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Remember Deposit Beta

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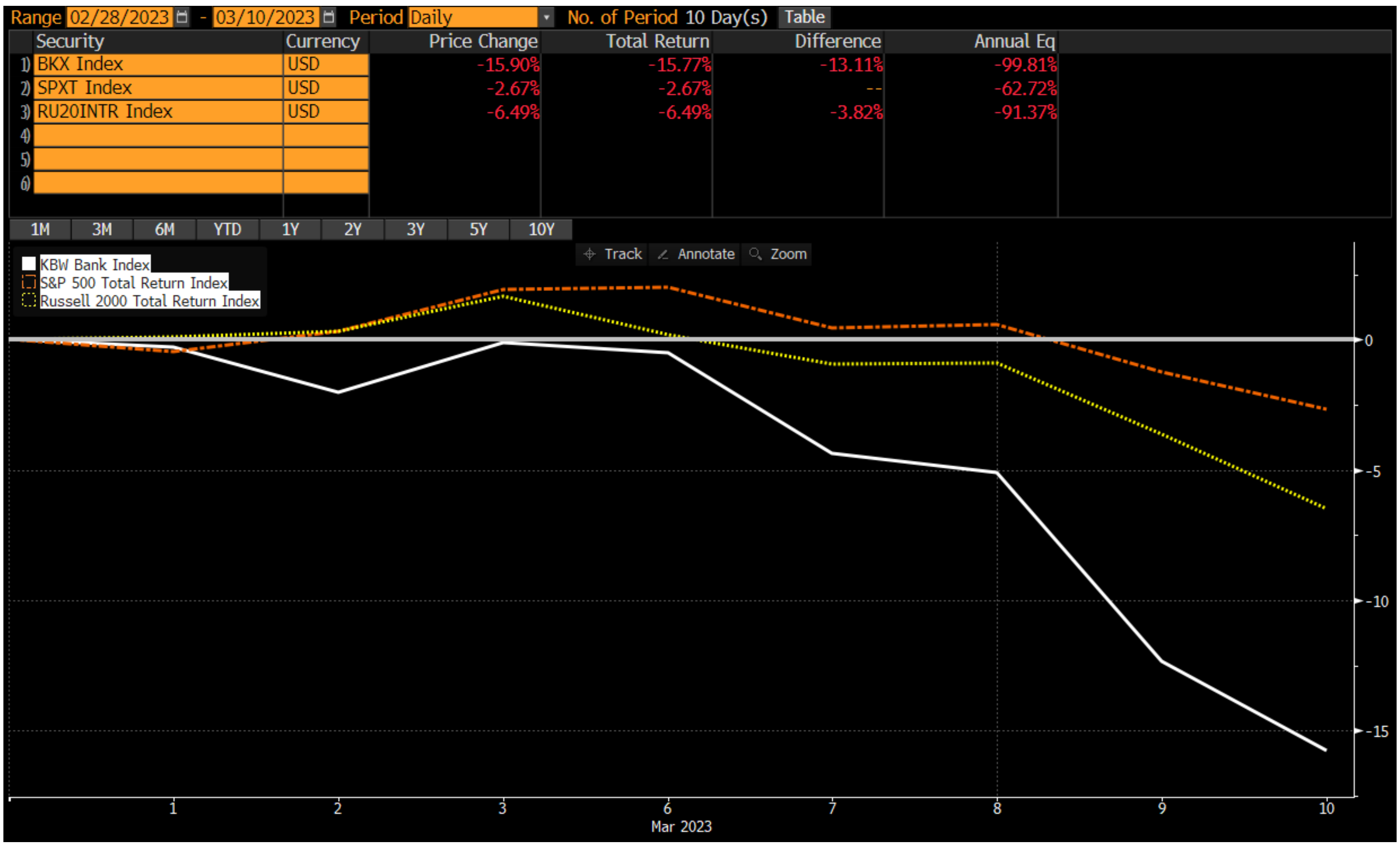
"Remember the Golden Rule: He who has the gold, makes the rules."

– Johnny Hart, writer of comic strip Wizard of Id

The events that led to this past week's market sell-off, especially in U.S. bank stocks (Figure 1), reminded investors of the lagged effects from restrictive monetary policy (i.e. central bank rate hikes and the reduction of bank reserves through quantitative tightening). The market's fixation on Fedspeak, such as Chair Jerome Powell's testimony in front of Congress warning of higher-than-expected interest rate hikes, and on key economic releases, such as the employment payrolls report on Friday, was abruptly jerked toward the troubles that surfaced, seemingly out of nowhere, across smaller regional banks, notably SVB Financial Group, the holding company of Silicon Valley Bank (SVB).

