1/9 Vontobel Swiss Financial Advisers AG / February 2023



# **Investment Focus**

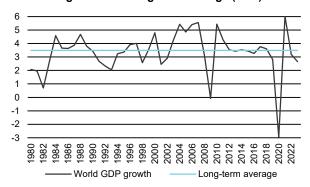
Disinflation, deceleration of economic growth and policy uncertainty lead to strained markets



Since we published our December 2022 edition of the Investment Focus "Bumpy Road ahead", economic activity has been more resilient than expected, despite many surveys of business leaders, including the Purchasing Manager Indices (PMIs), having deteriorated at the end of last year. In response to higher and rising central bank rates, financial conditions were stricter, banks tightened their lending standards and private households were forced to deplete the previously accumulated elevated level of savings to fund end-of-year shopping. At the same time, inflation in the advanced economies continued to abate as disruptions to supply chains eased increasingly and energy prices started to decline. This created expectations that central banks could reduce the speed of rate hikes and set risk asset markets in motion at the start of this year.

Nevertheless, we expect the pace of global economic growth to decelerate further during the first half of 2023. Tighter financial conditions, lower purchasing power because of the significant decline in real income and lower potential pent-up demand due to falling levels of bank deposits held by private households, should take their toll on employment and therefore on economic activity. It remains to be seen whether these factors are strong enough to push the global economy into an outright recession. While the slowdown is due in part to the increasingly coordinated withdrawal of accommodative monetary policy, regional or country-specific factors are driving mixed trends. The depth and persistence of the stagnationary environment will depend on how the ideological, political, economic, and technological transitions are addressed. According to the Organization of Economic Cooperation and Development (OECD), the global economy should grow at a rate of only 2.2% or approximately 1.5 percentage points below the long-term average growth rate.

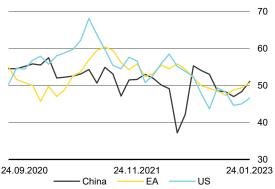
#### World GDP growth and long-term average (in %)



Source: International Monetary Fund, World Economic Outlook, October 2022, Vontobel SFA

This assessment is also confirmed by the development of the respective Purchasing Managers' Index (PMI) numbers for almost all major economic regions. The Composite PMIs peaked in late spring/early summer of 2022 followed by a downward trajectory until the end of the year where they fell below the neutral threshold of 50 in November 2022. There were slight improvements in December 2022 and January 2023, with the Composite PMI for the euro area (EA) and China moving close to the neutral threshold while the US Composite PMI continued to contract.

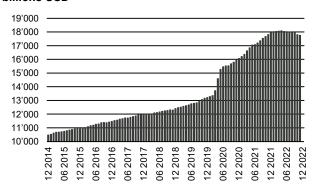
# Purchasing manager indices (PMI Composite) Index Points



Source: Bloomberg Finance L.P., Vontobel SFA, as of January 2023

After two quarters of moderate contraction last year, the US economy returned to growth in the third quarter with relatively weak domestic demand. In fact, net trade and non-residential fixed investment were the main sources of economic activity in the third quarter of 2022, while the rate of growth in value added of the manufacturing sector dropped by around one percentage point in the fourth quarter. This resulted in an average contraction of 0.7%. At the same time, personal consumption expenditure weakened to grow by a monthly average of 0.1% in November 2022, while fixed capital formation dropped by four percentage points to a meager 1.3% in the third quarter 2022. Looking ahead, domestic demand is projected to remain subdued, as high inflation erodes real disposable personal income, while tighter financial conditions could restrain capital investment and weaken housing demand on the back of higher mortgage rates. Excess deposits accumulated by private households in the United States during the lockdown periods imposed to contain the COVID-19 pandemic in 2020 and 2021, represent a glimmer of hope. Measured against the trend development of private deposits, private households hold deposits of around USD 3 trillion with US banks. This accounts for around one third of US real GDP and is a strong buffer against the threat of a severe recession in the US. Even if the US Federal Reserve continues to tighten monetary policy, these deposits should support private consumption, domestic demand and economic growth.

