Investment Outlook

Growth worries offset by rate cut hopes

September 2023

SEB

Contents
September 2023

Introduction

There is good news mixed with bad news. The inflation rate is continuing to fall from high levels. Central banks still have their foot on the brakes, since they believe that inflation levels are still too high and labour markets are too strong. Global growth is holding up better than expected, but we believe that the journey towards a soft landing in economic activity will continue for the rest of 2023 and into 2024. However, such a deceleration rarely takes place without risks. Last spring's problems in the banking sector were resolved quickly and decisively, but new financial sector problems cannot be ruled out. In Sweden and China, we foresee continued challenges in the real estate sector. Globally, consumption is declining measured in real terms or as volume but is holding up better measured in nominal terms. This means that the corporate sector has largely succeeded in compensating for lower volume by raising prices, since its earnings are slowly creeping lower. Yet there are wide divergences between different types of companies when it comes to actual performance. The same is true of the macroeconomic situation at national or regional levels. We thus expect a stabilisation to occur in 2024 and then morph into an increase in activity the following year, though moderate in nature. Apart from economic fluctuations, various favourable structural forces are supporting growth – such as digitisation, automation and AI development.

During 2023 financial assets have shown strength, and risk appetite among investors has gradually increased. This means that asset valuations have climbed. Two favourable forces have thus faded, since we prefer to increase our risk when risk appetite and valuations are low. This environment, together with an economic slowdown, suggests a consolidation or slight decline in the stock market before it gains new momentum thanks to signals of lower key interest rates or perhaps increased stimulus by the authorities in China. That point is not especially distant, and we regard the risk of systematic crises or major setbacks as low. Overall, we recommend a neutral risk level in our portfolios and a broad exposure to cope with new surprises. The details of what we view as an appropriate portfolio structure can be found in this issue of *Investment Outlook.*

Semiconductors are now part of numerous products and are a prerequisite for the digital services that are increasingly used in our societies. They are experiencing strong growth and the sector is expanding rapidly, though it is cyclical in nature. New players are gaining ground, and established ones are being pushed out. These complex relationships are examined in one of the theme articles in this issue. Our second theme article is also partly related to the use of semiconductors. It is a look into the future – how we might conceivably live our lives more than 25 years from now. Our approach is to examine the potential and the logic behind at least partially switching from ownership to usership, subscribing instead of buying. What is required for this to happen, what effects might it have, and will it lead to a higher degree of circularity in our societies?

Wishing you enjoyable reading,
Fredrik Öberg, Chief Investment Officer
Investment Strategy

Market view, risk exposure and allocation

Both inflation and the activity level continue to slow. Regional disparities are significant, with parts of Europe already below zero real GDP growth, while the US is showing greater resilience. An expected economic soft landing, followed by a relatively moderate recovery, will increase the odds that central banks will initiate key rate cuts in 2024. Share valuations and risk appetite levels rose in 2023, making a consolidation or slight downturn reasonable. During 2023 we have experienced lots of undesirable events, such as bank failures, structural weaknesses in China's economic model, trade restrictions and a war in Ukraine that keeps grinding on. Meanwhile we also see strong positive forces such as digitisation, automation, AI and the energy transition. The result is thus still a mixed bag, with a continued risk of disruptions and surprises. This is why we support a balanced approach, with neutral risk exposure and good risk diversification.

Risk exposure and allocation

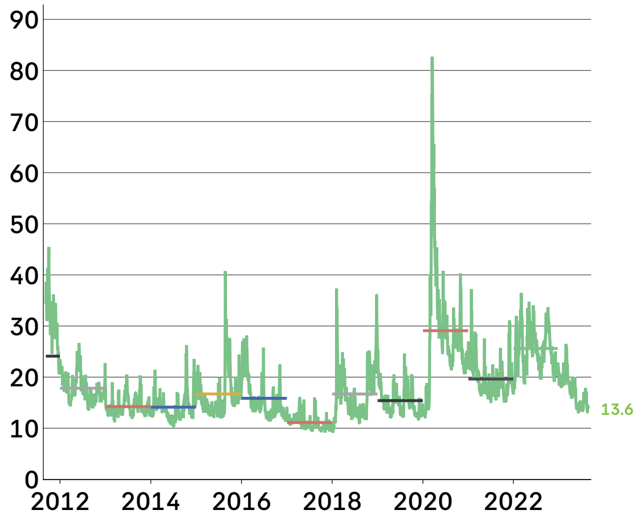
The past year has offered a lot of surprises as usual, but economic performance has largely followed historical patterns. One year ago, inflation had risen very fast, reaching levels we had not seen for many years. Central banks had announced a total reversal of the monetary policy that had prevailed more or less since the global financial crisis. Many investors had reduced their risks, and risk aversion was significant. Portfolios showed negative returns as all asset classes struggled during a period of sharply rising interest rates. Yet these declines were far more modest than the gains during the period of pandemic stimulus measures. Forecasts included different variants of recession scenarios. The typical recommendation was that problems would continue and that historically, new problems and weaknesses have "always" arisen when central banks hiked key rates quickly and sharply. This time it was also happening after a long period of ultra-low interest rates and abundant liquidity.

Liquidity would also be tightened by slimming central bank balance sheets. It was simply time to expose the weak links in the financial system. We too foresaw a lot of problems on the horizon, but we believed that investors and the capital market had already taken advantage of this via more appetising valuations than for many years and widespread caution among investors. We thus urged our customers to adopt a normal risk level but to be careful to diversify their risks, since we would probably enter a difficult period with many potential surprises. Since then we have refrained from recommending or offering highly defensive portfolio structures.

It is now September, and key rate hikes have created weakness in the real estate sector and reduced the scope for consumption. A number of US and European banks have ceased to exist, while large parts of the traditional banking business are in better shape than they were during the zero interest rate period. The US economy has performed more strongly than feared, due to pent-up consumption demand and aggressive fiscal policy. The Chinese economy, which was expected to expand its activity after prolonged pandemic-related restrictions while the rest of the world slowed down, has not performed as strongly as we had hoped. Europe has seen a noticeable slowdown, and some countries are experiencing a recession or negative real GDP growth. However, labour markets have remained strong and robust across all regions. Growth has thus held up better than expected, with the service sector contributing more than manufacturing. Some powerful structural forces have provided support. They include artificial intelligence (AI) and deglobalisation as well as environmental and sustainability investments. Inflation has fallen sharply, suggesting that central bank efforts have borne fruit. Corporate earnings have been squeezed, but not as much as feared, and the disparities in outcomes between different types of companies have been very wide. Record profits and depressed situations were presented side by side during the last quarterly report season.

In the capital market, outcomes have varied to say the least, but volatility in both equities and bonds has fallen from the levels prevailing a year ago. In the stock market, large growth companies with strong balance sheets have been among the winners. In the fixed income market, it has been profitable to move higher on the risk scale and to own corporate bonds, preferably with higher credit risk. Bearing risk has generally been profitable. However, the optimal portfolio has been difficult to find, since the market has been disparate and its pitfalls numerous. Diversifying risks, combined with not being too risk-averse, has worked well. Examples of positions that have fared poorly in the past year are the Swedish krona, the Chinese stock market and some classic defensive positions/sectors in stock markets. To avoid getting stuck in a backward-looking summation, it is high time to look ahead. We will thus begin by sharing a brief summary of our views on future economic performance.

Stock market volatility has fallen more than expected



Source: Bloomberg

The chart shows the volatility of the US stock market as measured by the VIX Index, which is a popular metric of stock market volatility expectations based on S&P 500 index options.

Soft landing possible, but little strong growth momentum in the next phase

Surprisingly strong labour markets are contributing to resilient households, not least in the US, where we are revising our growth forecast higher. The expected global economic deceleration is under way but will largely be a soft landing, although some countries such as Germany and Sweden will experience more of a slump. China will surprise on the downside, with weak domestic demand and a shaky real estate market. After a notably weak period of growth in the 38 mainly affluent OECD countries during the next few quarters, growth will accelerate cautiously in 2024. However, given the rather mild slowdown, upside potential will be limited during the coming year. Inflation is clearly on its way down, although in some cases this is happening more sluggishly than expected. Yet we expect inflation rates to be close to central bank targets by the end of next year. This also means that central banks may begin to cut key interest rates in mid-2024.

GDP growth forecasts, %

Market	2023	Rev	2024	Rev	2025
World	2.8	0.3	2.7	-0.2	3.2
United States	2.0	1.3	0.9	0.0	2.0
China	5.2	-0.7	4.7	-0.2	4.8
Germany	-0.4	-0.6	0.8	-0.9	1.9
United Kingdom	0.1	0.4	0.5	-0.2	1.8
Sweden	-1.2	-0.2	0.1	-0.5	2.5
OECD	1.4	0.5	1.2	-0.2	2.1
Euro area	0.6	0.0	0.8	-0.8	2.0
Baltics	-0.4	-0.3	1.2	-1.5	1.8
Emerging markets	4.0	0.1	4.0	-0.1	4.1

The table shows forecasts for real year-on-year economic growth in per cent, in line with our main scenario – expressed in purchasing power parities (PPP). For a more detailed account of SEB's economic forecasts, see the "International overview" section, which is an excerpt from the issue of *Nordic Outlook* published on August 29, 2023.

How should earnings and defaults evolve in our macro scenario?

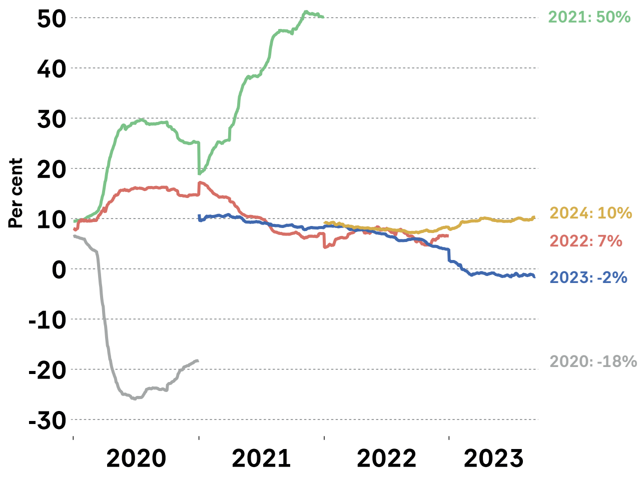
So far during 2023, earnings have turned out better than feared, but performance has been disparate. For example, companies that supply input goods have had a tougher time after the preceding record-setting year, since commodity prices have fallen. Traditional banking activities have done well as nominal interest rates have rebounded from record lows, but the financial sector's delivery of advisory services on corporate transactions and initial public offerings has stagnated. Real estate companies with low borrowing and attractive locations have successfully implemented substantial rent increases without being threatened by sharply higher debt burdens. The opposite has been true of highly leveraged competitors with less attractive property portfolios. Some companies in fields like semiconductors are performing brilliantly due to AI and generally strong demand, while other traditional growth companies have had an off year. The situation thus varies between sectors and regions, but also between different companies in the same sector.

The future outlook is undramatic and should not be confused with the enormous fluctuations we have seen during the past two decades of deep crises and strong recoveries. We now foresee a more normal cyclical scenario, with fairly low real growth rates both upward and downward, as well as central banks that can hopefully reduce their balance sheets (quantitative easing or QT) and governments that are no longer expanding public sector debt as a percentage of GDP. This is synonymous with expectations that the economic system will try to revert to the behaviour and functionality that existed before the global financial crisis around 15 years ago.

> *"Record profits and depressed situations were presented side by side during the last quarterly report season."*

One reasonable assumption is that 2023 will end with slightly negative reported earnings for aggregate listed companies in the world. This trend will continue into early 2024, after which profits will start to rebound. We thus expect 2024 to be a year of positive earnings, but below the long-term trend of about 8 per cent yearly, while 2025 has the potential to be in line with this trend. Of course, the outcome will not be exactly like this, but it does provide guidance on likely developments. A similar pattern should then also apply to the percentage of defaulting companies, which among other things affects returns in the corporate bond market. Defaults have started to rise from low levels but should continue to rise in 2024 before levelling off. Today, their level is around the historical average of 4 per cent. Next year's peak is expected to be a few percentage points higher, and the level of defaults will then fall again.

Global corporate earnings forecasts



Source: Bloomberg

The chart shows how corporate earnings forecasts, expressed as percentage changes for each calendar year, have been revised over time. These estimates are for global stock markets as a whole and follow the allocation in the MSCI World index.

Risks versus opportunities around our main scenario

The above-described business cycle pattern and its impact on earnings and the credit market are subject to uncertainty or risks. As a rule, the capital market as a whole is in fairly good balance with this type of basic forecast. Investors are thus eyeing the current scenarios presented by forecasters. Going forward, this also means that forecasters will look at pricing in capital markets when creating their view of the future. Because of this symbiosis, sufficiently large divergences from the main scenario often have a major impact on both forecasts and prices of financial assets. It is thus important to ponder what factors or events have the potential to shift risk appetite in both positive and negative directions and to monitor these, while having your own view of how you diverge from prevailing average perceptions in the market. Below are several such factors or risks:

- Inflation – is continuing to decline, although some sub-components are lagging behind. The direction is more important than the exact course of events, which means this is a signal that we believe will support risk appetite.
- Growth and labour markets – can we write off the possibility that a more negative course of events will occur, and that the downturn will be both deeper and more prolonged than expected? No, it can certainly happen, and this must be closely and continuously monitored.
- Earnings and defaults – very strong correlation with the previous point, although there are numerous favourable structural forces that are not controlled by the economic cycle – such as ongoing technology shifts, transitions to sustainable solutions and deglobalisation. All of these provide support for investment, which is beneficial.

- Central banks – have strongly influenced economic performance for many years, and today there is an obvious risk that they will go too far in attempting to be absolutely sure that they have conquered inflation. If we look at short-term inflation rate metrics and compare them to key interest rates, we see that real interest rates have risen sharply. This will risk creating an unnecessarily powerful slowdown in the economic system – especially since the most important central bank, the US Federal Reserve, operates in the country that is currently showing the most robust growth and labour market.

- High interest rates over a long period of time risk further undermining consumption and putting unnecessarily heavy pressure on companies with high levels of debt. Even though these forces have been operating for quite some time, the problems have so far been limited. But it is very hard to assess the magnitude of lagging effects and the sensitivity of the mechanism when old loans fall due and are replaced by new ones.

- Aside from this, there are always numerous problems and risks in the world. The war in Ukraine is grinding on, and the Chinese economy is stumbling because of both cautious consumers and a real estate market that is slowly changing shape. When the economic machinery is not working properly, this spreads to the credit system and the capital market. China is an economic giant, so the spillover effects are obvious.

- Global trade is moving towards regionalisation. The United States and China are continuing to clash, and the latest US initiative is intended to limit exports of more advanced technology to China. Meanwhile the US and Europe are using government funds and subsidies to localise green initiatives to their own region.

- The above risk map provides a clear indication that a continued decline in inflation and cooler labour markets would increase the likelihood of a change in communication by central banks, which in itself would result in falling interest rates and bond yields. Should this happen at the same time as the Chinese government was launching more extensive stimulus measures, risk appetite would rise noticeably among the world's investors.

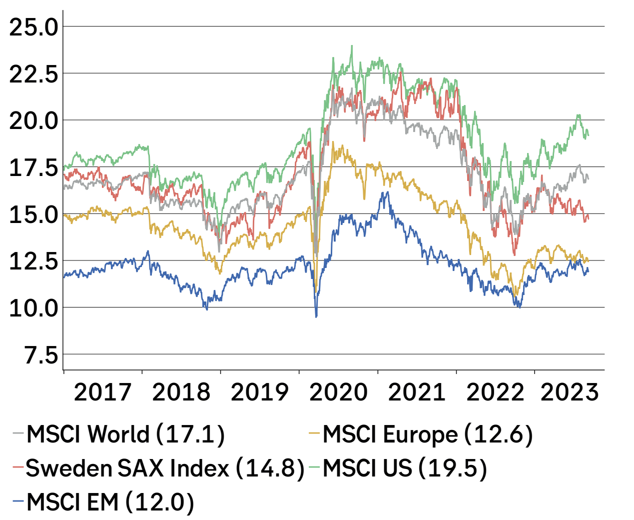
Pricing in the equity and fixed income markets

Current pricing in equity and fixed income markets goes hand in hand, in the sense that volatility has fallen in both asset classes. Share prices have climbed, while credit spreads have narrowed. Underlying government bond yields have risen at the short end of the curve, driven by key interest rate hikes, while 10-year government yields have mostly fluctuated back and forth during 2023 but have recently moved higher. Private individuals have gradually increased their risk during the year. The same goes for hedge funds, trend-following strategies and investors guided by volatility movements.

