

# CIO | VIEW

Quarterly December 2017

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## Outlook 2018

How much further can this bull run?





# Beware of excessive euphoria

An eventful year lies behind us. There have been plenty of political surprises. In France and Austria, extremely young heads of government were elected. The government in Germany is yet to be formed. People in China have even less say in their country's future than before. Meanwhile, many Catalans voted for independence, and the presidential election in the United States is being investigated by a special counsel. Oh, and the leaders of the United States and North Korea have been exchanging insults and military threats.

Markets have remained quite unfazed by all these developments. This time around, investor serenity cannot be solely attributed to the sedative effect of monetary policy. Globally robust economic data has helped as well. Sentiment among companies and consumers has reached long-term highs, and markets have been rewarding this. Shortly before the end of the year, the MSCI AC World Index has achieved a total return of 20%. Some technology giants have even managed to double their value in 2017. A \$100 billion takeover deal in the semiconductor industry is in the making. Bitcoin saw a ten-fold surge in value; an oil painting sold for \$450 million. Such events are often taken as signs of overheated markets and are sometimes claimed to be turning points. However, there have been quite a few of such "turning points" over the past couple of years. As yet, the naysayers have always been proven wrong by this long-lasting economic cycle.

We are very confident about the world economy as we head into next year. Does this mean that we expect markets to be just as strong as in 2017? No, it doesn't. First, we have to take a look at 2019 to establish our outlook for the end of 2018. Regardless of the inflation and growth environment at that time, central-bank policy is likely to have become more unpredictable by then, not least because of new leadership. Second, markets trade on changes in expectations. At the moment, company, consumer and investor expectations are very high. They can hardly get any higher. Moreover, many portfolios already have similar allocations skewed towards riskier assets. We therefore expect the danger of temporary setbacks to be greater in 2018 than in 2017. Based on our economic and market outlook, however, we would use setbacks as an entry opportunity.



Stefan Kreuzkamp  
Chief Investment Officer

*"We are confident about the world economy in the year to come. However, markets trade on expectations. And investors are already expecting a lot."*

Important terms are explained in our glossary. All opinions and claims are based upon data on 12/7/17 and may not come to pass. This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect. Deutsche Asset Management Investment GmbH

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## FOCUS

The rise in the equity market continues. What hurdles could cause the bulls to stumble? The backdrop remains benign for equities. However, high valuations underline the need for caution.

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## MACRO

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## FIXED INCOME

Corporate bonds and bonds from emerging markets remain appealing. For sovereign bonds, we prefer short maturities. Monetary policy should remain supportive, but less so than in previous years.

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## EQUITIES

Strong corporate earnings continue to support global stock markets. However, positive sentiment, funds almost fully invested and challenging valuations increase the scope for temporary setbacks.

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We are positive on quality-driven long/short equity strategies and see scope for further upside. Market-leading companies potentially offer a hedge to equity portfolios during market selloffs.

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## MULTI ASSET

Constructing a portfolio with the potential to generate positive returns requires taking more risk than in years gone by. For the next 12 months, we still see positive return potential, mainly in equities.

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## OUR FORECASTS

Global economic growth remains strong. Yields are likely to rise only slowly. Equities look well supported by solid company earnings, but may be vulnerable to temporary setbacks.

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Deutsche Asset Management is one of the world's leading investment-management organizations. We provide retail as well as institutional investors with advice to realize their investment goals.

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# When will the **bull market** end?

» The rise in the equity market continues.  
What hurdles could cause the bull to stumble? «

**S**tock markets around the globe are testing new highs. The bull market in U.S. equities started in 2009. With each new high, investors are asking themselves whether the bull market will simply continue. Is there a risk it could suddenly turn into a bear market? A glance at historical data helps answer this question. Let's take a closer look at the U.S. equity market, the biggest market and the one that sets the pace globally.

The rally in prices without any major correction is causing more and more investors to fear that the U.S. stock market could be vulnerable. Such concerns tend to crystalize around the price-to-earnings ratio (P/E ratio) of the S&P 500. This ratio signals that, on average, U.S. stocks have reached historically high valuations. Moreover, low volatility could be a sign that some market participants are acting too carelessly and ignoring warnings.

## Reasons for a bear market

The higher valuation and low volatility are definitely important warning signs. It is even more important, though, to take a look at the factors that have caused bear markets and thus resulted in markedly falling prices of 20 percent or more compared to the previous high. Since 1967, there have been five recessions in the United States which were accompanied by bears dominating the stock market. There was one case of a bear market without a recession.

What is striking is that bear markets lasted longer in a recessionary phase,

and that share-price losses were particularly high.<sup>1</sup> The S&P 500, for instance, fell by an average of 43.5% compared to the previous high during the five bear markets accompanied by a recession. The average duration of these price corrections was 21.6 months. During the only bear market without a recession of the past 50 years, the U.S. stock-market barometer dropped 33.1% below its previous high. The bear market lasted 5.7 months.<sup>2</sup>

The reason why bear markets perform worse when accompanied by a recession is quickly found. In terms of allocation, gross domestic product (GDP) primarily consists of income from labor and capital income such as interest rates and profits. Income from labor as well as interest income are rather rigid in the short to medium term. This is why corporate profits are often hit particularly hard in phases of decreasing GDP. This in turn results in significant declines in share prices.

What does this mean for the current situation? For shareholders, the good news is that U.S. leading indicators are not signaling a recession. Unless there are some nasty surprises – such as major policy mistakes –, the risk of recession appears low. However, this does not rule out the possibility of equity-market corrections.

## Slide without recession

In October 1987, markets crashed although there was no recession in sight. None followed either, thanks in part to the aggressive loosening of monetary policy by the US Federal

Reserve Board (the Fed) in response to the crash. This led to investigations into the reasons why. In the years leading up to the crash, the U.S. stock market experienced a rally, driven by decreasing inflation since the beginning of the 1980s as well as falling interest rates and faster economic growth. Furthermore, the U.S. government intensified deregulation and tax cuts as of 1981 (Reaganomics), and this additionally boosted growth.

From 1982 on, the stock market's P/E ratio rose disproportionately compared to the bond market's equivalent of the P/E ratio (100 divided by the yield of a U.S. Treasury Note). In 1987, the resulting valuation mismatch was well above the levels typically seen during the 1960s and 1970s. Accordingly, it is presumed that investors were suspecting an overvaluation of U.S. stocks relative to U.S. government bonds, and this eventually contributed to the selloff in October 1987. In retrospect, it can be said that the slump in share prices was a buying opportunity.

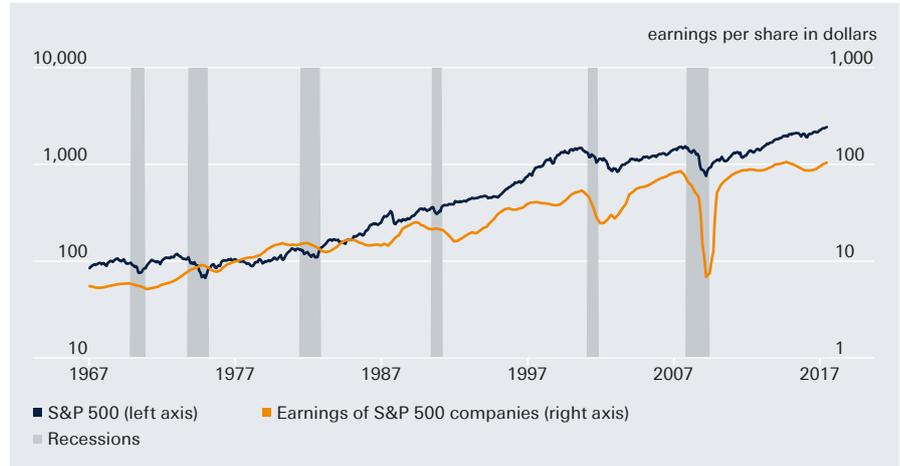
Do we have to reckon with a similar scenario next year as seen in 1987? Parallels certainly exist. As was the case then, we have recently experienced a long period of rising share prices. Another parallel is the increase in the stock market's P/E ratio. The essential difference, however, lies in the fact that at least compared to bonds, equities still appear rather cheap. In particular, the valuation indicator "stock-market P/E ratio divided by bond-market P/E ratio" is at historically low levels.

In the crash of 1987, automated trading also played a key role. With the help of nascent computer-based trading strategies, investors aimed to increase their chances of making a profit while limiting their losses. This intensified selling pressure during the correction phase. The importance of automated trading systems has grown further since then but so has the awareness of risk, at least in that respect.

With all the parallels to 1987 that can be identified, differences exist as well. Valuations are high across almost all asset classes. Compared to bonds, however, equities have a better return potential. As inflation will likely remain moderate next year and yields will presumably rise only slightly, we do not expect this situation to suddenly change. Moreover, corporate earnings should continue to grow at a healthy pace next year. This would indicate that time is not running out for the current bull market yet. But we need to stay alert.