Figure 1 – U.S. Banks Lead This Month's U.S. Stock Market Sell-Off Over Concerns of Diminished Profitability and Regulatory Capital Pressures Stemming from Asset Losses.



	Security	Currency	Price Change	Total Return	Difference	Annual Eq
1)	BKX Index	USD	-15.90%	-15.77%	-13.11%	-99.81%
2)	SPXT Index	USD	-2.67%	-2.67%	--	-62.72%
3)	RU20INTR Index	USD	-6.49%	-6.49%	-3.82%	-91.37%
4)						
5)						
6)						

Source: Bloomberg

U.S. regulators worked through the weekend to find a buyer of SVB, either in whole or asset-by-asset and business-by-business (it was reported early Monday morning that HSBC would purchase SVB UK for 1 pound). The SVB news coincided with other regulatory crackdowns involving crypto-exposed lenders such as Silvergate Capital Corp. and Signature Bank. Other regional banks and financial institutions viewed as more susceptible to funding mismatches, depositor flights and marked-to-market losses on securities portfolios also sold off sharply.

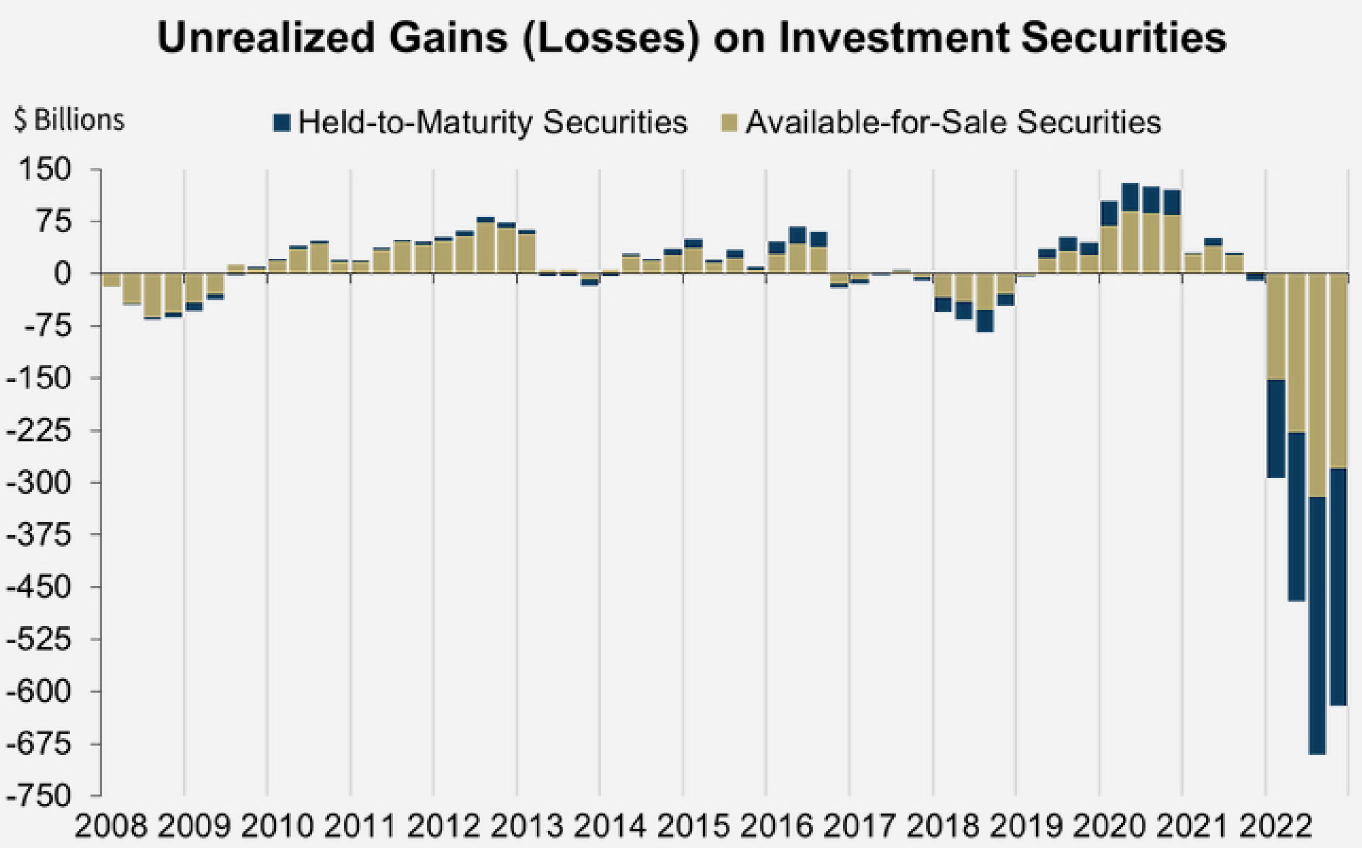
In the span of 48 hours, the top 15 U.S. bank ranked by assets and major lender to the venture capital community was shut down and taken over by California regulatory authorities and put into receivership by the Federal Deposit Insurance Corporation (FDIC). Much ink has already been spilled over what led to the collapse of SVB, but we recommend this substack piece, “The Demise of Silicon Valley Bank,” authored by Marc Rubenstein. The article provides a succinct overview of the asset-liability mismanagement that led to SVB’s fall from banker-to-the-VC-stars to an ignominious end in receivership with equity and debtholders likely wiped out but all deposit holders made whole through emergency backstop facilities set up by federal regulators.