However, early in the year, "long-only" investors – including fund managers and life insurance companies – had defensive average portfolios due to the projected recession and attractive bond yields. These investors raised their risk level at a later stage and to a minor extent, giving them an overall risk appetite or positioning signal above neutral, without repeating historical excesses. One year ago, the risk appetite of all three groups was characterised by a high degree of caution.

During the period of risk increase, the flow towards quality companies and growth companies has been stronger than towards low-valued companies and cyclical and defensive sectors. That has benefited the US stock market compared to the rest of the world. The Swedish stock market has not recently performed as strongly, especially taking exchange rates into account. The overall result is that a world equity index including emerging markets is now at a price-earnings (P/E) ratio of just over 16. This is in line with the pre-pandemic period. During that period, interest rates were notably lower, which means that the risk premium between equities and fixed income has clearly decreased. The valuation gaps between different types of companies have once again widened. This is visible both on a regional and sectoral basis, but within sectors the trend is the same. In the credit market's high yield segment, movements in underlying government yields and credit spreads have partly neutralised each other, which is why total yield in the US and Europe remains just above 8 per cent. The corresponding level for investment grade bonds is about 4.5 per cent in Europe and one percentage point higher in the US.

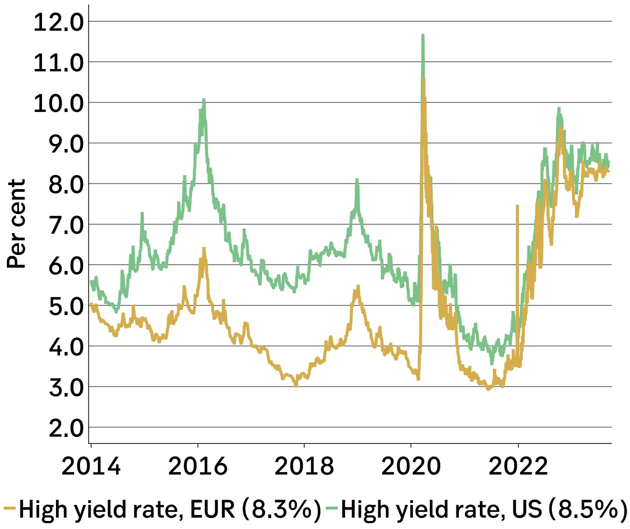
The US stock market has driven up valuations



Source: Bloomberg

The chart shows valuations measured as share price divided by earnings, so-called price-earnings (P/E) ratios, based on 12-month forward-looking earnings forecasts. Stocks with high growth, stable earnings and good returns on equity are valued the highest, while defensive stocks are valued as average or just above. Cyclical stocks have a clear discount to the average. Equities in Europe and emerging markets are valued lower than in the US, and this is a combination of style composition in the various regions but also regional pricing.

Stable yields in HY segment despite movements in both government yields and credit spreads



Source: Bloomberg

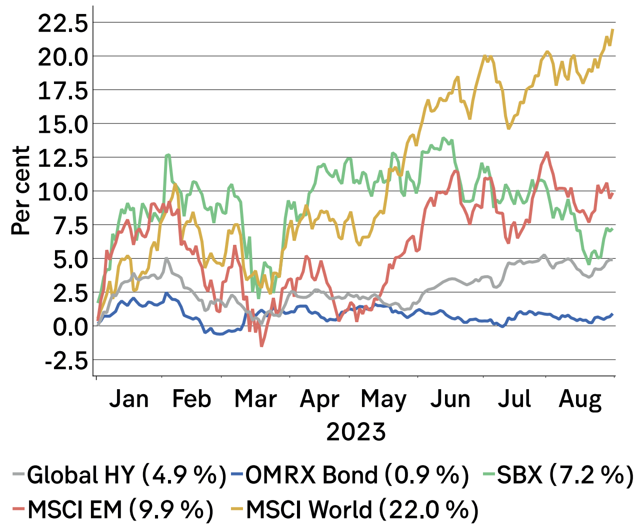
The above chart shows current yields on corporate bonds in the high yield (HY) segment in the US and Europe. Higher government bond yields and credit spreads of 4-5 per cent provide a total yield of just over 8 per cent. This provides a buffer against future credit events.

Broad exposure and neutral allocation in response to higher volatility

The return on our portfolios has been better than expected, due to strong global equity markets that have been given an extra boost by the weakness of our Swedish currency. This strength has gradually driven up certain stock market valuations and shifted investor positioning or risk-taking to higher levels. At the same time, we are seeing a continued deceleration in economic activity, while central banks are so far not signalling key interest rate cuts, since inflation remains higher than desired and labour markets have proved stronger than expected. This, in turn, will lead to a period with a higher risk of consolidation or slight downturns for risk assets. However, inflation is continuing to fall. It should not be too long until investors begin to discount falling key interest rates, which will favourably affect the rest of the yield curve and thus fixed income investments. When this happens, general risk appetite will rise, supporting the capital market as a whole. Until then, there is a risk of increased volatility. Valuations and positioning have not reached alarming levels. Nor do we foresee a structural crisis ahead of us, which is why the journey towards the first favourable central bank signal has good potential to be calmer than we might fear. It is important to have a portfolio that can withstand events such as new banking sector turmoil, a falling Swedish krona and a sputtering Chinese capital market. These are among the events that have created concern so far this year. It is hard to predict exactly what the future trouble spots may be.

With the benefit of hindsight, we could have carried more risk in our portfolios up to now. We have not been underweight, but equities and corporate bonds have outperformed government bonds and our cautious portfolio of alternative investments – not something that we regret, since markets have been surrounded by traps and obstacles along the way. This remains true. We do not know what negative effects may occur after a time lag, triggered by drastically higher interest rates. As a result, our portfolios have a normal weight in equities, with more global than Swedish equities, and we are careful not to unilaterally choose a given type of shares. We also have a normal proportion of corporate bonds – a major contrast to the zero interest rate period, when we had double this weight in the high yield segment. Finally, we have a lower proportion of our assets in alternative investment sub-portfolios, while holding more fixed-income investments that offer good current yields and the potential for extra returns if government bond yields start to fall.

Global equities are this year's winners in our portfolios



Source: Bloomberg

The chart shows the performance so far in 2023 of Swedish equities (SBX), the MSCI World Index and the MSCI Emerging Markets (EM) index in terms of Swedish kronor. It also shows the performance of Sweden's OMRX Bond fixed income index and a global high yield (HY) index hedged to Swedish kronor.

Global equities

Consolidation while awaiting a clearer direction

Despite rising interest rates/yields and subdued earnings, stock markets have delivered surprisingly strong figures – led by growth and quality companies. Stronger arguments for a soft landing and falling inflation give investors hope for the future. Robust company reports have not led to upgraded earnings forecasts. This has triggered higher valuations. Elevated long-term yields are leading to lower risk premiums, pushing down potential and boosting the likelihood of near-term consolidation. Yet rising investor confidence, with reduced risks related to growth and inflation, points to reasonable long-term stock market returns.

Higher share prices and downgraded earnings forecasts have pushed up valuations. Along with rising interest rates and bond yields, this has also squeezed risk premiums. Overall valuations are not yet disturbingly high. Global price-earnings (P/E) ratios are around 17, based on 12-month earnings forecasts. The United States tops the list at nearly 20, while Europe and emerging markets are trading at around 12-13. Sectoral structure justifies higher valuations in the US, but the gap has widened during 2023. This is because the US upturn has largely been driven by growth companies, which have made a comeback after last year's disappointing performance.

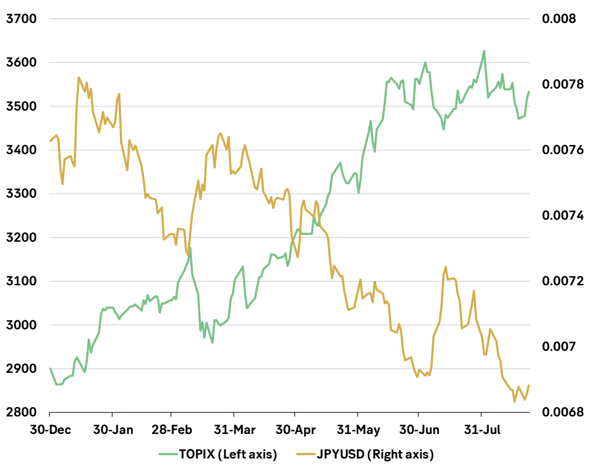
Falling popularity for the Chinese stock market

The Chinese stock market has fallen in popularity among international investors due to the country's uncertain economic policy climate, a seemingly protracted real estate crisis and a weaker than expected post-COVID recovery. As an alternative to China, investors have turned to the Japanese stock market, which has performed strongly in local currency terms. Warren Buffett's investments in a couple of trading houses listed in the Japanese stock market have received international media attention, generating greater interest.

Possible future Japanese stock market upturn

There are good arguments in favour of the Japanese stock market: relatively low valuations, strong balance sheets, a positive economic growth trend, a central bank that is keeping its key interest rate low, as well as a weak currency that benefits large portions of the corporate sector. For years, the government has tried to address continuing poor profitability – due to rigid structures such as cross-ownership and inefficient capital allocation. Looking ahead, improvements are possible, but the investor community remains sceptical since government actions have not yet led to any significant upturn in return on equity. Japan's sectoral structure makes the country sensitive to economic cycles. The stock exchange consists of approximately 25 per cent industrial companies and 18 per cent cyclical consumer companies (including automotive manufacturers), as well as a relatively high proportion of finance-related shares. A strong global economy is thus ideal for those making broad Japanese investments, and we do not have such a situation today. A selective approach aimed at companies that will benefit from the long-anticipated upswing in the domestic economy is probably better if you are going to start buying Japanese equities. Important for a foreign investor to note is the correlation between stock market performance and the weak yen. Despite its strong performance in local currency, the Japanese stock market has underperformed a global equity index in common-currency terms this year.

Strong stock market, weak currency



Source: Bloomberg

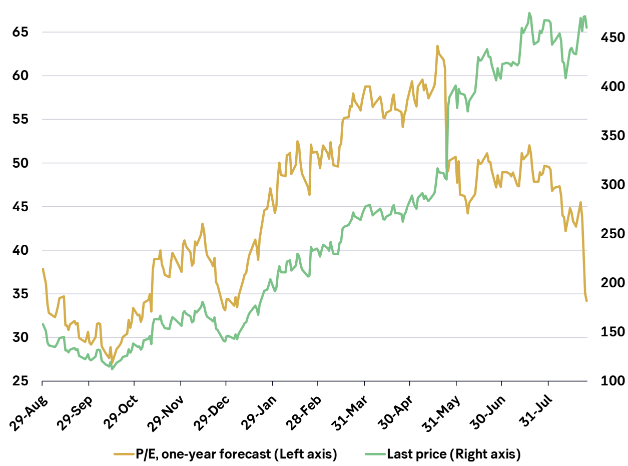
The chart shows the performance of TOPIX, a broad Japanese equity index, and the Japanese yen against the US dollar. The Japanese stock market has performed strongly in 2023, but yen depreciation wipes out much of the upturn for a foreign investor. The correlation between the falling currency and the rising equity index is very clear.

Earnings forecasts and valuations

The rise in global equity indices this year is being led by growth companies, but other market segments have also rebounded from last year's lows. This makes earnings performance key for future stock market gains. In recent quarters, earnings have continued to exceed estimates. But forecasts have gradually been lowered. In absolute terms, the current situation is not entirely convincing. In the US, profits are down more than 5 per cent year-on-year. Although there are wide gaps between sectors, with energy and commodity companies at the bottom, unchanged volumes and declining profits indicate some pressure on margins. This is happening from high levels and is natural during a slowdown, but if forecasts of around 10 per cent earnings increases next year are to prove correct, the downward trend probably needs to be reversed. Falling costs for input goods are likely to help, but falling volumes during a coming slowdown will pose downside risks to earnings. China's weak economic performance is also worrying.

Not all sectors are feeling the effects of the economic slowdown. Artificial intelligence (AI) is currently attracting heavy investment. For Nvidia, which designs and develops graphic processing units (GPUs) necessary for developing AI, demand and earnings have exploded, resulting in a share price surge reminiscent of the dot-com bull market around the turn of the millennium. Despite a share price increase of over 200 per cent this year, Nvidia's valuation expressed as a P/E ratio has fallen to the same level as at year-end 2022. The stock is certainly highly valued despite rising earnings forecasts, and its current price is starting to feel stratospheric, but its earnings multiple has fallen thanks to sharply higher earnings forecasts. Crucial for its market performance, and the challenge for the company will be delivering on high expectations – so far Nvidia's has surpassed them.

The AI boom is best represented by Nvidia, whose share price and earnings have skyrocketed

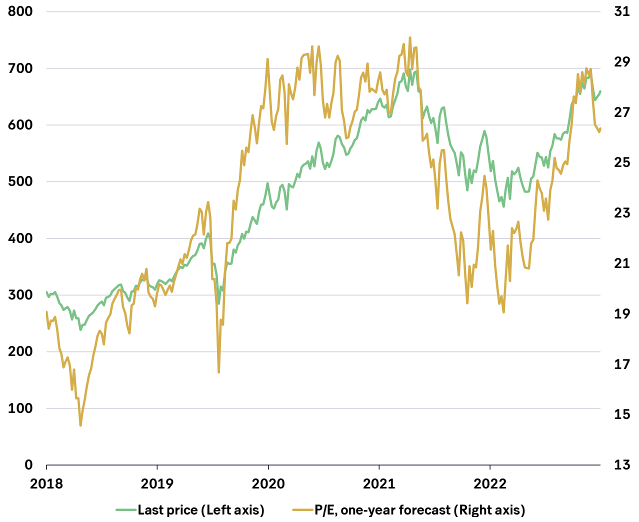


Source: Bloomberg

The chart shows Nvidia's share price during the past year and its 12-month forward P/E ratio. The stock has risen sharply, but its valuation has fallen thanks to upgraded earnings forecasts.

US-based information technology (IT) companies have rebounded sharply this year, which may seem surprising since earnings forecasts have been adjusted downward and interest rates/bond yields have risen. But the shares of companies that are winners due to the AI trend are in heavy demand. A recovery in earnings is expected as early as Q4 2023. This should provide support to the sector, which is relatively highly valued at present. For example Apple, whose P/E ratio was 20 at year-end, is now at 27. The company is expected to post net earnings of USD 95 billion this year, which is 5 per cent below the year-end 2022 forecast, but earnings growth is expected to resume in 2024.

The US technology sector is once again relatively highly valued



Source: Bloomberg

The chart shows share prices of US technology companies and their P/E ratios over the past five years.

This year's developments in terms of fundamental economic factors provide hope. A soft landing in the economy, together with the clear decline in inflation, will instil courage among investors as the focus of central banks shifts from final key interest rate hikes to future rate cuts.

Fewer negative investors

As for the actions of investors, this summer saw an interesting shift. The stock market upturn early in 2023 was essentially powered by momentum-driven investors and private individuals. Recent surveys indicate that "long-only" investors such as pension fund managers and mutual funds have increased the proportion of equities in their portfolios. This movement is happening from record lows and remains cautious overall. One possible favourable interpretation is that investors are daring to increase their risk-taking, now that a soft landing and a continued decline in inflation can be included in forecasts. Meanwhile there is room for continued increases in risk-taking. On the other hand, a pessimist can note that support from extremely cautious positioning has disappeared.

After sizeable stock market upturns, there is an increasing risk of a correction, or at least a consolidation. We are inclined to believe that a consolidation may characterise stock market performance in the near term. The continued focus on falling inflation, upcoming key rate cuts and a revival of economic growth reasonably soon will eventually open the way for a broad stock market recovery, but valuations and slow economic growth momentum suggest that there will be no dramatic gains.

