Marketing Material

September 2019

OUR 12-MONTH ECONOMIC & MARKET OUTLOOK

DWS

Content

September 5, 2019

A cycle like no other

The economy looks good now, the outlook less so. That's nothing new in this atypical cycle. Caution is warranted.

"Many leading indicators paint a gloomy picture yet services and consumption remain strong. The signals from the bond market are troubling – and political risks appear to be growing too. We remain cautious."

Stefan Kreuzkamp
Chief Investment Officer

What a good run markets are having! And why not? The labor markets in the U.S. and parts of Europe are extremely strong. So are corporate earnings, at least for now. Companies have solid balance sheets. Loan defaults remain rare. Oil is affordable. There's no risk of interest-rate hikes. And, U.S. President Donald Trump is always ready to talk to anyone – though quite a few people don't appreciate his well intended suggestions.[1] What more could investors wish for? Well, a few things come to mind. That starts with an array of disturbing warning lights flashing in front of us.

The most glaring of the warning lights is that the U.S. yield curve has inverted, which in the past has usually signaled an approaching recession. The U.S. Federal Reserve (the Fed) is clearly nervous – hence, it has already embarked on preemptive "insurance interest-rate cuts." In Europe, meanwhile, the European Central Bank (ECB) will probably adopt a whole new package of monetary measures in September, and new calls for fiscal stimulus are also doing the rounds. Another uncomfortable reality is that global manufacturing is making that nasty rattling sound you hear before the engine stalls. The overall economic situation is therefore not all that reassuring – as confusing perhaps as the messages coming from the U.S. President, who demands cheaper money from the Fed at the same time as boasting of a booming U.S. economy.[2]

It's not just the U.S. President who is struggling to reconcile the apparently good economy and the many warning lights on the dashboard. Complicating things still further for investors is that many don't have to think back very far to remember some very costly mistakes. Those who took heed of the warning signals in the past and got out of the equity market quickly lost out – because every setback since 2009 has proven just a brief pause in the enduring rally. This makes everyone more cautious now about predicting recession or saying the bull market is over; but even the bulls themselves are not suggesting that recessions have been banished forever.[3]

The troubling gap between the happy economy and the anxious mood is perhaps most powerfully demonstrated by the yield curve. In August, the spread between 2- and 10-year U.S. government bond yields went negative for the first time since 2007. This has happened nine times in the U.S. since 1956 and

1 In August, Danish Prime Minister Mette Frederiksen refused to accept Trump's request to buy Greenland. Fed President Jerome Powell also consistently refuses to fully comply with Trump's interest rate cut wishes.
2 See tweets from August 14, 23 and 24 for comments on the U.S. economy. See tweets from August 3, 7, 8, 14, 15, 19, 21, 23, 27 and 28 for comments on the Fed.
3 By recession we do not mean a technical recession in the sense of two consecutive negative quarters, but a longer term period of high unemployment and capacity underutilization.

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recession has tended to follow, within two years. And yet we are wary of taking this historical evidence at face value and concluding that a U.S. recession is around the corner now. The factors (economic, political, monetary, technical and demographic) that provoked each previous inversion were somewhat different each time. The current inversion reflects especially unusual circumstances:

1. Central banks are distorting financial markets with their continuing pursuit of unorthodox monetary policies, such as quantitative easing and negative interest rates. One result is that bonds worth more than 16 trillion dollars now yield negatively worldwide – half of all outstanding bonds with investment-grade status outside the U.S. That clearly extorts downward pressure on long-term U.S. interest rates, which may reduce the predictive power of the yield curve.
2. The two largest economies in the world are locked in a trade dispute that shows no sign of ending.
3. That dispute is having global knock-on effects. As China focuses on stimulating its domestic economy, raw material exporters such as Australia, European machinery and car exporters and U.S. mobile-phone companies are all feeling the impact.

Worrying, too, is the recklessness with which many countries, and especially the United States, are driving up their national debt, and the rise of populist governments pursuing protectionist economic policies. How these governments might react in more trying economic times is a further concern.

There are, then, many good reasons to be concerned about the medium term, but we believe that it remains too early to talk about an imminent crisis. There is too much positive data, a reflection of the length of this already record-breaking upswing. One reason for that may be the steadily growing service sector, which does not have inventory and investment cycles as large as those of the manufacturing sector. In addition, the good labor markets mean consumers are still spending heavily. Finally, the slight economic slowdown we are experiencing reduces the risk of overheating and means central banks have again softened their policies.

For our investment choices this poses a dilemma. It might seem tempting to swing back towards risky assets, especially as we don't expect any further slowdown in global economic growth in the coming year. But the worrying signals from the bond markets – negative nominal interest rates in Europe, negative real interest rates in the U.S., the inverted yield curve – should not be ignored altogether.

In short, we remain cautious. We see low-single-digit return potential for equities, coming primarily from dividends. Our regional preferences are not strong. In the medium term, U.S. stocks might continue to outperform the rest of the world, as they have done for 10 years. But their premium valuation and optimistic earnings estimates make them vulnerable to setbacks. We do not think it wise to focus on equities simply because the alternatives are unconvincing. Now that positive surprises from the central banks are hardly possible, we believe only an improvement in broad macroeconomic data is likely to increase the price potential of equities again.

In bonds, we have lowered our target yields compared with the previous quarter and do not rule out further periods of falling yields. However, we expect interest rates to rise slightly over the next 12 months. At the moment, bond investors have little choice but to put their money into assets which still offer positive yields at an acceptable level of risk. In our view, these are investment-grade corporate bonds and long-dated U.S. government bonds. Selectively, we also like emerging-market bonds.

We don't see any major currency imbalances at the moment, despite all the political risks, and we keep our 12-month target of 1.15 dollars per euro. Should investor risk aversion increase, we would expect the yen to appreciate because of its reputation as a safe haven. The British pound, too, could appreciate if a disorderly Brexit is avoided, which is our central scenario. In the case of oil, we expect sideways trading. Gold may continue its recent rally, though less strongly.

Look at our forecasts to see our 12-month outlook in numbers (page 31).

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September 9, 2019

Rising risks

We expect a further gradual weakening in growth, caused by trade tensions and related uncertainties.

_ The signs of lasting damage from ongoing trade conflicts continue to grow.

_ For now, much of the data merely points to a temporary slowdown in global growth, rather than a full blown recession in either the United States or the Eurozone.

Johannes Müller
Head of Macro Research

Three months ago, we warned that: "The outlook for the world economy is getting cloudier. Escalating trade tensions could trigger further downgrades." Sadly, this has now come to pass. In several export-oriented economies, notably Germany and Japan, we had to cut our growth forecasts for both 2019 and 2020. For the U.S., we have left our 2020 forecast unchanged at 2%, but now expect just 2.3% for 2019, 0.2% less than three months ago. The U.S cut is not actually related to 2019 economic performance. Instead, it is due to a revision of past data, dating back to 2018. To be sure, U.S. economic momentum is weaker this year, with the stimulus from tax cuts continuing to fade. However, that has always been reflected in our gross-domestic-product (GDP) forecast.

Indeed, if you look at the U.S. in isolation, forward-looking economic signals remain decidedly mixed, rather than unambiguously negative. For example, the ratio between leading and coincident economic indicators remains near its recent peak. Leading indicators, such as new orders in manufacturing, help to predict future trends. Coincident indicators, such as personal income, are measured in real time. So, if personal income was to shrink at the same time as orders began to deteriorate, you would, all else equal, notice a decline in the ratio. In past cycles, there have usually been substantial declines in the ratio, well before U.S. recessions started. The current pattern more closely resembles past temporary slowdowns. Another indication is, companies' continuous hiring of temporary workers. And, financial conditions broadly remain in line with economic growth of just above 2%.

Of course, you can always find reasons to worry. One particular bugbear is the yield curve. Recently, it has inverted in the U.S. and elsewhere, meaning that, for example, yields on 10-year U.S. Treasuries fell below those of 2-year U.S. Treasuries. In economic terms, the best way to think of inverted yield curves is as measuring the willingness of fixed-income investors to pay for "recession insurance." The more inverted yield curves are, the higher the implied recession risk premium investors are willing to settle for. That merely suggests, though, that plenty of investors are already quite gloomy – not that they are necessarily right to be gloomy. Also worth noting is that inverted yield curves of this sort are, if anything, self-denying rather than self-fulfilling prophecies: by driving down long-term yields, bond markets make a recession less likely, even in the absence of central-bank action.

Instead, the U.S. Federal Reserve (the Fed) looks set to continue its policy of 1998-style pre-emptive cuts, even as it

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remains reluctant to embark on a full-blown cutting cycle. We expect two more interest-rate cuts in the next 12 months. For the European Central Bank (ECB), we expect a small cut of 20 basis points to -0.60%, the introduction of a tiering system for central bank deposits, and a resumption of asset purchases as part of a broad package. We also expect these steps to be enough to stabilize the situation.

Both the Fed and ECB have been put in an unenviable position. Signs of financial-market nervousness and real economic damage in key countries such as Germany can mostly be traced back to global trade tensions. Yet, as central bankers rightly lamented at their recent conference in Jackson Hole, there is little monetary policy can do to alleviate the longer-term damage caused by protectionist policies. As we explained in our trade special (see CIO Special – Free trade under attack as of 5/17/18) last year, temporary protectionist measures are akin to taxing a highly efficient production technology. And permanent protectionist measures are akin to destroying existing production facilities at home and abroad. So, at least in an economy at full employment before a trade shock, all you eventually get from printing money (in one way or the other) in reaction to a trade shock is an economy just as much poorer, but with inflation added to the list of economic woes. The correct policy prescription, in our view, would be to simply stop the trade hostilities.

Unfortunately, there is little sign of global trade peace breaking out any time soon. Aside from the erratic policy pronouncements by the U.S. President, there are worrying signs of protectionist trends catching on. This includes not only the conflict between South Korea and Japan, but also between the European Union (EU) and several developing countries. The new European Parliament will probably be more willing to flex its muscles, notably on trade issues related to environmental concerns. We continue to hope that economic self-interest will prevail – eventually. In the meantime, trade conflicts in general and the one between the U.S. and China in particular remain a drag on the global economy. By contrast, we are reasonably confident about two other frequent political worries. On Brexit, we think that by constantly beating the "No-Deal" drum, the new Prime Minister Boris Johnson is likely to prevent the UK and the remaining EU 27[1] from sleepwalking into a "No Deal." In Italy, snap elections seem to have been avoided for the time being.

So, to sum it all up, the world is facing decelerating growth. However, we do not expect a recession in the U.S., nor in China, nor in the Eurozone as a whole. We believe that monetary policy is set to remain expansionary, providing support to the economy and financial markets. In Europe, there are signs fiscal policies might ease, though probably not enough to have much of an economic effect in the next 12 months. Inflation should remain low, at least for now. Could we, and central banks, be wrong in this comparatively benign assessment? Of course, and in more ways than one!

In the U.S., there are some worrying signs of profit margins getting squeezed. In the past, corporate America has typically reacted by laying off workers, sometimes quite suddenly. It remains too early to say, though, whether the trade-war-induced shock will play out exactly along those lines. Contrary to much of recent conventional wisdom, trade wars do not usually, or even necessarily, cause recessions. They tend to damage how much existing plants and businesses are worth in the long term, not necessarily how much of the remaining capacity might remain idle for a few quarters. And if trade tensions continue to escalate, there is an alternative scenario at least worth considering. That scenario is likely to be familiar to anyone still remembering the stagflationary[2] days of the 1970s: just as with oil shocks, adding loose monetary and fiscal policies to a trade shock is likely to be inflationary in the longer term. Let's hope today's policymakers do not repeat those mistakes.

[1] The "EU 27" include all member states of the European Union except for the UK.
[2] Combination of the words "stagnation" and "inflation," referring to a period where inflation is high while the economy is stagnating.

