Appendix B

LGPS CENTRAL LIMITED TACTICAL ASSET ALLOCATION

ISSUE 8 • December 2019

FOR PROFESSIONAL CLIENTS ONLY

CIO SUMMARY

Introduction

Welcome to the 8th Edition of our LGPS Central Limited (“LGPSC”) Tactical Asset Allocation (“TAA”) Report.

We see this report being used for short to medium term overlays over your strategic asset allocation to take advantage of current market conditions by refining your asset weights within your long-term allocation bands.

Summary of Strategy Thoughts

The last 12 months has seen good returns from Growth Assets led by a very strong Q4 from equity markets. Stabilising assets saw modest returns through the year after a disappointing Q4. Income assets have performed well except for Property which has suffered from the poor performance in retail. Sterling saw a strong rally in Q4 (+7.9% versus the US Dollar) as a result of the UK general election and the Brexit votes. This has meant that unhedged overseas investments will have seen a setback in sterling-based returns.

Global Growth has been slowing (3% Global GDP expected in Q4 2019 from 3.6% long term average) all year on the back of trade growth and political uncertainty. Monetary policy is expected to remain stable, but we are seeing expansionary fiscal policy from the UK, US and China. We expect growth to stabilise at current levels, with the risk of a recession appearing to recede with temporary resolutions to the global trade wars, Brexit certainty and accommodative fiscal and monetary policy.

LGPSC prefers Income Assets over Growth Assets preferring to remain underweight in Stabilising Assets. Growth Assets have been downgraded to neutral after the very strong returns in Q4. Within Equities we favour UK, Asia Pac and Japanese equities and move to a significant underweight position in US Equities. Index-Linked remain underweight, Gilts move to neutral and US bonds remain at overweight within Stabilising Assets. Within Equity Factors the only change is that the Quality/ESG factor has moved from neutral to overweight and Low Risk moved from overweight to underweight. Infrastructure and Emerging Market Debt remain our favoured investments in Income Assets, though Property has moved from underweight to neutral.

Our views on currency remain the same favouring Sterling against the Euro and Yen with the US dollar expected to be weakest. Hedging foreign currency assets back to Sterling is something LGPSC continues to support in the current market environment.

In this edition of the TAA report we have added a special feature from Ann-Marie Patterson on “Emerging Market Debt”. The quarterly update on Responsible Investing will be shared with you separately next week.

Please read on for a more detailed analysis of our views.

Jason Fletcher,

Chief Investment Officer

LGPS CENTRAL LIMITED'S VIEW ON WEIGHTINGS

The following table gives a summary of our view on the 6-18 months tactical positioning horizon.

Table1: Weightings ▲ Upgraded ▼Downgraded compared to previous quarter

	Significant Underweight	Underweight	Neutral	Overweight	Significant Overweight
Estimated Probability	**80-70%**	**70-65%**	**55-45%**	**70-65%**	**70-80%**
BROAD ASSET CLASS		**Stabilising**	**Growth ▼**	**Income**	
GROWTH ASSET CLASS	**US Equities, Private Equity**	**GEM Equities**		**UK Equities, EU Equities Commodities, Asia Pac Equities**	**Japan Equities**
INCOME ASSETS		**Credit**	**Property, ▲ EM Debt ▼**	**Infrastructure**	
STABILISING ASSETS	**JP Bonds**	**Index-Linked, EU Bonds, IG Bonds ▼**	**UK Bonds ▲**	**Gold ▼**	**US Bonds ▲**
INVESTMENT STYLES	**Low Volatility ▼**	**Size ▲**	**Growth**	**Momentum, Value, Quality/ESG ▲**	
CURRENCIES		**US Dollar**	**Euro, Yen**	**GBP**	

LGPSC's view on "Weightings":

- LGPSC remains Underweight in Stabilising Assets and Overweight in Income Assets but downgrades Growth Assets from Overweight to Neutral.
- Growth Assets retain a positive sentiment, however recent valuations look more expensive, hence LGPSC moves to a neutral position.
- Stabilising Assets have done well. LGPSC's outlook remains cautious on those but notes that they can provide downside protection in times of recession.
- LGPSC prefers exposure to Income Assets as an alternative as Stabilising Assets where yields and expected returns will combine with a low correlation to those riskier Growth Assets.

BROAD ASSET CLASSES

Table 2: Growth/Income/Stabilising Assets

	Model Score[1]	View	Investment Notes
GROWTH	0	Neutral	Downgraded from Overweight to Neutral mainly based on expensive valuations and increased market risk. Sentiment remains positive
INCOME	2	Overweight	Remains safe income in economic downturn, valuation looking attractive and positive sentiment
STABILISING	-1	Underweight	Reiterate Low/Negative expected return, remains expensive, but could provide protection in a recession

Table 3: Historical Annualised Returns in local currency (* except for the 3 months, where total return is used)

	3 months*	One year	Three years	Five years	Ten years	Twenty years	Bloomberg Ticker
GLOBAL EQUITIES	9.3%	27.2%	13.0%	9.1%	9.4%	4.9%	FTAW01 Index
PRIVATE EQUITY	9.7%	39.3%	13.0%	15.0%	14.0%	na	IPRV LN Index
PROPERTY	7.8%	28.7%	10.3%	8.5%	12.5%	11.8%	REIT INDEX
INFRASTRUCTURE	5.7%	26.9%	11.3%	6.5%	7.8%	na	SPGTIND Index
HIGH YIELD	5.1%	13.4%	6.3%	7.0%	10.3%	10.1%	HL00 Index
UK GILTS	2.2%	7.3%	3.2%	4.1%	5.7%	5.6%	G0L0 Index
UK INDEX-LINKED	-1.5%	6.5%	2.8%	6.1%	7.9%	6.6%	G0LI Index
GOLD	3.1%	13.9%	7.2%	8.6%	5.4%	10.0%	XAUGBP Curncy

Source: Bloomberg (NB: assumes dividends were reinvested), Note: Listed proxies have been used for Infrastructure, Property and Private Equity.

