

Panorama

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Mid-Year 2018 | UBS Asset Management



Opportunities in a maturing cycle

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In this edition of *Panorama: Mid-Year*, our senior asset class and allocation experts assess the potential challenges and opportunities for investors over coming months.

This edition explores:

- How a maturing US economic cycle and the prospect of lower returns and higher volatility may affect asset class attractiveness
- How rising US interest rates are changing the game for fixed income investors, and why it may pay to be nimble in the coming months
- Views from our other investment areas on the outlook for liquid and alternative asset performance
- Views from our sustainable, systematic and emerging market equities teams

The following pages bring you distinct viewpoints, drawn from the full breadth of our global capabilities to help you meet your investment challenges.

For more of our views and forecasts, and for previous editions of *Panorama* including 'Investing in 2018: Challenge and opportunity ahead', visit ubs.com/am-insights.



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Lavonne Kuykendall and Beth Roberts

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Suni Harford
Head of Investments

Time to think differently

2018 has already brought with it a fresh set of challenges for investors. Market conditions year-to-date have contrasted, sometimes sharply, with the low volatility and lower-for-longer narrative that dominated the broader market backdrop for much of the post-financial crisis. Inflationary fears have raised their head in the US for the first time in a decade. Broad-based geopolitical risks are also notably more elevated as populism continues to assert itself into the political mainstream and as President Donald Trump's "America first" mantra unsettles the global trade status quo.

Inflationary fears have raised their head in the US for the first time in a decade.

Yet we should not forget that while the global growth impulse has become less synchronized, the residual growth rate remains robust and above trend. As Erin Browne, Head of Asset Allocation, points out in the following pages, the current US economic cycle may be the second longest since 1945, but there are good reasons to believe that the recent tax reform will spur a reacceleration in US demand growth. Monetary policy outside of the US also remains accommodative.

Nonetheless, returns from risk assets are likely to be lower in the coming years than investors have been used to. Given the combination of macro-economic uncertainty and heightened geopolitical risk, it also seems likely that the overall volatility regime will be higher for all asset classes compared to the low levels of volatility in 2017.

We therefore see this as an environment in which investors will have to think differently, work harder, and be more precise in their quest for attractive risk-adjusted returns. 'Buy and hold' has generally worked well across asset classes since the financial crisis but investors may simply have to become more tactical.

Charlotte Baenninger, our Head of Fixed Income, makes precisely this point, arguing that investors may benefit from thinking outside of traditional bond exposures to protect from the potential

Floating rate bonds, short-duration credit and securitized investments all have attributes that make them attractive in this environment.

for rising rates globally and to exploit short-term opportunities as and when they arise. Floating rate bonds, short-duration credit and securitized investments all have attributes that make them attractive in this environment. There is also innovation from our sustainable and impact investing team who argue compellingly why ESG criteria need to be part of fundamental credit analysis and not a separate overlay to be most effective.

Within global equity markets, higher volatility is likely to go hand-in-hand with higher security dispersion—which may provide high conviction active investors with a much more attractive environment to add value than has prevailed for much of the post financial crisis period.

The dislocation within emerging markets has long-provided a rich source of potential alpha for skilled investors—yet events in Turkey, Argentina, Brazil and others have raised the spectre of a repeat of 2013's 'taper tantrum'. Geoffrey Wong, Head of Emerging Market and Asia Pacific Equities, explains why EM governments and corporates are in much better shape financially to weather the twin threats of a stronger USD and higher USD funding rates—and argues that the EM cycle is still in its infancy.

Our ongoing efforts to deliver more sustainable alpha across our active investment teams means constantly challenging the effectiveness of our investment processes.

The search for more cost-effective alpha has seen strong institutional flows into equity factor investment mandates over the past year. In our view (page 16), isolating individual factor premia is critical to the efficient use of the risk budget, to reducing systematic risks, to lowering drawdowns and to generating the more consistent alpha contributions that all investors seek.

Perhaps the most significant challenge facing multi-asset investors in the coming years is whether the negative correlation between equities and bonds will hold. Multi-asset investors have been able to call on government bonds as a simple and effective portfolio diversifier to global equities over the past decade. History suggests that any sustained rise in inflation will see the statistical relationship between debt and equities become more positive—threatening the effectiveness of the asset allocation of a large number of investors. Against this backdrop we see the focus on alternative assets including infrastructure debt and private equity growing still further. We believe that one of the most compelling diversifying

strategies in the current environment is merger arbitrage (page 28). On the deal side, cash-rich corporate balance sheets are driving record levels of M&A, while geopolitical risks are helping to make the arbitrage risk spread unusually high. The combination should make for a particularly attractive opportunity set that is uncorrelated to traditional asset classes.

With a breadth of insights across both traditional and alternative asset classes, we trust you will find our mid-year update thought provoking and helpful in facing the investment challenges that lie ahead. In an environment of heightened risk and opportunity, thinking differently is likely to be a key to success.

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The big picture

Global macro-economic and tactical asset allocation outlook



Erin Browne
Head of Asset Allocation,
Investment Solutions

In recent weeks it has become clear that the rate of acceleration in global economic growth has moderated from the very strong level indicated in late 2017 and in early 2018.

Growth rates by country and region are also more differentiated and less synchronized—with the relative strength of the US amidst this moderation a noteworthy development. Importantly however, while the pace of acceleration may be slowing overall in the global economy, the residual growth rate remains robust and above-trend. With monetary policy in aggregate still accommodative, we do not see the recent moderation as heralding a more meaningful demand downturn or an imminent global recession.

In the US, the current growth cycle is already long by historical standards. As of May, this expansionary phase is the second longest since 1945. Nonetheless, the Tax Cut and Jobs Act passed late in 2017 and the spending bill passed earlier this year are likely to provide a significant boost to the US economy at a

time when such demand drivers may otherwise have been slowing more significantly without the fiscal stimulus.

More specifically, tax code reform is helping to support a sharp increase in US corporate capital expenditure. This gives us confidence in longer-term productivity growth and the sustainability of demand growth despite the length of this cycle. Indeed, we believe that US demand growth may reaccelerate later in the year. Consumption growth remains healthy and is likely to be similarly bolstered by the boost to disposable income from the recent tax cuts. While the US economy is not immune to the negative impacts of high oil, the recent spike in energy prices does not represent a material drag on growth prospects due to the growing importance of US oil exports. In fact, energy-related employment and capital investment continues to rise sharply.



Overall US unemployment levels are very low in an historical context and continue to fall. With the number of job openings exceeding the number of unemployed workers for the first time in 17 years, we believe that the US is now at or at least very close to full employment. This is likely to support stronger wage growth in the coming months, albeit from relatively low levels. As the output gap closes, we see inflation continuing to edge higher.

Against this backdrop US monetary policy remains mildly accommodative at current levels. Real policy rates remain around zero. Despite the obvious increase in the Fed's confidence in the growth and inflation backdrop, their overall rhetoric remains neither clearly hawkish nor clearly dovish. According to the minutes of the June FOMC meeting, the "risks to the economic outlook appear roughly balanced." We therefore do not believe that the Federal Reserve will deviate from its current gradual approach to policy normalization unless confronted by a sustained acceleration in inflation data or other evidence that the US economy is overheating. While at some point the Fed will be forced into a

restrictive monetary policy stance, neither the data nor rhetoric suggests that this is in any way imminent, not least given that a strengthening USD is already tightening financial conditions for US consumers and corporates.

In a global context the strength of the US is beginning to contrast ever more sharply with the rest of the world, where growth rates appear to be moderating more substantially. Continental Europe has the unwanted distinction of having swiftly evolved from the region where economic data was surprising most consistently to the upside to the region where economic data has been surprising most consistently to the downside. In part we believe that the recent softening of both lead indicators and hard data reflect a number of one-off factors such as

unusually high employee illness rates amidst a prolonged cold weather snap, as well as the timing of public holidays. But while the economy continues to grow modestly above-trend, there is no disguising that growth rates in both the services and manufacturing sides of the Eurozone economy are softening in the short term. Higher input costs driven by the oil price are likely to be playing a significant role here. By country, the recent composite PMI data showed the sharpest declines in France and Germany. The most recent announcements from the ECB implicitly recognize this recent softness. In its June statement the ECB announced that its purchasing of assets would stop as expected at the end of 2018. However, the ECB also said that it would continue to reinvest the proceeds of maturing bonds "for as long as necessary to maintain favorable

In a global context the strength of the US is beginning to contrast ever more sharply with the rest of the world.

liquidity conditions". The ECB also pushed back any hike in official policy rates until at least the summer of 2019.

Meanwhile, initial euphoria at the prospect of wide scale Eurozone reform and integration inspired by the election of Emmanuel Macron to the French presidency has dissipated. In Germany, an uneasy coalition has been agreed between Angela Merkel's Christian Democrats and the Social Democrats. In Italy, the political backdrop is complex and uncertain. Initial attempts by the populist party of the far right, the Northern League, and the anti-establishment 5 Star Movement to form an unlikely coalition government were rebuffed by the Italian president's veto of the parties' choice of an anti-euro finance minister. In the face of soaring

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Italian bond yields, a swift compromise was reached. Nonetheless, the parties' apparent commitment to lower taxes and higher spending continue to concern investors. The political risk premium in European assets is likely to remain elevated with two non-mainstream parties leading an Italian government that may challenge the Eurozone's existing fiscal rules. All this comes at a time when the European Union's negotiations with the UK appear to have stalled on issues including the Irish border.

Elsewhere, recent data suggests that the moderation in Chinese demand growth rates continues as policies aimed at rebalancing the economy and reducing debt kick-in. Clearly any sustained trade war with the US would negatively impact Chinese growth rates. On June 15, President Donald Trump announced new tariffs amounting to USD 50 billion in response to what the US claims has been the systematic theft of intellectual property by China. The Chinese authorities have threatened to respond in kind. Having begun trade negotiations on relatively friendly terms and with the sense that economic pragmatism would ultimately prevail, the most recent rhetoric appears to represent an escalation in tensions and a step closer to a full blown trade war. Meanwhile, the June 1 inclusion of China A shares in MSCI's widely followed emerging markets index is a small but nonetheless important step in

China's assimilation into the global capital markets system.