# US Excess savings – Deposits private households, billions USD

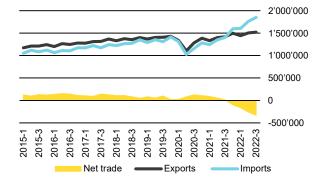


Source: Federal Reserve Bank St. Louis, Vontobel SFA

In EA, the economy showed remarkable resilience to rising inflation and the increase of geopolitical tensions in the wake of the war in Ukraine during the first half of 2022.

Nevertheless, economic activity slowed down significantly in the third quarter of last year, from average growth of 0.7% in the first semester of 2022 to 0.3%. This deceleration was mainly caused by the negative contribution of net trade to GDP growth. From the end of 2021 and throughout 2022, the EA trade balance moved into negative territory and accounted for approximately 1% of total GDP at the end of the third quarter. At the same time, domestic demand and output benefited from a sharp acceleration in inventories and a strong rise in service consumption, which outpaced the drop in the volume of goods consumed.

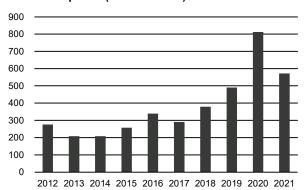
## Exports, imports and net trade in EA (in million EUR)



Source: Eurostat, Vontobel SFA

Looking ahead, incoming data suggests a further deceleration of economic momentum. PMI numbers for EA in the fourth quarter of 2022 remained below neutral levels, implying a greater likelihood of economic activity declining further. This is also confirmed by the economic sentiment indicator (ESI) for the manufacturing and services sectors. In the aftermath of the COVID-19 pandemic, both indicators reached their highest levels in late 2021 before starting to decline. The manufacturing index dropped into negative territory in early autumn 2022 with the services index only slightly above zero, therefore mirroring the ongoing deceleration of economic momentum. As reported by the European Central Bank, falling stocks of finished goods and new orders overshadowed confidence in the industrial sector, while labor shortages and other factors limiting production continued to ease. Although inflation is expected to ease off, food and energy prices should remain elevated and take their toll on purchasing power. As the European Commission points out, all metrics on the growth in labor compensation, including negotiated wages, compensation per employee and compensation per hour, lag the overall inflation trend. This translates into negative real wages and weigh on disposable income and private consumption. Tighter financial conditions (corporate and private lending rates) and higher capital market rates due to the less accommodative monetary policy may also put a strain on fixed capital formation and spending on consumer durables. As in the US, private households in EA also hold record high levels of deposits in the banking system. These have accumulated to reach approximately EUR 300 billion more than before the crisis which should also help to stabilize domestic demand if unemployment rises due to tighter monetary policy.

## Euro area deposits (in billion EUR)



Source: Eurostat, Vontobel SFA

The low growth-high inflation backdrop would be expected to spread evenly across the EM universe with a few exceptions, the most relevant being China. The official economic growth target of 5.5% for 2023 is ambitious in our view, but economic activity remains on an upward trajectory compared to the anemic growth of 3.2% in 2022.

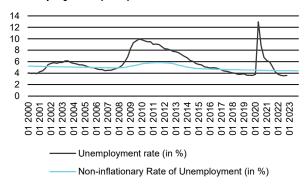
The Chinese economy rebounded initially in the third quarter of 2022, as COVID-19 containment measures were gradually lifted following a wave of infections in April and May. Economic growth in the third quarter was supported by a recovery in both consumption and investment which, despite the prolonged weakness in the property sector, recovered on the back of fiscal stimuli. However, the Chinese government unexpectedly reversed its zero-COVID policy in December and lifted most of the pandemic restrictions. As a result, infections increased rapidly but the actual implications on economic activity are not immediately clear. Consumer price pressures remain moderate.

