FOR PROFESSIONAL INVESTORS – 19 March 2020

ASSET ALLOCATION FLASH

BNPP AM – Multi Asset, Quantitative and Solutions (MAQS)

NAVIGATING THE CORONA STORM

Please note that until further notice, given rapid shifts in markets, we will update clients on the latest MAQS views via frequent *Flash* publications, and suspend the *Monthly/Quarterly* publications for the time being.

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MONITORING THE VIRUS & ITS IMPLICATIONS

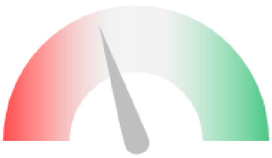
- **Tracking the virus:** Number of new cases still rising rapidly in Europe. Daily growth rate gradually falling in Italy. US is next large economy to watch closely.
- **Macro:** First signs of significant economic disruption in the US. US corporates enter buyback blackout window until 24 April. In China, business/activity resumption continues gradually, but far from normal consumer habits.
- **Policy responses:** Aggressive stimulus on the way: USD1.2tn of fiscal easing in the US (including USD500bn of cash payments to households). EU members pledge 1% of GDP at national level for 2020. Merkel hints Eurobonds possible. Most major central banks hit zero bound and restart QE aggressively.
- **Sentiment and systemic market stresses:** Indicators of market stress rising but not unhinged. Sentiment still in 'virus panic' mode.

KEY VIEWS & ASSET ALLOCATION

- **Fundamental base case**: COVID-19 is eventually mitigated by drastic measures and by policy responses that avoid a systemic crisis, thus supporting a 'U-shaped recovery'. The main risk to our base case is that the COVID-19 shock morphs into a systemic crisis that leads to a more severe global recession scenario.
- **Market dynamics indicators**: Our temperature metrics are flashing 'dark green', typically a good contrarian 'buy' signal for risk. Our dynamic technical analysis suggests that we are still in a bullish cycle medium term, so a rebound is possible.
- **Asset allocation changes:** After trimming our equity overweights in a risk management exercise, we then added conviction to equities again yesterday at better levels. We are now overweight US, EMU and EM equities (notably via call spread option structures in flexible portfolios). In rates, our core view is for higher yields, and we added to our underweight conviction in EMU bonds and remain long US inflation. Elsewhere, we cut our long CAC/DAX RV trade, cut our long USD/CNY trade, and have added to our long gold trade.

Core asset class views*

Equities



Rates & duration

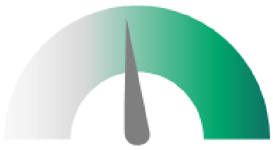
Credit

Real estate

Commodities

FX (EUR vs. USD, GBP, JPY)

