

Investment Outlook 2019

OPPORTUNITIES & THREATS IN A DESYNCHRONISED WORLD



UNION BANCAIRE PRIVÉE



Managing Risks in a Fragmented Global Economy



MICHAËL LOK
Group CIO and Co-CEO
Asset Management

Entering 2018 investors brimmed with enthusiasm as global synchronised growth continued like in 2017, confirming that the world was finally moving on after the crisis. However, while financial markets remained attractive, monetary policy normalisation combined with near historically high equity valuations, near all-time low bond yields, and record tight credit spreads soon led investors to expect more modest performances and heightened volatility. Although markets promise to hold up in 2019, the landscape is starting to look patchy: we believe that desynchronisation between economies will be the dominant theme in the coming year.

The US remains ahead in the economic and monetary cycle, driving strength in the dollar. Europe has finally managed to break out of its post-crisis deflation, but the continent's recovery is sluggish and its growth pattern fragmented. As for emerging markets, they have dislocated with Asia remaining on track, while Latin America, Eastern Europe and the Middle East are all seeing sharp dispersion.

Amid a tense geopolitical climate, especially in Europe and the Middle East, this desynchronisation is impairing visibility and heightening risks. Meanwhile central banks' policy tightening is going to put pressure on longer-term yields and fresh trade tariffs may be on the cards for China and perhaps for European and Japanese carmakers too.

Our risk-focused approach has enabled us to seek short-duration exposure to weather the sell-off in bonds throughout 2018 while a rotation to non-corporate

credit solutions has provided shelter from the volatility across fixed income markets. For 2019 we are maintaining our short-duration exposure on the US market. Investors should tread carefully in Europe, although given the region's three-year lag its bond markets should see repricing and curve-steepening.

With modest return prospects across traditional asset classes in 2019, we encourage investors to reposition tactically across both structured products and hedge fund strategies to contain downside risk in this period of rising volatility.

Corporates now face growing cost pressure and more limited earnings growth. Capital-protected equity exposure helps shield against mounting uncertainties. Our preference has moved away from the energy sector and focuses on bottom-up innovation, not only in technology, but also in the healthcare sector. Strategically, investors have an opportunity to shift their focus while at the same time stretching time horizons and to lean more heavily on secular trends and company analysis to add value. In particular, impact investing should continue to grow as millennial investors enter the market.

We examine all of these issues and more in the pages that follow. As ever, we look forward to working alongside you to develop an investment portfolio that meets your expectations and needs.

CONTENTS



6

ECONOMIC OUTLOOK

**A Desynchronised
World**

8

INFLATION & INTEREST
RATES

**Wage and Inflation
Spiral**

10

DEBT DYNAMICS

Public vs. Private Debt



11

IMPACT INVESTING

**Aligning Societal
and Financial Gains**

12

EQUITIES

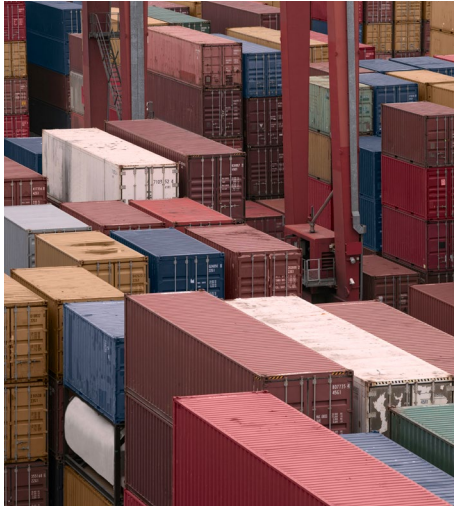
**The Equity Gap
Narrows**

14

SECTOR FOCUS

**Healthcare:
Innovation Creates
Opportunities**





15

COMMODITIES

**Time to Expand
Focus from Oil to
Industrial Metals**

16

FOREIGN EXCHANGE

**Global and Economic
Crosswinds Favour
Dollar Strength**

18

CHINA

A New Cold War



20

TRADE WAR

**Focus on US–Europe
Rather Than US–China
Trade War Risks**

21

EUROPE

**Still Time to Kick
the Can in Italy**

22

BREXIT

Deal or No Deal?



A DESYNCHRONISED WORLD

World growth is likely to slow down and become more geographically uneven in 2019. The US should keep driving the cycle while China will stay in the race for world leadership. The rest of the world will have to adapt its strategies to those two economic and political superpowers.

After two years of brisk global economic activity, it should slow down in 2019. Growth spread to all the world's regions in 2016, and by 2017 it was strong and synchronised across the globe. Going into 2019, it is becoming clear that 2018 has been a transition phase with rising risks, as all regions progress towards the mature end of the cycle.

In 2019 growth should come in at 3.5%, falling short of the IMF's forecast of 3.7% and also below 2018's 3.7%. All regions are expected to lose momentum and become increasingly desynchronised. Several factors are set to send regions out of step, including rising political risks and varying strengths in domestic demand in each country, but also a shift

*Dynamic growth
is likely to be
confined to the US*

in international trading relations and tighter monetary policy.

As it slows down, growth will be gradually returning towards its potential rate – a combination of labour force expansion and productivity gains – exacerbating the disparities likely to emerge between countries. Since 2016 all regions have posted above-potential activity, either due

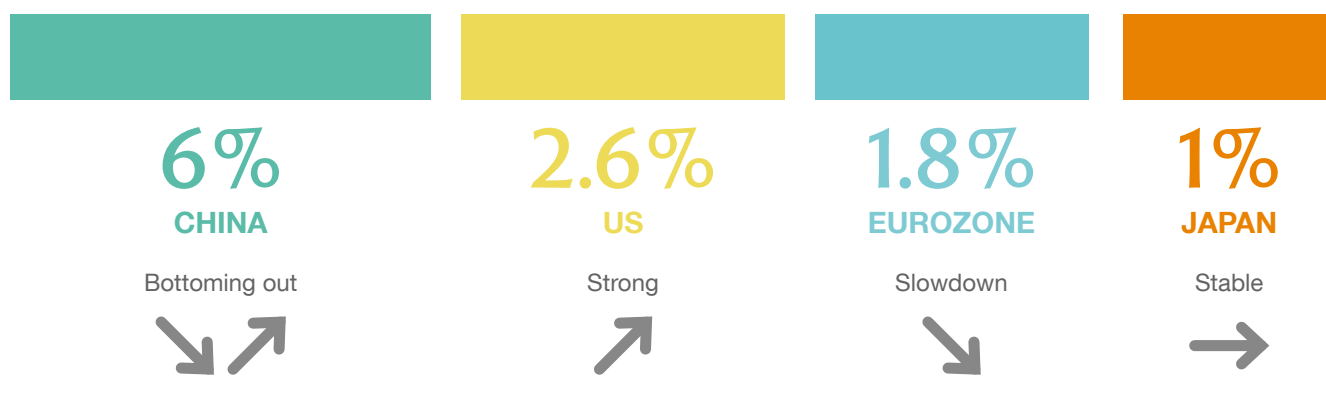
to local stimulus policies or to a rebound in world trade and favourable commodity prices. However, such a high rate can only be maintained with adequate economic policies and fully effective growth drivers. Yet investment and consumption have dipped everywhere except in the US and world trade expansion has petered out as globalisation has been called into question.

The US still drives the cycle

While the slowdown is set to affect all countries, it should be less marked in the US than in the rest of the developed world, with growth there reaching 2.6% in 2019 (after nearly 3% in 2018). Investment and domestic demand in the US should get



2019 GDP GROWTH



↗ trend in domestic demand

Source: UBP

support from the corporate tax reform, continuously low interest rates, and incentives for firms to create jobs locally. Some infrastructure plans put forward at the start of Donald Trump's presidency may be brought back to the table, fuelling demand through the public sector.