In a nutshell, the bank was undone by classic Banking 101 mismanagement, namely 1) loading up on long-term high-quality securities (government and mortgage-backed securities unhedged) mismatched against short-term liabilities (customer deposits) and 2) misunderstanding the flighty nature of its depositor base as well as an industry-wide downturn that drove an accelerated drawdown of corporate cash (not to mention that 97% of its deposits exceeded the $250,000 insurance threshold, making the bank especially susceptible to flight risk). Prior to the sudden collapse, the bank had posted profits every year but its profitability suddenly dwindled in the face of higher funding costs (deposits), slowing loan growth, and dwindling deposits. In the end, the bank announced a capital raise on Wednesday to make up for the capital shortfall from having to incur a loss on the disposition of its entire Available-For-Sale (AFS) book, causing an initial collapse in its stock price and ultimately the takeover by regulatory bodies.

The issues of 1) mismatched asset/liability funding, 2) dwindling customer deposits chasing higher risk-free returns offered by U.S. Treasury Bills and money market funds, 3) declining loan growth (due to tightening standards), and 4) credit troubles surfacing across the loan book (primarily commercial real estate) came to a head this past week as many banks were directed by regulators/credit rating agencies to recognize unrealized losses on their AFS portfolio and raise equity capital if needed to shore up regulatory capital coverage ratios. The best-case outcomes were warnings of increased pressure on profitability, notably net interest income margins.