In Japan, recent data has been mixed. GDP for calendar Q1 contracted after eight successive quarters of growth—the longest period of uninterrupted expansion since the late 1980s. There are a number of reasons to believe the weakness is temporary. On the income side, profits growth and wage growth are accelerating. Exports also remain strong. Yet there is scant evidence to date of this strength feeding through to inflation despite the relative tightness of the domestic labor market. There are some positives for risk assets from this overall global moderation. Monetary policy outside of the US is likely to stay looser for longer. The unwinding of emergency policy conditions, which we already believed would be gradual, may now take place over an even more extended period. Recent dovish rhetoric from key officials at the European Central Bank and Bank of Japan, both major contributors to global liquidity, and from the Bank of Canada and Sweden's Riksbank, all support this view.

In our view, it is only the US where there is evidence of any sustained increase in prices. And even here, inflationary pressures are relatively moderate. Nonetheless, with the Fed now alone among major central banks in pursuing a more aggressive tightening regime and the US benefiting from fiscal

We do not see rising nominal bond yields as a de facto negative for equities.

stimulus while growth elsewhere moderates, we see short-term support for the USD even if our longer-term view remains more negative.

Overall we retain a positive view of global equity markets given above-trend underlying global demand growth and more attractive valuations after recent earnings strength. We do not see rising nominal bond yields as a de facto negative for equities. Historically, equities have struggled when real 10yr yields have exceeded real GDP growth. Even in the US we are still some way from such restrictive financial conditions. Nonetheless we are particularly wary of any structural increase in correlations between equities and government bonds. With the range of potential growth, inflation and interest rate outcomes globally broadening, a moderate and sustained increase in the volatility regime for all major asset classes is likely in comparison to 2017.

Paced by the US in particular, global corporate earnings have also been very strong. The most recent quarterly earnings season for the S&P 500 was the strongest in a decade. We do not see the US or global equities more

broadly degrading significantly in the face of such robust corporate profitability. Equities globally remain attractively valued against both government bonds and corporate bonds. Stronger-than-expected corporate earnings growth and increasing capital returns to shareholders are likely to remain key supports in the coming months to US equities in particular.

Emerging market equities have struggled in recent months in the face of a strengthening USD and rising USD rates. Uncertain economic backdrops in Argentina and Turkey in particular have also raised concerns of a return to the volatility of the 'taper tantrum.' We remain optimistic. We do not dispute that a stronger USD and higher US yields present headwinds to EM countries with material external funding requirements, nor that within EM's

broad universe there remain less favorable political and economic forces. But in aggregate EM demand growth is strong, inflation low, and policy in aggregate still accommodative. We also note the rise in intra-EM trade as an important factor in reducing the potential impact on EM countries (excluding Mexico) of a reduction in US trade. With global growth momentum still positive, we see attractive valuations and rising margins as more than offsetting the potential headwind of tightening financial conditions via a stronger USD and higher US treasury yields.

In Europe, short-term earnings momentum has been negatively impacted by a stronger euro. That strength has now reversed. We believe that the structural earnings recovery story has further to run - supported by the potential for regearing, higher dividend growth and buybacks and operational gearing due to margin expansion. We note that in the short-term, geopolitical concerns may overshadow fundamentals, but over the longer run we still believe that European assets offer good value.

Emerging market equities have struggled in recent months in the face of a strengthening USD and rising USD rates.

In Japan core inflation remains muted despite the closing of the output gap. This supports a very gradual adjustment of current loose monetary policy. However, after the recent outperformance, we are now slightly less optimistic on Japanese equities as political and overheating risks increase. In addition, any strengthening of the JPY is unlikely to be greeted positively by equity investors given the sensitivity to export volumes.

In the world of fixed income, our view on global duration remains negative. The higher oil price is likely to continue to support higher nominal bond yields. Meanwhile, we see core inflation continuing to tick upwards as higher input costs spill over into consumer pricing, output gaps close and wage growth accelerates across developed countries. Structural deflationary forces including technology and demographics are still likely to limit the overall repricing of inflation risk however. Swiss and German bonds continue to look very overvalued and, in our view, have an increasingly asymmetric risk profile. The Swiss economy is relatively strong and we see Swiss bonds as vulnerable to attempts to normalize monetary policy by a Swiss National Bank increasingly concerned by the strength of the housing market.

Elsewhere we are more positive on Australian and Canadian duration on a relative basis. In our view, both economies are vulnerable to a housing market correction after very strong recent performance.

Within the world of credit, current default rates in high yield are still very low by historical standards. And given the supportive low rates and global growth backdrop we do not expect any material pick-up in US corporate debt defaults in the near-term. However, after the significant spread compression we do not view the risk/reward as attractive. Elsewhere, we see emerging market debt yields as attractive relative to still robust credit fundamentals.

We identify higher-than-expected US inflation, geopolitics and a China hard landing as the three principal risks to global risk assets. In the US, inflation is likely to continue to tick higher but we believe that structural deflationary forces including demographics and technology will continue to limit the scope for price rises. In China, we believe that the authorities have sufficient tools at their disposal to respond quickly if the slowdown accelerates. On geopolitics, our focus is on the uncertainty in Italy and on US and China trade negotiations. While we retain a positive view of global equity markets, geopolitics in general and rising protectionism in particular are therefore perhaps the most immediate threat to risk assets.

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Key investment views

Changing allocations Q4 2017 – Q2 2018

Traditional asset classes

Erin Browne, Head of Asset Allocation, Investment Solutions

Since the year-end 2017 edition of Panorama our key asset allocation calls have not changed substantively. At the headline asset class level we remain positive on global equities given attractive valuations against bonds, earnings strength and above-trend global growth. Against a backdrop of higher oil prices and slowly rising inflation, our negative view on global duration remains similarly unchanged.

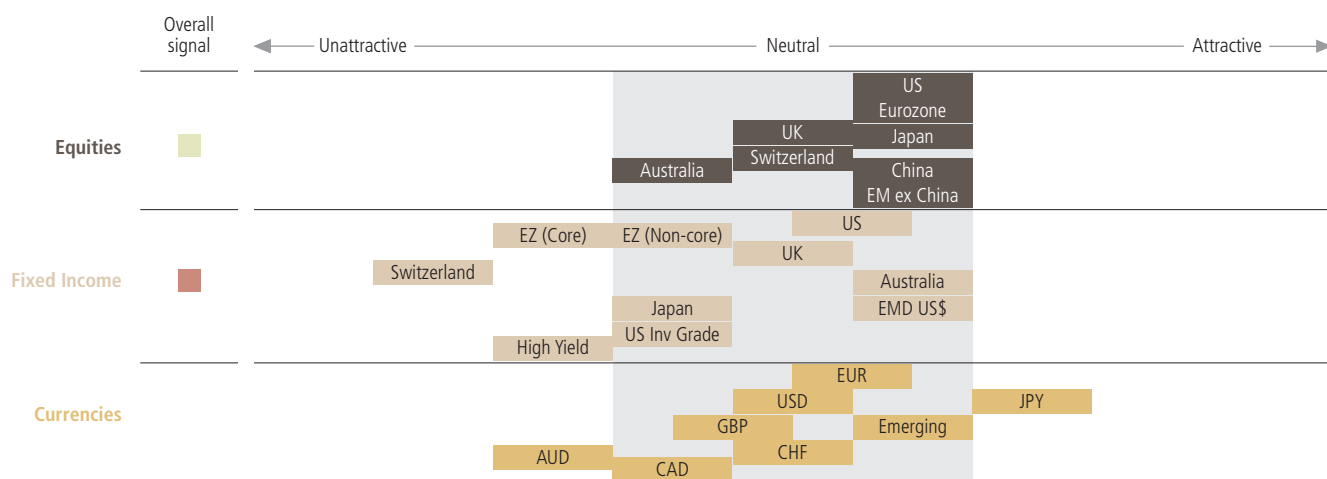
Within equity markets however our preferences on a relative basis have evolved. They are now more nuanced and tactical. Compared to six months ago we retain mildly less positive stances on emerging markets, Japanese and European equities. In Japanese equities our previously very positive view has tempered in the wake of significant outperformance. In emerging markets we remain positive on a medium-term horizon given compelling valuations and what we believe is

self-sustaining demand growth. But with forthcoming and potentially controversial elections in Turkey, Mexico and Brazil, political concerns may dilute the narrative in the short-term before fundamentals reassert themselves. In Europe, we await further evidence that earnings growth is coming through amidst the headwind of increased geopolitical risk.