This economic boom is likely to be confined to the US. Other regions are expected to post quite a clear downturn. The eurozone's growth rate, which was 2.5% in 2017 and 2.1% in 2018, is set to fall below 2% in 2019, to 1.8%. Europe is feeling the trade tension with the US, and after the steel stand-off, there is no guarantee that European carmakers will escape a revision of customs duties. But bear in mind that Europe has taken some time to rebuild the capital it lost in the financial crisis, and its potential growth will remain modest as long as economies like Greece and Italy remain structurally vulnerable and fiscally restricted. Despite the new French president's political will, the future of the European Union has yet to be clearly redefined and the project is now under threat from governments that are openly hostile to the budget policy put forward by the Commission and some fundamental principles such as free movement of people. Meanwhile, as the March 2019 deadline for Brexit

looms large, negotiations are in gridlock (see p. 22).

Political stability in Japan should enable the government to complete its transformation of the economy and society. But Japan's potential growth is stuck below 1% because of the ageing population and a loss of impetus from public investment. The rise in consumer spending is set to be modest, and despite strong private investment and automation efforts, growth may not pick up much beyond 1% in 2019.

China: partner or rival in trade?

China's economic growth should stabilise next year around 6%. While a slowdown has started as we approach the end of the year, US constraints on exports are not the culprits at this stage. Trade tariffs were raised this year for almost all Chinese goods exported to the US, and China retaliated with similar taxes on US products, fuelling a dangerous escalation for world trade (see p. 20). Faced with this threat and in an attempt to curb the slowdown, China has eased its economic policy, providing stimulus for some sectors such as real estate and financing for

strategic sectors. The trade stand-off could last for some time yet, prompting further domestic stimulus measures in China (see p. 15).

Based on our global economic growth analysis, the US and China may be able to achieve a détente in their current trade war. However, even if they find areas of potential compromise allowing for a 1980s Japan-like balance to be struck, periodic flare-ups should be expected, as was the case back then (see p. 18).

The growth outlook in other emerging countries also dipped after monetary and fiscal policy was tightened when some currencies came under pressure in 2018. The most fragile countries, like Argentina and Turkey, are at risk of a slump. In other countries, like Indonesia and India, economic activity could be somewhat constrained by the stricter economic policies at the beginning of the year, but then pick up again later. So there will be wide disparities between emerging countries in 2019: growth in Asia should hold up well with China stabilising, while in Latin America hopes of a rebound will depend on the economic policies that will be adopted in Brazil and Argentina.

WAGE AND INFLATION SPIRAL

Despite sharp economic growth, inflation and wage growth have remained limited, but pressure is mounting on the labour market and therefore on wages, and not only in the US. Central banks may adopt much tighter policies if wages and inflation start feeding each other.

After several years where deflation seemed to be the biggest risk around, 2018 tells another story where markets are watching for signs of overheating as the economic cycle reaches maturity in many countries. This quarter inflation has risen back to the major central banks' targets, except in Japan. The main causes of this increase have been the rebound in commodity prices and currency volatility. As a result the inflation rate in the US and the UK has reached nearly 3% and has risen above 2% in the eurozone and Germany. We believe it should stabilise next year between 2% and 2.5% in the US and around 2% in Europe, unless any major currency or commodity upsets occur. In emerging countries, inflation should rise mechanically in countries whose currencies depreciated sharply in 2018, but then ease once stricter economic policy reins in demand.

Financial markets have responded well to this inflation regime change between 2015 and 2018, and medium-term expectations based on inflation-linked bonds are pointing to around 2% in the US and Europe.

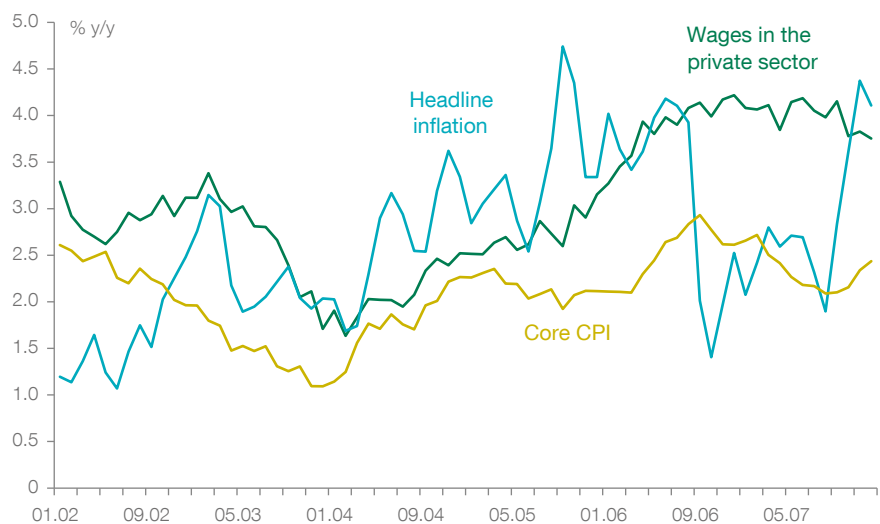
With several developed countries at the mature end of the cycle, the major risk for economies, monetary authorities and bond markets is an inflation surge sparked by wage rises; this would force central banks, and in particular the Fed, to rethink their gradual rate normalisation strategies and go for a more drastic approach.

Tightening labour market and rising wages

With the growth cycle maturing in the US, the labour market has tightened and a bottleneck has formed both for skilled and for unskilled workers. Some mass retail names have had to substantially increase base salaries and the tension could rise further if US economic policy goes for another stimulus plan. The lack of skilled labour is also starting to show in other countries. In Japan base salaries are starting to climb more sharply following government incentives.

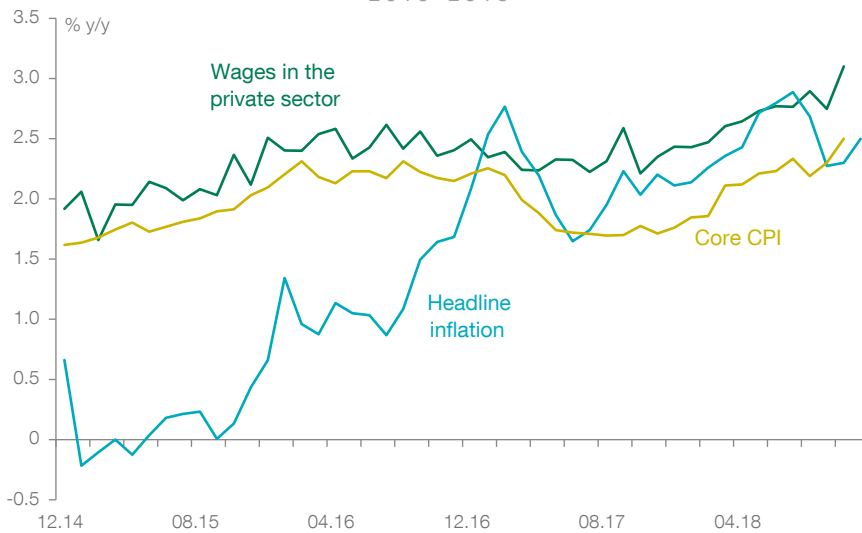
Wages and inflation may become highly correlated again

US WAGE GROWTH & INFLATION
2002–2007



Sources: Fed, BLS

US WAGE GROWTH & INFLATION
2015–2018



Sources: Fed, BLS

Germany is also facing labour shortages, as is the UK, which is seeing the inflow of foreign workers ebb because of Brexit.

This pressure on wages could become more noticeable and make core price indexes (i.e. excluding food and energy) rise faster than expected. So far those indexes have only partially replicated the global index rebound, but given the steady demand and the fall in unemployment, prices should be higher in 2019. The risk is of core inflation and wages becoming

correlated again, like in 2005–2007 when wage growth pushed up CPIs, forcing central banks to adjust their strategies.

A change of pace in the Fed's rate normalisation process would also come as a big shock for money markets as they have still not fully priced in the three key rate hikes it is planning for 2019. Should wages and inflation escalate, the Fed might raise rates four times or more, and go for 50 basis-point rather than 25 basis-point hikes. In this scenario, long-

term bond yields would inevitably shoot up and the yield curve would steepen.

