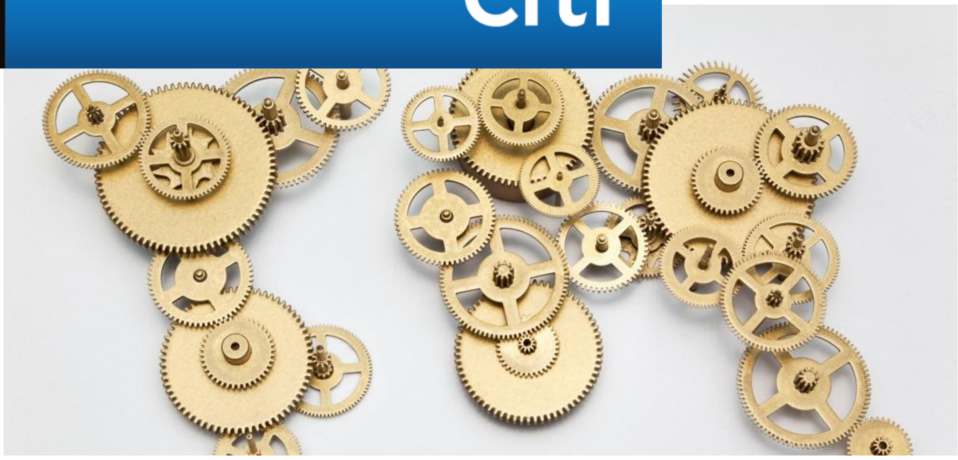
Private Bank

Europe Strategy



June 27th, 2019

Politics and trade war impacting sentiment and growth

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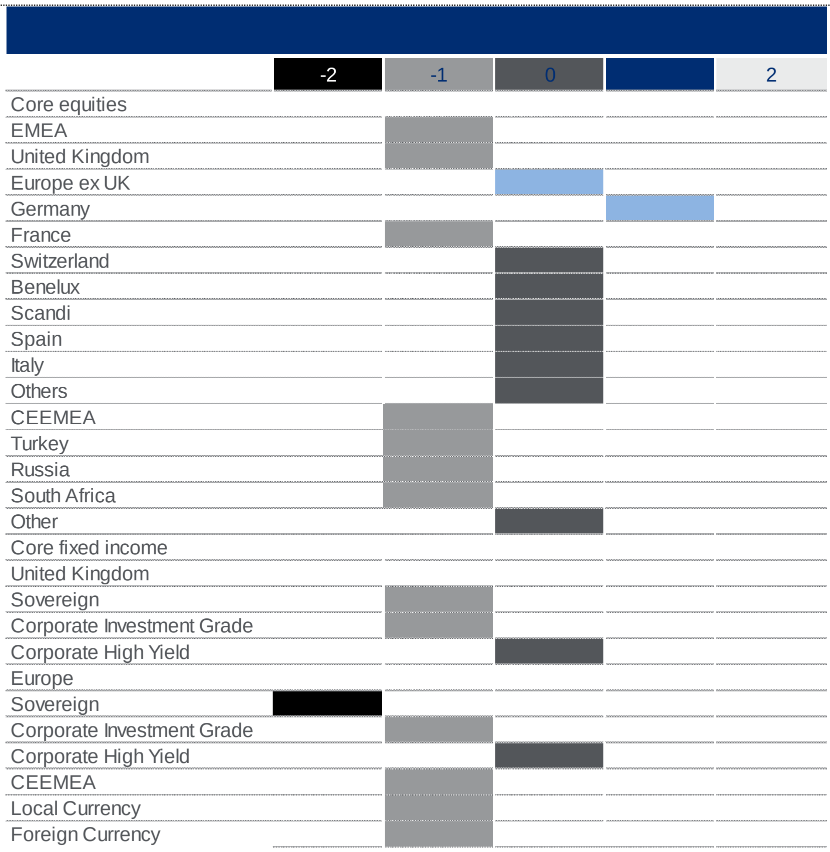
- **As the UK's Conservative Party leadership battle reaches its final stages, there is a rising risk of a snap general election before Brexit resolution**. Sterling could face more downward pressure.
- **European economic growth weakening.** We thus expect the ECB to adopt further monetary easing measures.
- **Worsening trade outlook.** The US-China trade war re-escalation has negative implications for Europe. Furthermore EU-US trade tensions likely to intensify in the second half of 2019.
- **Small underweight Europe ex-UK equities.** Remain overweight Germany, underweight France, with preferences within technology and healthcare sectors. Downgraded cyclicals to neutral, prefer value over growth.
- **Small underweight large-cap UK equities**. The attractive low-teens valuation multiple, 4.8% average dividend yield, and undervalued currency, are offset by uncertainty over Brexit and domestic politics.
- **Underweight European sovereign bonds.** 10-year German Bund yield of -0.33% is poor value regardless of potential renewed ECB buying support.
- **Underweight Europe and UK investment grade corporate bonds.** Likely higher net supply, and unattractive yields versus US and EM equivalents.
- **Neutral EMEA high yield corporate bonds**. Decent coupon support, low level of defaults and leverage. Selective opportunities in areas like AT1s.