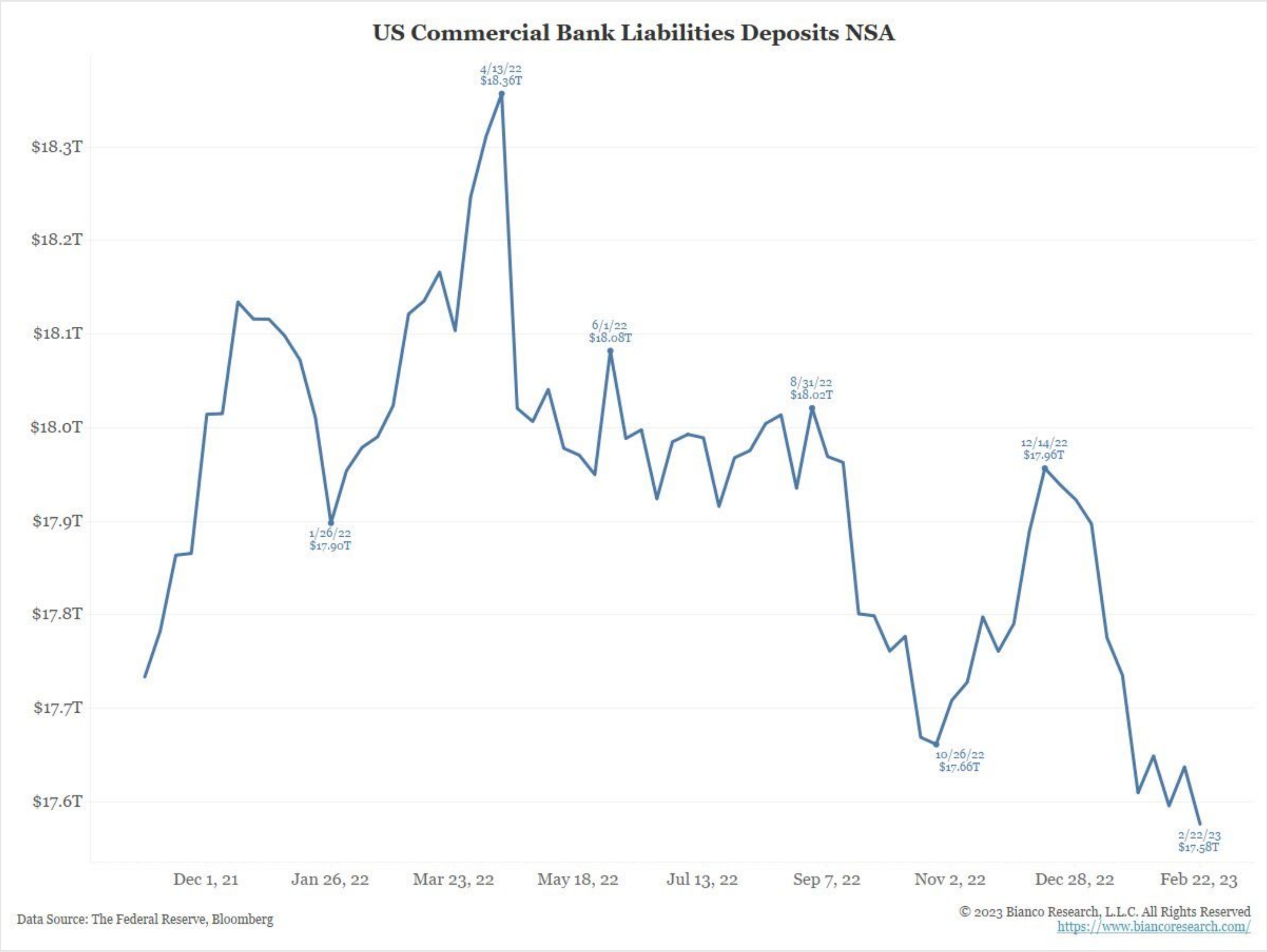
Figure 2 displays the aggregate amount of unrealized losses accumulated by the banking system, mostly due to sharply higher interest rates over the past year that have reduced the value of interest-bearing securities (more so with longer-maturity securities on an unhedged basis). **Figure 3** displays the decline in bank-held deposits accelerated in the past few months as zero-cost bank deposits had no shot of competing with 5% T-Bills and 4.5% money market yields. In effect, Deposit Beta went from Zero to 60 seemingly overnight in bank-time space.

Figure 2 – Unrealized Losses on Investment Securities Ballooned as Interest Rates Rose Sharply Since 2021.



Source: FDIC.
Note: Insured Call Report filers only.

Figure 3 – Deposits at Commercial Banks Have Declined as Zero-Cost Deposits Can No Longer Compete with 5% Treasuries and 4.5% Money Market Yields