In the eurozone, if wage inflation picks up, Germany may press a more radical policy adjustment than currently planned by ECB President Mario Draghi (no rate hike until the third quarter of 2019). But the leadership change at the ECB in 2019 could be decisive and mark a turning point away from Mr Draghi's famous "whatever it takes" pronouncement in 2012 that kicked off the quantitative easing measures. As for the Bank of England, it will keep a close eye on inflation and on the effects of Brexit on the labour market, and may raise base rates further. If the risk of inflation and wages spiralling materialises, it could send economic growth and financial markets plummeting as they face much tighter monetary policy than expected. In addition, markets are likely to become less and less liquid due to the Fed's plans to reduce its balance sheet and the ECB's to end quantitative easing.



PUBLIC VS. PRIVATE DEBT

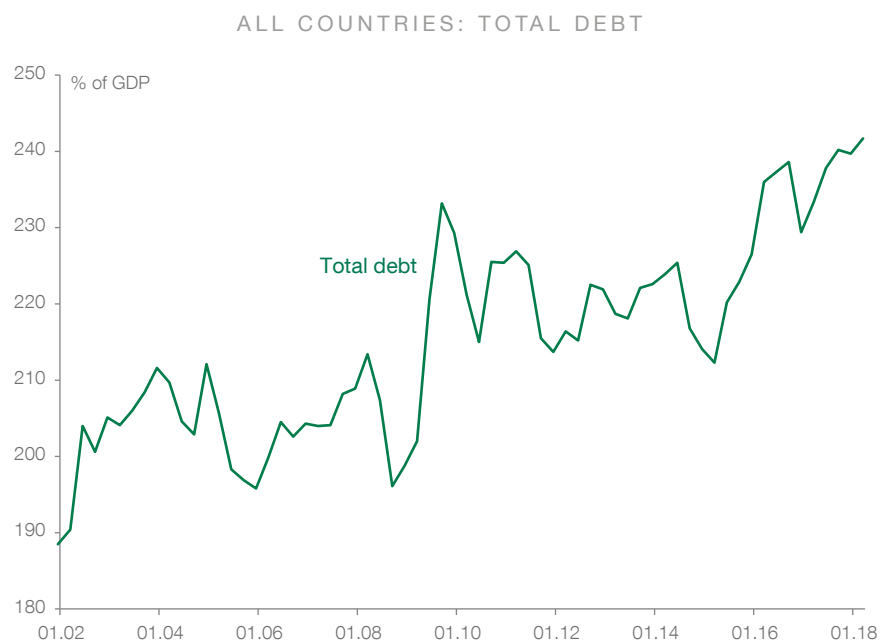
Debt levels have kept increasing since the financial crisis and now central banks are starting to tighten monetary policy and liquidity is beginning to dry up. Neither long-term interest rates nor credit spreads are reflecting any major risks yet, but markets may be a little too complacent.

As the monetary regime starts moving towards a less accommodative stance, the continuous increase in overall global debt is startling. The low-rate and high-liquidity environment encouraged debt-creation and financial leverage; ten years on from the crisis, this has resulted in a sharp rise in total debt relative to growth. In particular, the major financial hubs have seen economic agents' debt grow even faster than elsewhere, which has exacerbated disparities and created vulnerability in different areas from one country and from one sector to another.

In the US, the surge in public debt is the IMF's main concern, way above corporate debt, where leverage is, and should remain, contained as long as profitability is strong. Household debt is on a moderate uptrend, but is being easily serviced as wages are rising. The eurozone's main weakness is public debt, which has stayed high in relation to GDP since the financial crisis and has only been receding slightly since 2016. The ratio of private debt to GDP has eased down, but companies are using more leverage and households have become more dependent on real estate through mortgage loans. In China, both household and corporate debt has risen fast with companies adding to their leverage, and the trend is similar in other emerging countries. The risks on China, which are related to the unregulated banking sector, have been priced in. Further data shows that public debt in emerging countries has been increasing since 2016, after having stayed stable between 2007 and 2015, but it remains below 100% of GDP.

The pattern of world debt suggests that more drastic monetary tightening could pose a serious threat, especially for the public sector which has been benefiting from the very low interest rates. Furthermore, developed countries still depend heavily on foreign capital for their financing, as does the private sector in emerging countries. As long as confidence indicators hold up, capital markets will have nothing in particular to worry about, but although monetary policy is tightening, long-term government yields are still very low and credit spreads narrow, leaving very little leeway for absorbing any shocks or deterioration in credit quality.

Low rates and high liquidity feeding dependency on debt – a sense of déjà vu



Sources: BIS, UBP

ALIGNING SOCIETAL AND FINANCIAL GAINS

Generating value is the aspiration and target of any investment strategy. Impact investing is no different, but at its core, has a broader definition of value – to include both financial and non-financial returns.

Project finance and private equity have long been the home of impact investing. However, increasing demand from investors to generate both a societal benefit and financial return has led to impact investing broadening both its investor base and its presence in more liquid asset classes. The development of impact investing in the listed equity space is an exciting opportunity to expand both the access and effectiveness of impact through investment.

Active, bilateral engagement is by far the most effective means of obtaining non-financial data

Allocating capital to listed businesses with revenue streams dedicated to addressing the world's most pressing challenges is a powerful way to tap into a structural growth shift towards these solution-providers whilst at the same time gaining a non-financial "dividend".

As exciting as this development is, to create value in this new, broader sense, requires the measurement of both financial and non-financial benefits. This allows the end investor to have a much more complete picture of the "impact" of their holdings across both axes.

Looking beyond traditionally reported metrics such as share-price performance, impact investors must assess and disclose information, for example how much clean energy is produced (or CO₂ avoided), and what sort of innovation can be enabled for every 1 million dollars invested.

As much of these non-financial measures are not audited, rarely comparable across companies, and quite often not disclosed in company accounts or corporate social responsibility reports, the role and benefits of active management to engage in bilateral company exchanges is by far the most effective means of obtaining non-financial data that is relevant and useful.

This is the crux of effective impact investing in the listed equity space – in-depth, frank engagement can generate unparalleled non-financial returns which, in combination with estimated financial gains, can truly bring broad and deep value to the investor and society at large.



ALLOCATING CAPITAL TO BUSINESSES DEDICATED TO ADDRESSING THE WORLD'S MOST PRESSING CHALLENGES IS A POWERFUL WAY TO TAP INTO A STRUCTURAL GROWTH SHIFT.

THE EQUITY GAP NARROWS

The persistent global outperformance by US equities over the past five years should narrow in 2019. Investors should begin to turn their attention to Japan, where equity valuations are sitting near 2008 lows and companies' earnings growth has outpaced that of both their US and their European counterparts since 2013.

Since the end of the eurozone crisis in 2013, US equities have outperformed, in local currency terms, equities in other major regions of the world – by 25% versus Japan, 40% versus Europe and nearly 52% versus emerging markets. We expect to see this period of 'American exceptionalism' begin to erode in 2019.

The narrative for such persistent US outperformance typically focuses on a combination of adept and proactive policy-making, a flexible domestic economy, as well as shareholder-focused corporates

prioritising the enhancement of returns for investors. Since the early 1990s, these factors have helped support returns, with US companies able to drive much of their outperformance by posting higher earnings growth than both their European and their Japanese counterparts.

However, the period of 'American exceptionalism' since 2013 has been sustained by a different driver than the premium returns US corporates have delivered for shareholders: investors' willingness to pay more for US companies or, in other words, P/E multiples expansion.

In fact, US P/E expansion has contributed substantially all of the outperformance of US equities versus both European and Japanese equities over the period. Indeed, since 2013, while US earnings have contributed nearly six percentage points to the 11% CAGR total returns, this has only been enough to keep pace with the six percentage-point contribution added by European corporates, but lagging behind the nearly eleven percentage points that earnings added to total investor returns in Japan (see chart 1).

Without the rise in US P/E ratios and the decline in both Europe and Japan, US equities as a whole would have lagged behind both European and Japanese equities over the period as US dividends and earnings contributions did not outpace its peers'.