Table 4: Correlation Matrix (5 year historical correlation)

	FTSE All World AW TR GBP	iShares Listed Private	DJ REIT	S&P Global Infra	Sterling High-Yield	UK Gilt	UK Inf-Link Gilt	XAUGBP Index
GLOBAL EQUITIES	1	0.624	0.530	0.750	0.522	-0.222	-0.145	-0.253
PRIVATE EQUITY		1	0.364	0.445	0.428	-0.133	-0.074	0.049
PROPERTY			1	0.673	0.217	0.274	0.209	0.080
INFRASTRUCTURE				1	0.431	0.096	0.097	0.033
HIGH YIELD					1	-0.037	-0.042	-0.203
UK GILTS						1	0.827	0.476
UK INDEX-LINKED							1	0.406
GOLD								1

Source: Bloomberg Note: listed proxies have been used for Infrastructure, Property and Private Equity

LGPSC's view on Broad Asset Classes:

- LGPSC favours Income Assets due to significant attractive valuations, mixed economic outlook and mixed signal as to where we are in the economic cycle. Growth Assets moved from Overweight to Neutral due to valuations looking more expensive and an increased market risk.
- Equity markets have continued to rally towards the end of the year. Most asset classes have seen good returns above inflation over the last three, five, ten and twenty years.
- Commodities and Gold provide good diversification against equity markets and could be added as a diversifier to any portfolios.
- Fixed Income can be allocated to the portfolio for the same reason, but we remain underweight, given its poor valuation, low expected returns and LGPSC favours Income Assets.

[1] Refers to LGPSC model as described on page 7

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GROWTH ASSET VIEW

Table 5: Growth Assets

	Model Score[1]	View	Investment Notes
UK Equities	1 ▼	Overweight	Good dividend yields, positive sentiment, neutral valuation and market risk has improved
NORTH AMERICA Equities	-6 ▼	Underweight	Expensive valuations remain and economic risk is elevated compared to other geographies. Sentiment has turned more negative
EUROPE Equities	2	Overweight	No change, good dividend yields, neutral valuations, and improving sentiment, economic outlook is neutral
JAPAN Equities	3 ▼	Overweight	Less positive valuations, positive signal from trade deal, and economic outlook strong lead to less strong Overweight
ASIA PAC Equities	1 ▼	Overweight	No change, economic growth potential, sentiment now neutral but less overshadowed by fears of trade war
GEMs Equities	-1	Underweight	Mixed picture remains unchanged, sentiment is back to neutral, economic growth concerns have improved, relatively expensive valuation
PRIVATE EQUITY	-4 ▼	Underweight	High investment cost, long-term economic outlook uncertainty, we recommend selective positioning in quality and stable companies
COMMODITIES	1	Overweight	Neutral sentiment and exposure to weakening dollar but provides no yield

LGPSC's view on Growth Assets:

- The main change across Growth Assets is more expensive valuations which has changed the model weight for most Growth Assets. Overall Growth Assets are now Neutral compared to Overweight from the previous quarter.
- Only North America has worsened further mainly due to expensive valuations, negative sentiment and uncertainty on the economic cycle.
- Japan is still the favoured equity market, scoring highest albeit with a lower score than the previous quarter as sentiment has turned neutral and valuations look less attractive.

INCOME ASSET VIEW

Table 6: Income Assets

	Model Score[1]	View	Investment Notes
CREDIT	-2 ▼	Underweight	Beneficiary of stable economy but, valuations have worsened, and sentiment remains negative
EMERGING MARKET DEBT	0 ▼	Neutral	Economic play remains strong, and valuation has turned slightly expensive, sentiment remains neutral
PROPERTY	0 ▲	Neutral	Relative value, inflation protection, sentiment remains negative and high investment costs. UK property market outlook is better post-election.
INFRASTRUCTURE	2	Overweight	Relative value, inflation protection, neutral sentiment but high investment costs, Renewables & sustainable exposure is a positive for Infrastructure

LGPSC's view on Income Assets:

- Income Assets are LGPSC's favoured Asset Class for this quarter. Emerging market debt view changed to Neutral mainly due to more expensive looking valuations.
- Property is upgraded by a further notch to Neutral due to reduced market risk after the General Election, and Infrastructure remains Overweight.

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STABILISING ASSET VIEW

Table 7: Stabilising Assets

	Model Score[1]	View	Investment Notes
UK BONDS	0 ▲	Neutral	UK bonds outlook improved mainly due to outcome of General Election and are now rated neutral
INDEX-LINKED	-2	Underweight	Unchanged, due to negative expected return and concern about long duration/interest rate leverage
US BONDS	3 ▲	Overweight	Based on uncertain economic outlook score has improved and is now our favoured region for Government Bonds. Fair value and low market risk are supportive
JP BONDS	-4 ▲	Underweight	Unchanged, poor valuation and negative impact of Japanese economic cycle, in addition to currency risk
EU BONDS	-1 ▲	Underweight	Slight improvement but remains underweight due to unattractive valuation, economic outlook and sentiment
IG CORPORATE BONDS	-1 ▼	Underweight	Corp spreads neutral and anchored to Government Bond yields, but sentiment turned negative
GOLD	1 ▼	Overweight	Favoured Stabilising Asset, when we do not like other Stabilising Assets, but so current sentiment negative

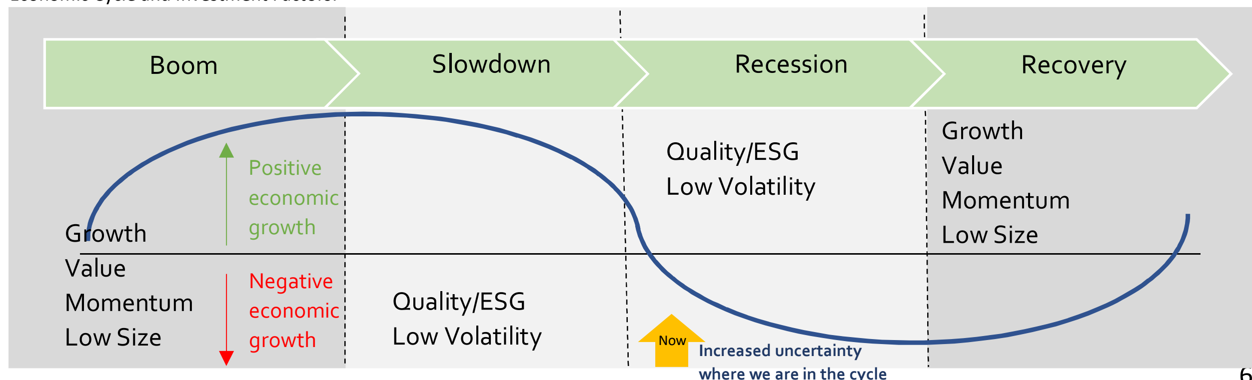
LGPSC's view on Stabilising Assets:

- LGPSC remains Underweight for most Stabilising Assets mainly based on the low/negative yields but recognises that they should represent a proportion of the portfolio given the downside protection they can offer.
- However, most Government Bond Assets have received a higher model score due to better sentiment and lower market risk. US bonds remain LGPSC's favourite bond market but are less confident in £ terms. In £ terms we would prefer UK gilts given the prospect of lower UK rates.
- Gold offers good diversification and a safe haven in turbulent markets and protects against political and economic risks.