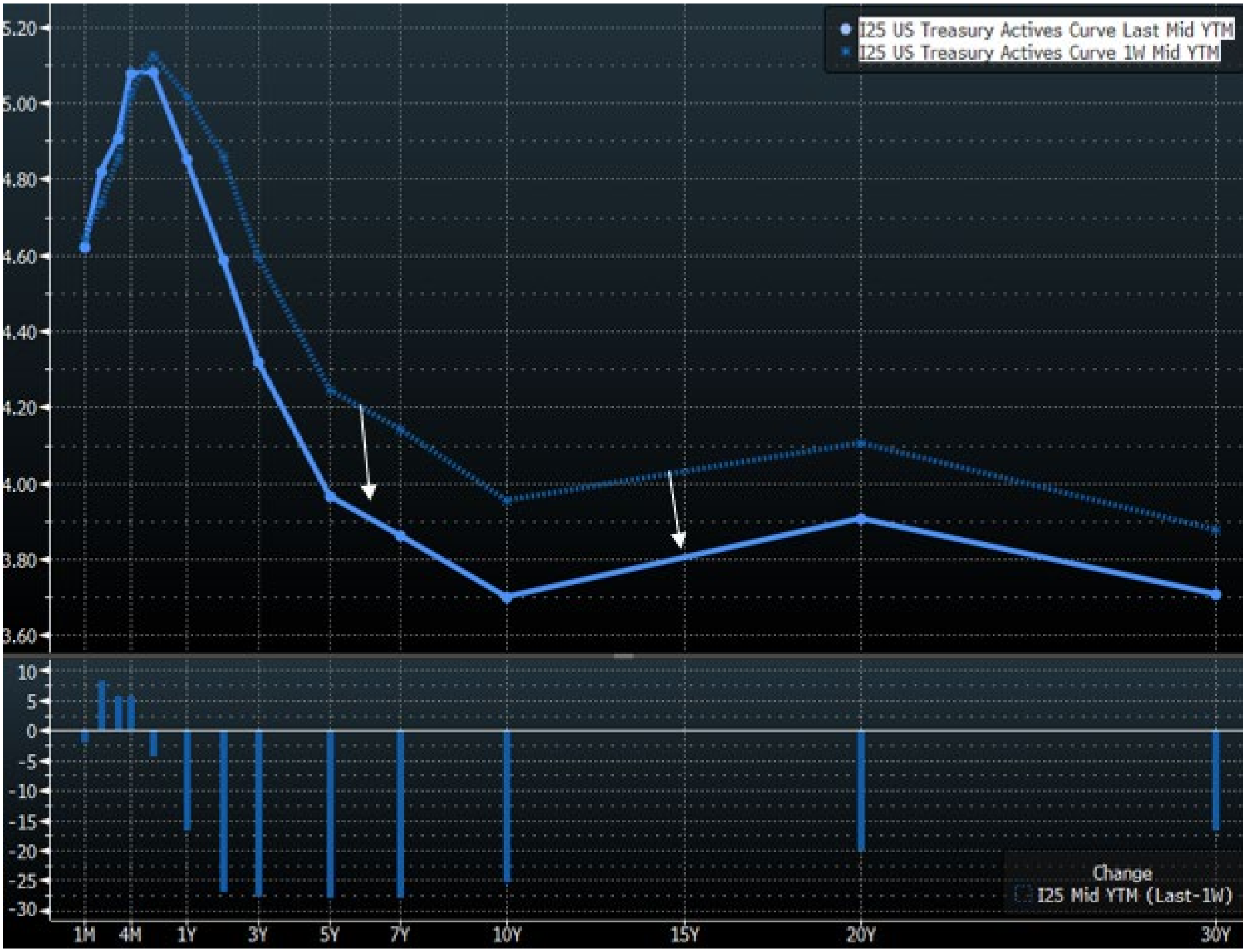


The larger banks, namely the Systemically Important Financial Institutions (SIFI), such as JPMorgan and Bank of America, are viewed as less susceptible to the pressures facing smaller regional banks as SIFIs enjoy more diversified sources of revenue outside of banking, a more diversified depositor base less likely to flee en masse, and more conservative capital ratios (partly driven by their designation as a SIFI subject to Supplementary Leverage Ratios (SLR)). If U.S. banking were to enter into a good bank-acquiring-bad bank phase, the larger banks would likely be "encouraged" by regulators to lead that effort. We may learn soon enough that banks able to retain the deposits (their Deposit Beta) will indeed set the rules for how the banking system moves on from this episode.

Whether this latest unsettling episode in bank collapses is viewed as a one-off event (clearing the few bad apples) or something more systemic that threatens to spread contagion across the entire financial system remains to be seen although most analysts and prognosticators are leaning towards the former. Ultimately, the losses incurred on bank portfolios so far are mostly due to the markdown of high-quality assets from higher interest rates rather than due to festering credit issues such as loan defaults (although troubles across commercial real estate are worth monitoring). These markdowns are pressuring banking capital ratios and bank earnings will take a hit, but the U.S. banking system should weather this latest storm barring a major recession (which would add credit stress on top of rate stress).

And a deep recession is what the Federal Reserve would like to avoid, both for political optics (witness the grilling Powell received on Capitol Hill) and how that added credit stress could put a real hurt on bank balance sheets already reeling from higher interest rates. The bond market has already figured this out as bonds rallied sharply this past week as rates dropped across the Treasury curve (**Figure 4**), especially the 2-Year Treasury rate (most sensitive to the expected Fed rate policy path) which had spiked the previous week following hawkish Congressional testimony from Powell indicating that rates would likely move higher as inflationary pressures remain elevated.

Figure 4 – Bonds Rallied This Past Week as U.S. Treasury Rates Dropped Across the Maturity Curve in Anticipation of a Policy Reversal from the Fed in the Face of U.S. Banking Stress



Source: Bloomberg

Indeed, Fed Funds futures have lowered the projected terminal Fed Funds rate by about 0.50% from the prior week and are now projecting a rate cut by the end of the year (**Figure 5**). Implicit in this bond market rally is the expectation that the Fed will be forced to backtrack its hawkish comments in the face of banking stress, regardless of this week's CPI and PPI prints (**Figure 6**), where year-over-year inflation is still tracking at 5-6%.