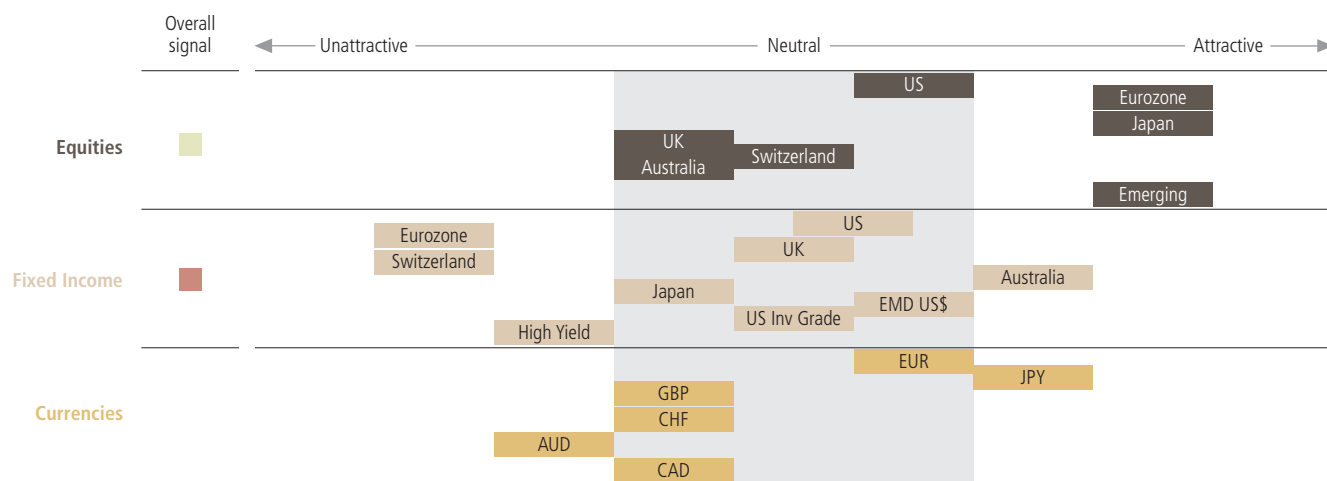
Across major fixed income and credit markets our views are also little changed with yields in many major government bond markets seemingly range-bound. Despite the widening in spreads over the past six months we retain a positive view on emerging market debt's attractive real yield.

Overall signal =  Positive  Negative 

Traditional asset classes, and currencies—as of June 22, 2018¹



Traditional asset classes, and currencies—as of November 30, 2017¹



¹ Source: UBS Asset Management's Asset Allocation and Currency team, as of June 22, 2018 and November 30, 2017 respectively. Views are provided on the basis of a 12–18 month investment horizon, are not necessarily reflective of actual portfolio positioning and are subject to change.

Hedge Fund Solutions

Bruce Amlicke, Chief Investment Officer, UBS Hedge Fund Solutions

Today, markets gyrate with each headline from Washington. As it pertains to global trade, headlines have made some sector and geographical investing quite challenging. While over time these news flashes may have a diminishing impact on markets, participants continue to price in higher uncertainty and thus volatility. This can be evidenced not only in cross-asset implied volatilities but also in more idiosyncratic areas like cross border merger deals.

In addition, with signs of further interest rate hikes, market participants have begun to view the US as if it is in the latter stages of economic expansion. The aging of the bull market has shown up as asset allocator shifts typical of late cycle phenomena, such as towards assets tied to inflation (i.e. financials and commodities) are occurring.

The ways that market technicals drive volatility were exemplified in Q1 2018 when the dramatic volatility surge (in the equity market sell off) forced further reductions of equity exposure. While initial catalysts for February's moves were possibly as mundane as investors rebalancing portfolios after a strong January start for equities, the price moves were exaggerated by technical selling from systematic strategies including risk premia, risk parity, volatility targeting, short volatility positions and trend-following strategies. Interestingly, most hedge funds were able to maintain their gross exposure due to strong performance, which supported alpha during the risk-off move.

Fundamentally, the inflation backdrop remains uncertain, regardless of fiscal stimulus. While the output gap in the US does appear to be closing and rate hikes have accelerated, long-term deflationary trends (disruptive technology, the demographics of developed markets, the globalization of labor and consumption) are very real and possibly underappreciated forces. Coupled with the sudden deterioration in

European economic data, and a surprisingly firmer footing of the Asian economic cycle, the picture is less clear. It is therefore possible that inflation could stay muted for some time despite market expectations.

In Equity Hedged, we expect global alpha generation to be positive, but muted after a period of strong performance. All eyes are watching technology and momentum. Market technicals may again come into play if weakness persists, potentially forcing managers to de-risk from elevated levels. In our Equity Hedged allocations, we prefer catalysts over crowded thematic approaches. We expect geography will continue to matter and we prefer exposures in Asia and Europe over the US.

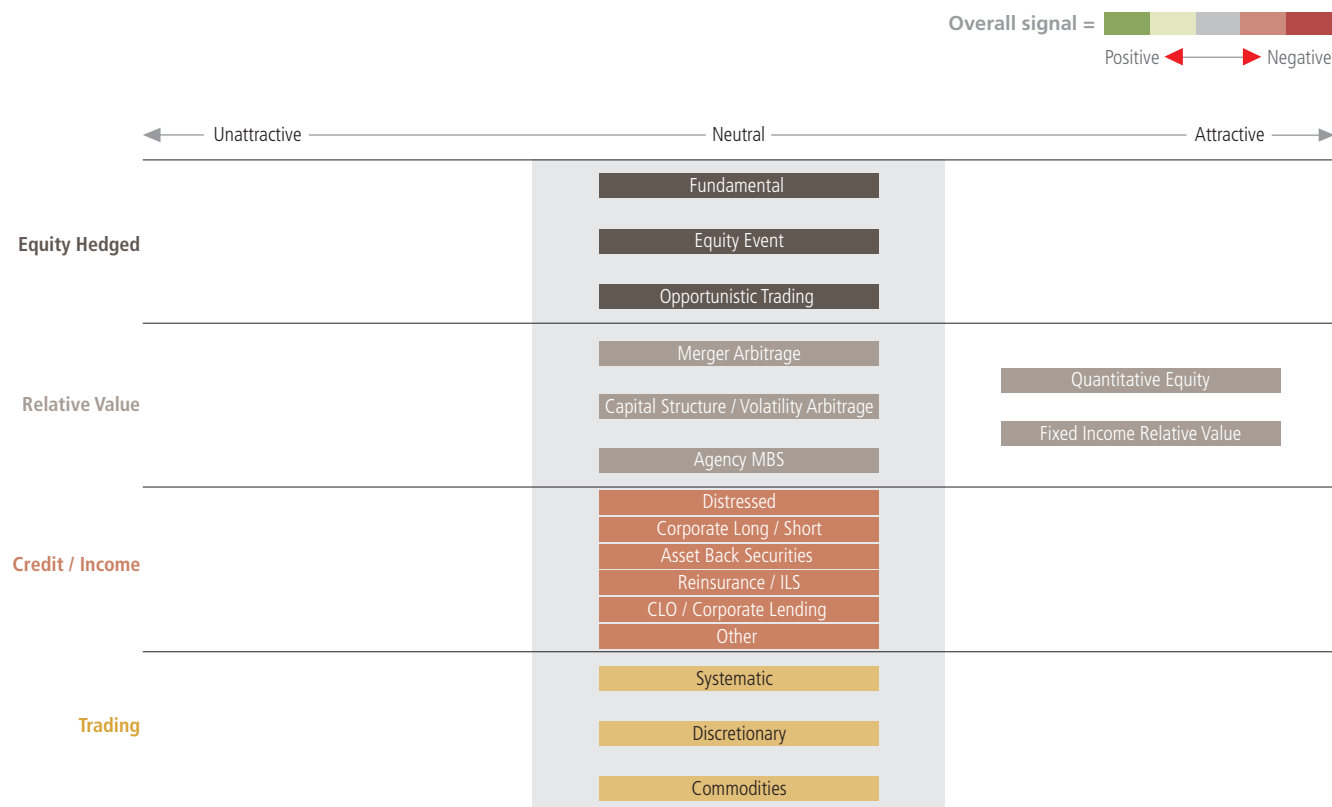
Towards the end of Q1, overbought credit markets retraced some of their recent gains and spreads widened. This is natural in a more volatile market environment. However, we believe the story to follow closely is how expected US interest rate hikes begin to impact credit markets. With leverage high in corporate America, companies that falter may start to run into difficulties refinancing or servicing debt. In the meantime, we find high quality asset-backed and cash flowing securities, including mortgage credit and reinsurance to be attractive. This is an environment where active management and agile portfolio management can pay dividends.

Relative Value strategies can ideally deliver a consistent return, with additional alpha if volatility remains elevated. Our conviction in Fixed Income Relative Value is particularly strong due to increased rate volatility and flows, despite an overall flatter US yield curve. Idiosyncratic risk and return dispersion also led to a strong first half of the year for both statistical arbitrage and fundamentally-based quant strategies. There have also been tailwinds in the event-driven space due to tax reform, deregulation and repatriation.

The discretionary trading community has largely been involved in reflation themes over the past year, and it finally paid off recently as US rates moved higher and curves flattened. Tactical trading in equities has provided strong gains for many who took advantage of cheap implied volatility in Q4 2017 to establish punchy upside exposure to a move higher in equities—and then were able to take gains before markets

reversed. Emerging markets have also continued to provide good alpha, despite some wobbles amid risk-off sentiment. Long EM local rate trades (Greece, Argentina, Egypt) and short US rates (hedges) proved profitable on both the long and short side of portfolios. We are cautious about overall EM beta exposure and confident that managers can capture a more two-way opportunity set this year.

Hedge Fund Strategies—Forward looking view as of Q2 2018²



² Source: UBS Asset Management's hedge fund team, as of Q2 2018. Views are provided on the basis of a 12–18 month investment horizon, are not necessarily reflective of actual portfolio positioning and are subject to change.

Multifactor investing

Meeting the challenge of cyclical factor premia

Urs Raebisamen, Senior Equity Specialist, Systematic and Index Investments team

Both academic as well as practitioners' research have identified factor premia—or styles—that are widely believed to add value in the long term. The most commonly accepted are value, momentum, quality, low risk and size (small minus large). That said, style performance and correlation can vary over time and through investment cycles.

For example, growth and momentum factors dominated global equity markets in 2017, while value and low risk investing underperformed. This continued into the beginning of 2018 and even well into February, as inflation scares triggered a short

market correction. Only in March, when geopolitical risks started to dominate investors' agenda, styles started to behave differently. This serves as a powerful reminder that a static bet on one style can lead to suboptimal results.