Nordic equities

Worrisome upturn in real interest rates

Inflation is falling fast, which should be a relief, but central bank communications are far from optimistic. Market interest rates have kept rising. Financial markets have now priced in the view that US inflation in the year ahead will fall below the Federal Reserve's 2 per cent target. The combination of higher interest rates and lower inflation means sharply higher real interest rates, which historically have often been very unfavourable for the stock market. The weak krona is pumping up the earnings of Swedish-based companies, but in euro terms their earnings curve has flattened. The risk premium for the Swedish stock market relative to long-term government bonds is near a 10-year low, while the US is seeing the highest relative equity valuations in 22 years. To continue justifying these levels, a strong reacceleration in growth and earnings is probably needed, which is difficult to foresee happening soon. All in all, there is a risk of stock market turbulence this autumn.

Lower inflation and worried central banks – an unpleasant cocktail

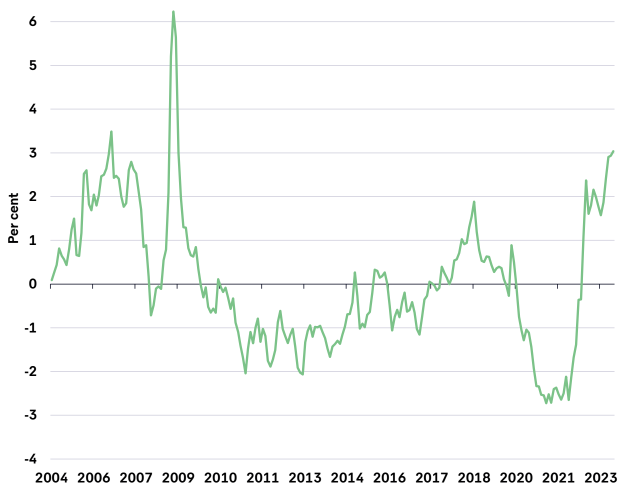
In line with what leading indicators such as the purchasing managers' index (PMI) have suggested for the past year, inflation – the big problem last year – has quickly fallen. Unfortunately, central banks have not shown much satisfaction about this but instead continue to warn of inflation risks and the need to maintain tight monetary policy. Financial markets now expect US inflation in the year ahead to fall below 1.5 per cent.

For Swedish and Nordic listed companies, there was a period between the second half of 2021 and during much of 2022 when many described their chances of raising prices as unusually good. For some, price increases were the only option if they were to maintain any profitability at all, while others improved their profitability despite cost inflation and supply chain problems. Today, price increases are often described as quite the opposite – difficult or impossible – and in many cases it is mostly a question of not needing to lower sales prices as quickly as the decline in input costs.

The encouraging inflation trend has had no impact on short-term interest rates, since central banks are still nervous about inflation and have not signalled any plans at all to start lowering their key interest rates. On the contrary, many want to continue raising them. The result is higher real interest rates, which should mean higher return requirements for equities and more challenging investment calculations for companies and households. In the US, the real interest rate on two-year government bonds rose above 3 per cent in July for the first time since the financial crisis of 2008-09 and has continued upward since then.

An upturn in real interest rates as sharp and swift as the one we saw this summer is fairly unusual, but we find a number of cases over the past 20 years. Usually this coincides with a significant stock market decline, but there are exceptions. Particularly when the upturn was from a very low level, as in 2013 and 2014, the upturn was clearly benign and coincided with an economic recovery. The stock market also remained strong despite the upturn in real interest rates from high levels at the end of the so-called supercycle of 2006-07. Unfortunately, it is hard to foresee such a bright economic picture today. Companies have given no indications of such an environment, and traditional leading indicators such as purchasing managers' indices (PMIs) suggest quite the opposite – a decline in economic activity. We find the stock market's relative calm in the late summer of 2023 remarkable, given the drama in the fixed income market.

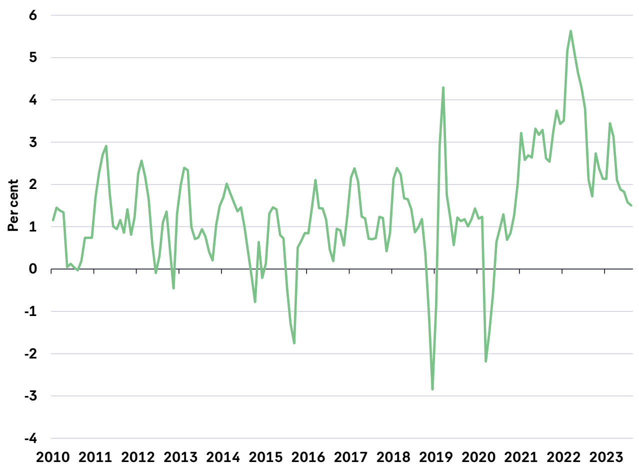
US real interest rates have skyrocketed



Source: Bloomberg

The chart shows the real interest rate for two-year US government bonds. Only during the so-called supercycle of 2006-07 did the stock market face a similar upturn in real interest rates. Upturns in real interest rates from lower levels are often associated with a post-recession recovery and are thus good for the stock market, whereas upturns in real interest rates from higher levels have historically often coincided with a stock market crash.

The market expects the Fed to miss its inflation target, on the downside



Source: Bloomberg

The chart shows US inflation expectations in the fixed income market over the next 12 months. For the first time since 2020, investors now expect inflation to fall below 1.5 per cent, well under the Fed's 2 per cent target. Apparently, investors do not share central bank concerns about another rapid upturn in inflation as soon as the tailwinds from falling energy prices have receded.

Comforting news from Nordic industrials

SEB held its annual two-day investor event in late August, when CEOs or CFOs from 31 major Nordic listed companies gave presentations to a large group of institutional investors. Many sectors were represented, but Swedish and Finnish manufacturers were overrepresented. Compared to the very negative economic picture painted if we look at leading indicators – such as PMIs, Germany's IFO business climate surveys or Chinese price statistics (China's year-on-year producer price index has fallen for 10 consecutive months) – the Nordic companies presented a rather comforting picture. The above-mentioned indicators suggest an economy in crisis, but that is not what these companies reported. In particular, the heavy industrial companies and their suppliers emphasised how major investments in sustainable technology and construction of new manufacturing facilities with stringent requirements for automation and energy efficiency are expected to contribute to good demand for many years ahead. This applies to everything from automotive factories switching to electric car production to smelting works that will cut their emissions and liquefied natural gas (LNG) infrastructure for a secure European energy supply without importing natural gas from Russia.

There were also numerous indications that some of the companies hit earliest and hardest by the economic slowdown may already be past its worst phase. One example is paper pulp, with prices now predicted to have bottomed out. Companies are also indicating that inventory adjustments in consumer packaging are probably at an end, so sales in the near term can be expected to recover to the underlying level of demand. In many cases, underlying demand is probably lower than 2019 volume but far higher than early 2023 delivery volume. As for prices and inflation pressure, the message from these companies is in line with statistics from recent months.

Costs of input goods, commodities, energy, transport and so on are falling, and many companies find it difficult to maintain their own sales prices. Further price increases are often extremely challenging, but in some cases prices are higher today than one year ago because the increases were carried out in late 2022 or early 2023. In other words, the message on cost inflation is generally encouraging, though there are exceptions such as US wage and salary costs – with some groups of workers setting extremely aggressive demands.

Is krona depreciation good or bad for the stock market?

Historically, the Stockholm stock exchange often weathers periods of great turmoil in the international stock market relatively well, in local currency terms. This is because the Swedish krona often serves as somewhat of a shock absorber, often falling sharply when the economy deteriorates surprisingly fast. The 2008 global financial crisis was a good example, but so was the spring of 2020. A weaker krona pumps up the earnings of the many large companies on the Stockholm exchange that have international operations and improves the competitiveness of Swedish exports. Big exporting companies dominate the country's stock market and, combined, they are many times larger than companies that are net importers and which prefer a strong krona. For the companies that SEB monitors and which use the krona as their reporting currency, a 1 percentage point weakening of the krona against the dollar and euro, all else being equal, means a 1.2 billion kronor improvement in earnings on an annualised basis. It is mostly companies that do business globally and have significant operations and costs in Sweden that benefit, such as forest product companies, mines and scrap-based steel producers, as well as the Ericsson telecom group and the big industrials.

As always, this year's weakening of the krona has also had a positive effect on the earnings trend for listed companies, mainly because earnings in international operations have a higher value in terms of kronor, but also due to the improved competitiveness of Swedish-based production. The weaker krona also bolsters the country's stock market index. The upturn on the Stockholm stock exchange this year is 9 per cent in local currency, compared to only 2 per cent in euros. Nonetheless, we believe it is not a given that the stock market performance for a year like 2023 has benefited from the weakening krona, calculated in hard currency. As usual in such economic contexts, it is difficult to know with any certainty what would have happened were it not for one specific factor, but there is anecdotal evidence suggesting that the weak krona trend is considered an undesirable risk by foreign investors. Domestically oriented companies such as banks, real estate companies and retail or service companies with a significant share of revenue in Sweden constitute krona assets on an underlying basis as well, and there is a genuine added currency risk especially for investments in such companies. These segments together account for about 18 per cent of total market capitalisation on the Stockholm exchange today. The exchange's valuation premium versus European indices has narrowed this year by more than 5 percentage points, but it is difficult to determine with any certainty whether and to what extent this is driven by a perceived added currency-related risk to investments in Sweden. Over the past two years, foreign investor ownership on the Stockholm exchange has fallen from 40 to 38 per cent, according to recent figures from Statistics Sweden and the Swedish Financial Supervisory Authority.

Weak krona is pumping up earnings

One thing we can say with certainty is that the weak krona has been a key factor in the continued positive earnings trend for large caps on the Stockholm exchange recently. In euro terms, the earnings trend has flattened. Much of the positive earnings trend in 2022 was driven by the weakening krona, and this year the gap between earnings calculated in euros and kronor has widened significantly.

Is continued earnings growth an illusion created by the weak krona?

Source: Bloomberg

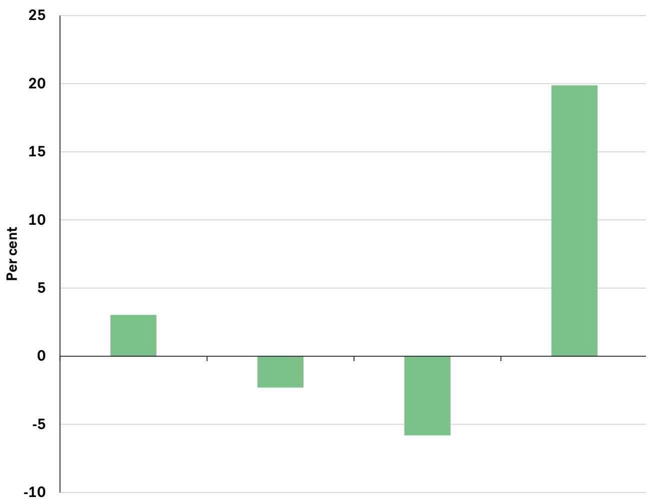
The chart shows 12-month forward earnings forecasts, with an index of August 2015 = 100, for the OMXS30 large cap index in Swedish kronor and in euros. Calculated in euros, earnings for listed companies have flattened over the past year and fallen somewhat from their peak earlier this year, while the earnings trend continues to look relatively good in terms of deflated Swedish kronor.

Copenhagen has outperformed other Nordic stock exchanges

The stock market got off to a strong start in 2023 in Sweden, in the Nordics as a whole and globally, but after the first five weeks of the year the party was over. Calculated in euros, the Stockholm exchange reached its high point for the year as early as February and has fallen by 8 per cent since then, whereas the upturn in kronor is still close to double digits. Thanks to a strong Copenhagen stock exchange and specifically one single company, Novo Nordisk, the Nordic index is up five per cent this year, also calculated in euros. However, two of the four Nordic exchanges are in negative territory for the year, and without Novo Nordisk the index would have been down this year for the Nordics as a whole. The average share price performance for large caps (those included in the OMXS30, OMXC20, OMXH25 and OBX indices) is also in negative territory so far this year, which means share prices for most large caps have fallen in 2023. However, Novo Nordisk has surged nearly 40 per cent this year, and the stock has a weight of more than 20 per cent in the index. Novo Nordisk's heavy index weight also means this stock alone weighs nearly twice as much as all the companies listed on the Oslo exchange.

The main factor behind Novo Nordisk's upturn is the unparalleled success of Ozempic and Wegovy, two drugs with the same active ingredient that fight diabetes and obesity. Demand for these drugs exceeds the company's delivery capability despite a strong upscaling of production capacity in the past year. The company's earnings are predicted to grow by more than 40 per cent this year to nearly 100 billion Danish kroner. Novo Nordisk's shares are probably also riding a clear global trend, with investor interest focusing on just a few of the world's biggest companies. A number of American information technology (IT) companies have mostly led this trend, but in Europe too a handful of the biggest companies in luxury brands, pharmaceuticals and IT have outperformed the overall index, including this Danish company. The trend is not new but has become much more prominent in 2023, and Novo Nordisk shares are now valued at a historically high price-earnings (P/E) ratio of more than 32 compared to an average P/E of 18 for the three years right before the pandemic.

A strong year for the stock market?



Source: Bloomberg

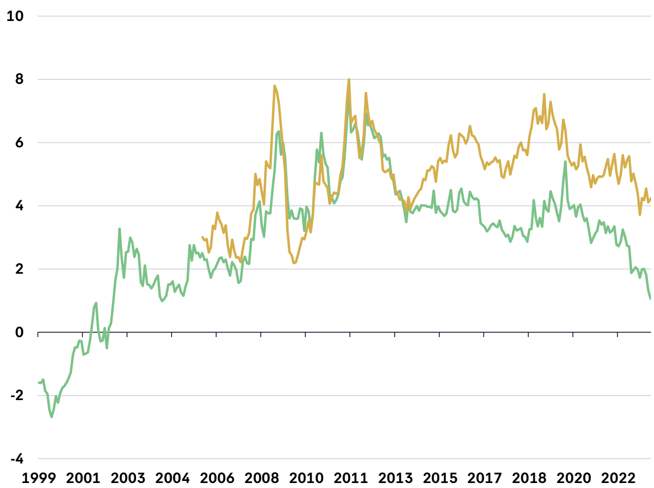
The chart shows the performance of the Nordic stock exchanges so far this year, calculated in euros. There are enormous differences between countries. Stockholm and Oslo are boosted by deflated local currencies but are not impressive in terms of euros. Copenhagen has outperformed all the other markets thanks to Novo Nordisk, which alone accounts for the entire year's stock market upturn and now has more than a 20 per cent weight in the VINX Nordic index.

Poor risk compensation for equity investors

The stock market has been remarkably strong this year given the interest rate trend. This is mainly true in relation to real interest rates and especially real yields on bonds with somewhat shorter maturities, but the most conventional method is to compare stock market valuations with long-term bond yields. If we compare the "earnings yield" or the "inverted P/E ratio" – that is, the earnings-price ratio (E/P) or a company's expected annual earnings divided by its share price – with the yield on a 10-year government bond, we get a measure of the risk premium that equity investors are paid. We have chosen to compare valuations of large caps on the Stockholm exchange, the OMXS30, with 10-year Swedish government bond yields as well as valuations of US large caps, the S&P 500, with 10-year US Treasury yields.

Over the past 15 years, equity investors have been paid an average risk premium of 4.0 per cent for US equities and 5.2 per cent for Swedish equities, but today this risk premium is below 1.1 per cent for US equities and 4.2 per cent for Swedish equities. The risk premium is the lowest in 22 years in the US and the lowest in 10 years in Sweden. Put somewhat differently, equities have high valuations compared to bonds in a recent historical perspective – especially in the US, but also in Sweden.

The equity risk premium is near a 10-year low in Sweden and a 22-year low in the US



Source: Bloomberg, SEB

The chart shows the risk premium for equities in the S&P 500 index and the OMXS30 index, calculated as the difference between the E/P ratio or earnings yield and the yield on 10-year US and Swedish government bonds, respectively. A low risk premium may mirror optimism about expected earnings growth, but is that reasonable?

