TOBAM Market & Performance Update

March 20th. 2020

Global Recession Fears Shake Markets

Worldwide economic activity is slowing significantly as the Coronavirus spread forces companies to halt production activities, traveling has been widely suspended, almost everywhere shops, schools and universities are closed, restaurants are empty and events with a large public are cancelled. Whether the economic slowdown will have a V-shape or will rather look like a long L will depend on for how long the worldwide economy holds its breath in a worldwide pandemic crisis. On top of this already fragile market environment, the escalation of the OPEC+Russia alliance conflict on March 9th provided the last ingredient needed to create a true panic and storm not only for risky assets but even in Treasury markets we have observed unusual volatility and significant liquidity concerns. The massive packages that Central Banks and governments announced to support markets, did not manage to stabilize the situation but rather increased even further the concerns about a deep recession that might hit the global economy.

Figure 1: Performance and Volatility Overview for Different Equity and Fixed Income Markets and Government Rates

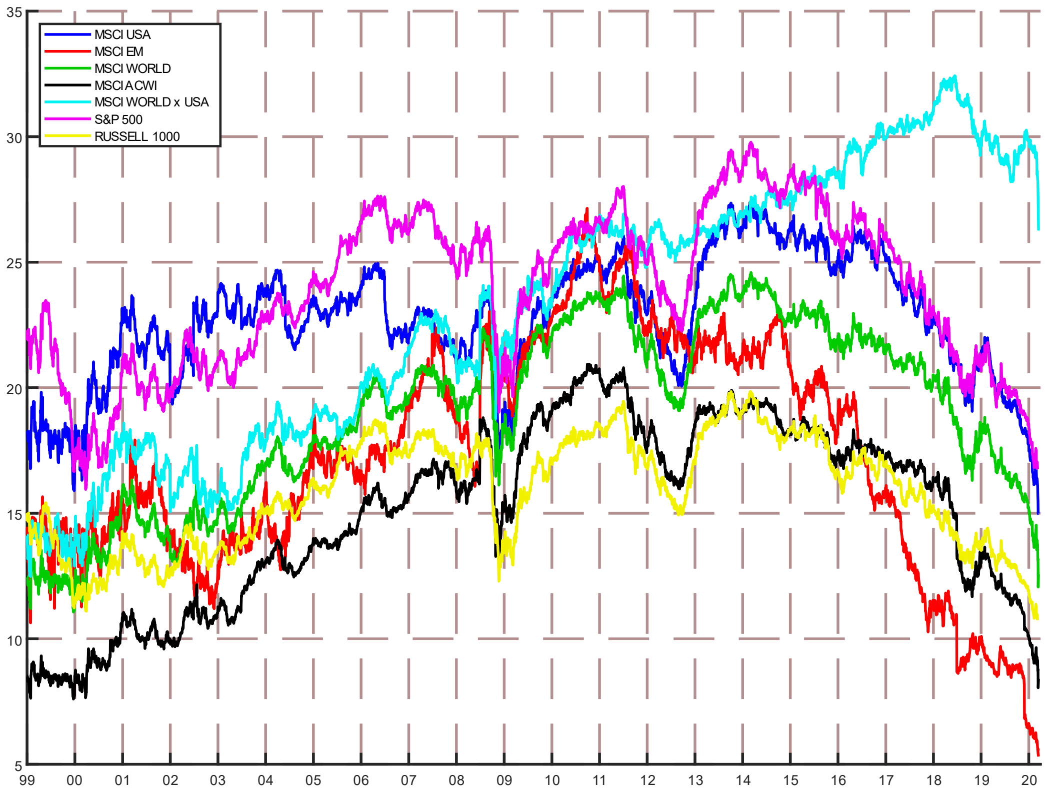
	Total returns			Volatilities	
Equity Markets	1wk	2wk	since Feb 19th	30d	260d
MSCI Daily TR Net USA US	-13.0%	-23.9%	-29.7%	73.52	27.57
MSCI EM ISLM	-15.5%	-23.2%	-28.3%	36.74	18.15
MSCI AC World Daily TR N	-14.9%	-24.8%	-30.4%	56.53	21.78
MSCI Daily TR Net World	-14.7%	-24.9%	-30.7%	59.74	22.81
	Rate variation (%)				
Rates	1wk	2wk	since Feb 19th		
US Generic Govt 2 Yr	0.01	-0.16	-0.89		
US Generic Govt 10 Yr	0.32	0.14	-0.37		
GERMANY GOVT BND 10 YR DBR	0.51	0.40	0.18		
UK Gilts 10 Yr	0.50	0.43	0.20		
	Total returns				
Credit	1wk	2wk	since Feb 19th		
Investment Grade					
CDX.NA.IG 5-year Total	-1.0%	-3.2%	-4.1%	7.93	4.86
iTraxx Europe Main 5-ye	-1.4%	-3.3%	-4.3%	6.22	4.14
iShares ETF US IG	-10.8%	-17.2%	-15.7%	31.22	15.47
ICE Global IG ($ unhedged)	-9.5%	-11.5%	-9.9%	18.51	18.27
ICE US IG	-9.2%	-12.0%	-10.5%	19.25	18.94
ICE EUR IG (€)	-5.8%	-7.3%	-7.6%	9.27	7.97
High Yield					
CDX.NA.HY 5-year TOTAL	-5.2%	-14.3%	-17.1%	29.48	18.72
iTraxx Europe Crossover	-8.1%	-15.4%	-18.5%	23.51	14.92
iShares ETF US HY	-9.7%	-16.2%	-17.3%	30.89	17.76
iShares ETF Global HY	-14.5%	-20.2%	-20.6%	28.63	17.53
ICE Global HY ($ unhedged)	-11.9%	-16.9%	-17.5%	22.47	24.94
ICE US HY ($)	-10.5%	-16.2%	-17.2%	22.70	26.83
ICE EUR HY (€)	-12.5%	-17.3%	-19.0%	21.55	25.33