Risk utilisation**



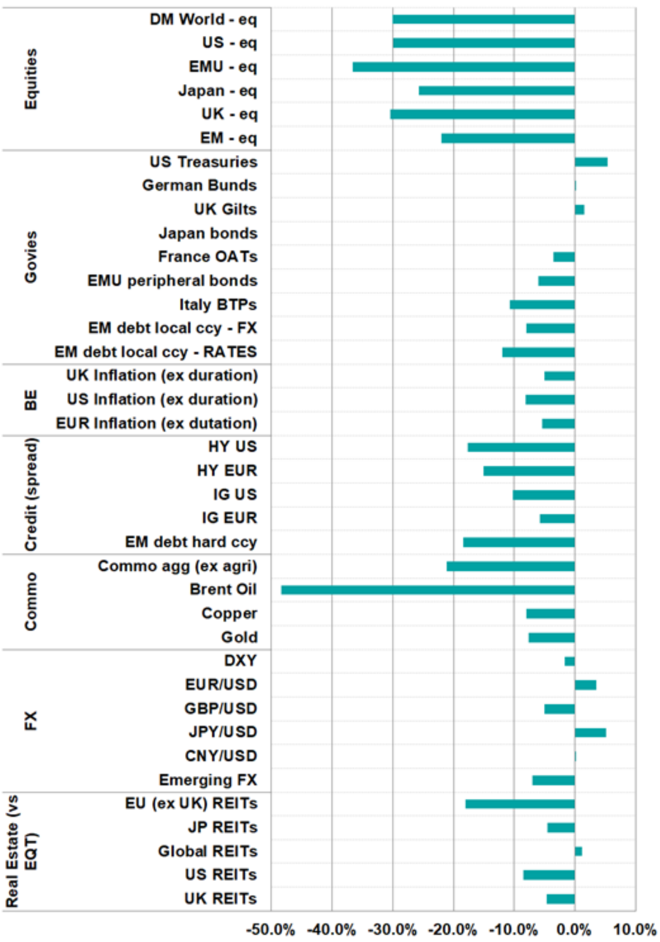
Active risk

* The core asset class views dashboard reflects the key views of the Investment Committee of the Multi-Asset team at MAQS. Other specific/tactical trades may be implemented in addition and are listed at the end of this publication. ** Risk utilisation/active risk is a measure of the tracking error (as a % of maximum tracking error) of an unconstrained theoretical portfolio, derived from core asset class views and from additional specific/tactical trades.

CORONAVIRUS KEEPS MARKETS IN TURMOIL

The coronavirus is spreading from east to west and the epicentre is now in Europe. Its economic and financial repercussions, however, are being felt across various latitudes as asset markets price in a global recession. Risky assets are facing severe losses since their peak in mid-Feb, with virtually nowhere to hide (Figure 1). Unlike previous crisis traditional safe havens like government bonds, the USD and the JPY have offered little comfort to investors.

Figure 1: Extreme risk-off since mid-Feb equity highs



Source: Bloomberg and BNPP AM, as of 18/03/2020

Part of the reason for this market reaction is the fact that the COVID-19 virus is an exogenous shock that is not rooted in economic or financial imbalances. As such, the way of mitigating it is not just by using the traditional economic policy tools. Rather policy makers need to find health related solutions to tackle the diseases and policies to mitigate its huge economic and financial spillovers.

For this reasons, we monitor four key pillars that help us understand how COVID-19 and its effects on markets unfold.

FUNDAMENTALS: MONITORING 4 PILLARS

Virus evolution

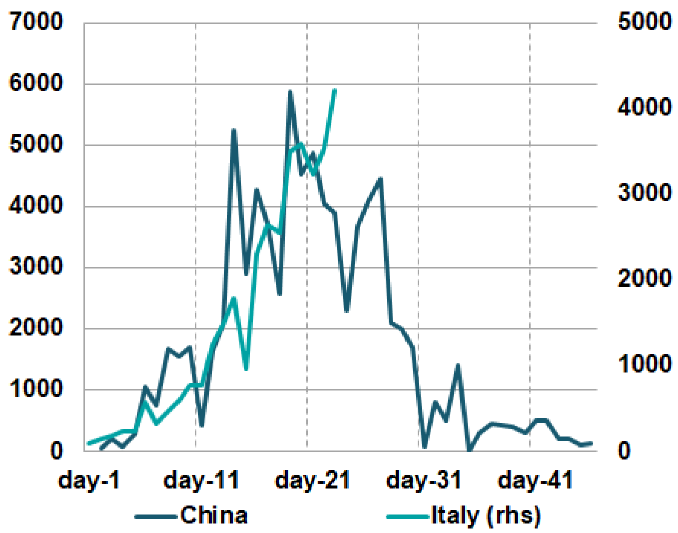
What to look for? Controlling the spread of COVID-19 is one of the key elements needed to circuit break the ongoing market rout. The news of a vaccine or a cure would be a game changer, but absent that we need to monitor closely the evolution of the virus and the measures taken to contain it.