Summary

All in all, we must face the fact that the improving inflation trend we have seen this year has not led to lower interest rates but instead to rising real interest rates, which risks having a negative impact on economic growth and the corporate earnings trend. It also makes fixed income investments an attractive alternative to equities. The risk premium that investors are paid today to buy equities instead of bonds is at its lowest level for 10 years in Sweden and more than 20 years in the US. The earnings trend is still relatively stable in Sweden and the other Nordics (excluding Norwegian oil companies), but the weak Swedish currency has played a significant role in painting a rosy picture if we look at the earnings trend calculated in kronor. This year's upturn on the Nordic stock exchanges can be fully explained by the strong performance of a single company, Denmark's Novo Nordisk. Excluding this company, the index so far this year would be in negative territory despite the stock market's strong start earlier in the year. To date, the stock market has done an impressive job managing the upturn in real interest rates, but we foresee the risk of a turbulent autumn. To enable the Nordic stock market index to return to its 2023 high, a substantial boost in the earnings trend is probably needed, which appears unlikely given the current economic situation – or else falling interest rates, which will require a complete turnaround in central bank communications.

Fixed income investments

A final balancing act for central banks

This summer confirmed the view that the key interest rate hikes of the past year have continued to have an impact. Inflation is still slowing, though the deceleration rate varies between countries. Meanwhile, surprising resilience is visible in various parts of the economy, which means that the expected economic downturn has been postponed. For central banks, this entails a balancing act – the risk of inflation returning if they end their rate hikes has to be weighed against the likelihood of an economic recession if they tighten too much and for too long. In a situation where inflation continues to fall and key interest rates are kept high, rising real interest rates are a factor indirectly squeezing asset prices and suppressing investor appetite.

Government bonds (excl emerging markets)

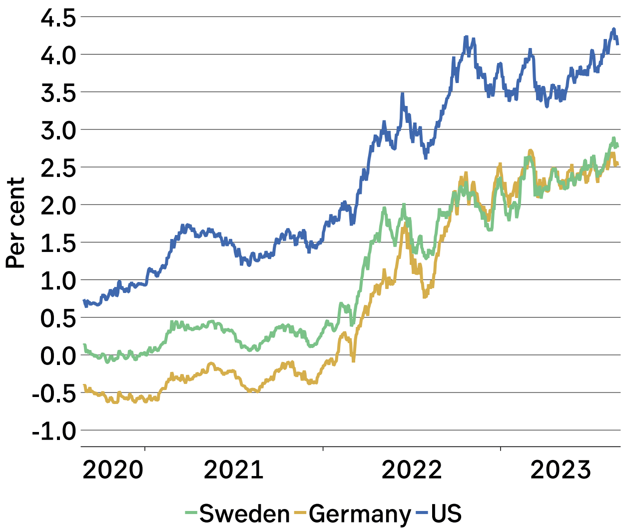
Global long-term yields have lacked a clear direction since last autumn but turned upward this past summer, with long-term US and German yields nearing their October 2022 peaks. The upturn was driven by stronger-than-expected economic data, postponed expectations of interest rate cuts, a dramatic increase in the bond supply and the Bank of Japan (BoJ)'s willingness to let domestic bond yields rise. Although markets have already priced in these factors to some extent, bond yields may remain high until the timing of future rate cuts becomes clearer.

We believe that the US Federal Reserve (Fed) carried out its final hike in July and will introduce key rate cuts during the second quarter of 2024. Historically, US long-term Treasury yields have topped out in conjunction with a peak in the Fed's key interest rate and have then fallen gradually during the rate cutting period. However, US long-term yields are currently low relative to the key rate, which should limit the strength and size of the downturn in long-term yields when rates cuts begin. We anticipate that US 10-year yields will reach a new peak of around 4.50 per cent during the autumn and then fall back to 3.90 per cent in 2024.

The picture is not as clear for the European Central Bank (ECB). We believe that the ECB ended its rate hike cycle with the July rate increase, but this does not rule out a further rate hike before the end of 2023. Economic data this autumn will very likely determine whether there will be any hikes. Based on recent communication from the ECB, one alternative to a further rate hike is for the central bank to keep its key rate at the current high level for an extended period. We believe that German 10-year government bond yields will rise to 2.80 per cent this autumn and then decline to 2.60 per cent in 2024, driven by cautious ECB rate cuts.

When Sweden's Riksbank raised its policy rate to 3.75 per cent after the Midsummer holiday in late June, Riksbank governor Erik Thedéen made it clear that there will be at least one more rate hike this year. In our view, a final 0.25 per cent hike to 4.00 per cent will be implemented this autumn and the central bank will then make its first rate cut around mid-2024. The Riksbank also announced that, starting in September, it will increase its monthly government bond sales by SEK 1.5 billion to SEK 5 billion. We expect the Riksbank to expand its sales volumes later this year, which may cause Swedish bond yields to rise further against their German counterparts. Our forecast is that Swedish 10-year bond yields will rise to 3.10 per cent during the latter part of the year and then fall back somewhat to 2.90 per cent in 2024.

Surprisingly resilient US economy has driven long-term yields



Source: Macrobond

Expectations that a US recession will be avoided, together with continued high inflation in Europe, have caused long-term yields to rise this summer.

Government bond forecast

10-year government bond yields	5 Sep	Dec 2023	Dec 2024	Dec 2025
United States	4.23	4.50	3.90	3.00
Germany	2.59	2.80	2.60	2.50
Sweden	2.80	3.10	2.90	2.80

Source: SEB, forecasts September 2023

In light of expectations that central banks will carry out their final rate hikes this autumn and begin to cut rates in 2024, we believe long-term government bond yields will peak towards the end of 2023 and then fall back in 2024.

Corporate bonds – Investment grade (IG) and high yield (HY)

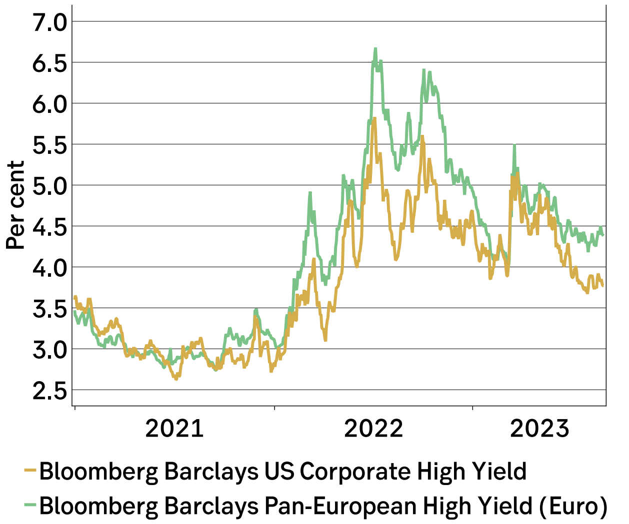
The stress in the US banking sector last spring, which spread to Europe to some extent, put heavy pressure on corporate bonds in both the high yield and investment grade segments. However, various rescue measures managed to limit spillover effects to a large extent, and after more than a week of dramatically widening credit spreads in both segments, spreads narrowed again. This trend has since continued, with credit spreads currently near the lows seen before the banking sector problems surfaced. US regional banks, which were in the eye of the storm, have seen improved access to capital markets since the March events but still face some headwinds in the form of higher capital costs and more stringent regulations.

Over the past few months, support has instead come from the US economy's surprising resilience, driven in part by fiscal measures and industrial sector investments. Other factors are falling US inflation and expectations that the Fed has carried out its final rate hike and will instead start lowering its key interest rate during the first half of 2024. While the economic situation looks different in Europe – with weaker growth and higher inflation – the region benefits from the view that the US will apparently be able to avoid what many analysts thought just a few months ago was an unavoidable recession.

The above factors have partly reflected the HY bond trend we have seen in the US and Europe, two regions that have had strong economic growth, though US HY bonds have the advantage given the macroeconomic challenges still prevailing in Europe. The default rate for companies classified as high yield continues to rise from low levels, and at present the rate is at its historical average of around 4 per cent according to the credit rating agency Moody's. This figure is expected to peak at 4.7 per cent during the first quarter of 2024 and then fall back to 4.3 per cent one year from now.

The regional picture for IG bonds looks similar to that for HY bonds. Challenges in Europe, with higher inflation and continued tight monetary policy, mean that US IG bonds enjoy an advantage. However, both regions offer attractive IG bond yields given high underlying base interest rates.

Credit spreads back around their level before last spring's banking sector stress



Source: Macrobond

The credit spread is the additional compensation an investor is paid above the risk-free interest rate to assume the credit risk in the underlying company. During the spring and summer, credit risk as well as credit spreads fell back to the low levels that prevailed before last spring's banking sector stress.

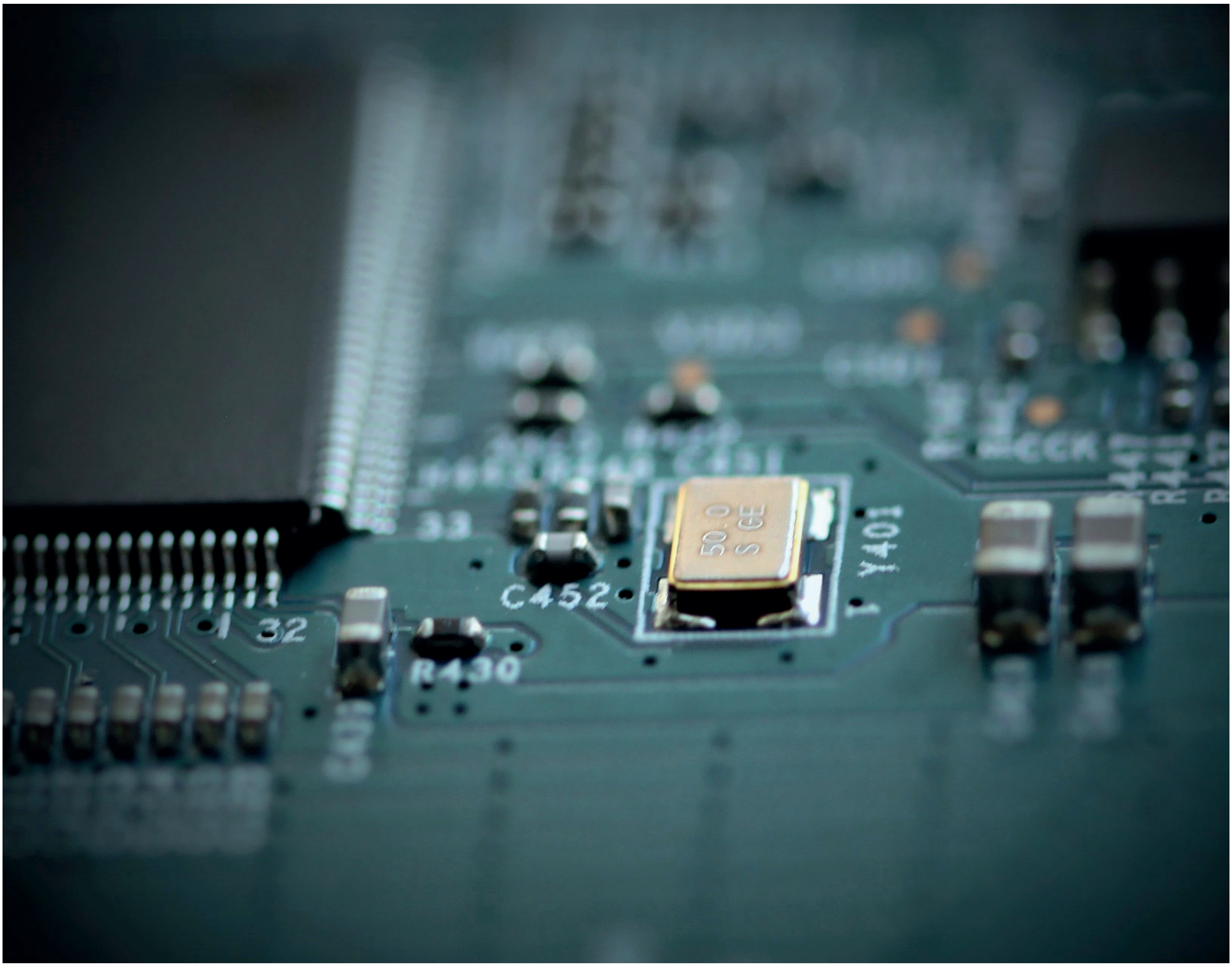
Emerging market debt (EMD)

During 2023, favourable conditions for fixed income investments in emerging markets have resulted in good yields. There is also reason to believe this trend may continue for the rest of this year. However, risks have also appeared recently, which makes the picture somewhat more challenging.

On the positive front, inflation is now falling in most emerging market economies. Although absolute figures vary between countries and regions, the trend is clear. Combined with expectations of slowing global economic growth, this should give some central banks room to start cutting their key rates as early as the second half of 2023. Meanwhile, general emerging market resilience in the face of weaker growth has turned out to be stronger in this cycle, which could limit the fundamental effects of slower economic activity. The flow picture can also be considered somewhat positive. After inflows early in the year, emerging market funds have seen outflows during the second and third quarters, the result being net outflows this year despite positive returns.

However, the bright picture painted above is overshadowed by other factors, such as the numerous economic growth challenges now facing China. Given China's role as a contributor to global economic growth and an important trading partner with other Asian countries, this affects market conditions. The outlook for the Chinese economy has continued to weaken in tandem with deteriorating economic statistics presented during the summer.

Problems in the real estate sector continue to affect the Chinese economy. Combined with unexpected weak domestic consumption after the easing of COVID restrictions, the feeling is that it will take time for political leaders in Beijing to reverse the weak trend. The geopolitical situation may also be a source of concern for China. Relations between the US and China have been strained for some time and tensions may escalate further, while the conflict with Taiwan is ever-present.



Theme: Semiconductors
The backbone of digitisation

What technological changes will impact society most over the next decade? This year, many people would probably say artificial intelligence (AI), but electrification and the sustainability transition are other leading candidates. Critical for all of them is access to the right semiconductor components.

The backbone of digital technology

Semiconductor components are far from new. On the contrary – a growing supply of continuously improved semiconductor components has been essential to all digitisation and major technological advances for many decades. But when Neil Armstrong took his first steps on the moon in 1969, there were probably not many viewers who contemplated how this would never have been possible without the technological advances that Fairchild Semiconductor's new silicon-based integrated circuits had just provided. Similarly, the development of the mobile phone over the past 30 years, which has significantly changed our lives and societies, has required and is built on amazing improvements in semiconductor components, which constitute the building blocks of these phones.

According to semiconductor manufacturer ASML, no fewer than 1.15 trillion chips were produced globally in 2021. Looking ahead, many of the technological and social changes that have been predicted will require us to squeeze even more and better semiconductor components into homes, cars, machines and gadgets. This is needed, for instance, to reduce waste in manufacturing by producing perfect machines and components from the start, which in turn will require more and better sensors and data transfer. For cars to be self-driving or to assist the driver, require more sensors, memory and processors. In order for us to lock, monitor and regulate our homes and other properties and thus improve safety, security, comfort and energy efficiency, these buildings need to be able to communicate. The same is true of many machines and instruments.

Semiconductor stocks are volatile but have generated good growth in shareholder value over time

Source: Bloomberg

The chart shows the Philadelphia Semiconductor Index since 1996.

The latest hot trend in digitisation, AI, requires enormous quantities of expensive and advanced chips. Earlier this year Nvidia, the leading supplier of computer server processors that power, for example, ChatGPT and other AI services, issued what the financial industry has described as the biggest upside profit warning ever from a semiconductor company – causing the company's market capitalisation to skyrocket by USD 184 billion in a single day. Analysts now predict that Nvidia's 2023 earnings will rise to USD 25 billion, a sixfold increase in five years.

From a niche for nerds to the centre of world politics

Just as water and air are vital to our existence yet are often taken for granted, semiconductors have led a fairly obscure life out of the public eye for a long time, despite being absolutely crucial to the digitisation of society that has been under way for many decades. In recent years, various simultaneous supply chain disruptions have dramatically changed this. The semiconductor component shortage forced many industrial companies to close their plants in 2021-22, and virtually all manufacturing activity around the world was affected; the automotive industry stood out as especially hard hit. Supply chain security and access to semiconductor components have therefore climbed to the top of the agenda, not just in the business world but at the highest level of global politics.

No other industry appears to be as vital to the struggle for technological dominance between the United States and China. Sanctions on semiconductor component exports to Russia are also among the most visible economic sanctions against the country after its invasion of Ukraine. The world's dependence on semiconductor components from Taiwan-based contract manufacturers is a key dimension of the geopolitical conflict that the island lies at the centre of.