Sources: TOBAM, Bloomberg, MSCI, ICE; Data as of March 19th, 2020

After March 9th, equity markets experienced exceptionally large drawdowns, with Italy for example down 16% in a day, multiple circuit breakers being hit and the implied volatility (which some consider also as a “Fear” index) rose to levels that even exceeded the highs of 2008. In fact, what is special about this sell-off compared to market reactions in 2008 is its suddenness and brutality, coupled with an extreme dry out of market liquidity - even in equity markets, with bid-ask spreads widening significantly - and despite central banks starting pumping money into the system. In the market close and opening auctions, we observed mega cap stocks with no quote for a significant amount of time, with index futures experiencing significant price dislocations.

Another striking evolution in the equity market, as shown in Figure 1, is that the trend toward concentration[1] since 2014/15 of most major indices has accelerated significantly. The figure exhibits the number of effective stocks in a universe, i.e., the inverse of the sum of squared weights, normalized with the number of stocks in the universe. This measure can be considered as reflecting the breadth of the holdings of a portfolio. What we notice is that considering the evolution of weights or market depth, during the recent market crash investors sold stocks across the board, but relatively less those with the highest weights that over the last years were more likely to have outperformed (e.g. IT mega caps). Overall, this resulted in a dramatic reduction of market depth and a rotation of investor exposures into Quality and Momentum.

Figure 1: Long-Term Number of Effective Stocks divided by Index Number of Stocks (%)



Sources: TOBAM, Bloomberg; Data as of March 18th 2020

On the Fixed Income side, in a context of such extreme market stress, Government bonds didn’t play their usual safe haven role with long term rates increasing by 0.5% in Europe since March 9th and 0.3% in the US. German bund rates are now trading around the same level as in June 2019. Moreover, government bond markets have been worryingly illiquid over the last weeks so that Central Banks had to massively step in. Fixed Income Credit, in the meantime, suffered from heavy outflows of more than

[1] As measured by the inverse of the Herfindahl index (Effective Number of Stocks) divided by the number of assets in the index

$64bn last week, a major part of them in absolute terms due to mutual fund redemptions, however, in relative terms ETF redemptions were twice as high[2], hitting both IG and HY in the US and Europe drawing significant liquidity out of the asset class. As a consequence, the largest Fixed Income ETFs have traded at significant discounts to their NAV last week (for instance the LQD iShares ETF replicating the iBoxx US IG liquid index traded at a -5% discount to NAV on March 12th and 20th).