Figure 5 – Fed Funds Futures Anticipate a Lower Terminal Fed Funds and a Rate Cut Later This Year

Region: United States » | Instrument: Fed Funds Futures »
Target Rate 4.75 | Pricing Date 03/10/2023
Effective Rate 4.57 | Cur. Imp. O/N Rate 4.565

Meeting	#Hikes/Cuts	%Hike/Cut	Imp. Rate Δ	Implied Rate	A.R.M.
03/22/2023	+1.332	+133.2%	+0.333	4.898	0.250
05/03/2023	+2.394	+106.3%	+0.599	5.163	0.250
06/14/2023	+2.881	+48.6%	+0.720	5.285	0.250
07/26/2023	+2.802	-7.9%	+0.700	5.265	0.250
09/20/2023	+2.442	-36.0%	+0.610	5.175	0.250
11/01/2023	+1.904	-53.8%	+0.476	5.041	0.250
12/13/2023	+1.281	-62.3%	+0.320	4.885	0.250
01/31/2024	+0.642	-63.9%	+0.160	4.725	0.250

Source: Bloomberg

Figure 6 – Don't Forget Inflation as Year-Over-Year CPI and PPI Are Still Tracking Around 5-6%

United States | 0) Browse | 09:17:54 | 03/11/23 - 03/18/23
Economic Releases | All Economic Releases | View ● Agenda ● Weekly

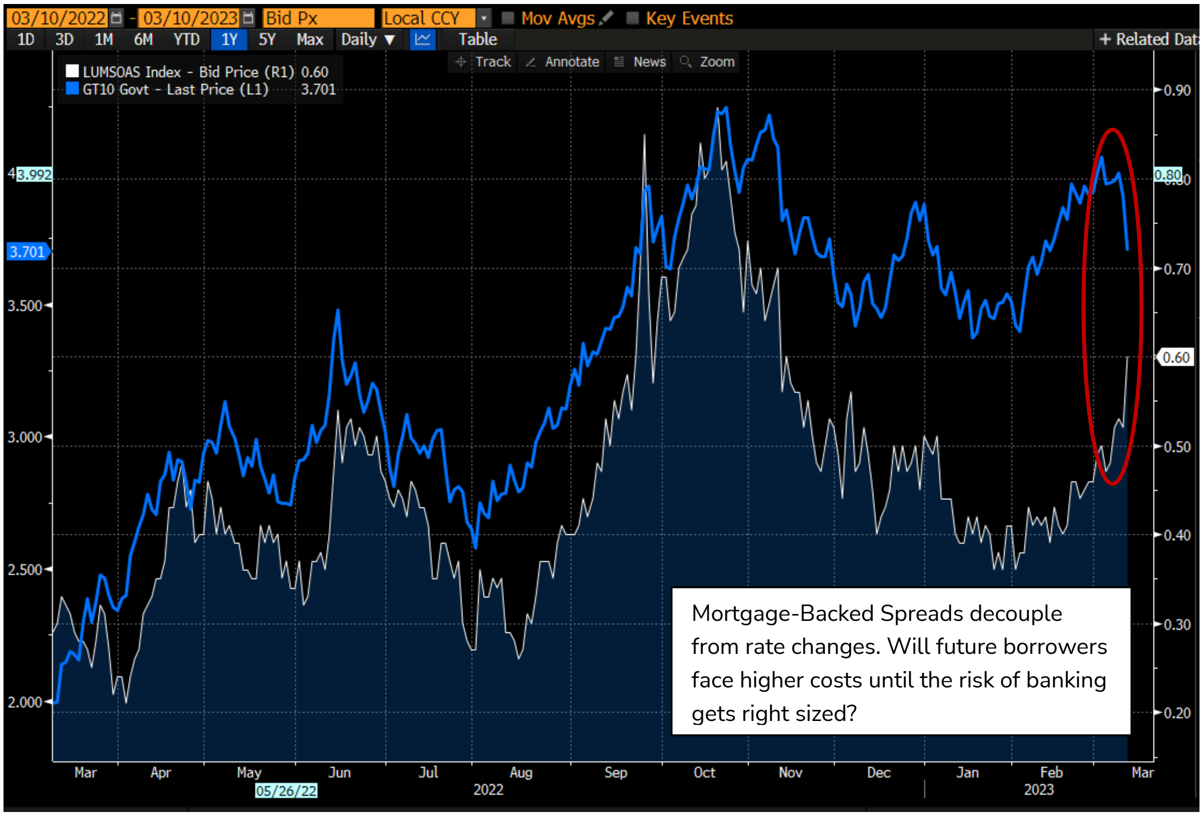
	Date Time	A	M	R	Event	Period	Surv(M)	Actual	Prior	Revised
24)	03/14 08:30				CPI MoM	Feb	0.4%	--	0.5%	--
25)	03/14 08:30				CPI Ex Food and Energy MoM	Feb	0.4%	--	0.4%	--
26)	03/14 08:30				CPI YoY	Feb	6.0%	--	6.4%	--
27)	03/14 08:30				CPI Ex Food and Energy YoY	Feb	5.5%	--	5.6%	--
28)	03/14 08:30				CPI Index NSA	Feb	300.860	--	299.170	--
29)	03/14 08:30				CPI Core Index SA	Feb	303.736	--	302.702	--
30)	03/15 07:00				MBA Mortgage Applications	Mar 10	--	--	7.4%	--
31)	03/15 08:30				PPI Final Demand MoM	Feb	0.3%	--	0.7%	--
32)	03/15 08:30				PPI Ex Food and Energy MoM	Feb	0.4%	--	0.5%	--
33)	03/15 08:30				PPI Ex Food, Energy, Trade MoM	Feb	0.3%	--	0.6%	--
34)	03/15 08:30				PPI Final Demand YoY	Feb	5.4%	--	6.0%	--
35)	03/15 08:30				PPI Ex Food and Energy YoY	Feb	5.2%	--	5.4%	--
36)	03/15 08:30				PPI Ex Food, Energy, Trade YoY	Feb	--	--	4.5%	--

