February 2018

Investment Outlook

Contents

Introduction

Get ready for more volatility

Last year included a combination of favourable factors that resulted in very strong asset markets and record-low volatility (fluctuations in market prices). These factors were: strong economic growth without troubling inflation, stable and increasing earnings, continued very low interest rates and central banks that were pumping liquidity into the economic system. However, we expect headwinds from some of these parameters during 2018 and have already experienced higher volatility. In reality, this means we must expect weaker periods and profit-taking, but as part of a continued positive trend.

Troublesome periods that lead to large stock market declines and downtrends are often connected to one of the following events: a recession, a financial crisis or the bursting of a valuation bubble. Of these, the last-mentioned cannot be disregarded, since prices of shares, bonds and real estate are fairly high. But strong economic conditions and corporate earnings generation, topped by the American tax reform, will serve as effective risk-absorbing buffers. Although the economic expansion has lasted since 2009, because of these buffers and the good condition of the financial system, we believe that the expansion does not yet need to end. At present, this leads to a recommendation to remain overweighted towards equities, though mildly.

In our assessment, what will generate continued volatility is the combination of high valuations and central banks that are gradually moving away from loose monetary policies and preparing to apply the brakes. Although the reduction in stimulus measures will occur at a leisurely pace, it is reasonable for interest rates and bond yields to move higher. Factors that were holding back volatility earlier are thus slowly but surely losing their power. Overall, this means that we expect positive but lower returns in 2018.

One of our theme articles in this issue of *Investment Outlook* is an analysis of blockchain technology and its potential applications. The other is a new look at sustainability and the rapid developments occurring in that field.

Wishing you enjoyable reading,

Fredrik Öberg
Chief Investment Officer
Investment Strategy

Risk exposure & allocation

Moderate overweight in equities

At this writing we are maintaining a moderate overweight in equities and corporate credits in our balanced portfolios, albeit lower than last autumn. We remain optimistic about economic performance and the global growth rate, and about the positive effects these have on corporate earnings generation. The regional breadth of growth and its spread to virtually all parts of the economy provide a stable foundation. On the minus side are relatively high asset valuation levels, rising interest rates and bond yields as well as central banks that will gradually apply the brakes by means of higher key rates and smaller liquidity injections.

Our picture of 2018 is somewhat different from 2017, when most factors contributed to a rising risk appetite. This year we expect a more erratic and volatile capital market. The average investor is more aggressively positioned today than for a long time. Disappointments, even those of a short-term nature, may thus create more obvious risk aversion than they have in recent years. We believe that the positive trend will persist, but that returns will be lower and risks higher than during 2017.

The following is a review of a number of important factors that justify our somewhat more cautious but optimistic approach to risk assets today, and how these factors may influence future developments

Growth and corporate earnings

We expect yearly global economic growth of about 4 per cent during both 2018 and 2019, while the inflation rate will stay at around 2 per cent. This is a good environment for companies to further increase their earnings. Many companies will also receive extra help from the tax reform that the United States has launched, which will have a positive effect from this year onward. Global earnings growth is expected to end up above 10 per cent this year. High resource utilisation is beginning to have an impact. This means we may see short-term inflation tendencies, but we believe that a persistently rising inflation rate will have difficulty in taking hold.

Central banks

We expect the US Federal Reserve to hike its key interest rate four times in 2018 and shrink its balance sheet (decrease the volume of fixed income investments it owns), which will reduce liquidity in the market. Other central banks are lagging behind, and the net effect of their actions is expected to remain positive, though clearly less than before. The breakpoint may occur as early as this coming September, when the European Central Bank (ECB) may well end its bond-buying. Sweden's Riksbank continues to pursue a very expansionary monetary policy. The overall outcome may be rising interest rates, which will increase risks since the global debt level is high.

Valuations

Most financial assets carry high valuations compared to historical levels. This is risky, and to prevent market worries from increasing, growth must remain healthy.

Risk appetite and positioning

Risk appetite and positioning generally go hand in hand with valuations when the world is in the latter part of an economic cycle, which is also true this time around. Valuations are high, and investors with high risk appetites have aggressive portfolios.

Expected returns

We expect positive returns for most asset classes over the next 12 months. They are lower than historical averages, while risk is unchanged. This forecast is dependent on our optimistic economic outlook proving correct.

Examples of risks

A downturn in the economic cycle would have a major impact, but the recession risk is low. Valuations are high from a historical perspective. After major liquidity injections and record-low key interest rates, we expect central banks to gradually normalise their policies, which means that a large "subsidising" force will fade. Global debt is high. We see signs of weaker home prices here and there.

Asset class allocation

At the overall level, we have chosen to remain slightly overweighted towards equities and corporate credits. This implies an overweight in global equities, a neutral position in Swedish equities and alternative investments and an underweight in fixed income investments. In global equities, nowadays we have only minor over- or underweights towards individual regions and sectors, which means that company-specific risks predominate. Credits with short maturities dominate our fixed income portfolios, while our alternative investments are characterised by a relatively defensive hedge fund portfolio.

Global stock market performance, past nine years

The chart shows the performance of the broad MSCI World Index during the past nine years, stated in US dollar terms.

Equities

- Strong outcome in 2017 (despite negative currency effects for Swedish investors, among others)..
- Impressive quarterly reports (for the fourth quarter).
- Risk of setbacks after euphoria.
- Favourable environment for equities, but for how long?
- High valuations will limit potential returns.
- US earnings will be sustained by growth and tax reform.
- Emerging market equities are benefiting from strong growth; selectiveness about companies is important to reduce the risk of setbacks.
- We are now more cautious about cyclical portions of the European and Japanese stock markets.

Return expectations, next 12 months

	Return	Risk
Global equities	6.9%	12.6%
Emerging market equities	9.3%	14.3%
Swedish equities	9.0%	13.0%

Source: SEB

Fixed income investments

- Riksbank key rate hike will lift Swedish interest rates and yields in the second half of 2018.
- The European Central Bank (ECB) will soon end its loose monetary policy.
- The US Federal Reserve will speed its pace to four key rate hikes in 2018.
- Emerging markets will benefit from global growth, despite rising interest rates.

Return expectations, next 12 months

	Return	Risk
Government bonds	-3.0%	1.7%
Corporate bonds, investment grade	1.1%	3.1%
Corporate bonds, high yield	3.0%	5.2%
Emerging market debt	3.5%	11.3%

Source: SEB

Alternative investments

- Trend-following (CTA) hedge funds began 2018 strongly but are hampered by rising volatility.
- A changing monetary and fiscal policy landscape will create opportunities for macro hedge fund strategies.
- Event-driven hedge funds will continue to benefit from lively activity and potential for corporate transactions.
- Equity long/short hedge funds have been sustained by strong stock markets and should be able to manage limited market turmoil.

Return expectations, next 12 months

	Return	Risk
Hedge funds	3.5%	6.0%
Commodities	n.a.	1.6%

Source: SEB

Market view – macro

Good growth, stable inflation – continued bright picture

Continued signs of strength on a broad front confirm the picture of a global economy in a phase that looks like a mature expansion period. For some time, we have been more optimistic than the consensus forecast, yet we have gradually needed to adjust our forecasts higher. Our latest upward revision implies that we expect global growth of 4 per cent this year and only one tenth of a percentage point lower in 2019.

High, broad-based growth

The global economy is establishing itself at a high growth level. This growth is also clearly broad-based. The US economy showed strength during the latter part of 2017. Now that the Trump administration has pushed through a relatively large tax package, the outlook will improve further. In the euro zone, greater political optimism and economic confidence are mutually reinforcing. Growth is now the highest in a decade. The Brexit process is apparently slowing economic performance in the United Kingdom, but not as much as feared. Growth is also relatively healthy in Japan, considering the structural problems that push down its potential.

In emerging market (EM) economies, too, bright spots have predominated. During 2017, the EM economies speeded up significantly after an earlier slump. Looking ahead, they will establish overall GDP growth of about 5 per cent. In China, a minor deceleration is likely as national leaders, after the Communist Party congress, take advantage of economic strength to tighten lending and prioritise debt reduction, which implies an acceptance of slightly lower growth. In other major EM economies, led by India, GDP is accelerating. The biggest turnaround is occurring in the commodity-dominated economies of Russia and Brazil, which are rebounding after deep recessions.

Considering how many years the global upturn has lasted and how long it took before it gained momentum in earnest, it is reasonable to consider what driving forces are behind it, how long they will operate and what threats there are – what can disrupt this picture.

Driven by private consumption, capital spending

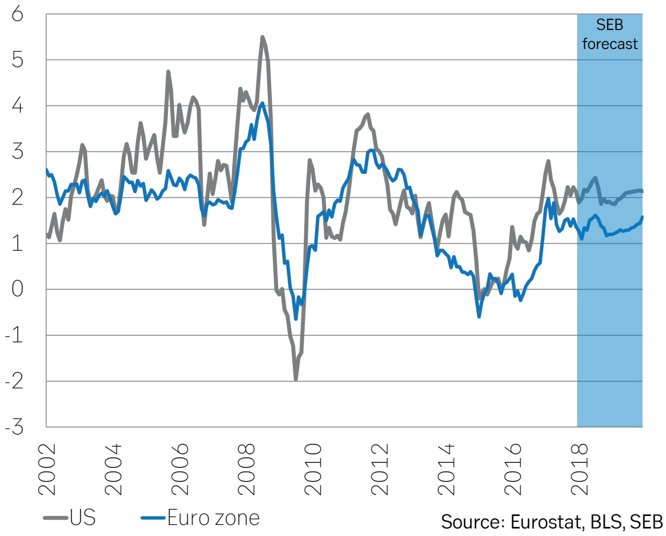
The driving forces in a mature expansion are ordinarily private consumption and capital spending – this time, too. During the years of recovery between 2009-2010 and 2016-2017, the global economy grew slowly and from a low base. There were plenty of idle resources in the system, for example in the form of an ample labour supply (high unemployment). Growth was supported by expansionary central bank policies: something that was necessary at that time, but which poses perhaps the clearest future threat to the economy – more on this later. Yet despite such support there was a shortage of optimism, which made the upturn slow. The situation steadily improved, though. More and more people found jobs, and company resource utilisation crept higher. The stronger labour market, combined with low interest rates and rising asset values, helped private consumption to gradually pick up. Looking ahead, we expect it to contribute substantially to growth. Meanwhile, due to earlier low resource utilisation, business investment appetite was low. Now that companies are approaching their capacity ceilings, there is thus a pent-up need for capital spending – which will also add to growth. Both these forces tend to be in play for a relatively long time. They often provide a surprising degree of strength.