There is no concrete news about a cure/vaccine yet. But news reports show that a Chinese coronavirus vaccine was given a go-ahead for early-stage clinical trials on Monday night. In the US, things are also moving fast. A Bloomberg article recently cited that a drugmaker received regulatory approval to move quickly to human trials last week, skipping the years of animal trials that are the norm in developing vaccines

The virus is spreading from east to west, with Europe now in the eye of the storm. Asia has weathered the storm well, either with aggressive shut-downs (China and South Korea), or by being prepared and reacting early (e.g. Taiwan, Japan, Hong Kong) following the SARS experience.

Europe was clearly unprepared and, as result, the number of new infections have spiralled higher rapidly. In Italy, after a week or so of drastic measures, the number of new cases keeps rising (Figure 2). However, the daily growth rate of new cases is now clearly on a downtrend (Figure 3).

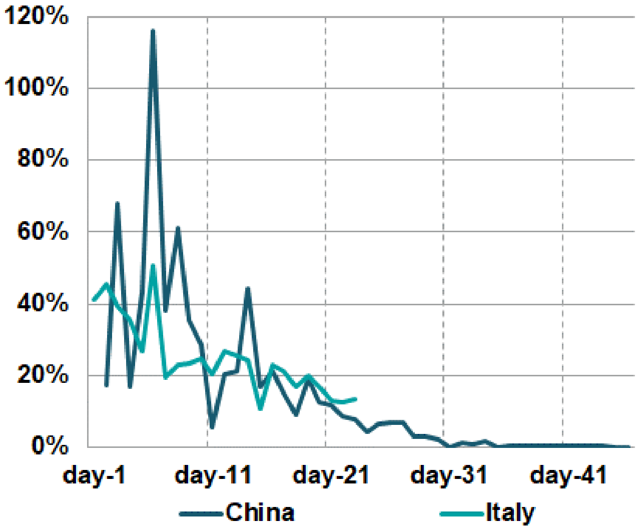
Figure 2: New coronavirus cases in Italy still rising



Source: worldometers.info and BNPP AM, as of 18/03/2020

Most European countries have applied severe measures to foster self-isolation, but new cases are still rising fast. Spain remains the most hit country after Italy, with 15k cases, and a daily increase of +2,945 yesterday (and a daily growth rate of 25%).

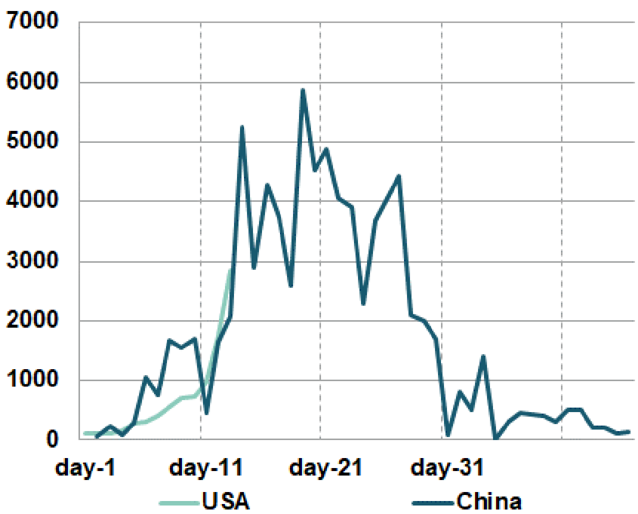
Figure 3: Growth rate of new coronavirus cases in Italy starting to decrease



Source: worldometers.info and BNPP AM, as of 18/03/2020

The US is also being caught off guard, with the crisis deepened by lack of testing capacity and an unclear government roadmap. The number of new cases keep rising rapidly (+2,848 yesterday vs +1,748 on Tuesday, +396 a week ago) and is likely to accelerate sharply in the next few days. The growth rate is currently above 44% (30% a week ago).