In the US, the CHIPS Act, a stimulus programme worth USD 52 billion, has already sparked significant investments in new production facilities. China has a similar investment fund for integrated circuits worth USD 51 billion in two phases plus tax breaks. The European Union, Taiwan, South Korea and Japan also have various initiatives and subsidies to stimulate investments in their local semiconductor industries. In particular, suppliers of production equipment and related infrastructure – which are also an important part of the semiconductor sector – should benefit from this. Interest in this sector among political leaders is a clear recognition of the importance of semiconductor components for the economy and our societies.

A highly dynamic, fragmented sector

Ever since its infancy in the 1960s, the semiconductor sector has been characterised by rapid changes, not just in terms of products and technology but also the companies themselves. New companies emerge quickly and can grow at extraordinary speed, while established market leaders can go nearly as fast from making billions of dollars in earnings to fading away.

Naturally, every company is unique to some extent, but we can roughly divide the semiconductor sector into a number of sub-sectors:

- **Integrated device manufacturers** – Intel, Micron Technology and Texas Instruments.
- **Chip design companies without their own production ("fabless" chip designers)** – Qualcomm, AMD and Nvidia; Nordic companies include Fingerprint Cards and Nordic Semiconductor.
- **Semiconductor contract manufacturers** – TSMC, Global Foundries and UMC.
- **Equipment or materials subcontractors for semiconductor makers** – ASML, Applied Materials and Lam Research.

It is also relevant to divide these companies into various broad product categories such as memory, logic and analogue circuits as well as sensors, discrete components and optoelectronics.

A company's own production and contract manufacturing of semiconductor components are both very capital-intensive and depend on large-scale production. It is so capital-intensive that formerly integrated companies have abandoned this model and switched to buying manufacturing services. IBM is a relatively recent example of this. To some extent, these economies of scale have helped to concentrate production to a small number of fabrication plants, which is now creating concerns in this era of deglobalisation. The COVID pandemic and Russian aggression were a wake-up call about the risks this may entail.

The economies of scale for chip design companies are also very large. Costs for developing the best solution are often substantial but once the solution has been found, the marginal cost of producing another unit – or for that matter, several million additional units – is small. The biggest companies with this business model, such as Nvidia and Qualcomm, have gross margins of 50-70 per cent. Rapid technological advances also mean that new products quickly become old, and companies that do not keep up with developments will be squeezed out, which is clear from how quickly the list of the most successful companies in this industry has changed. Since companies with this business model do not need their own production facilities, they can maintain a light balance sheet.

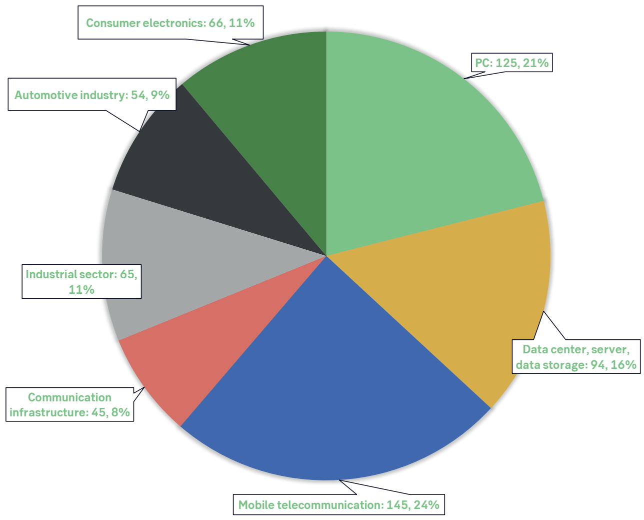
Rapid changes in sector leaders are reflected in how the 30 leading semiconductor companies included in the Philadelphia Semiconductor Index (SOX) has changed over the past five years. In the table below, we compare changes in the SOX with the Swedish OMXS30 index of the 30 most actively traded stocks on the Stockholm exchange (29 companies, but Atlas Copco's class A and B shares are both included).

Five-year performance, 2018-2023, for the Philadelphia Semiconductor Index (SOX) versus the OMXS30

	SOX	OMX
New stocks	11	4
Stocks removed	10	4
In and out/out and in/more shares issued	12	0
Stocks in index throughout the period	19	26
Total number of companies in index today	30	29
Best share performance	544%	156%
Average share performance	159%	37%
Worst share performance	-56%	-83%
Market cap, largest company, USD bn	1,010	217
Market cap, smallest company, USD bn	31.6	0.6

Source: Bloomberg

Semiconductor market by end-customer category in USD billion, 2021



Source: ASML, Gartner

The chart shows global semiconductor sector sales by customer category for 2021 in USD billion and per cent. Historically, the above pie chart has undergone dramatic changes, but in recent years the changes have been relatively small. Every market is expected to grow until 2030, with overall sector sales predicted to nearly double from today's level. The fastest growth is predicted for automotive components, for which a threefold increase in market value is forecast in 2030.

A cyclical sector with extraordinary price pressures and rapid growth

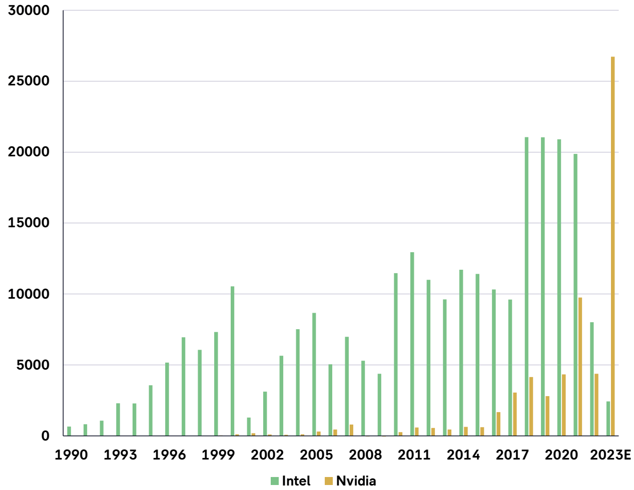
The semiconductor sector has long been characterised by strong growth. Since 1987, global sales have grown by an average of 8.3 per cent per year. This rapid growth is predicted to continue, with sector sales expected to double to more than USD 1 trillion dollar in 2030. However, this is not a sector where a rising tide lifts all boats. On the contrary, it is somewhat of a "winner-take-all" market, where companies that develop the best solutions can grow extremely fast with high profitability, while laggards risk being wiped out just as fast. In Sweden we had one example of this, though on a rather small scale, with Fingerprint's meteoric rise and fall over the period 2015-17. After years of losses the company reported net earnings of SEK 2 billion in 2016, but since 2018 it has posted losses again. Because various kinds of semiconductors are used in every conceivable product, companies are often more dependent on the demand trend for the end product that their semiconductors are embedded in than the overall semiconductor market.

Two of the world's best-known companies in the semiconductor sector are Intel and Nvidia. They also serve as interesting illustrative examples on a large scale:

Intel was an extreme success story in the 1990s. Its processors managed to capture a large share of the company's earnings from the then fast-growing personal computer (PC) industry. Between 1990 and 2000 net income rose from USD 650 million to USD 10 billion, before collapsing. It would take Intel 10 years to exceed its record earnings from 2000, and the company's earnings trend has been much worse than the sector average over the past decade as well. Intel has maintained a strong position in PC processors, a niche with insignificant growth, but has also developed several other product lines with more favourable end-markets.

Nvidia was founded in 1993 and was long primarily known for its graphic cards, beloved by many young computer gamers. The company's processor sales were also boosted by the speculative craze in crypto assets during the COVID pandemic. It is now expected, above all, to be one of the biggest and earliest winners in the AI revolution given its dominant position in advanced processors, which are needed for the enormous quantities of data that must be processed. The first year it was listed, in 1999, Nvidia posted a net income of USD 38 million. The company broke the billion dollar barrier for the first time in 2016, with net income of USD 1.6 billion. In 2021, it reached a temporary peak of USD 9.8 billion. This year the company is expected to report net income after taxes of USD 25 billion.

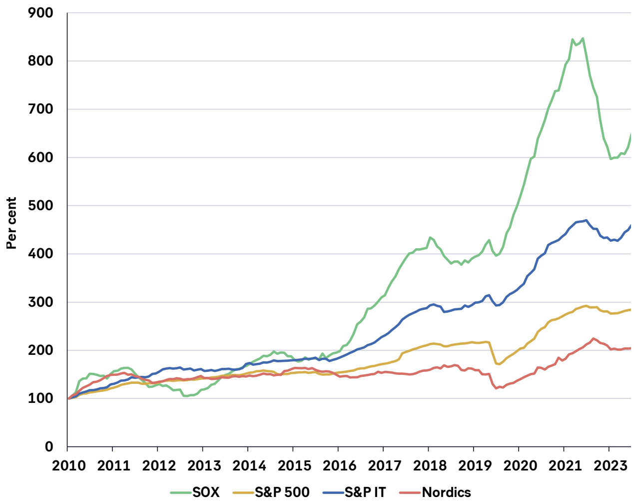
Earnings for Intel and Nvidia since 1990



Source: Bloomberg

The chart shows the annual net income of Intel and Nvidia in USD million. For Nvidia, whose fiscal year is February-January, the 2022 figures cover Feb 2022-Jan 2023. The forecasts for 2023 are consensus figures.

Earnings growth for semiconductor companies has outperformed the stock market average in the US, the Nordics and the American IT sector generally



Source: Bloomberg

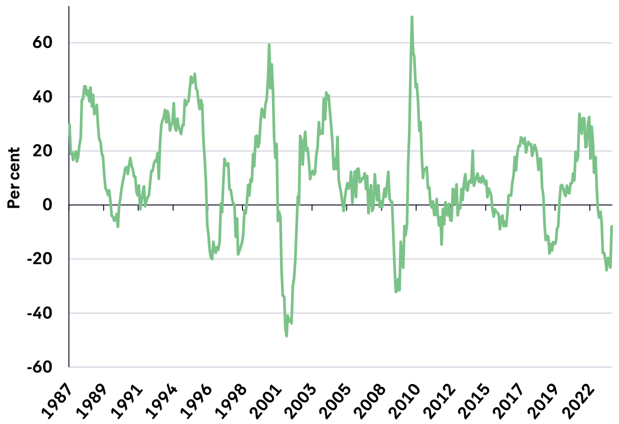
The chart shows 12-month forward earnings forecasts for the Philadelphia Semiconductor Index (SOX), the S&P 500 index, the S&P 500 IT sector index and the VINX Nordic index. Earnings forecasts are indexed at 100 for January 2010 and in USD for the three US indices but in EUR for the Nordic index. The earnings performance of semiconductor companies is volatile, but over time their growth has outperformed the comparative indices.

Dip in strong earnings trend creates interesting situation for stock market

The sector as a whole is sensitive to business cycles and is highly volatile. A look at historical business cycles brings to mind classic Nordic basic industries such as sawmills, paper pulp and steel. However, underlying growth is significantly higher, especially in volume. Furthermore, prices for many of the most important products are falling, and chips with an older design can quickly become unsaleable.

The collapse in sector sales this year, with a downturn of 24 per cent at most compared to the same month in 2022, is one of the largest since the 1980s. Only the collapses in 2008 and 2001 were larger. However, the downturn has already eased significantly, and the trade association WSTS predicts growth of nearly 12 per cent for the full year 2024.

Global semiconductor sales, year-on-year growth



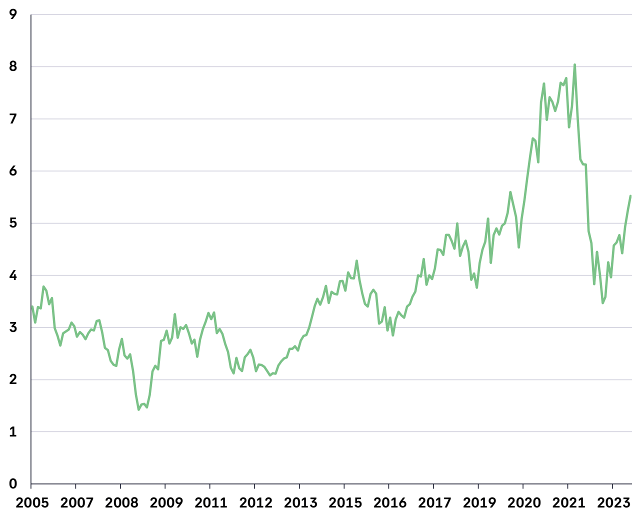
Source: Bloomberg/WSTS

The chart shows monthly sales growth in USD for the global semiconductor sector since 1987. Average annual growth is 8.3 per cent, but volatility is extreme, with frequent peaks of more than 30 per cent growth and several troughs with more than a 20 per cent downturn. Earlier this year, sales plunged 24 per cent; only the downturns in 2008 and 2001 were deeper.

The economic slowdown has also left its mark on share prices. The Philadelphia Semiconductor Index fell from its 2021 peak by as much as 48 per cent but has since recovered about two thirds of this. As usual, the stock market has factored in expected future performance in advance, and the combination of the current earnings dip and the stock market upturn has lifted the price-earnings (P/E) ratio to a historically high 22, though this is expected to fall quickly as earnings rise during the next few years. In cyclical industries, one can often get a better picture of what valuations are like by looking at sluggish, earnings-dependent metrics, such as equity capital or sales. Equity capital valuations have fallen significantly from their earlier peak but are still high in a historical perspective. In other words, investors have already factored in better profitability than historically, but a number of concurrent factors may well mean we are entering a period of structurally higher profitability.

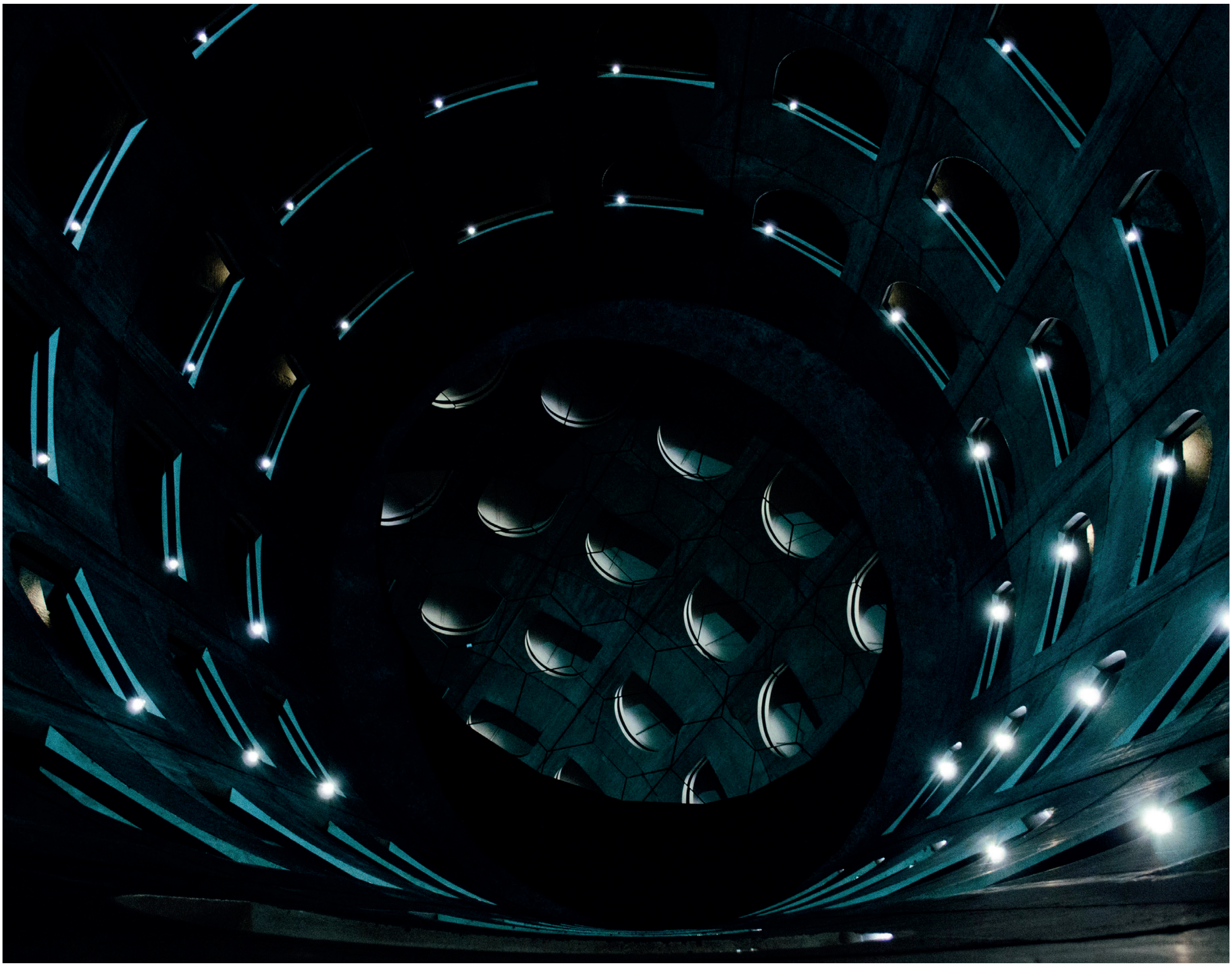
Strong expected growth in AI is one factor. Subcontractors of production equipment, materials and testing can also be expected to enjoy a particularly favourable market over the next few years, since a more geographically diversified production infrastructure will be built up. Another sector that may see a particularly good trend is automotive semiconductor components, since this segment is expected to growth about twice as fast as the overall market.

