UBS House View

Monthly Letter | 23 March 2023

Turbulent times

Banking sector turmoil appears unlikely to evolve into a full-blown crisis. But confidence is fragile, and markets are likely to stay volatile.

Risks to growth

Financial conditions are likely to tighten, raising the risk of a hard landing for the US economy. Some banks may scale back on lending.

Policy rates to peak

Central bank rate-hiking cycles look likely to end sooner, so investors should manage their liquidity and lock in higher yields.

Asset allocation

We move bonds to most preferred relative to equities. We move the US dollar to least preferred, and add a preference for gold.



Mark Haefele Chief Investment Officer Global Wealth Management

in Follow me on LinkedIn linkedin.com/in/markhaefele

Follow me on Twitter twitter.com/UBS_CIO

Inflection point or breaking point?

The collapse of Silicon Valley Bank and the subsequent turmoil in the banking sector have prompted comparisons with the global financial crisis. Yet despite recent market headlines, the S&P 500 is still closer to its six-month high than its six-month low.

As we consider what to make of this seeming anomaly, three key questions are top of mind for investors: Have policymakers averted a full-blown crisis? What does it all mean for the economy? Where next for interest rates?

Confidence is still fragile, volatility is likely to remain high, and policymakers may yet have to go further to ensure that faith in the global financial system stays solid. But regulations brought in after the global financial crisis to boost bank capital and liquidity ratios, combined with the magnitude of policymakers' responses over the last couple of weeks, mean this episode looks unlikely to evolve into something akin to the 2008–09 meltdown.

Nonetheless, financial conditions are likely to tighten, increasing the risk of an economic hard landing even if central banks ease off on interest rate hikes. In the months ahead, various banks are likely to restrict lending in order to build up their liquidity buffers. Regulators may demand higher capital reserves, particularly for smaller US banks. Fragile sentiment is also likely to mean a higher cost of credit more generally.

Central banks may worry about stopping rate hikes given still-elevated inflation. But they also need to consider how to balance their battle with inflation against risks to growth and financial stability. The Federal Reserve raised rates by 25 basis points this month, but its statement contained a shift in language: Gone is the reference to "ongoing increases" likely being appropriate; instead, "some additional policy firming may be appropriate." The European Central Bank delivered on its promised 50bps hike, but shifted to a "data-dependent" stance going forward.

Chief Investment Office GWM

Investment Research

This report has been prepared by UBS AG. Please see important disclaimers and disclosures at the end of the document.



Well-diversified investors should refrain from making rash decisions and keep sight of long-term financial goals.

We recommend increasing exposure to bonds.

A faster end to the rate-hiking cycle seems likely if the banking sector starts to limit the supply of credit into the real economy. Lower bank lending is usually associated with disinflation, or even deflation.

How should investors position?

Most important, investors who are already well diversified should refrain from making rash decisions, keep sight of long-term financial goals, and consider opportunity costs and reinvestment risks alongside market risks. History has taught us that for well-diversified investors, the greatest threat to real wealth tends not to come from being invested through periods of short-term volatility, but from being under-invested over the long term.

Tactically, we see a higher probability that central bank hiking cycles will end sooner. We therefore think it's time to increase exposure to bonds, which we upgrade this month to most preferred. We see high-quality fixed income as attractive given decent yields and the potential for capital gains in the event of a deeper economic slowdown. Investors holding excess cash should consider opportunities to lock in today's yields within the asset class.

Figure 1

Bonds are attractive relative to equities

Global equity risk premium calculated on a DDM and earnings yield less 10-year US Treasury yield basis, in %



Note: DDM = dividend discount model

Source: Refinitiv, UBS, as of March 2023

While equities should remain a key component of long-term portfolios, we expect global stocks to deliver limited returns and exhibit high volatility over the remainder of the year. We downgrade equities this month to least preferred. Within the asset class, we recommend diversifying beyond the US and growth stocks given elevated valuations and rising risks to the US economy. We do, however, expect positive performance from emerging market equities, including China and Asian semiconductor stocks, and select European themes, including German equities. At a global sector level, we like industrials, consumer staples, and utilities.