### A glance at the S&P 500 and corporate earnings

Share prices and earnings tend to decline during recessions. The fall in earnings was particularly marked during the last two recessions.



Source: Robert Shiller, Yale University as of 11/10/17

### Relation between stock- and bond-market P/E ratio

We are seeing historically high stock-market P/E ratios, but even higher bond-market P/E ratios. Compared to bonds, equities remain appealing.



Source: Robert Shiller, Yale University as of 11/10/17

<sup>1</sup> Elena Holodny: It usually takes a recession to bring down the stock market. Business Insider, 8/25/15

<sup>2</sup> Edward Yardeni: Stock Market Briefing – S&P 500 Bull & Bear Market Tables, 8/11/17

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# What could possibly go wrong?

» As the recovery enters its ninth year, inflation remains largely dormant. It nevertheless needs to be watched closely. «



Johannes Müller  
Head of Macro Research

## IN A NUTSHELL

Global economic growth has been strong in 2017, and surprisingly widespread.

Inflation is slowly emerging as a key risk surrounding our upbeat base case.

"Low and slow" does not equal "never ever."

2017 has been another year of strong and surprisingly widespread economic growth. Unusually, all major and most minor economies are currently growing. For the Eurozone in particular, we were able to continuously upgrade our forecasts – the latest one largely reflects revisions in the official growth estimates for earlier quarters. Growth in Japan has accelerated. In the United States, it continues to look well supported. China, that other source of perennial growth, is proving, well, perennial.

How long can the good times last? Throughout the year gone by, we have written extensively about political and geopolitical risks. As we look ahead, I would like to focus on a perhaps less obvious conundrum underpinning the current cycle. Inflation has remained surprisingly dormant across much of the developed world and the United States in particular. This is all the more remarkable, given the continuing strength of the U.S. labor market. If you take an average of the last six months, seasonally adjusted unemployment is at 4.3%, below levels last seen in 2007. Usually, you would expect wages to have risen well before this point. Rising wages should in turn have forced companies to raise their prices – contributing to further wage growth.

One increasingly popular interpretation is that the link between inflation and unemployment, depicted by the Phillips curve, is permanently broken. Three reasons are frequently advanced: demographics, technolog-

ical change and globalization. None of them is quite convincing, least of all in terms of the timing of the most recent Phillips curve flattening. For example, it is commonly thought that an older population puts downside pressure on inflation, as the elderly tend to spend less. However, older people also tend to demand more labor-intensive services, such as health and home care, which is likely to lead to upward wage pressure in these areas. Indeed, a recent empirical study of our colleagues at DB Research showed that in the United States, regions with a higher percentage of older people tended to see more, rather than less inflation. Decomposing the labor force into age groups also reveals that the slow growth in aggregate measures of average compensation is partly due to higher-wage baby boomers retiring. If you look only at hourly earnings of U.S. workers aged 25-54, the Phillips curve appears very much alive.

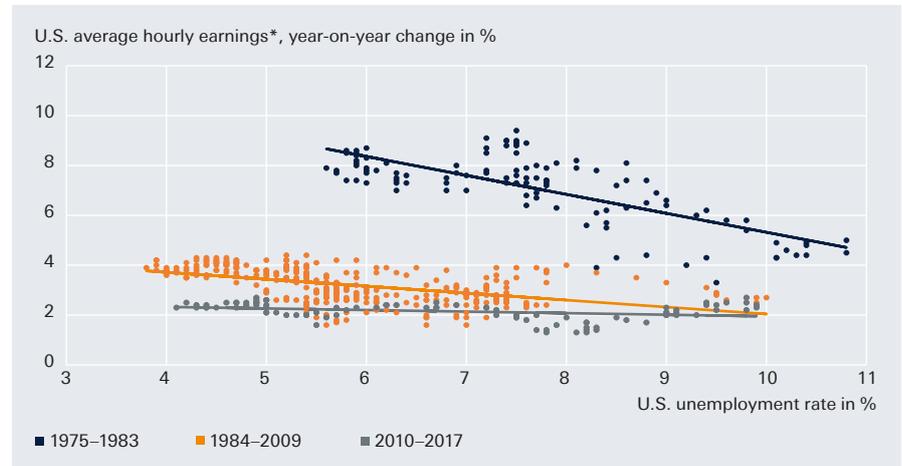
Similarly, it is often argued that the massive investment in technology will continue to be deflationary. Intuitively, that too makes sense. For example, more and more of retail revenues is moving online. This allows consumers to compare prices with the speed of a mouse click, perhaps limiting the scope for price increases in any goods sold both online and in stores. Once again, however, there is no reason to think that this will necessarily always be so. At some point, online retailers might be sufficiently dominant to start pushing up prices. Finally, global competition might at times keep a lid on wages and prices,

but there is no reason to think that this should be a one-way street. Just because globalization has contributed to moderate inflation in the past does not mean it always will. Not so long ago, some of the same people now doubting the link between inflation and unemployment were similarly unconvinced that currency devaluation would trigger inflation. Since then, inflation in the United Kingdom following the Brexit referendum and the fall in the pound has proven the old economic textbooks right.

All this underscores that you would need to investigate why and how exactly causal links might be changing, rather than dismissing familiar economic reasoning altogether. Our upbeat base case rests on the notion of inflation inertia, the idea that low inflation in the recent past tends to cause low wage demands. Adjustment to better economic surroundings and thus higher inflation takes time. A key risk to this is that we could see a sudden upward reversal in inflation once unemployment falls too much, forcing central banks to tighten policy very quickly. It is equally possible that disinflationary pressures of the sort we described above might prove stronger for longer. Either way, "low and slow" does not equal "never ever," whether you are talking about inflation or tightening monetary policy.

### A flattening Phillips curve?

The Phillips curve measures the supposed trade-off between cyclical unemployment and inflation. In recent years, it appears to have gotten flatter.



Sources: Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/9/17  
\* Private sector

### A Brexit-induced inflation shock

Following the Brexit referendum, the pound sharply devalued, resulting in higher prices for imported goods and also higher headline inflation.



Sources: Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/9/17

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# Don't write off bonds

» Corporate and emerging-market bonds should continue to provide solid returns in 2018. We expect slightly rising interest rates. «



Jörn Wasmund  
Head of Fixed Income/Cash

## IN A NUTSHELL

With strong global growth, we expect inflation and interest rates to rise in 2018, but only gradually.

Central banks should continue to provide support, but this support is likely to be scaled back considerably in 2018.

We remain positive for corporate and emerging-market bonds. On the government-bond market, we prefer shorter maturities.

Looking back at 2017 evokes a sense of déjà vu. Despite surprisingly strong economic figures, inflation once again surprised to the downside. The inflation rate in Europe of 1.5% is still some way below the European Central Bank's (ECB's) target of 2.0%. This raises the question as to whether a Euro-zone rate hike can really be expected in 2018. Yields on 10-year German Bunds moved sideways in 2017, while those on U.S. Treasuries are likely to end the year at lower levels than back in January. However, the skeptics also have to admit that yields in both countries in 2017 clearly moved away from their lows reached in mid-2016. We believe this trend will continue in 2018, based on our economic forecasts and expectations for monetary policies. We expect global growth to accelerate further to 3.8% in 2018. As we also expect slightly higher inflation figures in many parts of the world, we think that monetary policy will be gradually tightened.

We expect one interest-rate hike in the United States in December this year and two more in 2018. Furthermore, the Fed is likely to reduce its balance sheet by about 7%. Meanwhile, it is no longer the only central bank among the G7 countries that has initiated the interest-rate hiking cycle. Its counterparts in Canada and the United Kingdom have already joined in. Meanwhile, the ECB has announced a reduction of its bond purchases from the current 60 to 30 billion euros starting in January 2018, followed by another – perhaps final –

cut in September. We do not expect any interest-rate increases before 2019. However, investors may well start to fret about that prospect from mid-2018 onwards. Another point of concern will be the upcoming replacement of three of the six ECB Executive Board members, including Mario Draghi. Together with unusually high staff turnover within the Fed, this leaves plenty of scope for communication mishaps, if not downright surprises, in global monetary policy. The timing is slightly unfortunate: by the end of 2019, markets will most probably have to deal with a net withdrawal of liquidity by central banks for the first time since the financial crisis.