Supply-side woes, inflation risks cause concern

In the current phase, problems are often related to the supply side of the economy and to inflation risks. Given high resource utilisation and labour shortages in various economic sectors (both in the US and Sweden, for example), there is an obvious risk that production resources will not be sufficient to meet demand – that the economy cannot maintain enough production to keep the growth rate up. This is one reason why we anticipate marginally slower growth next year. Sooner or later, supply-side restrictions will kick in more significantly, but there are various historical examples of the economy managing to grow nicely anyway, with the supply side showing more flexibility, so that bottlenecks did not have to arise. For instance, the labour shortage may not be as large as low unemployment figures indicate. Many people who have chosen to leave the labour market may return, now that demand is high. In any case, we do not believe that this type of resource shortage will slow down growth this year, and hardly even in 2019.

Inflation risks, which are normally fuelled by the above-described resource shortage, are absolutely there, but at present they do not seem to be a major problem either. As we explained in the last *Investment Outlook* (published in December 2017), there are many indications that the relationship between resource shortages in the labour market and rising pay levels – followed by inflation – is clearly limited.

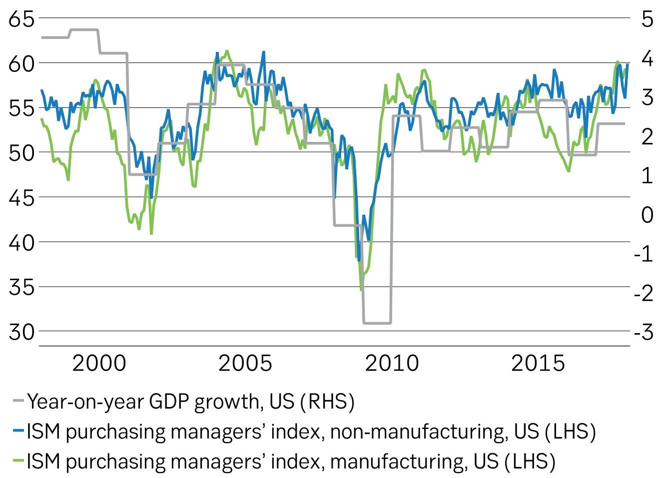
Inflation still under control



Source: Eurostat, BLS, SEB

Inflation will remain relatively stable and close to the central bank target (in the US) or below it (in the euro zone). "Core" inflation (excluding volatile energy and food prices) is somewhat lower and definitely more stable. This gives central banks substantial flexibility in choosing the pace at which they normalise their monetary policies.

Indicators are pointing towards healthy growth



Source: Bloomberg/Macrobond

In the US, the ISM purchasing managers' indices are pointing towards further acceleration in the pace of growth. Together with the impact of the tax cuts, this has led us to boost our growth forecast.

Among the explanations that we are highlighting are globalisation and automation. Along with low interest rates, they have an apparent restraining effect on wage and salary demands. We are thus not counting on any dramatic inflation upturns for a while.

Central banks will apply the brakes

If controlled inflation continues, however, this may still cause strains in financial markets. The background is that central banks launched their gigantic stimulus programmes in the form of low interest rates and large bond purchases in a situation where economies were hardly growing and there was a deflation threat, or in any case a clear absence of inflation. Given weak economies and inflation far below central bank targets, stimulus measures were reasonable. But now that growth is no longer a problem and inflation is close to central bank targets, it is equally reasonable to reverse these measures. It is also in the best interest of central banks to normalise their monetary policies well before the next recession, so that they have the tools they will need to use when it arrives. In the US, the Federal Reserve (Fed) has already made a lot of progress. The central bank has hiked its key interest rate several times and has initiated a cautious reduction of its balance sheet. For the time being, the policies of other central banks remain expansionary. However, we expect the European Central Bank (ECB) to end its bond purchases during 2018 and begin hiking interest rates next year, while the Fed continues to hike its key rate and speeds up its bond portfolio reduction. We also expect Sweden's Riksbank to join this trend with an initial rate hike this coming autumn.

During the period of large and accelerating liquidity expansion, the volatility in financial markets has been low – a frequent correlation. Now that there are moves towards tightening, it is reasonable for volatility to climb again. The stock market turbulence of early February 2018 should perhaps be viewed against this backdrop.

Continued healthy growth

We thus expect continued healthy growth for another two years, without inflation taking off to any great extent. From a macroeconomic perspective, there is probably a greater "risk" of growth soaring faster than we think – which might trigger supply-side and inflation problems – than of growth cooling down "by itself". As long as our forecast holds true, the macro situation will offer a pleasant environment for investors – provided there are no unexpected shocks, for example due to geopolitics, unusual inflation surges or policy mistakes in the form of excessively rapid central bank actions.

GDP forecasts, year-on-year percentage change

Market	2016	2017	2018	2019
United States	1.5	2.3	2.8	2.5
Japan	0.9	1.5	1.2	1.0
Germany	1.9	2.2	2.5	2.2
China	6.7	6.9	6.6	6.2
United Kingdom	1.9	1.8	1.4	1.1
Euro zone	1.8	2.3	2.5	2.2
Nordic countries	2.2	2.4	2.4	2.3
Baltic countries	2.2	4.2	3.5	3.2
OECD	1.8	2.4	2.5	2.2
Emerging markets	4.3	5.0	5.2	5.1
World, PPP*	3.2	3.9	4.0	3.9

Source: OECD, IMF, SEB

* Purchasing power parities

Global equities

Nervous stock markets in a positive earnings environment

Last year was dominated by optimism and faith in the future. Higher economic growth, continued support from central banks and low inflation helped sustain corporate earnings, but for Swedish investors the strong krona limited the upturn. The MSCI World equity index rose by more than 11 per cent measured in SEK. In local currencies, the upturn was a full 24 per cent.

During 2017, emerging market (EM) equities held on to their leading position, gaining nearly 38 per cent measured in US dollars. Large Asian tech companies – Alibaba, Tencent, Samsung, TSMC and Naspers – drove the EM equity upswing. This quintet accounted for about one third of the returns in the MSCI Emerging Market index. Stock market performance was also strong in advanced economies measured in local currencies: both the US and Japan rose around 22 per cent, followed by Europe at close to 11 per cent. There were wide divergences between sectors, with technology companies turning in by far the best performance, followed by commodity-related companies. Other cyclical sectors such as industrials and financials also had a good year. Defensive sectors, along with oil and gas companies, were at the bottom.

Good fundamentals for equity investments

This year began in the same style as 2017 ended. Cyclical sectors started off the strongest, while defensive sectors lagged. China, Russia and Brazil were off to a roaring start in 2018. Equity indices in these countries largely consist of sectors dependent on strong economic conditions, such as oil and mining companies, banking and – in China's case – technology. The rapid correction in February had a broad impact on stock markets worldwide. No sectors or regions stood out as especially vulnerable. We interpret the downturn as signifying that over a long period, deceptively calm stock markets have created an exaggerated faith in equities as a stable investment. The source of concern is rising interest rates and yields, plus central banks that have begun or will begin to withdraw liquidity from the market. This coincides with a US economy that is late in the economic cycle. The rapid downturn is generating nervousness and higher volatility. This usually leads investors to adopt a wait-and-see attitude for a while. Basically, however, corrections during an upward trend are healthy. Equities are associated with risk and are likely to remain that way. But in terms of fundamentals, equities look good as a form of investment, since earnings continue to climb and the global economy is strong.

President Donald Trump finally pushed through his much-discussed and controversial tax reform. The reform is far-reaching and includes full, direct deductions for the costs of certain investments in machinery and equipment (which benefits new capital spending), limited deductibility for interest costs and modernisation of international tax rules.

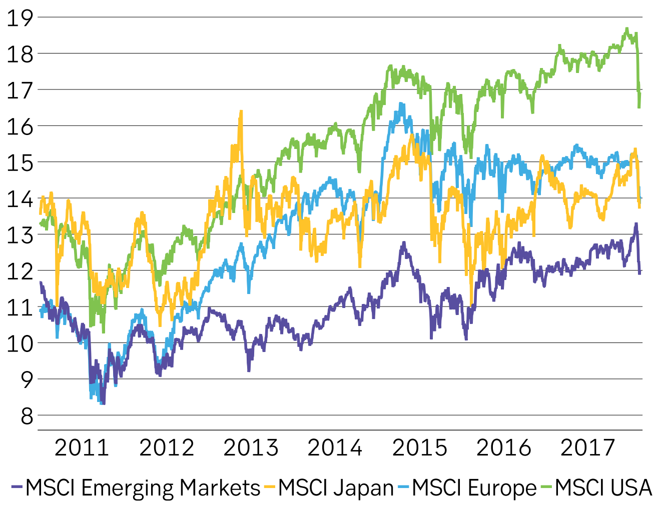
Most observers expect US-based corporate earnings to enjoy an aggregate positive tax effect of 6-8 per cent in 2018. Consensus estimates indicate an earnings upturn of 10 per cent for US companies in addition to the tax effect. In other words, American firms can expect a highly profitable year.

A lot has been written about the "repatriation tax" on liquid assets kept by US companies in countries with lower tax rates. This tax will now be 15.5 per cent, regardless of whether the money is brought back to the US or not. The tax will be payable for eight years, of which 8 per cent yearly will be paid during the first five years. The tax on repatriated capital was previously 35 per cent. Large cash-rich companies like Apple, which has borrowed nearly USD 100 billion for its business operations, can now use their own cash instead. Their cash reserve, which totals USD 285 billion and has largely been kept abroad, can now start to be activated. A large proportion of the repatriated funds will probably be used to buy back its own shares. Buy-backs will help prop up share prices, especially in tech companies that play an outsized role in equity indices and whose situation is similar to Apple's.

Small companies – which usually have more domestic exposure than large companies and less opportunity for tax planning – will benefit to an even greater extent. But large companies have performed better in the stock market since the tax reform was unveiled. This can be explained by strong international economic conditions and a weaker dollar, which has benefited exporters. As the tax cut shows up in earnings estimates, however, small companies should gain the most. If this coincides with appreciation of the currently weak US dollar, small companies should again move into the spotlight.