In currencies, we think investors should start to position for a weakening of the US dollar. Safe-haven flows have supported the greenback in recent weeks, but elevated valuations and an approaching end to the Federal Reserve's rate hikes mean we expect the US currency to weaken over the balance of the year. On a relative basis, we prefer the Australian dollar as well as the Swiss franc, euro, British pound, Japanese yen, and gold.

The US dollar is likely to weaken over the balance of the year.

Policymakers have acted quickly to restore confidence in the banking system.

The US banking sector is much better capitalized than it was prior to the global financial crisis. Elsewhere, we see opportunities to add return and diversification to portfolios through select real assets, including broad commodities and infrastructure; alternative assets, including hedge funds and private markets; and sustainable investments, including sustainable bonds and equity themes.

For more on our ideas for navigating the current market environment, please refer to our *2Q Outlook*, "Stability amid uncertainty," published concurrently with this letter.

Have policymakers averted a full-blown banking crisis?

Central banks and other regulators have acted with speed and conviction to restore confidence in the banking system. At the time of writing, the steps taken so far appear to have succeeded in preventing disorderly bank failures and boosting investor confidence.

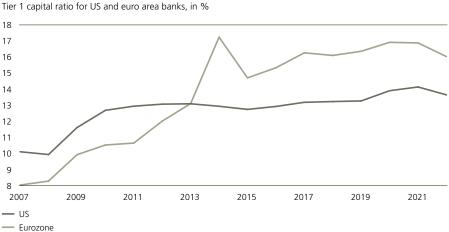
But in 2008–09, the global financial crisis only truly eased once depositors and investors regained faith that banks were both sufficiently solvent and liquid. Are the actions taken this time potent enough to rein in this latest crisis?

Solvency – no widespread solvency issue, but some banks may raise more capital

Some banks have certainly made losses on their investment portfolios if the securities held were to be marked to their current market values. But, unlike in 2007, we don't think the situation today represents a widespread issue around bank solvency.

The US banking system is far better capitalized than it was before the global financial crisis. At the end of 2022, the aggregate Tier 1 risk-based capital ratio was at 13.65%, compared with 10.11% at the end of 2007. The mark-to-market losses are likely to be temporary: High-quality government bonds are highly likely to be repaid in full at maturity, unlike many collateralized debt obligations (CDOs) that banks held in 2007.

Figure 2



The banking system is far better capitalized than before the GFC Tier 1 capital ratio for US and euro area banks, in %

Source: FDIC, ECB, UBS, as of March 2023

European banks have strong capital levels.

Authorities have been proactive in addressing liquidity challenges.

Over the past year, the US economy has shown resilience in the face of Fed rate hikes. If mark-to-market losses on securities were realized, this would dent banks' capital ratios. According to analyst estimates, of the top 24 US banks, the median common equity Tier 1 (CET1) capital ratio—a narrower definition of bank capital and one of the many metrics regulators look at—would be reduced by over 300bps as of year-end 2023. But the Fed's new Bank Term Funding Program (BTFP) has effectively removed the need to mark securities to market.

That said, after the global financial crisis, the introduction of credible stress tests, bolstered capital requirements, and capital raising were crucial to sustainably rebuilding confidence in the largest banks. A similar approach may now be required at the regional US banks, for example by gradually harmonizing their capital and liquidity requirements with those for the larger banks.

It's worth noting that unrealized losses on held-to-maturity securities appear to be a far smaller issue in Europe. European banks have not experienced as rapid a growth in deposits in recent years, meaning their securities investments have been more limited. Based on public disclosures of their securities portfolios, their unrealized losses not yet reflected in regulatory capital would translate into an average CET1 capital erosion of about 40bps (based on the MSCI Europe Banks index). Given their strong capital levels, European banks should be readily able to absorb this—their pro forma CET1 ratio would still be at 13.5–14% even if banks were forced to realize the mark-to-market losses.

Liquidity – buying time while confidence is restored

Banks hold a proportion of their capital in liquid assets that can be quickly sold to meet short-term obligations even during periods when outside funding is unavailable. But if a bank experiences a particularly rapid or large depositor outflow, or if counterparties suddenly stop accepting their credit, a liquidity crisis can still emerge, as we have seen. While this does not necessarily affect a bank's ability to pay depositors and creditors eventually, a "lender of last resort" may need to step in.