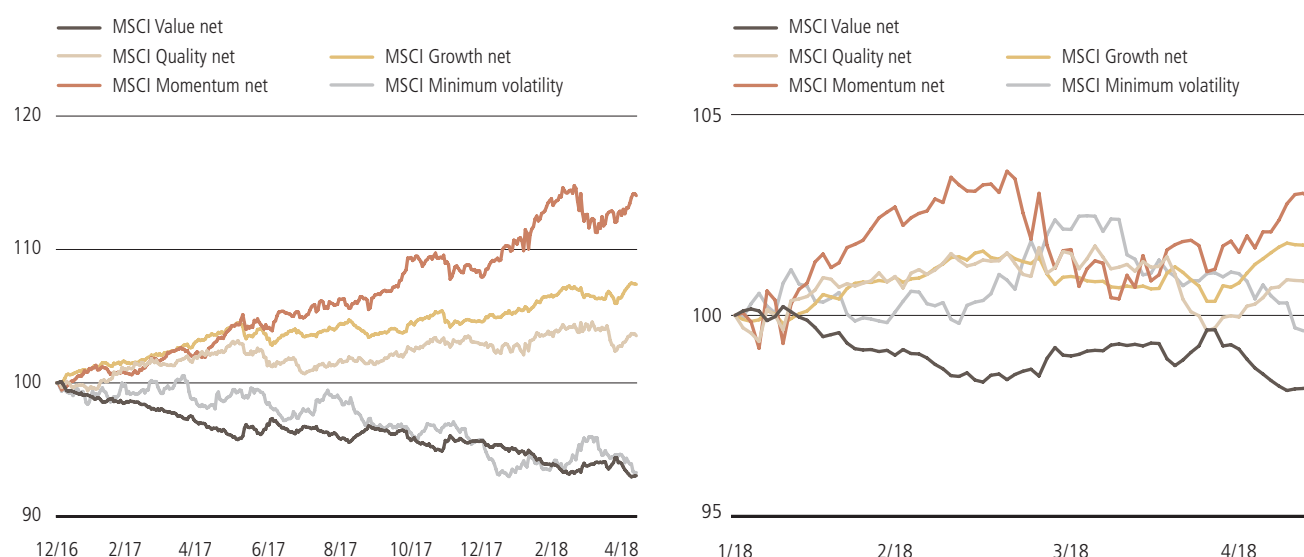
We believe this is particularly relevant now as risks of a regime shift in markets have increased. The rate of acceleration in global growth has moderated in recent months, and global demand growth rates are less synchronized. If geopolitical risks prevail, central banks' loose monetary policies gradually unwind, and the economic cycle matures, it is reasonable to assume that equity markets' will remain volatile.

Exhibit 1: Style ranking per calendar year – measured by MSCI World factor indices (net) (%)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
World	45.61	1.53	-4.46	-9.57	56.73	28.56	28.35	31.02	19.91	-29.23	42.05	18.19	8.04	16.69	32.66	12.06	5.82	10.27	32.59
Volatility	40.13	1.24	-8.03	-9.80	50.37	24.09	17.17	28.90	16.76	-33.47	41.87	16.54	4.84	16.54	30.28	9.01	4.54	9.38	26.64
Size	25.34	0.31	-10.03	-13.58	33.76	21.30	15.16	22.10	10.31	-39.92	33.75	12.76	4.79	15.01	27.74	7.03	4.25	8.86	23.92
Quality	20.48	2.13	-11.51	-14.38	30.51	20.76	10.02	21.20	9.57	40.33	33.49	12.34	4.43	14.79	27.37	5.50	0.32	8.18	23.07
Momentum	18.43	-10.21	-12.09	15.14	26.03	20.02	8.50	20.65	7.34	-41.92	30.79	11.36	5.02	13.66	26.53	4.56	-1.05	8.15	22.88
Value	8.62	-12.92	-16.52	-16.48	25.91	15.25	8.34	19.07	6.42	-42.39	17.18	9.15	-9.34	13.30	22.89	3.42	-2.38	5.12	19.17
Yield	8.42	-18.90	-20.46	-19.54	21.99	12.68	6.00	16.78	6.13	42.63	14.76	7.22	11.05	8.87	19.41	3.28	-2.73	4.75	18.04

Source: MSCI Inc., year-end 2017.

Exhibit 2: Cumulative relative returns of MSCI factor indices versus MSCI World net—comparison Jan. 1, 2017 to Jan. 31, 2018 vs Feb. 1, 2018 to May 11, 2018.



Source: UBS Asset Management, Bloomberg.

The solution: Isolate the specific components

In essence, investors have three ways of dealing with the challenges of the cyclicity of factor premia and changing correlations: a) active timing of factor premia, b) blending factor premia efficiently, or c) isolating the specific value-adding components of the factor premia and combination thereof. We presented our views on blending factor premia in the last issue of Panorama. In this edition, we will discuss the isolation of the specific components.

The basic idea of isolating the specific components is to build model portfolios that have true exposure to the respective factor premium they aim to harvest. For instance, two stocks can both appear to be driven by momentum. However, while one stock may be a true momentum stock, the other may just be a high beta stock having done well in upward markets. When constructing a momentum factor premium portfolio, we would want to only consider the true momentum stocks, not the ones that happen to have been correlated with momentum.

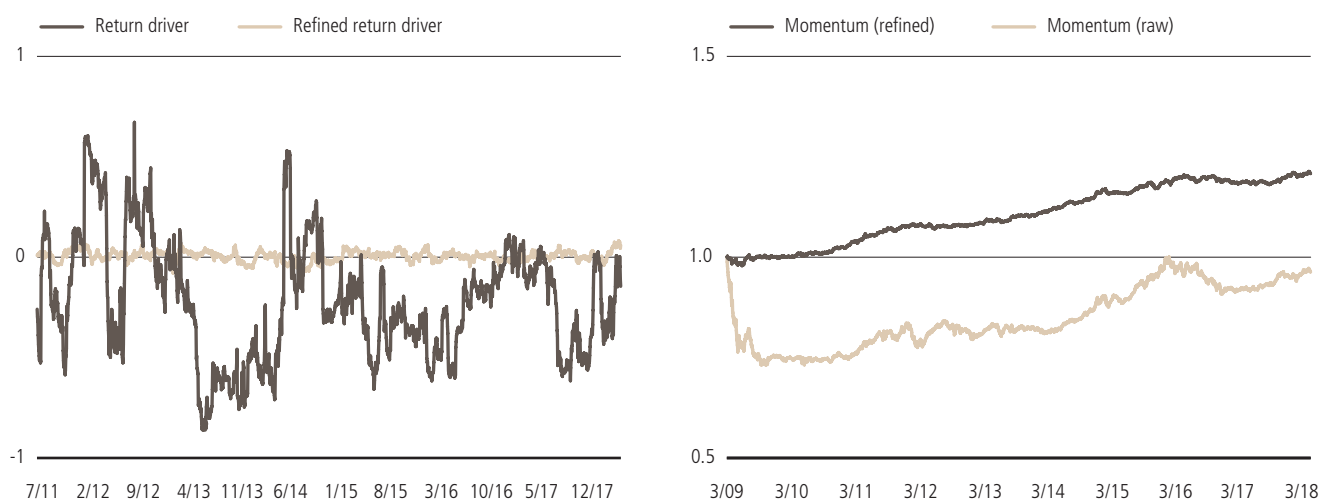
Our proprietary investment approach aims to achieve exactly that. Our multifactor models are industry-specific and consist of a series of factor premia-based investment themes—called return drivers: Valuation, Capital Usage, Profitability, Growth and Market Behavior. Through our refinement process, we aim to isolate the specific components of our industry-specific multifactor models. The resulting refined return drivers represent pure insights into a factor premium and have expected cross-correlations and correlations to systematic risks that are close to zero. This should allow for a more efficient use of the risk-budget, lower drawdowns and therefore more consistent alpha contributions.

Exhibit 3 on the next page, based purely on out-of-sample data—demonstrate that our refined return drivers exhibit the aforementioned desired characteristics such as ex ante correlations to each other that are more stable and much closer to zero compared to the ones of raw return drivers. Moreover, refined return drivers on average achieve higher risk-adjusted returns and lower drawdowns than raw return drivers. Therefore, refined return drivers offer a more efficient alpha source.

Exhibit 4 on the next page, plotting the refined return drivers of our live global multifactor model, demonstrates that none of the return drivers exhibited significant drawdowns and their combination produced a stable and value-adding alpha signal.

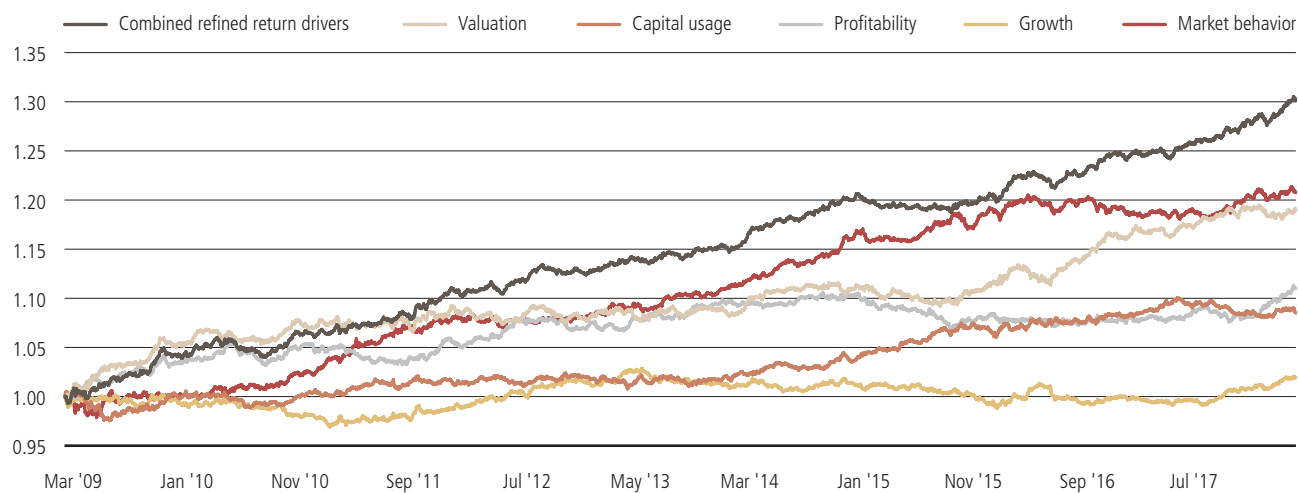
Besides the ability to create more stable and lowly correlated alpha signals, a proprietary approach to constructing factor premia indices is flexible in terms of further enhancements. In particular, non-conventional factors for instance based on ESG-related data, and improved ways to identify value-adding factors and methodologies, such as machine learning, can be applied.