In the United Kingdom, the outlook for real activity has weakened further following the contraction of GDP in the third quarter. High consumer price inflation, rising mortgage costs and tight financial conditions are acting as a strong drag on consumption and private investment. The fiscal measures announced in November will slightly increase the budget deficit in the near term but will contribute to fiscal consolidation over the medium term. The economy is now expected to contract from the third quarter of 2022 until the second quarter of 2023. At the same time, the labor market remains tight and widespread wage pressures are contributing to persistent domestic inflation.

# Monetary policy and inflation: Disinflation, but rates higher for longer

With inflation turning decisively lower over the past few months in all major regions of the advanced economies, especially in the US, the Federal Reserve (Fed) is close to the peak of its current rate tightening cycle. Headline inflation in the US reached a high of around 9% in late summer and has fallen back since then to just above 6%. At the end of January 2023, the International Monetary Fund (IMF) communicated that it expects US inflation will continue to decelerate in 2023 to around 4.6%. This favorable inflation development gives the Fed leeway to reduce the speed and scope of future interest rate hikes, which are expected to come to an end soon. With respect to the current labor market situation, where unemployment remains at 3.5%, job openings are still above 10 million and initial jobless claims remain low. The threat of rising inflation again has not yet disappeared. The Fed will likely keep rates high even if the pace of the GDP growth continues to slow down and unemployment rises to between 4.5% and 5% in 2023.

# US current unemployment and the Non-inflationary Rate of Unemployment (in %)



Source: Federal Reserve Bank St. Louis, Vontobel SFA

First, the Fed estimates the non-accelerating inflation rate of unemployment (NAIRU) to be close to 5%. Second, textbook economics tell us that the impact of tighter financial conditions on economic growth and inflation happens with a significant delay of around 12 to 18 months. With plausible assumptions for an adjustment to interest rates, the terminal rate stands at around 5% if the famous Taylor-Rule is applied. This means using an equation John Taylor introduced in a 1993 paper that prescribes a value for the federal funds rate based on the values of inflation and economic slack such as the output gap or unemployment gap. As the Fed started to back off from its ultra-accommodative to a restrictive policy at the start of 2022, the full impact of this policy change will only become clear in the months ahead.

In EA, the European Central Bank (ECB) tightened its rates by 2.5 percentage points. One of its main interest rates, the marginal lending rate, now stands at 2.75%, which is the highest level since spring 2009. Inflation has also started to decline, with headline inflation reaching 8.5% in December, down approximately one percentage point from November. The main contributors to overall inflation are food and energy inflation. Excluding these two components, core inflation now stands at around 6.8%. GDP growth in the fourth quarter continued to decelerate further and increased only by a meager 0.1%. This confirms that the ECB has already started tightening financial conditions over the past semesters and has achieved "substantial progress in withdrawing monetary policy accommodation" (ECB, Combined monetary policy decisions and statement, October 27, 2022). It suggests the ECB might already consider slowing the adjustment path of central bank rates to the terminal rate, given the uncertain lags in the effects of monetary policy tightening. With respect to the management of the ECB's bond portfolio and quantitative tightening, the ECB intends to shrink its balance sheet by repaying TLTRO (Targeted longer-term refinancing operations) loans and with scheduled maturities of the overall bond portfolio.

The BoE also hiked rates aggressively to reach 3% in October, accompanied by some dovish communication. Its forward guidance acknowledged the need to tighten more albeit less than the level implied by markets. We expect rates to peak at 4.5%.

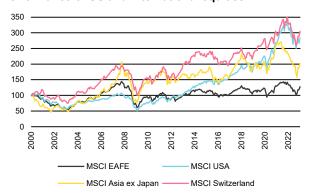
Moving to Japan, the USD/JPY exchange rate weakened to a 32-year low of 150, prompting the Ministry of Finance to

intervene on the FX market to stall this depreciation. Meanwhile, the Bank of Japan had to protect its yield curve control targets by offering emergency Japanese government bond purchases. The unprecedented strength of the USD and monetary policy gap are exerting upside pressure on JGB yields, as a weaker JPY feeds into stronger imported inflation, driving markets to predict that the BoJ will eventually follow up with tightening. We do not expect any change in the foreseeable future, as the BoJ appears ready to buy time, waiting for US rates to peak.

