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What asset classes should investors consider in times of great market uncertainty?

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Executive Summary

The coronavirus crisis has understandably caused a great deal of unrest on the financial markets. This article examines the opportunities and threats at times when share prices have fallen sharply in a short period of time, spreads have increased materially and fear in the financial markets is elevated.

We have investigated whether a peak in fear in the financial markets is a good time to add risky investments to the portfolio and, if so, which asset classes are most suitable. In this study, we compare several categories within equity and fixed-income asset classes.

Our analysis identifies global high yield as historically having brought strong risk adjusted returns after periods of stress when compared to the numerous asset classes considered. However, the asset class is not homogeneous and managing default risk, especially following current market turmoil, will be key. Short-dated high yield in particular highlights interesting and enhanced yield opportunities for Dutch pension funds in relation to FTK capital requirement.

Background

During periods of stress, the implied volatility on equities increases significantly in a short period of time. In addition, we often see a sharp drop in equity prices as well as an increase in the spreads on bonds. The latter partly due to expected higher defaults. Crises have a major economic impact, but at the same time, markets can overreact often representing opportune times to invest in risky asset classes.

After it became clear that the coronavirus was becoming a pandemic, turmoil arose on the financial markets. In a short period of time, many countries decided to impose lockdowns. This had and continues to have a major impact on many sectors and companies. For many companies, this has led to a sharp drop in revenues and will lead to an increase in the number of bankruptcies. A sharp fall in stock markets and increases in spreads can therefore be explained.

VIX as a measure of fear

We define fear in the financial markets as a phenomenon characterized by an extreme sell-off and heightened volatility. The VIX is not only a measure of the implied volatility of the broad S&P 500 equity index, but it is also a good indicator of how much fear there is in the financial markets. There are of course many measures of fear. We have chosen to use the spikes in the VIX index as a good measure for market stress. Figure 1 shows the development of the VIX from 2000 and the five highest values in the period considered.

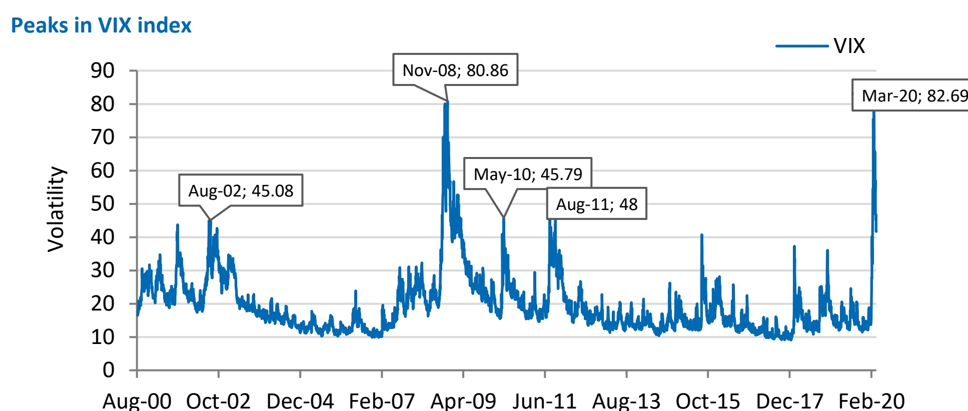


Figure 1: VIX index as of 16-Apr-2020. Source: Bloomberg and Aegon Asset Management

Opportunity or threat?

For various asset classes, we would like to investigate whether a peak in the VIX index has historically been a good time to buy or not when compared with the recent peak in the VIX index. We looked at the four highest historical peaks in the VIX index and examined the development of various asset classes after these peaks[1]. These four peaks were selected because of their absolute height, so that they are as close as possible to the level of the VIX in March 2020. In addition, only one peak is selected in a limited period of time, so that there is no overlap of the data used. To investigate whether peak moments in fear, reflected by the VIX index, are actually opportunities to invest or whether the risks are dominant, we first look at the risk-return ratios if one starts to invest three months after a spike in the VIX index. The period of three months has been chosen so that at the time of investing it is clear whether there is a peak in the VIX. The returns, volatilities and the ratio between the two are shown in the table below and are based on an investment of one year's duration.