Recent actions by the US and Swiss authorities have shown a willingness to use "shock and awe" to eliminate liquidity challenges, and their presence and proactivity should help reassure investors and depositors. In the week ending 15 March, US banks took USD 152.9bn from the Fed's discount window and USD 11.9bn in loans from the BTFP. In total, this is equivalent to 1% of total deposits (versus 1.8% at the height of the global financial crisis).

However, over time, to repay loans from the central bank, banks need to add deposits, find other lenders, or reduce their assets. When confidence is low, none of these are straightforward. For markets, this means that, until we start to see that banks are reducing their reliance on central bank funding, a sense of pending crisis could persist.

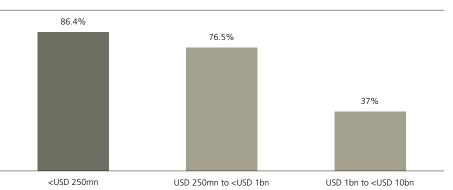
What does it all mean for the economy?

The US economy has proven resilient even in the face of the fastest Fed ratehiking cycle in four decades. Over the last two months, nonfarm payrolls have increased by 815,000. The unemployment rate is close to a 50-year low, and there are 1.8 job openings for each unemployed person.

Figure 3

Small banks play a big role when it comes to C&I loans to small businesses

Percentage of banks by size that make "largely all" of their commercial and industrial (C&I) loans to small businesses



Source: FDIC, UBS, as of March 2023

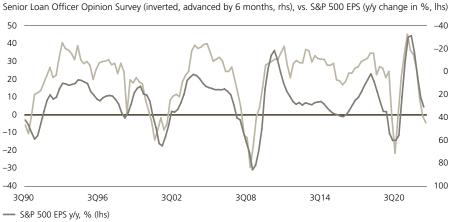
Lower risk appetite among banks could mean a pullback in new loans to the real economy.

But recent events could change this. Banks are a key conduit for transmitting central bank interest rate policy into the broader economy. A potential threat to the US economy is that regional banks' diminished appetite for risk and attempts to rebuild liquidity will mean fewer new loans for the real economy. These banks, with less than USD 250bn in assets, account for roughly 50% of US commercial and industrial lending, 60% of residential real estate lending, 80% of commercial real estate lending, and 45% of consumer lending. And in the US, businesses with fewer than 500 employees account for 52% of the private work force. The potential result is that tighter lending standards lead to a small-business credit crunch, lower growth, and higher unemployment.

Goldman Sachs has estimated that a pullback in lending could hit US GDP growth by up to 0.5 percentage points, with a 2.5% decline in credit growth translating to about a 0.25% hit to GDP growth. A more pronounced reduction in credit would have an even greater impact. Historical data also suggests that US corporate earnings are closely linked to banks' willingness to lend.

Figure 4

Tighter lending standards point to a contraction in US earnings



Senior Loan Officer Opinion Survey, inverted, advanced 6m (rhs)

Source: Refinitiv Datastream, UBS, as of March 2023

Central banks need to balance their battle against inflation with heightening risks to growth and financial stability.

The Fed has continued to raise policy rates, but highlighted growing economic risks.

We focus on strategies to build resilience, mitigate risks, position for regional divergences, and diversify portfolios. Contractions in bank lending tend to be disinflationary, which may provide the Fed with additional confidence to stop hiking rates sooner. But even a change in Fed policy may not be enough to prevent a growth slowdown. If banks are restricting lending so they can rebuild their liquidity, lower interest rates will not suffice in stimulating loan growth.

Where now for interest rates?

Heading into the banking sector turmoil, the inflation threat had not gone away. US monthly core CPI inflation, excluding food and energy, accelerated to 0.5% in February from 0.4% in January. In the Eurozone, annualized core inflation increased from 5.3% to 5.6%. But now, central banks need to consider how to balance their battle against inflation with heightening risks to growth and financial stability.

Thus far, major central banks have responded by continuing to hike policy rates. The Fed and Bank of England increased interest rates by 25bps this week, and the Swiss National Bank by 50bps. The European Central Bank raised its deposit rate by 50bps last week. President Christine Lagarde acknowledged that downside risks to the Eurozone economy have clearly increased, but also said, "Inflation is projected to remain too high for too long."