INVESTMENT FACTORS (EQUITIES)

Factor Based investing provides a way of potentially adding outperformance relative to a market-cap-based approach at a much lower cost than active investing. It recognises that the market-cap-based index does not provide the best risk-adjusted return for a portfolio given its natural overweight to momentum, large cap and expensive stocks. In the following factor model, we have taken the seven factors of value, growth, income growth, size (small cap), ESG, low volatility and momentum and then applied the same criteria we use to consider other asset classes in our model assessing each factor for valuation, sentiment, economic suitability, risk suitability, investment cost and currency. Investment cost in factor-based investing is low relative to the other asset classes, though the momentum factor (given their higher turnover) and ESG factors (given their higher index costs) are both scored neutral. Given all strategies are global, the currency scores are all neutral. Note that ESG and quality share similar characteristics. Climate change as a factor is little correlated to specific economic cycles given its long-term investment impact horizon of 10-20 years. The graph below summarises the preferred overweight factor(s) depending on the various stages of the economic cycle.

Economic Cycle and Investment Factors:



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FACTOR ASSET VIEW

Table 7: Investment Factors

	Model Score[1]	View	Investment Notes
Value	1 ▼	Overweight	Very attractive valuations, unloved, but economics now less favourable for value factor
Growth	0	Neutral	Poor sentiment and increased risks, score unchanged
Size	-2 ▲	Underweight	Less negative score due to improved sentiment and uncertainty over the economic cycle
Momentum	1	Overweight	Overweight based on current attractive valuation and sentiment
Low Volatility	-3 ▼	Underweight	Poor long-term performance and less attractive after recent market rally and lower sentiment
Quality/ESG	2 ▲	Overweight	Positioning in light of potential economic slowdown and protection against market declines, improved sentiment

LGPSC's view on Investment Factors:

- LGPSC's view on Investment Factors changes slightly due to uncertainty over the economic cycle.
- Our favourite factor changes from Value to Quality/ESG. LGPSC's view is that Quality is best suited to address Climate Change risk.
- Least favoured factor is now Low Volatility and no longer size, mainly due to a sentiment change carried by recent market rally.

ABOUT LGPS CENTRAL LIMITED'S SCORING MODEL

LGPSC's model scores each asset class against its valuation, sentiment, economic outlook, market risk, currency and investment cost (scored between -2 and +2). Positive scores suggest strong overweight and negative scores, strong underweight positions. Where a zero is assigned, our view is neutral. The scores for the different assessment areas, e.g. valuation, sentiment etc. are then added to derive the final score for that asset class. We are constantly developing this scoring to include other variables such as ESG measures and technical factors.

RECESSION WATCH

Key indicators for a recession have stabilised over the last quarter with now providing a mixed picture 1) a positive yield curve, 2) stabilising employment and 3) the changing monetary environment in the UK. The amount of corporate debt is a worry in certain markets alongside EU banks' non-performing loans. Chinese domestic corporate leverage is of concern and some areas of the high yield market could pose problems especially if rates were to rise more sharply than expected. Auto finance is also showing some signs of stress. The 12-month recession probability indicator has strongly declined over the last quarter.

LPGS Central Limited View *–We see the likelihood of a recession as medium over the next 12 months. 2020 could mark the start of the next recession.*

Source: Bloomberg

Q4 LGPS CENTRAL LIMITED MARKET UPDATE[2]

All major indices experienced a strong end to 2019, with Q4 figures showing the S&P 500 up 8.22%, the Nikkei 225 up 8.74% and the FTSE 100 up 2.41% (all in local terms). The final quarter of 2019 also ended on a positive note for emerging markets indices, with the MSCI Ex Japan, up 10.66% and the Russian IMOEX index up 10.87%. The positive performance of Q4 echoed the year's performance, with a number of both developed markets and emerging markets indices experiencing double-digit growth over 2019. The strongest performers within the developed markets were the S&P 500 index which grew by 28.50%, the Euro Stoxx 50 by 24.89% and the Nikkei 225 by 18.20% with the emerging market MSCI Ex Japan seeing a gain of 16.43% over the year.

*

The growth of equities was even more impressive given that global macroeconomic indicators deteriorated over the year showing signs of a global slowdown in trade and a prolonged dispute between the world's two largest economies. The EU Area Manufacturing PMI over the course of 2019 pointed to contraction in manufacturing activity with a decline in new orders and an increase in job cuts not seen since 2013. In addition, throughout 2019, the US and China imposed retaliatory tariffs on each other dampening investor sentiment periodically throughout the year. However, the easing of tensions between the two nations, contributed to a strong rally in global equities during the final month of Q4.

*

The Michigan Consumer Sentiment Index has shown a strong increase in consumer confidence in the US over the last ten years, with 2017 to 2019 showing an average index figure of 97.0, the second highest average on record since the 1997 to 2000 average when the figure was 105.3. The VIX average for Q4 was 14.02, slightly lower than the 15.43 average experienced throughout 2019, indicating that the final quarter of the year saw US equities experience less volatility than the year, further cementing the positive momentum of equities.

*

Politically 2019 was a turbulent year in the UK. The year started with the prime minister Theresa May failing on three occasions to pass through parliament the EU withdrawal agreement negotiated over two years. Subsequently, Theresa May resigned, and Boris Johnson won the Conservative party leadership contest and assumed the role of prime minister in July. Failing to pass a revised withdrawal agreement, Parliament agreed to call a General Election for December which saw a comfortable Conservative majority. The Conservative Government successfully passed the withdrawal agreement through the House of Commons and is now being debated through the House of Lords. This will end the first phase of the UK's withdrawal from the European Union and allows for the second phase, which will be on trade negotiations and the UK's future relationship with the EU.