# Asset allocation: Stay invested, stay diversified Global equities: From a strategic angle – the relative attractiveness of international versus US equities

It can be hard to convince equity investors whose reference currency is the USD that investing in international equities could benefit their portfolios in terms of generating additional returns or diversification gains. Since the aftermath of the Great Recession of 2009, the US equity market outpaced international equity markets measured by the MSCI Europe/Asia by a factor of 2.3 in USD. The MSCI EAFE index comprises 21 developed equity markets excluding North America (US and Canada).

### Performance of US and international equities



Source: Bloomberg Finance, L.P., Vontobel SFA

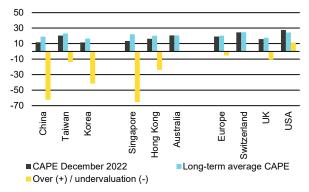
Nevertheless, Liedtke (2020)\* has shown that a stable long-term statistical relationship exists between US and international equities, i.e. that these financial markets are cointegrated. This implies that any short-term divergence between these markets will correct over the long-term.

\*Liedtke, Olaf (2020), Are global financial markets cointegrated? Master thesis for the Wealth Management Master Program, UBS AG.

Since the beginning of this year, US equities have surprisingly underperformed their European and Asian counterparts by 13 and 8 percentage points respectively. Does this short-term development already mark a turnaround? Should investors with a strong home bias towards USD-denominated assets use it to increase the degree of diversification, by adding equities denominated in foreign currencies to their portfolios? In the following paragraphs we will discuss a few arguments why this appears to be a compelling opportunity and time to invest in foreign currency-denominated equities. It is compelling for those investors whose portfolios are not sufficiently diversified, measured by their strategic asset allocation based on their respective risk profile.

Given the considerable outperformance of US equities over international equities in the past two decades, all valuation metrics indicate that US equities are much more expensive than international markets. Based on cyclically adjusted price-earnings-ratios, Asian stock markets offer great potential, as current valuations are around 40% to 60% below their long-term mean, while the US market is still trading approximately 5% above its long-term average. European markets are also trading at a discount relative to their long-term mean but to a lesser extent than Asian equity markets.

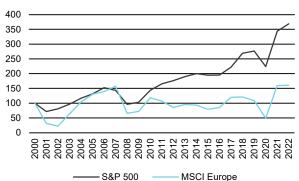
#### Cyclically-adjusted price earnings ratios



Source: Barclays Shiller, Vontobel SFA

The main reason for this expensive valuation was strong and fast earnings growth in the US corporate sector. Since 2000, US corporate earnings have quadrupled while corporate profits in Europe have risen by a factor of only 1.6. This also reflects much stronger US economic momentum compared to Europe. US real GDP rose by approximately 2.5% on average per year since 2000. Annual GDP growth in EA averaged around 1.3% over the same period, which is half of the economic momentum in the US. In addition, the regulatory environment for corporate taxation favors US corporate earnings; corporate income taxes stand at 21% in the US and at around 32% in Europe according to the OECD, while nonwage labor costs are slightly below 20% in the US and 34% of total compensation in the euro area.

# US and EA corporate earnings (January 2000 = 100)



Source: Bloomberg Finance L.P., Vontobel SFA

Recent discussions about the current political administration increasing minimum wages in the US and potentially raising corporate income taxes may become a stronger headwind for future earnings momentum in the US. Current valuations of approximately 18 times the consensus estimates of 2023 earnings of S&P 500 companies appears to be exaggerated,

especially as international stock markets in Europe and emerging markets in Asia are currently trading 40% cheaper.

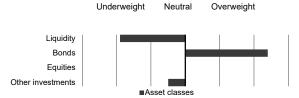
From a cyclical perspective, US equities are confronted with higher US central bank rates, bond yields and much tighter financial conditions than stock markets in EA and emerging Asia. Furthermore, given that the US labor market is strained by all metrics and although inflation is falling, the inflation genie is not yet back in its bottle and may force the Fed to maintain a relatively tighter policy stance than other major central banks.