Table 1: 1-year return starting after 3 months in VIX peaks (sorted)

	Annualized return (%)	Annualised risk (%)	Risk-adjusted return (%)
Global high yield	23.59	4.59	5.14
Emerging markets debt	18.26	3.82	4.78
Short-dated high yield	20.12	8.46	2.38
Global credits (IG)	11.42	5.21	2.19
Inflation linked	7.83	4.63	1.69
Equities EM	21.56	16.95	1.27
Government bonds	5.08	3.99	1.27
Equities DM	12.95	15.75	0.82

Source: Bloomberg and Aegon Asset Management. Indices used: Bloomberg Barclays Global High Yield, Bloomberg Barclays Global Agg Credit, MSCI World, MSCI Emerging Markets, IBOXX Eurozone Sovereign, Bloomberg Barclays Global Inflation-Linked, Bloomberg Barclays Pan European FRN ABS Bond and Bloomberg Barclays Pan Euro High Yield 1-5.5 Year Ba/B; all in Euro. Returns based on daily observations except for short-dated high yield (monthly observations). [2]

[1] Short-dated high yield and Inflation linked were not analyzed after the VIX peak in 2002 due to lack of historical comparable data

[2] Although equity markets dropped in 2020, they are still relatively expensive. The cyclically adjusted price-earnings ratio (CAPE) dropped for the S&P-500 index for example from 30.99 (31st of December 2019) to 26.85 (5th of May 2020). Based on a historical relationship between the CAPE and implied expected returns, these increased from 2 to 3 percent on an annual basis, well below the historical average return on equities.

The results in Table 1 show that high yield and emerging markets debt presented the highest risk-adjusted returns after the selected peaks in the VIX index. They also showed higher returns in absolute terms than equities from both developed and emerging markets. The high volatilities of equity returns are also notable, resulting in lower risk-adjusted returns. In addition, this historical analysis shows that emerging market equities outperformed developed market equities after stress in financial markets.

In all of the four periods following a peak in the VIX index in the past, shown in Figure 1, both global high yield and short-dated high yield led to a strong (statistically significant) positive return in the year following the peak. For this reason and to better understand this elevated risk-premia, we will discuss high yield in more detail in the remainder of this article.

High yield: Different reactions during and post-crises along the curve

Figure 2 shows the spreads on global high yield and short-dated high yield. The spread on this asset class often increases rapidly in times of stress, due in part to the lower rating assigned to these companies.

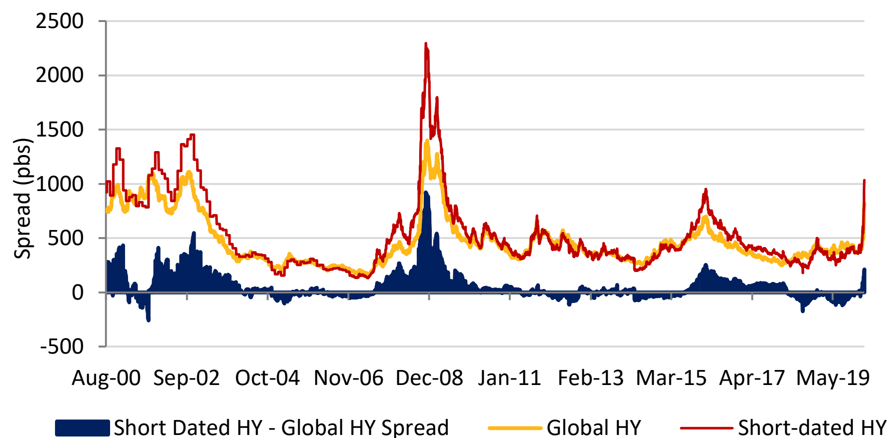
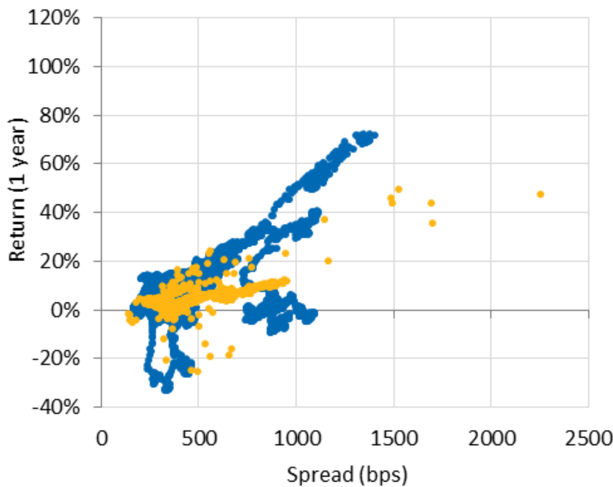