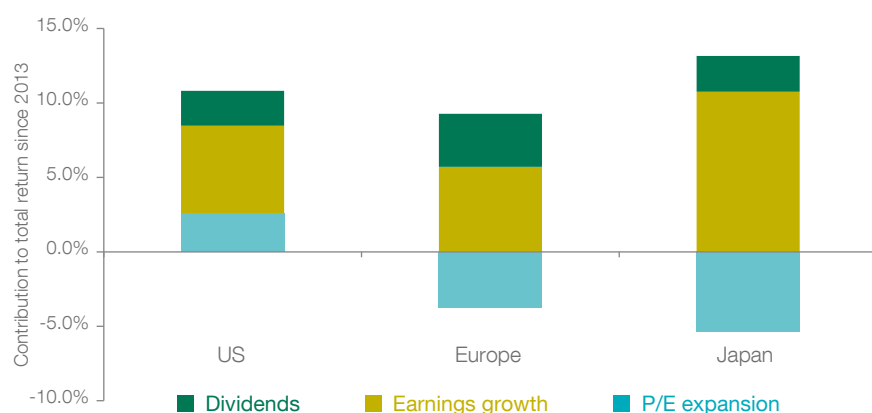
Admittedly, a strong reason for the willingness of investors to pay more via P/E multiples for US corporates has been the prominence of the technology sector among listed US corporates. Unfortunately for investors, we believe the dramatic rerating in global technology P/Es that has been ongoing since 2013 is near an end (see Technology box, right).

Looking ahead, with technology P/E multiples ceasing to drive broader US P/E expansion, we expect to see such dramatic US equity outperformance fade in 2019 (see chart 2).

Although Japan has a large technology sector as well, Japanese equities have not fared as well as their US counterparts. In fact, despite growing earnings 63% since end-2013 versus 31% for US equities, Japan investors today are paying 25% less in P/E terms, with multiples having fallen to 13.3 times, a level last seen during the lows of the 2008 global financial crisis (see chart 3).

With global and domestic growth strong, a central bank remaining accommodative

1. US 'EXCEPTIONALISM' COMES DOWN TO P/E EXPANSION

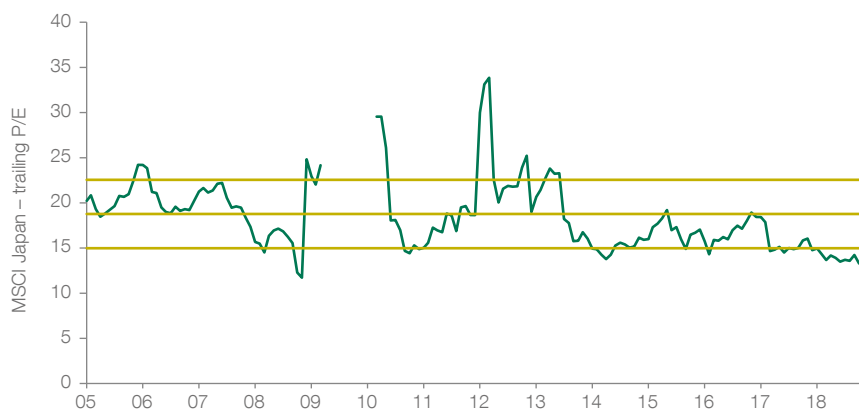


2. US TECHNOLOGY – P/E EXPANSION NEAR AN END



A Regime Change Ahead for Global Technology

3. JAPAN EQUITIES – VALUATIONS BACK TO 2008 LOWS



Sources: MSCI, Bloomberg Finance L.P., and UBP

rather than tightening (unlike the US and Europe), and with the currency still historically cheap, macro factors should remain a tailwind for Japan investors in 2019.

Encouragingly, European equities share similar valuation qualities with their Japanese counterparts, having seen multiples nearly halve since their 2016 peaks to 16 times historical earnings in late 2018.

Though valuations in Europe are still sitting well above 2008 lows, unlike in Japan, investors should recognise that the last period of sustained European outperformance versus the US, from 2003 to 2007, coincided with a period of significant technology sector underperformance versus broader global equities. With the technology sector likely to lose momentum, we expect European equities to start catching up with their US peers.

However, unlike in Japan, European investors will have to deal with a central bank withdrawing stimulus and a series of political events – from Italian budget

negotiations (see p. 21), to Brexit (see p. 22), as well as European parliamentary elections – which may make them hesitant to expand risk-taking in 2019.

Instead, however, as we view these issues as transitory in the context of ongoing European reform, the overly aggressive pricing in of eurozone fragmentation in particular should be viewed as a tactical opportunity for investors.

On balance, though investors have relied heavily on US equities, and in particular the technology sector, to generate returns in recent years, 2019 presents a window for investors to shift from unsustainable return drivers such as persistent P/E expansion, to more sustainable ones. Though such opportunities can be found across the globe – and in particular via prudent stock selection in thematic arenas such as impact investing (see p. 11) and in healthcare (see p. 14) and true innovators within the technology sector – geographically, investors may find themselves increasingly focusing their attention on Japan and, tactically, Europe as well.

Since 2013, the global technology sector has delivered an impressive +18.8% in annual returns, easily outpacing global equities as a whole (+10.4%) and even growth-oriented equities (+11.8%).

Underlying this performance, though, has been a recent shift in return drivers which may limit outperformance. Before 2018, investors in technology had earnings, dividends and P/E expansion all contributing to their returns. Indeed, P/E expansion alone contributed almost half of the returns that investors generated from 2013 to 2017.

In 2018, however, earnings growth has driven practically all of the returns generated by global technology investors while P/E multiples have dwindled (see chart 2). Even with the fall in P/Es in October 2018, investors should see stability rather than continued rerating looking into 2019.

Moreover, with 5-year earnings growth expectations already at 20%, the prospect of upside surprises to the current earnings consensus appears weak. Indeed, with key leading indicators suggesting peaking momentum in the US economy in particular, the increase in capital spending by American corporates should likewise begin to slow, removing a key driver to the better-than-expected earnings seen through much of 2018.

We believe 2018 represents the beginning of a new phase of long-cycle adoption for global technology investors. Similar to the 2002–2012 period, in the aftermath of the technology bust of 2000–2001, investors will have to rely primarily on earnings growth and identifying true, bottom-up innovators to drive returns in the sector.

However, unlike 2002, when the US economy was in the early stages of recovery and technology penetration was low and rising, 2019 leaves investors in the sector facing a US economy in the late stages of its cycle and a much more established technology sector. Thus, investors will increasingly have to look to active management strategies to identify innovative companies to overcome the rising cyclical headwinds in the sector.

(For more details, see UBP Spotlight: A Regime Change Ahead for Global Technology, August 2018)



US equity advance should narrow in 2019



Japan valuations are near 2008 lows despite corporate earnings outpacing US



Political volatility in Europe to provide tactical opportunities

HEALTHCARE: INNOVATION CREATES OPPORTUNITIES

The secular trends in healthcare – ageing populations, emerging market demand, and expanding basic health insurance – remain well entrenched but investors should shift their focus towards differentiated innovators in the healthcare space via mid-sized biotech, medical technology, and healthcare-focused IT companies.

The global healthcare market continues to expand rapidly, driven by ageing populations, emerging market demand and expanding basic health insurance, which will continue to drive demand for best-in-class and highly efficient treatment options: worldwide healthcare spending is projected to increase at an annual rate of 4.1% in 2017–2021, up from just 1.3% in 2012–2016, and combined healthcare spending in the world's major regions is expected to reach USD 8.7 trillion by 2020, up from USD 7 trillion in 2015.

Industry reports find that, in aggregate, average price increases have contributed to more than 60% of the over 20% growth in US sales of the 45 main pharmaceutical products over the past three years. However, we expect the benefits of these price rises to continue to wane as the growth in demand for those products slows further. Partially driving this is a commitment on the part of many pharmaceutical companies not to increase drug prices through 2018 in response to US political pressure.

Without these price increases driving growth, investors need to shift their focus to innovation as their key source

of return. In particular, therapeutic and technological innovation, with the potential to disrupt the existing USD 1 trillion annual biopharmaceutical market, is a key opportunity: there has been a notable increase in the number of approvals for new drugs and R&D budgets focused on areas of unmet need are growing. We have identified six growth areas in the current innovation cycle: immuno-oncology, gene-therapy, rare diseases, obesity, neurological diseases, and healthcare IT.

For investors, simply focusing on the world's largest pharmaceutical companies to participate in these growth trends is

no longer a viable strategy. Bernstein Research highlights that almost 50% of blockbuster drugs – those with peak sales exceeding USD 1 billion – now emerge from smaller and mid-sized biotech and medtech companies, which in turn need investors in order to pivot their focus.