From here, the central banks essentially have three options. One, keep hiking rates and accept that more areas of the economy may face challenges, potentially requiring targeted interventions. Two, stop hiking and assess how much banking sector stress tightens financial conditions. Three, cut rates immediately and assume that banking system deleveraging will be sufficient to bring inflation down.

Based on this month's 25bps hike, it appears that the Fed is opting for option one. Although the Fed's most recent statement said the US financial system is "sound and resilient," it also noted that the stress in the banking sector is "likely to result in tighter credit conditions for households and businesses and to weigh on economic activity, hiring, and inflation."

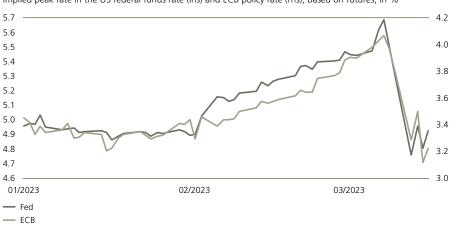
Looking ahead, we think option two—a pause in rate hikes—is more likely than an immediate switch to rate cuts. In 1980, the Fed cut rates when inflation was still in double figures, but on that occasion the unemployment rate was 7%. Cutting rates with inflation this far above target and unemployment so low would be unprecedented.

How do we invest?

As our "Year of Inflections" continues to evolve, events over the past month have shown how quickly the outlook can shift. With confidence in the banking sector still fragile and question marks about the economic and central bank outlook, markets are likely to remain volatile. Against this backdrop, we focus on strategies to build resilience, mitigate risks, position for opportunities created by regional divergences, and diversify portfolios.

First, manage liquidity as rates peak. In a period of rising interest rates, many investors have held more cash than usual, in anticipation of even higher rates. Amid volatility in equity and bond markets, that strategy has worked well so far. But with recent events suggesting that policy rates may peak earlier than anticipated, we think investors should act to lock in attractive yields in fixed income.

Figure 5



Rate hike expectations moved quickly amid the US banking turmoil Implied peak rate in the US federal funds rate (Ihs) and ECB policy rate (rhs), based on futures, in %

Source: Bloomberg, UBS, as of March 2023

We see an attractive opportunity set in fixed income.

Second, buy quality bonds. We see an attractive opportunity set in fixed income, and this month we move bonds to most preferred, relative to equities. We prefer high grade (or government) and investment grade bonds, which should be more resilient in the event of a recession. We also like sustainable bonds and emerging market bonds. We are more cautious on corporate high yield credit given deteriorating corporate fundamentals and the risk of spillover from banking sector stress.

Third, diversify beyond the US and growth. We think the outlook for US equities and growth stocks is challenged in the context of high valuations, declining corporate earnings, and latent risks arising from interest rate hikes. By contrast, we expect positive performance from emerging market equities, including China and Asian semiconductor stocks, and select European themes, including German equities. At a global sector level, we like industrials, consumer staples, and utilities. However, we downgrade our stance on global energy equities to neutral this month as the recent dip in the oil price is likely to weigh on the sector's profitability in the near term.

Scenario targets

	Spot*	Upside	Base case	Downside
MSCI AC World	748	880 (+18%)	770 (+3%)	670 (–10%)
S&P 500	3,937	4,400 (+12%)	3,800 (–3%)	3,300 (–16%)
EuroStoxx 50	4,196	4,900 (+17%)	4,250 (+1%)	3,650 (–13%)
SMI	10,782	12,500 (+16%)	11,300 (+5%)	9,800 (–9%)
US 10y Treasury yield	3.43%	2.5%	3.25%	4.5%
US 10y breakeven yield	2.25%	2%	2.25%	3%
US high yield spread**	500bps	300bps	550bps	850bps
US IG spread**	135bps	60bps	120bps	200bps
EURUSD	1.09	1.18 (+9%)	1.12 (+3%)	1.07 (–1%)
Commodities (CMCl Composite)	1,778	2,300 (+29%)	2,200 (+24%)	1,750 (–2%)
Gold	USD 1,970/oz	USD 2,200–2,300/oz (+14%)	USD 2,050/oz (+4%)	USD 1,800–1,900/oz (–6%)

* Spot prices as of market close of 22 March 2023. Values in brackets are expected percentage changes from the quoted spot level.