*

Sterling and the FTSE reacted very positively to the Conservative victory. In quarter four, sterling rallied against the dollar, gaining 6.71% after the election and UK utilities and telecom equities performed strongly, as the threat of nationalisation under a Corbyn led Labour government subsided. The Conservative's manifesto pledged to lower taxes on businesses and stated that there will be no raises in income tax, national insurance or VAT resulting in their manifesto being viewed as business friendly.

*

Q4 of 2019 continued the year-long positive trend for oil and gold, with both experiencing double digit gains of 12.60% and 2.90% respectively. The major event in commodities last year was the flotation of the Saudi Arabian

[2] Performance for the quarter measured over period of 30/09/2019 to 31/12/2019

state owned oil company Aramco on the Saudi stock exchange. The Saudi Government sought a valuation in excess of two trillion dollars, however given concerns about reliable figures on Saudi oil reserves, global decarbonisation trends, Middle East political instability and ESG concerns, Aramco was valued at $1.7 trillion. Oil prices increased last by 27.27% in 2019 owing to production cuts by OPEC, US sanctions on oil producers Iran and Venezuela and continued Middle East political instability. Gold prices also increased over the year gaining 18.13% in value as investors grew concerned about the US-China trade dispute, geopolitical tensions and buying from central banks.

*

UK Bonds experienced a positive final quarter of 2019, due to political certainties following the general election. UK 10 Year Gilts and the UK Government 10 Year note saw growth of 38bps and 37bps respectively as investors backed the UK economy following the election defeat of Corbyn's Labour party and the Conservative's clear direction with regards to Brexit. Overall however, the bond markets performed poorly with 2019 experiencing the first yield curve inversion in US bonds since 2007. This is often seen as an indicator of a potential recession in the near term. US 10 Year Treasury experienced a 34.49% decline in value, though it did increase by 7.4bps in quarter four as global investors grew concerned with the US-China trade dispute and its impact on global demand.

*

Central banks across the developed world signalled that interest rates will not be raised in 2019, with the US and Australia cutting rates, this resulted in a stellar year for several asset classes.

*

On the next two pages, we have summarised the FTSE 100's and MSCI All World's journey over the year 2019.

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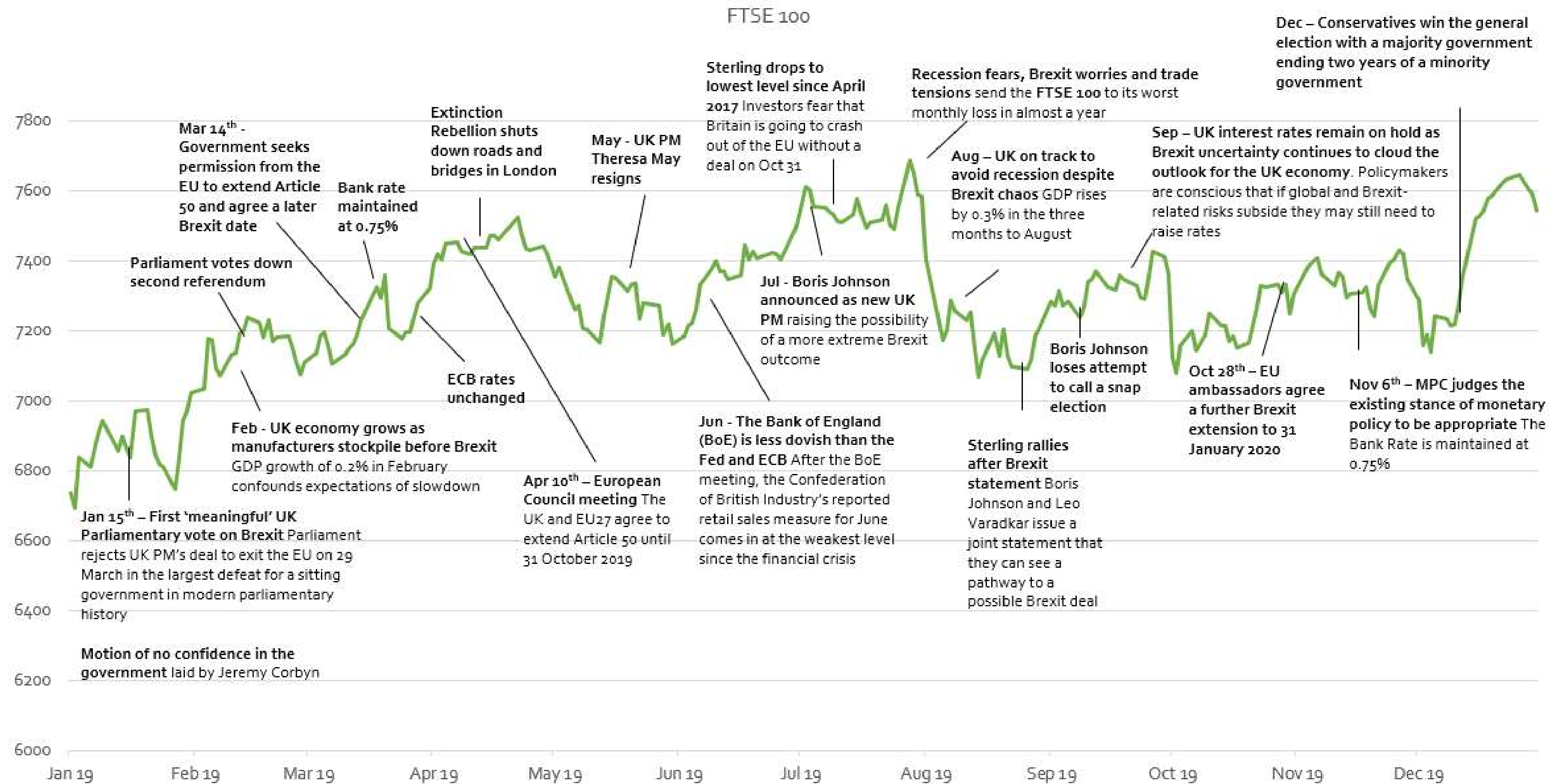
FTSE 100 in 2019