Contents

Global Investment Committee (GIC) EMEA asset allocation:



Source: Citi Private Bank showing Office of the Chief Investment Strategist (OCIS)'s asset allocation for Europe as of last Global Investment Committee (GIC), June 2019. Note: -2=very underweight; -1=underweight; 0=neutral, 1=overweight; 2=very overweight. All allocations are subject to change at discretion of the GIC of Citi Private Bank.

Mid-year review of European assets

Key regions / Sectors	View	Performance			Drivers YTD	Comment
		QTD (%)	YTD (%)	1YR (%)		
UK	UW	3.1	12.8	1.8	Weaker Sterling, higher commodity prices, political risk	UK equities are trading 12% higher YTD, supported by the depreciation in GBP from close to $1.32 to $1.27. While political risk could lead to further GBP weakness which could support UK equities, upside is likely to be capped - **see UK section.** Higher commodities driven byhigher oil YTD has supported UK equity index performance.
Europe ex UK	UW	4.1	17.6	6.1	Beta rally, trade, China rebound	Europe-ex-UK has strongly performed so far YTD, although the rally has mostly been a beta rally. The possible escalation in trade concerns and the likely anticipated trade focus by the US towards the EU has recently weighed on European sentiment and inflows. The GIC have shifted to a slight underweight in the region.
Europe ex UK SMID	UW	2.8	15.6	-2.3	Higher exposure to domestic slowdown, profit post outperformance	While mid-caps have outperformed meaningfully in 2016-2017 given the EU growth acceleration, the relative outperformance has begun to fade as growth has slowed. Given mid-caps are also more exposed to a cyclical slowdown in Europe, with lower allocations to sectors we like such as financials and IT, the GIC moved underweight SMID's in May.
Eur.ex.UK - IT	OW	7.2	23.4	3.1	Cyclical rally, global tech rally	Second best performing sector YTD, supported by strong cyclical rally.
Eur.ex.UK - Healthcare	OW	1.8	17.8	14.2	Defensiveness supporting 2Q recovery after weak 1Q	Healthcare had initially underperformed YTD given the global rally had been driven by cyclical sectors, however this has since turned. Favoured sector globally.
Eur.ex.UK - Financials	OW	2.7	10.3	-2.3	Cyclical rally, more recent impact from dovish ECB	Financials outperformed during the first part of the year, however has since underperformed as a more dovish ECB raised concerns about longer term bank profitability outlook.
Euro IG	UW	2.0	5.3	4.6	ECB dovishness, weak growth	Further easing by the ECB could lead to expensive IG becoming more expensive.
Euro HY	UW	2.1	7.4	5.0	Weak growth	Spread have continued to tighten, however Euro-area growth concerns may start to weigh on the sector.

United Kingdom faces a challenging autumn

Brexit on hold for now. The UK is having a period of calm after the European Union extended the UK's membership until 31st October, and after the resignation of Prime Minister Theresa May. The hiatus is likely to last until 22nd July when the Conservative Party will announce its new leader and Prime Minister.

Unsettled politics. UK domestic politics is fragmented and polarised owing to Brexit. The EU parliamentary elections saw major gains for the new anti-EU Brexit Party and for the pro-EU Liberal Democrats. The Conservatives, having lost ground due to their inability to implement Brexit thus far, are likely to pick a leader who might stem the tide of voters moving towards the Brexit Party. The Labour Party, having lost ground due to their lack of a clear Brexit policy, are expected to move closer to a position favouring a second referendum.