** During periods of market stress, credit bid-offer spreads tend to widen and result in larger ranges.

Note: The asset class targets above are for December 2023 and refer to the respective macro scenarios. Individual asset prices can be influenced by factors not reflected in the macro scenarios.

Source: UBS, as of March 2023

Scenario analysis

Scenarios (December '23)	Upside)	Base case	Downside	Things to watch	
Probability	15% (from 25%)	55% (from 50%)	30% (from 25%)		
Inflation	Falls quickly back to central bank targets over the coming months.	Continues to slow in the US and in Europe but ends the year above central bank targets.	Proves more persistent than central banks and markets expect.	US: CPI and PCE inflation US: ISM prices-paid subindex US: Average hourly earnings US: JOLTS openings and hires	
Central banks	Major central banks cut rates in 2H23.	Fed, ECB, SNB, and BoE complete their hiking cycles by mid-year but unlikely to cut rates in 2023.	Longer period of tighter monetary policy with rate hikes into late 2023 or early 2024, followed by recession and rate cuts next year.	Eurozone: HICP inflation	
Economic growth	Rebounds as the outlook for corporate earnings improves.	US, Europe, and UK expe- rience subtrend growth as China reaccelerates. US consumption holds up well due to a strong labor market and solid wage growth. Lower energy prices cushion the impact from higher policy rates in Europe.	Falls sharply toward late 2023 or early 2024 owing to highly restrictive mone- tary policy; possible China U-turn on COVID.	Global: Oil price US, China: PMI data US: Change in nonfarm payrolls China: Consumer mobility Europe: Gas prices	
Financial conditions	Ease, lifting market valuations.	Remain tight, increasing the market's vulnerability to negative surprises or external shocks.	Tighten further, causing more stress in the financial system and increasing the risk of a systemic event.	Global financial conditions indexes US debt ceiling negotiations	
			<i>Tail risk:</i> US debt ceiling not raised by July/August; US Treasury defaults; global markets sell off.		
Geopolitics	The war in Ukraine deescalates, e.g., via a ceasefire agreement.	The war in Ukraine drags on as ceasefire negotia- tions remain elusive.	The war in Ukraine esca- lates or US-China tensions intensify.	Territorial gains by Russia Weapon shipments to Ukraine Putin support polls US sanctions on Chinese companies Reverse-CFIUS process	
Market path	Risk assets lifted by easing financial conditions and a brightening outlook for global growth.	Elevated volatility owing to uncertainty about inflation, monetary tightening, eco- nomic activity, and geopol- itics. Idiosyncratic factors cause diverging perfor- mance across markets.	Severe downturn with global equities posting double-digit losses, credit spreads widening, safe- haven assets benefiting.		
Source: UBS, as of I	March 2023				
We expect the to weaken this		expect some erosion in th rest of the world. Investo	e US economic growth and rs should diversify their doll	dollar at least preferred as we d interest rate premium to the ar cash holdings, reduce alloca e outright, or position in option	

or structured strategies that could deliver positive returns when the currency weakens. On a relative basis, we prefer the Australian dollar as well as the Swiss franc, euro, pound, yen, and gold. The recent banking sector turmoil boosted gold prices, which supports our view that the yellow metal has value as a portfolio hedge. Amid heightened uncertainty, alternative assets can help investors diversify sources of return. Fifth, diversify with alternatives. At a time of heightened uncertainty in global markets, alternative assets provide investors with the opportunity to diversify their sources of return. Private market secondaries and distressed strategies could be well positioned to buy distressed assets at attractive valuations.

In hedge funds, we like macro strategies, which have historically shown an ability to take advantage of tighter monetary policy and higher volatility across asset classes. Macro funds can also quickly moderate risk in an uncertain economic environment, although we note that the unexpected events of March caught many managers off-guard, especially those with short directional positions on US front-end rates.

Investors should note that alternatives can carry unique risks, including reduced liquidity, high costs, and various complexities. Following the US banking sector stress, hedge funds' access to funding is a factor to watch.

Sixth, invest in real assets. Exposure to real assets, including commodities, infrastructure, and select core real estate, can provide investors with additional portfolio diversification and income, as well as the potential for long-term inflation mitigation. We currently see particular appeal in direct and indirect infrastructure exposure and direct commodity exposure.