Figure 4: US still in early stages of the virus evolution (new cases)



Source: worldometers.info and BNPP AM, as of 18/03/2020

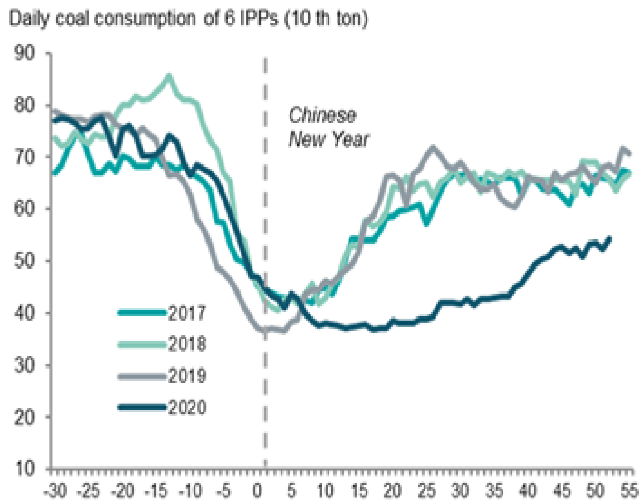
Macro disruption and business resumption

What to look for? We know that the economic damage associated with the virus is going to be very large. Macro forecasting will be difficult given the very large uncertainty around any point estimate. However, there is a lot to learn from the early signs of damage and notably from the business resumption efforts in China and Asia more broadly.

It is highly likely that the global economy will be in recession in for most of 2020. Our base case is for a gradually recovery towards the end of the year in what we see as a ‘U-shaped’ recovery. Some macroeconomic data that capture the disruptions of coronavirus are starting to come through. In the US these point towards significant economic disruption. Earlier this week, for example, the Empire manufacturing index for March registered its steepest fall since the GFC and now sits at its lowest level on record.

In China, surveys of economic activity like the PMIs collapsed in February and hard data for February published this week have also been dismal (e.g. retail sales -21% y/y and industrial production -16% y/y). However, the rate of business resumption in China is encouraging, if far from normal. These include energy consumption, passenger traffic and consumer behaviour (including online retailing, hotels and restaurants). This is partly the result of the virus control and also targeted policy responses to support SMEs, vulnerable populations and measures to incentivise consumption.

Figure 5: China daily coal consumption



Source: UBS, as of 18/03/2020

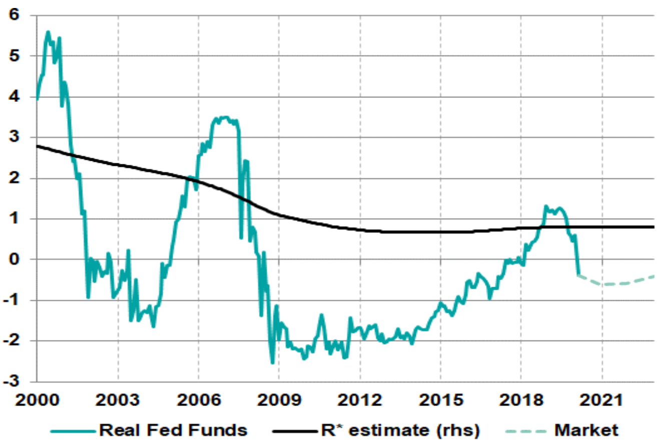
Policy responses

What to look for? In any crisis, policy responses are a way of circuit-breaking markets in turmoil. Here we concentrate on economic policy rather than public health measures (e.g. self-isolation recommendation or shutdowns). Policy makers have relied heavily on monetary policy since the GFC so central bank ammunition is already limited. Fiscal policy is crucial this time around as it can be deployed quickly to support demand and also in a targeted way to help corporates and people in need.

On the monetary policy front, major central banks like the ECB and the Fed have eased as much as they can, given their different constraints. The ECB committed to more QE, announcing a 750bn euro bond buying programme, and the Fed slashed rates by 100bp again to close to zero (Figure 6), and most other central banks in the developed world are following suit. Both central banks also deployed measures to increase liquidity.

In addition, they were joined by other major central banks in advanced economies to provide ample USD liquidity. So far, risky assets have largely ignored these efforts. After all monetary policy is unlikely to alter markedly the decisions consumers or corporates that are now at the mercy of COVID-19.

