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IT IS TIME FOR CASH MANAGEMENT INNOVATION

In a context of historically low interest rates which have shown first signs of a reversal, it's time to explore new investment strategies that reduce exposure to rising rates.

Cash management is caught in a conundrum. In a world of ultra-low interest rates, many investors are taking extra interest rate risk to generate performance. Yet, as the European Central Bank takes first measures to reduce quantitative easing, the likelihood of this greater risk crystallising into capital losses is increasing.

In our view, it's time to look into innovative ways to manage cash. There is a range of new investment approaches emerging that can be used to provide the extra yield that investors seek without taking significant extra risk. Critically, they insulate investors from the possibility of rising rates.

Just as all businesses innovate to adapt to changing circumstances, so cash management must do the same. It can exploit new market opportunities, apply techniques developed in other areas of asset management and take advantage of market inefficiencies. Joined together in a diversified portfolio, these specialist approaches offer the benefits of traditional cash management without the same risk to capital.

>> SPEED READ

- >> A reversal in historically low interest rates signals a change in the investment environment and means it is time for new ideas
- >> Traditional cash management investments are exposed to rising interest rates and a withdrawal of financial liquidity
- >> Innovative new cash management approaches offer specific ways to capture extra yield while mitigating risk

MONEY MARKET FUNDS' SENSITIVITY TO RISING RATES AND CREDIT SPREADS

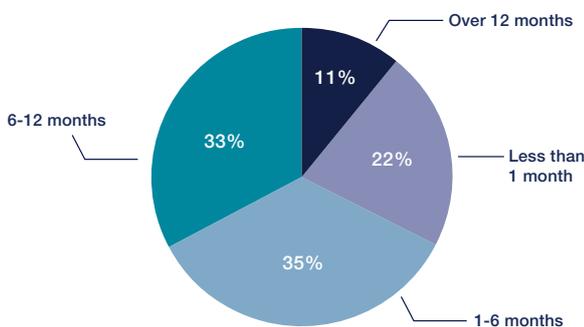
Lyxor has conducted an analysis which aims to assess the risk that traditional cash management faces from rising rates. This analysis is based on a sample of 31 money market funds, of which 9 short-term money market funds, with cumulative assets of EUR 248 billion (data as at 30 September 2016). The funds have been selected by Lyxor's Mutual Fund Selection Team using rigorous selection criteria based on size and risk/reward profile.

Our analysis shows that money market funds invest on average 44% of their assets in commercial paper with a maturity of more than six months, and 11% in paper with a maturity of more than one year (see figure 1). When interest rates have fallen in recent years, these securities have gained compared to the Eurozone's Eonia interbank rate (used as a benchmark). But if rates were to go up, they will lose.

Credit spreads are currently at historically low levels due to the abundance of liquidity. However, they are expected to rise once monetary policy normalises. Money market funds invest a significant portion of their assets in lowly rated paper, and would therefore fall in value when this normalisation would actually happen. According to our analysis, 30% of money market fund assets are rated BBB or below (see figure 2).

FIGURE 1: Almost half of money market fund maturities exceed six months

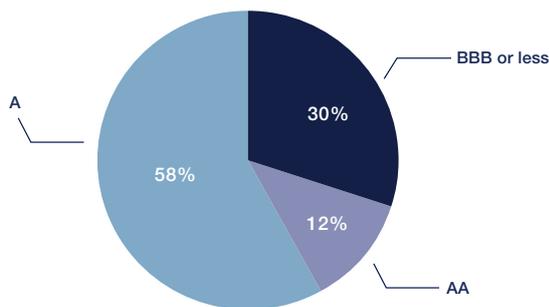
Maturity breakdown of money market fund investments



Source: Lyxor. Data as of 30 September 2016

FIGURE 2: Almost a third of money market assets invested in paper rated BBB or below

Credit rating breakdown of money market fund investments



Source: Lyxor. Data as of 30 September 2016

INNOVATIVE CASH MANAGEMENT TECHNIQUES THAT CAN IMPROVE RISK-REWARD

By turning to innovative cash management strategies, investors can reduce their exposure to rising interest rates and widening credit spreads. These strategies

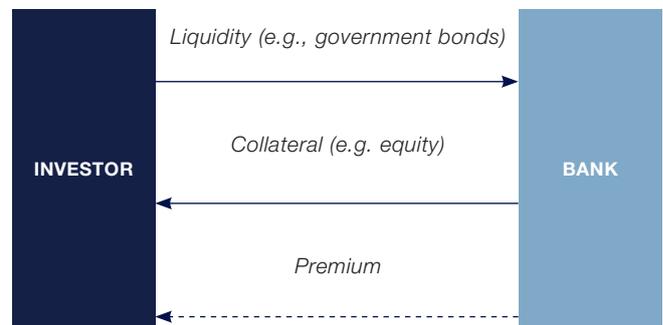
offer the potential extra yield provided by traditional cash management while minimising the risk posed by the possibility of rising rates and a tightening monetary environment.

We highlight below four alternative approaches:

1. SHORT-TERM BANK LENDING

By lending cash or bonds to banks through the repo market, investors can earn an attractive yield. This approach takes advantage of regulatory capital requirements, which mean banks need to temporarily swap capital intensive assets, such as equity, for capital light assets, such as cash or government bonds. Historically, banks have paid a premium to borrow cash and bonds of around 10 - 35 basis points. This premium was even higher for non-domestic currencies (additional 20 - 30 bps for USD) or for transactions with longer time commitments (additional 10 - 15 bps for 3 months). The investor gains the extra yield, while the risk is protected by the equity that acts as collateral.