The future direction of the USD is not clear. On the one hand, higher rates in the US than in the rest of the advanced economies favor the USD, even though it is overvalued against other major currencies by approximately 20% in terms of purchasing power parity. On the other hand, the US is by far the world's largest borrower based on the international investment position statistics. The US economy runs a current account deficit of more than 3% of GDP, while other advanced economies show a more balanced current account statistic. This speaks against a continuation of USD strength. The probability that the USD may depreciate against other major currencies such as the EUR is therefore relatively high, particularly as economic momentum in the US should be lower in 2024 according to the latest IMF projections.

Against this backdrop of potentially superior equity market returns for international stock markets and a broad-based weakening of the USD, USD-based investors with a significant home bias should consider seriously using the current opportunity to diversify their portfolios into foreign currency denominated assets.

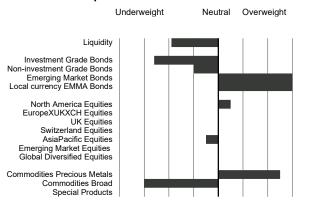
Against the macroeconomic backdrop of decelerating economic momentum in the advanced economies, declining albeit still elevated inflation and heightened uncertainty about future monetary policy, we reiterate our investment advice to maintain a global equity allocation close to the strategic weight. We also recommend no directional allocation to single stock markets. We hold a neutral allocation to all major equity markets, including the US, EA, Switzerland, UK and emerging markets. If the global economy recovers faster than expected, our portfolio will benefit from our more cyclically exposed markets, such as EA and emerging market equites. Should the downturn become more pronounced, it is to be expected that the more defensive markets such as the US and Swiss provide some cushion against potential market stress.

#### Asset class preferences



Source: Vontobel SFA, as of January 2023, based on PM Global Balanced LISD

#### Sub-asset class preferences

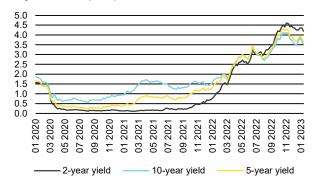


Source: Vontobel SFA, as of January 2023, based on PM Global Balanced USD

# Global fixed income: Yields and spreads offer attractive risk-adjusted opportunities

In the course of tightening monetary policy, rising inflation and elevated geopolitical tension, government bond yields and investment grade corporate debt spreads have climbed back to attractive levels. Over the past year, the 10-year US government bond yield nearly doubled from 1.8% to around 3.6%. The yield on 5-year US government bonds experienced a similar increase. Short-term government bonds yields are mainly controlled by monetary policy and expectations of the future stance of monetary policy.

## US yield curve (in %)



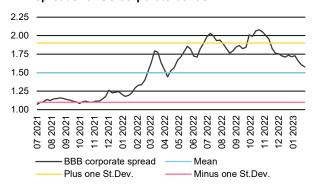
Source: Federal Reserve Bank St. Louis, Vontobel SFA

As long as most investors anticipate higher central banks rates, short-term bond yields rise and yield curves tend to flatten or even to invert. This is not just the case for the US, but also for the EA and other yield curves in the advanced economies. 27 countries currently have an inverted yield curve, according to World Government Bonds. Regarding our yield curve positioning and duration strategy, we prefer

intermediate maturities, as longer-term bonds offer lower yields than short duration debt. This yield curve positioning results in a portfolio duration that is close to the market duration for all our reference currencies, as yield curve inversion does not adequately compensate for taking long duration into the portfolios.

At the same time, the effective yield of BBB corporate debt has risen from around 2.2% in late 2021 to currently 5.3%, an increase of approximately three percentage points that moves the spread to 160 basis points.