Figure 6: Fed easing in context



Source: Bloomberg and BNPP AM, as of 18/03/2020

Market participants know that the right medicine for this crisis is fiscal rather than monetary policy. Fiscal easing in the developed world was initially deployed mostly to support health systems, vulnerable populations and SMEs. But until recently, in the developed world fiscal measures had generally been underwhelming in size and uncoordinated, a feature that usually adds power to the measures taken. In Italy, for example, the government has announced a package to support business and households worth only 1.2% of GDP, half of which will be deployed immediately.

In Germany, the government has proposed health expenditure and other targeted measures of around 1% GDP. It has also pledged to guarantee USD550bn of loans to the corporate sector (implying a potential government liability of 14% of GDP). In France, President Macron has pledged a fiscal package, but hasn't given precise details, but like Germany has pledged support for USD338bn of loans to the corporate sector (potential government liabilities 12.3% of GDP).

More recently EU Finance Ministers have agreed to commit further fiscal measures at the national level (of about 1% of GDP on average for 2020). More importantly, Angela Merkel has suggested that EU members could consider Eurobonds: a jointly issued bond guaranteed by member states that could be bought by the ECB. If true, this will be big step towards fiscal integration and a big positive for Eurozone risky assets and a negative for core bonds.

In the US, there latest proposals amount to USD1.2tn (5.5% of GDP), including USD500bn of cash payments to households. The proposed legislation also includes $300bn of provisions for small business loans, $200bn in stabilization funds, and tax deferrals for individuals and corporates making up the rest of the $1.2tn price tag.

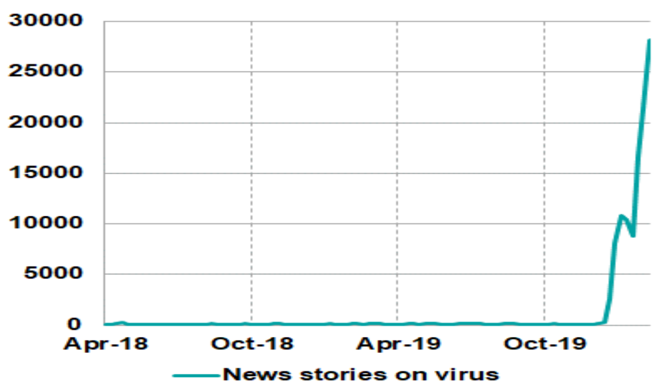
In China, the fiscal efforts have been large and targeted (mainly to SMEs and vulnerable segments of the population. These fiscal packages have been primarily delivered through local authorities and some central cut tax cuts. They are estimated at 2-3% of GDP, however it's likely that this figure underestimates the true size given the role of state guarantees for loans.

Sentiment and systemic market stresses

What to look for? We also monitor sentiment and market stress metrics in an attempt to gauge the panic that the COVID-19 pandemic is instigating in the markets and the general public. Regaining confidence is key to circuit break markets under stress.

Both google searches and news stories (e.g. from Bloomberg) mentioning the virus are still on the rise, suggesting panic and depressed sentiment/confidence. Market-bases metrics of systemic risk still under control: funding stresses and USD shortages creeping up, but not unhinged for now.

Figure 7: News trends: number of articles mentioning virus



Source: Bloomberg and BNPP AM, as of 18/03/2020

MARKET DYNAMICS INPUTS

As regular readers will know, besides our fundamental views, our ‘market dynamics’ inputs form the other major pillar in our investment process. This pillar is split into our proprietary ‘market technical’ and ‘market temperature’ inputs, forming a helpful addition in timing markets alongside our fundamental views. Overall, ‘market dynamics’ are suggesting that risk/reward in risky assets is becoming attractive again after the current sell-off.

Market technicals

Here we monitor markets through the price dynamics in multiple time frames. For equity markets, medium to long term time frames had been bullish for some time, and continue to be so for now. On daily dynamics, most markets have reached critical levels during the accelerated sell-off. The next monthly close will be important to validate/invalidate the medium term trend.