FIGURE 3: Short-term bank lending's mechanics



2. "RISK-BASED" FIXED INCOME INVESTING

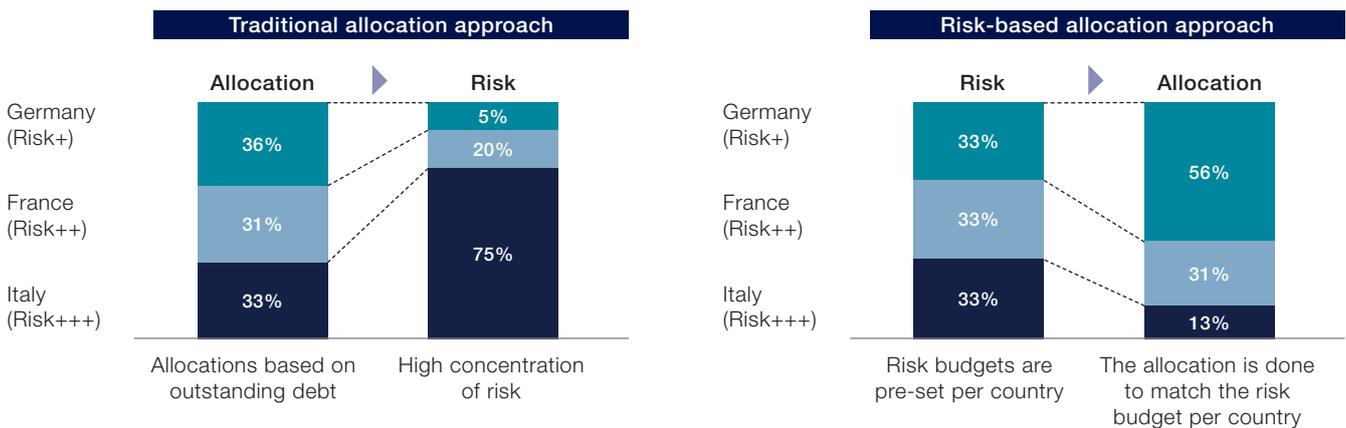
"Risk-based" fixed income investing is an evolution of the risk-based approach that is used in multi-asset strategies. This approach gives high allocations to fixed income sectors with low volatility and low correlations to others; but those sectors with high volatility and high correlations receive lower allocations. Allocations are dynamically adjusted depending on market circumstances. For example, if a sector's volatility rises, the allocation to that sector decreases.

Risk-based investing has three advantages:

1. It enhances the strategy's risk/return profile, by reducing volatility and drawdowns
2. It allows to increase portfolio diversification, knowing that a security mechanism is in place
3. It tends to reduce exposures before credit downgrades

Over 2006 – 2016, this strategy would have added 20 basis points to annual performance and reduced volatility by 25% compared to a buy-and-hold strategy, according to back tests.

FIGURE 4: How risk-based investing balances risk more evenly



For illustrative purposes
Source: Lyxor

3. BOND LIQUIDITY INEFFICIENCIES

This investment approach exploits the market inefficiency that leads bonds which appear less liquid to often pay a significant yield premium over liquid bonds. To assess whether a bond's yield is in line with its liquidity, Lyxor and Euroclear have developed a liquidity measure for publicly traded bonds, called "e-Data Liquidity". For example, German agency bonds (e.g., KfW Bank) have

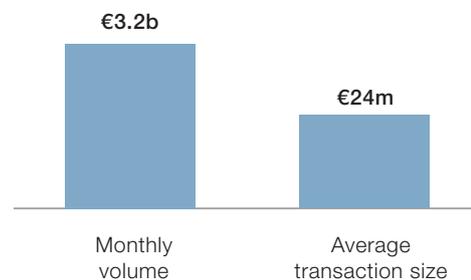
yielded up to 25 bps more than government bonds during the last three years (see figure 5). But the trading volume of KfW bonds was EUR 3.2bn in June with an average transaction size of EUR 24m, which might be more than sufficient for many investors (see figure 6). So, it is possible to buy higher yielding bonds without taking outsized liquidity risk.

FIGURE 5: Difference in yield between 10-year KfW bonds and German government bonds (basis points).



The figures relating to past performances refer or relate to past periods and are not a reliable indicator of future results. This also applies to historical market data. Source: Bloomberg, Lyxor analysis. Data as at 3 November 2016

FIGURE 6: Liquidity indicators for 3 – 5 years KfW bonds for June 2016.



Source: Lyxor, Euroclear e-Data liquidity

4. REDUCING INTEREST RATE RISK

As we believe that cash management investments should not bear interest rate risk, we recommend an “asset swap” strategy to hedge out this risk. Such a strategy allows investments in longer maturity bonds, benefiting from their embedded diversification and spread possibilities without incurring interest rate risk. This gives investors some of the benefits from investing in long-dated bonds without exposure to rising rates.

TIME TO THINK AHEAD

US rates have already risen strongly. It is not inconceivable that this upward pressure could spill over into Europe. European quantitative easing must be reversed sooner or later. While it is hard to foresee how quickly this might come to pass, or how great the change might be, clearly there is a need to reduce exposure to rising rates.

At Lyxor, we believe that innovative cash management approaches are the answer. Just like traditional cash management strategies, they offer opportunities for additional returns. Yet they also provide the greater protection for capital that may well be needed.

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