Among the sectors that will benefit especially from the tax reform is banking, which has a largely domestic exposure and will thus enjoy an immediate effect from the corporate tax cut. Sectors with investment-heavy companies, such as manufacturers and commodity producers, will take advantage of the direct cost deduction. This will lead to increased and accelerated capital spending, which will also strengthen the economy as a whole. Tech and pharmaceutical companies with large liquid assets abroad will benefit from the above-mentioned repatriation tax. The tax reform will not benefit highly leveraged companies, which will only be able to deduct net interest expenses of up to 30 per cent of earnings before interest, taxes, depreciation, amortisation plus

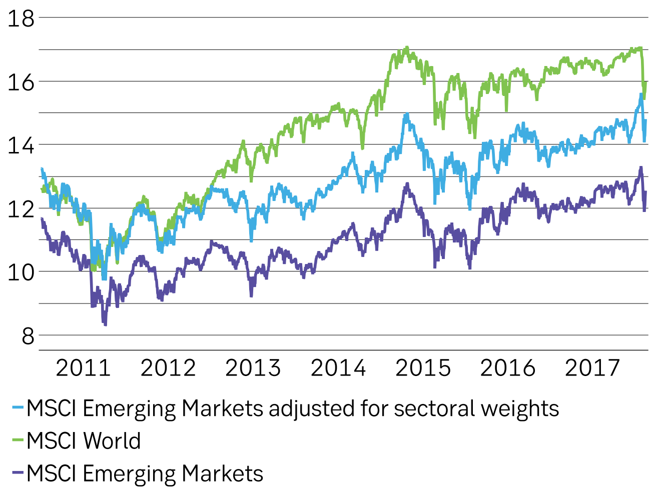
P/E ratios in major economies and spheres



Source: Bloomberg/Macrobond

The chart shows changing price /earnings ratios in indices for major economies and spheres. US equities still carry higher valuations than those in other indices. EM equities have become more expensive, but they still have low valuations compared to developed markets

Sectorally adjusted P/E ratios, emerging markets



Source: Bloomberg/Macrobond

If we apply the rest of the world's sectoral weights to EM equities, the valuation gap becomes much narrower. EM shares then have a P/E ratio of 15.6, compared to 17.1 in the rest of the world – thus a smaller discount

goodwill and intangible asset impairment (adjusted EBITDA). The tax reform is the most far-reaching since 1986, and its complexity makes the outcome difficult to assess, but the reform is largely growth-enhancing.

For **emerging market (EM) equities**, last year was the best in seven years both in absolute terms and in relation to advanced economies. For a USD-based investor, the broad EM index rose by a full 37 per cent. Strong global economic growth, a weakened dollar, rising commodity prices and high earnings growth were all factors that contributed to the upturn. The valuation gap compared to advanced economies had also become much too wide. Asset managers entrusted with investing globally are now heavily over-weighted in EM equities. Looking at performance over the past five years, however, equities in advanced economies have outperformed EM equities by 40 per cent, so last year's performance also reflects a certain normalisation of valuation conditions.

A lot has happened in emerging market economies during the past decade. In earlier issues of *Investment Outlook*, we have examined the EM sphere's increasingly dominant element of technology and internet companies, as well as consumer-related companies. In macroeconomic terms, EM countries have generally strengthened their finances and improved their current account deficits. Inflation has also fallen significantly in many countries. If we compare the EM sphere today with 2013, when the US central bank declared its intention to taper its bond purchases (the ensuing market turmoil has come to be called the "taper tantrum"), resilience to rising interest rates and a stronger USD is higher. The positive performance of EM equities despite rising US interest rates in the past six months underscores this statement.

Historically, a weak USD, high commodity prices and strong economic growth – preferably coupled with low interest rates – have been a perfect cocktail for investing in EM equities. These indicators are still relevant, but to a lesser extent than before. As economies and stock markets evolve, such correlations also change. We already see that the choice of sectors and companies is becoming more important, while the region investors choose is decreasing in significance. This is a natural development as EM-based companies become increasingly competitive in the international market.

The valuation gap against developed market (DM) equities has recently narrowed, since valuations of EM shares have also climbed. EM equities are still valued lower than DM ones, which is justified by lower-quality corporate governance and higher political risk. But the growth component is more attractive in the EM sphere, so the gap should narrow. Adjusted for sectoral weights, the valuation gap has become far narrower.

Summary

We have an optimistic view of global stock markets, since earnings continue to be revised upward as economic conditions improved. As for EM equities, we are humbled by the fact that their performance has been extremely positive and that macroeconomic developments have been very helpful to the stock market. We thus prefer a qualitative approach, with careful selection of companies, which will make investments more resilient in case of any reversals. It is difficult to ignore the US tax reform since it will probably provide an extra growth impulse that stimulates companies in particular. The US dollar has also weakened despite a strong underlying economy, which is positive for a foreign investor. Although valuations are high, the earnings trend is positive. The overall market is also supported by dynamic effects such as a higher rate of capital spending, share buy-backs and increased economic activity. We prefer domestically oriented companies that are directly affected by the tax reform. Export-heavy countries in Europe and Japan have currency effects going against them, and earnings revisions have thus stagnated, but good economic conditions are favourable to exporters. Higher interest rates will be helpful to the banking sector. In a situation where forward-looking indicators are peaking, however, it is time to adopt a more cautious attitude towards the most cyclical portions of the market in both Europe and Japan.

Nordic equities

Higher share prices, but also higher volatility

There can be no complaints about the strength of the stock market over the past nine years. An almost euphoric mood among equity investors spread to many places around the world in late 2017. Rising corporate earnings and low interest rates and bond yields are an almost perfect environment for equities, and the conditions are favourable for us in 2018 to celebrate a full decade of an essentially uninterrupted stock market upswing. The question is how long this can last. We fear that the increased volatility we have seen in the stock market in February will persist during the year, but overall we still expect some upturn in share prices this year.

Impressive reports, growing earnings

It is perhaps difficult to see, based on share price reactions, but the ongoing corporate earnings season is really strong and impressive. At this writing, not all companies have published their year-end reports, but it appears that earnings growth for Nordic listed companies, calculated in euros, will be a healthy 8 per cent for 2017 – the best performance since 2010. Both the companies themselves and all the relevant leading macroeconomic indicators signal that 2018 will be a new record year. We also expect the economic expansion to continue this year and in 2019. We expect further earnings growth of about 10 per cent for Nordic listed companies both in 2018 and 2019. Although analysts have a tendency to provide rather optimistic forecasts at the start of a new year, downward revisions of 2017 earnings forecasts during this past year are probably only about 3.5 percentage points.

Among the largest listed companies, reports with upside surprises have clearly dominated, and big industrial companies in particular account for these upside earnings surprises, but share price reactions have been modest. The reason for this is probably that the industrials sector, after two years of sharp price climbs, is already valued at historically high multiples of the record earnings that they are expected to deliver in 2018. Investors are therefore hesitant about pushing share prices further upward only on the basis of earnings for the latest quarter. Share prices have also been weighed down by a weakened dollar and higher market interest rates and yields.

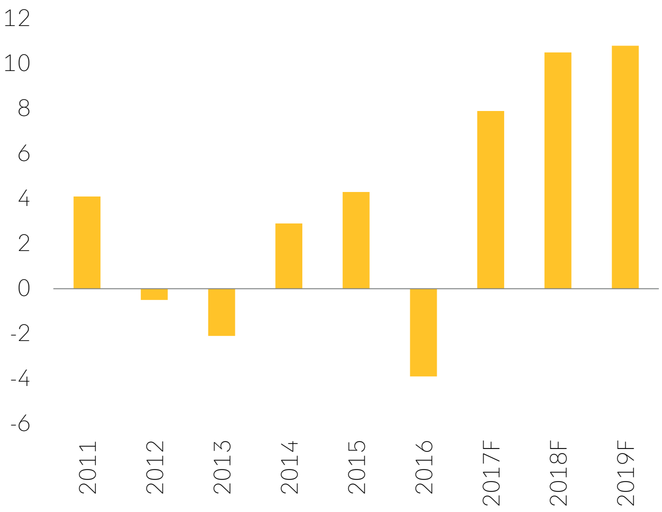
If we instead look at share price reactions among other big Nordic companies, there are really four that diverge significantly: H&M, Ericsson, Skanska and Nokia. Three had sharply negative share price reactions to their earnings report, while one saw a positive reaction.

H&M is suffering severely from the ongoing migration of retail apparel sales from physical stores to online stores because although Swedish-based H&M is active on the internet, it is primarily a classic retail chain. No turnaround can be seen yet in the negative trend of recent years, with declining sales per physical store.

The crisis at Swedish-based telecom equipment giant **Ericsson** continues. The major restructuring costs and savings there will take time before they have an effect, with the result being dwindling sales. Its Finnish-based competitor **Nokia** is also suffering in a difficult market for new telecom infrastructure but has already streamlined its service operations (with a focus on profitable contracts), which is something that Ericsson, among others, is grappling with. Meanwhile Nokia has been successfully licensing the company's extensive patent portfolio to Asian phone makers. It is also interesting that Nokia is already beginning to bounce back, even though 2018 is expected to be a low point in terms of demand for telecom infrastructure. The new generation of mobile telephony – called 5G – is expected to contribute to a significant upswing in sales in the years ahead, and the company expects a sharp improvement in profitability between 2018 and 2020.

The problems at Swedish-based construction company and property developer **Skanska** are not primarily related to the housing market downturn. On the contrary, those operations have weathered the decline in housing prices surprisingly well. Its problems are instead related to its new CEO's dissatisfaction with the historical profitability of the company's construction contracting operations. Profitability has been too low in its construction division, which has been hit far too often by impairment losses on various projects. In order to remedy this, extensive restructuring, management changes and cost savings are now being implemented. This process of change will be costly in the short term and will hopefully have positive effects in the future, but so far investors have chosen to focus on its short-term costs.

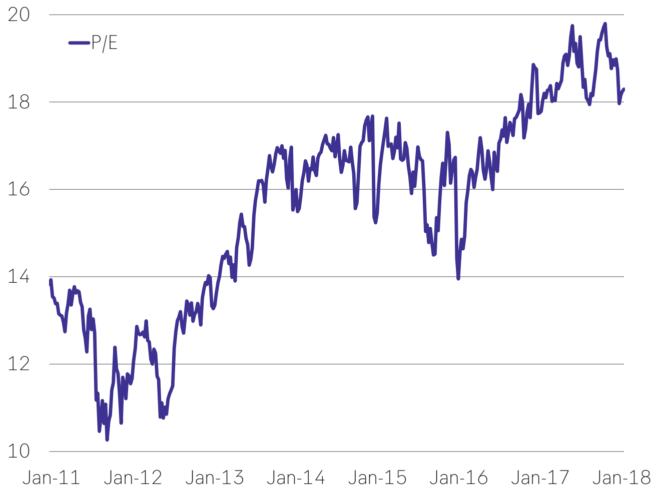
An economic boom is here and earnings are rapidly expanding



Source: SEB Equity Research

The chart shows the percentage of earnings growth for Nordic listed companies in euros since 2011 and our forecasts for the next couple of years. Last year was probably the best year since 2010, and we expect more good years going forward.

Record earnings are valued at historically high multiples



Source: Bloomberg

The chart shows forward price/earnings ratios for the Stockholm stock market since 2011. Valuations do not appear to be especially attractive, but this will probably require companies to continue delivering good earnings growth while interest rates remain low.