Unpredictable outcomes. This raises the probabilities for two extreme outcomes: the UK crashing out of the EU acrimoniously without a deal, and of the cancellation of Brexit. To complicate matters further, a snap general election may precede either outcome. The path to this snap election could be as follows: The new UK prime minister seeks to enhance the existing withdrawal agreement with the EU. However, no changes are secured or perhaps only small changes are made to the accompanying political agreement. The new PM then fails to get the deal through the UK's House of Commons. The Commons next votes against a 'No Deal' Brexit. The PM then either calls for a general election or loses a vote of no confidence that leads to a general election if he cannot regain the house confidence within 14 days.

Let's briefly consider the possible economic paths under the scenarios of 1) 'No Deal' and 2) Labour election victory.

- **'No Deal' Brexit involves significant economic risks.** Should the UK leave the EU on 31st October without a deal, then the UK would have to trade under World Trade Organisation (WTO) rules. This could involve higher tariffs on goods being bought from or sold to EU members. One of the two Conservative candidates Boris Johnson has also highlighted Gatt 24 as a possible 'way forward' with 'agreement on both sides'. This potentially allows for the creation of an interim agreement necessary for the formation of a customs union or a free-trade area, which could stay in place for up to ten years. The Bank of England (BoE) has previously assessed that there could be a negative 9% impact to the UK's GDP over 15 years. More recently, it has said that a stimulus package could be needed in the event of 'No Deal'. Given the rising risk of 'No Deal', it was unsurprising that the BoE recently voted 9-0 to leave the base rate at 0.75% and looking forward could be challenged in trying to achieve its aim of raising rates "at a gradual pace and to a limited extent."

- **A Labour election victory is possible and would pose significant economic risks.** Their socialist programme could include increases in both corporate and personal taxes, as well as nationalization across several sectors, including the national electricity grid, water companies, the postal service, and the railways. It might also include an 'Investment Transformation Fund' to invest £250 billion over a decade in energy, communications, scientific research, and housing. They might also seek to grant 10% ownership of many UK blue chip companies to employees. That said, Labour might well fail to win an outright parliamentary majority, forcing the party into coalition with partners that could water down its economic policies. Even so, a Labour victory would at the very least cause a slowdown in foreign direct and portfolio investment, as well as prompting further falls in domestic business confidence and investment.

All of the risks for the UK come at a time when global trade tensions are rising and the UK economy is vulnerable. The services sector contributes 80% of UK output and slowed by 0.3% in the first quarter. The services PMI fell below 50, indicating further contraction ahead. The manufacturing sector rose by 2.2% in the first quarter – its fastest pace for 30 years – more than offsetting the services decline to give overall GDP growth of 0.5%. However, the manufacturing boost was largely due to inventory building ahead of the UK's originally scheduled Brexit date of 31st March 2019. April's growth contraction of 0.4% month-on-month showed the fading effects of the inventory build-up as well as a sharp decline in car production. While unemployment is at the historically low level of 3.8% and wage growth is firm at 3.4%, a further weakening in the manufacturing sector could drive a slowdown in hiring and then harm consumption.

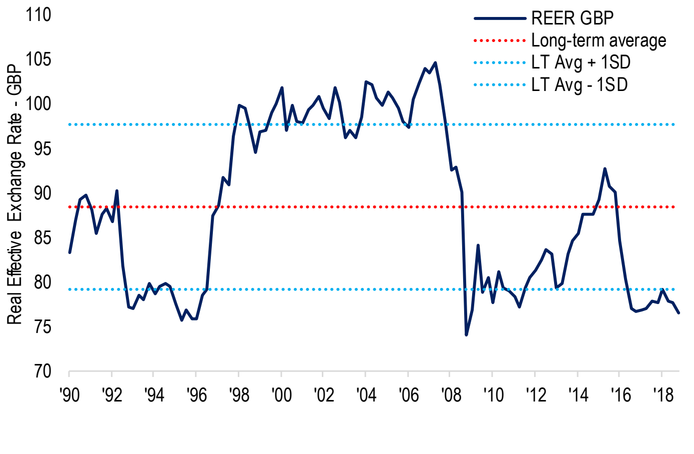
- **Selective UK investment opportunities only.** The UK newsflow is fluid and the economic and political situations are highly fragile. We thus continue to advocate a short-term and selective approach to UK assets, based only on actual developments rather than on speculation.

  Sterling: As the main barometer of Brexit, we expect further short-term Sterling weakness as Brexit faces the two possible extreme outcomes of 'No Deal' and 'No Brexit'. While $1.25 is the next likely support level, the growing likelihood of a snap general election ahead of either Brexit alternative would probably take Sterling lower than this. The cheap real exchange rate is only a secondary factor until the UK political backdrop stabilizes – **figure 1**.