So overall, for equities, the bullish cycle is still the central case from ‘market technicals’, but the alternative one risks a much more bearish and long lasting sell-off.

Market temperature

Sentiment, positioning and other statistical indicators underpin our ‘market temperature’ framework. Regular readers will recall that we had warned not to chase markets higher in January, as our assessment of the market’s temperature was ‘hot’, or dark red – usually an environment prone to corrections.

Since then, market temperature has turned dark green, usually a contrarian buy signal. Indeed, the selloff that happened in the last week of February had all the ingredients of a panic event with several indicators reaching multi-year records.

KEYS VIEWS & ASSET ALLOCATION

In terms of our base case, we still see an economic 'U shape' recovery medium term as the virus wanes and policy support kicks in. But the downside risks of the COVID-19 shock morphing into a systemic crisis and hence a more prolonged global slowdown/recession have clearly increased.

As such we remain nimble, and are cautiously looking for opportunities across financial markets, utilising both the fundamental and market dynamics pillars of our investment process. Given the increased volatility in markets, we have also gone through a risk management exercise last week.

Recent changes to positioning

In March, the following positioning changes were implemented:

- **Equities:** we added tactical long conviction in S&P 500 last week, but hit our tight stop loss later in the week. Additionally, at the same time, we cut some of the prior equity exposure in a risk management exercise. After further sharp falls in major equity markets, we added equity long conviction again yesterday, via US, EMU and EM, notably via call spread option structures for flexible portfolios
- **Rates:** we added to our underweight conviction in EMU bonds whilst yields dropped to new all-time lows
- **RV:** we cut the long CAC/DAX trade as oil exposure in CAC and China exposure in DAX (where China is faring better with the virus) worsen the risk/reward of this RV. We also cut our long USD/CNY trade, as the de-globalisation drivers underpinning it are less attractive
- **Commodities:** we added to the long gold trade given a large drop in prices in the short term, and our medium term outlook still supportive for the yellow metal
- **Options for flexible funds:** as per above, we have implemented equity call spreads and entered a USD 2s10s steepener via CMS spread options

Current asset allocation stance

To summarise, our main views are:

- **Equities:** we are long US, EMU and EM equities. We are open to adding to our positions given our base case, but equally will be nimble in taking profits. We hold call spread options for flexible portfolios
- **Carry trades:** we are long emerging market USD debt and EMU REITs
- **Rates:** we are short core EUR bonds, we are long US breakeven inflation, short USTs via options and in USD curve steepener via options
- **Long gold:** we still see gold as an attractive asset, as it shines as central bank easing debases major currencies, and also in our risk scenarios. After a price drop recently, we added to our position

PORTFOLIO CORNER

Risk utilisation

The active risk in our portfolios is currently at around 50% of our target (Figure 8). Whilst the increase in equity conviction added to active risk all else equal, note that given the higher volatility inputs in our optimiser, risk utilisation is lower than last week. Put differently, we are only marginally increasing equity overweight exposures in a higher vol environment.

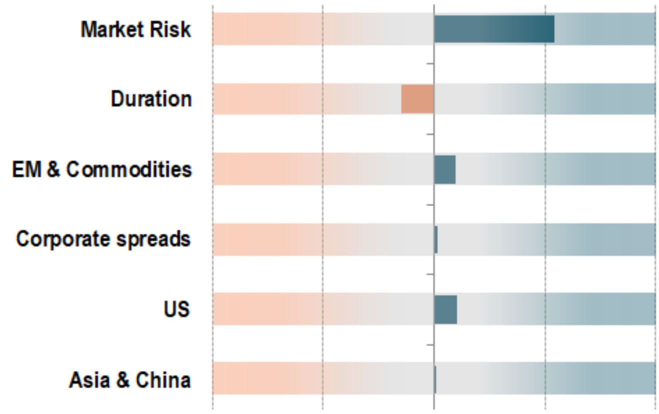
Figure 8: Current level of active risk*

* Risk utilisation/active risk is a measure of the tracking error (as a percentage of maximum tracking error) of an unconstrained theoretical portfolio, derived from core asset class views and from additional specific/tactical trades.
Source: BNPP AM, as of 18/03/2020