Exhibit 3: Refinement creates return drivers with lower drawdown and lower and more stable correlations amongst each other



Source: UBS Asset Management, MSCI Barra, FactSet; based on our live global multifactor model. Data as of April 30, 2018.

Exhibit 4: Refinement creates return drivers better risk-adjusted returns



Source: UBS Asset Management, MSCI Barra, FactSet; based on our live global multifactor model. Data as of April 30, 2018.

More to go

The upcycle is not broken in emerging markets

Geoffrey Wong, Head of Emerging Markets and Asia-Pacific Equities

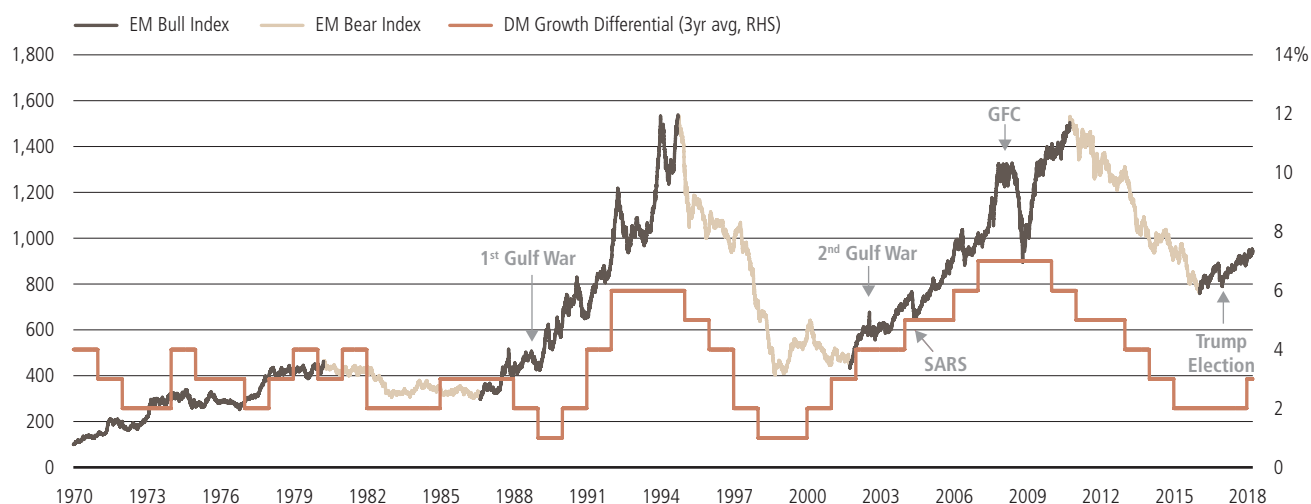
Although investors may have been worried, we believe the recent bout of volatility in emerging market equities was driven more by sentiment than fundamentals. While risks overall increased (including stronger USD/US rates, trade concerns and geopolitics), fundamentals have remained strong with continued positive earnings and economic growth across EM.

Absent a strong growth shock, we assume these risks will not derail the multi-year upcycle currently underway for emerging markets equities (see Exhibit 1). After being cut for several years, capital expenditure is on the rise again. This development should drive demand across emerging markets and support further improvement in corporate margins and earnings, although at a more moderate pace going forward.

Trade issues: An escalation of the trade conflict between US and China into a full blown trade war is not our base case. However, there are uncertainties as to how the situation might evolve. We believe US President Donald Trump wants a fairer trade playground and we believe China will be ready to offer some concessions (e.g. China recently ended the requirement for foreign car brands to set up a joint venture with a local company when building manufacturing facilities in China).

Stronger USD: A stronger USD may continue to overhang the performance of EM assets in the near term. However, we see reduced crisis risks for EM given the asset class is healthier than in the previous episodes of weakness (e.g., during the 'taper tantrum' in 2013). This is thanks to stronger fundamen-

Exhibit 1: EM: In the middle of a multi-year upcycle



Source: FactSet, Datastream, Bloomberg, Goldman Sachs Global Investment Research, data up to April 4, 2018. GFC: Global Financial Crisis of 2007/08, SARS: Severe Acute Respiratory Syndrome in the Guangdong province of China in 2002-2004.

Note: We used the MSCI World as a proxy for DM. For EM, MSCI EM was used from Dec. 1987 onward. Prior to this, the EM index was reconstructed using individual EM exchange-level data available at the time

tals both at the macro level via more balanced current accounts, more competitive exchange rates, less FX debt with localized exceptions and replenished FX reserves—and at the micro level via lower corporate indebtedness.

China: Rebalancing continues to offer investment opportunities

Looking across emerging markets, the Chinese economy continues to face many structural challenges, but we believe they will result in lower medium-term economic growth, accompanied by some volatility, rather than pose crisis risks. China has remained resilient at the macro level.

The rebalancing of the economic structure toward services should continue to provide investment opportunities, especially within sectors such as e-commerce, e-payments, social media, education and insurance. For the next few years, we expect China to focus on the quality of growth and to continue its reforms agenda including corporate deleveraging and environmental improvements.

India remains an attractive long-term story

In India, corporate earnings are beginning to improve but only gradually. While we currently see attractive bottom-up opportunities, we are also monitoring the macro risks, such as the widening trade and current account deficit.

In the nearer term, the government's focus on infrastructure spending continues to boost domestic sentiment. There should also be further fiscal support in the run-up to 2019 national elections, especially for the rural economy. The consumer remains somewhat robust and household sentiment has improved from last year.

We see India as an attractive long-term story and believe that the Modi government will continue to focus on removing bottlenecks and pushing through calibrated reforms to revive investments for sustained growth in the medium term.

Outside Asia—contagion risks and political uncertainties overshadowing economic improvement

We see limited contagion risks from Argentina and Turkey woes, which we believed are already reflected in currencies that have weakened against the USD, and inexpensive valuations. The situation is also quite different for many countries, primarily commodity producers, as commodity prices are currently strong despite the stronger USD, which should offer some buffer and offset the potential economic impact of tighter financial conditions.

Overall, while we don't view the upcycle as broken, risk perception has risen and we expect heightened stock price volatility going forward. We thus encourage investors to look through the noise and focus on long-term fundamentals and the continued economic recovery. Our analysis shows large opportunities exist in various sectors, including consumer, internet/e-commerce, and financials. While there are some small vulnerable spots in EM, we are mindful of these risks and have very limited exposures to these areas.

Changing times

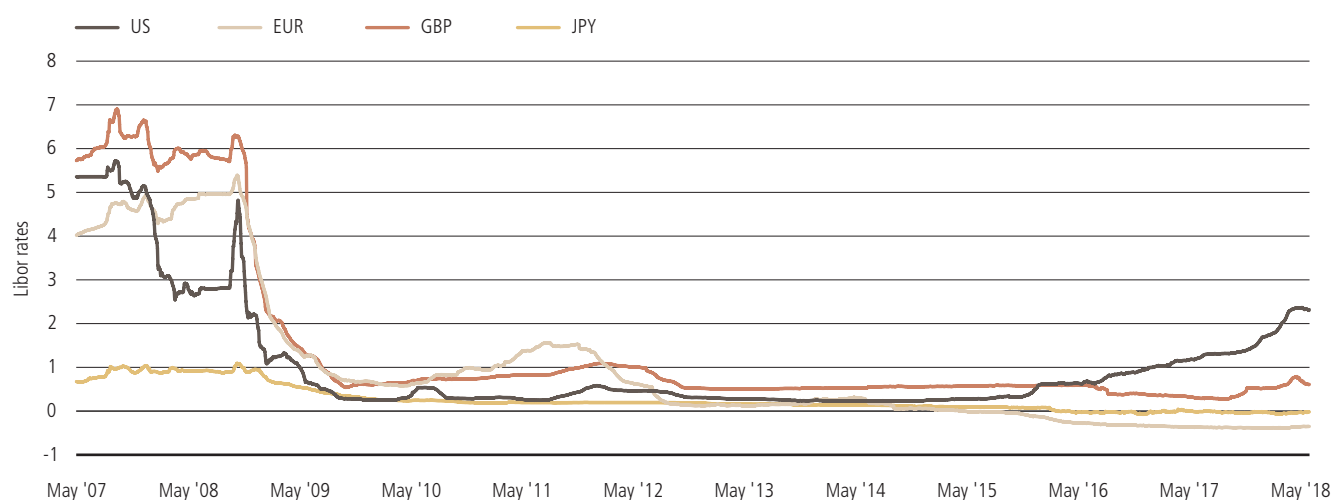
Fixed income investors need to stay nimble

Charlotte Baenninger, Head of Fixed Income

One of the most notable features of the global fixed income market in 2018 thus far has been the sharp increase in USD Libor rates—the market interest rate at which banks lend dollars to each other in London over various short-term horizons. Libor rates—and the spread between Libor and market expectations of the Federal Funds rate – are therefore widely watched benchmarks and seen by many as a gauge of overall credit market conditions. The 60 basis point increase in USD Libor since the start of the year to levels last seen in the financial crisis in 2008 (See Exhibit 1) has therefore prompted much comment and consternation. The increase, however, has not been accompanied by equivalent increases in EUR Libor or GBP Libor. This suggests very strongly that the increase reflects specific technical factors in the US market rather than investor concerns about overall bank creditworthiness.