Source: Bloomberg

One likely fallout from this episode: banks have now gone through their own figurative Cat-5 hurricane from the sins of asset/liability mismatch and unanticipated deposit beta. One may reasonably expect a repricing of risk as what typically happens with property and casualty insurance premiums right after a major loss event. The upshot is higher risk premiums across all consumer lending, especially long-term fixed-rate lending such as mortgages (maybe you get a discount if you hold deposits at the lending institution).

Figure 7 displays the 10-Year U.S. Treasury yield versus the option-adjusted spread (OAS) of mortgage-backed securities – the OAS is the risk premium investors require to be compensated for credit risk and prepayment risk (or negative convexity). OAS typically rises with rates and vice versa, mainly due to rate volatility (higher volatility makes the embedded option more attractive as the future cash flows become less certain). However, last week saw a breakdown between government rate changes and MBS OAS as OAS actually rose even though the 10-year rate dropped. In other words, an elevated OAS relative to government borrowing rates implies mortgage lenders will demand a higher risk premium for underwriting mortgage risk. The convexity profile is changing and Fed rate cuts may lower government borrowing costs but may not have the same transmission mechanism through private lending until the risk of banking gets right-sized, especially mortgages that do not conform to federal housing agency guidelines (aka conventional mortgages). It should also be noted that corporate borrowing spreads have not widened that much suggesting that institutionalized borrowing will not be as adversely affected from banking stress.