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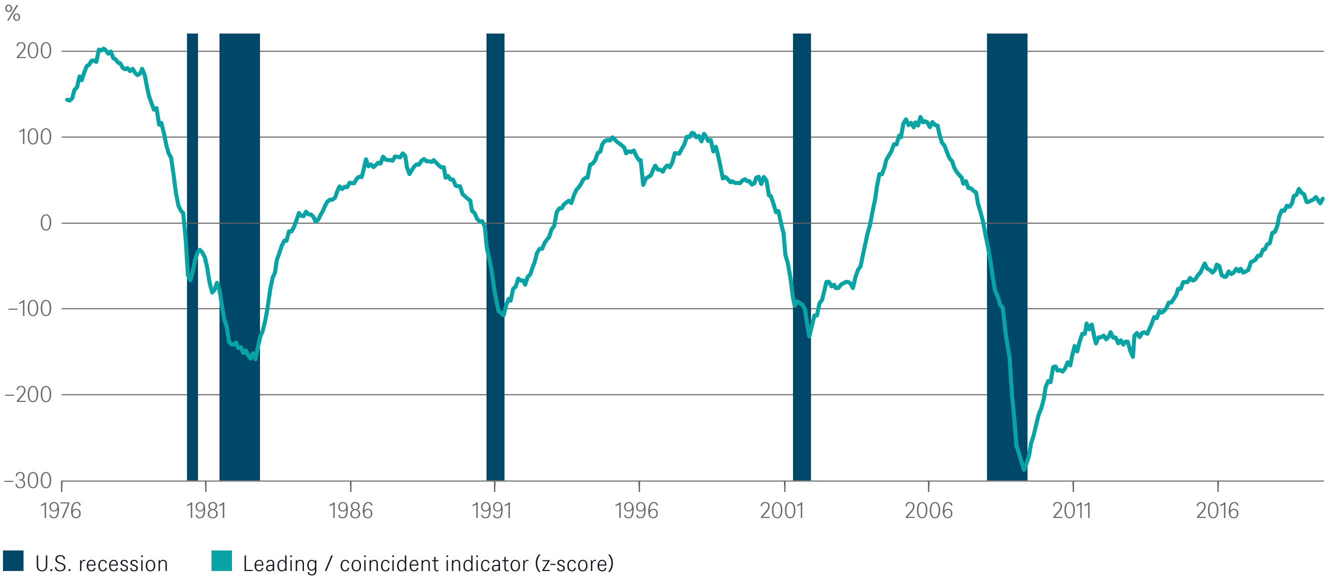
A LOW-NOISE INDICATOR

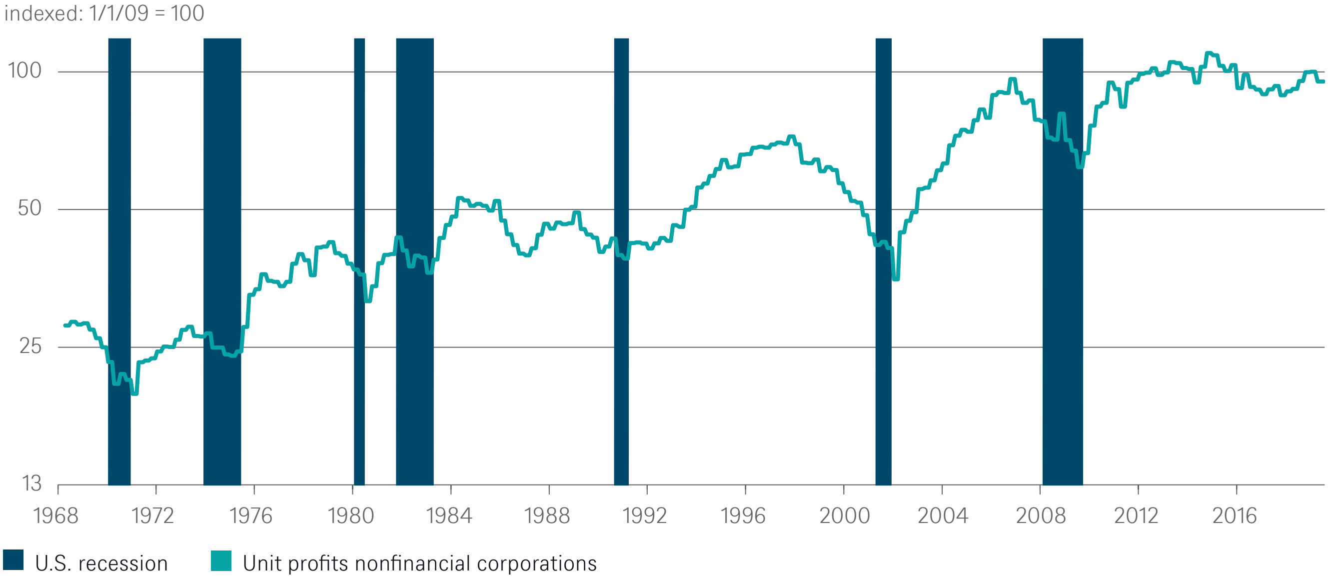
The ratio between leading and coincident U.S. economic indicators remains near its recent peak. That is suggestive of a temporary slowdown, not a recession.



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 8/30/19

U.S. UNIT PROFITS HAVE STARTED TO STALL

One of the more worrying signs for the U.S. economy concerns corporate profits. These are down 4.9% so far, which is not yet enough to serve as reliable recession signal. slowdown, not a recession.



Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 8/30/19

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September 18, 2019

Low for longer, but not lower

Yields are likely to remain low but not fall further. We believe a severe economic downturn would be needed to push them lower still.

_ Yields are likely to remain low for longer. Central banks have guided the way. Accordingly, we see only a little potential upside for most bonds.

_ Should recession fears increase again, yields could fall even further.

_ That makes the hunt for yield even more difficult. Corporate and emerging-market bonds remain among our favorites.

Jörn Wasmund
Head of Fixed Income/Cash

Last year saw the beginning of something many people had started to think would never happen: a turnaround in interest rates. What this meant was an end to the decade-long downward path for industrialized countries' rates. A big factor was certainly the U.S. Federal Reserve (the Fed). The Fed raised the key interest rate four times in the course of 2018, so that the effective federal funds rate (EFFR) rose from 1.4% to 2.4%. 10-year Treasury yields climbed to 3.26% in October, a level not seen for seven years. Meanwhile, 2-year yields reached a 10-year high. All this was against the backdrop of a U.S. economy that was humming along nicely and a distinctly robust labor market, with very low unemployment. Investors ought perhaps to have been pleased at these encouraging signs of returning normality. Instead they were nonplussed. The S&P 500 plunged by almost a fifth. "Sure, ok, let's have an interest-rate turnaround" seemed to be most investors' reaction, "but please let's not overdo it!" Their worries were understandable. The orders component of the U.S. purchasing managers' index fell below the dreaded 50 mark, which has happened in every cycle of interest-rate hikes by the Fed since the Second World War.

And the end of the decade-long tailwind from ever falling interest rates was, after all, a very big deal, implying a major change in all global financial markets. A year later, however, it all looks like the turnaround was what some might call fake news. The 10- and 30-year Treasury yields have tracked back down. Yields are once again in their long-term downward channel. We are in fact back right where we started. But where are we heading now? If things were to continue along this route Treasury yields would have to plunge into negative territory. Quite a few commentators are now predicting exactly that.

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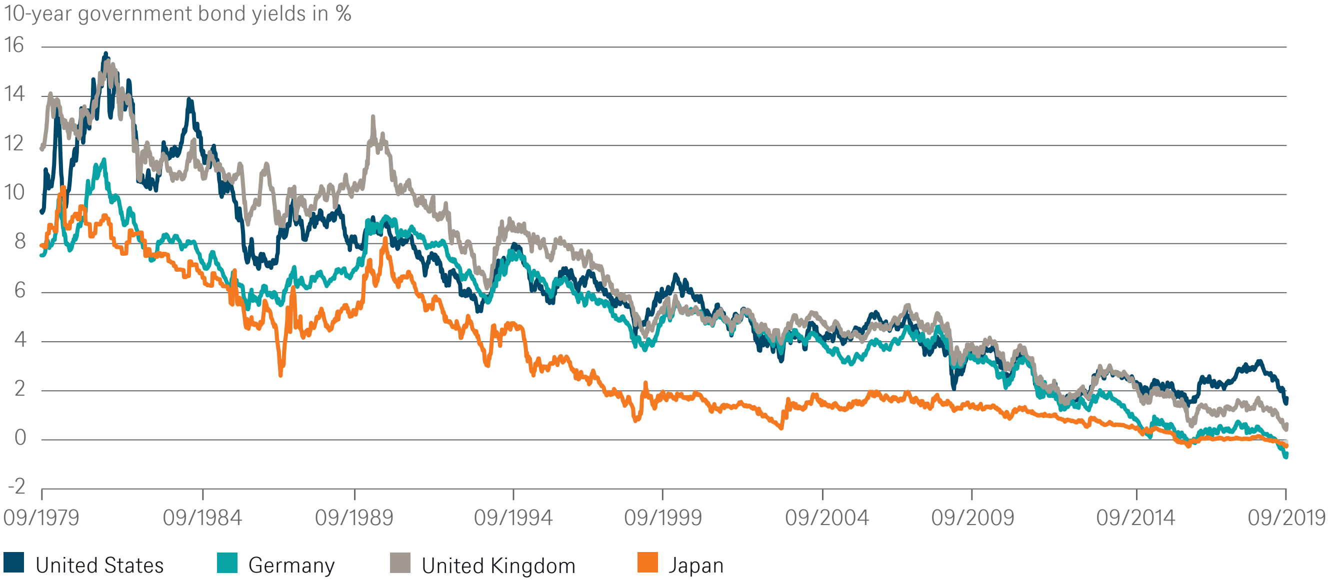
MAKING A BOTTOM OR CONTINUING THE TREND?

10-year yields of various countries bonds are surprisingly closely aligned. The long-term downward trend seems intact. Only in the U.S. does a bottom seem to be forming.



Sources: Refinitiv, DWS Investment GmbH as of 9/11/19

How likely is it that U.S. rates will go negative? Let's look at some pointers. 2-year U.S. yields came very close to the zero line in autumn 2011, at 0.14%. 30-year government bonds are yielding below 2% percent for the first time in history and the U.S. yield curve (spread between 2- and 10-year government bonds) has inverted for the first time since 2007. Meanwhile real, inflation-adjusted yields in the U.S. are falling again and have been negative for almost seven years.

This summer, however, the real historical landmarks of the bond market were found outside the U.S. The yield on 30-year Italian government bonds also fell below 2%, and 10-year bonds yielded less than 1% for the first time ever. In Germany, 10-year government bonds closed at -0.71%, the lowest ever, and 30-year bonds plunged into negative territory for the first time in their history. Thus, for a few weeks, it was impossible to buy any German government bonds with a positive yield. By late summer, global bonds worth 17 trillion dollars had negative yields.

The idea that the decade-long trend will continue and that 10-year U.S. Treasuries, too, slide into negative territory should therefore not be ruled out too quickly. All the more so given lingering fears of recession.

And yet we do not expect the downward trend in yields to continue, at least in the next 12 months. On the contrary, we expect most yields to track sideways, with a slight upward trend. That would not necessarily be a disaster for bonds in normal times. But in today's times, with so many bonds that currently yield nothing, it would imply that many bonds provide investors with negative returns over a 12-month period.

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MORE AND MORE BONDS GO NEGATIVE

For ever more bond yields, zero is no longer a natural lower limit. More than a quarter of bonds worldwide now have negative yields. Most of them are in Japan.

*Bloomberg Barclays Global Agg Neg Yielding Debt Market Value
Sources: Bloomberg Finance L.P. as of 9/11/19

In autumn 2019, it seems that all major central banks will continue to relax their monetary policy. We expect the Fed to cut interest rates twice in the next twelve months, with the first cut in September. As expected, the European Central Bank (ECB) opened up its big toolbox on September 12 and even gave investors a bit more than they had been expecting: a reduction in the deposit rate from -0.4% to -0.5%, the resumption of the bond-purchase program, at a rate of 20 billion euros per month, and the introduction of a tiering system for excess cash in order to give some at least partial relief to the banks. That the package has been left open-ended was its most dovish surprise: ECB President Mario Draghi may be leaving, but his legacy will remain. Other central banks, such as in China, Japan and the UK, are also moving towards easing. Bond markets see that and their reaction is clearly visible in the striking decline in yields in recent months.

What does all this mean for our fixed-income strategy? We expect yields to stay low for longer. In their search for positive yields, European investors might want to look outside the government bonds of core Europe. Our preferences are for euro corporate bonds – investment grade and some high yield. For the latter, we prefer issuers with a "B" rating. Those who want to stay in government bonds might want to consider moving to the periphery. We have lowered our forecast for 10-year German government bonds to -0.5%, due to additional purchases of government bonds by the ECB and continued demand from institutional investors. Expected purchases by the ECB (from the new bond-purchase program and from reinvestments of maturing securities) will also continue to support Spanish and Portuguese bonds. In Italy, the political situation has improved a bit but bonds had already amply priced this in – as the halving of the yield premium over German government bonds shows. Our view is that after so much anticipation the risk is of disappointment: that is, rising yields of Italian bonds.

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Institutional investors who want to invest in euros could consider looking at another asset class that offers the potential for positive returns: illiquid securities for example. They currently offer a premium over government securities for those who have longer investment horizons and don't require continuous tradability. Collateralized loans, in our view, deserve a special look as their market in Europe is now quite large.