Valuations have come down from their peaks



Source: Bloomberg

The chart shows equity valuations for companies in the Philadelphia Semiconductor Index since 2005. Valuations have fallen significantly from their 2021 peaks but are still high in a historical perspective. Investors in this sector need to believe in structurally higher profitability going forward.



Theme: Paradigm shift – from ownership to usership

The year is 2050. You're sitting at your favourite café drinking a cup of coffee on a cool September day. This morning you ran some errands by car, so now you're taking a well-deserved break. Despite a busy schedule, you're operating at a comfortable level of stress. That's because you didn't drive the car yourself or look for parking spaces either – so you didn't even think about traffic during these hours. You only needed to use your mobility app and click on where you wanted to be picked up and where you wanted to be driven – a stress-free morning.

In this future scenario, personal mobility has changed from buying units of cars to buying units of distance. This is part of a potential paradigm shift from ownership (paying for products as units) to what we refer to here as usership (paying for products as a service), which might be the next big retail disruption in our societies. This shift might lead to major changes in the way we manufacture and deliver physical products. Instead of short product lifespans, the economic incentive has shifted to long lifespans.

In this theme article, Christopher Lyrhem, Future & Strategy Analyst at SEB, describes one possible scenario and what this may imply and lead to. It should not be viewed as a forecast, but as a thought-provoking exploration and an attempt to describe a potential trend that may fundamentally change our lives.

Our society has changed more in the past 300 years than in the preceding several thousand. We have changed the way we create materials and energy. We move them to the other end of the world, and we transfer both information and funds to pay for such goods at the speed of light. New innovations, materials and energy sources are continuously being developed as a result of humanity's drive for a future with better living conditions. Both individually and combined, these "disruptive innovations" have created new market conditions (for example, when steam engines fuelled by coal were placed on iron rails and facilitated international trade, or when digital signals connected society together and enabled online shopping). Many lessons can be learned from developments over the past 300 years, with transformation being a keyword. Below are three such lessons:

1. New disruptive innovations always replace old ones.
2. Over time, disruptive innovations merge to an ever-greater extent (with totally new business opportunities).
3. The global economy is in constant transformation.

Our conclusion is that we must be attuned to the fact that our world will change, whether we want it to or not.

In order to formulate a future scenario, we must understand history. We must develop principles for what drives people, how they act when new ways replace old ones, and how society is restructured when disruptive innovations change earlier models. It is (primarily) human innovation capacity that changes society.

Billions of smart sensors

In the decades ahead, we can expect smart sensors with built-in microprocessors to be installed in most physical products we use each day to live comfortably – everything from appliances, kitchen gadgets and tools to compressors, cleaning robots and ball bearings. The question is not whether this will happen, but when. Today, these processors have already been installed in most new cars and many other high-value products.

Over the past decade, smart sensors have fallen sharply in price and increased in capability. They can now mow golf courses, clean hotel bathrooms, and identify and extinguish forest fires.

Although we are still at the beginning of this transformation, an increasing degree of artificial intelligence (AI) may enable manufacturing companies to rethink the way they create value for their customers, now enabling physical products to compete with humans in some fields.

Making new business models possible

To date, our underlying manufacturing and consumption models have been built on unit economics and ownership. We buy products that we use until they reach the end of their service life, or until we get tired of them and want something new. The structure of our economy is linear – that is, we extract raw materials, manufacture products that we use and eventually get rid of.

But what happens when physical products are fully integrated with smart sensors? Naturally, the answer lies in the future, but let us nevertheless create a future scenario based on what we know today. Today we can measure use in real time, which means we also have the possibility of being paid/paying for this use. Historically, it has been extremely difficult to generate long-term financial gains from renting out physical products, since we could not fully measure their use. Now that this capability exists, we can be paid/pay for the number of kilometres, days, hours, times or whatever unit we now measure use in. We do not need to buy units, which we mostly do today – we can instead use them and pay for their use.

"We must be attuned to the fact that our world will change, whether we want it to or not."

People are open to subscribing

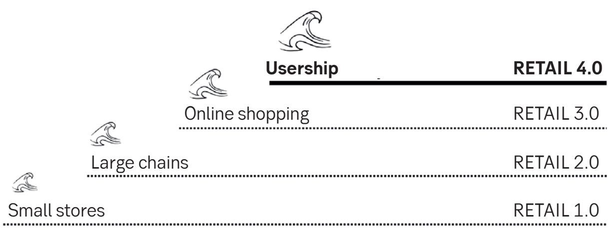
As a rule, people are distributed on a spectrum in terms of their preferences and traits. For many, continuous access and a problem-free life are worth more than owning a physical version of a product, while independent ownership is more important to others. We conducted a survey in which we asked consumers of all ages how they feel about testing a subscription for physical products (about 15 types of products). The respondents were clearly positive, with about half of them having a generally positive view of subscriptions. It is noteworthy that there is great variation between age groups, with younger people being significantly more positive than older people. The main driver (the reason for their positive response) was often "I want a problem-free life".

Moreover, there was a clear divide between products with higher unit prices, electronic content and capabilities to solve our everyday problems and products that we wear or keep around us for more emotional reasons. Products for our brains (for example, cars and appliances, which solve problems for us) had a much higher share of positive responses compared to products for our hearts (such as clothes or furniture, which reflect our personality).

Retail 4.0 – continuous access

The practice of renting out physical products has always been around – but with the help of a number of disruptive innovations (smart sensors, 5G, AI, cloud services, cryptographic solutions etc.) we may see the next retail wave in our society. First came small shops in cities (Retail 1.0). Shopping centres and large chains then took over large parts of the market (Retail 2.0), and in the past 20 years online shopping (Retail 3.0) has taken over about 20 per cent of total retail sales in many countries, such as Sweden. During the next 20 years, we could potentially see the next big wave, when we pay for continuous access to what physical products can provide us instead of buying them in physical or digital stores. I call this "Retail 4.0," a physical "on-demand" wave – with a shift from what so far have mostly been digital services. One example of constant access is a subscription for cars or for vacuum cleaners, lawn mowers, tools, kitchen gadgets, appliances, bicycles or even clothes.

Retail 4.0 **– The fourth big wave in retail?**



What we have presented so far is a future scenario based on principles for how disruptive innovations have historically changed our society, how emerging innovations (smart sensors, AI etc.) will affect developments going forward, and how people feel about paying for using instead of owning. Based on these factors, we can describe this potential paradigm shift.

The transition – not without challenges

To get closer to the truth, two dimensions of this scenario must be examined – not just the opportunities, which are continuously being developed, but the factors that constitute challenges and thus argue against such a shift. Two significant factors are part of a highly entrenched infrastructure and constitute the basis for linear production and consumption in our society:

1. The right conditions are not yet in place to scale up the recycling of materials and remanufacturing of products (important aspects of the notion of "circularity") at a global level.

2. The global structure for manufacturing and logistics is complex, with components and products travelling between continents.

The global economy is currently about 7 per cent circular, while the Swedish economy is about 3 per cent circular (source: Circularity Gap Report), and the trend in recent years has been disappointing.

One reason for this is a lack of economic incentives for increased circularity. As a rule, extracting new materials from the earth is more cost-effective than building global infrastructure to reuse materials and products. Economic incentives drive people's innovation capacity, and when recycling and remanufacturing (restoring an old product to like-new condition) have not been given enough economic impetus to be able to compete with our linear manufacturing model, it is difficult to break the pattern. The economic equation for usership models does not yet compute, which means the linear global manufacturing structure has not changed yet to any great extent. Historically, disruptive innovations have changed economic equations, and that is probably the likely solution to make the linear model circular.

Measuring – one key to an incentive for circularity?

One new variable in this context is the merging of smart sensors and AI. With this combination of technologies, the factors that argue against a shift from ownership to usership can be partly eliminated. This is because when we can measure use, we can be paid for use and when we are paid for use, a new economic incentive can be created – a circular incentive. When a manufacturer's product is paid for on the basis of a usership model, an incentive to extend product life is created, so the product can generate a cash flow over a longer period.

Let us suppose that the economic incentive for how we manufacture physical products actually changes from a linear present-day to a circular future – by starting the journey from ownership (units) to usership (services). Might we then face a systemic change in how our global infrastructure is shaped? Perhaps, based on my future scenario (my hypotheses are not forecasts, just scenarios). It is extremely difficult to change a system, since this essentially requires a transformation of all processes involved, both human and technological. For that reason, the focus is more on circular applications and products, rather than circular infrastructure. One analogy might be that we must all turn our own key in a gigantic door (infrastructure) at the same time, instead of using our own key to open individual doors (applications) as we do today.

Infrastructure for applications – an essential requirement

Historically, new infrastructure has been required for new applications to "break through" in our societies. Websites needed the internet, mobile applications needed smart phones, online shopping needed efficient logistics, landline phones needed telephone wires, electric cars need charging points – and circular products therefore probably need circular infrastructure before circular applications (products) can be fully scaled up in our societies. To build this infrastructure, economic incentives are needed. Inventors, entrepreneurs, business executives and investors all need the economy's driving force.

The shift from ownership to usership, with increased focus on lifespan (and, in the long term, recycling and remanufacturing), could trigger a chain reaction – increasing interest in building a future circular infrastructure.

What would happen if such a chain reaction actually had a strong impact on our societies? What would this mean to manufacturing companies when they develop their future product range for customers? And what would such an extrapolated scenario mean to our daily lives as consumers?

The automobile – a potential pioneer

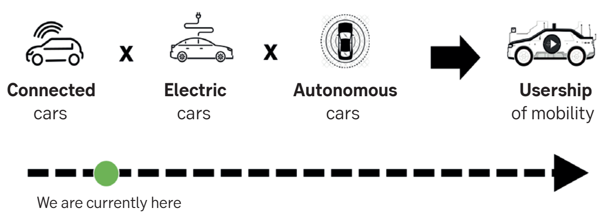
One category that may potentially become a pioneer in the shift from ownership to usership is personal mobility. Of course this primarily concerns passenger cars, about 95 per cent of which are owned by individuals (the remainder are leased). Additional modes in this category are public transport, motorcycles, bicycles, electric scooters and the classic alternative, walking.

Over the past 10 years, cars equipped with smart sensors have gone from a minority to a very large majority. Connected cars are the first important key in potentially transforming privately-owned cars from a unit to own (or lease) into a service that is subscribed to. The second key is electrification, which entails more favourable calculations for usership and sharing platforms, since cars no longer need to be transported to petrol stations but can instead be charged overnight through a far more extensive network of charging points. This lowers both staffing and energy costs.

A third key is when cars can drive themselves. The potential effect this would have in supporting usership as a business model is probably many times greater since, when we no longer have to drive ourselves, a car can pick us up anywhere. So we don't need a parking space either. We can pull out our phone, click on the place we want to travel to and wait for a car to come get us. This is already a reality in some places around the world, for example San Francisco, where one hundred driverless cars have started providing actual taxi service this year. Moreover, in this future scenario, with new sharing platforms owned by both companies and consumers, mobility investments will enable new participants to get a piece of the financial pie. All types of investors can own financial instruments that generate returns when the underlying physical cars earn money.

It is interesting that in 2022, the number of privately owned cars circulating in Sweden decreased for the first time since 1992-93 (during the real estate crisis) and before this in 1977-79 (during the oil crisis). Although the decrease was very small and was caused by high inflation, all other vehicle categories experienced growth. Perhaps it will be possible to clearly see the shift from ownership to usership in future statistics.

The journey to car subscriptions



Usership in our homes

Suppose that in the future we have an annual subscription for a number of home appliances. Instead of about 50 Swedish kronor a month, which is the cost of owning a general appliance in our example (excluding the cost of energy), we subscribe for SEK 50. In this example, we subscribe for five appliances (washing machine, dryer, dishwasher, refrigerator and freezer) for a total cost of SEK 250 (5 x SEK 50). If it turns out that one of the appliances is not working, automatic servicing and possible replacement of the appliance are included. We do not need to call the supplier. Instead this is handled automatically. We have also subscribed for supplies needed for the dishwasher and washing machine to do their job – laundry detergent and dishwasher tablets. These are also ordered automatically. Even before you run out, the supplier knows (based on user data) that you will soon run out. We do this because we love to just click on the "Play" button and subscribe – without any worries.

We also subscribe to various pieces of furniture, again because in this case we do not need to own as much as in today's societies. Instead we subscribe to a nice brown leather armchair, some pictures, a rug under the coffee table and a "smart home system," which includes speakers installed in decorative sculptures.

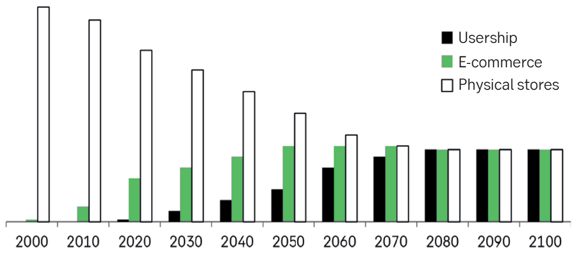
In addition we have a lawn mower, a vacuum cleaner and a future general cleaning assistant. By this time, all three are fully robotic, and we subscribe to them all. The lawn mower is also shared with neighbours. The future general cleaning assistant is a new invention which our future scenario envisages from a blank piece of paper. It can put dirty dishes in the dishwasher, take clean dishes out and put them away, pick up clothes and the like and put them in their right place, do the dusting and also take care of the laundry on its own. Instead of a human maid service, this robot is now an indispensable partner for a comfortable life.

Online shopping faces new competition

Instead of people buying physical products for home delivery by logistics company trucks, people now subscribe directly to the manufacturer – or a number of usership platforms that handle logistics for suppliers. This could mean that, for the first time since the 1990s, online shopping will level off as a percentage of retail sales in our societies. Just like with historical disruptive innovations, new innovative companies will dominate platforms for usership and consumer-oriented services. See below for a long-term scenario (my own) for retail in society in the event usership actually experiences strong growth.

Various software applications are also needed to compile data, connect products with people, and understand when products need maintenance or a new life (through remanufacturing). When we discuss a future (potential) wave of circularity in society going forward, software applications will thus be important keys, and so will new financial solutions.

A potential shift from ownership to usership



The future puzzle is complex but exciting

Disruptive innovations continuously change our society, as history has taught us. The shift from ownership to usership could be one of numerous revolutionary changes in society. Such a change could create a new incentive for a circular economy and potential changes in infrastructure for manufacturing, logistics and consumption. These would be enormous changes for our societies, just like those we have seen historically. The fact is that, over the past few decades, people's innovative capability has accelerated, and continues to accelerate.

With this in mind, it is important to work continuously and in an objective manner to put together a future puzzle with pieces that fit together. That is something I have tried to do for the past few years, and this theme article is an attempt to summarise some of these pieces. Not all of the pieces are here, and this is definitely not a complete picture, but rather an introduction to what I believe will be one of the biggest themes of all over the next 20 years – that is, pressing the Play button – not just in our digital lives, but in our physical lives as well.