Core views and resulting factor exposures in MFA

The main factor exposures of our core views is clearly tilted towards ***Market Risk***, and driven by our equity overweights (Figure 9). ***Duration*** is slightly underweight after we added to our EMU bond short. Other factors are more muted, given the offsetting factor profiles of some trades.

Figure 9: Current factor exposures* from core asset views



* The factor exposure shown is for an unconstrained theoretical portfolio and derived from core asset class views. These factors will be projected onto individual portfolios considering constraints. Additional specific/tactical trades may be implemented and these will not be visible in the factor profile. They are listed at the end of this publication.
Source: BNPP AM, as of 18/03/2020

Specific/tactical views implemented outside of MFA

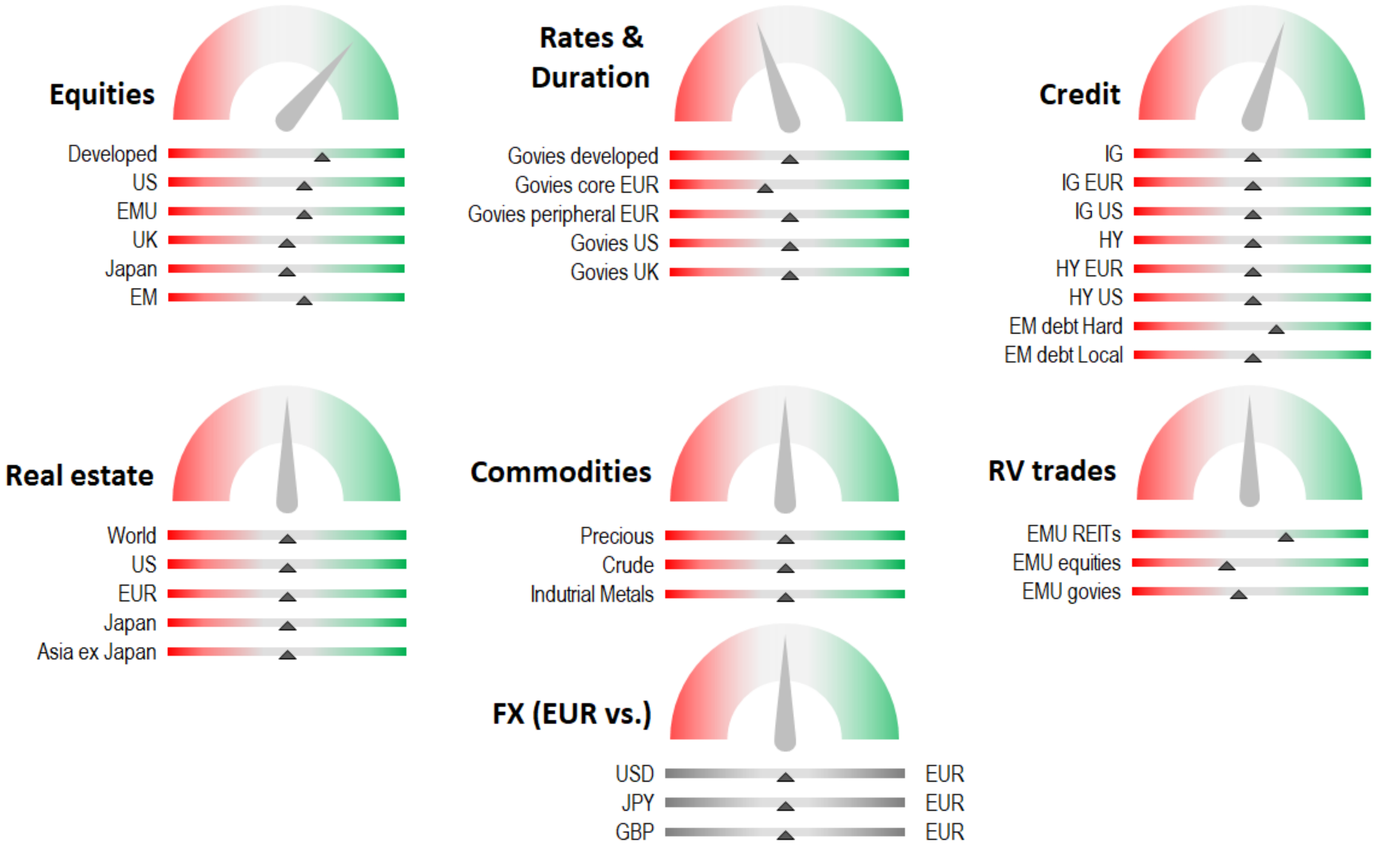
We implement some trades outside of our MFA portfolio optimiser. Such trades are either tactical or specific (i.e. we do not want a trade to be factorised across the book of business) or the asset in question is out of the scope of our optimiser.