Outside the Eurozone – with the exception of Japan – returns are still generally positive. In the U.S., we expect 2-year Treasuries to yield 1.6% and 10-year government bonds to yield 1.75% in twelve months' time – not far at all from today's level. And so we see the decline in yields as being arrested. Nor do we expect the yield curve to remain inverted. We like emerging-market hard-currency bonds.

Trade-dispute-related risks, however, have increased. The intensification of the global trade conflict and the potential impact of slower growth in export-oriented countries is worrying us. But their reasonable valuations are appealing and lower U.S. interest rates, a stable U.S. dollar and comparatively low government debt are supportive. Attractive investment-grade-rated countries and select high-yield opportunities are among our favorites in this environment. We are modestly positive on Turkish government bonds given the relatively low level of debt. For both EM- and U.S.-bonds, however, European investors are bearing the currency risk.

Despite the euro's weakness against the dollar for more than a year now, we are sticking to our 12-month forecast, with the euro at 1.15 dollars. The strengths and weaknesses of the two currencies in relation to one another look largely balanced. Following the decisions of the Fed and the ECB in September, we expect the market to see further Fed easing as more likely than anything fresh from the ECB under Draghi's successor, Christine Lagarde. We continue to regard the yen, particularly vis-à-vis the euro, as a currency that investors might want to consider moving into in times of higher risk aversion.

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September 13, 2019

Still in love with equities?

There may be few alternatives to equities. However, that is no longer a sufficient reason to buy into every dip.

- _ Despite some warning signs, it is probably too early to give up on equities, especially if and when leading economic indicators begin to stabilize.
- _ Low interest rates remain supportive for global markets.
- _ Even in choppier markets, equity investors should still be able to capture the dividend and buyback yields.

Dr. Thomas Schüssler
Co-Head of Equities

Andre Köttner
Co-Head of Equities

Since our CIO Day[1] in August, we have turned a little more constructive on equities. Partly, that is due to some very recent encouraging political developments. At the time of writing, a "No-Deal Brexit" is no longer the only choice for the UK. Italy has a new government. The U.S.-Chinese trade conflict continues, but is not running out of control as talks will supposedly resume. Protests in Hong Kong are, at the very least, no longer escalating. None of this would be enough, however. Political tailwinds could quickly turn into headwinds again. Instead, a little bit of historical perspective might be helpful.

The current upswing in global stock prices is now in its 10th year. Especially in the early stages, it was frequently labelled the most unloved bull market in history. That was because investors were famously slow to increase their risk exposure, after the sobering experience of the global financial crisis. Following the stock market nadir of early 2009, it took a while for risk appetite to return. Central-bank action of the hitherto unthinkable helped TINA to catch on. The TINA concept describes the idea that "There Is No Alternative" to equities in an ultra-low interest-rate environment.

Put succinctly, our view rests on the idea that equity markets will continue to dance to the TINA tune, potentially for quite a while longer. The universe of bonds offering negative, nominal interest rates keeps growing. The problem with TINA, though, is that lower bond yields are often a sign of a cyclical downturn, meaning lower economic growth and lower company earnings. We agree with our economists that the U.S. yield-curve inversion should not be seen as an indicator of a pending global recession. Low interest rates can help support elevated valuation levels only for as long as earnings are expected to be resilient, however. And that was precisely one of the reasons why we turned more cautious before the summer. In our view, analyst expectations for profit growth have been too high for much of the year. Negative nominal or negative real interest rates could potentially have unintended negative consequences on particular sectors, such as financial services.

Two other reasons for caution were that we had some concerns about both the longer-term earnings prospects, especially in the U.S., and about the quality of the earnings growth seen in recent years.
Events such as the recent increase in U.S. tariffs on imports from China and their impact on earnings, can no longer be safely dismissed as mere temporary aberrations. Instead, they may mark the beginning of the end of several key drivers behind the increase of net margins for the S&P 500

[1] Global meeting held quarterly, in which we define our economic and market outlook across all asset classes for the next 12 months

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during the past 25 years. Profitability increases were partly a result of decades of globalization, as leading multinationals rapidly expanded abroad. By contrast, corporate managers are now forced to consider shifting their global supply chains in reaction to every new U.S. policy announcement or Chinese retaliatory measure. Given the cost of such actions, they are unlikely to be reversed even if tariffs are eventually rolled back.

Moreover, we also fear that the quality of reported U.S. earnings may have declined in recent years. Threats to global supply chains and corporate sentiment are not the only reasons why profits in the U.S. and elsewhere may struggle to continue their familiar upward path of recent decades. Especially for large U.S. multinationals, business profitability also benefited from lower effective tax rates, thanks to their international expansion. Under President Trump, the U.S. corporate tax cut provided an additional boost in 2018. However, there seems to be little political appetite for further tax giveaways to big businesses on either side of the Atlantic. Similarly, companies have long benefited from lower interest expenses from lower net debt and lower interest rates. Despite the recent declines, the additional net benefit looks set to be marginal at best. Meanwhile, we expect buybacks to slow further in favor of higher dividend payouts, given current valuations and slower earnings growth.

Does any of this matter? It might not in the short term. The main reasons we have turned more constructive are some encouraging signs that the global economy may be regaining some momentum. For example, several Japanese capital-goods companies see no further deterioration of their order books. That gives us some confidence for a stabilization of leading economic indicators in the fourth quarter. If so, our expectations for 5% global earnings-per-share (EPS) growth in 2020 remain realistic. As, back in 2007, Chuck Prince, at the time Citigroup's CIO, honestly if somewhat unwisely put it, "as long as the music is playing, you've got to get up and dance. We're still dancing."[2]

This suggests longer-term investors should be worried indeed, if indiscriminate TINA had been the only thing underpinning equity-market returns in the decade since. Fortunately, that has not been the case. Much of the global gains in stock prices over the past 10 years has been driven by the U.S. Calculated in U.S. dollars, non-U.S. equities are still trading below the January 2008 level. This is partly due to industry composition: Within U.S. indices, the service sector and especially companies with a heavy focus on digital technology are more strongly represented than, for example, in European indices. There may be few alternatives to equities overall, but we believe plenty to choose within the global equities universe.

Previous historical episodes of U.S. yield-curve inversions were typically accompanied by rising equity markets, driven by a shift of active funds towards defensive and growth sectors, out of cyclical and value companies. We would argue that investors have already front-loaded this sector rotation, evidenced by the rapid rise in the valuation premium of growth over value during the past 2 years (~70% price-to-earnings (PE) premium of growth vs. value according to our calculations). Paying careful attention to sector weightings is therefore likely to be critical going forward. We prefer overweighting technology and growth in this environment as low interest rates are likely to support this premium. Future profits naturally carry more weight in growth stocks. If they continue to be discounted by a lower factor, that increases their present value. The snag, though, is that it also makes them more vulnerable if and when profits turn out to be less sustainable than thought.

For balance, we are also overweighting financial services, which seem to offer good value for money and should benefit from a stabilizing macroeconomic environment. Tactically, we have recently upgraded industrials back to neutral. Since the downgrade in early July, the sector has only marginally underperformed despite increased trade tensions. By contrast, we are downgrading utilities to underweight, which have had a great run since July as global interest rates collapsed. All in all, we believe equity investors should be able to capture the dividend and buyback yield over the next 12 months. And if our confidence in a stabilization of leading macroeconomic indicators proves justified, we should be able to raise our index targets, too.

2 Financial Times, July 9, 2007 "Citigroup chief stays bullish on buy-outs"

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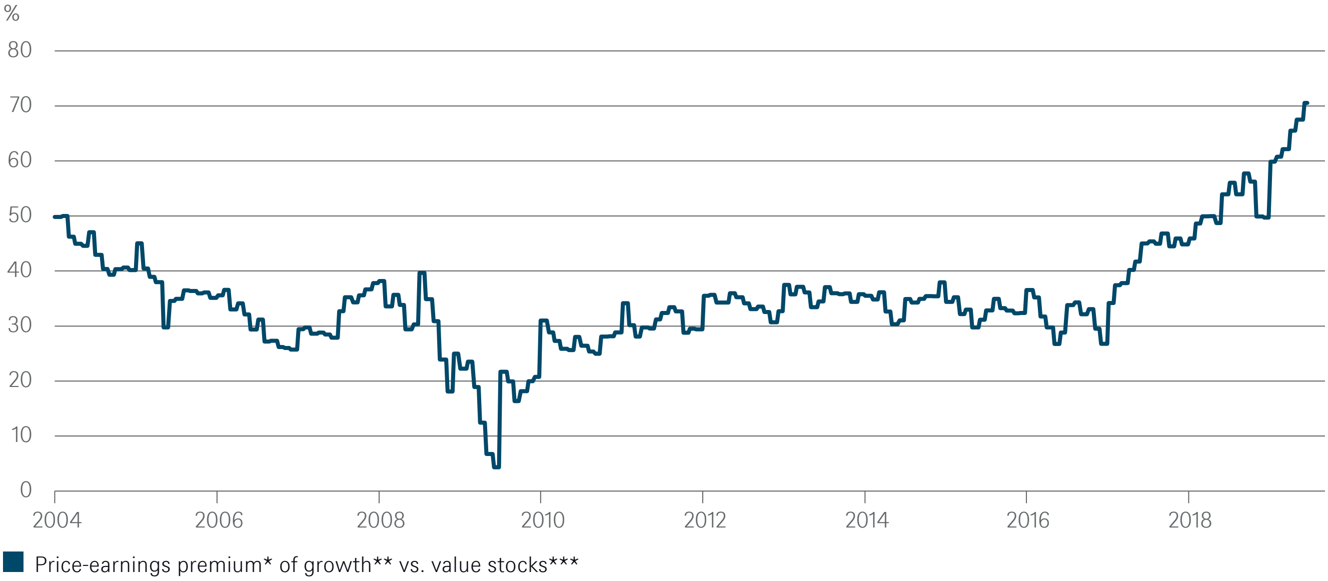
THE VALUATION PREMIUM OF GROWTH STOCKS CONTINUES TO SWELL

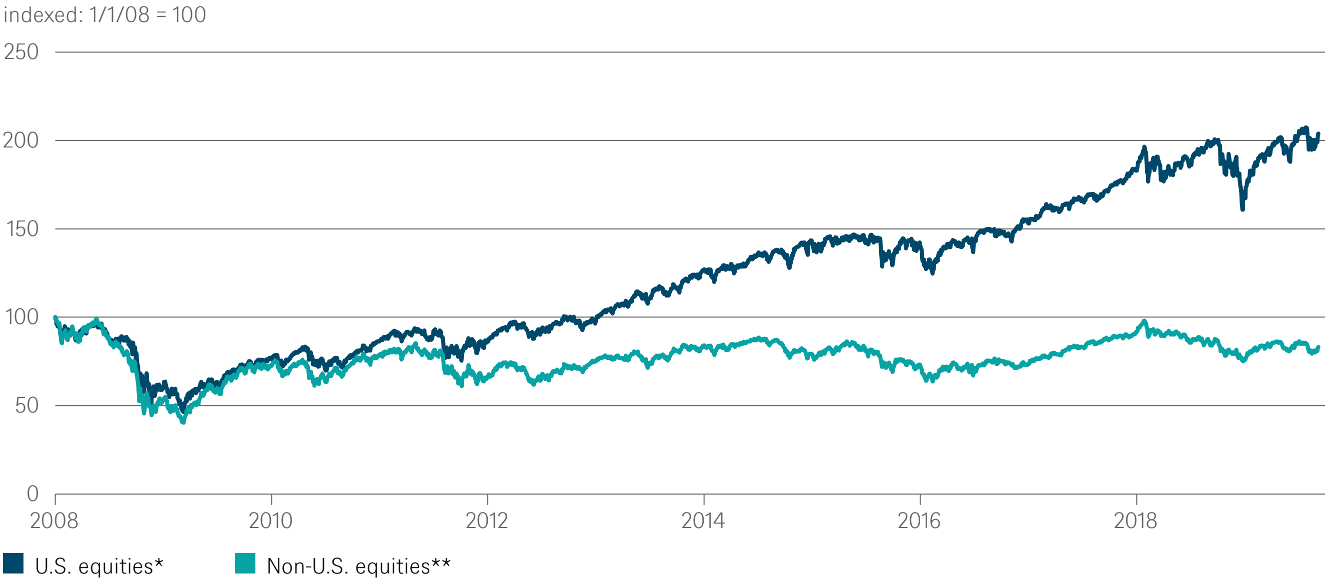
Growth stocks continue to see their valuation multiples expand. Meanwhile, value stocks continue to gain value, if this is defined as a discount to the market. This cannot go on forever.