In our view, the increase in US Libor likely reflects a combination of factors. US tax reform has precipitated a repatriation of US dollars held overseas by US corporations. This overseas cash had become a significant source of funding for global markets. The owners of this cash are not simply leaving this money on deposit once repatriated. By employing some of this cash for M&A and capital expenditure, demand for commercial paper and other money market instruments from corporates is falling. All this comes at a time when the widening US budget deficit is being funded by increased US Treasury Bill issuance. Unsurprisingly given the volume of issuance, the US Treasury is having to compensate investors with higher yields. In turn, this puts upward pressure on money market rates by ‘crowding out’ commercial paper markets. Despite the increase in front-end rates, volatility in global fixed income

Exhibit 1: Libor Rates



Source: Bloomberg Finance LP, as of May 31, 2018.

markets has remained relatively subdued. As the US Federal Reserve continues on its path of monetary policy normalization at a time when the issuance schedule for US treasuries is significant, we suspect volatility is likely to increase.

How to take advantage of the current environment

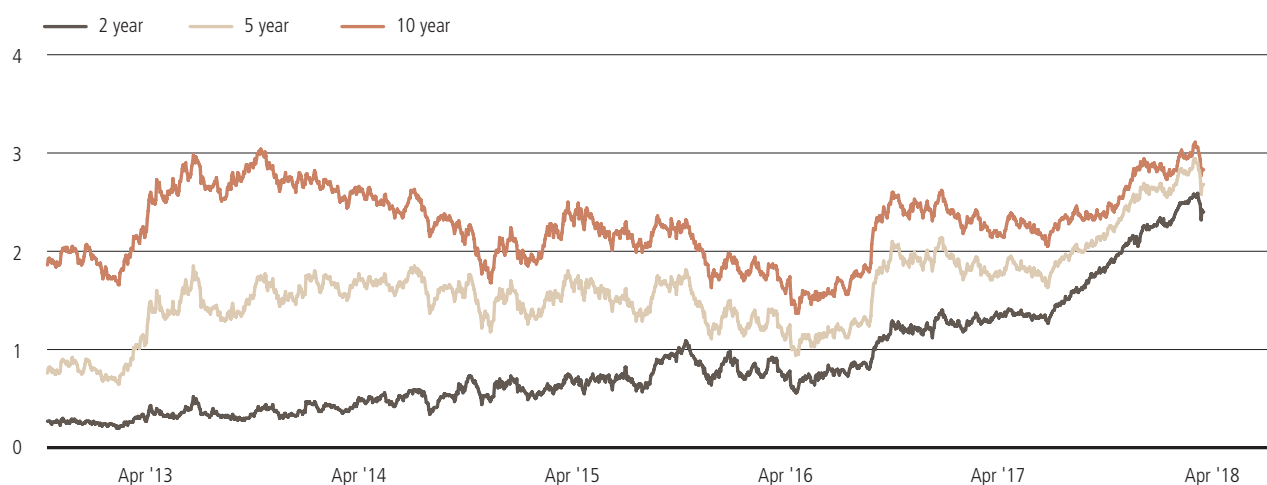
Floating rate bonds

Floating rate bonds have two components—one component is based on a floating reference rate, such as Libor, and a second component being a spread, which is based on the bond issuer's credit quality. Depending on the individual bond terms, the coupon is adjusted periodically, typically quarterly, so any increase in interest rates is soon reflected in the yields of the bonds. Therefore cash flow will increase in a rising rate environment. Because coupon rates mirror the market interest rate, floating rate bonds have very low price sensitivity to changes in interest rates.

Short dated credit

For investors concerned about a sustained increase in interest rates, credit exposure at the front end of the yield curve looks attractive. Given the tremendous flattening of the US yield curve that has occurred (Exhibit 2), short dated credit exposure looks particularly interesting on a risk-adjusted basis. We believe carry (coupon earned) provides a solid income stream with limited downside risk given fundamentals in corporate credit continue to look healthy. And while leverage has increased in some segments, a focus on shorter maturity issues increases the ability to project the financial health of issuers.

Exhibit 2: Yield curve flattening 2-, 5- and 10-year US Treasuries



Source: Bloomberg Finance LP, as of May 31, 2018.

Securitized investments

Securitized assets such as mortgage-backed securities (MBS), asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS) possess many positive attributes including enhanced yield and the secured nature of the bonds. In the current environment perhaps one of the more important and underappreciated attributes is the diversification these assets can provide. Securitized bonds exhibit low historical correlations to both investment grade and high yield corporate credit. For example, in Exhibit 3, agency mortgage-backed securities exhibit moderate correlation to investment grade credit and virtually zero correlation to high yield.

For bondholders who have benefitted from traditional corporate credit over the last several years, incorporating securitized assets into a broader portfolio construct can potentially help reduce volatility and enhance risk-adjusted returns. Moreover many of these securities, particularly CMBS, have floating rate features.

Exhibit 3: Correlations

	Agency MBS	ABS	CMBS
IG Corporate	0.54	0.54	0.48
HY Corporate	0.02	0.59	0.73

Source: Bloomberg Barclays; all data annualized as of December 31, 2017.
IG Corporate = Bloomberg Barclays U.S. Investment Grade Corporate Index. HY Corporate = Bloomberg Barclays U.S. High Yield Corporate Index. Securitized = Bloomberg Barclays U.S. Securitized Index.
MBS = Bloomberg Barclays U.S. Mortgage-Backed Securities Index.
ABS = Bloomberg Barclays U.S. Asset-Backed Securities Index.
CMBS = Bloomberg Barclays U.S. Commercial Mortgage-Backed Securities Index

Staying the course

Economic fundamentals should continue to support real estate

Paul Guest, Lead Real Estate Strategist

Over the remainder of 2018, economic fundamentals should be supportive of further solid real estate performance. Transaction volumes will likely remain near long-term averages, rental growth should remain healthy, particularly in the prime segment, and as yet we do not expect a meaningful move outwards in yields.

Positive trends such as above-average consumer spending and business investment growth in Europe, fiscal stimulus in the US or an upswing in global trade are all worth noting.

But we also take note of the lingering fragilities, such as anemic consumer spending in Japan, growing credit risks amongst emerging markets, and slow wage growth in the developed economies.

The solid performance of real estate relies on supply remaining under control and this, of course, varies by market. But where supply growth has been strongest we have either seen or expect to see a downward adjustment in rents, e.g. Singapore or London office markets, or have seen very strong levels of demand growth that have compensated, e.g. in US multi-family residential or in global logistics.

Price gains are now concentrated in the logistics sector, in Europe, and in second-tier cities and countries. Looking ahead, we expect investors will continue to find it challenging to put money to work and expect another slight fall in transaction volumes in 2018.

Markets will eventually have to adjust to the shrinking risk premium. As interest rates slowly rise, investors will need to assess what is an appropriate risk premium for real estate by market and sector.

We expect the remainder of 2018 to be a continuation of the current relative calm. Investors should be reassured that slower appreciation was expected and the transition thus far has happened without market disruption.

Property values are increasing at about the pace of inflation, as the ultra-low interest rates and faster inbound flows of capital are no longer driving down cap rates. Appreciation in the market today relates back to the positive income generated by properties, as opposed to heated capital market conditions. The positive outlook for economic growth reinforces our view that income should continue to grow faster than inflation in 2018.

Private capital required

Increased regulation does not overshadow the opportunity

Declan O'Brien, Senior Analyst, Research and Strategy Infrastructure

We believe that the current backdrop offers institutional investors an attractive opportunity to step into infrastructure debt and benefit from long duration, stable debt assets with highly visible cashflows. The Organization for Economic Co-operation and Development (OECD) has outlined a need for infrastructure spending around the globe of USD 50 trillion to 2030.³ If the OECD recommendations are followed, it would lead to investments of around USD 3 trillion per annum, with as much as USD 2.5 trillion required for transportation, utilities and energy. We estimate that this implies a funding gap relative to current forecasts of government fiscal plans of around USD 1.5 trillion per annum. Unless government borrowing and investment plans expand dramatically, this shortfall will need to be funded through private capital. Of course, these figures also exclude the refinancing of debt raised against existing operational assets that mature in the coming few years. The need for institutional capital to fill the funding gap is further accentuated by broader bank deleveraging and by reduced lending to the sector by banks due to Basel III capital adequacy and new risk-weighted lending rules.

With Basel III penalizing banks for lending long-term and amendments to Solvency II making infrastructure more attractive for European insurance companies, major shifts in infrastructure funding are already taking place. In addition, institutional investors' appetite for higher-yielding alternatives, such as infrastructure, has grown as returns in traditional fixed income markets have become compressed by loose monetary policy.

We view the OECD member countries as the area with the most opportunity for institutional capital given the significant requirement to finance new and to help replace ageing infrastructure. These markets also benefit from a more developed regulatory framework and legal system compared to other jurisdictions—even if the risks of retrospective legislative or regulatory change have increased in the wake of the financial crisis and due to the increased focus on affordability of infrastructure for the end consumer. Regionally, we currently see Europe as the most attractive infrastructure opportunity within the developed world. Backed by powerful fundamental drivers such as regulatory change and investors' search for yield the European infrastructure market has evolved from a bank-dominated market less than 10 years ago, to one with a growing institutional investor presence—but one where there is sufficient dislocation to provide what we believe are strong opportunities on a risk-adjusted basis.

³ OECD, "Strategic Transport Infrastructure Needs to 2030", March 2012.
<http://www.oecd.org/futures/infrastructureto2030/strategictransportinfrastructureneedsto2030.htm>

Private equity delivers

Strong performance drives investor interest

Matthias Goegele, Head of Multi-Managers Private Equity Europe

Over the past twelve to eighteen months, private equity has continued to attract strong inflows both globally and across various investment strategies. Against a backdrop of generally robust macro-economic conditions and a strongly performing public equities market, this has been driven by investor appetite for strong risk-adjusted returns.