#### BBB spreads for US corporate bonds

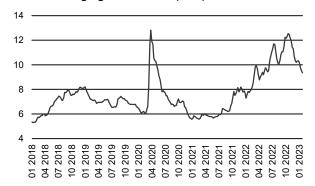


Source: Federal Reserve Bank St. Louis, Vontobel SFA

This spread is considered attractive, as it offers a significant yield enhancement to bond and multi-asset portfolios. A similar picture emerges for investment grade corporate bonds in EA. Based on these valuations, we continue to overweight investment grade corporate debt. Emerging market debt has suffered significantly since autumn 2021, with bond yields doubling to around 12.6% up to October 2022 before starting to decline again. They now stand at 9.5%. We expect more yield compression ahead for both hard and local currencydenominated emerging market debt. This is because the USD has most probably reached its peak level, which should support emerging market debt, especially hard currencydenominated emerging market bonds. USD strength or expectation of USD appreciation imply that repayment in USD requires higher local currency amounts to be monetized and cause potential capital outflows from local emerging market currencies. These outflows might be only stopped or even reversed if the local emerging market currencies pay higher interest rates.

The risk of significantly higher interest rates and bonds yields should fall with economic activity decelerating globally and inflation gradually easing which may also benefit emerging market debt. Rising rates in the advanced economies increases the relative attractiveness of fixed income investment abroad and may generate potential outflows from emerging market debt again. This means that emerging market debt must increase its relative attractiveness by offering similar risk adjusted returns.

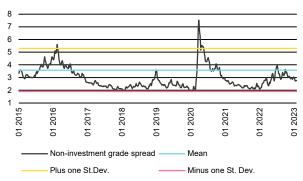
## Yield for emerging market debt (in %)



Source: Federal Reserve Bank St. Louis, Vontobel SFA

We reiterate our underweight allocation to non-investment grade corporate debt. Spreads on non-investment grade corporate bonds had widened in the past year slightly above the long-term average of approximately four percentage points. In wake of a rising appetite for risk in the last quarter of 2022, decelerating inflation and lower rate hiking expectations, spreads started to tighten and have fallen significantly below the long-term mean. They are now trading at the lower bound of the one standard deviation band. According to Moody's Investors Service, in an environment of decelerating economic activity, tighter financial conditions and rising funding costs, the probability of default for noninvestment grade corporate debt is expected to rise from the current cyclical low of 2%. During periods of economic deceleration, the default probability for B-rated speculative bonds could climb relatively quickly possibly to around 10% in the coming years. It is associated with spreads close to 15% to compensate for such an expected default risk. The current spread of approximately 2.6 percentage points does not offset the expected risk of potential credit events, such as a failure to make interest payments or even to repay of the full notional amount.

## Spreads for non-investment grade US corporate bonds



Source: Federal Reserve Bank St. Louis, Vontobel SFA

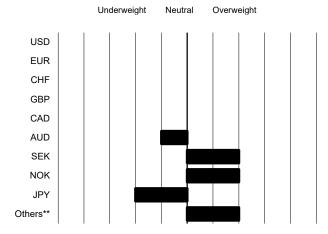
# Foreign exchange: USD poised to weaken? We favor NOK and SEK

We see the Fed reaching the peak of its rate tightening cycle. Against the backdrop of inflation moving lower and signs of a slowdown in economic growth, the last 25 basis point hike at the February Federal Open Market Committee (FOMC) will move interest rates into sufficiently restrictive territory. After the step-down in inflation led to a 50-basis point hike in December, the Fed has clearly indicated that another 25bp

hike is on the cards. We do not expect the February meeting to mark the end of the tightening cycle and expect no explicit signals from the Fed for now. More data deceleration over the coming months will be needed for the Fed to indicate that rates are sufficiently restrictive to warrant a pause. This data includes falling payrolls and inflation remaining in the new moderate range. If this materializes, the Fed may be tempted to keep rates steady at this level until December 2023, if it is then satisfied with the progress on inflation and confident it will come down further. This differs from the expectation expressed by the Fed fund futures rates that the Fed will already reverse the path of US central bank rates in the second semester of 2023. The potential for the USD to deteriorate in the short term in therefore limited. According to the IMF purchasing power parity estimates, the USD is overvalued against the EUR, CHF and other major currencies. It is therefore vulnerable in the longer term, given the strong US net negative international investment position and ballooning twin current account and budget deficits. This may potentially result in a rising risk premium for holding USDdenominated assets. For the time being, we anticipate the USD to trade in a narrow range against its major counterparties.