*based on next-12-months consensus earnings forecasts; Sources: Refinitiv, DWS Investment GmbH as of 9/10/19
**MSCI ACWI Growth Index
***MSCI ACWI Value Index

AMERICA FIRST

A look at the past 11 years of stock-market returns reveals interesting divergences between the United States and the rest of the world.



*MSCI USA Index
**MSCI AC World ex USA Index
Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 9/6/19

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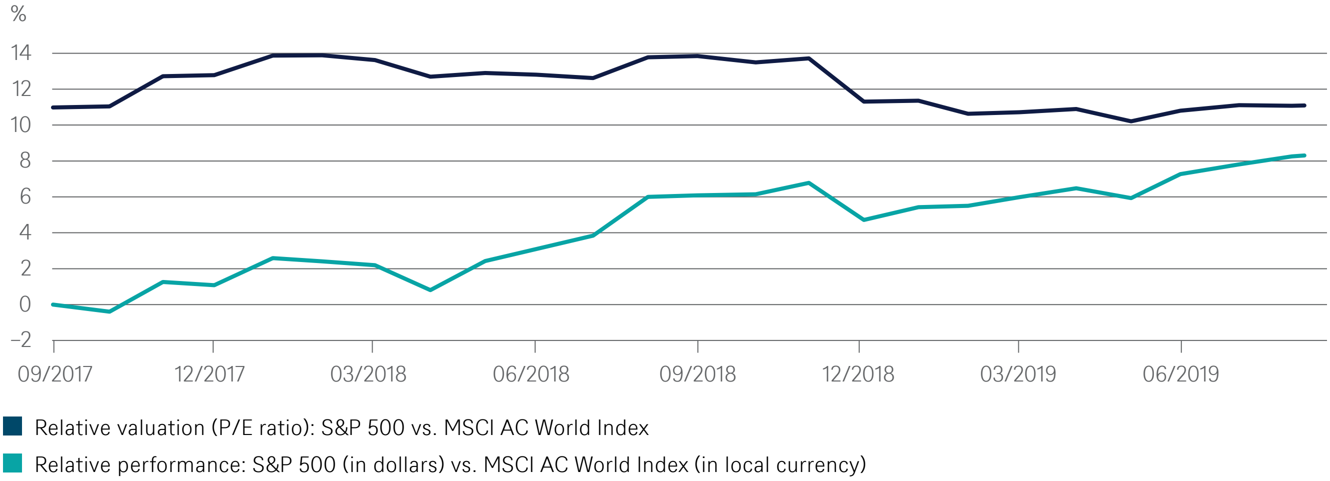
Valuations overview

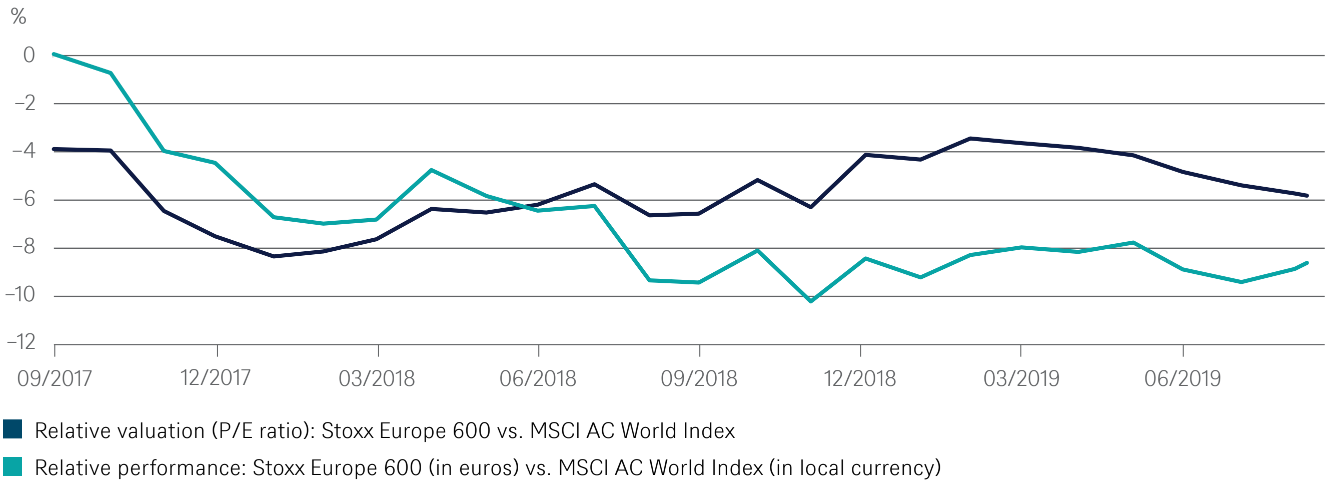
UNITED STATES: NEUTRAL (NEUTRAL)*

We are a little more cautious about U.S. equities. In the short term, there could well be further corrections, not least because earnings expectations still look quite high in several key sectors. Of course, any signs of progress in the trade dispute would probably be warmly welcomed by markets. The same would be true if the U.S. Federal Reserve delivered larger-than-expected interest-rate cuts. Unfortunately, we do not think either development is particularly likely.



EUROPE: NEUTRAL (NEUTRAL)*

Political risks have lately been receding in Europe. Italy has a new government, reducing the likelihood of a conflict with the European Union. The UK will probably avoid a chaotic, disorderly Brexit at the end of October. Alas, these positive developments are taking place against a darkening economic backdrop, especially in trade-dependent countries such as Germany. But given the relatively weak performance of European equities over the past decade, we think that a lot of bad news is already priced in.



* Our assessment is relative to the MSCI AC World Index, the last quarter's view is shown in parentheses.
Sources: FactSet Research Systems Inc., DWS Investment GmbH as of 9/6/19

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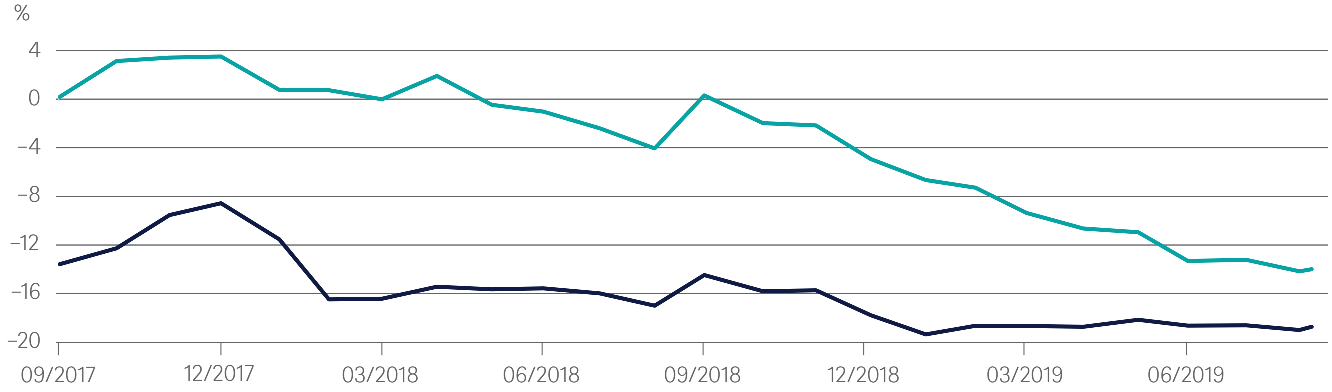
JAPAN: NEUTRAL (NEUTRAL)*

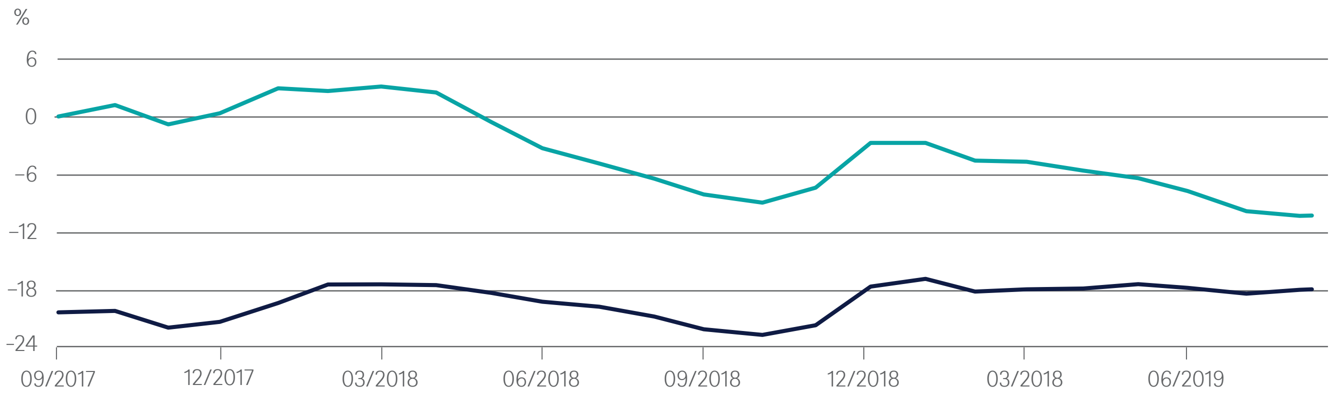
Japanese equities continue to look tempting in valuation terms. Unfortunately, they still lack any obvious triggers for a re-rating over the next couple of months. Earnings still appear to be under pressure as trade tensions continue to take their toll. If hopes for a trade deal with the U.S. materialize, that may well improve sentiment. However, that would also depend on the precise scope of any such deal as well as on progress in Japan's own trade conflict with South Korea.



Relative valuation (P/E ratio): MSCI Japan Index vs. MSCI AC World Index
Relative performance: MSCI Japan Index (in yen) vs. MSCI AC World Index (in local currency)

EMERGING MARKETS: NEUTRAL (NEUTRAL)*

Emerging markets remain heavily exposed to various trade conflicts, creating some near-term risks. In the longer term, they should probably benefit from fading headwinds, notably given that the Fed has shifted from higher to lower U.S. interest rates since the end of last year. Structural reforms should also help in several key countries. Compared to industrialized countries, we believe emerging-market equities should deliver pretty solid earnings growth in 2020.



Relative valuation (P/E ratio): MSCI Emerging Markets Index vs. MSCI AC World Index
Relative performance: MSCI Emerging Markets Index (in dollars) vs. MSCI AC World Index (in local currency)

* Our assessment is relative to the MSCI AC World Index, the last quarter's view is shown in parentheses.
Sources: FactSet Research Systems Inc., DWS Investment GmbH as of 9/6/19

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September 23, 2019

Private infrastructure and business cycles

Private infrastructure is a defensive asset class, but it tends to react to macroeconomic changes in multifaceted ways.

- For a diverse asset class like private infrastructure, benchmark returns can only provide limited insights.
- Infrastructure tends to be supported by long-term demand and dividend predictability, but much also depends on sector and contract profiles.
- Across different macroeconomic scenarios, an infrastructure portfolio with complementary characteristics may help to improve risk-adjusted returns.

Hamish Mackenzie
Head of Infrastructure

How do private infrastructure assets perform across a wide range of macroeconomic scenarios? It is a question increasingly asked by institutional investors. This partly reflects current market conditions. It is also partly because private infrastructure is still a relatively new, complex and diverse asset class. When pondering how to optimize their strategies, investors frequently rely on historical correlations between changes to the macroeconomic cycle and total returns for the asset class in question. In the case of private infrastructure, though, benchmark availability is limited, so historical return analysis can only go so far. Moreover, much depends on the sector of exposure, the underlying contractual structure of the asset, and the strategic approach an investor may take.

For purposes of this discussion, we take a slightly different approach. To start with, we believe that most appreciate private infrastructure assets for their perceived defensive characteristics. What is often less clear is what types of assets may have the potential to perform better as longer-term risks materialize. To help figure this out we developed four long-term macroeconomic scenarios for the Eurozone (indicative archetypes). See chart 1 for details.

In addition to a base-case and a goldilocks scenario, we also felt it important to differentiate between secular stagnation (in which economic growth, inflation and interest rates all remain low) and stagflation (in which growth is low but inflation and interest rates rise over the medium term). We then analyzed how private infrastructure has historically performed in a changing macroeconomic environment with the help of big data, while also taking into account traditional macro-economic statistics and results from a benchmark-return analysis, explained in greater detail below.