Valuations will limit potential

For experienced readers of this publication, this is nothing new but we still need to repeat it. Share valuations in the Nordic countries are already high, which limits potential returns. We expect record earnings for companies on the Stockholm stock exchange in 2018. They are valued at 18 times earnings. This is on a par with America's S&P 500, where a few highly successful tech companies such as Alphabet/Google, Facebook and Amazon weigh heavily. Given these valuation levels, share prices are vulnerable to disappointments, for example when earnings do not grow as expected or interest rates do not remain as low as we have become accustomed to. If this or some other event with a negative effect on the stock market occurs, there is no margin of safety with current valuations. Disappointments will have a clearly adverse impact on share prices.

We see limited potential for further multiple expansion to generate returns for investors in the Stockholm stock market over the next few years (where every krona of earnings is valued higher than previously). This means that returns have to come from earnings growth and dividends. With regard to returns, there is still a lack of attractive alternatives to equities. Low interest rates and bond yields are favourable for the stock market, and this will still be the case for a long time to come.

Rising yields provide less support for equities

However, recently we have seen a marginal change, since market yields have gone from record lows to slightly higher. From a historical perspective, bond yields are still quite low, but early in 2018 yields on 10-year government bonds have climbed to their highest levels in four years in the US and are at two-year highs in Germany and Sweden. The US Federal Reserve has already started shrinking its balance sheet, and both the European Central Bank (ECB) and Sweden's Riksbank will probably declare with increasing frequency how their ongoing quantitative easing programmes will be phased out and what their next steps will be. At present, we do not see this as a major problem for the stock market, but the strong support for equities long provided by monetary policy will gradually fade.

The overall dividend yield on equities is down to about 3 per cent, which as such is not enough to provide an especially impressive total return, but in some sectors such as banking and telecom operators, many companies are distributing shareholder dividends equivalent to 5-9 per cent. In many cases, construction companies also pay a high dividend yield, but at the same time these shares have a very high volatility due to concerns about the Swedish housing market.

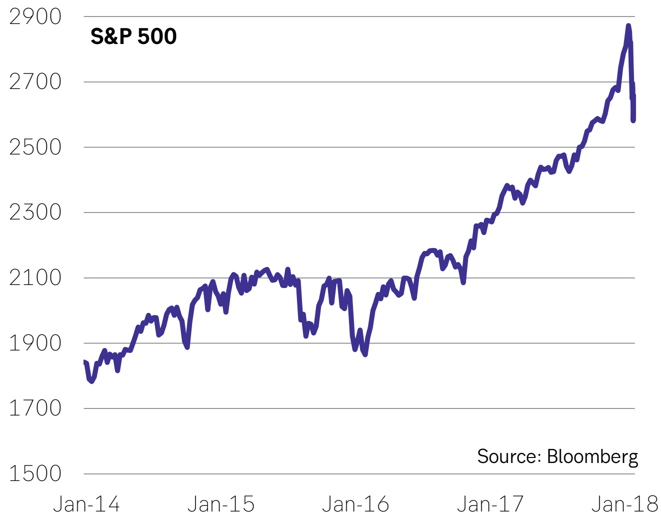
Earnings trend a cause for rejoicing

Earnings growth is the real cause for rejoicing at present. As long as earnings continue to grow by 8-10 per cent, unchanged earnings multiples and a 3 per cent dividend yield are enough to provide an 11-13 per cent total yearly return. Of course the question is how long earnings can continue to grow at this pace before interest rates and inflation put an end to the party. Optimists may point out that the powerful deflationary pressure generated in many places by the ongoing digitisation process will allow the economy and earnings growth to remain strong for a record-long period before we see any significant inflation and interest rate problems.

Accelerating upturn in global stock markets

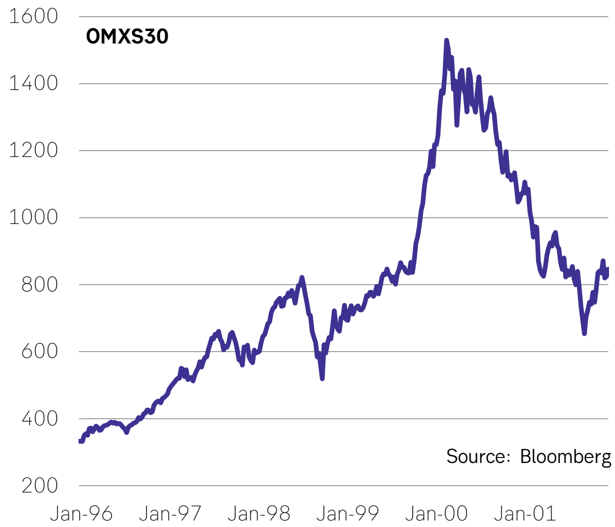
It may be precisely these kinds of assumptions – continued strong earnings growth and ultra-low interest rates for a long time to come – that drove the stock market surge in the US and a number of Asian markets in December and January. It is clear that after nine years of rising share prices, this upturn accelerated in several key stock markets, especially New York, late in 2017. The upturn coincided with large net inflows into equity funds and sharply higher activity among small savers. Recently, the proportion of trading on the New York Stock Exchange coming from investment management

Was the recent accelerating upturn in the US a sign of euphoria?



The chart shows the US stock market trend according to the S&P 500 index. After a nine-year rally, a clear acceleration was apparent in late 2017 and early 2018. Was this a sign that the rally had entered a final stage of euphoria? Or simply a function of what is an ideal cocktail for the stock market, with high growth and low interest rates?

At the end of the 1993-2000 rally, Stockholm share prices clearly accelerated



The 1993-2000 stock market rally was driven mainly by the telecom/media/technology (TMT) sector, which was heavily represented on the Stockholm stock exchange. During the summer of 1999, the upturn in the OMXS30 index, in which Ericsson was a major presence along with Nokia, Framfab and Icon, entered what (in hindsight) was a clearly euphoric final stage, when the index surged 100 per cent in eight months.

firms that focus on small savers has increased to more than one third, which means that the percentage has doubled in six months. It remains to be seen whether the correction in early February was just a temporary slump or something more serious.

There have long been many indications that the stock market rally has started to age – for instance, the number of initial public offerings, structured transactions and acquisitions along with valuations. Yet until recently, there were no noticeable signs of the kind of euphoria that has often historically ended a long stock market rally.

For example, we saw a very clear acceleration in the upswing for OMXS30 shares in Stockholm during the summer and autumn of 1999, with the index doubling in just eight months to March 2000. The global stock market rally in the late 1990s was dominated by the IT (or "dotcom") sector, which at the time accounted for a very large proportion of the Stockholm stock exchange. The next rally was mainly characterised by euphoria about the incredible economic growth in the BRIC countries, led by China, and we saw a corresponding acceleration in the 2007 rally in Hong Kong; during the second half, the Hang Seng index surged by 60 per cent. It is often easy in hindsight to see what is a euphoric ending and what is simply a period of rapid upswing in a rising trend, but far more difficult to assess while it is actually happening. The overall picture and the correlations between events events often tend to become clearer only some time later.

At the end of the 2003-2007 rally, Hong Kong share prices clearly accelerated

The 2003-2007 rally was driven by the BRIC countries, led by China. The upturn in the Hong Kong stock exchange, on which many big Chinese companies are listed, entered what (in hindsight) was a clearly euphoric final stage, when the index surged 60 per cent between April and October.

Summary

Today we remain cautiously optimistic about the outlook for equities for the rest of the year. We interpret the upturn in New York during December and January as a rational outcome of good earnings prospects combined with relatively low interest rates in perfect harmony for the stock market, rather than as a euphoric phase. A genuine trend reversal in New York would also be likely to have a negative impact on Nordic stock markets going forward. We expect higher share prices in Sweden and the other Nordic countries at the end of 2018. In addition, dividend yields will be about 3 per cent, but volatility will probably be higher going forward as questions arise about the sustainability of the ongoing earnings cycle. Meanwhile the support that stock markets have enjoyed due to interest rates and monetary policy over the past decade will now gradually decrease.

Fixed income investments

Less central bank support will bring higher yields

A number of central banks now look set to react to strong economic signals by speeding up their monetary policy normalisation. We see a number of driving forces for higher market yields going forward, given the robust global economy and continued interest rate hikes by central banks. However, the pace of this upturn is being slowed by subdued inflation prospects.

Government bonds (excl emerging markets)

The downturn in the Swedish housing market does not change our forecast that the **Riksbank** will deliver its first repo rate hike in September 2018. This will be followed by another three hikes, with the repo rate ending up at 0.50 per cent in late 2019. Although inflation surprises may lead to some uncertainty, a long delay in the start of normalisation is still unlikely, since the rest of the world is increasingly moving in the same direction (towards higher interest rates and less liquidity support). The Riksbank will continue to buy large quantities of bonds, while the Swedish National Debt Office will reduce its borrowing requirement due to large tax revenue. As a result, Swedish yields are expected to rise slowly in the short term. Further ahead, our forecast is that 10-year yields will rise from 0.90 per cent today to 1.50 at the end of 2018 and to 2.10 per cent at the end of 2019.

The sharp upswing in Europe appears to have strengthened the hawks (those who believe in higher interest rates) at the **European Central Bank** (ECB). This provides increased support for our forecast of an end to bond purchases in September this year. In March 2019, we believe the ECB will hike its deposit rate for banks to -0.25 per cent, while the refi rate (its key interest rate) will be raised only in mid-2019. Our overall assessment is that the ECB's refi rate will be 0.50 per cent at the end of 2019. We expect German 10-year government bond yields to increase to 1.00 per cent at the end of 2018 and to 1.50 per cent at the end of 2019, after the ECB begins its gradual rate hikes.

As expected, the US **Federal Reserve** (Fed) raised its key interest rate again in December 2017. Higher GDP growth, rising inflation and stronger inflation expectations are creating conditions for the Fed to continue its monetary policy normalisation. We believe the Fed will accelerate the pace and hike its key rate four times this year (March, June, September and December), followed by another hike to 2.75 per cent at the end of 2019. The shrinking of the Fed's balance sheet began in October 2017 and is proceeding according to plan. Combined with a continued gradual reduction in the Fed's balance sheet and an increased borrowing requirement as the US federal budget deficit grows, this suggests somewhat higher US bond yields. We believe US 10-year Treasury yields will rise to 3.1 per cent at the end of 2018, then a bit further to 3.3 per cent at the end of 2019. In general, there is a risk that bond yields may climb more than expected.