Performances of our Flagship Portfolios

MDP Anti-Benchmark® US Equity

In this stressed market environment, the sectors in the US market that suffered heavily under the fear of investors of a global economic crisis were in particular Financials (-37.2% YTD vs -31.1% for the market[3]) but also the Energy sector (-57.6% YTD) due to the Oil price dump. The paralysis of economic activity obviously hit all sectors and the sharply decreased earnings expectations have been priced in across the board.

However, as mentioned above, the sell-off did not happen homogenously across sectors. In fact, those stocks that have dominated already the previously market rally, i.e., IT and communication services stocks (with few exceptions such as Facebook) have been sold much less than other stocks and continued their significant outperformance. The outperformance of the Quality factors shows that investors rotated into these stocks since they expect them to be relatively less affected by the Virus crisis. We see this as a first phase of the market downturn. During this phase, the already previously thin market depth and low number of effective stocks aggravated sharply when we consider weight-based measures of concentration.

In such a market environment, our strategy should have underperformed on a risk-adjusted basis. Instead, our fund provided a cushion of positive excess returns (1.5% YTD and 2.1% since the last peak on February 19th) and a significant volatility reduction (15% YTD). In fact, when looking at correlations and market concentration from a correlation point of view by using the Diversification Ratio[4], we notice that it has increased slightly most recently, i.e., pointing toward a tendency of deconcentration. After all, the largest part of the sell-off happened on a sector (Financials) that represented the third largest exposure of the market cap weighted index. In sum, while our fund has been much less biased toward Financials and Energy compared to the MSCI USA and could instead profit from a more balanced exposure to other sectors such as Utilities and Real Estate, its outperformance potential was diminished by the fact that in this market downturn, we cannot see yet a major deconcentration but rather still an outperformance of those sectors that have already been major drivers of the previous bull market such as IT Mega Caps.

It remains to be seen what will happen in a second phase of the crisis and how it will change the market structure in the longer run.

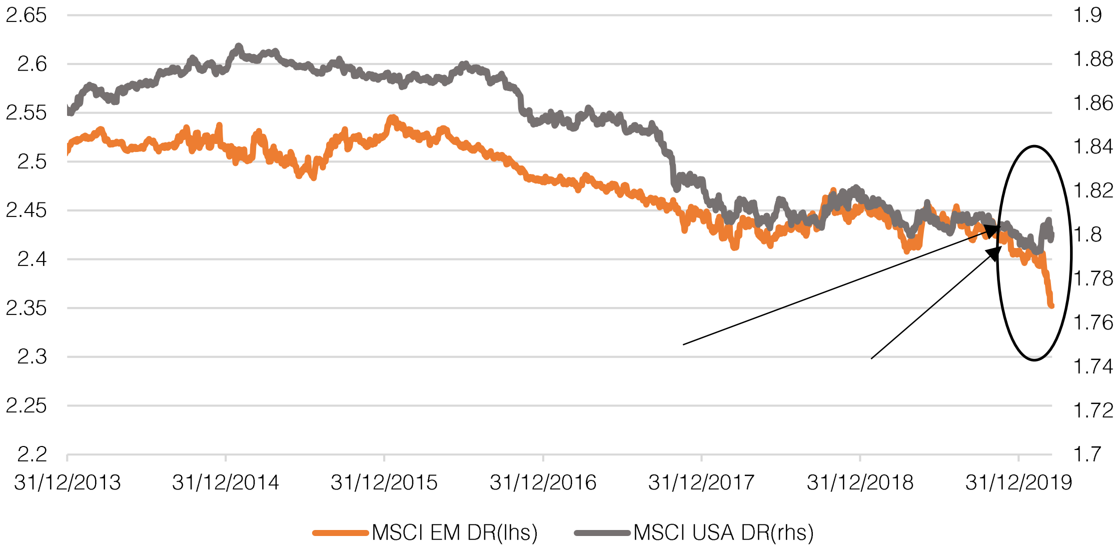
MDP Anti-Benchmark® Emerging Markets Equity