Specifically, we started by analyzing the volatility in demand across various European sectors, mainly relying on Eurostat data for the period 2005-2016. From it, we concluded that demand for infrastructure on average historically tended to be less volatile than for other sectors. However, not all infrastructure sectors revealed the same resilience to business cycles in our analysis. Some sectors, including for example essential services, such as regulated water networks, education or healthcare, exhibited solid demand characteristics and low volatility historically. Other sectors appeared to be more exposed to a downturn, but also appeared to be supported by solid underlying long-term growth trends, which help reinforce demand fundamentals. For example, sectors such as airports or public transportation are typically positioned to capitalize on healthy long-term growth trends, but may be exposed to some volatility in the short term compared with other areas such as essential services.

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For the second step in our analysis, we relied on our proprietary database comprising over 300 infrastructure companies with publicly available data.[1] We tried to understand how changes in the macroeconomic environment may filter through the capital structure of assets across different sectors and used a panel regression analysis[2] of operating performance, capital expenditure (capex), leverage and free cash flow, with key macroeconomic variables including gross-domestic-product (GDP) growth, inflation and interest rates for purposes of that evaluation. The knowledge gained from this analysis supports our view that income may well be predictable across most infrastructure sectors, but the source of this resilience to change varies in the macroeconomic environment.

More specifically, our analysis found that regulated sectors including water networks or electricity grids evidenced a somewhat solid level of resilience across most parts of the capital structure. Some other sectors, including for example airports or healthcare evidenced an overall long-term neutrality to macroeconomic changes across the capital structure and flexibility in operating performance, capex or leverage offering the potential to preserve dividend predictability. Other sectors, including ports, waste management, toll roads and rail freight have also historically demonstrated long-term dividend predictability, but also experienced some exposure to the macroeconomic cycle, particularly for operating performance and leverage. We believe this may represent a risk in case of a downturn, but also an important opportunity for growth and value creation in periods of economic expansion.

In our view, a helpful way to think about this may be to consider two different, widely used types of infrastructure-strategy styles. "Core strategies" are typically viewed as potentially having lower risks. Regulated water networks in mature markets would be one example. Such assets have historically provided a significant component of income yield, somewhat predictable and regulated revenues, as well as a longer-term investment horizon. However, the bond-like characteristics of such assets also make asset valuations quite sensitive to changes in interest rates. An increase in bond yields may cap valuations for core assets, even if, with a time lag, most regulatory frameworks allow for both inflation-indexed user tariffs, and the recovery of increases in interest rates.

By contrast, "core-plus strategies" target infrastructure assets with still moderate but slightly higher risk-return characteristics. They provide cash-flow visibility, but also have potential for some capital appreciation. An operational energy-from-waste business with an additional development component would be a typical example. In our analysis, core-plus infrastructure income has exhibited the ability to recover inflation in the long-term, while it only showed limited ability to absorb fundamental changes in interest rates in valuations. At the same time, income for core-plus assets has historically demonstrated the potential to grow at a multiple of gross-domestic-product (GDP) growth, thus supporting income and driving valuations in periods of economic growth, generally associated to rising interest rates. Growth may help offset the potential impact of increasing interest rates on valuations in the long term.

All this work, in turn, allowed us to model how different assets might do in the four long-term macroeconomic scenarios for the European economy outlined above. It helped us define an indicative, optimal strategic portfolio allocation across core and core-plus strategies for each scenario when looking at synchronized changes in GDP, interest rates and inflation. From our analysis, we determined that short-term changes in the macroeconomic cycle, such as a recession, remain an important factor in tactical investment decisions, but these tended to have more limited repercussions on private-infrastructure performance when investing for the longer term.

Across long-term macroeconomic scenarios, we believe that infrastructure investors may be able to benefit from constructing portfolios diversified across core and core-plus assets (see chart 2). We also feel that core, regulated infrastructure is key to balance systemic risk in a portfolio and to hedge against interest-rate changes in the long term, but capital-growth potential may be limited. In our base case, we believe that interest rates should remain lower for longer to support economic growth. In this context, considering an allocation to core-plus infrastructure, where assets may still exhibit a predictable dividend component but also be positioned for some growth, may help to improve risk-adjusted returns longer-term.

1 Mostly, this is because these infrastructure companies are listed. We used their financial performance in the past to see how comparable private infrastructure assets might do in the future.
2 A panel regression analysis is a widely used statistical method to identify whether one set of variables (such as, in this case, GDP growth) appears to have an identifiable and significant impact on another set of variables (such as capital expenditure by infrastructure companies in various sectors).

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FOUR LONG-TERM MACROECONOMIC SCENARIOS FOR EUROPE

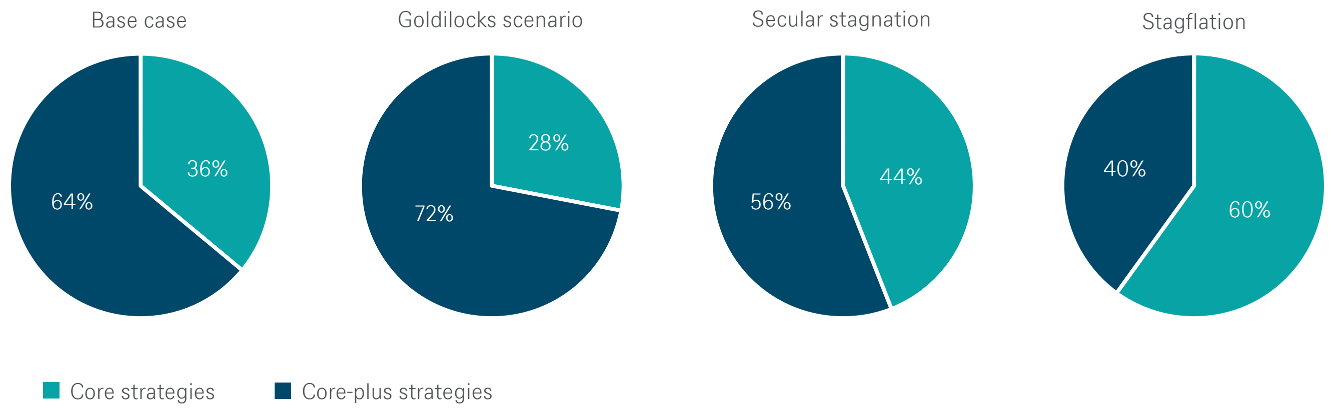
Our scenarios are intended as indicative archetypes. The goal is to see how different types of private infrastructure assets might perform over a wide range of plausible outcomes.

		GDP growth (real*)	Inflation (CPI**)	Interest rates (10-year government bond)
Macro scenario (10-year)	Goldilocks scenario	High	Low	Low
	Base case	Moderate	Low/ Moderate	Low/ Moderate
	Secular stagnation	Low	Low	Low
	Stagflation	Low	High	High

* In economics, a real value is adjusted for inflation.
** Consumer price index (CPI)
Sources: Oxford Economics, Eurostat, DWS Investment GmbH as of May 2019

INDICATIVE OPTIMAL INFRASTRUCTURE PORTFOLIOS

Our analysis suggests that building infrastructure portfolios with complementary characteristics can help boost risk-adjusted returns in all four scenarios.



Source: DWS Investment GmbH as of May 2019

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September 30, 2019

Ready for sideways trading

Central banks have pushed valuations up, leaving little upside potential. We stick to equities and hedge portfolios.

- Economic data, interest rates, central-bank policies and equity valuations, all give little hope of high returns, even in the absence of recession.
- In this environment we stick to equities and higher-yielding bonds, while waiting for tactical opportunities.

Christian Hille
Head of Multi Asset

Expansive central banks continue to dominate global markets. Bonds in total worth more than 15 trillion U.S. dollars currently yield negatively worldwide. Fewer and fewer investment-grade bonds are being issued with positive yields. But negative interest rates at the long end and the inversion of the U.S. yield curve point to economic concerns that have also been keeping interest rates low. The unhappy word "recession" has made the rounds in the last quarter, especially in mid-August, according to data on online search queries. Some of the macro data, too, is negative. According to Purchasing Managers' Indices (PMI), the industrial sector has been contracting for some time in many industrialized countries. In Germany, the composite PMI[1] in September fell to its lowest level in seven years. In addition, a near-term revival in capital spending looks unlikely. The continuing trade conflicts between the United States and China and the United States and Europe, together with Brexit, continue to be big disincentives to investment. The attack on two important Saudi Arabian oil plants was a further setback for global confidence. It showed the fragility of vital energy infrastructure and how quickly major supply shocks can occur.

In terms of inflation the threat of such attacks are not the desirable demand-pull kind that would alleviate deflationary worries. Rises in oil prices caused by a supply shock would simply hurt consumers and deter spending, adding to the downward pressures on growth.

Inflationary risks, however, have almost been forgotten at present. No amount of money printing appears to drive consumer prices up. But it has contributed to inflation in asset prices. The return on many bonds in recent years has come primarily from price increases rather than coupons. More than 85% of the return on 10-year German government bonds in the past five years has come from rising prices. Now with 10-year Bunds trading with negative yields and assuming yields won't fall further, bond investors would seem to be faced with two possible future scenarios. Either stable yields, giving little to no further return from price increases and therefore a negative total return; or rising yields and a painful fall in bund prices – and therefore again a negative total return[2]. Either way, it doesn't look good.

[1] Purchasing Manager Index from IHS Markit
[2] Given a relatively flat yield curve, otherwise some return could be achieved through the "roll-down" effect. See also: https://dws.com/insights/cio-view/charts-of-the-week/cotw-2019/chart-of-the-week-20190802

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GOLD IS PROFITING FROM LOW REAL YIELDS

Lower opportunity costs and economic expectations are reflected in lower real yields that are likely to benefit the gold price.

Sources: Refinitiv, DWS Investment GmbH; as of 9/23/19. May not be indicative of future results.

What about other asset classes? Gold, which tends to be popular with nervous investors in turbulent times, and especially at a time of low real yields (see chart above) for its potential to reduce the opportunity cost of holding the non-interest-bearing yellow metal, is trading at an 8-year high. The Japanese yen, often used as a safe-haven currency, has been appreciating for about a year. Even the most prominent of all cryptocurrencies has had a strong year, reaching its year-to-date high at the end of June, before economic worries peaked and the U.S. yield curve of 10- and 2-year Treasuries inverted. And equities? The S&P 500, is prancing around at its historic high of just over 3000 points. The consensus view is that earnings per share (EPS) will grow by just over 10% next year.[3]

We expect only half that. And while the S&P 500 is already at twice its last high before the financial crisis, the MSCI AC World ex USA Index is only slightly higher than in mid-2007, thanks to dividends. Even in the American market there is a fly in the soup: in the past 12 months, only the big caps were on the up: the S&P 500 gained 2.5%, the smaller-cap Russell 2000 lost 8.6%.[4]

Longer-term structural developments have also remained a constant worry for the markets: frailer growth, modest productivity gains, record global debt (319% of GDP in the first quarter) and an aging population in big parts of the world. But calls for fiscal stimulus, which would mean more debt, are getting louder. For the capital markets the implications have been worrying. The conundrum for investors is to generate a positive real rate of return when the 10-year real government yields of all the major industrial nations are negative: Japan at -0.7%, the United States at -0.9% and Germany at -2.1%. Where is yield supposed to come from, the desperate asset manager might ask the equally desperate client?