Emerging market (EM) debt

Global economic growth is strong, and a number of emerging markets are showing especially strong expansion. Due to the positive effects of this growth and relatively low inflation, there should be great resilience to a gradual tightening in the US economy. Together with continued high risk appetite among investors and low absolute yields in other segments of the fixed income market, this has led to large capital flows into this type of investment.

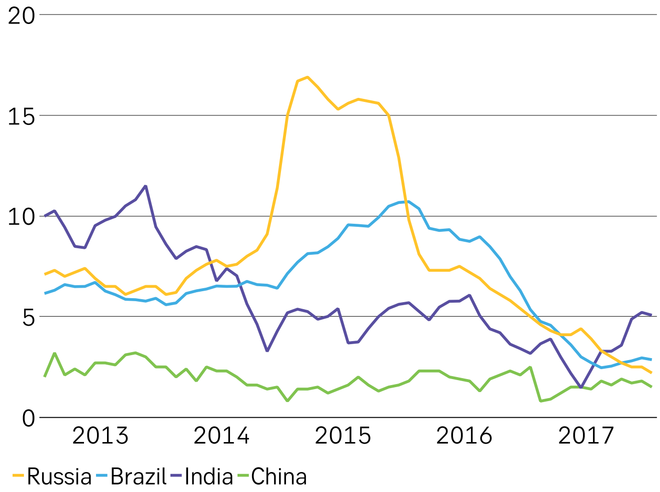
Absolute yields in a number of emerging markets – for example Russia, Brazil and Mexico – are far higher than in developed markets. That is true of both government and corporate bonds, allowing them to pay a good current return. In many cases, a strong underlying economy also leads to stronger currencies, which we saw numerous examples of last year. When choosing between buying EM securities in a major currency like the USD or in local currencies, at present we consider it advantageous to buy them in **local currencies** since there should be potential for continued appreciation in EM currencies. Investing in an interest-bearing security denominated in an EM local currency gives rise to two relatively significant sources of risk and return – changes in interest rates and changes in foreign exchange (FX) rates. A factor that often affects such markets is US interest rates. One reason is that many countries have US dollar-denominated loans, which means higher or lower borrowing costs depending on US interest rate and yield trends. But given recently improved current account balances in many EM countries, we expect the negative effect of rising US interest rates to be limited. The countries that we believe will be most adversely affected by US rate hikes are Egypt, Argentina, Turkey and to some extent South Africa. Other sources of risk include political risk and protectionism, along with generally lower risk appetite among investors.

Lower returns on high yield bonds

Source: Bloomberg/Macrobond

There is a low probability of recession, and the growth outlook is stable. That is our main argument for the continued potential of HY corporate bonds, although HY bond yields are substantially lower than in the past three years.

Relatively low inflation pressure



Source: Bloomberg/Macrobond

Low inflation in emerging markets is reducing the likelihood that they will also need to hike their key interest rates in step with the US Federal Reserve.

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

Low yields and narrow yield spreads against government bonds limit the potential returns from both investment grade (IG) bonds, with higher credit ratings, and high yield (HY) bonds, with lower credit quality. Given that we expect strength in the underlying economy, followed by higher yields, we see greater potential for HY than IG bonds, since HY bonds are not as sensitive to rising government bond yields as IG bonds are. Stable oil prices and a significant decline in the corporate default rate are further factors that will help support the high yield market. However, in a historical perspective the return potential for high yield bonds is also limited, given low absolute yields and narrow yield spreads.

Alternative investments

New conditions prevail as volatility reawakens

Early 2018 has brought some sudden reversals. A world where volatile trends are both reversed and reinforced creates opportunities for hedge funds to contribute better risk-adjusted returns in a portfolio. Those who predicted that the year would start off with investor caution and profit-taking after a strong 2017 had to revise their analysis. US markets continued their uninterrupted surge. In Europe, the bells that rang in the New Year seemed to signal a brighter future, eclipsing the weak late-2017 trend in the region. However, at this writing, the picture is rather changed. Volatility has reawakened, shaking up stock markets. Meanwhile, long-term government bond yields are rising at a faster pace.

Hedge funds

Most hedge fund strategies had a strong start to the year. No matter what asset class or classes were used by managers, conditions were reasonably good during the first month of 2018. Based on economic data – both confirmed and forecast – the risks of a recession are very limited. Meanwhile, current trends include sharp price movements, whether we are talking equities, currencies or fixed income instruments. Reactions to corporate earnings reports for the last quarter of 2017 show that the market clearly distinguishes between good and bad equities, rewarding good reports with higher share price rises and punishing companies with weak reports. Adding the continued clarity of central bank ambitions, and there are favourable conditions for hedge funds to keep contributing good risk-adjusted returns to investor portfolios for a while.

Equity long/short

Factors that strongly contributed to the stock market's good performance during 2017 were global growth, corporate earnings and liquidity. There are many indications that these factors will continue to provide support to the stock market in 2018. The recent spike in volatility is not necessarily a bad thing. As long as price movements are linked to fundamentals and hedge fund managers are able to adjust their exposure to risk, these increased fluctuations may equally well be opportunities for returns. For investors who want to limit their risk somewhat, hedge funds without a net exposure to the market – so-called market-neutral funds – may be preferable.

Credit

The yield (or credit) spread between government and corporate bonds gradually narrowed during most of 2017, and apart from some increase during the final few months of the year it is now at historically low levels. Together with low absolute yields and limited volatility (although it has increased recently), the potential for generating returns in this strategy is somewhat limited at present. However, one factor that is increasingly relevant is clearer divergences in pricing based on the credit quality of different bonds, which may help increase potential returns for skilful credit managers.

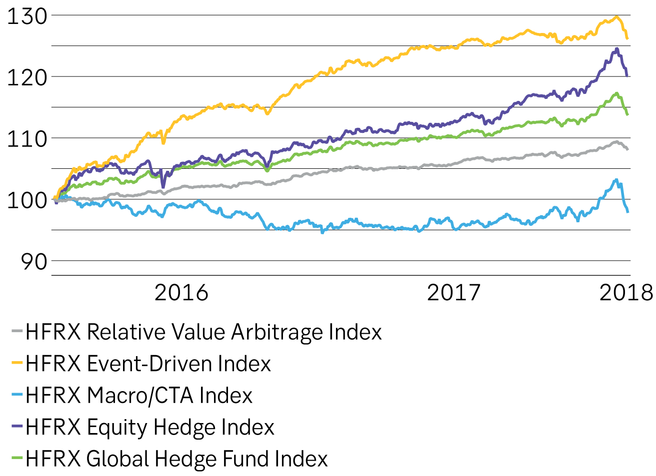
Event-driven

This strategy has had a period of stable returns, which has a good chance of continuing. The "special situations" sub-strategy should benefit from a strong underlying market, along with clearer differences in returns between sectors as well as individual shares. For the "mergers & acquisitions" sub-strategy, there are indications that corporate deals will increase going forward. We also believe that the recently enacted US tax reform will make a positive contribution to the US market to some extent. Similarly, the trend towards spin-offs, where the aim is to focus on a company's core activities, will keep up for another while, which should contribute to continued stable flow of transactions.

CTA/Macro

Stable trends for equities as well as fixed income instruments and currencies during the first month of 2018 contributed to the strong performance of trend-following CTA strategies. Even if volatility were to rise further and there were sudden trend reversals in some asset classes, over time this strategy can contribute good portfolio properties given its low correlation with other asset classes. Based on the central banks' different agendas, macro strategy managers should find investment opportunities during the year. With the US Federal Reserve raising its key interest rate and shrinking its balance sheet while Europe and Japan continue to provide stimulus, there are conditions for both divergences and clearer trends, which talented macro managers should be able to take advantage of.

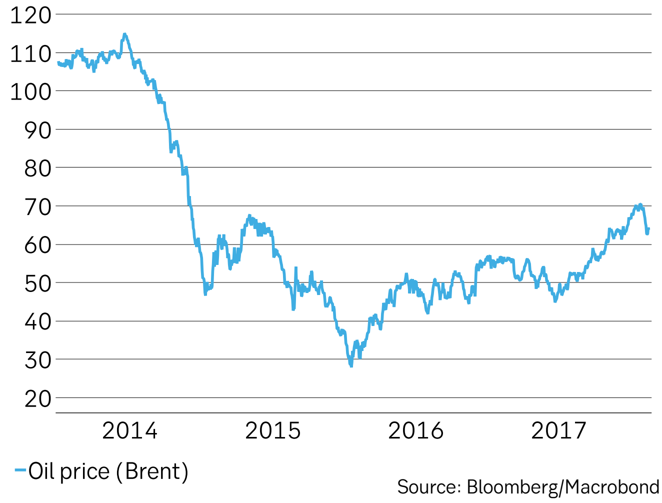
Two-year trend for broad hedge fund indices



Source: Bloomberg, Macrobond

The event-driven hedge fund strategy showed the strongest performance in 2016 and also did well in 2017. Equity hedge strategies showed the strongest performance in 2017.

The oil price trend since 2014



Source: Bloomberg/Macrobond

Oil prices moved substantially in 2017. During the first half, prices fell about 20 per cent to around USD 45 per barrel of Brent crude, before climbing late in the year to USD 68 per barrel, which in turn was 20 per cent higher than at the end of 2016. The single most important reason behind the oil price trend since mid-2017 has been the production caps introduced by "OPEC & Co".

Commodities

OPEC & Co determine the oil price trend

Oil prices moved substantially in 2017. During the first half, prices fell about 20 per cent to around USD 45 per barrel of Brent crude before climbing towards the end of the year to USD 68 per barrel, which in turn was 20 per cent higher than at the end of 2016. However, it was mostly prices of oil for immediate delivery (spot prices) that rose, whereas prices for oil with later delivery dates (forward prices) only rose about USD 5 per barrel during the period.

Both greater geopolitical risk and a weaker US dollar have had an effect, but the single most important explanation for the price trend since mid-2017 has been the production caps implemented by "OPEC & Co" (the Organisation of the Petroleum Exporting Countries plus Russia, Mexico, Kazakhstan, Oman, Azerbaijan, Brunei, Malaysia, Sudan, South Sudan and Bahrain), which are still in effect. These limits are equivalent to about 2 per cent of global oil supply. Faster global economic growth and higher demand for oil – combined with involuntary production cuts in Mexico, Venezuela and China – have also contributed, but the fact remains that OPEC & Co produced an average of just over 1.8 million barrels per day less during 2017.

Without these voluntary oil production caps, there would have been continued excess supply in the global oil market and probably far lower prices. We expect OPEC & Co's current strategy, which prioritises higher prices over volume, to remain in place at least this year and next, until the market achieves a natural supply shortfall.