Messages in Focus

Manage liquidity as rates peak	Many investors have held more cash than usual in anticipation of higher interest rates. But rates could now be approaching a peak. Investors should stay (or get) sufficiently invested and diversified, act soon to lock in attractive yields, and avoid unnecessary deleveraging.			
Buy quality bonds	We see attractive opportunities in high-quality fixed income given decent yields and the scope for capital gains in the event of an economic slowdown. We prefer bonds relative to equities, and prefer high grade, investment gra and sustainable bonds relative to high yield bonds. We also like emerging market bonds. Investors who actively manage their bond portfolios have the potential to take full advantage of the opportunities.			
Diversify beyond the US and growth	We think the outlook for US equities is challenged amid tighter financial conditions, declining corporate earnings, and relatively high valuations. By contrast, we like emerging market stocks, powered by strong earnings growth, China's recovery, and relatively cheap valuations. We also like value and quality income relative to growth, and see select opportunities in Europe. Given ongoing volatility, structured investments and capital preservation strategies could provide ways to attain exposure in a more defensive way.			
Position for dollar weakness	We do not expect the US dollar's recent strength to be sustained as the US growth and interest rate premium relative to the rest of the world erodes. Investors looking to position for a weaker dollar should diversify their dollar cash or fixed income holdings, reduce allocations to US equities, hedge outright, or position in options or structured strategies that could deliver positive returns in the event of dollar weakness. On a relative basis, we prefer the Australian dollar as well as the Swiss franc, euro, pound, yen, and gold.			
Diversify with alternatives	Alternative assets provide investors with the opportunity to diversify sources of return at a time of heightened uncertainty in global markets, if investors can tolerate the risks involved. In hedge funds, we like uncorrelated strategies such as macro, which can benefit from inflections in economic trends. Meanwhile, private market secondaries and distressed strategies could be well-positioned to buy assets at attractive valuations.			
Invest in real assets	Exposure to "real assets," including commodities, infrastructure, and select core real estate, can provide investors with additional portfolio diversification and income, as well as the potential for long-term inflation mitigation. We currently see appeal in direct and indirect infrastructure exposure, and direct commodity exposure. We stay selective in real estate.			
Go sustainable	Green investment is stepping up around the world in response to the US Inflation Reduction Act. This should benefit innovative companies focused on improving resource efficiency, including energy and water. We also like sustainable bonds, and see a growing opportunity set to implement hedge funds and private markets within sustainable investment strategies, for example in the areas of education and health.			

Finally, go sustainable. We see a variety of attractive opportunities to position sustainably while earning attractive risk-adjusted returns. For example, we like companies focused on improving resource efficiency, including energy and water. We also see a growing opportunity set to implement hedge funds and private markets within sustainable investment strategies.

Mark Hayle

Mark Haefele Chief Investment Officer Global Wealth Management

Non-Traditional Assets

Non-traditional asset classes are alternative investments that include hedge funds, private equity, real estate, and managed futures (collectively, alternative investments). Interests of alternative investment funds are sold only to qualified investors, and only by means of offering documents that include information about the risks, performance and expenses of alternative investment funds, and which clients are urged to read carefully before subscribing and retain. An investment in an alternative investment fund is speculative and involves significant risks. Specifically, these investments (1) are not mutual funds and are not subject to the same regulatory requirements as mutual funds; (2) may have performance that is volatile, and investors may lose all or a substantial amount of their investment; (3) may engage in leverage and other speculative investment practices that may increase the risk of investment loss; (4) are long-term, illiquid investments, there is generally no secondary market for the interests of a fund, and none is expected to develop; (5) interests of alternative investment funds typically will be illiquid and subject to restrictions on transfer; (6) may not be required to provide periodic pricing or valuation information to investors; (7) generally involve complex tax strategies and there may be delays in distributing tax information to investors; (8) are subject to high fees, including management fees and other fees and expenses, all of which will reduce profits.

Interests in alternative investment funds are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency. Prospective investors should understand these risks and have the financial ability and willingness to accept them for an extended period of time before making an investment in an alternative investment fund and should consider an alternative investment fund as a supplement to an overall investment program.