There is, however, a lot going on below the surface of the main equity indices, within commodities and in different bond maturities and rating classes. We believe the active portfolio manager may have some leeway to tickle a little more yield from the market after all. Equity markets, for example, have been displaying for some time a twofold split in valuations across sectors. Companies seen as having little to offer have a price-earnings (P/E) ratio of around 5, while others trade

[3] Refinitiv, data as of 9/24/19
[4] As of 9/23/19

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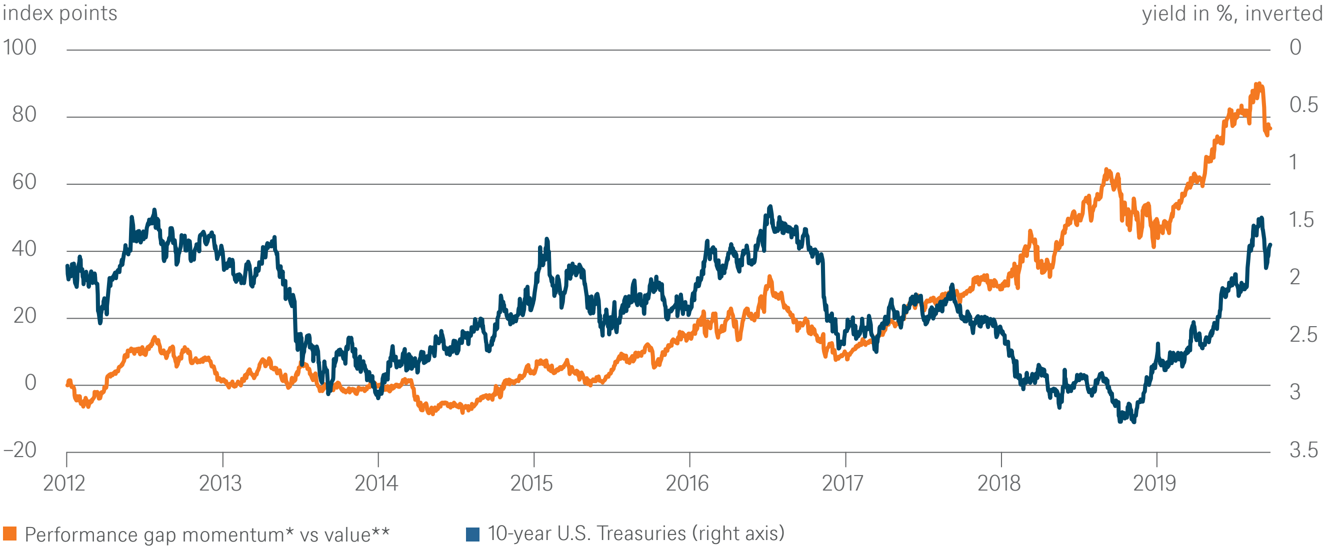
above 20. The winners keep on winning, the losers are sold on. As a result, the valuation premium of growth stocks over value stocks surpassed July 70% for the first time in July – higher than at the previous peak, in the year 2000.[5] The valuation premium of momentum versus value stocks, which was still at 30% at the end of 2017, is now approaching the 100% mark. As the following chart shows, this year in particular the sectoral trend was highly correlated with 10-year U.S. Treasury yields. The correlation was also evident at the beginning of September, when both curves suddenly reversed. Momentum stocks, which had previously performed extremely well, suffered one of their biggest declines in a few sessions compared to value stocks in a violent rotation of sectors and styles.

LOW YIELDS ARE OF LITTLE USE FOR VALUE STOCKS

While the correlation isn't always perfect, this year has shown how much growth and momentum stocks are profiting from lower yields, unlike value stocks.



* MSCI World Momentum Index
** MSCI World Enhanced Value Index
Source: Refinitiv and DWS Investment GmbH; as of: 9/23/19

[5] MSCI World Growth Index and MSCI World Enhanced Value Index

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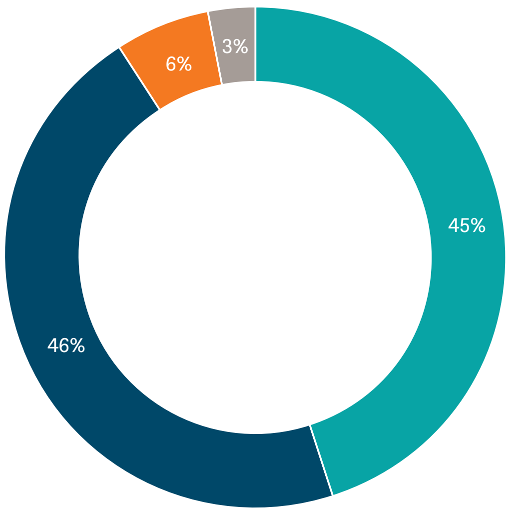
What does this mean for asset allocation?

Has the turnaround come? We don't think so. The above-mentioned sector rotation came to a standstill in mid-September and government bond yields tended to weaken again after two surprisingly strong weeks. We assume interest rates will trade sideways over the 12-month horizon and do not expect further violent rotations of sectors or styles while the stock rally persists. Our base scenario remains that we do not expect a recession in the coming twelve months, nor a marked revival in economic growth. In an interest-rate environment characterized by "lower for longer", we believe there is still no way past equities. However, the shaky global economy, unpredictable trade conflicts and Brexit are likely to continue to cause volatility. Our regional preferences remain the developed markets, especially the United States and Eurozone. In the United States we favor growth and quality stocks, in the Eurozone cyclical ones, making our overall portfolio balanced.

For bonds, the situation is clearer after the latest central-bank meetings, but the U.S. Federal Reserve (Fed) continues to have scope to loosen policy further if it chooses. The search for positive yields remains challenging. We see that as an argument for emerging-market hard-currency government bonds. In corporates we prefer euro- to dollar-denominated bonds, not least because the European Central Bank (ECB) is now once again a price-insensitive buyer in the European market. U.S. government bonds and, on the currency side, the Japanese yen for diversification purposes could eventually be considered to be worth contemplating about. Given the low real yields, gold remains a potential portfolio hedge.

MULTI-ASSET ALLOCATION FOR EUROPEAN INVESTORS

Profiting from ongoing trends, seeking opportunities and watching for risks



Equity	**45%**
Equities United States	25%
Equities Europe	6.5%
Equities emerging markets	5%
Equities Global Style	5%
Equities Japan	3.5%
Fixed Income	**46%**
Euro investment grade	13%
Eurozone sovereigns	11%
U.S. Treasuries	8%
Emerging-market (hard-currency) bonds	7%
Euro high yield	5%
U.S. high yield	2%
Alternatives	**6%**
Convertibles (euro-hedged)	3%
Commodities	3%
Cash	**3%**

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 and can be changed at any time without notice. Alternative investments involve various risks and are not necessarily suitable for all clients or for every portfolio. Source: Multi Asset Group, DWS Investment GmbH as of 9/10/19

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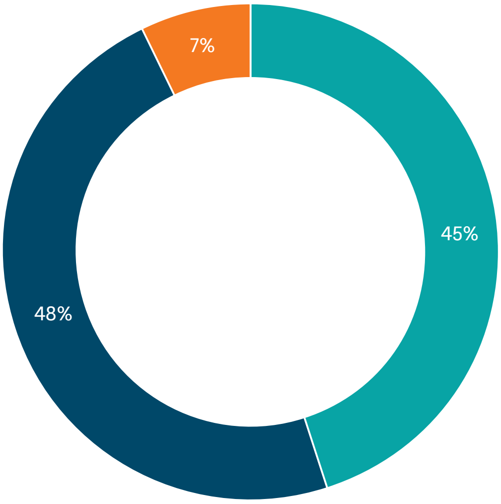
MULTI-ASSET ALLOCATION FOR ASIAN INVESTORS

Profiting from ongoing trends, seeking opportunities and watching for risks



Equity	**45%**
Equities United States	27.5%
Equities Europe	7.5%
Equities Asia ex Japan	6%
Equities Japan	4%
Fixed Income	**48%**
U.S. Treasuries	15%
Asia Credit	14%
Emerging-market (hard-currency) bonds	10%
U.S. high yield	5%
U.S. investment grade	4%
Alternatives	**7%**
Convertibles	4%
Commodities	3%

The chart shows how we would currently design a balanced, dollar-denominated portfolio for an Asian investor taking global exposure. This allocation may not be suitable for all investors and can be changed at any time without notice. Alternative investments involve various risks and are not necessarily suitable for all clients or for every portfolio. Source: Multi Asset Group, DWS Investment GmbH as of 9/10/19

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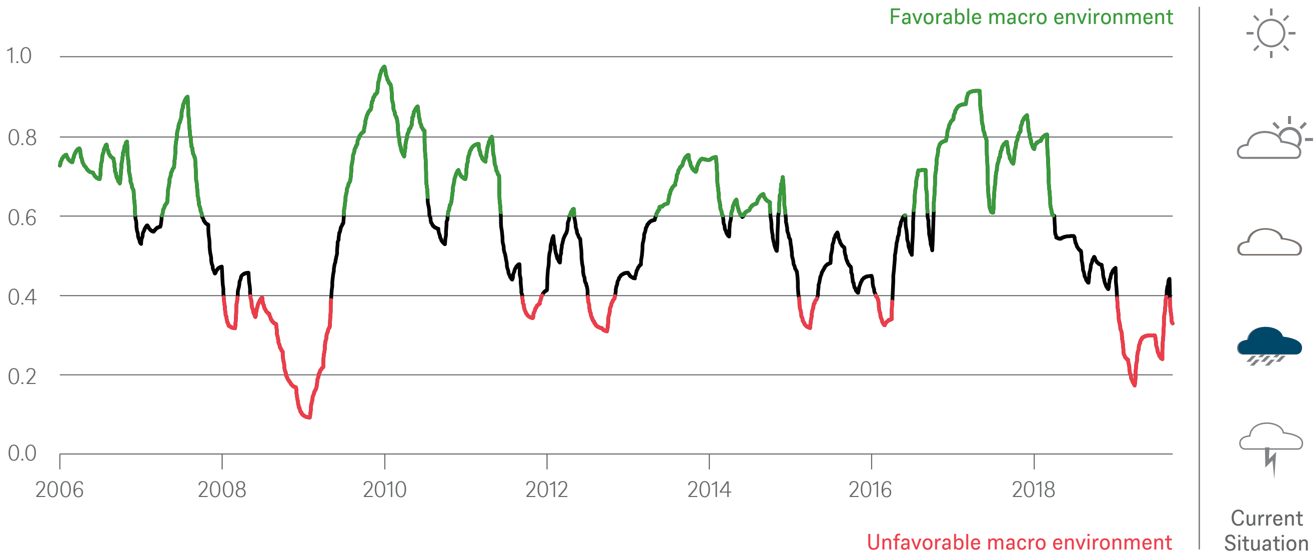
Prospects remain rather bleak

All three indicators show rather gloomy prospects.

For some time now, all three DWS indicators have been almost unanimously pointing to a negative environment. The brightening at the beginning of the second quarter proved to be no more than temporary. The macro indicator has improved a bit but is still negative – for the twelfth consecutive month. The surprise indicator suggests that analysts' expectations for 2019 as a whole were too optimistic and the risk indicator reflects investors' currently low risk appetite. The escalating trade disputes between the U.S. and China are further depressing investor sentiment. Despite some occasional temporary concessions, there are few signs that this serious trade-conflict episode is going to be resolved soon. Even if the tariff dispute between the two largest economies is resolved there is risk of the U.S. targeting Europe next. Further monetary-policy easing by global central banks may be one consolation for capital markets. But for now the bottom line is that the indicators point to a particularly fragile market environment.

MACRO INDICATOR / Condenses a wide range of economic data

The macro indicator recovered somewhat in August, but remains in negative territory in absolute terms. A slight recent worsening suggests a degree of caution is still required. The macro-indicator traffic light has now been red for more than 12 months.