Beyond this, in light of the high level of inefficiency in the global healthcare market, we see an opportunity in healthcare IT. Tech consultancy Gartner estimates that healthcare providers in the US will have spent approximately USD 42 billion on IT services in 2017, or just over 1% of domestic US healthcare expenditure. If the average spend on IT services across healthcare companies were to reach 3.3% (comparable to non-healthcare companies in corporate America), healthcare IT providers could see an incremental revenue opportunity of over USD 70 billion.

Though the healthcare sector should retain several of the secular growth drivers seen in previous decades, a shift in focus from safe, dividend-paying names to the interplay of multiple, fast-changing factors is needed to continue to participate in ongoing innovation and efficiency in the provision of healthcare.

*Differentiated
product and service
innovation is
the new secular
growth opportunity
in the sector*

USD **70**_{BN}

revenue
opportunity in
healthcare IT

50%

of blockbuster
drugs come from
small & mid-sized
companies



TIME TO EXPAND FOCUS FROM OIL TO INDUSTRIAL METALS

A supply shock is needed for higher oil prices, but 2019 should see tightening supply support industrial metals instead.

As outlined in the UBP 2018 Investment Outlook, we believe the energy and industrial commodity complexes are in the early stages of a long-cycle turn following the bear market seen in the early part of this decade. The divergence between crude oil and industrial commodity prices in 2018 belies the underlying fundamentals and highlights opportunities for investors to expand their focus from energy to metals in 2019.

Crude oil markets have rallied since output cuts by both Saudi Arabia and Russia in 2017 ahead of what we expect to be a more significant supply-demand imbalance looking forward into 2020. As 2017 turned into 2018, the move by the two oil giants was sufficient to create a shortage and drive crude oil prices up from the USD 27 per barrel lows to as high as USD 80 in the summer of 2018.

By mid-year, however, the driver to higher oil prices turned more speculative with a focus on the renewal of sanctions on the sale of Iranian crude oil, removing supply from the market. Despite this, the underlying supply-demand dynamic turned unfavourable for the first time since early 2017, with supply once again starting to exceed demand in June 2018, according to the IAEA.

Admittedly, with OPEC's spare capacity near historical lows, any further shock to output could extend the oil price rise further. However, with supply-demand dynamics shifting against investors, risk-reward in energy markets no longer favours substantially higher prices than the current level.

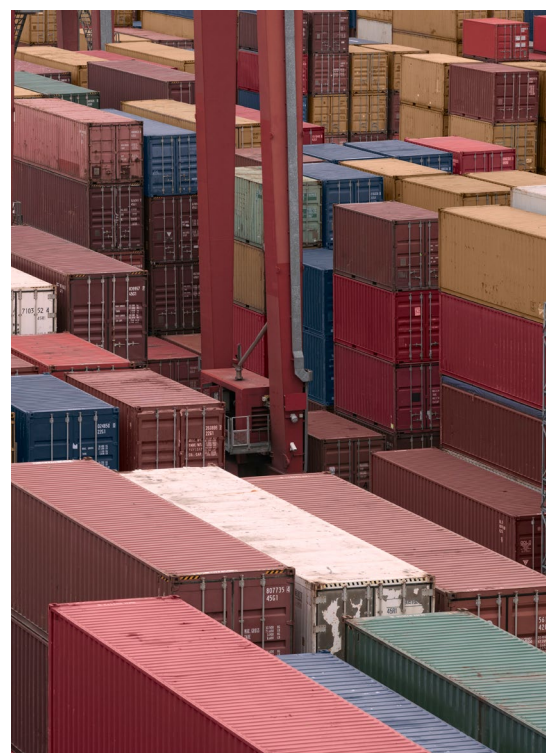
In contrast to the sharp rise in crude oil prices in 2018, industrial metal prices have

seen broad-based declines through much of the year, driven primarily by slowing Chinese growth and rising trade tensions between the US and China. Under the surface, however, undersupply pressures have continued to build across major metals, creating a fundamental backdrop that supported energy prices in late 2017.

Three years of undersupply is building the opportunity for industrial metals

Clearly a bottoming and turn in Chinese growth will be a requirement for a rebound in industrial metals in 2019. Though the trade overhang will likely remain in 2019, with GDP growth slowing towards the all-important 6% level, Chinese policy-makers have been adding stimulus to stabilise economic activity. As US tariffs are extended in January 2019, and with Chinese growth just above 6%, the hesitant easing strategy seen in the second half of 2018 may become more proactive in 2019.

Thus, with 2018 already having seen a period of undersupply across major metals, the prospect of this continuing, against a backdrop of stabilising and improving rather than deteriorating Chinese demand, investors should view signs of proactive stimulus on the part of Chinese policy-makers as the key catalyst for industrial metals in 2019.



Metals should rally in 2019 just as oil did in 2018



Gold's defensive role is valuable

Fundamental support for gold, however, remains modest and dynamics are pointing to continued excess supply in 2019. With a stronger US dollar and a steady rise in US interest rates across the yield curve, gold prices will likely stay firmly capped. Investors will have to rely on the prospect of geopolitical instability as a catalyst to gold price rises in the months ahead. Fortunately for gold investors, meaningful potential flashpoints remain, giving gold an important role in portfolios in the current environment.

GLOBAL AND ECONOMIC CROSSWINDS FAVOUR DOLLAR STRENGTH

The unsynchronised nature of global economic growth combined with the increasing local, regional and global political instability should continue to underpin volatility in foreign exchange markets in 2019, leaving the US dollar likely to sustain the strength it showed for much of 2018.

Providing ongoing support for the US dollar will be continued though stabilising economic growth and widening interest rate differentials between the US and its key trading partners.

Despite markets pricing in an additional two rate increases in 2019, Fed Chairman Jerome Powell and other voters on its policy-setting Federal Open Market Committee have used speeches in late 2018 to take a more hawkish tone, suggesting that the risk to the rate-raising outlook may be of more rather than fewer hikes than expected in 2019.

Moreover, the migration of the 'normalisation' process to the 10-year portion of the US yield curve likely means that disparities between global long-term interest rates should likewise continue to widen in 2019 in favour of the US dollar.

Politically, with the US coming out of mid-term Congressional elections in November 2018, risks to the US dollar are likely front-loaded, with the lame-duck session of the US Congress having to deal with the threat of a US government shutdown if funding is not approved by 7 December 2018.

In the eurozone, while positive economic momentum has led the European Central Bank (ECB) to signal the wind-up of its quantitative easing program, we expect this exit to be gradual to avoid any derailing of the still fledgling recovery in the single currency area.

Indeed, signs that eurozone economic momentum has peaked have appeared in the last quarter of 2018. Magnifying this trend is the slowing growth in key emerging markets which are proportionately more important trading partners to Europe than to the US.

With ECB rate increases not expected until the second half of 2019 at the earliest, both interest rate and growth differentials should prove headwinds to sustained euro strength throughout the year. Admittedly, as we expect Italy's end-2018 confrontation with the European Union over fiscal policy to be resolved in the months ahead, tactical euro strength may emerge

as Italian risk premia are unwound in early 2019. However, with elections for the European Parliament set for May 2019, we expect political uncertainty to reappear by mid-year.

Sterling appears to reflect Britain's modest economic activity and softening housing market. Though progress has been made towards a Brexit agreement, risks of a 'hard' Brexit in March 2019 appear moderately underpriced in currency markets.

Japanese yen investors should see a trajectory similar to that of their continental European counterparts. Reactive policies from the Bank



of Japan likely mean interest rate differentials will continue to work against the yen in 2019. Domestically, the hike in consumption taxes in October 2019 should keep domestic policy favouring a weak yen so as not to overly burden an economy still under repair.

Moreover, like Europe, Japan's reliance on exports means that weakening emerging economies may continue to widen the economic growth gap between Japan and the US.

Tactically, the yen's role as a safe-haven currency will probably mean periodic bouts of currency strength as geopolitical instability mounts. However, we view the prospect of such appreciations as temporary, though likely tradeable, and favour a weakening bias overall on the Japanese yen in 2019.