Uncertainty still dominates. As the announcements of massive measures to support the economy are increasing in the United States and in Europe to cushion the shock of the coronavirus pandemic, the Emerging stock markets evolved in a dispersed way. As of the 19th of March, the MSCI Emerging Markets

[2] According to EPFR Global / FT.
[3] All data from Bloomberg and as of March 19th 2020.
[4] Using the same correlation matrix over successive periods

Index slid by 31.1% YTD. However, for instance eve if domestic Chinese stocks declined, they did so by much less than other countries and outperformed the index by more than 15% points. Elsewhere, South Korea restricted short selling in an effort to calm the market dump. Circuit breakers halted trading in India. However, January industrial production was ahead of expectations at 2.0% YoY. From a sector point of view, especially Energy, to which the market cap index has a relatively large exposure, as well as the higher exposure to Financials compared to the Anti-Benchmark contributed negatively to the Benchmark's performance, while Communication Services and Consumer Discretionary, i.e., the sectors of the Emerging Markets' mega caps, continued to rally and contributed positively to the performance of the Benchmark. Most notably, as opposed to Developed Markets where especially in the US we could notice a marginal market deconcentration, the fact that the same stocks that had shown a strong momentum in 2019 and the beginning of 2020 continued to outperform also in the market turmoil, while only less heavily weighted sectors lost (Financials and Energy are each of them much less prominently represented), exacerbated in fact the market concentration in Emerging Markets as is very visible in Figure 2. Very noticeable is also that just before the worst sell-off started (as indicated by the arrow), the US equities had been at their unprecedented most extreme level of concentration.

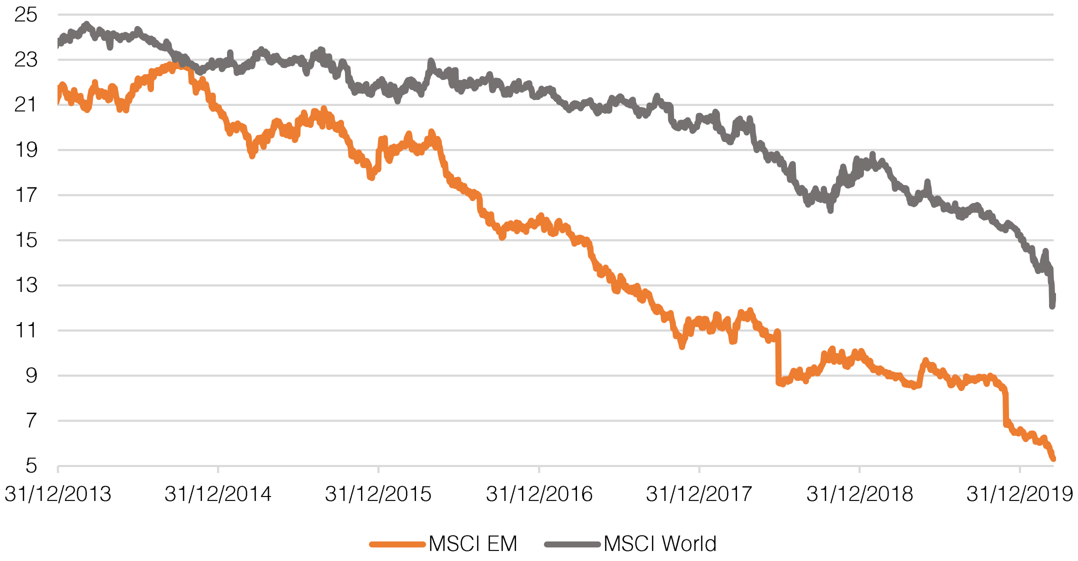
Figure 2: Constant Matrix Diversification Ratios for the MSCI USA and MSCI Emerging Markets



Sources: TOBAM, Bloomberg; Data as of March 18th 2020

Figure 3 shows impressively, how the breadth of the Developed markets but even much more so Emerging Markets has decreased over the last years.
Impressively, the effective number of stocks of the MSCI EM is only 5% of the actual number of stocks present in this index. This means that even though there are now 1400 stocks with the recent inclusion of China A Share, the effective number stocks held by this index is only 75 stocks.