2017 private equity industry review

In North America, buyout activities for 2017 amounted to USD 421 billion, representing an increase of 12% compared to 2016. 2017 was also another strong year for European buyouts—one of the highest years on record, partially driven by cross-border deals completed by non-European investors. Exits in Europe followed the same trend as seen in North America, with 2017 volume declining slightly from 1,570 deals in 2016 to 1,544. Fundraising also experienced a slight dip—88 funds closed at an aggregate value of USD 69 billion. Buyouts in Asia increased in 2017 and venture capital activity in Asia remained robust with a larger total value of USD 82 billion.⁴

Trend to watch—private equity and healthcare

The healthcare sector has attracted increased interest from private equity investors. In an environment which is generally impacted by political and macro-economic uncertainties, powerful secular and demographic trends provide the basis for robust long-term growth dynamics that are mostly resilient through economic cycles.

A continuing global environment of high public market valuations will be a cause for concern as private equity players fret over the availability of upside and the pressure it puts on private market valuations. Undoubtedly, the equity bull market that started 2018 has been partly fueled by the quantitative easing that has been ongoing in much of the world, not least in China. It looks likely that this monetary policy support will diminish in the coming year, albeit gradually. Meanwhile, uncertainty around global trade, brought on by the targeted US tariffs on specific goods or industries as well as the US cancellation of its nuclear deal with Iran, is likely to persist.

Where does this leave private equity?

While increased prudence and additional caution is advised, we do not think investor interest in private equity will drop off significantly. We remain convinced that our investment focus on the global growth themes, including small- and medium-sized buyouts, is better positioned to reap the upside of a continued growth scenario.

⁴ Source: UBS Asset Management, Real Estate and Private Markets.

In a sweet spot

Record M&A activity helps drive merger arbitrage strategies

Blake Hiltabrand, Head of Merger Arbitrage Research and Senior Portfolio Manager

Investors continue to face a number of risks in markets that were not front-and-center during the post-2008 financial crisis recovery. Many are turning to the world of alternatives, and in particular, market neutral and arbitrage strategies, as a source of diversification and alpha in an environment that has become increasingly unpredictable.

Merger Arbitrage is a strategy that seeks to capture the risk premia associated with announced transactions. In a world of increasing risk premia and transaction volumes, this traditional hedge fund strategy has begun to regain the attention of asset allocators across all regions, as they seek absolute returns with low correlation to the broader markets. We believe there are both structural and cyclical forces at play that add to the attractiveness of the space.

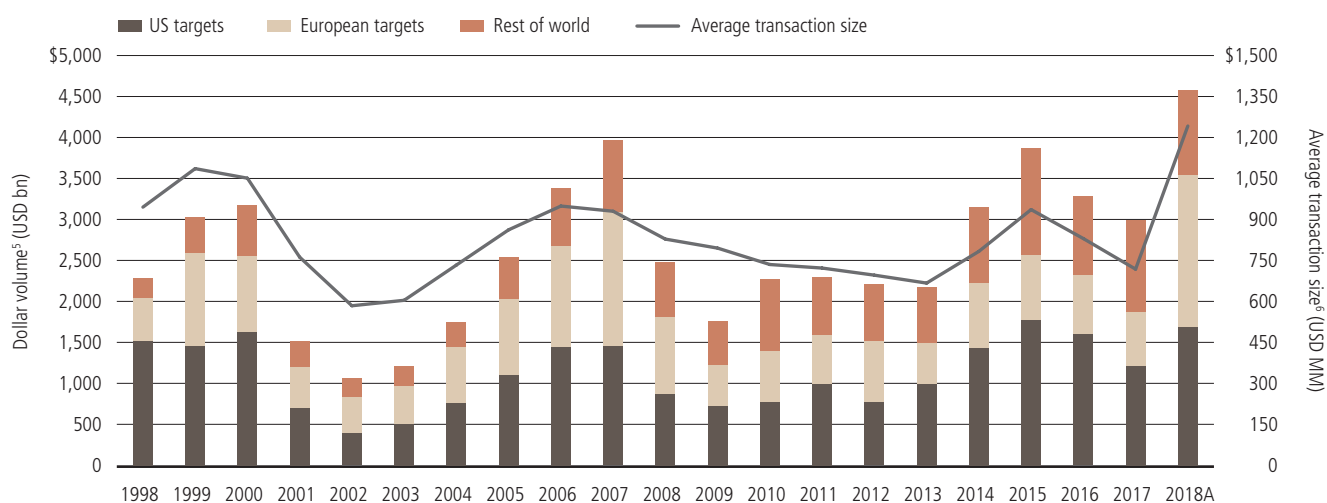
Record M&A deal volumes paired with wide spreads

To say the least, 2018 has been a truly unprecedented year for those that invest in merger arbitrage. Merger arbitrage returns

are typically a derivation of either a robust deal environment or wide spread levels—though it's unusual to experience both at the same time. High corporate confidence and low risk premiums typically go hand in hand with greater transaction volumes. So why now, when we look at the global M&A opportunity set, do we see record deal volumes coupled with substantially wider spreads?

If you turn to the front page of any newspaper, you would be hard-pressed not to find mention of significant deal activity in the headlines. Whether it is a rebound in deal activity in Europe after a decade of lackluster corporate confidence or transactions in the US on the back of recently enacted corporate tax reform—it is obvious to even the most casual observer that the impetus for M&A is growing. As seen in Exhibit 1, the first half of 2018 has reached record heights in terms of deal volume and size.

Exhibit 1: Global announced transaction volume



Source: Morgan Stanley, Thompson Reuters. Data as of April 2, 2018.

⁵ Includes announced transactions, each with an aggregate value of \$100MM or more. Includes transactions with estimated values. Excludes terminated transactions. Future terminations of pending transactions will reduce totals shown.

⁶ Includes transactions announced as of 31 March 2018.

So then we turn to the other driver of returns in merger arbitrage: risk premia, or the spread. After a deal is announced, the security of the target company generally trades at a discount to the consideration the acquirer has offered to pay. That discount can vary substantially from situation to situation based on the risks inherent in the completion of the transaction. This is where the hand-off occurs from the traditional owners of the security, who likely were invested based on their views around the sustainability of the business, cash flows, value or potential catalysts such as an acquisition. These investors do not specialize in evaluating legal, regulatory, financing or political risk—and thus most public companies involved in mergers experience a massive redistribution of the shareholder base post announcement. Arbitrage investors look to profit from the over-estimation of risk by those who do not specialize in analyzing these risks consistently across situations, regions and over time. This type of market neutral investing was historically very common amongst bank proprietary trading desks, but with the Volcker Rule, we have seen the amount of capital dedicated to this strategy substantially shrink, creating the environment for wider spreads and a structural opportunity for investors.

The US administration has injected immense uncertainty into that market, particularly with regard to trade policy, resulting in wider spread levels. There have been surprising challenges from the Department of Justice, which have also elevated the perception of risk in the M&A space. Once again, merger arbitrage investors who have experience evaluating the various risks involved in these transactions have the potential to reap the benefits.

That brings us to today and where we believe the opportunity is headed in the coming years. It is our belief that uncertainty from political/policy actions emanating out of the current administration is the “new normal”. These risks are real, but often significantly over-dramatized by the market, creating a target rich environment for those who specialize in evaluating these situations and risks. That, coupled with the continued “animal spirits” from corporate board rooms to grow via acquisition, presents us with what we think is a truly attractive M&A landscape for the foreseeable future.

The next frontier

ESG integration in fixed income

Francis Condon, Senior Sustainable Investment Research Analyst and **Christopher Greenwald**, Head of SI Research, Sustainable and Impact Investing

Historically, investors have been more likely to integrate sustainability considerations within equity than fixed income strategies. There are a number of reasons for this: the role of ESG in credit ratings, a shortage of ESG indices against which to benchmark performance and challenges in engaging with issuers. But that picture is changing fast.

More and more investors are expressing an interest in ESG investing beyond equities, supported by initiatives from policy makers, such as the European Commission's High-Level Expert Group on Sustainable Finance. Given bonds form a key constituent of institutional portfolios it is hardly surprising that investors are looking to integrate ESG principles within fixed income investments, particularly as regulatory and fiduciary pressures increase.

Several factors have made ESG integration into fixed income easier. ESG data and ratings are now available for almost all investment grade credit, and for many high yield issuers. Several important innovations in fixed income have also occurred, allowing investors to allocate more private capital to sustainable fixed income instruments. These innovations include the rise of green bonds, the emergence of social bonds, and unique collaborations, such as that between the World Bank and UBS to provide sustainable investment alternatives to high grade fixed income.

The next significant step in our view is the integration of sustainability considerations into the overall credit assessment, and the important implications that carries for mainstream investors looking to apply sustainability in their credit portfolios.

Integrating ESG: The limitations of ESG ratings

All too often in our view, 'integration' of sustainability simply refers to the application of sustainability data or ratings to the investment process. But we think this reflects three crucial misunderstandings around the role of third-party sustainability data in relation to sustainability integration.

First is the belief that applying ESG ratings based on some form of screening equates to sustainability integration. Undoubtedly the data sets from large ESG providers are invaluable for the finance industry, and the challenges of collecting and presenting the underlying data in a consistent, usable format are great. However, that type of data does not comprise investment analysis. By their very nature they are based on historic information and events, reflecting what has happened rather than what might happen in the future.

Second, ratings providers serve a wide range of parties and topics, so their frameworks are broad; too broad in our view to be immediately applicable to the investment process. Furthermore, their sustainability information tends not to distinguish between fixed income and equity applicability. Although some overlap exists, fixed income investors are more concerned with downside risk, whereas equity investors tend to focus on upside growth potential.

Third and most important, in our view, is the fact that the assessment of sustainability ratings is separated from the actual financial analysis of a company. The data providers work independently of the investment process so do not cover the impact of material sustainability issues on the actual

financial assessment. While sustainability ratings are important, to be truly meaningful, we argue the credit analysts and portfolio managers need to apply those ratings to their own financial credit assessment.