Source: DWS Investment GmbH as of 9/19/19

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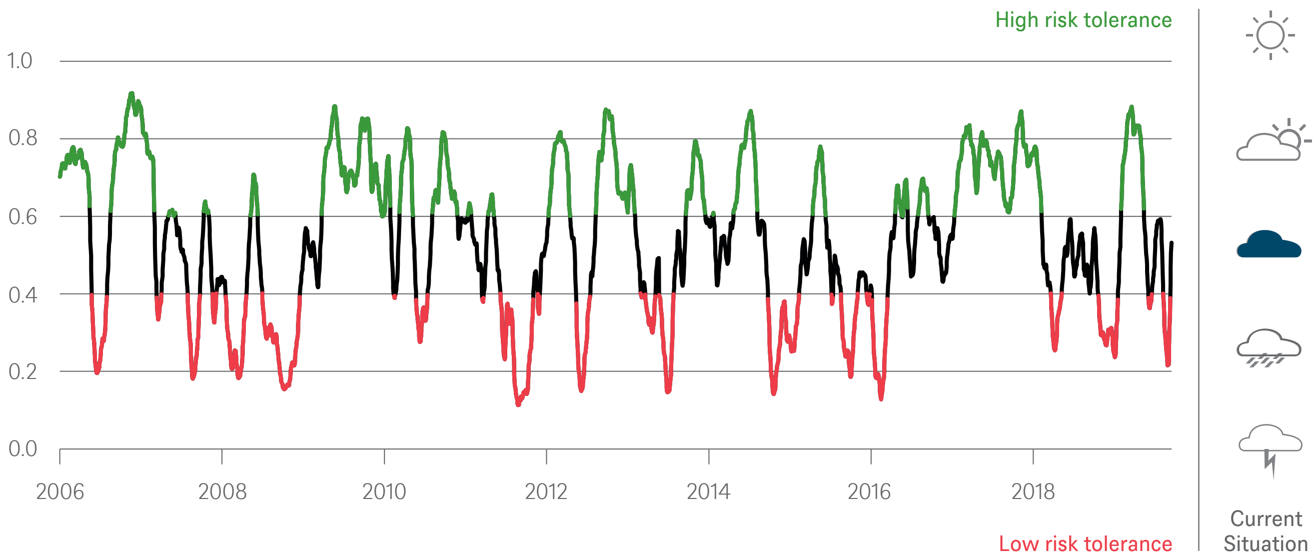
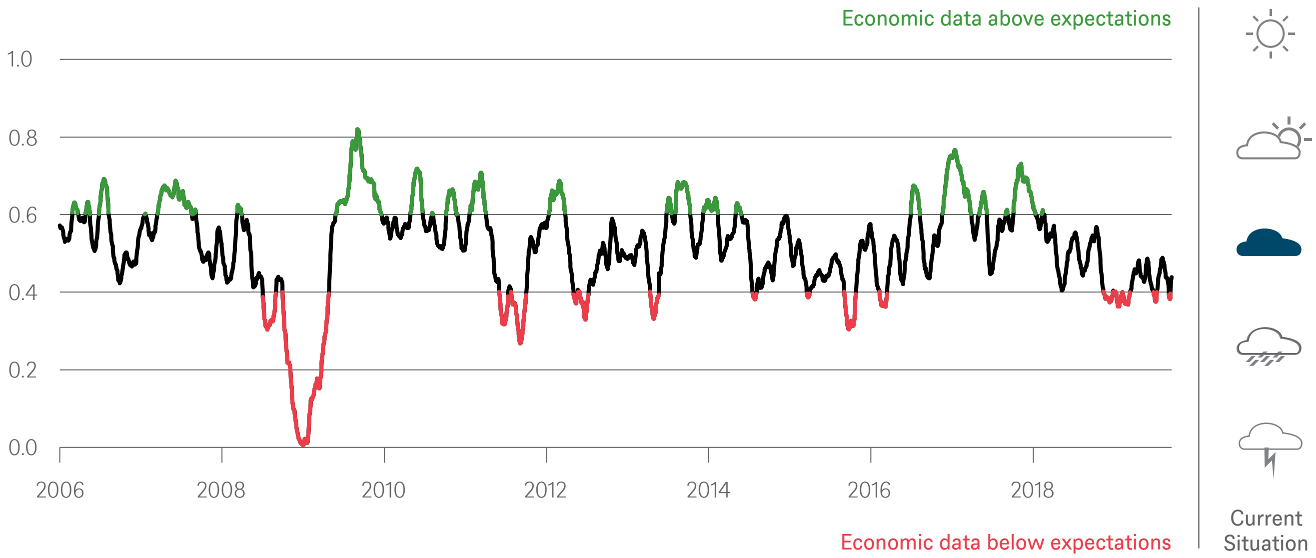
RISK INDICATOR / Reflects investors' current level of risk tolerance in the financial markets

The risk indicator has deteriorated significantly since the beginning of the year. The escalation in the trade conflict between the U.S. and China and the deadlines set by the U.S. in the trade conflict with Europe are just two contributing reasons. Continuing uncertainty over Brexit is another. The fact that there has been no marked further worsening of the trade dispute and yet more largesse from the ever generous central banks might explain the indicator's recent recovery: it is now just in green territory. But the recent attack on Saudi oil assets is not yet reflected in these figures.



SURPRISE INDICATOR / Tracks economic data relative to consensus expectations

The surprise indicator has been red for most of the year. But the regional sub-indicators have diverged substantially. The regions keep changing from negative to positive and vice versa, so that no consistent regional picture can be drawn.



Source: DWS Investment GmbH as of 9/19/19

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September 25, 2019

Climate-transition risk and asset allocation

A methodology that focuses on climate-transition risk may help to identify investment implications of moving toward a low-carbon economy.

_ Climate change remains a considerable risk for investors, but it presents investment opportunities across all sectors of the world economy.
_ From a sector perspective, we identify energy, materials, real estate and utilities as having some of the highest degree of climate-transition risk.
_ We believe investment opportunities are most concentrated in the information-technology, utilities and industrials sectors.

Petra Pflaum
CIO for Responsible Investments

Climate change continues to present a significant risk for investors, from financial losses incurred due to extreme weather events, to asset re-pricing when transitioning to a low-carbon economy and use of the legal system as a new instrument to enforce and accelerate climate-change action. However, we believe climate change could also present investment opportunities across all sectors of the world economy.

A traditional approach to assess climate risk within investment portfolios has been through carbon foot-printing – that is identifying the concentrations of carbon across the portfolio. However, this approach was not without its share of shortcomings, not the least of which was to capture information on changes in a company's carbon exposure or strategy. Data sets also have historically suffered from inconsistent company disclosure when it comes to greenhouse-gas emissions. Therefore, within the past few years, we have witnessed increasing efforts to improve ESG and specifically climate-related disclosure.

When it comes to integrating transition risk, a number of low-carbon-transition-risk methodologies are available, including those of MSCI, ISS-Oekom and Sustainalytics. The MSCI low-carbon-transition methodology is based on a carbon-intensity footprint measure. According to MSCI, 20% of the constituents of the MSCI All Country World Index (ACWI) face asset stranding or significant transition challenges.[1] ISS-Oekom calculates a carbon-risk rating which captures not just the carbon-related performance of the company, but also incorporates the company's industry-specific characteristics. It favors companies involved in clean-tech solutions and penalizes those with high greenhouse-gas emissions along their value chain. Finally, Sustainalytics provides its carbon-pillar risk rating that covers the emissions of the companies' own operations as well as the emissions of the company's products and services.

Given the variety of approaches available, DWS has designed and implemented a proprietary climate-transition-risk rating, which seeks to identify the risks and opportunities associated with a transition to a low-carbon economy. With it, an A to F rating system helps to identify climate-transition leaders and laggards by amalgamating the latest generation of climate-risk measures of MSCI, ISS-Oekom and Sustainalytics.

From our analysis, we have found that some of the highest- and excessive-transition-risk companies can typically be found

[1] Source: MSCI; low carbon transition categories and scores as of March 2019

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operating in the energy, materials, real-estate and utilities sectors while those companies with limited climate-transition risk are typically in the financials, communication-services and IT sectors.

How climate-transition risk might affect financial performance in practice is at the heart of this mapping exercise. For example, within materials, the need for key inputs such as water and energy in the mining sector will physically and financially constrain the establishment of new operations. On the other hand, new business opportunities might arise as demand for materials used in existing and future low-carbon energy and industrial technologies is likely to increase. Examples include copper, which is key for electrification and improving energy efficiency.

To address high carbon emissions in the transportation sector, governments, most notably in Europe, have begun to adopt stringent fuel-economy and emissions regulations. These include standards for carbon-dioxide and nitrogen-oxides emissions, which may not only see car manufacturers incur penalties due to missed emission-reduction targets, but also force companies to invest in new product strategies. As a result, we expect regulation and technologies to combine to eventually drive out internal combustion engines and enable e-mobility sectors to become key growth markets for carmakers. The oil sector widely dismissed the threat of electric vehicles, arguing as late as 2017 that they were a drop in the ocean of cars. However, leading car companies have already started to shift their strategy. According to Reuters, the world's leading automotive companies had committed 90 billion dollars to electric-vehicle strategies by January 2018.[2] According to Bloomberg New Energy Finance, incremental sales of electric vehicles are likely to exceed those of vehicles with internal combustion engines by 2020; by 2023 internal-combustion-engine sales may already be falling.[3]

When it comes to the fossil-fuel sector, investors may be financially impacted even before companies see the peak in fossil-fuel demand. For example, we have seen a significant re-pricing of equity valuations in the global coal and European-electricity sectors in response to new technologies and/or government regulation. The share prices of major U.S. coal producers are a case in point. Some of the leading companies saw their share price peak around 2011 at the point when rapid coal demand growth slowed. By 2014, global coal demand stagnated and the largest one had filed for bankruptcy.[4] Similarly, fossil fuels in electricity generation peaked across the OECD in 2007 at a time when solar systems and wind were just 1% of the electricity mix.[5] Shortly before then, the share price of leading German power utilities also peaked. Since then, assets in excess of 150 billion dollars have been written down, and the European power sector's capitalization has fallen substantially.

In order to enhance our asset-allocation process in light of ongoing asset-re-pricing risk, we aim to reduce exposure to climate risk, as well as capture low-carbon investment opportunities. Taking steps to identify the climate-risk leaders and laggards on a sub-sector and security level, might help to identify leaders in sectors that do not seem appealing on a headline-climate-transition-risk basis. From a sector perspective, we identify energy, materials, real estate and utilities as having the highest degree of climate-transition risk, before digging deeper. For utilities, for example, our analysis has found that the largest share of entities with excessive transition-risk was among independent power. Within materials, construction and then metals and mining were the most prevalent for climate-transition risks and within industrials, securities in the marine and airline sectors tended to be most exposed.

Aside from identifying where high levels of climate risk have a tendency to reside, we have also been able to identify the sectors, sub-sectors and individual securities where climate change could be providing the most opportunities. We found that such opportunities tend to be most concentrated in the information-technology, utilities and industrials sectors. Within IT, we found it specifically in the hardware and communications sectors. In utilities, it was among the water-utility entities and a small portion of the independent power companies focused on renewable parks while in industrials it tended to be in the electrical-equipment and building-producing sub-sectors.

2 Reuters (15 January 2018).
3 Bloomberg NEF (May 2019); Electric Vehicle Outlook 2019.
4 For details on this and the European electricity companies discussed below, see Carbon Tracker as of September 2018. According to their estimates, fossil fuels will peak in the 2020s as renewables looks set to supply all growth in energy demand.
5 BP Statistical Review of World Energy (1965-2018).

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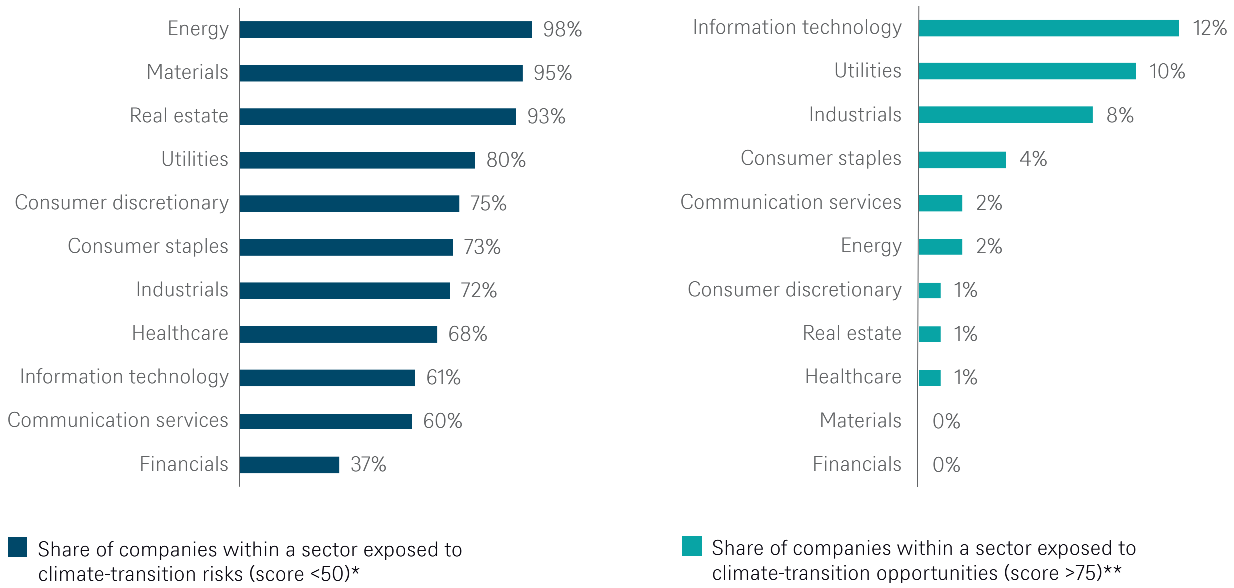
CLIMATE-TRANSITION RISKS AND OPPORTUNITIES BY SECTOR

Our proprietary climate-transition-risk rating, allows us to identify the risks and opportunities associated with a transition to a low-carbon economy in various sectors.