Figure 3: Short-Term Number of Effective Stocks divided by Index Number of Stocks (%)



Sources: TOBAM, Bloomberg; Data as of March 18th 2020

The aggravation of market concentration in Emerging Markets as opposed to Developed Markets is the major reason for why the Emerging Markets Anti-Benchmark portfolio exhibits a different pattern in terms of outperformance than our other portfolios and underperforms slightly by 1% YTD.

MDP Anti-Benchmark® All Countries World Equity

The MSCI ACWI has a weight of over 55% in a single country, i.e., the US. Over the last 10 years the weight to the US has increased by 39% at the expense of all the other countries. What is even more astonishing is that the next largest country in the index is Japan with a weight of only 7.0%. This means that today the US has a weight that is more than 7.7 times that of the next largest country. Since our portfolio is positioned in a way that balances out risk exposures, it doesn't have such extreme biases, however, the US represent still the most important exposure and Emerging Markets also have a relatively important contribution. Hence the performance drivers described above for the US and EM portfolio apply in a similar manner for the Anti-Benchmark ACWI portfolio.

Despite the aggravation of market concentration in terms of effective number of stocks or market depth, our fund could also provide for the ACWI universe a positive excess return (1.7% YTD) and since the last peak an excess return of 2.04% and a significant volatility reduction (-22% YTD) in this extreme market environment. As Figure 2 shows, there was a slight increase in diversification in the Developed markets, that helps to understand the outperformance. The pattern is similar across Developed Markets, the benchmark has suffered in particular from its high Financials and its less important Energy bias, while IT and communication services continued their extreme positive momentum. However, the negative effects have been so large that they have overcompensated the positive contribution of the momentum stocks. Since the Developed markets part is significantly larger than the share of Emerging Markets, we could overall see a small outperformance of our fund and significantly higher risk-adjusted returns.

MDP Anti-Benchmark® World Equity

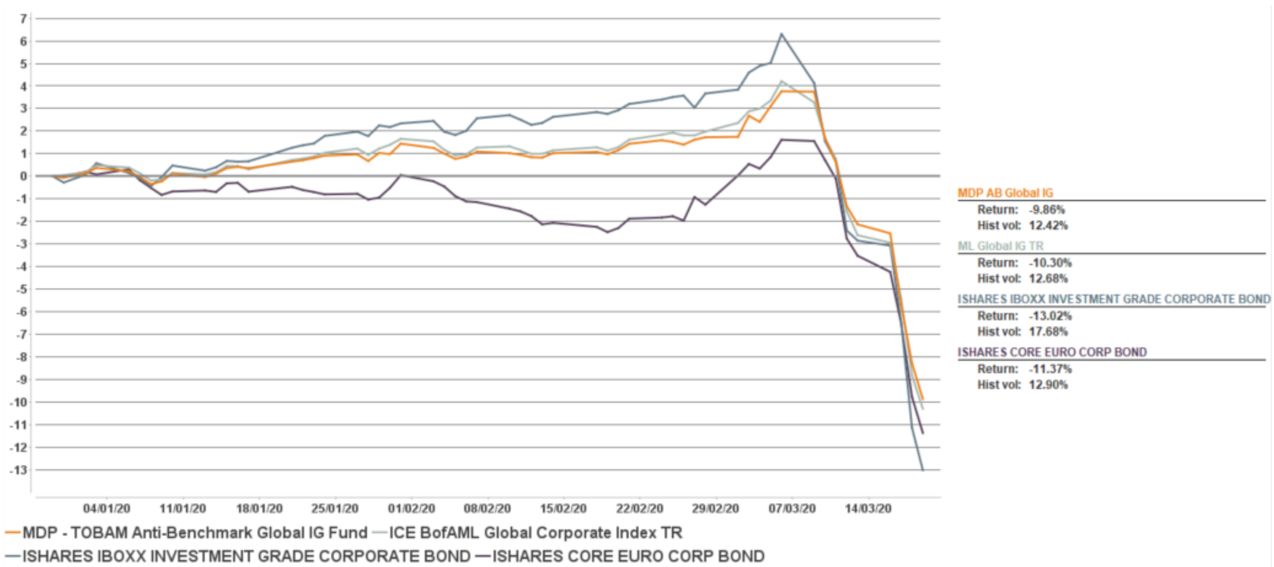
The performances of the AB World are roughly at par with the market (YTD -0.1%) and since the beginning of the market turmoil created a positive excess return of 1.09% while the volatility was roughly -21% lower than the volatility of the market cap weighted index. In fact, all across the Developed Markets we observe a very similar performance pattern in terms of sectors that are more or less affected from the market turmoil and factor exposures that paid a positive premium. Therefore, the performance drivers were, as already described for the US market, largely the Financial and Energy Sector that weight more severely on the Benchmark's performances compared to our portfolio, however, the flight to Quality was also for the world portfolio a reason for a continued outperformance of the IT and communication services sector compensated somewhat this negative performance effect. Overall, as was visible in Figure 2, the market deconcentrated marginally, but overall, the effect was quite marginal and not sufficient to make the portfolio outperform on a YTD basis.