Source: Bloomberg, LGPSC

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MSCI All World in 2019

Source: Bloomberg, LGPSC

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RISK ANALYSIS

Table 8: Risk in order of probability

RISK	LGPSCL Possibility	LGPSCL Impact	Change on quarter	Comment	LGPSC favoured assets to protect against the risk
EQUITY DOWNTURN	Medium	Moderate	→	Slightly increased possibility for this risk, but not enough to assign "high" possibility. Exaggerated growth expectations, profit taking in the equity market, increased recession risk and limited monetary policy stimulus available could see equity markets fall.	Safe haven assets such as government bonds and gold, increased demand for equity downside protection makes volatility rise, buy volatility early, as short-term measure protect through selling futures
NO DEAL BREXIT	Medium	Medium	↓	Brexit uncertainty reduced since General Election, however a no trade deal risk remains, which could set the economy back by 10%. Uncertainty remains as to whether Brexit will be done in 2020. The possibility of no Brexit seems to have receded.	A hard Brexit would have a negative impact, but there is a favourable view that a trade deal can be done which would be positive
GLOBAL RECESSION	Medium/ High	Moderate	→	Recession watch factors have been pointing towards a possible global recession in 2020 fuelled by US growth stagnating, Chinese debt leverage and elevated interest rates in the US. However, recent indicators now show a more mixed picture compared to 2019, with increased uncertainty over where we are in the cycle.	Factors such as Quality/ESG and Low Volatility perform relatively well in a recession. Stabilising and income assets will outperform if economy enters recession
POLITICAL RISKS	Medium	Low	↓	There is a considerable amount of political risk around the globe, such as the Syria/ Turkey situation and domestic US political risks.	Overweight protective assets such as Gold, non-Euro assets, buy US Dollar
ISOLATION & PROTECTION/CHINA	Medium	Medium	↓	General trade war concerns from 2019 soften their trend in 2020 with more positive sentiment and less worries about the possible consequences. Recent US-China trade deal news is positive but one deal does not mean the end of the war. Exports are down everywhere.	Slowdown of economic growth and de-stabilising effect, overweight Gold and insurance linked, overweight US equities, underweight GEMs
CREDIT RISK/DEBT ISSUES	High	Moderate	→	In the event of a marked slowdown, highly leveraged corporates might find it difficult to refinance cheaply, at a time when profitability is under pressure. Corporate bond spreads might also widen. EU banks have not taken enough non-performing loan action, China and Automotive debt are concerns at present.	Underweight EU and China, underweight selective credit, such as Automotive. Incorporating ESG reduces Credit Risk.
US$ WEAKNESS	Low	Moderate	→	If significant GDP slow down occurs and US rates decrease by 200bps the US$ could fall around 10%.	Overweight US$ Government Bonds, hedge the US$, Overweight EM equities
CLIMATE-RELATED TRANSITION RISK	Medium	Moderate	→	- EU carbon price over €20 per tonne since March - Sales of Tesla units nearing 100,000 per Q - Labelled green bond issuance USD117.8bn in H1 2019 (up 48% on H1 2018)	Underweight Energy & GEMs, overweight Renewables and Sustainable Investment themes such as Infrastructure
CLIMATE-RELATED PHYSICAL RISK	Medium	Moderate	→	- US Billon Dollar Disaster (BDD) Event Frequency: 10 US BDDs as of October 2019; annual average is 12.6 - 77% year on year increase in Amazonian forest fires	Hold a well-diversified portfolio

LGPSC's view on "Scenario Risks":

- LGPSC's view is that with a well-diversified portfolio, the majority of key risks from these scenarios should balance out potential strong negative impacts. Alternatively, short term asset adjustments can be made to the portfolio to seek protection or a derivative overlay can hedge out undesired potential negative impacts and provide protection.
- We have not made any major changes to this quarter's risks and they remain broadly the same. The two main changes to mention is the reduced risk of a 'no deal' Brexit due to the General Election outcome. We reiterate that uncertainty remains until a trade deal is closed. Similarly, the trade deal between China and US is positive and reduces market risks, however one deal does not necessarily mean the end for the trade war.
- It remains our view that the next 12 months should produce a positive return for Income Assets and will probably see low to negative returns for Stabilising Assets. Our opinion is that fixed income does not offer good risk adjusted returns relative to equities for pension fund money at this time and should remain underweight. Growth Assets have become less attractive due to a change in sentiment and the year-end rally, but we note the lack of opportunities elsewhere. As a result, we have reduced the equity downturn risk although there remains a risk of a recession that is deeper than is currently priced into markets and this outcome would be very negative for equity valuations. Added uncertainty over where we are in the economic cycle further adds to difficulties in predicting the way forward.

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LGPSC's Thoughts on Emerging Market Debt

The investment case for allocating to Emerging Market debt remains solid. The long-term risk- reward has been and remains compelling. Most emerging market countries are in relatively healthy economic shape, both in external and in domestic terms. They are growing in an environment characterized by relatively benign inflation and relatively undervalued currencies, while commodity prices, especially oil, have been stable or higher over the recent past.

Given the moderately high real yields and this benign inflationary backdrop, EM central banks continue to have some room to ease monetary policy, which could boost economic growth. So, what are emerging markets?

The modern market for Emerging Markets (EM) sovereign Dollar-denominated bonds – known collectively as EM external debt (or 'less developed markets') – traces its origins to the Petrodollar loan boom, which emerged during the oil price shocks of the 1970s ([1]). As a result of the oil price which tumbled in the 1980s, Western banks found themselves with enormous exposures, which they were unable to trade due to the low liquidity of the instruments. In order to help the banks, US Treasury Secretary Nicholas Brady introduced a program to package the loans into so-called 'Brady bonds' [(2),] which were large liquid securities, which could trade freely in London and New York. The Brady bonds were later replaced by so-called Eurobonds, which today constitute the backbone of the EM external debt asset class. Eurobonds are large, Dollar-denominated, Euroclearable bonds issued under New York or English Law. In the 2000s, many EM countries began to establish internal pension funds, which enabled them to begin to secure financing in their own currencies. The local currency government bond market has since replaced external debt as the primary funding source for most established EM countries. However, the external debt asset class continues to grow because incumbent issuers continue to issue and new countries, typically lower income EM countries, which do not yet have local pension funds, regularly enter the asset class. Thus, EMD includes defined separate markets Hard Currency Sovereign (external debt) (HCS), Local Currency Government debt (LCS) and Hard Currency Corporate debt (HCC).