International overview

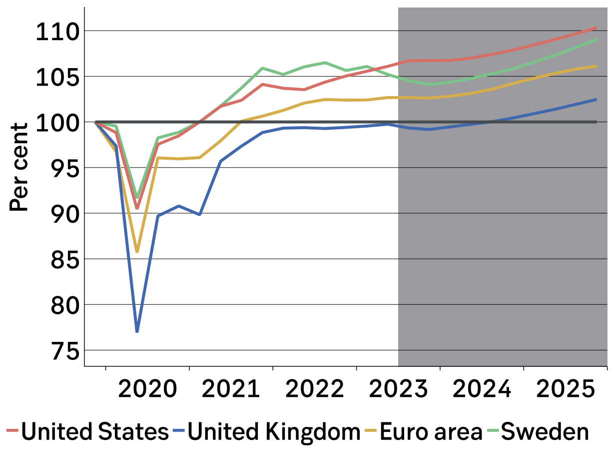
Excerpt from the Nordic Outlook research report.
For the full report, see seb.se/nordicoutlookreport.

Inflation and labour markets crucial for soft landing

Growth will be weak this autumn as households continue tightening their belts, but there will be a relatively soft landing as the United States and other countries avoid recession. Inflation is falling. But due to a sluggish decline in core inflation, central banks will wait until 2024 before cutting key rates. Global recession risks have diminished, yet there are lingering concerns. The economic outlook is weighed down by war, geopolitical turmoil, extreme weather, higher trade barriers and competing subsidies. The economic outlook for China has also deteriorated.

The serious security situation – especially the war in Ukraine and increasingly strained US and EU relations with China – continues to create human suffering and economic policy unpredictability. Record-high air and water temperatures, resulting in torrential rains, drought and forest fires, have raised questions about short- and long-term effects, including risks of everything from famine to inflation and trade conflicts. Upcoming elections in the US, the EU and elsewhere have the potential to increase political risk premiums in 2024.

Soft landing



Source: Macrobond , SEB

The expected deceleration will have a limited impact on the growth trend in the above countries, especially the US. The decline will be more noticeable in Sweden, whose economic growth was previously the strongest.

Inflation and labour markets crucial

The inflation outlook and labour market developments are crucial if we are to experience a soft landing, with moderate or no growth for one quarter or so, or whether central banks and economists have underestimated the impact on the economy and financial system of aggressive key interest rate hikes over the past 18 months or so. Inflation has slowed, but how much and how rapidly it will continue falling will have a major impact on central bank policies, growth prospects and financial markets. The second piece of the puzzle is labour markets, whose vigour is one important explanation for the unexpectedly strong resilience we have seen so far. Our forecast is that only a slight rise in unemployment is needed – about 0.5 percentage points in both the US and the euro area – to ease wage pressures enough to slow inflation and enable central banks to shift towards looser monetary policies.

An economic slowdown has occurred

The effects of high inflation and rate hikes are noticeable but varied; the US is an exception. Growth has obviously decelerated. Households have faced powerful headwinds as real incomes have fallen, despite strong labour markets. Last spring's financial stress in the US and Switzerland has subsided, confirming global financial sector resilience. The Chinese economy has not recovered as expected but has instead lost momentum due to a troubled real estate market, weak domestic demand and geopolitics. We expect many central banks to have reached – or be close to – their peak interest rates. Meanwhile a clear downturn in inflation will help resolve various issues, although many will persist. Key interest rates are rising in real terms as inflation falls, which will be another headache for central banks and will influence their monetary policies.

Global GDP growth, %

Market	2022	2023	2024	2025
United States	2.1	2.0	0.9	2.0
Japan	1.0	1.8	1.2	0.9
Germany	1.8	-0.4	0.8	1.9
China	3.0	5.2	4.7	4.8
United Kingdom	4.1	0.1	0.5	1.8
Euro area	3.4	0.6	0.8	2.0
Nordic countries	2.7	0.1	0.6	2.3
Sweden	2.8	-1.2	0.1	2.5
Baltic countries	1.6	-0.4	1.2	1.8
OECD	2.9	1.4	1.2	2.1
Emerging markets	3.6	4.0	4.0	4.1
World, PPP*	**3.3**	**2.8**	**2.7**	**3.2**

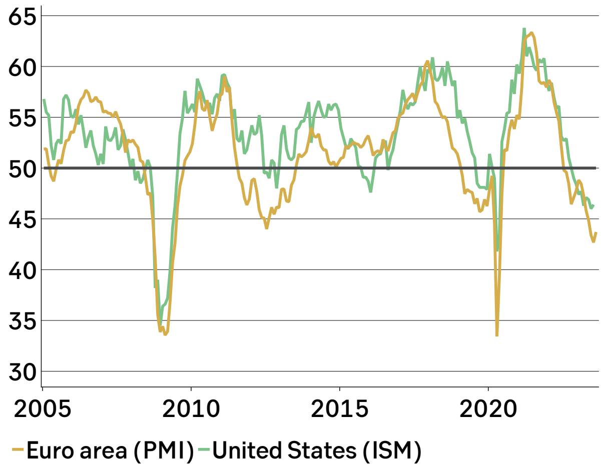
Source: SEB Nordic Outlook

*PPP=Purchasing power parities. The table shows forecasts of real economic growth in line with our main scenario.

Anaemic growth environment

Growth will decelerate this autumn, but at a slow pace. The US has surprised on the upside in terms of growth and will avoid a recession. This is good for the world economy and will help increase risk appetite, although such resilience will also maintain inflation risks. Performance is weaker in the euro area. Its former growth engine, Germany, is in trouble. Manufacturing activity is sluggish after the energy price shock, with weak global demand for industrial products. The outlook we envision over the next few quarters is essentially a soft landing, though in some cases mild recessions cannot be avoided.

Depressed sentiment in manufacturing



Source: Institute for Supply Management (ISM), S&P Global, Macrobond , SEB

A clear decline in manufacturing PMIs is signalling lower activity in OECD countries. In the euro area, this is largely explained by weakness in Germany, which is also expected to report slower growth than the area as a whole in the next few quarters.

A more fragmented, multidimensional outlook

We are now seeing a more fragmented forecast situation. Household and manufacturing indicators are signalling a downturn, but actual outcomes are stronger. In terms of growth, the US has shown strength while Germany, Sweden and China are among those with bigger problems. Countries like the US that previously spent more on stimulus programmes have larger household savings buffers. Construction and the real estate market are under pressure in various countries, contributing to uncertainty and deceleration. Inflation is falling, but at different rates. For example, the United Kingdom has bigger problems with high wage inflation, which poses a challenge for the Bank of England. Due to varying inflation and growth conditions, central banks will cut key rates at different speeds in 2024-2025. Federal Reserve and European Central Bank key rates will be around 2.50 per cent by end-2025 – roughly neutral – while the Bank of England will still have some way to go.

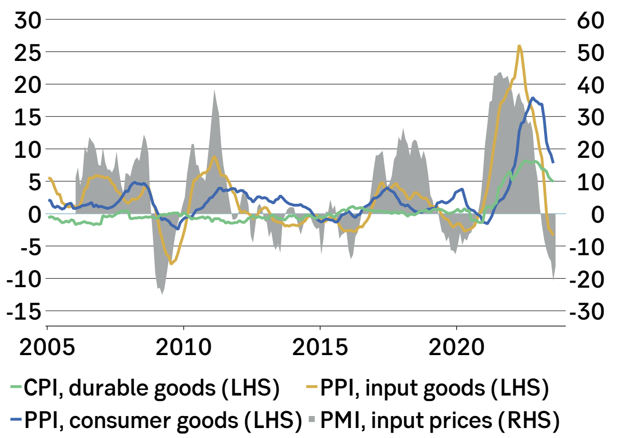
Inflation is falling, but at different speeds

Inflation is clearly falling, but at rates that vary from one country to another. The main drivers of lower inflation today are base effects from energy and food. But we are also seeing broad downward pressure on goods prices. All indications are that the downward inflation trend will continue. For various producer price metrics, in some cases prices are not only levelling off but are actually falling. Indicators such as PMI price expectations are pointing to continued easing of price pressures.

First input prices, then consumer prices

Despite positive signals, it is too early to say that the inflation problem is over. The impact on consumer prices from lower prices in early production stages is uncertain, both in terms of magnitude and time lag. Goods prices are decelerating and may even fall in the future, but it is generally unusual for consumer prices to fall. Meanwhile, the upturn during the past two years has been exceptional. For service prices, the picture is more mixed. Faster wage hikes are pushing up prices, but at the same time they are being held back by falling input goods prices. The service sector also still enjoys solid demand, enabling it to maintain high prices, but demand is expected to fall. Due to the structure of inflationary forces, core inflation will remain above headline inflation for much of our forecast period.

Lower inflation but with a time lag (Germany)



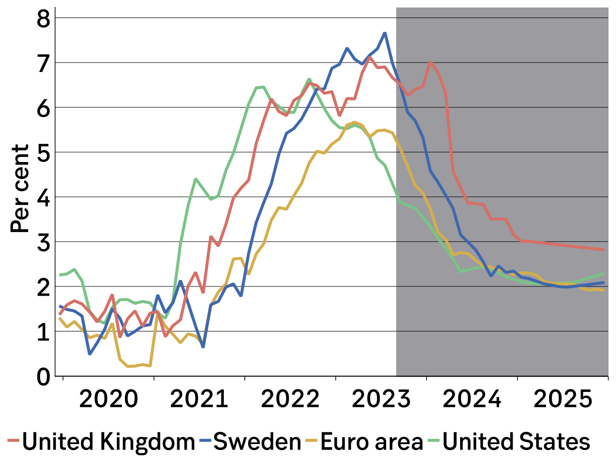
Source: S&P Global, German Federal Statistical Office (Statistisches Bundesamt), Macrobond, SEB

Declines in both purchasing managers' views of input prices and actual data on producer prices suggest that consumer prices are following suit, though with a time lag.

Core inflation will take more time

During 2021 and 2022, energy and food prices pushed headline inflation well above core inflation. We will now see the reverse during much of our forecast period. Exactly by how much will vary between economies and will depend primarily on how energy prices affect inflation metrics. We foresee the biggest gap in the euro area, where CPI energy prices in some large countries are lagging significantly behind market prices. Energy and food prices will remain well above pre-2021 levels. We expect weather, climate and geopolitics to have a major impact on inflation, but under the right circumstances total CPI may fall substantially.

Prolonged downturn in core inflation



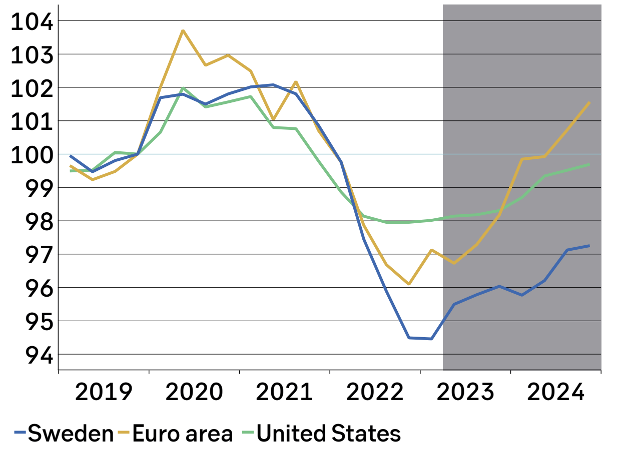
Source: Macrobond, SEB

"Core inflation" (here inflation excluding energy and food) changes more slowly than the usual broad inflation metric (CPI). This is a normal pattern but may nonetheless persuade central banks to apply a tighter monetary policy if the decline is too prolonged.

Is a slowdown needed, or will inflation ease anyway?

Now that the inflation rate has fallen and forecasts are pointing to a continued decline, one important question is whether inflation will soon reach central bank targets, or whether "the last mile" will be the toughest. Is a powerful economic slump still necessary to bring inflation all the way down to target? Our conclusion is that a relatively mild increase in unemployment will be sufficient for wage pressure to decelerate and end up being in line with inflation targets. Our forecast is that central banks will successfully curb both inflation and wage growth without an economic hard landing. Although the potential for a soft landing is relatively good, this meanwhile implies that in most economies, the GDP level will remain below potential for most of our forecast period, thus helping dampen price and wage pressures. Key interest rates will not approach roughly neutral levels until 2025 and will thus contribute to continued but diminishing austerity.

Long period of depressed real wages



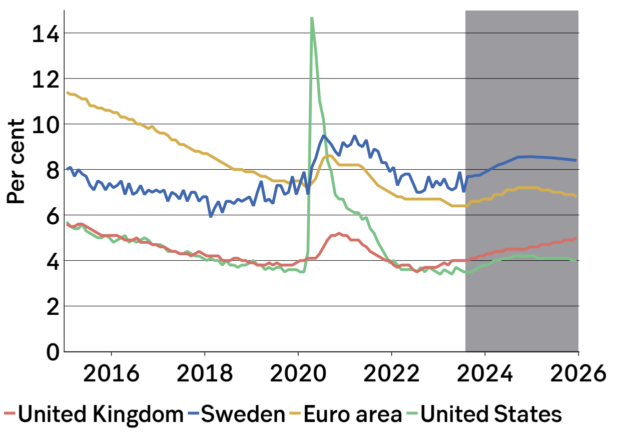
Source: Macrobond, SEB

High inflation has caused real wages to fall sharply, which is slowing economic growth. Due to faster pay increases, coupled with falling inflation, real wages are now starting to rise again, providing support for a recovery going forward.

Growth deceleration, but at a slow pace

The US and the overall euro area will avoid a recession, while individual economies such as Germany will shrink slightly. Households are under financial pressure because real wages have fallen 5-10 per cent compared to the trend in some countries. Yet euro area consumption has fallen only moderately, while staying close to trend in the US. The savings ratio in both the US and the euro area has already fallen to pre-pandemic levels or lower. When labour markets weaken this autumn, though relatively moderately, and savings buffers run out, a second wave of austerity will begin. Households will have to tighten their belts further, construction will fall in many countries and we will have an anaemic growth environment for the next 2-3 quarters. The US will dodge a recession, which will support demand and financial markets and will thus be a positive force in the overall world economy.

Unemployment will climb, but only moderately



Source: Macrobond, SEB

The economic slowdown will lead to only a slight upturn in unemployment. We expect this to be enough to persuade central banks to initiate key interest rate cuts, but it will lower growth potential.

Acceleration in 2025 as incomes rise and inflation approaches targets

When inflation has dropped further and interest rates have fallen, some growth momentum will return. After tough years for households, real wages will rebound and labour markets will improve. We then see greater scope for households to recover some lost ground. Despite this acceleration, US and European growth figures will only be slightly above trend in 2025. This will lead to a minor downturn in unemployment but will not suffice to achieve full resource utilisation during our forecast period. Labour markets will weaken only moderately during the coming quarters, limiting growth potential as many countries meanwhile grapple with demographic headwinds.

Problems in the Chinese economy

China's expected post-pandemic acceleration ended during the first half of 2023. Households are holding back, inflation worries have morphed into deflation worries, exports have fallen and bank lending is weak. Financial uncertainty is increasing, driven by a troubled real estate market, debt-ridden regional authorities and shadow banks, and the government's reluctance to launch broader stimulus policies. Increased geopolitical tensions, mainly with the US, are putting a further damper on the economic mood. China's central bank is struggling with the need to cut interest rates to support construction and real estate companies, but at the same time to avoid weakening the currency. Beijing has the financial muscle to tackle many problems, but we are revising down our Chinese growth forecast by a total of about 1 percentage point for the period 2023-2024.

Global uncertainty and continued tensions

The world is facing several historic challenges. The war in Ukraine continues, and the price for the country to reconquer Russian-occupied territory will be high. The fact that the West, led by the US, increasingly sees economic and security policies as a single entity means that investment and trade – with a focus on China – are increasingly surrounded by obstacles. We are also seeing more active subsidy policies. Although these policies favour vital areas such as environmental initiatives and green investments, they also include obvious elements of protectionism. Climate issues are becoming increasingly acute, with new record-high air and water temperatures. It is hard to quantify these events in economic terms, but they are clearly generating greater uncertainty.