MDP Anti-Benchmark® Global Investment Grade

Our AB Global IG strategy has performed in line with its Benchmark so far this year (-9.86% vs -10.3% for the ICE Global IG index). In terms of sector performances, Energy (-18.3%) was the main underperformer due the oil price crash, while Real Estate, especially residential, benefitted from a the somewhat insulated nature from the virus crisis of such businesses (-5.2%). In terms of sector allocation effect, our strategy benefitted from both (+0.65%) as Energy being the largest concentration of the Benchmark the AB is less exposed to this risk and has a larger exposure to Real Estate. The Benchmark heavy Financial overweight proved costly (-0.18%) as Bank debt tend to be on average of a higher quality than the rest of the market.
In terms of rating exposure, our Fund is mainly exposed to the BBB rating category and less exposed to higher quality (A and above). This Rating positioning detracted -0.38% from the strategy performance YtD.
Current trading conditions are markedly deteriorated – bid/offer cost more than doubled and the ability to trade some bonds has sometimes been impaired. In this context, we keep a higher than usual share of the portfolio in cash, while keeping the overall exposure of the portfolio close to 1x.
Such liquidity conditions had a significant impact on the major ETF instruments which are viewed as liquid instrument to manage credit exposure. As Figure 4 shows, heavy concentrations and scarce liquidity caused such Funds to underperform materially during the selloff both in the US and euro markets.

Figure 4: MDP AB Global IG gross performance vs. ICE Global IG index, iShares US IG (LQD) and iShares Euro IG (IEAC)