Given the geopolitical situation in Venezuela, there is an increased risk of relatively sharp declines in supply from that country. Industrial activity there is essentially at a standstill, inflation is at 1,100 per cent and unemployment is the second highest in the world. Government debt is USD 196 billion, while the central bank's reserves are equivalent to USD 10 billion. Debts include about USD 60 billion to oil service companies, leading them to cut back their operations and in many cases decide to leave the country. Venezuela's oil production was about 13 per cent lower in December 2017 than in the same month of 2016. The departure of oil service companies is adversely affecting both investment opportunities and the continuity of existing operations. We expect daily production to fall by about another 250,000 barrels in 2018, which is manageable, although there is a risk of a faster production decline.

We expect the US oil industry to continue performing well over the next couple of years. The break-even cost of American shale oil production has continued to fall and is now estimated to be around USD 40 dollar per barrel. Production is expected to increase by 16 per cent this year and another 11 per cent in 2019. However, that will not be enough to trigger a major decline in oil prices, as long as OPEC sticks to its current strategy.

In our estimate, global oil demand will increase by 1.8 per cent in 2018 to nearly 100 million barrels per day, in line with the growth in demand over the past five years.

Our forecast is that the US dollar will continue to weaken and that this factor will help boost oil prices by about USD 4 per barrel. All in all, we expect Brent oil to trade at around USD 65 per barrel in both 2018 and 2019.

Currencies

Tightening leads to currency appreciation

Strong economic growth and political optimism in the euro zone will drive the EUR/USD exchange rate to above 1.30, even though the US Federal Reserve will raise its key interest rate in a number of steps to 2.75 per cent at the end of 2019.

Right now there is an absence of clear patterns and driving forces in the foreign exchange (FX) market. Apart from significant ups and downs for the US dollar, movements have been relatively small. The combination of low market volatility and high risk appetite should be favourable for investors looking for returns in so-called carry strategies (selling one currency in a country with low interest rates and buying another in a country where interest rates are higher), but this was not the case in 2017.

Stronger EUR/SEK/NOK/EM currencies

In our assessment, countries whose central banks are getting close to monetary tightening will continue to be rewarded with currency appreciation. Such currencies include the euro, the Swedish krona and the Norwegian krone. In recent months, many emerging market (EM) currencies have appreciated. In our view, factors such as the strong global economy and rising commodity prices will continue to push these currencies even higher.

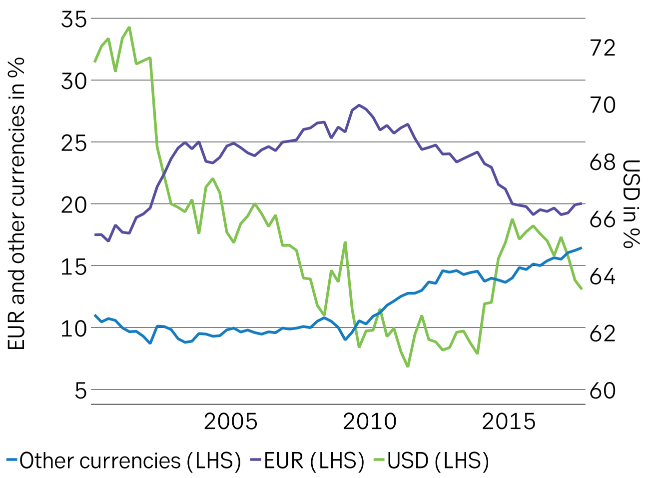
Normally, yield spreads have a major impact on FX rates, but the recent weakening of the dollar breaks this pattern. Although market players have gradually priced in widening yield spreads between the US and the euro zone, the dollar has weakened and brought the EUR/USD exchange rate to unreasonable levels.

Dollar will fall as reserve managers opt for euro

Stronger economic and political optimism in the euro zone has helped push the euro higher, and we see a clear trend among managers of global currency reserves to shift from dollar- to euro-denominated assets. This trend may very well continue when EU integration is strengthened, as a result of Brexit (the United Kingdom opposed stronger integration) and the election of Emmanuel Macron as president of France, which made that country's cooperation with Germany and other EU countries easier. The risk of "Frexit", or French withdrawal from the EU, which Macron's election opponent Marine Le Pen put forward as a potential scenario, decreased significantly.

One counterbalancing factor would be larger US tax cuts than the market expects, which might suggest a stronger USD. Meanwhile lower taxes will help widen the US budget deficit and foreign trade imbalances. The US national debt is already nearly 100 per cent of GDP, which does not improve the dollar's weak long-term fundamentals. Although there will probably be a downward short-term correction in the EUR/USD rate, our forecast is that this rate will continue to rise, reaching 1.28 at the end of 2018 and then continuing upward to 1.32 at the end of 2019.

IMF: Global foreign currency reserves



Source: Bloomberg/Macrobond

The chart shows that the dollar's share of foreign currency reserves has fallen, while the euro's share has increased.

Flat trend for the pound and yen

The long-term trend for the British pound will be determined by the outcome of Brexit negotiations. The Bank of England will have a hard time accepting a continued steep decline in the currency, but until the market has more information about the future EU-UK relationship, we expect the EUR/GBP rate to remain flat in a narrow range around 0.90. During the autumn of 2018, the pound will begin to appreciate as negotiations start to show positive results. The EUR/GBP rate will then gradually move down to 0.82 towards the end of 2019. That means that the GBP/SEK rate will remain in the 10.60-11.40 range during 2018.

The Bank of Japan will not accept any substantial yen appreciation from today's levels, so we believe the USD/JPY rate will remain around 108-113 in the year ahead. When the Bank of Japan gets closer to normalisation in the slightly longer term, the undervalued yen may appreciate a bit, with the USD/JPY rate expected to move down to 100-105 by the end of 2019.

Cautious krona appreciation in 2018

Over the past six months, the EUR/SEK pair has traded at what are unsustainable levels in the long term, near 10.00, but the krona has now begun to strengthen. Flow potential for a stronger krona will come mostly from Swedish export companies increasing their currency hedges and thus shifting their extensive foreign currency reserves. Foreign institutions will probably position themselves for a stronger SEK, but since it will still be a while before the Riksbank switches to a less stimulative monetary policy, it will remain costly to hold kronor. This will contribute to a very gradual downturn in the EUR/SEK rate to 9.50 by the end of 2018. It will make the Riksbank's job easier if the European Central Bank (ECB) reduces its stimulus measures and raises its key interest rate. At the same time, because of the krona's strong link to the euro, the euro's strength against other global currencies will automatically lead to trade-weighted krona appreciation, which will curtail the Riksbank's manoeuvring room. This, in turn, will limit the range of EUR/SEK movement downward, and we do not believe it will go below 9.30 by the end of 2019 as the Riksbank raises its repo rate to 0.5 per cent. As a result, the USD/SEK rate will end up around 7.00.

Stronger NOK

According to our forecast, the Norwegian krone has the very best prospects. Due to higher oil prices, increased oil investments and less fear about a steep decline in Norway's housing market, we expect the NOK to appreciate against the euro. The clearly undervalued krone will probably attract buyers as interest rate hikes draw closer during the second half of 2018. Our forecast is that the EUR/NOK rate will fall to 9.20 at the end of 2018 and then to 9.00 at the end of 2019. The rebalancing from the USD to the EUR is expected to continue over the next few years.

Currency forecasts

Currency pair	Exchange rate					Change			
	Today	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018
EUR/USD	1.24	1.22	1.25	1.27	1.28	-1.6%	0.8%	2.4%	3.2%
EUR/SEK	9.86	9.80	9.70	9.60	9.50	-0.7%	-1.7%	-2.7%	-3.7%
EUR/NOK	9.69	9.50	9.40	9.25	9.20	-2.0%	-3.0%	-4.6%	-5.1%
EUR/CHF	1.16	1.18	1.19	1.20	1.21	1.8%	2.7%	3.6%	4.4%
USD/JPY	109	111	111	107	103	1.8%	1.8%	-1.9%	-5.6%
EUR/GBP	0.89	0.89	0.88	0.87	0.85	0.4.%	-0.7%	-1.9%	-4.1%
USD/CNY	6.28	6.40	6.30	6.20	6.10	2.0%	0.4%	-1.2%	-2.8%

Currency forecasts were made by SEB Research & Strategy as of February 6, 2018. Please ask for a copy of our latest forecasts.

Theme – Sustainability

Sustainable development increasingly in the spotlight

It was not so many years ago that publicly listed companies dutifully presented their environmental and sustainability work in various contexts. However, the attitude and awareness of both companies and consumers have changed significantly, with an ever increasing focus on issues related to the environment, society and governance, or ESG. In 2015 a milestone was reached when 193 countries adopted the United Nations' 17 global Sustainable Development Goals. In practice, this means that governments, civil society and businesses in these countries have committed to combine forces and work together to fight poverty, inequality and climate change.

Environmental issues now have elevated status

Just a few years ago, although listed companies included a slide in their corporate presentations for investors that focused on ESG issues, this was often touched upon fairly quickly without much feeling, while many listeners yawned or looked at their watches. Since then, the attitude of both senior management and investors has changed significantly. Granted, this has been a gradual change, but seen from a long-term perspective, the change is striking. Today many senior executives show off their environmental awards with great pride, and a growing number of them highlight the business opportunities provided by a sharper focus on ESG issues. To put it a bit simply, environmentally related sustainability issues have gradually been transformed from a risk element into a business opportunity.

At SEB's big investor seminar in Copenhagen this past January, some 150 Nordic companies were presented by their CEO or other senior officer to the cream of Nordic institutional investors and a fair number of non-Nordic ones. Many speakers emphasised the business opportunities they saw in areas such as electric cars and renewable packaging materials. But they also highlighted the need and potential for increased recycling, along with action plans to reduce emissions, especially carbon dioxide.

Electric cars – a honey jar that attracts everyone

Electric cars, including plug-in hybrids, are gaining ground all over the world. In particular, China's initiative to phase out combustion engines in the long term (no exact year has been specified yet, unlike in countries such as the UK, France, Norway, the Netherlands and India) is an important driving force that is expected to ensure continued strong growth in the global electric car market for a long time to come. Companies in the Nordic countries see this trend as a great opportunity.

Volvo Cars, owned by the Chinese manufacturer Geely, will have electric motors in all new models starting in 2019. In conjunction with this announcement in July 2017, CEO Håkan Samuelsson noted that the decision reflected the demand for electric cars from an ever growing number of customers.

Consultancy firms such as Sweden's ÅF also want to be on board and are working today with a number of Chinese automakers to develop new models of electric cars. The Swedish-based mining and smelting company Boliden notes that its copper mines will derive great benefits from increasing copper consumption as the world shifts towards electric cars. This is partly because of the significantly higher copper content in electric cars than in cars with traditional combustion engines, but also because power grid infrastructure must be significantly expanded if electric cars are to become as successful as the auto industry is expecting. This will require large quantities of copper. Boliden is also assessing the potential for extracting cobalt from existing ore, which would probably be an attractive alternative for all the companies that produce battery-powered products and do not want to be associated with the cobalt industry in Congo.