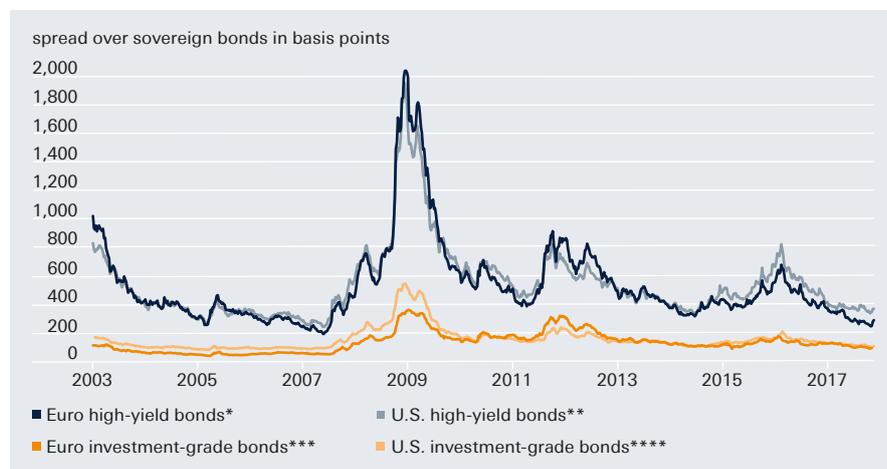
For our forecasts, however, all this results in surprisingly little need for adjustments. We enter the new year with optimism, but we remain vigilant. To put it briefly, we feel most comfortable with corporate bonds and emerging-market bonds. Government bonds from European core countries are likely to experience a slight yield increase. We expect the yield for 10-year Bunds to reach 0.80% by the end of 2018. Due to the related price losses, this would result in a negative total yield. We see the yield for U.S. Treasuries at 2.60%, which would mean a total return close to zero. In the government-bond segment, we therefore prefer bonds with shorter maturities. However, a balanced portfolio should still include longer-term bonds, because they provide better protection in the event of a surprising decline in yields. We

expect the U.S. yield curve to flatten further. Growth skeptics are likely to monitor this development closely. So far, every recession in the United States has been preceded by an inverted yield curve. However, there have also been inverted yield curves that were not immediately followed by a recession. As central banks are likely to have significantly distorted yield curves, we think the flattening this time around has more to do with lingering concerns about long-term growth prospects than bond markets starting to price in a U.S. recession.

In the corporate-bond segment, we note that some sectors in the United States are already reporting higher debt ratios than in 2008. The interest coverage ratio (earnings before interest, taxes, depreciation and amortization, divided by a company's interest expenses) of the S&P 500 has been on a downward path since 2015. However, it remains significantly higher than in 2009. The situation for smaller companies (Russell 3000) is not as favorable, but we do not think there is cause for immediate concern. Based on the solid economic environment, we forecast only low default rates in 2018. Corporate bonds are not expected to benefit as much from narrowing credit spreads as in previous years, but some scope still remains. We see a higher return potential for U.S. corporate bonds than for their European counterparts.

## Corporate bonds: focus on coupons in 2018

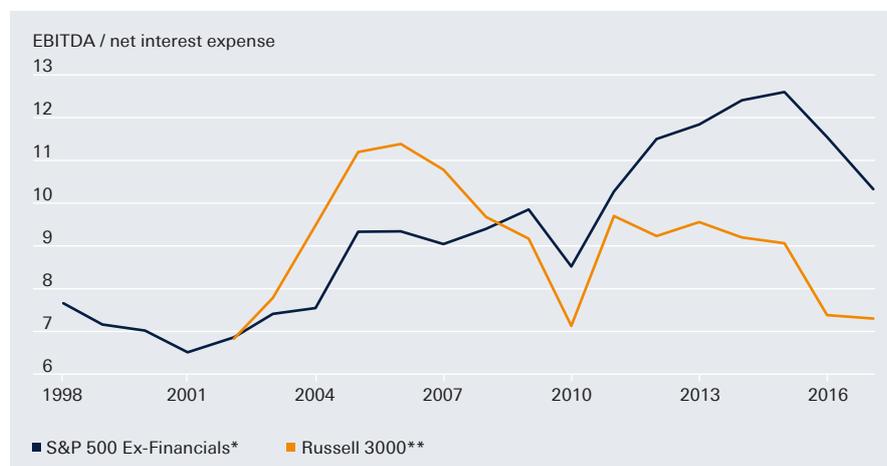
Although credit spreads have already narrowed considerably, they might decrease even further in 2018.



Sources: Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/22/17  
 \* BofA Merrill Lynch Euro Non-Financial High Yield Constrained Index  
 \*\* Barclays U.S. Corporate High Yield Index  
 \*\*\* iBoxx Euro Corporate Index  
 \*\*\*\* Barclays U.S. Aggregate Bond Index

## Interest coverage ratio in big and small U.S. firms

We do not believe U.S. companies in general will have problems servicing their debt. However, we are keeping a close eye on individual sectors.



Sources: FactSet Research Systems Inc., Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/22/17  
 \* Using average EBITDA  
 \*\* Excluding financial and real-estate companies, using median EBITDA

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# Less euro weakness ahead

» We are trimming our forecast for the euro to weaken against the dollar.  
On a 12-month basis, the euro's downside now looks limited. «

## IN A NUTSHELL

The U.S. dollar had its weakest start into the year since 1986, but has rebounded lately.

We expect discussions over the ECB's first rate hike to intensify towards the end of 2018. This should eventually support the euro.

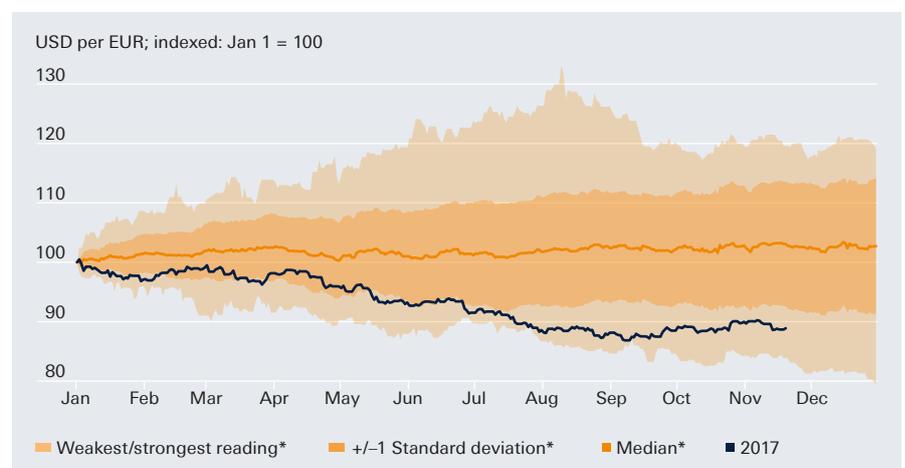
Against this backdrop, we lift our 12-month EUR/USD forecast from 1.10 to 1.15.

The U.S. dollar had a dismal start into the year. Market positioning had been tilted towards a stronger dollar. This contributed to a decline of the greenback against other major currencies. It got worse after another weak first-quarter performance of the U.S. economy and ongoing political turmoil in Washington. Simultaneously, Eurozone growth data came in surprisingly strong. Coupled with a smooth win by Emmanuel Macron in the French presidential elections, this boosted the euro. In fact, looking at late August exchange rates, it was the dollar's weakest start into the year since 1986. We argued that this selloff was overdone and saw a good chance for a rebound. To an extent, this is exactly what happened.

Now, however, shifting our forecast horizon out by three months to December 2018, we have to consider the state of the world's markets in late 2018. By then, we expect the ECB to be largely done with its asset-purchasing program. Markets will be trying to evaluate the upcoming changes at the top of the ECB (in 2019, the terms of three board members will expire, with the president being the most important one). In such an environment, we expect discussions about the likely timing of the first rate hike in the Eurozone to intensify. Hence, while keeping most other currency pairs unchanged, we are lifting our euro exchange-rate forecasts to 1.15 vs. the dollar and 132 vs. the yen.

## An unusually weak greenback

By historical standards, 2017 has been an unusually bad year for the dollar.



Source: Bloomberg Finance L.P. as of 11/20/17

\* The underlying sample consists of daily USD/EUR exchange-rate values between 1974 and 2016.

# Constructive but vigilant

» The global upturn is likely to continue to drive corporate earnings in 2018. Equities still have room, but risks are growing. «

**G**lobal synchronized expansion. Those were the words we heard the most at an investor conference in the United States at the beginning of November. Some 250 industrial firms were making their case. The atmosphere was so good that it could easily make you nervous. This aptly sums up the starting point for our 2018 stock-market outlook. Businesses are confident, order books are full, and orders are coming in from all over the world. Developed as well as emerging markets are surprising with positive economic data. Seldom in recent history have there been so few countries in recession as this year. According to consensus estimates, 2017 corporate earnings in the United States, Europe, the emerging markets, Japan and China are likely to grow in lockstep, with rates in the double digits. It would be the first time in ten years that we see such synchronized earnings growth.