* Score <50 in the DWS climate-transition-risk rating
** Score >75 in the DWS climate-transition-risk rating
Source: DWS Investment GmbH as of 9/16/19

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September 5, 2019

MACRO / Rising risks

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

Region	2019F		2020F
United States	2.3	↘	2.0
Eurozone	1.2	↘	1.1
United Kingdom	1.3	→	1.3
Japan	0.6	↘	0.2
China	6.2	↘	6.0
World	3.3	↗	3.4

Fiscal deficit (in % of GDP)

Region	2019F		2020F
United States	4.4	↗	4.6
Eurozone	0.9	→	0.9
United Kingdom	1.6	→	1.6
Japan	3.3	↘	2.7
China	4.8	↘	3.8

Consumer price inflation (in %, year-on-year)

Region	2019F		2020F
United States[1]	1.9	↗	2.0
Eurozone	1.4	→	1.4
United Kingdom	1.9	↗	2.0
Japan	0.7	↗	1.3
China	1.7	↘	1.8

Current-account balance (in % of GDP)

Region	2019F		2020F
United States	–2.7	↗	–2.6
Eurozone	3.3	↘	3.2
United Kingdom	–4.3	↗	–3.8
Japan	3.2	↗	3.5
China	0.4	↘	0.2

Benchmark rates (in %)

Region	Current*		Sep 2020F
United States	2.00–2.25	↘	1.50–1.75
Eurozone	0.00	→	0.00
United Kingdom	0.75	→	0.75
Japan	0.00	→	0.00
China	4.35	↘	4.10

Commodities (in dollars)

	Current*		Sep 2020F
Crude oil (WTI)	55.4	→	54
Gold	1,498	↗	1,575
Copper (LME)	5,683	↗	6,300

* Source: Bloomberg Finance L.P. as of 8/22/19
[1] core rate, personal consumption expenditure Dec/Dec in % (no average as for the other figures)
F refers to our forecasts as of 8/22/19
WTI = West Texas Intermediate
LME = London Metal Exchange

Legend applies to 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 / Lean times ahead?

	Current*		Sep 2020F				
			Forecast	Total return (expected)[1]	Expected earnings growth	P/E impact	Dividend yield
United States (S&P 500)	2,923	↗	3,000	4.7%	5%	–2%	2.0%
Europe (Stoxx Europe 600)	374	→	370	2.5%	5%	–6%	3.6%
Eurozone (Euro Stoxx 50)	3,374	→	3,300	1.5%	5%	–7%	3.7%
Germany (Dax)[2]	11,747	→	12,000	2.2%	6%	–7%	3.3%
United Kingdom (FTSE 100)	7,128	↗	7,100	3.5%	2%	–3%	4.8%
Switzerland (Swiss Market Index)	9,806	→	9,800	3.2%	6%	–6%	3.2%
Japan (MSCI Japan Index)	906	→	910	2.9%	–4%	4%	2.5%
MSCI Emerging Markets Index (USD)	976	↗	1,000	5.5%	7%	–4%	3.0%
MSCI AC Asia ex Japan Index (USD)	605	↗	620	5.1%	6%	–3%	2.7%

* Sources: Bloomberg Finance L.P., FactSet Research Systems Inc. as of 8/22/19
[1] Expected total return includes interest, dividends and capital gains where applicable
[2] Total-return index (includes dividends)

Fixed Income / Negative yields all over the place

United States

	Current*		Sep 2020F
U.S. Treasuries (10-year)	1.61%	→	1.75%
U.S. municipal bonds[1]	80%	→	80%
U.S. investment-grade corporates	112 bp	→	105 bp
U.S. high-yield corporates	393 bp	→	440 bp
Securitized: mortgage-backed securities[2]	50 bp	→	35 bp

Europe

	Current*		Sep 2020F
German Bunds (10-year)	–0.64%	→	–0.50%
UK Gilts (10-year)	0.52%	→	0.95%
Euro investment-grade corporates[3]	120 bp	→	90 bp
Euro high-yield corporates[3]	370 bp	→	380 bp
Securitized: covered bonds[3]	49 bp	→	45 bp
Italy (10-year)[3]	195 bp	→	240 bp

* Source: Bloomberg Finance L.P. as of 8/22/19
[1] Ratio of 10-year AAA Municipal yield to 10-year U.S. Treasuries yield
[2] Bloomberg Barclays MBS Forward Index
[3] Spread over German Bunds

Asia-Pacific

	Current*		Sep 2020F
Japanese government bonds (10-year)	–0.24%	→	–0.10%
Asia credit	276 bp	→	295 bp

Global

	Current*		Sep 2020F
Emerging-market sovereigns	360 bp	↘	350 bp
Emerging-market credit	349 bp	↘	350 bp

Currencies

	Current*		Sep 2020F
EUR vs. USD	1.11	→	1.15
USD vs. JPY	106	→	105
EUR vs. GBP	0.90	→	0.89
GBP vs. USD	1.23	↗	1.29
USD vs. CNY	7.08	→	7.10

F refers to our forecasts as of 8/22/19
bp = basis points

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One basis point equals 1/100 of a percentage point.

A benchmark is an index or other value against which an investment's performance is measured.

The Bloomberg Barclays Global Agg Neg Yielding Debt Market Value Index calculates on a daily basis the value of all outstanding bonds worldwide with a negative yield.

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

A bull market is a financial market where prices are rising – usually used in the context of equities markets.

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

Capital expenditure (Capex) are funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment.

A central bank manages a state's currency, money supply and interest rates.

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

Collateralized loan obligations (CLOs) are securities backed by a pool of debt, such as low-rated corporate loans.

A corporate bond is a bond issued by a corporation in order finance their business.

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

Coupons are interest rate payments made on a bond.

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 current account includes trade in goods and services, a net-factor-income balance (e.g. earnings on foreign investments and cash transfers from individuals working abroad) and transfers (e.g. foreign aid). It is a part of the balance of payments.

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

Diversification refers to the dispersal of investments across asset types, geographies and so on with the aim of reducing risk or boosting risk-adjusted returns.

The dividend yield is the dividend that a company pays out each year divided by its share price.

Doves are in favor of an expansive monetary policy.

Earnings per share (EPS) is calculated as a company's net income minus dividends of preferred stock, all divided by the total number of shares outstanding.

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

Environmental, Social and Governance (ESG) is a way of assessing a company that investors increasingly use to screen potential investments, using environmental, social and governance criteria.

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 European Union (EU) is a political and economic union of 28 member states located primarily in Europe.

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

The federal funds rate is the interest rate, set by the Fed, at which banks lend money to each other, usually on an overnight basis.

The financial crisis refers to the period of market turmoil that started in 2007 and worsened sharply in 2008 with the collapse of Lehman Brothers.

Fiscal policy describes government spending policies that influence macroeconomic conditions. Through fiscal policy, the government attempts to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy.

A fiscal union is the integration of the fiscal policy of several nations. Decisions about the collection and expenditure of taxes are taken by common institutions.

Free Cash Flow (FCF) is a measure of financial performance calculated as operating cash flow minus capital expenditures. It shows how much cash a company is able to generate after deducting the money required to maintain or expand its asset base.

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.

The term Goldilocks economy refers to a state of the economy, where there is neither a threat of inflation due to an overheating economy, nor a threat of a recession.

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.

Gross national product (GNP) is economic statistic that measures what a country's citizens produced. It includes gross domestic product (GDP) plus any income earned by residents from overseas investments, but excludes income earned within the domestic economy by overseas residents.

Growth stocks are stocks from companies that are expected to grow significantly above market average for a certain period of time.

A hard currency is any globally traded currency that is considered as historically stable and can be exchanged easily.

A hedge is an investment to reduce the risk of adverse price movements in an asset.

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

IHS Markit is a listed company providing market data and information services for a variety of industries.

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

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 ISM Purchasing Manager Index, published by the Institute for Supply Management, measures economic activity by assessing the sentiment among purchasing managers. It is an important indicator of the economic health.

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

Leverage attempts to boost gains when investing through the use of borrowing to purchase assets.

Momentum refers to the rate of growth of an index or security's price. Momentum investors believe that strong growth is likely to be followed by further gains.

Monetary easing includes measures such as lowering interest rates, implemented by Central Banks with the aim of facilitating GDP growth or inflation.

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 ex USA Index captures large- and mid-cap companies across 22 developed- and 23 emerging-market countries, excluding the United States.

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

The MSCI ACWI Growth Index captures large- and mid-cap securities across 23 developed- and 26 emerging markets, classified as growth stocks.

The MSCI ACWI Value Index captures large- and mid-cap securities across 23 developed- and 26 emerging-markets classified as value stocks.

The MSCI All Country World Index (ACWI) captures large and mid-cap securities across 23 developed- and 24 emerging-markets.

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 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 USA Index is designed to measure the performance of the large- and mid-cap segments of the U.S. market.

The MSCI World Enhanced Value Index captures large- and mid-cap securities across 23 developed markets. The index is designed to represent the performance of securities that exhibit higher value characteristics relative to their peers.

The MSCI World Momentum Index captures large- and mid-cap companies with high price momentum across 23 developed market countries.

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

In economics, a nominal value is not adjusted for inflation; a real value is.

The Organization for Economic Co-operation and Development (OECD) started in 1948 as the Organization for European Economic Co-operation (OEEC) and changed its name in 1960, now representing 34 countries with democratic governments and market economies.

Periphery countries are less developed than the core countries of a specific region. In the Eurozone, the euro periphery consists of the economically weaker countries such as Greece, Portugal, Italy, Spain and Ireland.

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.

The Purchasing Managers Index (PMI) is an indicator of the economic health of the manufacturing sector in a specific country or region.

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

A rating is a standardized assessment of the creditworthiness of the issuer and its debt instruments by specialized agencies. The main three rating agencies are the Moody's (Aaa over Baa1 to C, best to worst) , S&P (AAA over BBB+ to D, best to worst) and Fitch (AAA over BBB+ to D, best to worst).

In economics, a real value is adjusted for inflation.

The real interest rate is the nominal interest rate adjusted for inflation as measured by the GDP deflator.

A recession is, technically, when an economy contracts for two successive quarters but is often used in a looser way to indicate declining output.

The Russell 2000 is an index that captures the 2,000 smallest stocks of the Russell-3000 index, which again comprises 3,000 small- and mid-cap U.S. listed stocks.

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 spread is the difference between the quoted rates of return on two different investments, usually of different credit quality.

Stagflation is the combination of the words "stagnation" and "inflation," referring to a period where inflation is high while the economy is stagnating.

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

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 U.S. Federal Reserve, often referred to as "the Fed", is the central bank of the United States.

Valuation attempts to quantify the attractiveness of an asset, for example through looking at a firm's stock price in relation to its earnings.

A valuation premium is the excess a buyer is willing to pay for one asset relative to other assets.

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.

A yield curve shows the annualized yields of fixed-income securities across different contract periods as a curve. When it is inverted, bonds with longer maturities have lower yields than those with shorter maturities.

PERFORMANCE / Overview

Performance in the past 12-month periods (%)

	08/14 – 08/15	08/15 – 08/16	08/16 – 08/17	08/17 – 08/18	08/18 – 08/19
Asia credit	2.1%	10.2%	2.4%	–0.9%	10.9%
Dax	8.3%	3.2%	13.8%	2.6%	–3.4%
Emerging-market sovereigns	–3.0%	14.8%	4.5%	–4.6%	13.1%
Emerging-markets credit	–1.1%	10.9%	5.8%	–1.4%	11.8%
Euro high-yield corporates	2.0%	6.8%	6.4%	1.2%	4.8%
Euro investment-grade corporates	0.4%	6.7%	0.6%	0.0%	6.7%
Euro securitized: covered bonds	2.1%	3.7%	–1.0%	0.4%	4.9%
Euro Stoxx 50	5.7%	–4.8%	16.1%	1.8%	3.8%
FTSE 100	–5.0%	13.0%	14.0%	4.1%	1.4%
German Bunds (10-year)	2.3%	8.0%	–2.0%	1.2%	8.5%
Italy (10-year)	4.7%	9.0%	–3.3%	–6.6%	22.1%
Japanese government bonds (10-year)	2.0%	3.8%	–0.4%	–0.5%	3.6%
MSCI AC Asia ex Japan Index	–16.1%	12.9%	24.8%	2.8%	–6.3%
MSCI AC World Index	–5.8%	7.9%	17.8%	12.0%	0.3%
MSCI Emerging Market Index	–22.9%	11.8%	24.5%	–0.7%	–4.4%
MSCI Japan Index	4.2%	2.9%	13.7%	9.0%	–5.6%
S&P 500	0.5%	12.6%	16.2%	19.7%	2.9%
Stoxx Europe 600	9.4%	–1.9%	12.5%	5.7%	3.0%
Swiss Market Index	5.0%	–3.7%	12.4%	4.0%	14.0%
U.S. high-yield corporates	–2.9%	9.1%	8.6%	3.4%	6.6%
U.S. investment-grade corporates	–0.4%	9.1%	1.9%	–1.0%	13.0%
U.S. securitized: mortgage-backed securities	2.7%	3.9%	0.8%	–0.5%	7.1%
U.S. Treasuries (10-years)	3.4%	7.0%	–1.4%	–3.1%	13.7%
UK Gilts (10-years)	5.4%	12.3%	–1.0%	–1.1%	9.2%

Source: Bloomberg Finance L.P. as of 8/30/19

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