  Equities: The average UK price/earnings multiple of 12X and dividend yield of 4.8% look attractive. However, we don't advise buying the market as the uncertainties over Brexit and domestic politics immediately ahead could cap inflows and index upside.

  Gilts: In the short-term, prices could rally further and thus yields fall, in line with the global sovereign bond rally. However, there are medium-term concerns, not least that of a Labour government that might raise fiscal spending at a time when the UK still has a fiscal deficit equivalent to 1.1% of GDP – **figure 2.**

Figure 1: Sterling real effective exchange rate



Source: Bloomberg as of June 11th 2019

Figure 2: UK fiscal deficit (% of GDP)

Source: Bloomberg as of June 11th 2019

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ECB increasingly dovish amid mounting risks to growth

Eurozone growth is fragile despite a rise in the first quarter to 0.4% q/q, following 0.2% in 2018's fourth quarter. In addition, unemployment in April fell to its lowest level since 2008 at 8.4%. Broad money supply (M3) growth reached a 17-month high of 4.7%, and lending growth edged up to 3.4%.

However, we expect weaker second and third quarters for several reasons. (1) Growing trade concerns, see page 7, (2) Geopolitical risk factors remain elevated. (3) Brexit has still not been resolved. (4) Some emerging countries are showing vulnerability.

While the ECB raised its growth and inflation forecasts for 2019 to 1.2% and 1.3% respectively, it reduced forecasts for both for 2020 and the risk is further downgrades in the months ahead for 2020. Mr Draghi described the ECB's 'readiness to act in case of adverse contingencies with all instruments available.' This was a more granular assessment than normal.

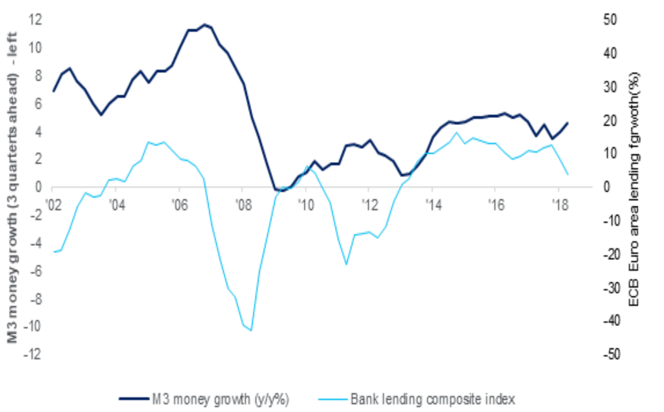
There are potentially four dovish policy responses from the ECB:

1. The deposit and refinancing rates won't rise for at least a year. Indeed, there is a growing expectation that the next rate move will be downwards – **figure 3.**
2. The possibility of restarting the asset purchase programme (APP).
3. The possibility of extending forward guidance.
4. A third targeted longer-term refinancing operations (TLTRO) has been announced. Interest rates on the new round of TLTRO's will be set at 10 basis points above the main rate, while banks that exceed the lending benchmark will pay 10 basis points above the deposit rate (-0.4%). This means the lowest rate on offer for banks would be -0.3%.

The pace and sequence that the ECB responds with will be dictated by how the trade war develops (see 'EU's rising trade concerns' page 7), and also whether or not the rise in broad money supply is reflected in a greater desire by corporates to borrow. **See figure 4.**

Figure 3: ECB hike expectations

Figure 4: EU money supply versus lending growth



Source: Bloomberg as of June 11th 2019

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EU's rising trade concerns

The EU is negatively exposed in several ways to the US-China trade war:

Firstly, the **European economies are exposed to China (5.8% of net trade) and to the US (6.3% of net trade)**. As US-China tariffs begin to impact on their respective economies, European exporters are likely to suffer. Taking Germany as an example, exports are equivalent to 47% of its total output – **figure 5** – and 7% of its total exports are to China. Over recent years, the fortunes of German manufacturing have been increasingly tied to Chinese growth. The risk for Germany is that its fragile and already-fading GDP growth (0.4% Q/Q in 1Q19 and expected 0.2% Q/Q in 2Q19) starts to feel the effects of weakening manufacturing activity upon domestic sectors by way of lower capital expenditure and hiring **– figure 6.**

Secondly, **European financial markets are getting impacted in several ways**, and this has weighed upon European indices, which are down 3% since the trade war re-escalated a month ago. For example, German cars and car parts make up 12% of the country's DAX index, while German equities make up 13.7% of the broader European equity index.