These figures are only outstripped by various sentiment indicators. Sentiment among consumers in Europe and the United States is better than it has been for 17 years. According to the ifo Institute, German company leaders' assessment of the current situation has not been as positive since the country's reunification in 1990. Sentiment among U.S. purchasing managers was only significantly better in the mid-1980s. And what do investors make of it all? The data is somewhat confusing. There

is no evidence of negative sentiment in any survey. The estimates range from 'average' to 'as high as last seen in 1985' (U.S. Advisors' Sentiment Report), but positive sentiment definitely prevails. The liquidity ratios<sup>1</sup> of (global) institutional funds are only just below their ten-year average, but they have fallen markedly within a year. Fund managers are taking on above-average risks at the moment, for the first time since 2000.<sup>2</sup> Meanwhile, the equity ratio in international hedge funds has reached its highest level in eleven years.<sup>3</sup> The cash ratio in traditional European equity funds is 1.3% at present.<sup>4</sup> This is more than twice as much as at the 2007 trough but still significantly below the ten-year average of about two percent. And yet, professional investors claim that they are not underestimating the risks for 2018. In short: There are often huge gaps between what fund managers say and what their portfolio looks like. What do the sentiment indicators, share prices and valuations tell us here? Compared to historic values, it can hardly be said that investors are lacking confidence at present.

Admittedly, it is very easy to find a fly in the ointment when it comes to sentiment indicators. With various sentiment indicators among investors, companies or consumers all open to interpretation, it is anybody's guess whether stock markets have already gotten ahead of reality. Not all signs in



Thomas Schüßler  
Co-Head of Equities



Andre Köttner  
Co-Head of Equities

## IN A NUTSHELL

We expect mid-single-digit returns for equities in 2018, primarily driven by cyclical sectors.

However, positive sentiment, funds almost fully invested and challenging valuations increase the scope for disappointments.

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capital markets are pointing to euphoria either. Flat yield curves suggest some skepticism towards growth. This takes us to the issue of interest rates. Their importance may grow in the coming quarters, for example when it comes to the leverage ratio, which has reached record levels in U.S. non-financial companies again – both, in absolute terms and relative to GDP. In some sectors of the S&P 500, the net leverage ratio is significantly higher than in 2007. When looking at the interest coverage ratio, i.e. the ability to pay interest on outstanding debt from operating income, the situation is less worrying. However, concerns will grow once real interest rates start to rise. For quite some time, companies with weak balance sheets have been penalized in stock markets.

### Some oxygen left

Despite some deterioration in corporate balance sheets, we are generally optimistic for 2018. This is primarily based on the sound economic situation. We expect global economic growth to accelerate to 3.8% in 2018. Added to this, we expect interest rates and volatility to remain low, but valuations to stay above the historical average. In this environment, a further expansion in valuation multiples appears unlikely. Instead, we expect slightly decreasing P/E ratios. The fact that we still expect total returns to reach high single digits in almost all markets is based mainly on two considerations: first, increasing corporate earnings – we expect, on average, high-single-digit growth rates in developed markets and rates of 15% in emerging markets; and, second, a

dividend yield of about 2% (United States, Japan) to about 4% (Europe).

On a sector level, our approach remains procyclical. We continue to expect the main impetus to come from the technology sector again in 2018. Tech companies have already presented impressive figures this year. Even some enterprises with a double-digit billion-dollar turnover have seen increases by more than 50%. The drivers of this strong demand for technology are likely to persist in 2018. However, the good performance this year might make this sector particularly vulnerable to market downturns next year. The financial sector could become the second strong driver. The United States offers looser regulation, higher interest rates and rising distributions. In Europe, consolidation is advancing and restructuring efforts are likely to start paying off.

Although we are generally optimistic, we do not expect similar returns and similarly low volatility in the stock markets as in 2017. Just looking at the length of the rally might make many investors nervous. On December 13, the S&P 500 could beat its record of 532 days without a setback of at least five percent. This run could be stopped by surprising inflation figures, disappointing growth rates from China or the collapse of the U.S. tax-reform plans. After the current phase of high risk appetite, investors could abruptly unwind risk positions in 2018. Based on our overall benign economic outlook, we would see setbacks as an entry opportunity, however.

### Company/sector contribution to S&P 500 performance

The S&P 500 has been more clearly influenced by the top ten (irrespective of sector) before, but technology has never been more dominant than in 2017.



Source: Bloomberg Finance L.P. as of 11/16/17

\* Up to and including November 16

\*\* Only stocks with a positive annual rate of change were considered

\*\*\* Refers to the 10 companies with the strongest market-value increase in the respective year

\*\*\*\* S&P 500 Information Technology Index

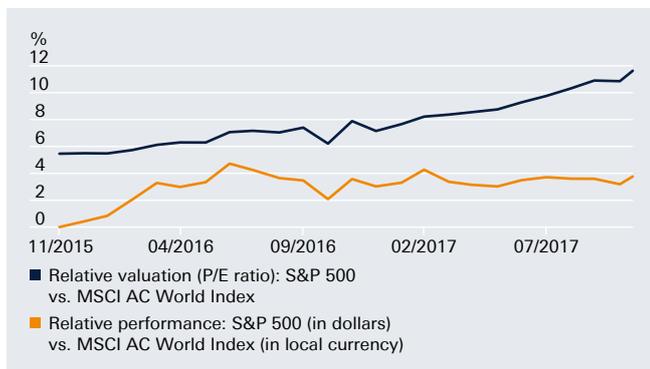
<sup>1,2,3</sup> BofA Merrill Lynch Global Fund Manager Survey dated 11/14/17; Bank of America Corporation

<sup>4</sup> Morgan Stanley Research, Strategy Data Gallery as of 11/10/17

# Valuations overview

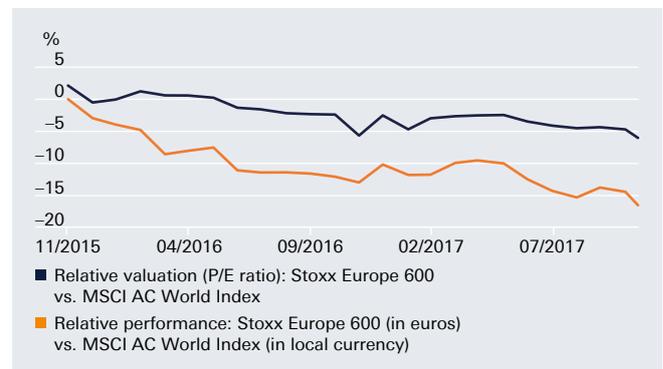
## U.S. equities

For the S&P 500, we still expect earnings-per-share (EPS) growth of 11% this year and 7% next year. Against this backdrop, the scope for further share-price gains looks limited. A major impetus from the planned tax reform appears increasingly unlikely. Not much is to be expected from the Trump administration in terms of infrastructure spending either. Our 2018 year-end price target for the index is 2,750 points.



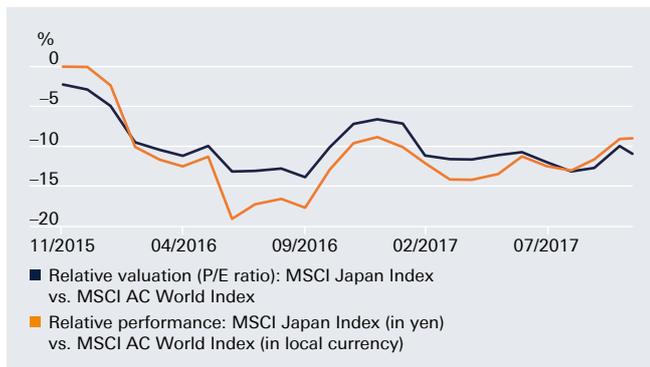
## European equities

Europe's economies are performing surprisingly well. Based on third-quarter figures, the Eurozone is set to achieve its highest growth rate since 2007. And, while sentiment indicators are already at multi-year highs, earnings expectations have barely risen recently. Overall, we remain optimistic for the Eurozone. We have lowered our tactical view for Germany to neutral but see potential for the Dax of up to 14,100 points by the end of 2018.



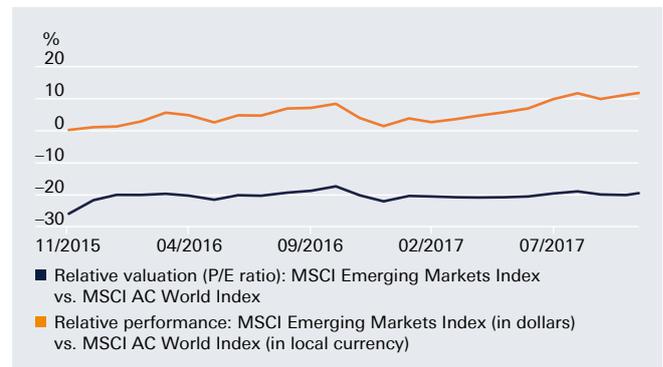
## Japanese equities

The Japanese market has recently performed positively but is lagging behind Europe and the United States for the year as a whole. Abe's re-election has enhanced confidence in loose monetary policies staying in place. Meanwhile, corporate governance continues to improve. Corporate earnings in the third quarter grew by one-fifth, and earnings revisions are among the highest in developed markets. Japanese equities remain one of our favorites.



## Emerging-market equities

The economic environment in emerging markets remains robust. It is especially appealing in Asia, where we continue to see both solid growth and low inflation. Neither the recovery of the dollar nor U.S. interest-rate hikes have prevented the region from performing better than the MSCI World. Unless the situation in North Korea escalates, we expect a similar result for 2018 – but across a wider range of sectors than in the year to date.