HCS is the smaller part of the USD 26.5 tn [(3)] EM fixed income universe (23% of overall global fixed income at the end of 2018 [(3)]) and comprises sovereign and quasi sovereign bonds denominated in USD and other developed market currencies. About 82% [(3)] of EM bonds are denominated in local currency (LCS) but despite this difference in size, the HC market is more diversified in term of country representation (73 vs 19). EM government issues make up 45% of all EM bonds with the remainder issued by corporate entities. Asia dominates the EM fixed income market with 78% of all outstanding bonds but with little external issuance (HCS) as they have well developed domestic markets which provide the bulk of the financing for the indigenous government. As an example, Thailand has no outstanding external debt!

Noticeable developments within the EMD marketplace have included the steady growth in LCS bond issuance. Whilst the HCS universe has grown by about US$ 50bn per year since 2000 [(3)] it has declined as a percentage of GDP with the even faster increase in EM nominal GDP. However, by the start of 2019, LCS markets made up 82% [(3)] of the total EMD market. This has been overstated potentially as the valuations are liable to show relatively high degrees of volatility given that the market size is expressed in terms of USD.

Relative currency moves can have a significant effect on market valuations as local markets appear to increase much faster in times of USD weakness and vice versa.

Given the predominance of government borrowers in the LCS EMD market, the overall credit quality of the LCS market is higher according to the average of market indices adopting the major three recognised credit agencies. Currently, the major LCS market index (JPM GBI EM Global Diversified Index) has an average credit rating of BBB as against the HCS market index (JPM EMBI Global Diversified Index) with a comparable rating of BB+. To complete the universe, the HCC index has an average rating of BBB-

Other notable characteristics between the three defined EMD markets include the number of issues, duration, geographical and rating split as seen in Table 1 below:

	Hard currency Sovereign	Hard currency Corporate	Local currency Sovereign
	JPM EMBI Global Div	*JPM CEMBI Broad Div*	*GBI-EM Global Div*
Market Cap (US Bn)	999.7	995.2	1,194
Yield (%)	5.98	5.56	6.06
Duration	6.95	4.69	5.26
Average rating	BB+	BBB-	BBB
Currency	USD	USD	Local (19)
Number of countries	73	52	19
Number of issuers	170	659	19
Top 10 Countries (%)	34%	51%	82%
China (%)	4%	8%	0%
Africa	13%	7%	9%
Asia	19%	37%	25%
Europe	22%	11%	32%
Latin	35%	29%	35%
Middle East	12%	17%	0%
IG	50%	59%	77%
HY	50%	41%	23%

Source M&G

Characteristically, EMD markets have combined a variety of rapid economic growth, low per-capita income, maturing capital markets, volatility and potentially high returns. An emerging market economy has been defined as an economy with low to middle per-capita income [(4)]. They have a real GDP growth rate of around 5%, which compares to c.2% growth rates among developed economies [(5)]. Over the last 40 years there have been several serious periods of crisis when both EM currencies and/or market prices have plunged leading to severe negative performances. These date back to the Latin American crisis in the 1980's, the Mexican Crisis of 1994-1995, the Asian meltdown starting in 1997 in Thailand and the Russian currency event in 2015. More recently there has been idiosyncratic 'meltdowns' in Argentina (for a second time), Brazil and Chile with South Africa potentially on the brink of both political and economic uncertainty linked to recent election results and ongoing uncertainty as to the future ownership structure of ESCOM, the impoverished government owned electricity company.

These crises have occurred due to a variety of events and policies. Some from outstanding loans that could not be repaid; Poland informed its bank creditors in March 1981 that it could not repay its obligations beginning the so called 'International Debt Crisis' lasting until 1989 and affecting 20 other countries facing serous debt problems but each one had unique problems in origin and implications. However, by 1989 there was a marked improvement in external economic environment facing many of the indebted nations. The result of these crises, and in some cases associated IMF bailouts and related fiscal and monetary prudence, has improved the economic standing of many of the current EM countries. This was most noticeable during the International Financial Crisis (2008) when the health of the EMD markets compared favourably to those of the developed markets with EMD having set their banking systems and economies on a better footing.

The performance of the various parts of the EMD universe can return quite diverse numbers as the table below shows (best performers in GREEN, worst in RED):

	HCS (JPM EMBI)	LCS (JPM GBI EM)	HCC (JPM CEMBI)
2007	6.2	18.1	3.9
2008	-12.0	-5.2	-15.9
2009	29.8	22.0	34.9
2010	12.2	15.7	13.1
2011	7.3	-1.8	2.3
2012	17.4	16.8	15.0
2013	-5.3	-9.0	-0.6
2014	7.4	-5.7	5.0
2015	1.2	-14.9	1.3
2016	10.2	9.9	9.7
2017	10.3	15.2	8.0
2018	-4.3	-6.2	-1.7

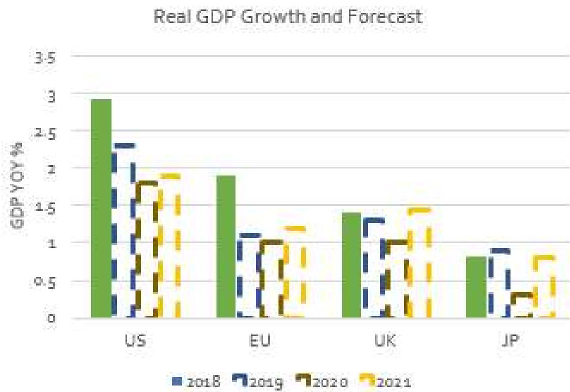
Source for figures M&G

Following analysis, we have discerned that HCS has been the best and consistent performing EMD asset class historically when compared to LCS and HCC but it would have been possible to outperform an HSC benchmark with active allocations to LCS and HCC asset sectors. It should be noted that the LCS has historically been the weakest performer but as mentioned, it is also the fastest developing asset class.