Emissions crucial to metal industry profitability

The metal industry is probably not the first sector that investors think of when they are looking for companies that work for a better environment. While the industry is classified as emissions-intensive, there are business opportunities in being "best in class".

For example, Boliden has invested significant amounts in its smelting works in order to separate environmentally harmful emissions. This enables the company to use cheaper metal concentrates of relatively low and dirty quality, since it can remove these emissions. Unfortunately, the problem is not solved just because the company has managed to separate pollutants such as mercury when it smelts zinc. This type of heavy metal must also be safely deposited in final storage, so that it is not released into nature. Boliden has built an underground chamber for this purpose deep down in bedrock, where waste can be stored in the same way as spent nuclear fuel. A zinc smelter may never top the list of companies that contribute to a sustainable society, but it is undoubtedly a major benefit to the environment if mercury and other heavy metals can be sealed in underground chambers instead of being discharged into the sea and air. That is good for the environment and, according to the company's CEO, good for Boliden's business.

The aluminium manufacturer Norsk Hydro is proud of its new plant in Karmøy, Norway. It is said to be the world's most energy- and emissions-efficient of its kind, an important step in the company's work towards achieving carbon-neutral operations by 2020. It is also interesting that, although it is not something the company can influence, issues such as China's environmental policy are among the most important factors for the company's profitability. China has long talked about limiting production in energy-intensive industries such as aluminium; last winter, there were widespread temporary shutdowns of the country's aluminium plants. China's political leaders largely hold the fate of this industry in their hands. The best outcome for Norsk Hydro would be permanent and extensive closures of surplus global capacity (preferably the dirtiest plants).

Plastic pollution attracting greater attention

According to a European Commission survey, 87 per cent of EU citizens are worried about what impact plastic waste has on the environment and 74 per cent are worried about the potential effects on their own health. Because of this concern, 24 per cent have totally avoided buying goods that they think have excessive or inappropriate packaging, while 72 per cent try to reduce their plastic bag use.

The background is not so difficult to understand. Plastic pollution is highly visible, and a full 84 per cent of all waste on European beaches is made of plastic. The sad and frightening effects of our widespread micro-plastic emissions have also received greater attention in the media. For instance, researchers say that the approximate age of a seabird can be determined by the amount of plastic collected in its stomach. Fish eat micro-plastic in the belief that it is plankton, jellyfish or something else edible, and birds then eat the fish. Of course this plastic is not digested and it takes an enormously long time to decompose biologically, which is why it remains in the stomachs of birds, whales and tortoises for their entire life. When they are just babies, birds are fed food by their parents that contains plastic. There are baby birds in which 10 per cent of body weight consists of plastic waste in their stomach. In one heavily publicised case in Norway early in 2017, a 6-metre-long stranded beaked whale had become ill because it had 30 plastic bags in its stomach, including one that was 2 metres long.

Today, the weight of all plastic waste in the world's oceans is equivalent to 1/5 of the weight of all fish. This figure will rise to 1/3 as early as 2025, and in about 30 years it will reach parity, according to a report from the World Economic Forum. About 8 million tonnes of plastic waste are added each year. Meanwhile, plastic recycling is remarkably low; only 10 per cent of the world's annual production of 78 million tonnes of plastic packaging is recycled. Even in Europe, the proportion of plastic waste collected for recycling is only 30 per cent, and until this year much of this was exported to China for re-smelting. As a comparison, more than 70 per cent of all paper is recycled, while 75 per cent of all aluminium produced in the last 100 years is thought to still be in use, in many cases after repeated recycling/re-smelting. Given this comparison, the European Commission's target of 55 per cent recycling of all plastic by 2030 is hardly visionary.

Consumers revolt against plastic waste

Consumers are now revolting against plastic pollution, and this is creating major business opportunities for many Nordic companies. The McDonald's fast food chain recently announced that it will no longer use plastic cups in any of its markets starting in 2019. For the Finnish packaging specialist Huhtamäki, which supplies cups and other packaging to fast food chains around the world (except in the US), this announcement was hardly a surprise. Huhtamäki supplies both plastic and cardboard/paper packaging to its customers, and it sees a clear trend in favour of paper at the expense of plastic throughout the world (unfortunately, there is still limited customer interest in these issues in countries such as India). Makers of renewable packaging materials such as BillerudKorsnäs, Stora Enso and Metsä Board will naturally benefit from this trend – liquid packaging board instead of plastic bottles, paper bags instead of plastic, trays made of wood fibre instead of foam plastic and so on. Paper and pulp industry equipment sub-contractors, such as Valmet, say they have not yet seen any major impact from this trend in their order books but are following developments with great interest. Obviously, a lot of new machines for making cardboard and paper bags will be needed if a fairly large share of all plastic packaging is to be replaced with renewable alternatives.

Financial sector investing more in sustainability

Among investors, sustainability work has been on the agenda for a long time, but as in our societies as a whole, there has been sharper focus in recent years – both in terms of a company's actions and the products it offers to its customers.

In 2006, the United Nations established six Principles for Responsible Investments (PRI). In brief, investors signing up for the PRI global initiative undertake to be active owners in the investments they make, thus ensuring that sustainability is integrated into corporate governance and that company executives meet sustainability standards. Signatories must also work actively to ensure the spread of PRI principles across the investment industry and report on their activities and progress related to sustainability issues.

How SEB works

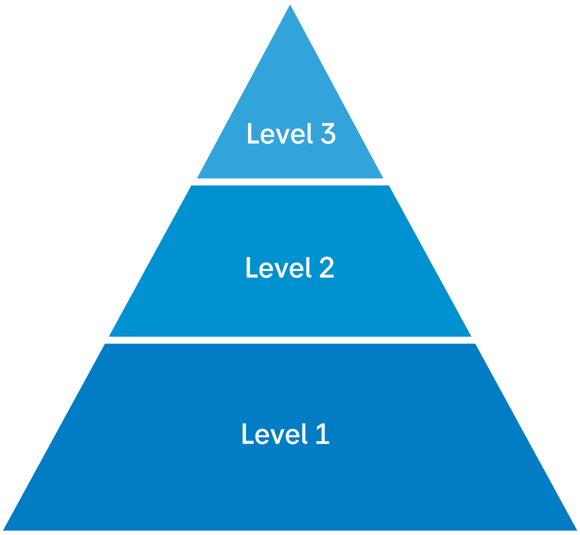
Our sustainability ambition is based on the conviction that companies that work in a structured way with sustainability issues will be more successful in the long term. SEB became a PRI signatory in 2008, and since then the six principles have become a global standard for sustainable investment in financial markets. SEB's fund management company works proactively to comply with PRI's intentions, and corporate responsibility is a vital element of its day-to-day operations. One example of this is that in recent years, we have chosen to require that companies in which SEB funds invest meet higher standards than PRI requires.

Sustainability criteria for funds managed by SEB

Level 3 – Criteria for SEB's sustainability funds, no investments in:
- companies that extract coal, gas or oil

Level 2 – Criteria for SEB's ethical funds, no investments in:
- companies or corporate groups in which more than 5 per cent of revenue comes from the alcohol, tobacco, gambling, pornography or weapons business sectors

Level 1 – Core criteria for all of SEB's funds, no investments in:
- companies that make or sell controversial weapons
- companies that develop or produce nuclear weapons
- companies in which extraction of thermal coal accounts for more than 20 per cent of revenue
- companies that have verifiably breached international norms, with no ambition to improve



SEB's fund management company works with a sustainability pyramid on three levels – core criteria that apply to all SEB funds, criteria that we have established for funds we categorise as ethical, and finally criteria that allow an SEB fund to be classified as sustainable.

Sustainable investments

The practical task of sustainable investments can be carried out in a number of different ways, and there are no established sector-wide guidelines or regulations. Different investment managers use different methods in their efforts to integrate ESG in their work. Below we list three common approaches, which are also central to our way of working with ESG in our asset management:

- **Inclusion** – Our asset managers place great emphasis on identifying sustainable themes and on investing in companies that work actively, for instance, to reduce their climate impact.

- **Influence** – Through active ownership, we influence companies in their sustainability work and also try to bring about change if we detect deficiencies.

- **Exclusion** – Perhaps the most common way for our asset managers to integrate ESG into their work is to exclude obvious "villains" in different fields. Many asset managers have a sophisticated exclusion process, setting caps on how large a proportion of a company's revenue or business to exempt from ESG standards. The reason for this might be that the company has communicated a credible plan for disposing of such operations, or that they are clearly working to improve these operations from an ESG perspective. However, in many cases there is zero tolerance.

As noted, there are no sector-wide regulations for how to integrate ESG into the management of financial assets that are described as sustainable or ethical. The methods and level of transparency for this work vary. At SEB, we act as an intermediary for numerous funds managed by other market players, in which the general approach to sustainability is essentially the same as for SEB's own funds, with the basic requirement being that they must be PRI signatories. This requirement excludes companies that produce weapons of mass destruction, for example.

As for other requirements and criteria, all the funds in SEB's offering that are managed by other fund companies are analysed and assessed on a 3-point scale from a sustainability perspective. This work is done by our specialist unit for fund analysis, Manager Research. The biggest difference between SEB's ESG requirements and criteria and our analysis of funds where we serve as an intermediary is the use of exclusion. For external funds, the analysis focuses more on "opting in" rather than "opting out". The analysis starts with each fund manager's level of ambition on sustainability issues and how well this is integrated into its investment process. This analysis, which is qualitative, is based on two questions:

– How well does the fund manager integrate sustainability into his/her investment process?

– To what extent does the fund manager implement the six PRI principles?

Although the grounds for assessment vary and in some cases may lead to different analyses, no method is more right or wrong. The aim of both methods is to identify asset managers who work actively and single-mindedly to generate good returns through the ownership of companies whose operations have clear sustainability and ESG ambitions.

These two methods are different ways of working with sustainable investment in the financial sector; there are many more. However, it is clear that both the corporate sector and the investor community nowadays consider it completely natural to include ESG and sustainability as a self-evident element of their operations and that more and more resources are being allocated for this work. That bodes well for a continued positive trend, with more corporate responsibility and with investors setting increasingly nuanced and professional standards.

Theme – Blockchain

The next generation of the internet?