Sources: FactSet Research Systems Inc., Deutsche Asset Management Investment GmbH as of 11/16/17

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# Quality merchandise

» Some equity long/short strategies still offer upside while providing "flight-to-quality" downside protection «



Tim Gascoigne  
Head of Hedge Fund Advisory

## IN A NUTSHELL

We are positive on quality-driven long/short equity strategies and see scope for further upside.

High-quality, market-leading companies can act as a hedge to equity portfolios during periods of market selloffs.

With quality-driven investments, as in other areas of the hedge-fund universe, diligent strategy selection is paramount.

We continuously look for ways either to increase our portfolios' returns without adding risk or to reduce risk without having to give up returns. According to yesteryear's conventional wisdom of market efficiency, this should be impossible. This year's winner of the Nobel prize in economics, Richard Thaler, begs to differ and has spent his professional career identifying and trying to explain various phenomena we see in practice that should not exist according to economic theory. These are commonly known as "anomalies" and can allow hedge funds to generate returns uncorrelated to broader markets.

We recently turned our attention to the so-called "quality anomaly" in equities: that is, the tendency of high-quality stocks to exhibit high risk-adjusted returns, beating the market over time. This is a puzzle, as this effect should eventually have been arbitrated away. A living proof of its longevity is the legendary investor Warren Buffet, who famously likes buying quality merchandise when it is marked down, whether it's "socks or stocks." Of course, judging the quality of a sock is somewhat easier. For stocks, we use both an intuitive and a practical definition of quality. At the risk of sounding tautological, a high-quality company is simply consistently better than most other companies. That could mean a superior financial performance, better management and/or a more shareholder-friendly attitude than its peers. Metrics commonly used to measure quality include return on invested

capital, profitability and leverage as well as payout- and cash-flow-related measures of efficiency.

High-quality stocks have indeed generated significant excess returns over time. These returns can be achieved by buying high-quality companies and shorting the market and/or shorting low-quality companies. In both cases, excess returns are positive over time.<sup>1</sup> What could explain this anomaly? Perhaps investors prefer lower-quality, "lottery-ticket" types of stocks rather than "boring," predictable high-quality stocks. If so, this would explain why the quality anomaly appears contingent on the broader market sentiment. The strategy generally underperforms in highly "risk-seeking" environments, which by definition skew investors' preferences to more uncertain investments. It instead performs well during periods of market selloffs: as an example, a strategy of long quality stocks and short "junk" stocks would have generated a very strong positive performance in 2008.

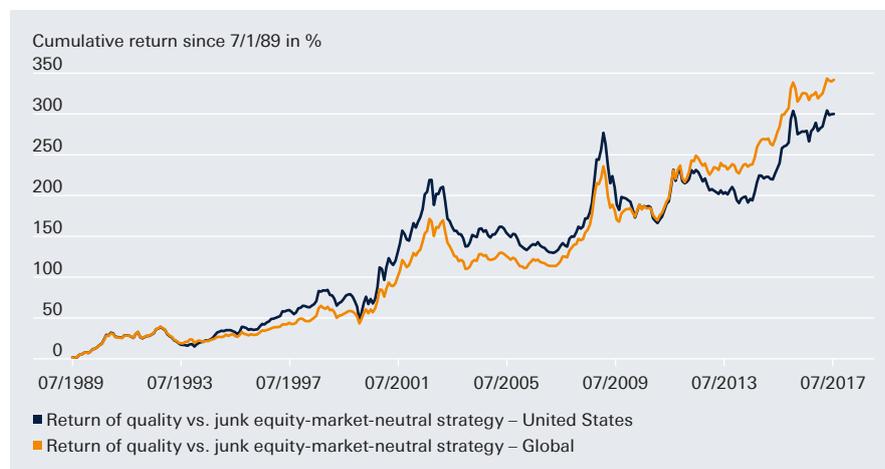
In recent months, the equity-market rally has been driven primarily by stocks that happen to be high-quality companies: they are highly cash-generative, they have very profitable business models and are scoring well on most quality metrics. This suggests that the recent equity rally is different from previous ones because of its quality bias. In the late 1990s, equity markets were driven by technology companies that were largely untested business models. Back then, quality-based investment strategies

underperformed the broader market. In the 2000s, the market rose independently from quality elements, hence quality-based investment strategies would have been roughly flat. Since the global financial crisis, such strategies have moved through periods of flat performance when equity markets were rallying and strong returns in "risk-off" periods.

We favor an overweight to quality-driven investment strategies in the medium term. We see signs that after a long-lasting equity bull run, investors are "rotating into quality." We think that high-quality, market-leading companies should continue to be the most likely candidates to deliver earnings growth and therefore still offer upside potential while providing a level of "flight-to-quality" downside protection. To be sure, today's high-quality businesses may not maintain their status forever. We think that quantitative measures of quality play an important role, combined with qualitative assessments by experienced investors. With quality-driven investments, as in other areas of the hedge-fund universe, diligent strategy selection is paramount.

### Long-term returns from favoring quality stocks

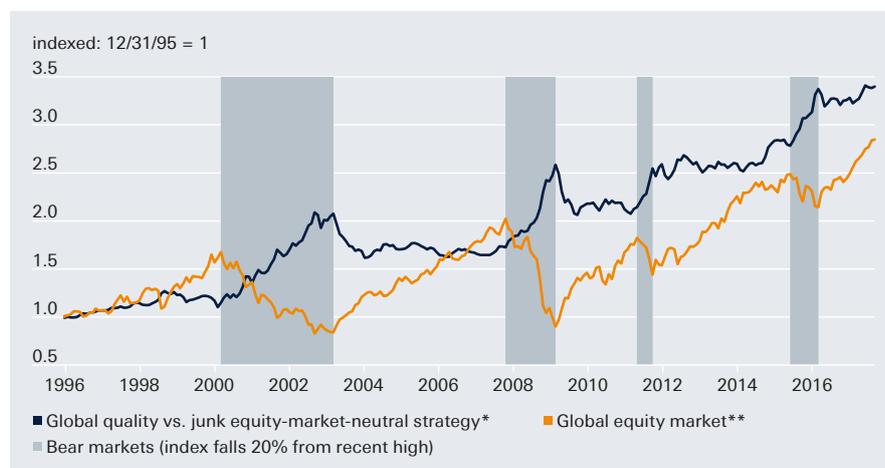
The quality anomaly has generated significant excess returns over time by buying high-quality companies and selling low-quality ones.



Source: AQR Capital Management, LLC as of 8/31/17

### How a quality-based strategy has outperformed

The strategy performed well in "risk-off" and "flight-to-quality" scenarios. This was partially reversed when markets rebounded.



Source: AQR Capital Management, LLC as of 8/31/17

\* Returns in excess of risk-free rate

\*\* Excess-return index including all global stocks weighted by market capitalization

<sup>1</sup> See Asness, Clifford, Frazzini, Andrea and Pedersen, Lasse (2013) "Quality Minus Junk", Working paper, available online: [http://www.econ.yale.edu/~shiller/behfin/2013\\_04-10/asness-frazzini-pedersen.pdf](http://www.econ.yale.edu/~shiller/behfin/2013_04-10/asness-frazzini-pedersen.pdf).

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# Equities, what else?

» We have positioned ourselves for late cycle. This means favoring equities in multi-asset strategies and portfolios. «



Christian Hille  
Head of Multi Asset

## IN A NUTSHELL

Constructing a portfolio with the potential to generate positive returns requires taking more risk than in years gone by.

We continue to think it is worth taking risk, while ensuring that risks are managed properly.

For the next 12 months, we still see positive return potential, mainly in equities. Low volatility could last even longer.

In modern portfolio theory, a widely used concept is the efficient frontier. It comes in handy, when thinking about the current market environment. The efficient frontier is constructed by plotting all assets or combinations of assets on a chart. For each asset, the chart shows the expected return and associated risk (as measured by the variability in the resulting portfolio's return). From this, you can easily identify the assets or portfolios (taking correlations into account), which offer the highest expected return for any given level of risk. In theory, assuming there are no other options, these are the portfolios any rational investor would want to hold.

Now imagine that there is also a risk-free asset, guaranteeing a low, but certain return. The new efficient frontier becomes a straight line, stretching from the risk-free rate to the point of tangency<sup>1</sup> with the portfolio set. Through quantitative easing (QE), central banks have pushed down yields on long-term government bonds, commonly used as a proxy for a country's risk-free rate. In much of the Eurozone, these rates remain close to or even below zero. Partly as a result, efficient frontiers have been lower but steeper compared to history for globally diversified multi-asset portfolios, and we expect this to persist. Therefore, constructing a portfolio with the potential to generate positive returns requires taking more risk today than in years gone by.