The Chinese yuan has declined consistently since mid-2018, mitigating the impact of tariffs imposed by the US on imports from China (see p. 18). With a new set of tariffs set to take full effect in the new year, the renminbi should keep depreciating. Absent a rapid escalation in trade tensions (see p. 20), we expect the cushion of a weakening currency to be augmented by expanding domestic liquidity to counterbalance the impact on the Chinese economy. This suggests the downward trajectory of the second half of 2018 should moderate in 2019, though the yuan should remain on a downtrend.

CHINA YUAN – REAL EFFECTIVE EXCHANGE RATE
(BASED ON MANUFACTURING CPI)



Sources: UBP, Bloomberg Finance L.P.



EUR headwinds to emerge in H1 2019



Tax hikes & elections portend JPY weakness in 2019

A NEW COLD WAR

The 2018 trade dispute between the US and China appears to conceal a more strategic confrontation between the two largest economies in the world. Economically, the clash mirrors the 1980s US–Japan relationship and as in that period, domestic policy decisions should create tactical opportunities for China investors in 2019.

Many believed that the US President's broadside on trade in early 2018 was both a ploy to get better terms in the renegotiation of the North American Free Trade Agreement (it was) as well as a political strategy to fulfil campaign promises (it was as well). What went unnoticed in the policy shift was the US effort to use trade as the first volley in a broader campaign to isolate America's strategic rival on the global stage, China.

This broader objective began to reveal itself as the US rejected Chinese overtures to reduce China's bilateral trade surplus by nearly 50% in the spring of 2018. By September the nature of the most recent tariffs imposed by the US signalled an intention on the part of

the US to take a long-term, strategic approach to the trade battle (for more details, see UBP Spotlight *US–China Trade War: From Checkers to Chess*, September 2018).

By October US National Security Advisor John Bolton confirmed this isolation strategy, stating: "...[China's] behaviour needs to be adjusted in the trade area, in the international, military and political areas, in a whole range of areas..."

With China having struck back with tariffs on the full range of American imports, the tit-for-tat retaliation stage is nearing an end despite the fact that US tariffs are scheduled to rise once again on 1 January 2019. As highlighted

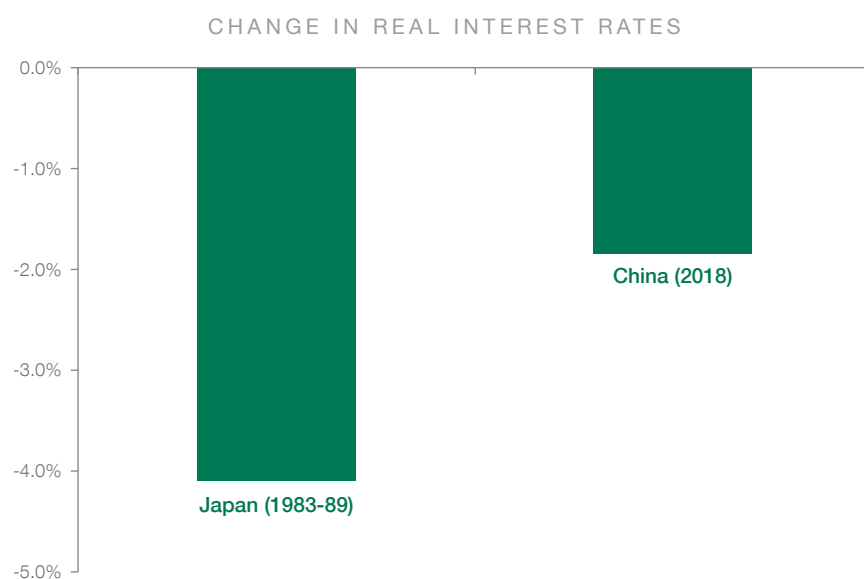
in our Trade War discussion (see p. 20), the next step towards isolating China may turn US attention towards Europe in the new year.

Though there is a risk that the US will continue to increase pressure on China, such a pause may provide an opening for China to craft a domestic policy response more proactively, similar to the steps taken by Japan in its own trade war with America in the early 1980s.

Though China has been adjusting its policy to the shifting trade landscape, much of the heavy lifting has been done by the Chinese yuan, which has depreciated by 10% since US trade rhetoric increased in April 2018. Indeed, we estimate that the 10% depreciation against the US dollar has substantially offset the additional cost of US tariffs borne by US importers of Chinese goods.

Interestingly, this also parallels Japan's experience back in the 1980s. Threatened with tariffs by the US, Japan agreed to 'voluntary restraints' on the volume of its auto exports in the face of a yawning trade surplus with the US. Cushioning the impact on Japan's automakers and its economy as a whole was a 22% yen depreciation against the US dollar from 1981 to 1985.

For China, with a further tariff rise to 25% scheduled for the new year, we expect China, like Japan, to allow renewed pressure on the renminbi through the psychologically important seven per US dollar level to serve as a cushion for the domestic Chinese economy.



Sources: IMF, UBP

“...[China’s] behaviour needs to be adjusted in the trade area, in the international, military and political areas, in a whole range of areas...”

JOHN BOLTON, US NATIONAL SECURITY ADVISOR (OCT. 2018)

In the US–Japan case, however, by 1985 the US responded aggressively to perceived currency manipulation and coerced Japan into strengthening its currency by 30% against the US dollar. By 1988, the yen had risen by 50% against the US dollar.

With China likely seeking to avoid such an outcome, it is turning to policies Japan resorted to in order both to mitigate the effects of American policies on the domestic economy and to strategically reduce its reliance on US exports.

Indeed, China has been seeking free trade agreements with other large, developed economies. However, in pursuing its isolation strategy, the US has shown a willingness to force the hand of major trading partners to choose free trade with either the US or China, but not both (see p. 20). Moreover, bilaterally, the US has been discouraging Japan from joining regional free-trade areas, potentially leaving the world’s third-largest economy out of China’s economic reach.

As a result, we suspect China will need to turn towards Japan’s final tool to soften the impact of US policies – domestic deflation. From 1983 to 1989, inflation-adjusted interest rates fell from 4% to nearly 0%, spurring an asset bubble that Japan is still recovering from.

Admittedly, China has been reluctant to be seen as overtly embarking on policies which mimic 1980s Japan. However, just as Japan reacted to its economy slowing sharply in 1986 following its America-inspired revaluation, as China GDP growth slows towards the critical 6% level, by late 2018 China will likely have to become more aggressive in its domestic policy stimulus.

Indeed, real interest rates (3-month interbank) in China have already fallen from near 3% in early 2018 to 1% by October 2018, suggesting China has already quietly begun going down Japan’s path in its own conflict with the United States.

Should this heavier stimulus materialise as expected in 2019, onshore Chinese

equities (A-shares) could rise from the current 11x earnings, a level last seen during China’s previous attempts at deflation in both 2008 and 2014. Offshore Chinese equities (H-shares) traded in Hong Kong with their bank-heavy listings are even cheaper at 7x earnings, though still above the 5.5x earnings at their all-time low. Encouragingly, H-share equities have firm dividend yields of 3%, a level breached during the 2008–2009 global financial crisis and well supported with payout ratios of only 20%.

On balance, while the new ‘Cold War’ between the United States and China raises considerable obstacles for China, the Japan experience of the 1980s highlights the openings for opportunistic investors ahead of what we expect to be substantial stimulus to come for China’s domestic economy.

Given the potential that the US will continue to increase pressure on the Chinese economy, either directly or via its trading partners, capital-protected and/or option strategies which limit investor risk appear prudent for 2019.

80s Japan provides
a roadmap for China

6% GDP growth = trigger
for more aggressive
Chinese stimulus

Seek capital-protected
or option strategies to
limit risk



FOCUS ON US-EUROPE RATHER THAN US-CHINA TRADE WAR RISKS

Though by late 2018 investors' trade war concerns have focused on US-China relations, the US may instead turn its attention to Europe in 2019 in an effort to strategically isolate China further and reshape global trade.

With the US moving to strategically isolate China, much like it did Japan in the 1980s (see p. 18), investors may be focusing too much on the bilateral trade conflict between the two largest economies in the world.