In addition to the risks that apply to alternative investments generally, the following are additional risks related to an investment in these strategies:

- Hedge Fund Risk: There are risks specifically associated with investing in hedge funds, which may include risks associated with investing in short sales, options, small-cap stocks, "junk bonds," derivatives, distressed securities, non-U.S. securities and illiquid investments.
- Managed Futures: There are risks specifically associated with investing in managed futures programs. For example, not all managers focus on all strategies at all times, and managed futures strategies may have material directional elements.
- Real Estate: There are risks specifically associated with investing in real estate products and real estate investment trusts. They involve risks associated with debt, adverse changes in general economic or local market conditions, changes in governmental, tax, real estate and zoning laws or regulations, risks associated with capital calls and, for some real estate products, the risks associated with the ability to qualify for favorable treatment under the federal tax laws.
- Private Equity: There are risks specifically associated with investing in private equity. Capital calls can be made on short notice, and the failure to meet capital calls can result in significant adverse consequences including, but not limited to, a total loss of investment.
- Foreign Exchange/Currency Risk: Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in U.S. dollars, changes in the exchange rate between the U.S. dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a U.S. investor.

UBS Chief Investment Office's ("CIO") investment views are prepared and published by the Global Wealth Management business of UBS Switzerland AG (regulated by FINMA in Switzerland) or its affiliates ("UBS").

The investment views have been prepared in accordance with legal requirements designed to promote the **independence of investment research**.

Generic investment research – Risk information:

This publication is **for your information only** and is not intended as an offer, or a solicitation of an offer, to buy or sell any investment or other specific product. The analysis contained herein does not constitute a personal recommendation or take into account the particular investment objectives, investment strategies, financial situation and needs of any specific recipient. It is based on numerous assumptions. Different assumptions could result in materially different results. Certain services and products are subject to legal restrictions and cannot be offered worldwide on an unrestricted basis and/or may not be eligible for sale to all investors. All information and opinions expressed in this document were obtained from sources believed to be reliable and in good faith, but no representation or warranty, express or implied, is made as to its accuracy or completeness (other than disclosures relating to UBS). All information and opinions as well as any forecasts, estimates and market prices indicated are current as of the date of this report, and are subject to change without notice. Opinions expressed herein may differ or be contrary to those expressed by other business areas or divisions of UBS as a result of using different assumptions and/or criteria.

In no circumstances may this document or any of the information (including any forecast, value, index or other calculated amount ("Values")) be used for any of the following purposes (i) valuation or accounting purposes; (ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or (iii) to measure the performance of any financial instrument including, without limitation, for the purpose of tracking the return or performance of any Value or of defining the asset allocation of portfolio or of computing performance fees. By receiving this document and the information you will be deemed to represent and warrant to UBS that you will not use this document or otherwise rely on any of the information for any of the above purposes. UBS and any of its directors or employees may be entitled at any time to hold long or short positions in investment instruments referred to herein, carry out transactions involving relevant investment instruments in the capacity of principal or agent, or provide any other services or have officers, who serve as directors, either to/for the issuer, the investment instrument itself or to/for any company commercially or financially affiliated to such issuers. At any time, investment decisions (including whether to buy, sell or hold securities) made by UBS and its employees may differ from or be contrary to the opinions expressed in UBS research publications. Some investments may not be readily realizable since the market in the securities is illiquid and therefore valuing the investment and identifying the risk to which you are exposed may be difficult to quantify. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, divisions or affiliates of UBS. Futures and options trading is not suitable for every investor as there is a substantial risk of loss, and losses in excess of an initial investment may occur. Past performance of an investment is no guarantee for its future performance. Additional information will be made available upon request. Some investments may be subject to sudden and large falls in value and on realization you may receive back less than you invested or may be required to pay more. Changes in foreign exchange rates may have an adverse effect on the price, value or income of an investment. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information.

Tax treatment depends on the individual circumstances and may be subject to change in the future. UBS does not provide legal or tax advice and makes no representations as to the tax treatment of assets or the investment returns thereon both in general or with reference to specific client's circumstances and needs. We are of necessity unable to take into account the particular investment objectives, financial situation and needs of our individual clients and we would recommend that you take financial and/or tax advice as to the implications (including tax) of investing in any of the products mentioned herein.