### Still worth taking risk

For now, we think it is still worth tak-

ing risk. We mainly do so through equities. At the same time, it is important to monitor overall portfolio risk and ensure that risks are managed properly. Equity valuations are stretched but still not too high in our opinion to justify further gains. After all, earnings are growing solidly. There is hardly any alternative to equities to generate reasonable returns, not least as they are a lot more liquid than high-yield credit, for example. On the fixed-income side, we expect rates to stay rather low, with the yield curve flattening. This reflects our view that the market has entered a late-cycle phase. Within fixed income, we prefer emerging-market over developed-market debt in general and over high yield in particular. Debt levels are going up, especially in the United States, but they are also underpinned by strong earnings. As for gold, we do not expect massive upticks in real rates, which would raise the opportunity costs of the precious metal. Gold remains one of the preferred assets to diversify multi-asset portfolios against event risks.

### Enjoy it while it lasts

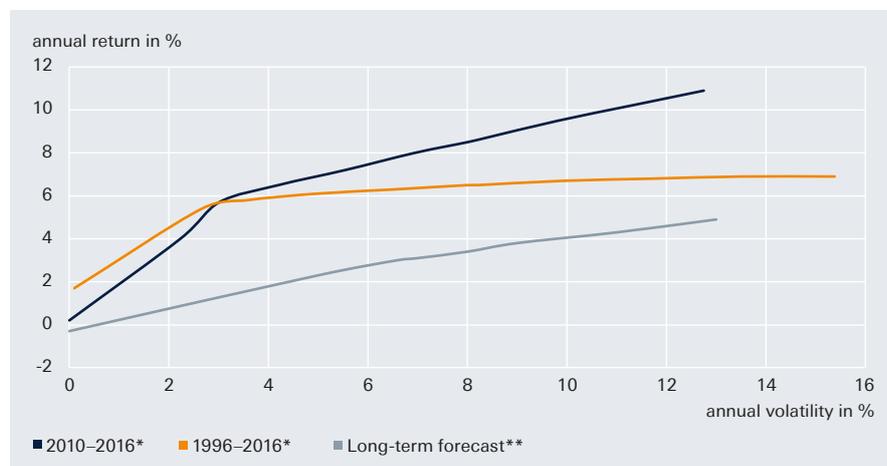
Our positioning is predicated on the benign macro-economic environment we expect for the next 12 months. Global growth has lately become very broad-based. Meanwhile, inflation remains dormant in most countries. This should continue to limit pressures on central banks to raise interest rates too quickly. QE looks set to peak towards the end of 2018, however. That might also be a turning point in the cycle given the impact monetary policy has had on

asset prices in recent years. Investors' demand for both capital growth and income from coupons and dividends is likely to remain high as we expect monetary policy to remain loose for the time being.

Which brings me back to the efficient frontier. Due to QE, a lot of investors have been forced to take more risk than they might have previously felt comfortable with. In anticipation of less accommodative monetary policy, we might eventually move from a low- to a medium-volatility regime. Risk measures relying on volatility numbers for the last couple of years might prove misleading. Notably, they are likely to understate the potential impact from events we currently assign low probabilities to. Such events include a recession suddenly materializing or a surprising increase in inflation, perhaps accompanied by some kind of policy mistake by central banks. We could also see increasing divergence of central-bank policy between the Fed and the ECB with respective implications for core interest rates as well as the EUR/USD exchange rate. Sharp policy shifts or geopolitical escalations could lead to temporarily higher volatility. For now, such a temporary uptick in volatility is unlikely to be a game changer. All told, we expect the currently low volatility to last longer, potentially for another 12 to 24 months.

### Lower returns ahead

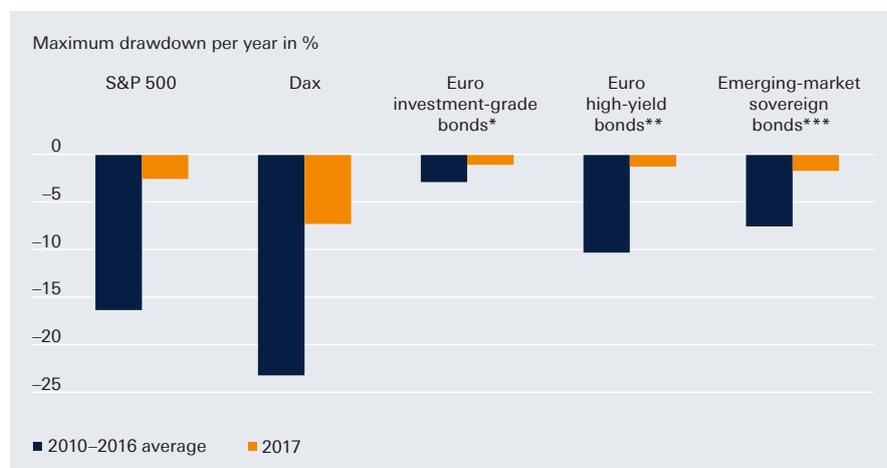
We expect efficient frontiers to be lower but steeper for globally diversified multi-asset portfolios than has historically been the case.



Sources: Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/2017  
 \* Performance based on MSCI World (in euros), J.P. Morgan Global Bond Index Germany (until 10/2/00) and Barclays Global Aggregate Bond Index Hedged EUR (from 10/2/00)  
 \*\* Forecast based on comprehensive asset-class data set of the Deutsche AM Multi Asset Group

### 2017 has been an unusual year

Across a wide range of asset classes, maximum drawdowns (the fall from peak to trough) have lately been well below historic averages.



Sources: Bloomberg Finance L.P., Deutsche Asset Management Investment GmbH as of 11/2017  
 \* Barclays Euro Aggregate Corporate TR Index Unhedged EUR  
 \*\* Barclays Pan-European High Yield (Euro) TR Index Unhedged EUR  
 \*\*\* J.P. Morgan EMBI Global Diversified Composite

<sup>1</sup> Here, the point of tangency is the point on the efficient frontier where a straight line connecting the risk-free interest rate (on the y axis) with the efficient frontier has the same slope as the efficient frontier.

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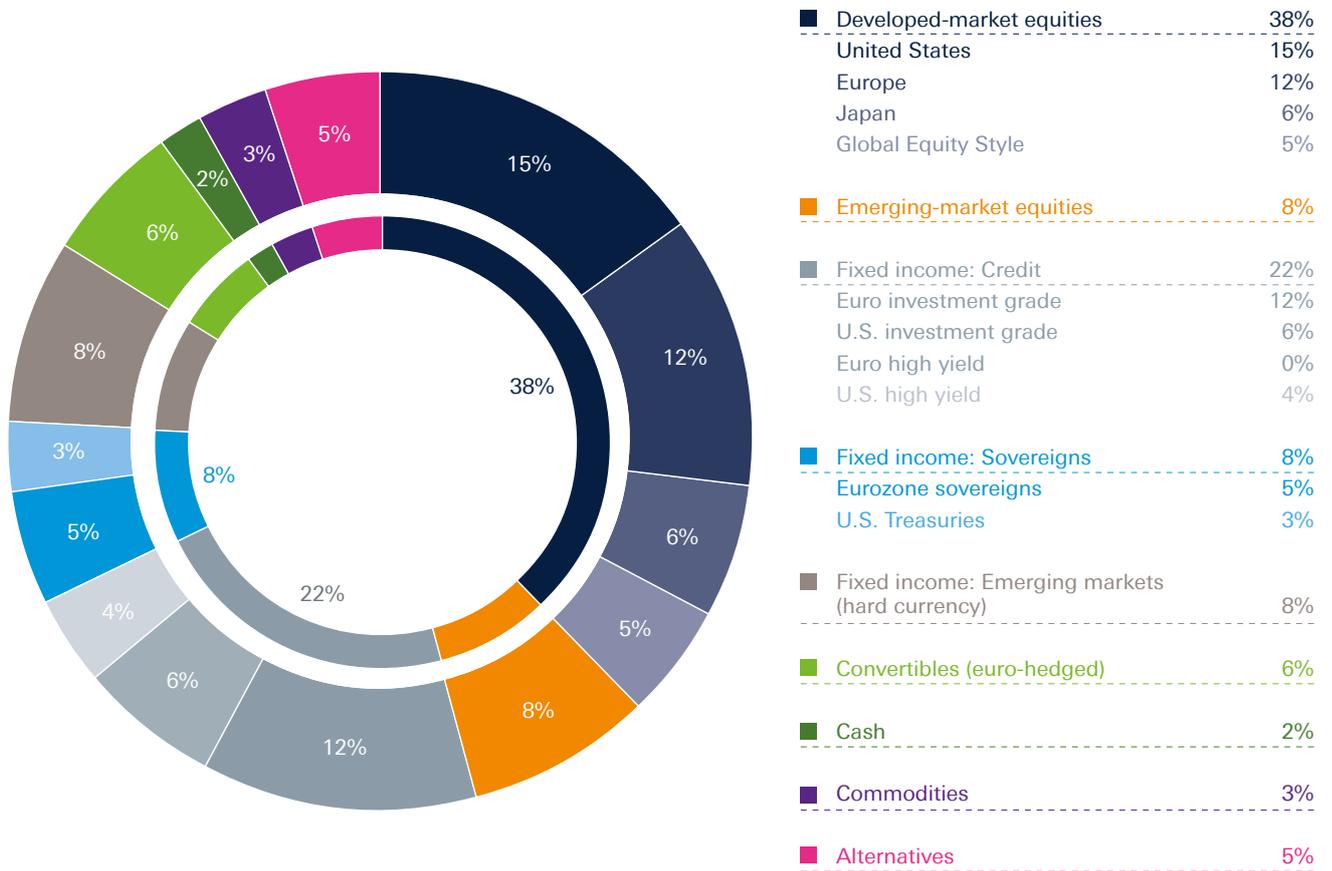
# Taking risks the right way