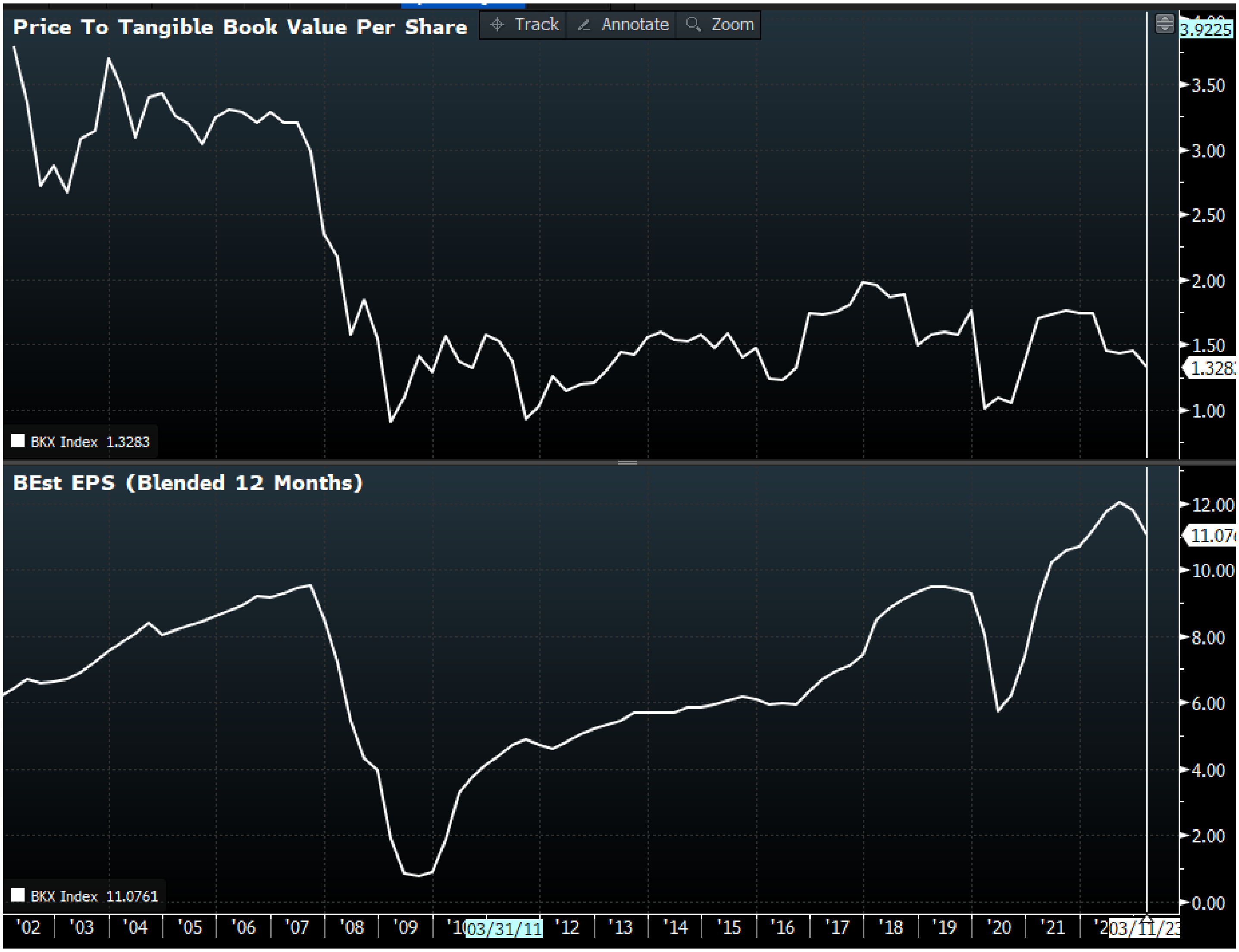
Figure 7 – Will Mortgage Borrowers Have to Pay More Should the Perceived Risk of Long-Term Lending Increase?



Source: Bloomberg

Finally, last week's sharp selloff in U.S. bank stocks has brought valuations down although they remain above the troughs seen during the pandemic (**Figure 8**). Few are surprised that bank earnings per share are projected to decline in the face of net interest margin pressures (higher deposit costs, slower lending, lower long-term rates relative to short-term rates). The regulatory review that prompted the recognition of unrealized losses on securities held also likely means stock repurchases and dividend increases have been put on hold for the time being.

Figure 8 – Bank Valuations (KBW Bank Index) Have Dropped but Projected Earnings Are Rolling Over



Source: Bloomberg

Key takeaways:

- Investors should reassess their underlying risk exposures within fixed income and debt securities with respect to duration (interest rate risk) and credit (default risk), in light of the challenging landscape facing the U.S. economy such as a slowing labor market and elevated inflation. Inflation protection which had been arguably underpriced earlier in the year appears to be fairly priced as TIPS breakeven rates have risen above the Fed's long-term inflation target.
- The securitized market, particularly mortgage-backed securities, appears more relatively attractive relative to other sectors, such as corporate debt, as the latter may experience a sustained rise in cost of capital due to greater uncertainty even though credit spreads remain unchanged.
- Few bank stocks came away unscathed from last week as investors threw the baby out with the bath water. There might be a limited window to identify bank stocks trading at depressed valuations despite more attractive balance sheets, capital ratio profiles and business prospects. Astute active managers should be able to invest in these opportunities.
- Stock market volatility may be impacted by policy reactions either from the government or from the Federal Reserve. Investors may cheer any pro-fiscal responses such as government backstops of all deposit holders or the Federal Reserve pausing any further policy tightening until the fog-of-war surrounding the banking sector clears up.

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