This material may not be reproduced or copies circulated without prior authority of UBS. Unless otherwise agreed in writing UBS expressly prohibits the distribution and transfer of this material to third parties for any reason. UBS accepts no liability whatsoever for any claims or lawsuits from any third parties arising from the use or distribution of this material. This report is for distribution only under such circumstances as may be permitted by applicable law. For information on the ways in which CIO manages conflicts and maintains independence of its investment views and publication offering, and research and rating methodologies, please visit www.ubs.com/research-methodology. Additional information on the relevant authors of this publication and other CIO publication(s) referenced in this report; and copies of any past reports on this topic; are available upon request from your client advisor.

Options and futures are not suitable for all investors, and trading in these instruments is considered risky and may be appropriate only for sophisticated investors. Prior to buying or selling an option, and for the complete risks relating to options, you must receive a copy of "Characteristics and Risks of Standardized Options". You may read the document at https://www.theocc.com/about/publications/ character-risks.jsp or ask your financial advisor for a copy.

Investing in structured investments involves significant risks. For a detailed discussion of the risks involved in investing in any particular structured investment, you must read the relevant offering materials for that investment. Structured investments are unsecured obligations of a particular issuer with returns linked to the performance of an underlying asset. Depending on the terms of the investment, investors could lose all or a substantial portion of their investment based on the performance of the underlying asset. Investors could also lose their entire investment if the issuer becomes insolvent. UBS does not guarantee in any way the obligations or the financial condition of any issuer or the accuracy of any financial information provided by any issuer. Structured investments are not

traditional investments and investing in a structured investment is not equivalent to investing directly in the underlying asset. Structured investments may have limited or no liquidity, and investors should be prepared to hold their investment to maturity. The return of structured investments may be limited by a maximum gain, participation rate or other feature. Structured investments may include call features and, if a structured investment is called early, investors would not earn any further return and may not be able to reinvest in similar investments with similar terms. Structured investments include costs and fees which are generally embedded in the price of the investment. The tax treatment of a structured investment may be complex and may differ from a direct investment in the underlying asset. UBS and its employees do not provide tax advice. Investors should consult their own tax advisor about their own tax situation before investing in any securities.

Important Information About Sustainable Investing Strategies: Sustainable investing strategies aim to consider and incorporate environmental, social and governance (ESG) factors into investment process and portfolio construction. Strategies across geographies and styles approach ESG analysis and incorporate the findings in a variety of ways. Incorporating ESG factors or Sustainable Investing considerations may inhibit the portfolio manager's ability to participate in certain investment opportunities that otherwise would be consistent with its investment objective and other principal investment strategies. The returns on a portfolio consisting primarily of sustainable investments may be lower or higher than portfolios where ESG factors, exclusions, or other sustainability issues are not considered by the portfolio manager, and the investment opportunities available to such portfolios may differ. Companies may not necessarily meet high performance standards on all aspects of ESG or sustainable investing issues; there is also no guarantee that any company will meet expectations in connection with corporate responsibility, sustainability, and/or impact performance.

External Asset Managers / External Financial Consultants: In case this research or publication is provided to an External Asset Manager or an External Financial Consultant, UBS expressly prohibits that it is redistributed by the External Asset Manager or the External Financial Consultant and is made available to their clients and/or third parties.

USA: Distributed to US persons by UBS Financial Services Inc. or UBS Securities LLC, subsidiaries of UBS AG. UBS Switzerland AG, UBS Europe SE, UBS Bank, S.A., UBS Brasil Administradora de Valores Mobiliarios Ltda, UBS Asesores Mexico, S.A. de C.V., UBS SuMi TRUST Wealth Management Co., Ltd., UBS Wealth Management Israel Ltd and UBS Menkul Degerler AS are affiliates of UBS AG. **UBS** Financial Services Inc. accepts responsibility for the content of a report prepared by a non-US affiliate when it distributes reports to US persons. All transactions by a US person in the securities mentioned in this report should be effected through a US-registered broker dealer affiliated with UBS, and not through a non-US affiliate. The contents of this report have not been and will not be approved by any securities or investment authority in the United States or elsewhere. UBS Financial Services Inc. is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.

For country information, please visit ubs.com/cio-country-disclaimer-gr or ask your client advisor for the full disclaimer.

Version A / 2023. CIO82652744

© UBS 2023. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.