Figure 2: Development of High Yield spreads from Aug-2000 to Apr-2020.
Source: Bloomberg and Aegon Asset Management

We now look closer at the relationship between the spread and the realized return in the following one-year period. In Figure 3, these are shown for global high yield and short-dated high yield. An analysis for maturities of six months and two years has been performed as well and a similar relationship has been identified.

For both global and short-dated high yield, a positive relationship between the spread and the realized return is observed. Although we have seen very high risk-adjusted one-year returns if one starts to invest three months after a peak in fear, the return prior to the peak in 2008 was strongly negative.



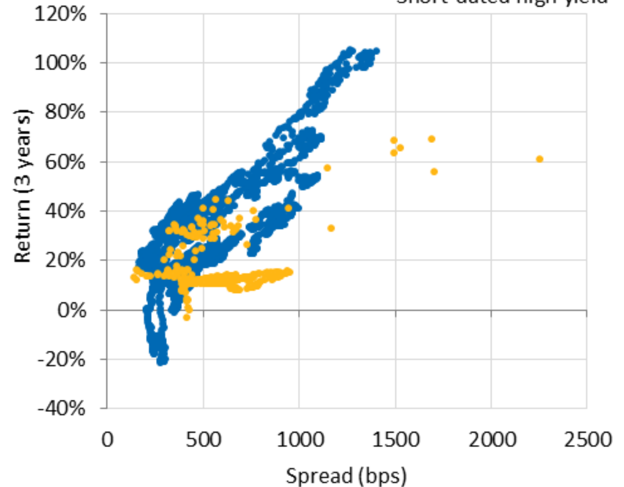


Figure 3: Spread and return (one and three years after observation of spread) for high yield strategies (2001-2019); all in EUR.
Source: Bloomberg and Aegon Asset Management[3]

The post-crisis attractiveness of high yield securities owes a considerable amount of its risk premium to expected defaults. Such risk will now be analysed and put in the context of the current turmoil.

Default risk & lockdown duration scenarios

As a direct result of the coronavirus crisis, many corporates have lower revenues. The impact will vary across geographical regions and sectors but in general we would expect this to lead to more bankruptcies. This is also the reason why spreads on high yield have increased considerably. The central question is clearly whether this is an overreaction or not. To gain insight into this, it is important to look at both the balance sheets of the companies and historical default data.

According to Figure 4, historically defaults have been lower than that priced into spreads with defaults in high yield having reached their peaks in the months following a marked increase in spreads.