from 30-12-2019 to 19-03-2020 – USD unhedged

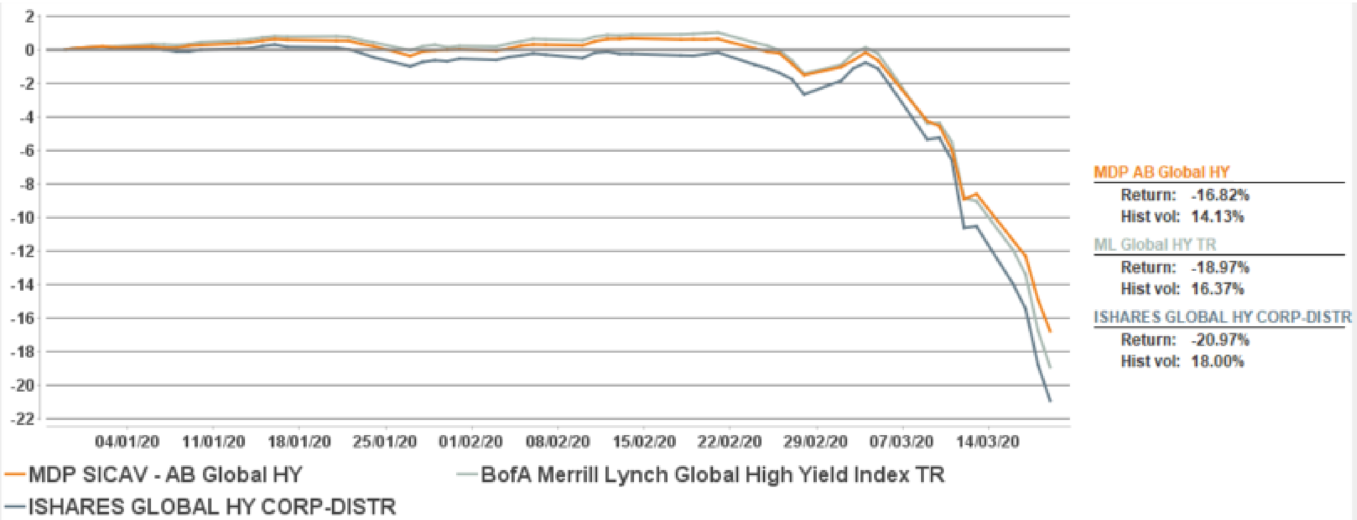


Sources: TOBAM, ICE, Bloomberg; Data as of March 19th 2020

MDP Anti-Benchmark® Global High Yield

The MDP AB Global HY strategy fared better than its reference index over the last two weeks (-16.82% vs -18.97%). The underperformance of the Energy sector – which is the main underweight of the strategy – contributed 75bp to this outperformance. However, the underweight in Financials, which so far performed better than the overall index, compensated half of these benefits.
Rating wise the Fund is less exposed to BB and CCC & lower than the Benchmark – in a market sell off it is not surprising to see the BB underweight costing roughly 36bp YTD. However, this was fully compensated by the CCC underweight we kept. Overall, the Rating allocation effect proved neutral, while most of the outperformance comes from a strong selection effect mainly arising from the BB segment.
Current trading conditions are markedly deteriorated – bid/offer cost more than doubled and ability to trade some bonds has sometimes been impaired. In this context we keep a higher than usual share of the portfolio in cash, while keeping the overall exposure of the portfolio close to 1x.
High level of concentration and heavy outflows detracted from the main ETF performance during the sell off. Figure 5 gives an illustration of that phenomenon by comparing the MDP AB Global HY Fund to the equivalent iShares Global HY ETF (one of the main ETF on this investment universe).
The overall level of correlation increased materially in this sharp market crash, with some names reaching levels above 80% unprecedented in the HY space. Due to deteriorated trading conditions and as the portfolio initially had a well-diversified positioning that turned out to be favourable, we decided to take a smoothed approach to the necessary rebalancing of this portfolio in the weeks to come.

Figure 5: MDP AB Global HY gross performance vs. ICE Global HY index and iShares Global HY ETF (HYLD)
from 30-12-2019 to 19-03-2020 – USD un hedged



Sources: TOBAM, ICE, Bloomberg; Data as of March 19th 2020 – please note the last Fund NAV is TOBAM internal estimation as official NAV number were not yet available at time of publication of this note

For more information

TOBAM is an asset management company offering innovative investment capabilities designed to increase diversification. Its mission is to provide rational and professional solutions to long term investors in the context of efficient markets.

The Maximum Diversification® approach, TOBAM's flagship investment process founded in 2006, is supported by original, patented research and a mathematical definition of diversification and provides clients with diversified core exposure, in both the equity and fixed income markets.

In line with its mission statement and commitment to diversification, TOBAM also launched a separate activity on cryptocurrencies in 2017.

TOBAM currently manages US$8.5 billion (at December 31, 2019). TOBAM's team is composed of 51 professionals.

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