These trades are listed at the back of this publication.

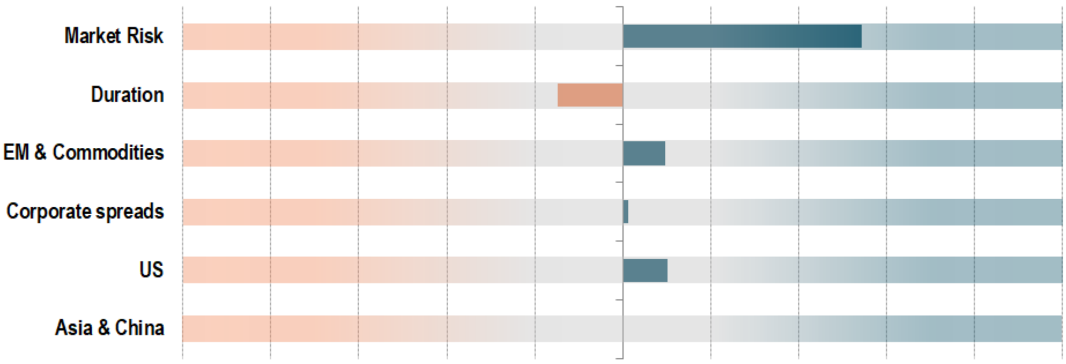
RISK UTILISATION[1]

CORE ASSET CLASS VIEWS & FACTOR EXPOSURE

Core asset class views[2]



Factor exposure[3]



[1] Risk utilisation/ active risk is a measure of the tracking error (as a % of maximum tracking error) of an unconstrained theoretical portfolio, derived from core asset class views and from additional specific/tactical trades.
[2] The core asset class views dashboard reflects the key views of the Investment Committee of the Multi-Asset team at MAQS.
[3] The factor exposure shown is for an unconstrained theoretical portfolio, derived from core asset class views. These factors will be projected onto individual portfolios considering constraints. Other specific/tactical trades may be implemented in addition and will not be visible in the factor profile

SPECIFIC/TACTICAL TRADES[4]

Trade	Asset class	Specific/Tactical
Long US Breakeven inflation	Rates & duration	Tactical & specific
Long gold	Commodities	Specific
Long puts on US treasuries	Rates & duration	Specific
Long call spreads on S&P 500 and Eurostoxx	Equities	Tactical & specific
Long USD 2s10s steepener via CMS spread caps	Rates & duration	Specific

[4] Specific/tactical trades are implemented in addition to the core asset class views and will not be visible in the factor profiles shown elsewhere in the document.

Views expressed are those of the Investment Committee of MAQS, as of March 2020. Individual portfolio management teams outside of MAQS may hold different views and may make different investment decisions for different clients.

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As at March 2020.