Since the mid-90s, the internet has taken the world by storm. At first, its benefits were not entirely clear to everyone, but it soon demonstrated a potential that generated tremendous economic forces. We may very well be facing another such revolutionary advance, with various forms of blockchains contributing to the positive evolution of the global economy. Put simply, a blockchain is a digitally distributed database with information that combines the openness of the internet with the security of cryptography. The initial field of application for blockchain was in payment solutions, but its benefits can potentially be shared by thousands of other fields, and the technology may potentially lead to dramatic future changes in the business world.

A blockchain, or "hyper-distributed ledger", is a technology that may very well change the way we conduct transactions, whether related to monetary values, ownership documents or product verification. Let us call it the "internet of value". This internet differs fundamentally from our ordinary "internet of information", mainly because it is decentralised and has the ability to convert digitally copyable information to digitally encrypted information. A blockchain combines the openness of the traditional internet with the security of cryptography. This technology has the potential to change the way we shop: how we buy, sell, exchange assets, interact with government, and how we verify everything from real estate transactions to the ownership of cattle.

It is still very early to predict the concrete benefits of this potential infrastructure, but the theoretical value of improved efficiency, security and governmental processes is gigantic. A blockchain is a database, or a ledger in the corporate world, with millions of accounts that are synchronised with everyone in the database at any given time. The database consists of smart contracts that are saved and changed with full transparency. The database differs significantly from the databases we have today, because all the contracts that have ever existed in the blockchain are available, not just the current content of the database (like a hard drive).

Digital cryptography emerged in the 1970s and was turned into digital currency in 2009

Digital cryptography, the very basis for blockchains, was developed in the 1970s and further refined in the 1980s (mathematical cryptography, on the other hand, is much older and can be traced all the way back to antiquity). Today's blockchain was developed in 2009 with the aim of serving as a digital currency, bitcoin. Satoshi Nakamoto, still an unknown person (or persons) today, believed that the convenience, speed, efficiency and costs of traditional payments were sub-standard.

Why was blockchain created?

Inventions like the car, telephone, credit card, internet and mobile technologies have all helped to shrink the distance between people and to globalise local enterprises. Nakamoto's main reasons for developing bitcoin were: excessive transfer times and expensive intermediaries (still true), while fraud, cyberattacks, human error and complexity expose assets and business information to undesirably high risks. His intention was to change this (which has not yet happened). Bitcoin was the first major blockchain application, but this does not automatically mean that a blockchain is a digital currency. A digital currency like bitcoin is thus based on an infrastructure that is comparable to operating systems such as Microsoft's Windows or Apple's MacOS.

Thousands of potential uses

Blockchain technology is already being used in a number of value-generating applications such as security in logistics and energy transactions and as a means of payment. According to experts, blockchains may have the same impact on business that the internet did in communication. Many people believe that the actual benefit of a blockchain will be in thousands of applications, not merely as a digital currency or financial asset – although we are probably at too early a stage to determine that for sure. Let us look at some examples of real-world uses, in order to better explain what benefits a blockchain may provide.

The retail sector – ensuring a supply chain

Pirate copying and the sale of stolen goods are major problems for many companies and consumers all over the world. The ability to be 100 per cent certain that a given product is manufactured at a quality-assured and verified location, including all parties in a blockchain, would be highly valuable.

Examples of blockchain applications

Banking & insurance	Cattle & foodstuffs	Diamond industry
Energy trading	Films & music	Pharmaceuticals & health care
Public sector	Real estate	Retail sector

Being able to verify a product's origin, certified components and performance is a vital element of retailing and something that consumers appreciate. Using a blockchain, this is theoretically possible.

If the supply chain in today's retail sector is interrupted in an illegal manner, this may mean that an import tax is not paid, while many business people and consumers may be subjected to fraud. A blockchain offers the potential for eliminating these security holes by providing transparent transactions. For a business, a blockchain can be a secure and synchronised ledger of transactions where all steps in the value chain of a product are recorded, regardless of the number of stages in the supply chain. Each transaction is registered in the ledger, which in turn is linked to the previous transaction file (or block) – thus the term blockchain. Each transaction can only be registered if verified by other parties. All parties can simultaneously view all transactions. This implies total transparency and security – in theory.

Diamond industry – high monetary value, great benefit

Another example is the high-value diamond industry, where it is very important that every little diamond that is found reaches its final buyer in a straightforward value chain without illegal changes of ownership. Today's value chain to the final consumer depends on intermediaries at every stage: from government employees to lawyers, accountants, dealers and banks. This leads to both high costs and long lead times. A blockchain can lead to a functioning, transparent and safe digitally distributed ledger that could eliminate the illegal diamond trade, where unsavory conditions persist (such as "blood diamonds").

Banking – greater efficiency, fewer intermediaries

If blockchains become a global reality, their theoretical efficiency gains are probably greatest in the financial services sector. Moving money between individuals or companies without involving third parties (intermediaries) is a potential threat to today's banks, while it may also be a great opportunity. For central banks, too, blockchains are very interesting as regards international capital flows. The stock market sector could be revolutionised if a global, efficient, secure and regulated blockchain stock exchange were built, gathering the ownership of shares from all over the world. Ownership of limited companies through such a stock exchange has already been created in Finland, enabling investments from all over the world. By investing in a company based on blockchains, major corporations, small businesses, private investment projects and even consumers (to a lesser extent) already have opportunities to fund their economic ambitions with the help of thousands of investors, without banks as intermediaries. A blockchain thus has the potential to become the next infrastructure for entrepreneurship.

Being able to sign contracts with financial players while excluding physical intermediaries could, for example, lower the price of mortgages and insurance policies – two kinds of products that (still) largely rely on manual processes. The mortgage process could be digitised using a blockchain, although banks are necessary because someone has to carry the capital risk and offer a platform for consumers.

Most banks are currently studying the potential for implementing an efficient and secure blockchain in their respective platforms, while many have already built alliances to build shared networks. SEB is one bank that, together with approximately 40 other investors, has helped fund a company (R3) that plans to build next-generation infrastructure for the banking world, especially for international transfers.

The energy sector – blockchains are already being used

The energy trading sector has already begun its journey towards more efficient management of transactions between producers, intermediaries and consumers. For the past few years, intensive development work has taken place, and in some places blockchains are already being used for direct energy transactions between different market players, without having to go through a centralised, expensive trading venue. The Swedish-based utility Vattenfall and some 40 other energy market players in Europe are currently developing a platform based on blockchains that will enable the creation of a decentralised system open to smaller but more numerous transactions, higher speeds and lower costs. In the new energy landscape, with both commercial and private solar roofs, this technology might play a crucial role.

The entertainment industry – bringing income back to the source

In monetary terms, the music industry has essentially shrunk by half since the turn of the millennium, when illegal music sharing exploded via companies like Napster and Kazaa (which were decentralised information-sharing networks). People shared music with each other instead of buying it from the source. A blockchain can theoretically distribute music to consumers or businesses as a non-copyable music file intended solely for the buyer in the contract. The film industry, too, could be transformed once again, by offering non-copyable films – at least theoretically.

Ownership – real estate, livestock, identity, voting rights

Changing the ownership of real estate, land or livestock via state-owned infrastructure run by a secure blockchain system may be a future way of achieving a more efficient government apparatus with fewer intermediaries, but with legally impeccable contracts, identifiable owners, high security and great cost-effectiveness. Being able to determine a property's historical renovations and ownership would make life easier for building contractors. In addition, a digitally issued form of identity with associated voting rights, social security numbers and other information – might be a way for the public sector to increase its efficiency and reduce its costs. For many countries around the world, the voting process is not always fully secure, so a focused blockchain could strengthen the legitimacy of government elections.

Other applications

The "internet of things" remains an apt term for explaining the digital interconnection of physical devices. Any relevant product, vehicle or tool can be connected by means of a network card. This can enable smoother transport of people and goods, extended service life and reduced maintenance of measuring instruments, or simply a seamless system for those players who choose to be included. Ensuring that an aircraft's components are actually certified is an ambition that some enterprise resource planners want to realise, for example a landing gear system that can announce by itself when it needs to be replaced. An industry-wide blockchain for drug development, in which every participant records its part of the information chain, would clearly enhance safety and security. Ensuring that a piece of meat is actually from the location stated by a grocery chain's sub-contractor could strengthen the food industry's quality assurance.

Is there potential to improve blockchains?

Creating a fully functional and safe blockchain requires the development of the cryptography (verification) that forms the basis for this technology. If its security is not flawless, major corporations will not dare to invest, regardless of whether the theoretical customer benefit seems lucrative. Digital viruses and unpredictable blockchain takeovers (requiring 51 percent of participants) are two major risks. Even quantum computers, which are expected to be extremely fast and smart, may become a threat. They may theoretically cause the mathematical cryptographic keys to be broken into – a further risk of using blockchains in the future.

There are new cryptographic mathematical models that are theoretically thousands of times faster as well as safer than blockchains, structured in a way that provides significantly more effective verification. Hashgraph is one example of a mathematically distributed database model whose scalability is theoretically higher, security is better and speed incredibly faster. Hashgraph and similar improvements in blockchain structure also have the potential to solve bitcoin's energy consumption problem. We are mentioning this specific cryptographic model by name to exemplify human innovation power and point out that blockchain probably needs further development work.

Conclusions

Human innovation is amazing. Over the past 70 years, energy impulses sent via transistors have evolved into wireless communication of millions of lines of information from Shanghai to San Francisco in an instant. The blockchain, which appears to be another stage in this digitisation process, has the potential to change a number of economic sectors from the inside out. Distributed blockchain platforms may well be one reason why thousands of employees will need to improve their skills over the next 20 years, in order not to become obsolete. So far, hundreds of start-up companies have been working on blockchain technology in an effort to reshape various economic sectors. Then again, blockchain is not the only technology based on distributed ledgers/databases, and the development of better distributed database systems cannot be ruled out. Better speed, security and energy consumption are vital and improvements will undoubtedly continue.

This theme article has not discussed whether blockchain can become an internationally used digital currency or not. Despite their name, cryptocurrencies do not need to correspond to any underlying value or be classified as currencies in a purely legal sense. So far, the largest such currency, bitcoin, has attracted more investment capital than capital intended to change owners. As a means of payment, bitcoin is both extremely expensive and slow, so (at present) it should instead be referred to as an asset rather than as a means of payment. Can the world's central banks transition to various national digital currencies based on blockchain technology? The likely answer is yes. Will there be independent international digital currencies? This will probably happen, but their value must be stable and security must be high. The technology is sensitive to various types of interruptions. So far, we have seen extreme volatility and heavy speculation. Bitcoin consumes titanic amounts of electricity worldwide and is thousands of times slower than credit card systems. It is neither a sustainable nor an effective solution. Let us follow blockchain-based currencies closely – if cryptocurrencies can solve their real problems, they may have their place in the world order.

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