Though a risk exists that the US may seek to escalate already elevated US-China tensions further in the new year, a yet unrecognised threat to markets and the global economy rests with the prospect of American policy-makers refocusing their efforts on Europe in order to achieve the same strategic objective – the economic isolation of China.

While many hailed the US-Mexico-Canada Agreement as an important sign that trade tension can be eased following months of difficult negotiations between the North American trading partners, the

A yet unrecognised threat rests with the prospect of the US refocusing its efforts on Europe to isolate China further



celebration over the agreement diverted attention from an important clause of the pact that allows signatories, the US in particular, to withdraw should either Canada or Mexico sign free-trade agreements with 'non-market' economies (i.e. China).

This clause adds further evidence to the idea that the underlying objective in the US trade war is strategic isolation of the Middle Kingdom. If this is correct, if the US is indeed seeking to increasingly isolate China, America may seek to strong-arm Europe into a similar trade arrangement that limits China's access to the continent. Much like steel and aluminium tariffs exerted credible pressure on Canada and Mexico to bring them to the negotiating table, the US may view rekindling the threat of slapping tariffs on European auto exports to the US as equally effective for Europe.

Encouragingly for Europe, Germany's recent agreement to support efforts to open the German gas market to imports of US natural gas may provide an avenue to ease the strain on the broader US-European trade relationship, should such agreement be broadened across the continent. However, should it not, whereas tariffs on aluminium and steel had a modest effect on overall regional and global growth, similar tariffs or even just the threat of duties on cars and the auto supply chain could be more damaging for the global economy in 2019.



**US IS USING TRADE
AGREEMENTS**

to isolate China further

STILL TIME TO KICK THE CAN IN ITALY

Long-term concerns about Italian debt sustainability remain, but need not crystallise with the current confrontation with the European Union.

In late 2018 Italy became involved in a confrontation with the EU over its budget, renewing concerns about the threat that Italy poses to the integrity of the single-currency area, culminating in a rise in Italian government bond (BTP) yields to nearly 3.7%.

At these levels, if maintained, Italy's ability to sustain its current, onerous debt burden comes into question as the rising interest costs alone are outweighing the Italian economy's ability to service its debt. Moreover, we estimate that a sustained move to above 4% would leave Italian banks, among the largest holders of Italian debt, perilously short of capital and needing to raise more in the midst of an unwelcoming market for such paper.

While these dynamics are not new for Italy, they come against a backdrop of the European Central Bank (ECB) set to end its purchasing of eurozone (including Italian) government debt. 2018 saw the ECB buy as much as 20% of Italian government debt on issue. In 2019 this will fall to 5%, likely putting additional upward pressure on Italian yields as the bonds seek to attract alternative buyers.

Should this indeed occur in the new year, Italian bond yields risk hitting the 4% yield level referred to above, raising the risk of insolvency within its banking system.

While concerning for investors, we believe that following a period of escalation into

The standoff should ultimately end in compromise, once again pulling the single-currency area back from the brink

year-end, this standoff will ultimately end in compromise, once again pulling the single-currency area back from the brink. Politically, the Lega-Five Star coalition, like other populist governments which have taken power, needs to be seen to be pursuing key campaign promises, especially early in their term. We believe they are currently at this stage in the political cycle.

However, such governments must also seek to maintain power and, when necessary, prioritise their political agendas. As a result, we expect a window to open following the late-2018 period of confrontation. One potential compromise would be for the EU to agree to re-classify some of Italy's proposed infrastructure and immigration proposals as 'exceptional' spending outside the normal budgetary cycle in exchange for concessions on some of the more controversial spending programs proposed by Rome.

The timing of this window will likely depend on the combination of the level of Italian 10-year yields – with moves into the 3.5–4.0% range accelerating the pace of 'negotiations' – and the hard deadline of the end of ECB bond purchases at end-2018. With yields having already pierced the 3.5–4.0% range, the end of ECB purchases may serve to crystallise the threats both to Italy's debt sustainability and to its bank solvency if carried through into the new year, providing strong motivation on both sides to find a compromise in the months ahead.



THE END OF ECB QE
poses a long-term risk
without more Italian reform



4% YIELDS
on Italian BTPs to spur
Italy-EU compromise

DEAL OR NO DEAL?

The United Kingdom is to split from the European Union on 29 March 2019, but neither party is ready – negotiations are still in full swing and no plans have been adopted yet. This is an unprecedented process and the wildly different competing scenarios are giving financial markets the jitters.

The UK's exit from the EU is a complex and risky process. The hard deadline is 29 March 2019 yet neither the terms of the divorce nor future relations have been settled and many different scenarios are floating around.

The first step of the negotiations has to be an agreement on the terms of the exit. By the end of the one-year transition period, the UK will have to have signed trade agreements redefining its relations with the EU and with all its other partners. However, the exit agreement has been repeatedly put off because of the issue of the Irish border, which remains a sticking point both for the EU and for the UK.

The main question for the UK is whether it will be able to retain access to the European Single Market after the transition period. The legal terms of such access will be less important in the end than the economic impact of the arrangement on the movement of goods, capital and people.

If the UK lost that access, the damage on its economy would be considerable: its economic growth could drop by 5% on average, and even by a chilling 8–10% if other trading partners like the US were to delay signing new agreements. British industry, finance, services and farming would all be deeply affected. This would result in recession, monetary easing and Sterling devaluation, with the added risk that the eurozone would also lose up to 0.5 percentage points in growth. This in turn would bring UK assets under

pressure, except those that would benefit from the fall in the currency.

If, on the other hand, goods continue to be traded, then the UK's prospects are much more constructive. After a period of soft growth, a recovery would emerge as trade would pick up, and sectors already affected in June 2016 by the Brexit referendum would rally. Since the referendum outcome, the UK economy has been lagging nearly 2% behind other developed countries; if all goes well, as confidence builds up again, Britain's growth could rise back to 2%. This recovery would boost British assets and the pound, but the central bank may have to manage overheating risks, forcing it to hike its base rates sharply, which would put pressure on bond yields.

To have or not to have access to the Single Market: that is the question





MICHAËL LOK

Group CIO and Co-CEO Asset Management

Michaël Lok, who has over twenty years of experience in wealth and asset management, joined UBP in 2015 as Head of Investment Management. Previously, he was Global Head of Asset Management with Indosuez Wealth Management (Crédit Agricole Group), where he developed a range of UCITS funds for Private Banking and a set of UHNWI mandates and dedicated investment solutions

with a focus on Asia and Latin America. This followed his roles as Head of Investment and Head of Risk and Quantitative Portfolio Management. Before that, he was Portfolio Manager at Banque Martin Maurel and HSBC France (ex-CCF). Michaël Lok holds two Master's degrees, one in Finance (DESS) and one in Banking and Finance (DEA), from the University of Aix-en-Provence.



NORMAN VILLAMIN

Chief Investment Officer (CIO) Private Banking

Norman Villamin joined UBP in November 2015 as Head of Investment Services and Treasury & Trading of UBP Zurich. He was appointed Chief Investment Officer Private Banking in 2016. With over twenty years of experience managing wealth both on an advisory and discretionary basis, Norman Villamin has been Chief Investment Officer for Coutts International, Head of Investment Analysis & Advice for Citi

Private Bank in Asia-Pacific as well as the Head of Asia-Pacific Research for HSBC and the Head of Asia-Pacific Strategy for Morgan Stanley based in Hong Kong and Singapore. Norman Villamin holds a Bachelor's degree in Business Administration from the University of Michigan and a Master's in Business Administration from the University of Chicago.



PATRICE GAUTRY

Chief Economist

Patrice Gautry joined UBP in Geneva in February 2000 and heads the Bank's Economic and Thematic Research department. Prior to that, from 1991 to 1999, he worked in the Institutional Asset Management department of HSBC Group in Paris as head of economics and investment strategy. From 1988 to 1991,

he was a manager of European diversified SICAV and mutual fund portfolios for the Ecofi-Finance Group. Patrice Gautry holds a Research Master's degree (Diplôme d'Etudes Approfondies) in economics from the HEC-CESA Paris and the University of Orléans, with specialisations in currency, finance and banking.