Balanced risk outlook

The financial sector uncertainty that flared up in the US last spring highlighted tensions in the wake of a rapid rise in interest rates. In the May issue of *Nordic Outlook* we foresaw larger downside than upside risks. Now that we are at or near peak interest rates and inflation is slowing, our conclusion is that central banks have successfully dealt with increased financial stress. Its impact appears unlikely to prove worse than a period of anaemic growth and soft landings. We thus foresee a more balanced risk outlook.

Downside risk from tightening and a second wave

The resilience of households, labour markets and the financial system are major uncertainty factors. One key question for our forecast is whether we are being fooled by long, elusive time lags. In such a scenario, resilience will only be temporary and risks will quickly turn into weakness. If the economic slowdown becomes more severe, with higher unemployment, things could quickly become worse than we expect in our main scenario – with spillover effects to real estate markets and other parts of the economy. It is also too early to write off the risk that financial sector stress will return or that China's slowdown, for example, will be more severe than we expect.

Scenarios for the OECD countries

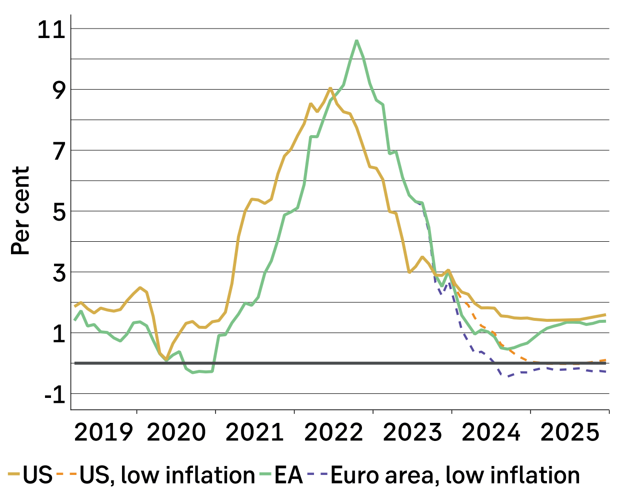
GDP growth, per cent	2022	2023	2024	2025
Main scenario	2.9	1.4	1.2	2.1
Negative scenario		1.0	-0.9	1.6
Positive scenario		1.7	2.7	2.2

Source: SEB

Growth acceleration if inflation falls rapidly

Inflation has slowed, but prices remain high. How much goods prices will fall, and how quickly this will be reflected in lower consumer prices, is highly uncertain. If we were to have downside inflation surprises, this may quickly have several positive effects due to strengthened real incomes and faster interest rate cuts by central banks. It does not take an extreme change in price assumptions to get a lower inflation forecast. For example, if we assume that one third of the food and goods price increases of recent years is reversed – and in the case of the US, rents – total inflation would fall much faster towards zero, improving purchasing power and easing pressure on central banks.

Low inflation scenario



Source: Macrobond, SEB

Even relatively small declines in those prices that have risen the most, such as food and goods, would lead to significantly lower inflation than forecasts and central bank targets, but it should be noted that the reverse is also true.

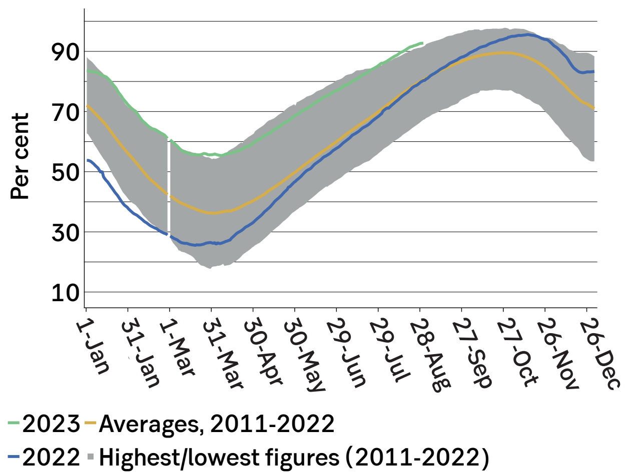
Energy prices will increase slightly

By means of production cuts, OPEC+ has contributed to an oil price increase to about USD 85 per barrel recently (Brent crude). Controlling oil prices is a balancing act; producers want a high price, but if it climbs close to USD 100 per barrel, this will increase discontent and ramp up pressure from such countries as the US, which for economic reasons and because of its 2024 election does not want high petrol prices. Our forecast is that the Brent crude price will largely remain around its current level at the end of this year. After that, when economic growth accelerates in 2024-2025, it will rise to USD 90 per barrel.

Well-filled European gas reserves, but still expensive

Europe's natural gas reserves are now about 90 per cent full; a 10-year record for this time of year. Europe is trying to stock up as much as possible for winter. Given larger reserves, continued cost-cutting measures and expansion of renewable energy, Europe is clearly well prepared for the winter. Our forecast is that natural gas prices will rise late this autumn and this winter, but that the new normal – looking towards 2024-2025 and beyond – will be prices of around EUR 40-55/MWH. This is about double the historical average price but is substantially lower than we experienced during 2022.

Record-full European natural gas reserves



Source: Gas Infrastructure Europe (GIE), Macrobond, SEB

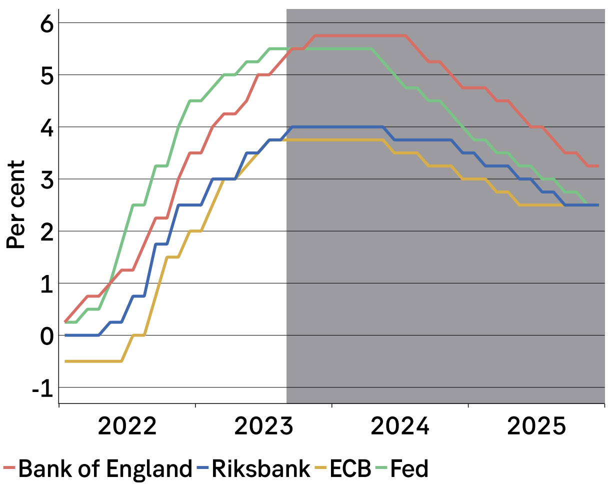
Well-filled gas reserves ahead of winter suggest that a European energy crisis can be avoided, but due to structural changes in supply and demand the new price level is significantly higher than the old "normal" level.

Fed will go first – rate cut in May next year

The Fed has now raised interest rates by 525 basis points at record speed in about 18 months. The focus of central banks' attention is now shifting from how much further key interest rates should be raised to when the first cut will come, although some central banks have one or more rate hikes left. Before it is time for rate cuts, inflation must fall further, especially the more sluggish core inflation.

In addition to inflation and a slowdown in growth, central banks face more challenges. One is that the credibility of their forecasts has suffered a blow, especially when it comes to inflation forecasts – formerly a source of pride. The Bank of England has commissioned an evaluation on this question, and we are likely to see further external and internal reviews. Another challenge is that inflation hinders initiatives by fiscal policymakers, who do not want to fuel demand (and thus inflation) – making it hard for politicians to assist central banks when the economy slows down. A third challenge is the relationship between interest rates and financial stability. Interest rates must now be high due to inflation, but they are also squeezing households and businesses, especially in highly indebted countries.

Record-fast hiking cycle is ending



Source: Macrobond, SEB

We do not expect the first key interest rate cuts until mid-2024 and believe that some key rates will reach 2.5 per cent by the end of 2025.

Fed cut will be first, BoE will remain at a higher level

We believe that the market is currently pricing in interest rate cuts a bit too fast. Our assessment is that central banks want to wait and make sure that the downward trend of inflation towards their targets will persist and that disinflationary forces can be confirmed. It is thus reasonable that they would rather wait a little longer to avoid a setback. This is also why key interest rate cuts will occur in standard 25 basis point steps unless something exceptional happens. The pace of the inflation downturn will determine their actions, and central banks will thus move at different speeds. The Fed will be the first to cut its key rate in May next year and will gradually reduce its rate spread against the ECB. By the end of 2025, both the Fed and the ECB will have a key rate of 2.50 per cent, a level that we consider close to neutral. A rapid downturn in US inflation will cause real interest rates to rise, making them more tightening than desired, which in itself may drive key rate cuts. The Bank of England's situation is more stretched, with a bigger inflation problem, an overheated labour market and rapid wage increases. The BoE will thus maintain its peak rate a little longer, and its end point will also be higher.

This autumn the Bank of Japan will raise its key rate to zero. After Japanese core inflation rose, the BoJ decided to allow the 10-year Treasury yield to climb as high as 1 per cent with "flexibility" in the target, that is, above the ceiling of its tolerance range (0 per cent ± 50 basis points).

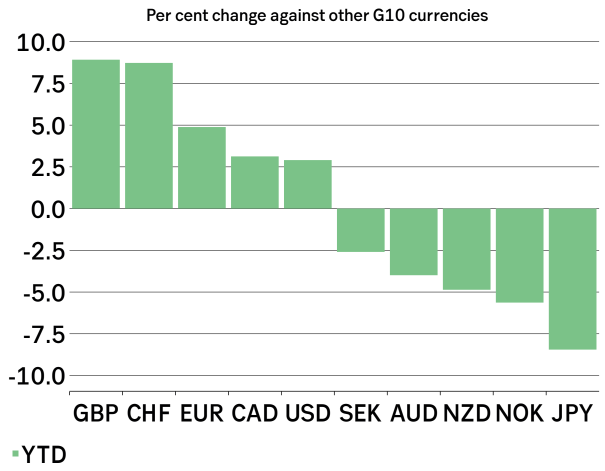
Long-term yields will be determined by short-term rates when the peak is near

The upturn in long-term bond yields during the summer was driven by delayed expectations of key rate cuts and concerns about increased bond supply. Until the market is more confident that short-term rates are peaking and will soon be cut, there is some further upside risk. Long-term yields often peak soon before short-term rates, and during our forecast period we believe that key rates – actual and expected – will also govern long-term yields. However, downside potential for 2024-2025 is relatively limited, given that long-term yields are currently at relatively low levels compared to key rates. In addition, downward movement in long-term yields will be limited by high private and public debt and the quantitative tightening (QT) policies of central banks. There is also speculation that inflation targets will be raised. Although we do not believe this will happen, in any event during the near term, it may keep inflation and maturity premiums higher.

SEK weakness and USD strength this autumn

With interest rate spreads and risk appetite as drivers, this autumn will begin with another period of US dollar strength. Later this year, as the market focuses more and more on when key rates will be lowered, the strength of the dollar should fade. This may allow a turnaround, with a depreciating dollar and a rebound for currencies that have been weak during 2023.

Exchange rates during 2023



Source: Macrobond, SEB

We expect the US dollar to weaken next year, while currencies that have taken a beating – such as the Swedish krona – may then regain some lost ground.

Weak Nordic currencies will regain some lost ground

Currencies such as the Swedish krona have been at record-low levels this summer. They have faced particularly strong headwinds due to market concerns about how interest rate hikes will affect households and the real estate market. The downturn has also been driven by hedge funds selling both Norwegian kroner and Swedish kronor. Next year – when we see growth stabilisation, greater risk appetite and narrower interest rate spreads – there will be potential for a stronger EUR, SEK and NOK.

We also believe that the strong dollar cycle of recent years is coming to an end. In addition, long-term factors such as diversification out of the dollar as a reserve currency and better terms-of-trade for energy-importing European countries might strengthen the euro. Given the clear connection between the krona and the EUR/USD exchange rate, such a reversal may also provide support for the EUR/SEK rate. Our forecast is that the EUR/USD will climb from today's 1.09 to 1.19 in 2025 and that the EUR/SEK rate, which may climb above 12 this autumn, will fall below 11 in 2025.

Falling credit growth with little drama

Tighter global monetary policy has dampened bank lending in the US, the euro area and elsewhere. We do not see reduced lending as an effect of the financial sector stress that characterised the US, Switzerland and other countries this spring, nor does it indicate an inability to lend money (a "credit crunch"). Credit spreads are not currently causing concern, despite significant challenges for commercial real estate. However, both the Fed and ECB bank lending surveys confirm that credit demand will continue to decline going forward. The credit cycle is likely to increase the number of defaults, but from low levels. The resilience of the global banking system to increased losses is expected to remain strong.

Looser financial conditions

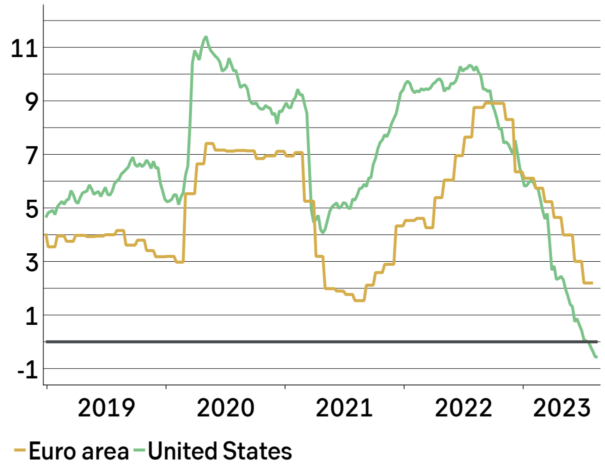
Indices of US and euro area financial conditions from the International Monetary Fund (IMF) and others have eased in recent quarters, despite monetary policy tightening. One driver is rising prices for such assets as shares and homes. This may explain the surprising resilience of the real economy and the global banking system to interest rate hikes, but it also calls into question the effectiveness of the monetary policy transmission mechanism. As old loans are replaced by new loans with higher borrowing costs, the negative impact on growth becomes clearer. When key interest rates are cut in 2024, the outlook for financial conditions and credit growth will improve.

Shrinking balance sheets

Now the money supply is also decreasing in various economies, including the US and Sweden. Most central banks, except in Japan, are pursuing policies that are causing their balance sheets to shrink. This is achieved by passively allowing fixed income securities to mature or by actively selling them back to the market, and/or by cutting back liquidity support measures. But it is a relatively slow process. At the four largest central banks, the balance sheet reduction so far is just over 10 per cent compared to pre-pandemic totals (equivalent to a reduction of USD 2.9 trillion).

However, the decline in money supply is welcome and is a sign of greater normality. This trend may have a certain inhibiting effect on global stock markets, but the trend of real interest rates is viewed as playing a greater role in the value of tangible and financial assets.

Credit growth



Source: Federal Reserve, ECB (European Central Bank) Macrobond, SEB

Credit demand is clearly declining. We do not see this as a sign of a coming systemic crisis, but an effect of cyclical factors, a weaker growth situation and higher interest rates.

Neutral fiscal policy over the next few years

The past few years have witnessed historically large public policy interventions. The pandemic caused fiscal and monetary policies to go hand in hand to support growth. Fiscal policy has now also reversed. Pandemic stimulus measures have been phased out, but their effect remains in some countries via household savings buffers. Now that energy price subsidies in Europe have also diminished, we expect relatively neutral fiscal policies in most countries over the next few years. High debt levels, and in many cases continued large deficits at the same time as central banks have shifted from quantitative easing (QE) to quantitative tightening (QT), imply that room for manoeuvre is limited. This is reflected in actual policy even though conditions vary from country to country. Aside from stimulus payments to households, we are seeing that various investment-oriented programmes (for example in the US and the euro area) are having a positive impact. Because of high inflation, fiscal policymakers have limited room for manoeuvre, despite weak economic growth. A more worrisome aspect is the risk that the active fiscal and monetary stimulus policies of recent years have made households and firms too accustomed to such support. If this is true, there is a risk that households and businesses will not be cautious enough. This may be one reason why, for example, consumption and home prices have not recently fallen further.

Contact information

This report was published on September 12, 2023.
Its contents are based on analysis and information available until September 11, 2023.

Contributors to this issue of Investment Outlook

Fredrik Öberg
Chief Investment Officer
Investments
fredrik.oberg@seb.se

Henrik Larsson
Portfolio Manager
Investments
henrik.y.larsson@seb.se

Ida Nordenadler
Investment Specialist
Investments
ida.nordenadler@seb.se

Kai Svensson
Portfolio Manager
Investments
kai.svensson@seb.se

Esbjörn Lundevall
Equity Analyst
Investments
esbjorn.lundevall@seb.se

Johan Hagbarth
Investment Strategist
Investments
johan.hagbarth@seb.se

Christopher Lyrhem
Future and Strategy Analyst
SEB
christopher.lyrhem@seb.se

Investments
SEB
SE-106 40 Stockholm, Sweden