Hence our approach reflects our core belief: ESG integration is strongest when the credit analysts sit at the heart of it. They are best placed to use their in-depth knowledge of issuers, and experience in fundamental analysis, to provide the context in which to consider sustainability issues. It is that same skill set which they use to analyze ESG factors. Most crucially, the analysts make forward-looking judgments—something which applies as much to ESG issues as to financial ones. By having analysts own their understanding of sustainability issues, we expect ESG integration to deepen further still.

Collaboration is vital. Our sustainability investment research team provides close support to the credit analysts, advising on materiality and timing of relevant ESG issues across the full range of sustainability factors. Through this ongoing dialogue, we can address questions about the materiality of a topic, such as how well an issuer manages its risks, how different levels of materiality or the timing of an ESG issue will likely develop, and ultimately, will the ESG issues impact the credit assessment? Are they significant enough to become a key consideration in the future development of the issuer's credit worthiness, and to what extent does the ESG analysis change the credit opinion? These are key questions the sustainability analysts work with the credit analysts to determine.

The approach described so far forms the bottom-up assessment, carried out primarily by the credit analysts. There is one further, important step which our sustainable investment research team carries out and that is to provide a top-down context for ESG issues. They do this by assessing cross-sectoral topics from the perspective of overall credit impact, thereby supporting credit analysts in their assessments, and portfolio managers wanting to position their strategies appropriately.

We believe that ESG analysis by the credit analysts provides an opportunity to pursue a deeper level of integration, one which is materially-focused, forward-looking and concentrated on the implications of sustainability for credit risks. Our aim is to remain at the forefront of this movement, developing innovative new strategies and solutions to answer the challenges our clients face.

UBS-AM has recently published a white paper that gives a detailed analysis of ESG fixed income integration, of which this article is a summary. Download the full paper at ubs.com/panorama/the-next-frontier.

About the authors



Bruce Amlicke is Chief Investment Officer, UBS Hedge Fund Solutions. His primary role is the creation of a single center of excellence for the selection of third-party alpha managers across traditional and hedge fund capabilities. Before re-joining UBS in 2010, he spent five years as the CIO of Blackstone Alternative Asset Management and Senior Managing Director of The Blackstone Group. Prior to that, Bruce was CIO of the then O'Connor Multi-Manager Program from 2003–2004, which was a predecessor business to HFS. He originally joined the O'Connor Multi-Manager team in 1998.



Erin Browne is Head of Asset Allocation in the Investment Solutions team at UBS Asset Management. Erin drives our macro research, capital market assumptions, tactical asset allocation and strategic asset allocation views across asset classes. She contributes to strategic research initiatives and plays an active role in designing investment solutions for clients. Erin was most recently Head of Macro Investments at O'Connor, managing cross-asset class portfolios, with a specific focus on currencies and equities. She joined UBS in 2016 and has 16 years of industry experience.



Charlotte Baenninger is Head of Fixed Income at UBS Asset Management, overseeing more than CHF 200 billion across Fixed Income and Money Market investment strategies globally. She leads the Fixed Income Switzerland business, chairs the Fixed Income Management Team and the Fixed Income Investment Forum, and is a member of the AM Switzerland Management Committee and a board member of the Swiss bond commission. Charlotte is also senior ambassador for Fixed Income towards Wealth Management. Charlotte started her career at the former UBS in 1987.



Francis Condon joined UBS as a Sustainable Investing Research Analyst in December 2017. Previously, Francis was a Senior ESG Analyst at RobecoSAM covering the oil and gas and mining sectors. He was also responsible for developing investor-oriented responses to climate change, and ESG integration activities in fixed income and equities. Previous roles in sustainable finance include, Associate Partner at Financial Access (a consulting firm), and Vice President Sustainability at ABN Amro covering sustainable strategy implementation and transaction risk assessments.



Matthias Goegele heads the European team of Multi-Managers Private Equity (MM-PE) in Zurich and London. MM-PE is part of Multi-Managers, a business which forms part of Real Estate & Private Markets (REPM) within UBS Asset Management. His role includes investment selection of European fund opportunities, monitoring and portfolio management responsibilities for international private equity mandates as well as the UBS Private Equity fund-of-fund businesses. Matthias is a voting member of the Multi-Managers Private Equity Investment Committee.



Paul Guest is the Lead Real Estate Strategist for Real Estate Research & Strategy, a business which forms part of Real Estate & Private Markets (REPM) within UBS Asset Management. Paul is responsible for supporting multi-regional investment mandates with qualitative and quantitative analysis of cross-regional economies and investment markets. He also liaises between business functions within UBS's Wealth Management and Investment Bank businesses. Paul has been with UBS Asset Management since 2015 and is a member of the Fund of Funds and Multi-Manager Investment Committee.



Christopher Greenwald joined UBS Asset Management as Head of SI Research, Sustainable and Impact Investing, in February 2017. Prior to UBS-AM, Christopher led the sustainability research efforts at RobecoSAM, where he managed a team of sector specialists responsible for the integration of sustainability into the investment process. Previously, he headed the Sustainability Application and Operations team, overseeing RobecoSAM's sustainability data and calculation for the Dow Jones Sustainability Indices. Prior to joining RobecoSAM, Christopher was Director of ESG Content Strategy for ASSET4 / Thomson Reuters.



Suni Harford joined UBS Asset Management in 2017 as Head of Investments. Suni was previously at Citigroup where she worked for 24 years, most recently as Regional Head of Markets for North America. Suni was also a member of Citi's Pension Plan Investment Committee and a Director on the Board of Citibank Canada. Earlier, Suni was Citi's Global Head of Fixed Income Strategy and Analysis as well as Global Head of The Yield Book Inc. She started her Wall Street career at Merrill Lynch & Co. in Investment Banking.



Blake Hiltabrand is a Managing Director and Head of Merger Arbitrage Research and Senior Portfolio Manager on the Merger Arbitrage team at O'Connor, based in Chicago. Prior to joining O'Connor in 2007, he was an Assistant Portfolio Manager at Deephaven Capital and Amaranth Advisors LLP. Blake was also previously an Associate and Senior Analyst at Goldman Sachs in their equity division primarily focusing on event driven research.



Urs Raebtsamen is an equity specialist on the Systematic and Index Investments team. Between September 2007 and July 2010, Urs was on assignment in Korea with UBS Hana Asset Management, where he was responsible for quantitative investments as well as a range of business and operational areas in the Equities division. He was a member of the UBS Hana Asset Management Executive Committee. Urs joined UBS Asset Management in 2001 as a portfolio manager with responsibility for the UBS Equity Fund Small Caps Switzerland and the UBS Equity Fund—Gold.



Declan O'Brien joined UBS Asset Management in 2017 as a Senior Infrastructure Analyst in the Research & Strategy team, which forms part of Real Estate & Private Markets (REPM). Declan is primarily responsible for providing quantitative and qualitative cross-regional analysis of infrastructure investment markets. Declan joins from Legal & General Investment Management where he was responsible for research and strategy in the infrastructure sector.



Geoffrey Wong is Head of Global Emerging Markets & Asia Pacific Equities, with overall responsibility for all EM, Japanese, and Australian equity teams, strategies and research. Geoffrey joined UBS Asset Management in 1997. Prior to that, he was a co-founder of an Asian investment management firm, where he was responsible for asset allocation and stock selection for global and regional institutional portfolios. Geoffrey has also served on the board of the Singapore Stock Exchange.

Why UBS Asset Management

Drawing on the breadth and depth of our capabilities and our global reach, we turn challenges into opportunities. Together with you, we find the solution that you need. At UBS Asset Management we take a connected approach.



Ideas and investment excellence

Our teams have distinct viewpoints and philosophies but they all share one goal—to provide you with access to the best ideas and superior investment performance.



A holistic perspective

The depth of our expertise and breadth of our capabilities allow us to have more insightful conversations and an active debate, all to help you make informed decisions.



Across markets

Our geographic reach means we can connect the parts of the investment world most relevant for you. That's what makes us different—we are on the ground locally with you and truly global.



Solutions-based thinking

We focus on finding the answers you need—and this defines the way we think. We draw on the best of our capabilities and insights to deliver a solution that is right for you.

What we offer

Whatever your investment profile or time horizon, we offer a comprehensive range of active and passive investment styles and strategies designed to meet your needs across all major traditional and alternative asset classes. Our invested assets total USD 831 billion⁷ and we have around 3,600⁸ employees, including over 900 investment professionals, located in 23 countries.

Who we are

We are one of the largest managers in Alternatives: the second largest fund of hedge funds manager⁹ and fifth largest manager globally of direct real estate.¹⁰ We are a leading fund house in Europe, the largest mutual fund manager in Switzerland,¹¹ Europe's third largest money manager¹² and the top foreign firm in China.¹³ UBS's unique passive offering, encompassing index and systematic strategies, provides smart beta, alternative indices, and other custom solutions to meet our clients' needs. We are the second largest European-based passive player¹⁴ and the fourth largest ETF provider in Europe.¹⁵ We are a truly global firm with principal offices in Chicago, Frankfurt, Hartford, Hong Kong, London, New York, Singapore, Sydney, Tokyo and Zurich.

Past performance is not indicative of future results.

⁷ As of March 31, 2018.

⁸ Thereof around 1,300 from Corporate Centre as of December 31, 2017.

⁹ HFM InvestHedge Billion Dollar Club, published March 2018.

¹⁰ FT/Towers Watson, based on data to December 31, 2016.

¹¹ Morningstar/Swiss Fund Data FundFlows, March 2018.

¹² Institutional Investor Euro 100, based on data to June 30, 2017 (based on discretionary assets only, UBS WM and AM combined, excluding fund of funds assets).

¹³ Z-Ben Advisors: 2018 China Rankings, April 2018

¹⁴ UBS Asset Management, December 2017.

¹⁵ ETFGI European ETF and ETP industry insights, February 2018.

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Americas

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