Disclaimer

This document is a marketing communication containing GENERAL INFORMATION on the financial services and/or financial instruments, and reflecting the sole opinion of Union Bancaire Privée, UBP SA and/or any entity of the UBP Group (hereinafter "UBP") as of the date of issue. It may contain generic recommendations but should not be deemed an offer nor a solicitation to buy, subscribe to, or sell any currency, product, or financial instrument, make any investment, or participate in any particular trading strategy in any jurisdiction where such an offer or solicitation would not be authorised, or to any person to whom it would be unlawful to make such an offer or solicitation. This document is meant only to provide a broad overview for discussion purposes, in order to determine clients' interest. It does not replace a prospectus or any other legal document relating to any specific financial instrument, which may be obtained upon request free of charge from UBP or from the registered office of the fund concerned, where applicable. The opinions herein do not take into account individual clients' circumstances, objectives, or needs. In this document UBP makes no representation as to the suitability or appropriateness, for any particular client, of the financial instruments or services described, nor as to their future performances. Clients who wish to obtain more information about any specific financial instruments can request it from UBP and/or their Relationship Manager. Where an investment is considered, the information on the risks linked to each financial instrument shall be provided in good time by separate means before the investment decision is taken. In any case, each client must make his/her own independent decisions regarding any securities or financial instruments mentioned herein and regarding the merits or suitability of any investment. Before entering into any transaction, clients are invited to carefully read the risk warnings and the regulations set out in the prospectus or other legal documents and are urged to seek professional advice from their financial, legal, accounting and tax advisors with regard to their investment objectives, financial situation and specific needs. This generic information is therefore not independent from the proprietary interests of UBP or connected parties, which may conflict with the client's interests. UBP has policies governing cases of conflicts of interest. The investments mentioned herein may be subject to risks that are difficult to quantify and to integrate into the valuation of investments. Generally speaking, products with a high degree of risk, such as derivatives, structured products or alternative/non-traditional investments (such as hedge funds, private equity, real estate funds, etc.) are suitable only for clients who are capable of understanding and assuming the risks involved. The value of any capital investment may be at risk and some or all of the original capital may be lost. The investments are exposed to currency fluctuations and may increase or decrease in value. Fluctuations in exchange rates may cause increases or decreases in the client's returns and/or in the value of the portfolio. The client may be exposed to currency risks if a financial instrument or the underlying investment of a financial instrument is denominated in a currency different from the reference currency of the client's portfolio or from the currency of his/her country of residence. For more information on risks, the brochure called "Characteristics and risks of certain financial operations" should be consulted. The information contained in this document is the result neither of financial analysis within the meaning of the Swiss Banking Association's "Directives on the Independence of Financial Research" nor of independent investment research as per the EU's regulation on MIFID provisions. In principle, EU regulation does not govern relationships entered into with UBP entities located outside the EU, including but not limited to Union Bancaire Privée, UBP SA in Switzerland, which is subject to Swiss law and Swiss regulation, in Hong Kong, and in Singapore, and the subsidiary in Dubai. Reasonable efforts have been made to ensure that the content of this document is based on objective information and data obtained from reliable sources. However, UBP cannot guarantee that the information the Bank has gathered in good faith is accurate and complete. Circumstances may change and affect the data collected and the opinions expressed at the time of publication. Therefore information contained herein is subject to change at any time without prior notice. UBP makes no representations, provides no warranty and gives no undertaking, express or implied, regarding any of the information, projections or opinions contained herein nor does it accept any liability whatsoever for any errors, omissions or misstatements in the document. UBP does not undertake to update this document or to correct any inaccuracies which may have become apparent after its publication. This document may refer to the past performance of financial instruments. Past performance is not a guide to current or future results. The value of financial instruments can fall as well as rise. All statements in this document, other than statements of past performance and historical fact, are "forward-looking statements". Forward-looking statements do not guarantee future performances. The financial projections included in this document do not represent forecasts or budgets, but are purely illustrative examples based on a series of current expectations and assumptions which may not happen as forecast. The actual performance, results, market value and prospects of a financial instrument may differ materially from those expressed or implied by the forward-looking statements in this document. The projected or targeted returns are inherently subject to significant economic, market and other uncertainties that may adversely affect performance. UBP also disclaims any obligation to update forward-looking statements, as a result of new information, future events or otherwise. Any performance data included in this document does not take into account fees, commissions, expenses charged on issuance and redemption of securities, or any other costs, nor any taxes that may be levied. The tax treatment of any investment depends on the client's individual circumstances and may be subject to change in the future. This document does not contain any tax advice issued by UBP and does not necessarily reflect the client's individual circumstances. This document is confidential and is intended to be used only by the person to whom it was delivered. This document may not be reproduced, either in whole or in part. UBP specifically prohibits the redistribution of this document, in whole or in part, without its written permission and accepts no liability whatsoever for the actions of third parties in this respect. This document is not intended for distribution in the US and/or to US Persons or in jurisdictions where its distribution by UBP would be restricted.

UBP is authorised and regulated in Switzerland by the Swiss Financial Market Supervisory Authority ("FINMA").

UK: UBP is authorised in the United Kingdom by the Prudential Regulation Authority, and is subject to regulation by the Financial Conduct Authority (FCA) and limited regulation by the Prudential Regulation Authority.

Dubai: This marketing material has been communicated by Union Bancaire Privée (Middle East) Limited, a company regulated by the Dubai Financial Services Authority ("DFSA"). It is intended for professional clients and/or market counterparties only and no other person should act upon it. The financial products or services to which this material relates will only be made available to a client who meets the professional client and/or market counterparty requirements. This information is provided for information purposes only. It is not to be construed as an offer to buy or sell, or a solicitation for an offer to buy or sell any financial instruments, or to participate in any particular trading strategy in any jurisdiction.

Hong Kong: UBP is a licensed bank regulated by the Hong Kong Monetary Authority (HKMA) and a registered institution regulated by the Securities and Futures Commission (SFC) for Type 1, 4 & 9 activities only in Hong Kong. The securities may only be offered or sold in Hong Kong by means of documents that (i) are addressed to "professional investors" within the meaning of the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) and any rules made thereunder (the "SFO"); or (ii) are defined as "prospectuses" within the meaning of the Companies Ordinance (Chapter 32 of the Laws of Hong Kong) (the "CO") or constitute offers to the public within the meaning of the CO. Unless permitted to do so under the laws of Hong Kong, no person may issue or have in his/her possession for the purpose of issuing, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the securities, directed at, or likely to be accessed or read by, the public in Hong Kong, except where the securities are intended to be disposed of only to persons outside Hong Kong, or only to "professional investors" within the meaning of the SFO.

Singapore: UBP is a merchant bank regulated by the Monetary Authority of Singapore (MAS), is an exempt financial adviser under the Financial Advisers Act (Cap. 110 of Singapore) to provide certain financial advisory services, and is exempt under section 99(1)(b) of the Securities and Futures Act (Cap. 289 of Singapore) to conduct certain regulated activities. This document has not been registered as a prospectus with the MAS. Accordingly, this document and any other document or material in connection with generic recommendations may not be circulated or distributed, whether directly or indirectly, to persons in Singapore other than (i) to institutional investors under Section 274 of the Securities and Futures Act (Cap. 289) of Singapore ("SFA"), (ii) to relevant persons pursuant to Section 275(1), or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Luxembourg: UBP is registered by the Luxembourg supervisory authority the Commission de Surveillance du Secteur Financier (CSSF).

Italy: Union Bancaire Privée (Europe) S.A., Succursale di Milano, operates in Italy in accordance with the European passport – held by its parent company, Union Bancaire Privée (Europe) S.A. – which is valid across the entire European Union. The branch is therefore authorised to provide services and conduct business for which its parent company, Union Bancaire Privée (Europe) S.A., has been authorised in Luxembourg, where it is regulated by the Luxembourg financial supervisory authority, the Commission de Surveillance du Secteur Financier (CSSF).

Monaco: This document is not intended to constitute a public offering or a comparable solicitation under the Principality of Monaco's laws, but might be made available for information purposes to clients of Union Bancaire Privée, UBP SA, Monaco Branch, a regulated bank under the supervision of the Autorité de Contrôle Prudentiel et de Résolution (ACPR) for banking activities and under the supervision of the Commission de Contrôle des Activités Financières for financial activities.

November 2018