» Diversification is getting ever harder in traditional asset classes. «

**E**quities remain our preferred choice among higher-risk asset classes. Tactically, we note that sentiment and positioning have become more bullish. This suggests scope for setbacks, but fundamentals remain solid. We generally prefer regional equity exposure outside

the United States, due to lower valuations and better earnings momentum elsewhere, notably in Asian emerging markets. We retained exposure to commodities sensitive to global growth, believing they have the potential to rise further. Developed-market credit, in particular high

yield, looks increasingly vulnerable to any market correction. Overall, it is hard to find diversification in traditional asset classes these days. Hence, we built up exposure in diversified alternative strategies.



Source: Multi Asset Group, Deutsche Asset Management Investment GmbH as of 11/21/17

The chart shows how we would currently design a balanced, euro-denominated portfolio for a European investor taking global exposure. This allocation may not be suitable for all investors. Alternatives are not suitable for all clients.

# Mostly sunny

» Indicators continue to signal an excellent environment for capital markets. «

For months, indicators have signaled a very positive market environment, and this is due mainly to two factors: first, investors appear to have gotten used to geopolitical risks and have tended to shrug them off; and second, ever larger swaths of the global economy are currently growing in sync. This has further strengthened capital-market participants' confidence. Consequently, the macro indicator has climbed considerably again.

However, continuing positive economic data had already boosted analysts' expectations before the summer. This increased the potential for disappointment, and the surprise indicator temporarily slipped into negative territory. Since then, expectations have moved back in line with reality. As a result, there have been more positive surprises. The surprise indicator has gone up continuously since the end of June. The sub-indicator for Europe even marked a new all-time high in October. The risk indicator reflects investors' most recent extremely high risk appetite; in October, it reached its highest level since 2012. This was accompanied by a mainly positive stock-market performance. All three multi-asset indicators are currently in positive territory, as they have mostly been thus far this year.

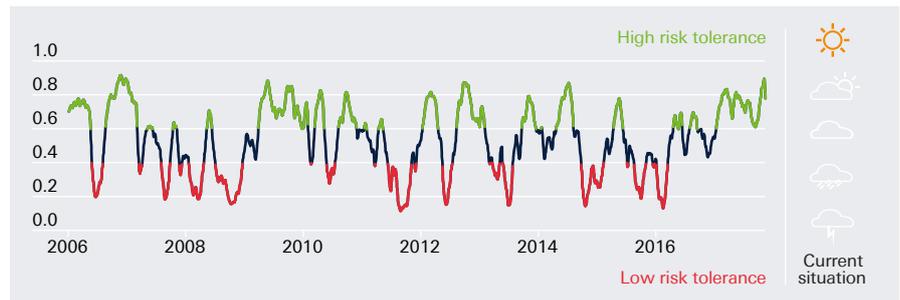
## Macro indicator

Condenses a wide range of economic data



## Risk indicator

Reflects investors' current level of risk tolerance in financial markets



## Surprise indicator

Tracks economic data relative to consensus expectations



Source: Deutsche Asset Management Investment GmbH as of 11/15/17

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## Macro | Solid growth ahead

### GDP growth (in %, year-on-year)

Region	2017F		2018F
United States <sup>1</sup>	2.3	→	2.3
Eurozone	2.3	↘	2.0
United Kingdom	1.5	↘	1.3
Japan	1.5	→	1.5
China	6.7	↘	6.5
World	3.7	↗	3.8

### Fiscal deficit (in % of GDP)

Region	2017F		2018F
United States	3.5	→	3.5
Eurozone	1.4	↘	1.3
United Kingdom	3.3	↗	3.5
Japan	4.8	→	4.8
China	3.4	↘	3.2

### Consumer price inflation (in %)

Region	2017F		2018F
United States <sup>1</sup>	1.5	↗	1.8
Eurozone	1.5	↘	1.4
United Kingdom	2.6	↗	2.7
Japan	0.7	↗	1.0
China	1.9	↗	2.2

### Current-account balance (in % of GDP)

Region	2017F		2018F
United States	-2.6	↘	-2.8
Eurozone	3.1	↘	2.9
United Kingdom	-4.5	↗	-3.5
Japan	3.5	→	3.5
China	1.8	→	1.8

### Benchmark rates (in %)

Region	Current*		Dec 2018F
United States	1.00-1.25	↗	1.75-2.00
Eurozone	0.00	→	0.00
United Kingdom	0.50	↗	0.75
Japan	0.00	→	0.00
China	4.35	→	4.35

### Commodities (in dollars)

	Current*		Dec 2018F
Crude oil (WTI)	57.4	→	55
Gold	1,275	→	1,230
Copper (LME)	6,762	↘	6,600

\* Source: Bloomberg Finance L.P. as of 11/30/17

<sup>1</sup> core rate, personal consumption expenditure Dec/Dec in % (no average as for the other figures)

F refers to our forecasts as of 11/16/17

WTI = West Texas Intermediate

LME = London Metal Exchange

Legend applies for this and the following page

- Equity indices, exchange rates and alternative investments: The arrows signal whether we expect to see an upward trend ↗, a sideways trend → or a downward trend ↘.
- Fixed Income: For sovereign bonds, ↗ denotes rising yields, → unchanged yields and ↘ falling yields. For corporates, securitized/specialties and emerging-market bonds, the arrows depict the option-adjusted spread over U.S. Treasuries. ↗ depicts a rising spread, → a sideways trend and ↘ a falling spread.
- The arrows' colors illustrate the return opportunities for long-only investors: ↗ ↘ positive return potential for long-only investors. → limited return opportunity as well as downside risk. ↘ ↗ negative return potential for long-only investors.

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## Equities | Well supported by earnings growth

	Current*		Dec 2018F	Total return (expected) <sup>1</sup>		Expected earnings growth	P/E impact	Dividend yield
			Forecast	in %				
United States (S&P 500) <sup>2</sup>	2,648	↗	2,750	6.2		14%	-9%	2.3%
Europe (Stoxx Europe 600)	387	↗	405	8.4		8%	-3%	3.7%
Eurozone (Euro Stoxx 50)	3,570	↗	3,780	9.6		9%	-2%	3.7%
Germany (Dax) <sup>3</sup>	13,024	↗	14,100	8.3		8%	-3%	3.1%
United Kingdom (FTSE 100)	7,327	↗	7,400	5.3		5%	-4%	4.3%
Switzerland (Swiss Market Index)	9,319	↗	9,450	4.7		13%	-10%	3.3%
Japan (MSCI Japan Index)	1,062	↗	1,120	7.9		13%	-7%	2.4%
MSCI Emerging Markets Index (USD)	1,121	↗	1,210	10.7		15%	-6%	2.8%
MSCI AC Asia ex Japan Index (USD)	696	↗	760	11.8		16%	-5%	2.6%
MSCI EM Latin America Index (USD)	2,719	↗	2,850	7.7		10%	-5%	2.9%

\* Sources: Bloomberg Finance L.P., FactSet Research Systems Inc. as of 11/30/17

<sup>1</sup> Expected total return includes interest, dividends and capital gains where applicable

<sup>2</sup> Revised target as of 12/4/17

<sup>3</sup> Total-return index (includes dividends)

## Fixed Income | Yields likely to rise only slowly

### United States

	Current*		Dec 2018F
U.S. Treasuries (10-year)	2.41%	↗	2.60%
U.S. municipal bonds	92%	↘	85%
U.S. investment-grade corporates	92 bp	↘	80 bp
U.S. high-yield corporates	344 bp	→	350 bp
Securitized: mortgage-backed securities <sup>1</sup>	72 bp	↗	100 bp

### Europe

	Current*		Dec 2018F
German Bunds (10-year)	0.37%	↗	0.80%
UK Gilts (10-year)	1.33%	↗	1.40%
Euro investment-grade corporates <sup>2</sup>	95 bp	↘	75 bp
Euro high-yield corporates <sup>2</sup>	272 bp	→	260 bp
Securitized: covered bonds	46 bp	↗	65 bp
Italy (10-year) <sup>2</sup>	138 bp	↗	160 bp

\* Source: Bloomberg Finance L.P. as of 11/30/17

<sup>1</sup> Current-coupon spread vs. 7-year U.S. Treasuries

<sup>2</sup> Spread over German Bunds

F refers to our forecasts as of 11/16/17

bp = basis points

### Asia-Pacific

	Current*		Dec 2018F
Japanese government bonds (10-year)	0.04%	→	0.10%
Asia credit	229 bp	↘	210 bp

### Global

	Current*		Dec 2018F
Emerging-market sovereigns	288 bp	→	285 bp
Emerging-market credit	285 bp	↘	270 bp

### Currencies

	Current*		Dec 2018F
EUR vs. USD	1.19	↘	1.15
USD vs. JPY	112.5	→	115.0
EUR vs. GBP	0.880	→	0.885
GBP vs. USD	1.35	↘	1.30
USD vs. CNY	6.61	↗	6.80

## The Chief Investment Office ...



<sup>1</sup> Deutsche Asset Management is the brand name of the Asset Management division of the Deutsche Bank Group. The respective legal entities offering products or services under the Deutsche Asset Management brand are specified in the respective contracts, sales materials and other product information documents.

