   ● Trend

Bloomberg Intelligence   BI

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