Thirdly, **there is rising uncertainty at the corporate level**. As an early confirmation of rising concern, the EU Chamber of Commerce in China said recently that one-third of EU companies are being 'hit hard' by the US-China trade war.

Fourthly, **some companies are being impacted much more than others. As a result, a very selective approach is necessar**y. As an example, Daimler manufactures almost half of its cars in the US, so would be significantly impacted if China retaliated by imposing tariffs on US car imports.

Finally, as the US-China trade war rages on, impacted companies are already starting to shift their supply chains. In the second half of 2019, we could see more companies diverting exports to Europe. **This could put downward pressure on European domestic prices, at a time when the ECB is already losing its battle to drive inflation up to its 2% target.**

It has been notable how the US has approached its trade policy in a sequential manner, taking on countries one by one. The EU is likely to be next in this sequence, with four areas of potential direct conflict with the US.

1. The US and EU differ over whether or not a **broad trade deal should include agriculture**. The US will likely push hard for the EU to import more US agricultural products. Both sides would prefer to finalise the broad trade deal before the current EU Commissioner's term expires at the end of October 2019.

2. The US decision over whether to impose **tariffs on EU cars and car parts**, based on the results of its 232 investigation, was postponed for six months in February. Our view is that these tariffs will eventually be imposed, but simultaneously suspended, possibly for the US to use them as leverage in negotiations over a broader trade deal.

3. During the constructive Trump-Juncker trade talks last summer, the **EU agreed to import more LNG** (liquefied natural gas) from the US. However,

the Russian-German Nord Stream 2 pipeline is now nearing completion, which could raise tensions.

4. **EU aircraft industry subsidies** have prompted US tariffs of $11 billion. The EU is threatening to retaliate, given the World Trade Organization's comment that the US subsidises its own aircraft industry.

These areas of potential upcoming conflict could be additional to what has already been imposed. The US has imposed 25% tariffs on EU steel exports and 10% tariffs on EU aluminium exports, equating to $7.1 billion. In response, the EU's counter-measures equate to $3.2bn tariffs on US exports to the EU.

We see two potential positives for the EU from the US-China trade war. However, both are likely to have an impact only in the longer term:

Firstly, part of what the US is seeking from China – better market access, less forced technology transfer, legal protection of intellectual property – have been problems for the EU too. So, an eventual US-China trade deal including provisions in these areas would be potentially positive for the EU, assuming that China also extended them to the EU.

Secondly, EU companies are likely to start making some substitution gains in the coming months. They could be well-placed in particular sectors. These include aircraft exports to China, and machinery and chemical exports to the US.