An even more hawkish ECB than the Fed will not alter investors' view that EA needs a weak EUR to compensate for higher rates and to ensure the relative competitiveness of the EA export sector as a main pillar of economic growth and employment. Even if the ECB moves central bank rates close to 4% – a further hike of 100 basis points – USD-denominated assets still offer an interest rate advantage. A redirection of capital flows into the EUR would require significant depreciation expectations for the USD, in order to offset the interest rate disadvantage of the EUR versus the USD. The ongoing conflict in Ukraine and associated geopolitical uncertainty, concerns about the impact of higher funding costs on the propensity to invest and the reaction of consumer behavior amid the loss of purchasing power, due to elevated and broad-based price increases mainly for energy and food, may be perceived as a drag on the medium-term performance of the European economy.

## Currency preferences\* (six months)



Source: Vontobel SFA, January 2023

\*Shows the preferences of international currencies vis-a-vis the USD

\*\*Refers mainly to local emerging market currencies

In our global and international mandates, we continue to hold an overweight allocation to the Norwegian krone (NOK). We expect the Norwegian central bank, the Norges Bank, to continue to raise rates above market expectations. This offers scope for the NOK to appreciate further against our reference currencies. The same reasoning applies to the Swedish krona (SEK), which we use in our international mandates to diversify our currency exposure. We are keeping an overweight allocation to gold. In the past, gold as an asset has proven to be a solid portfolio diversifier in the event that uncertainty and volatility starts to pick up again.

#### Authors

- Dr. Pascal Koeppel, CFA
  - Chief Investment Officer
- Christoph Windlin, CIIA Head Investment Solutions
  Dr. Olaf Liedtke

- Chief Investment Strategist

  Daniel Richard Burri, CFA
- Senior Portfolio Manager G.J. Midge Brown, CFA, FRM, CAIA
  - Business Developer

## Legal notice

This report has been prepared and published by Vontobel Swiss Financial Advisers AG ("Vontobel SFA"). Vontobel SFA CIO is independent. The views of the Vontobel SFA CIO may vary from the view and opinions of others Vontobel group entities.

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. 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 Vontobel 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 Vontobel that you will not use this document or otherwise rely on any of the information for any of the above purposes.

Vontobel SFA and its affiliates 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 Vontobel SFA and its employees may differ from or be contrary to the opinions expressed in Vontobel SFA 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. Vontobel SFA does not maintain information barriers to control the flow of information contained in one or more areas within Vontobel SFA, into other areas, units, divisions or affiliates of Vontobel. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies prior to publication of this report and those constituencies are able to consider and act on this information before it is published.

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. Tax treatment depends on the individual circumstances and may be subject to change in the future. Vontobel SFA and its employees do not provide legal or tax advice and Vontobel SFA 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 Vontobel SFA. Unless otherwise agreed in writing Vontobel expressly prohibits the distribution and transfer of this material to third parties for any reason. Vontobel 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 Vontobel SFA manages conflicts and maintains independence of its investment views, please refer to the Vontobel SFA Wrap Fee Program Brochure (ADV Part 2A) available at vontobelsfa.com. Additional information on the relevant authors of this publication and other publication(s) referenced in this report; and copies of any past reports on this topic; are available upon request from your Wealth Management Consultant.

Vontobel Swiss Financial Advisers AG is a subsidiary of Vontobel Holding AG.

Vontobel Swiss Financial Advisers AG Gotthardstrasse 43 8022 Zurich, Switzerland T +41 58 283 81 11 (Switzerland) T +1 855 853 4288 (USA, toll free)

info@vontobelsfa.com vontobelsfa.com