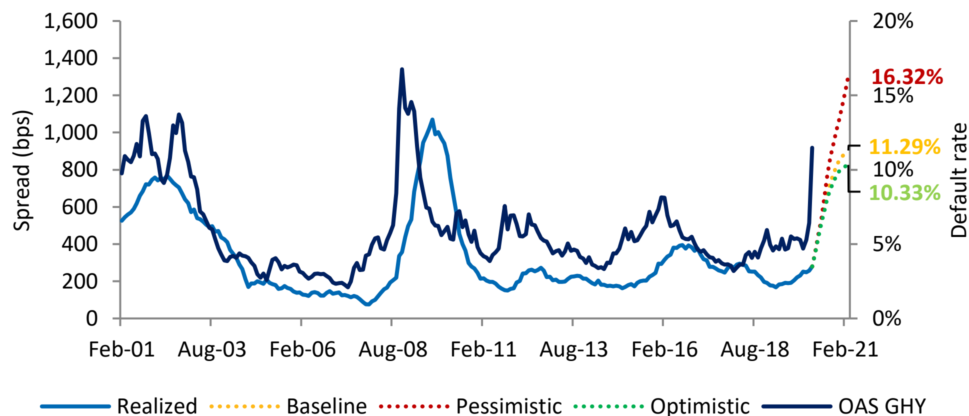


Figure 4: Moody's realized and expected speculative-grade defaults. Source: Moody's, Bloomberg and Aegon Asset Management

[3] In this figure, overlapping data is shown. We also analyzed non-overlapping data and the conclusions were the same and statistically significant. These data are available upon request. Data for short-date high yield was not available for the period after the first VIX peak in 2002.

Table 2 summarizes a sensitivity analysis on the expected loss for speculative-grade bonds, based on scenarios generated by Moody's, underpinned by their expectation of recessions in many large economies.

Table 2: Expected recovery rate and loss in bps by March-2021

Recovery rate	Baseline	Pessimistic	Optimistic
0%	1129	1632	1033
25%	847	1224	775
50%	565	816	516

Source: Moody's and Aegon Asset Management

In the baseline scenario, a sharp downturn in the global economy during the first half of 2020 is assumed, combined with a recovery in the second half of the year and in 2021. The pessimistic scenario assumes a 12-month duration of the lockdown and the optimistic implies a lockdown of less than 6 months. Recovery rates are typically between 20 and 60%. They depend on the structure and security of the bond and are typically lower during a crisis. Active management is required to select bonds with better prospects and/or a high recovery rate compared to the cash price.

The baseline expected loss is 565 basis points based on an assumed 50% recovery[4], well below the current spread on global high yield. Part of the additional spread may be explained by uncertainty, especially with respect to the duration of the coronavirus crisis, which will have a direct impact on corporates and the impact on the level of realized losses.

Credit curves can become inverted during periods of stress. In addition, issuers of short-dated high yield securities can face a more immediate refinancing need during stress periods as a result of a decline in revenues or unhealthy cash flows. These corporates hence tend to price in a higher spread compared to similar issuers of bonds with a larger duration. Figure 2 shows that the extra spread offered by short-dated high yield has been particularly high during periods of high volatility, concurrent with three of VIX index peaks (2002, 2008 and 2020).

We put emphasis on the higher need for a strong fundamental analysis aimed to balance the valuation argument against the impact of Covid-19. The current high yield market is very bifurcated; troubled sectors are trading distressed, while those better placed to survive the coronavirus crisis are trading tighter.

Conclusion - High yield can offer an attractive risk-adjusted return

Among other things, the coronavirus crisis led to a sharp fall in equity markets and an increase in spreads on fixed-income securities. In addition, the VIX, a measure of fear in financial markets, showed a sharp rise in a short period of time.

Throughout history, such moments have represented good opportunities to invest in risky assets as a result of financial markets tending to over react. Global high yield in particular has demonstrated a strong risk-adjusted return relative to other asset classes.

But no crisis is the same. For the coronavirus crisis, the impact on corporates will depend, among other things, on how long the pandemic will last. The longer it continues, the greater the number of defaults and downgrades. In addition to expected returns and risks, Dutch pension funds will also have the task of balancing these risks against movements in FTK capital requirements (please refer to the supplement on the next page).