Figure 5: **Euro-area exports as a percentage of GDP**

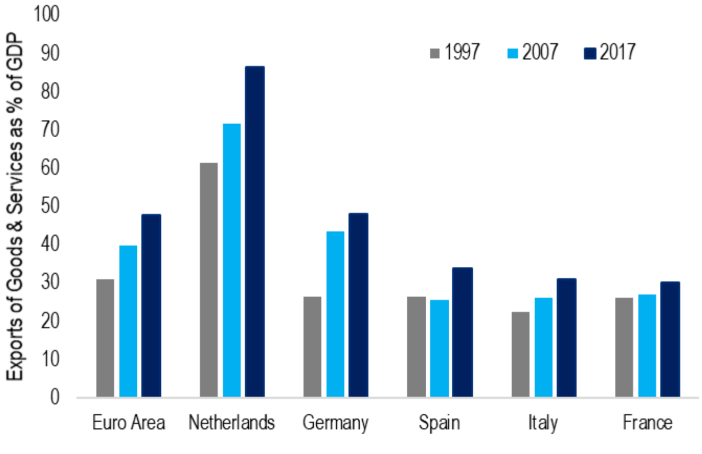

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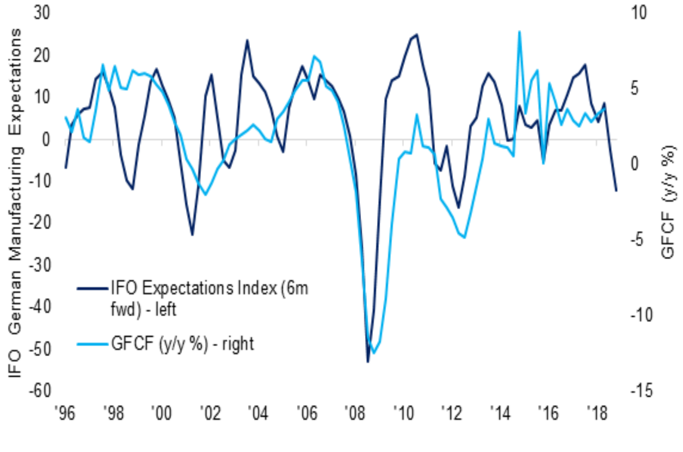
Figure 6: **IFO versus gross fixed capital formation**



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IFO: German IFO is a closely followed leading indicator for economic activity

GFCF: Gross fixed capital formation is defined as the acquisition (including purchases of new or second-hand assets) and creation of assets by producers for their own use, minus disposals of produced fixed assets.

European equities and bonds offer selective opportunites

We continue to recommend a selective approach. Within equities, we have shifted our overweight in cyclicals towards neutral with defensives, and from growth towards value.

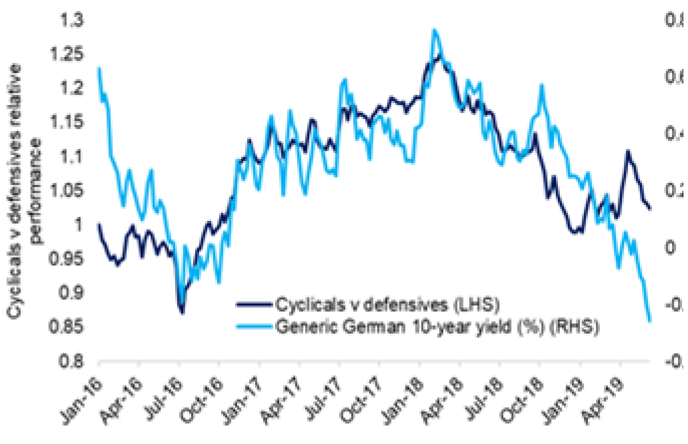
Cyclicals downgraded to neutral. Cyclicals performed well early in the year, rising by 13% YTD. However falling growth expectations are expected to negatively impact on cyclical earnings during the second half. Typically, cyclical stocks underperform as bond yields fall, and bond yields have recently fallen sharply eg. the German 10-year Bund yield has fallen from 0.25% in Jan 2019 to -0.33% currently – **figure 7**. The growing European growth concerns and more dovish ECB are likely to keep bond yields low. A secondary factor is that the summer months are typically weaker for European cyclicals.

Value stocks expected to outperform growth stocks. European value stocks have consistently underperformed growth stocks since the great financial crisis. While value could be cheap and remain cheap for good reasons, we believe the recent correction has created value in companies with sound balance sheets, deeply discounted valuations, compelling dividend yields, with catalysts to unlock the value – **figure 8.**

For example, cars are a prime example of a sector that could potentially offer selective deep value opportunities in the coming weeks. European car stocks are down 15% since their April peak. Average P/E multiple of 6.9x looks cheap (at one standard deviation below its average price-to-earnings multiple since 2002). In the short-term the sector could get cheaper as the US continues to threaten further tariffs under Section 232. However looking towards later this year, if the US decide to suspend tariffs we could see good entry levels.

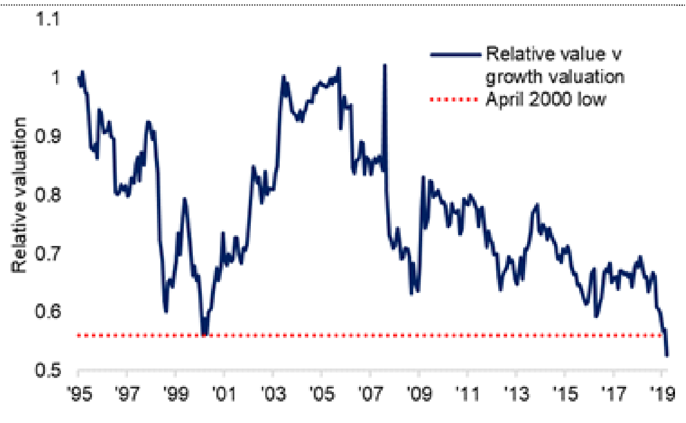
Our favoured sector for growth and defensiveness remains healthcare. The Healthcare sector tends to outperform during periods of heightened uncertainty and risk aversion due to its stable earnings outlook. Healthcare remains our favoured sector globally and within Europe we favour Swiss healthcare companies. Increased healthcare spending, ageing populations, and medical technological innovation will continue to fuel multi-year growth in earnings.