# Glossary

» Here we explain central terms from the CIO | VIEW «

**Arbitrage** is the practice of exploiting a price differential between two (or more) markets.

The **Barclays Euro Aggregate Corporate Total Return Index** is a bond index containing euro-denominated investment-grade corporate bonds with a maturity of one year or more only.

The **Barclays Euro High Yield Index** captures the performance of Euro high-yield debt securities.

The **Barclays U.S. Aggregate Bond Index** tracks the performance of U.S. investment-grade bonds.

The **Barclays U.S. Corporate High Yield Index** measures the dollar-denominated, high yield, fixed-rate corporate bond market.

The **BofA Merrill Lynch Euro Non-Financial High Yield Constrained Index** tracks the performance of euro-denominated below investment-grade corporate debt publicly issued in the eurobond or euro-domestic markets by non-financial issuers, capping issuer exposure at 3%.

**Brexit** is a combination of the words "Britain" and "Exit" and describes the possible exit of the United Kingdom of the European Union.

**Bunds** is a commonly used term for bonds issued by the German federal government with a maturity of 10 years.

The **Chinese yuan (CNY)** is legal tender on the Chinese mainland and the unit of account of the currency, Renminbi (RMB).

**Correlation** is a measure of how closely two variables move together over time.

**Covered bonds** are securities similar to asset-backed securities (ABS) which are covered with public-sector or mortgages loans and remain on the issuer's balance sheet.

The **Dax** is a blue-chip stock-market index consisting of the 30 major German companies trading on the Frankfurt Stock Exchange.

**Deflation** is a sustained decrease in the general price level of goods and services.

A **developed market (DM)** is a country fully developed in terms of its economy and capital markets.

**Emerging markets (EM)** are economies not yet fully developed in terms of, amongst others, market efficiency and liquidity.

The **euro (EUR)** is the common currency of states participating in the Economic and Monetary Union and is the second most held reserve currency in the world after the dollar.

The **Euro Stoxx 50** is an index that tracks the performance of blue-chip stocks in the Eurozone.

The **European Central Bank (ECB)** is the central bank for the Eurozone.

The **Eurozone** is formed of 19 European Union member states that have adopted the euro as their common currency and sole legal tender.

The **FTSE 100** is an index that tracks the performance of the 100 major companies trading on the London Stock Exchange.

**Gilts** are bonds that are issued by the British Government.

**Greenback** is a commonly used expression for the U.S. dollar.

The **gross domestic product (GDP)** is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

The **Group of 7 (G7)** consists of the finance ministers and central-bank governors of the seven major advanced economies as reported by the International Monetary Fund: Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. They meet to discuss primarily economic issues.

**High-yield** bonds are issued by below-investment-grade-rated issuers and usually offer a relatively high yield.

The **iBoxx Euro Corporate Index** includes euro-denominated corporate bonds issued by investment-grade-rated entities.

The **ifo Institute for Economic Research**, based in Munich, is a leading European research institute, particularly known for its sentiment indicator "ifo Business Climate Index."

**Inflation** is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

**Interest coverage** is calculated by dividing a company's earnings by its interest payments over a given period.

**Investment grade (IG)** refers to a credit rating from a rating agency that indicates that a bond has a relatively low risk of default.

The **J.P. Morgan EMBI Global Diversified Composite** comprises dollar-denominated government bonds, issued by select emerging-market countries.

The **Japanese yen (JPY)** is the official currency of Japan.

**Long/short equity strategies** are investment strategies that take a long position in individual equities or sectors that are expected to gain in value and a short position in those that are expected to fall in value.

A **mortgage-backed security (MBS)** is a special type of asset-backed security where the holder receives interest and redemption payments from pooled mortgage debtors, secured by the underlying mortgages.

The **MSCI AC World Index** captures large- and mid-cap companies across 23 developed- and 24 emerging-market countries.

The **MSCI AC Asia ex Japan Index** captures large- and mid-cap representation across 2 of 3 developed-market countries (excluding Japan) and 8 emerging-market countries in Asia.

The **MSCI Emerging Markets (EM) Latin America Index** captures large- and mid-cap representation across five emerging-market countries in Latin America.

The **MSCI Emerging Markets Index** captures large- and mid-cap representation across 23 emerging-market countries.

The **MSCI Japan Index** is designed to measure the performance of the large- and mid-cap segments of the Japanese market.

The **MSCI World Index** tracks the performance of mid- and large-cap stocks in 23 developed countries around the world.

**Municipal bonds (Munis)** are debt securities issued by a state, municipality or country.

In economics, the **Phillips curve** is a historical inverse relationship between rates of unemployment and corresponding rates of inflation.

The **pound sterling (GBP)**, or simply the pound, is the official currency of the United Kingdom and its territories.

The **price-to-earnings (P/E) ratio** compares a company's current share price to its earnings per share.

**Quantitative easing (QE)** is an unconventional monetary-policy tool, in which a central bank conducts broad-based asset purchases.

The **risk-free interest rate** is a theoretical concept in financial economics, describing an investment yielding exactly the return expected at the time of purchase. This is mainly used as a benchmark for other, riskier investments. In practice, it is usually estimated by taking the yield on a long-term top-rated government bond.

The **Russell 3000** is a market-capitalization-weighted index tracking the performance of the U.S. equity market's 3000 largest companies.

The **S&P 500** is an index that includes 500 leading U.S. companies capturing approximately 80% coverage of available U.S. market capitalization.

The **S&P 500 Information Technology Index** contains the stocks of all technology-sector companies in the S&P 500.

**Short**, in a financial-markets context, refers to approaches that seek to gain from a fall in the price of the underlying asset.

The **Stoxx Europe 600** is an index representing the performance of 600 listed companies across 18 European countries.

The **Swiss Market Index (SMI)** is Switzerland's most important equity index, consisting of the 20 largest and most liquid large- and mid-cap stocks.

**Treasuries** are fixed-interest U.S. government debt securities with different maturities: Treasury bills (1 year maximum), Treasury notes (2 to 10 years), Treasury bonds (20 to 30 years) and Treasury Inflation Protected Securities (TIPS) (5, 10 and 30 years).

The **U.S. dollar (USD)** is the official currency of the United States and its overseas territories.

The **US Federal Reserve Board**, often referred to as "the Fed", is the central bank of the United States.

**Volatility** is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

## Risk warning

Investments are subject to investment risk, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time.

Investments in Foreign Countries – Such investments may be in countries that prove to be politically or economically unstable. Furthermore, in the case of investments in foreign securities or other assets, any fluctuations in currency exchange rates will affect the value of the investments and any restrictions imposed to prevent capital flight may make it difficult or impossible to exchange or repatriate foreign currency.

Foreign Exchange/Currency – Such transactions involve multiple risks, including currency risk and settlement risk. Economic or financial instability, lack of timely or reliable financial information or unfavorable political or legal developments may substantially and permanently alter the conditions, terms, marketability or price of a foreign currency. Profits and losses in transactions in foreign exchange will also be affected by fluctuations in currency where there is a need to convert the product's denomination(s) to another currency. Time zone differences may cause several hours to elapse between a payment being made in one currency and an offsetting payment in another currency. Relevant movements in currencies during the settlement period may seriously erode potential profits or significantly increase any losses.

High Yield Fixed Income Securities – Investing in high yield bonds, which tend to be more volatile than investment grade fixed income securities, is speculative. These bonds are affected by interest rate changes and the creditworthiness of the issuers, and investing in high yield bonds poses additional credit risk, as well as greater risk of default.

Hedge Funds – An investment in hedge funds is speculative and involves a high degree of risk, and is suitable only for “Qualified Purchasers” as defined by the US Investment Company Act of 1940 and “Accredited Investors” as defined in Regulation D of the 1933 Securities Act. No assurance can be given that a hedge fund's investment objective will be achieved, or that investors will receive a return of all or part of their investment.

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