[4] Close to levels reported in Moody's Default Reports 09Apr2020

Capital requirements opportunities under FTK

Figure 5 shows that, after January 2020, the pick-up in yield for short-dated high yield is bigger than that gained by global high yield, while the corresponding excess capital requirement under FTK has been lower for the short-dated strategy. For comparative purposes, developed equities are assumed to have a similar yield to that of global high yield, as these two asset classes have been traditionally analyzed by Dutch pension funds looking for strong returns. However, global high yield requires a lower capital requirement. This will remain as long as its modified duration is lower than 5.66 —i.e. the breakeven level. Finally, regarding developed equities, the capital requirement is fixed (30%), hence does not change despite the turmoil. The modified duration assumed in this analysis is 4.09.

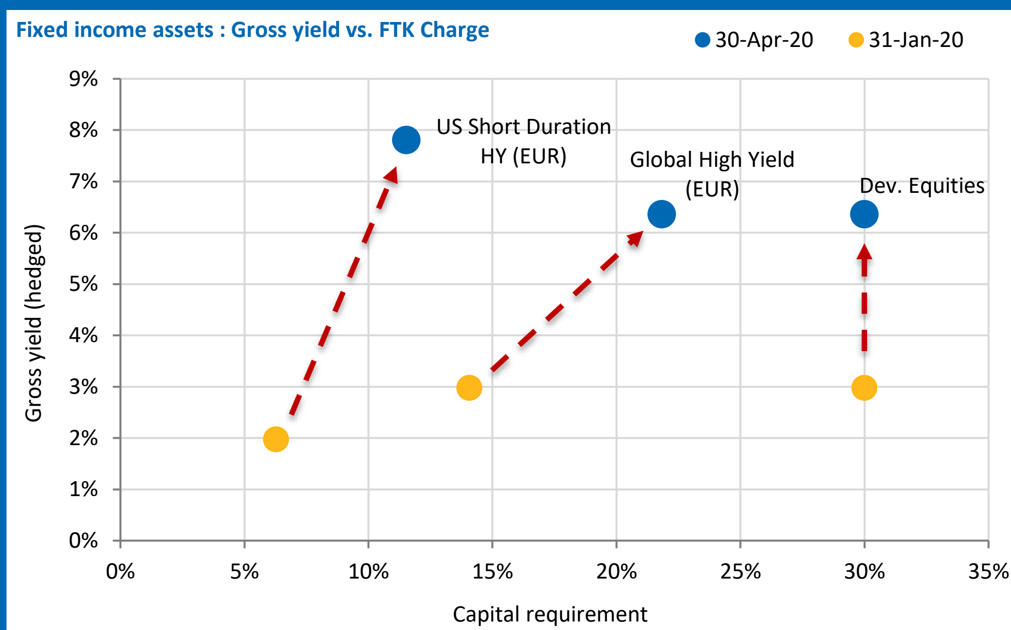


Figure 5: Gross yield (hedged) and capital requirement under FTK for high yield strategies and equities as of April 30, 2020. Source: Bloomberg & Aegon Asset Management. Actual AAM portfolios were used for this analysis. A comprehensive disclaimer is found at the end of this document.

Keeping in mind that this analysis is done on gross yields — i.e. before fees and expected losses — short-dated high yield is relatively more attractive from a portfolio perspective, as it consumes less capital compared to global high yield and equities while offering a major pick-up in yield. This strategy becomes suitable for investors with a lower capital budget and the ability to conduct in-depth due diligence to better manage the default-risk implied in the short-dated spreads. Global high yield offers a historically better return but is more suited to those investors with a higher capital budget and longer investment horizon. Finally, the pick-up in expected returns for developed equities is free of extra capital charge from an FTK perspective and becomes attractive for those who not only believe in equities' benefits over high yield strategies, but who are also committed to undertake high-quality active management.

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Figure 5: The values in the chart are for illustrative purposes and do not represent exact calculations. The graph does not take the capital charge for interest rate risk into account. US High Yield primarily invests in US high yield bonds, but may include opportunistic allocations to investment grade bonds, bank loans, emerging market bonds, and cash / cash equivalents. Global High Yield invests in USD, EUR and GBP denominated issuances (rating from B - CCC and modified durations from 1 to 8 years). Developed Equities are assumed to have a gross yield similar to that of High Yield only for comparative purposes of this paper.

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