Figure 7: Cyclical v Defensives against German Bund (%)



Source: Bloomberg as of June 11th 2019

Figure 8: Relative value versus growth valuation



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European AT1s offer good value

While overall European fixed income is expensive, there is selective good value in the European AT1 (contingent convertible*) market. European AT1s yields in Europe have fallen by over 80 basis points since May, with yields coming down over 200 basis points since the turn of the year. Despite this, yields of 5.4% still look attractive, especially in comparison with European HY which only offers a yield of 3.7% (a pick-up of over 170 basis points). European banks are much better capitalised now than they have been historically, and given this backdrop the risk of convertibility has also meaningfully decreased, which gives us greater comfort.

**Contingent convertible bonds (AT1's) are fixed-income instrument that is convertible into equity if a pre-specified trigger event occurs.*

Italy growth slowdown will expose high debt level and weak bank sector

Italy is the Eurozone's third largest economy and the world's eighth largest. Unfortunately, it is saddled with debt of around €2.29 trillion, or 132% of GDP, comparable to Greece and Japan **– figure 9**. The country has an even worse productivity record than the UK, feeding through into a high level of non-performing loans (NPL) in the undercapitalized banking sector. (NPLs have fallen in recent months to a still-too-high level of €200 billion). Several years of weak coalition governments have resulted in few long-term structural reforms, and insufficient investment into new growth areas. One consequence is the official unemployment rate of 10.4%, which helped spur the populists' rise to power last year. Market concerns have been mounting in recent weeks, reflected in the Italian debt's widening yield spread over 10-year German Bunds to 244 basis points – **figure 10**.

The ruling populist coalition is unstable. It is made up from the far-right Lega and the leftist Five Star Movement. Lega has been gaining in influence, demonstrated by its 34% share of the Italian vote in May's European parliamentary elections, double the share of the Five Star Movement. Lega might use those results as a way to push for a snap election to win power in its own right. However, its first priority has been its response to the EU Commission's recommendation of a debt-based Excessive Deficit Procedure (EDP) against Italy. The key reasons for the Commission's EDP against Italy have been the stalling of reforms and the partial unwinding of the pension reform, which has worsened debt sustainability. The EU debt rule requires reducing the 132% debt-to-GDP ratio by one-twentieth each year until a level of 60% is reached. However, the ratio rose last year due to backsliding on reforms.

The Italian tensions could escalate in the autumn, as the ruling populists will probably resist raising value added tax (VAT) from 22% to 24.2%. That increase is needed to generate extra tax revenue to prevent the budget deficit from going above the EU's guideline of 2.5% of GDP. Such a breach would, in turn, exacerbate the debt load. On the other hand, if the ruling coalition implements the VAT increase, the resulting austerity could tip the economy into recession, exacerbating the banking sector's NPL problem.

Italy is therefore between a rock and a hard place. If it chooses fiscal expansion and rising debt, the additional borrowing and borrowing costs will likely worsen its debt-to-GDP ratio. If it chooses fiscally induced austerity, it will likely damage growth, undermining its effort to reduce its debt-to-GDP ratio. In either case, therefore, there is a risk that Italy's sovereign debt rating is cut to junk status.

Should such a credit rating downgrade occur, further problems would arise. Regulations would force banks to post large losses and other investors to sell government bonds. The Italian government cannot afford the large-scale injection of funds that would be required to shore up the banking sector in this scenario. In this event, Italy's creditors could be in the firing line. Some 70% of Italian bonds are now held domestically. To put the potential scale of this problem into perspective, the three recent Greek bailouts required around €300bn. However, even absent any crisis, Italy needs to raise €220bn this year to refinance maturing bonds.

Recent Italian bond auctions have been well received. However, this does not mean that investors believe that Italy is on the path to recovery. Amid a global chase for yield, Italy is the only European sovereign offering positive yields out to five years (other than Greece). So for this reason, Italian bonds could continue to be well bid in the short-term. However, should the 10-year sovereign yield breach around the 3.5%-4% level, perhaps as a result of a Italy getting downgraded to junk, a further surge upwards in yields could follow. Forced sellers might exacerbate the yield rises (price declines).