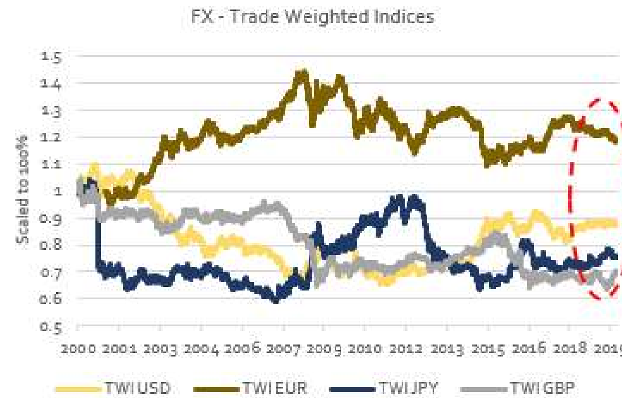
From an asset allocation standpoint, EMD offers an increase in available yields compared to developed markets (governments and credit) but not at the expense of lower quality assets (as defined by rating agency criteria). This yield pickup allows for strong total return given relatively high current income. EMD ticks the diversification 'box' and whilst this can sometimes come with additional risks such as political instability and periods of poor liquidity, the recent improvement in many EM economies' domestic positioning has allowed those markets to perform well. In many cases, the government debt levels are significantly lower in EMD than many developed markets. A final advantage of exposure to EMD markets is the associated currency allocations which can themselves be sources of additional performance.

Footnotes:
1: The case for EM external Debt – Ashmore Investment Limited May 2019
2: Brady Bonds Debt securities issued as part of a Brady Plan restructuring, or any similar debt restructuring or financing plan. The term Brady Bond includes debt securities that may or may not be collateralized, provided that they were issued either in exchange for commercial bank loans (or accrued interest thereon) or, in the case of some New Money Bonds, as one of the menu options made available as part of a sovereign debtor's restructuring or refinancing of its external indebtedness. *Remember* While both Par and Discount Bonds are 30-year collaterized bonds, a number of nations also issued uncollateralized bonds with shorter tenors (e.g., Floating Rate Bonds and Front Loaded Interest Reduction Bonds). Some nations also issue bonds in exchange for unpaid interest on defaulted loans (e.g., Past Due Interest Bonds or Interest Arrears Bonds). Each Brady country negotiated the specific terms and details of its Brady restructuring during discussions with its commercial bank creditors, who were offered a menu of options for their exchange of eligible debt. (Bloomberg)
3: Bank of International Settlements data as of end 2018
4: Antoine W. van Agtmael 1981, IFC, World Bank
5: JP Morgan December 2017

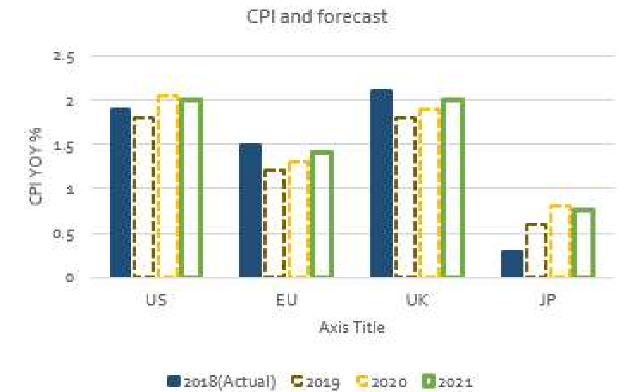
APPENDIX 1: ECONOMIC OUTLOOK



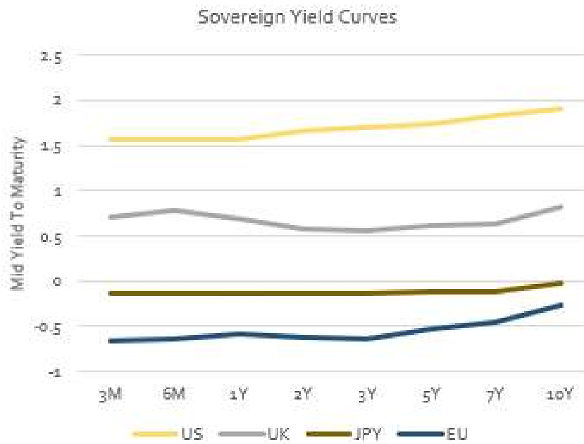
Since the last quarter the World Economic forecasts have been revised downward globally



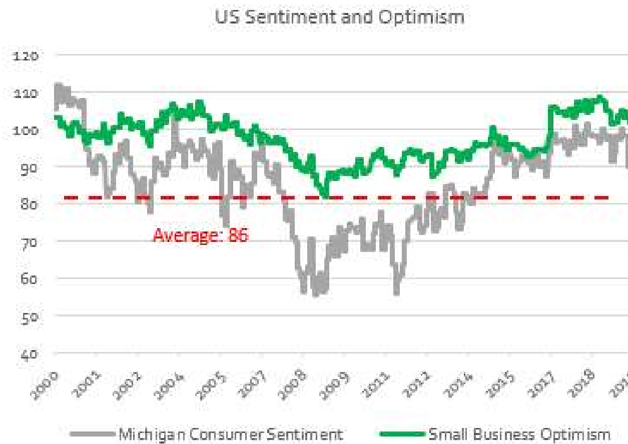
The trade-weighed strength of the Dollar has remained unchanged from the previous quarter



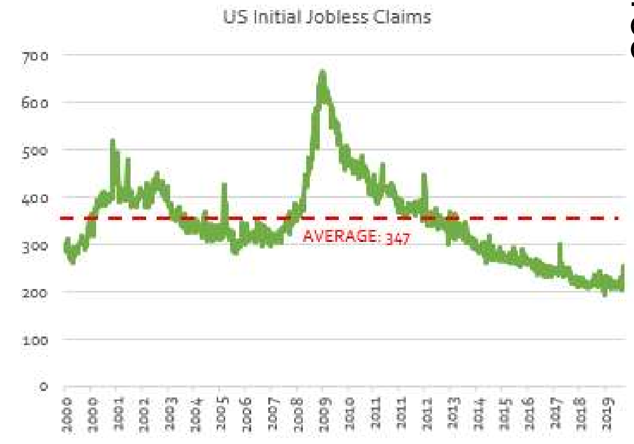
Inflation forecasts have not moved much since the last quarterly update and broadly remain the same across the globe



The US Sovereign yield curve shows signs of inversion mainly due to US growth concerns and the US-China trade war provoking a more dovish policy stance.