Italy's Achilles heel is more strained than last year. Debt and spending are higher, growth is lower, and the coalition is more unstable. Should its tendon snap, Italy is most unlikely to recover quickly. The Italian economy is insufficiently competitive, the government cannot print more Euros, and the ECB has ended its bond-buying programme.

Figure 9: G20 debt/GDP ratios

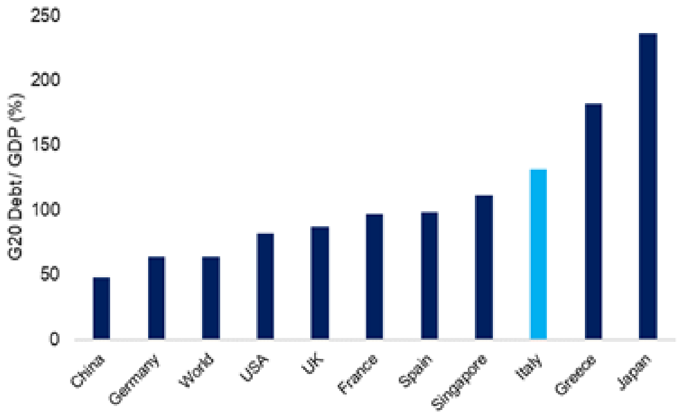

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Figure 10: BTP-Bund spread (%)

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Asset allocation definitions

Asset classes	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Bloomberg Barclays Capital Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.
Cash	Three-month LIBOR, which is the interest rates that banks charge each other in the international inter -bank market for three-month loans (usually denominated in Eurodollars).

Equities	
Developed market large cap	MSCI World Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in 23 developed markets. Large cap is defined as stocks representing roughly 70% of each market's capitalization.
US	Standard & Poor's 500 Index, which is a capitalization -weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.
Europe ex UK	MSCI Europe ex UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in each of Europe's developed markets, except for the UK.
UK	MSCI UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in the UK. FTSE 100 Index: Capitalisation weighted index of the 100 most highly capitalised companies traded on the London Stock Exchange FTSE 250 Index: Capitalisation weighted index of the 250 most highly capitalised companies outside of the FTSE 100 traded on the London Stock Exchange
Japan	MSCI Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in Japan.
Asia Pacific ex Japan	MSCI Asia Pacific ex Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the performance of large cap stocks in Australia, Hong Kong, New Zealand and Singapore.
Developed market small and mid-cap (SMID)	MSCI World Small Cap Index, which is a capitalization-weighted index that measures small cap stock performance in 23 developed equity markets.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.

Bonds	
Developed sovereign	Citi World Government Bond Index (WGBI), which consists of the major global investment grade government bond markets and is composed of sovereign debt, denominated in the domestic currency. To join the WGBI, the market must satisfy size, credit and barriers-to-entry requirements. In order to ensure that the WGBI remains an investment grade benchmark, a minimum credit quality of BBB–/Baa3 by either S&P or Moody's is imposed. The index is rebalanced monthly.
Emerging sovereign	Citi Emerging Market Sovereign Bond Index (ESBI), which includes Brady bonds and US dollar -denominated emerging market sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It is composed of debt in Africa, Asia, Europe and Latin America. We classify an emerging market as a sovereign with a maximum foreign debt rating of BBB+/Baa1 by S&P or Moody's. Defaulted issues are excluded.
Supranationals	Citi World Broad Investment Grade Index (WBIG)—Government Related, which is a subsector of the WBIG. The index includes fixed rate investment grade agency, supranational and regional government debt, denominated in the domestic currency. The index is rebalanced monthly.
Corporate investment grade	Citi World Broad Investment Grade Index (WBIG)—Corporate, which is a subsector of the WBIG. The index includes fixed rate global investment grade corporate debt within the finance, industrial and utility sectors, denominated in the domestic currency. The index is rebalanced monthly.
Corporate high yield	Bloomberg Barclays Global High Yield Corporate Index. Provides a broad-based measure of the global high yield fixed income markets. It is also a component of the Multiverse Index and the Global Aggregate Index.

Securitized	Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset -backed securities. The index is rebalanced monthly.

Disclosures

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Bond rating equivalence
Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings	Rating agencies		
Credit risk	**Moody's[1]**	**Standard and Poor's[2]**	**Fitch Ratings[2]**
Investment Grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
Not Investment Grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.
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Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

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