Consumer confidence remained well above the average of 86, indicating fewer concerns than other economic indicators



Initial jobless claims providing a similar picture below long-term average and showing a falling trend

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Source: Bloomberg, OECD, data as of 31/1/2019

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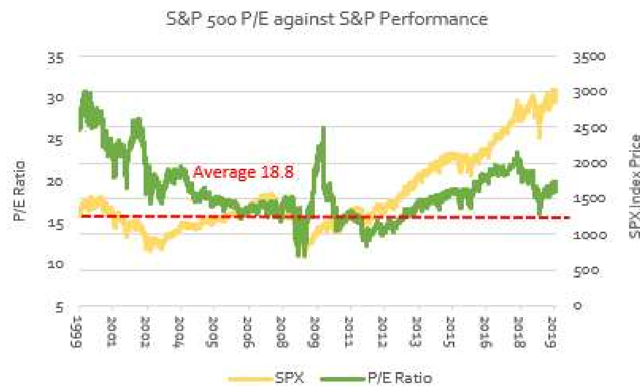
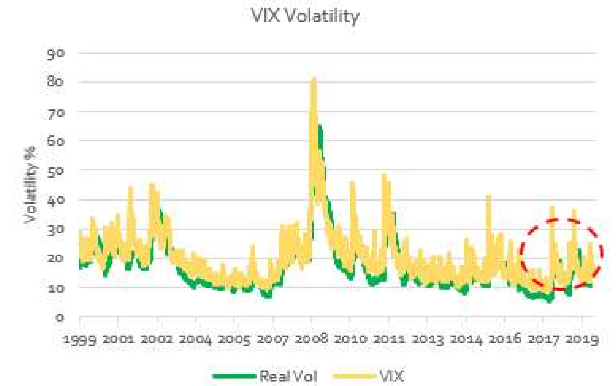
APPENDIX 2: MARKET OUTLOOK

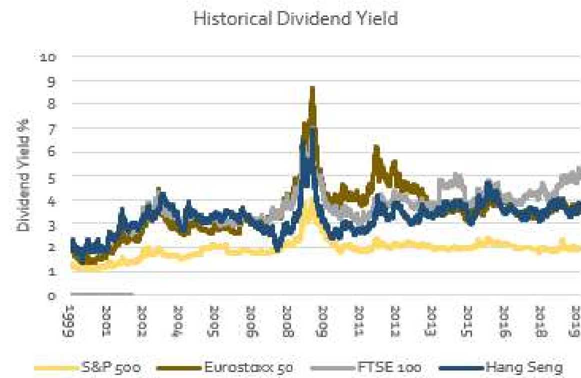
The US has significantly outperformed the rest of the world since 2009. With the end of the year markets have carried on with their rally



The current S&P P/E is 21.3, higher than the previous quarter (19.7) and above the long-term average of 18.8

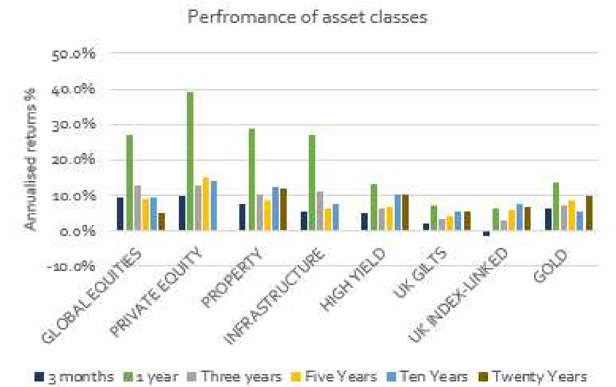


Implied volatility remains low and close to historical volatility indicating a confident equity market



Dividend yields carry on their upward trend, with the UK offering a strong yield over the last couple of years

Corporate bond spreads have fallen over the last quarter



All asset classes have seen good returns over the last ten years. Over the last year equities have seen a strong rally

Source: Bloomberg, OECD, data as of 31/1/2019

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APPENDIX 3: INVESTMENT IDEAS – MEET THE TEAM

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1 Selective Overweight Private Equity (J. Sidhu)

- LPs expect to continue deploy to PE, proof of their resilience and commitment to the asset class despite macroeconomic concerns
- High valuations persist in this late-cycle environment – favour recession resilient businesses, with low cyclicality and assets with value-creation potential in sub-sectors with above average growth rates
- Large amount of PE 'dry powder' particularly in the Mega buyout space – favour mid-market: more opportunities for deployment

2 Underweight Fixed Income (G. Ross)

- 0.70% nominal yield on benchmark 10-year Gilt remains unattractive on a real return's basis and with prospect of increased supply.
- Intermediate European Government Bonds remain attractive investments hedged back to GBP.
- G10 monetary policy likely to remain accommodative until there are signs of above-target inflation.
- Investment opportunities remain with active yield curve management

3 Neutral property – Positive Outlook (M. Hardwick)

- Brexit clarity but risks still evident
- Confidence should be higher post-election but still expect some nervousness in coming 12 months
- Product availability has increased as open-ended funds look to meet liquidity requirements
- Anecdotal evidence points to other potential vendors 'testing' market
- Preceding points should result in quality investment stock being more easily acquired than in recent years
- Yield still attractive to institutional investors

4 Overweight infrastructure (M. Hardwick)

- Election results dramatically reduce risk of renationalisation of some UK sectors
- Brexit direction clear but detail important
- Overseas assets marginally cheaper on Sterling strengthening but not enough to allay concerns over entry values
- Infrastructure assets historically expensive but investor demand is increasing despite this
- Increased investor demand may lead to declining but still attractive, returns

GLOSSARY:

ESG	**Environmental, social and governance**
FAANG	**Facebook, Apple, Amazon, Netflix & Google**
GEMs	**Global Emerging Markets**
IG	**Investment Grade**
IPO	**Initial Public Offering**
LTM	**Last twelve months**
OPEC	**Organisation of Petroleum Exporting Countries**
PE	**Private Equity**
UNPRI	**United Nations Principles for Responsible Investment**
VIX	**S&P Implied Volatility Index**
YTD	**Year to date**

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