A NEW PARADIGM IN FIXED INCOME

MARCH 2017

For more than three decades, fixed income has delivered yield, portfolio diversification and liquidity. Today, however, weak global growth and inflation has left us with low yields, higher market risk and weak diversification against growth assets. At the same time, central-bank and regulatory interventions have fractured fixed-income market liquidity.

Investors need a new portfolio paradigm: replacing traditional fixed income with three objectives-oriented asset buckets; and abandoning market capitalisation-weighted benchmarks that reward leverage in favour of low-turnover strategies anchored in fundamental issuer quality.

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EXECUTIVE SUMMARY

Fixed-income markets have been structurally and lastingly altered from what they were a decade ago. This is due to the long-term, global macroeconomic conditions that we find ourselves in; compounded by the responses of governments and central banks to those conditions; and by changes in financial-market regulation since the crisis of 2007-09.

High levels of debt, falling productivity growth in the developed world and in key emerging economies such as China, as well as an ageing population that saves more than it invests, are all making it difficult for the world to return to the economic growth levels it enjoyed before 2007. Although the Federal Reserve is starting to react to the changing policy mix in the US, in our view the European Central Bank and the Bank of Japan are likely to maintain very low or negative rates for much longer. These central bank policies have already removed a substantial number of bonds from the freely-tradable market, and at the same time, in their attempt to make the financial system safer regulators have curtailed the ability of banks to fulfil their traditional market-making and liquidity-providing roles in fixed-income markets.

Altogether, this has left fixed-income investors with significant challenges. In the past, investors relied on investment-grade fixed income to play three key roles in their portfolios:

1. Providing yield
2. Preserving capital while also diversifying against growth assets
3. Providing liquidity

Today, however, investors face **widespread low or even negative yields** in key developed markets, alongside the risk of higher rates in the US. Duration has been extended, making bond portfolios highly sensitive to interest-rate risk just as interest rates have reached their low bounds. That leaves bonds with a lot of **downside risk to capital** and **very little diversification** benefit next to growth assets. Furthermore, bond-market **liquidity is deeply fractured**.

We believe there are five principles that investors should follow to tackle these challenges:

1. Search for yield outside investment-grade bonds, rather than extending duration
2. Build portfolios that do not rely on the ability to trade actively
3. Move away from portfolios and benchmarks based on market-capitalisation weights
4. Implement buy-and-maintain strategies to shift the focus from interest-rate to credit risk
5. Find alternative assets and strategies to replace lost liquidity

Following these principles leads to a new portfolio of three objectives-oriented buckets: low-turnover or buy-and-maintain credit strategies; illiquid income strategies; and liquidity-substitution strategies. Together, these take the place of traditional fixed income by each replicating one or two of the three functions of providing yield, preserving capital and providing liquidity.

We believe that reducing the need to trade and placing a strong emphasis on quality leads to a much safer implementation of investors' ongoing search for yield. In this paper we present the five principles we think investors need to take to achieve this: in our view these principles can mitigate the substantial challenges faced by fixed-income investors.

THE MACRO BACKGROUND: GROWING POLICY DIVERGENCE

Fixed-income markets have been structurally and lastingly altered from what they were a decade ago. This is due to the long-term, global macroeconomic conditions that we find ourselves in; compounded by the responses of governments and central banks to those conditions; and by changes in financial-market regulation since the crisis of 2007-09.

High levels of debt, falling productivity growth in the developed world and in key emerging economies such as China, as well as an ageing population that saves more than it invests, are all making it difficult for the world to return to the economic growth levels it enjoyed before 2007.

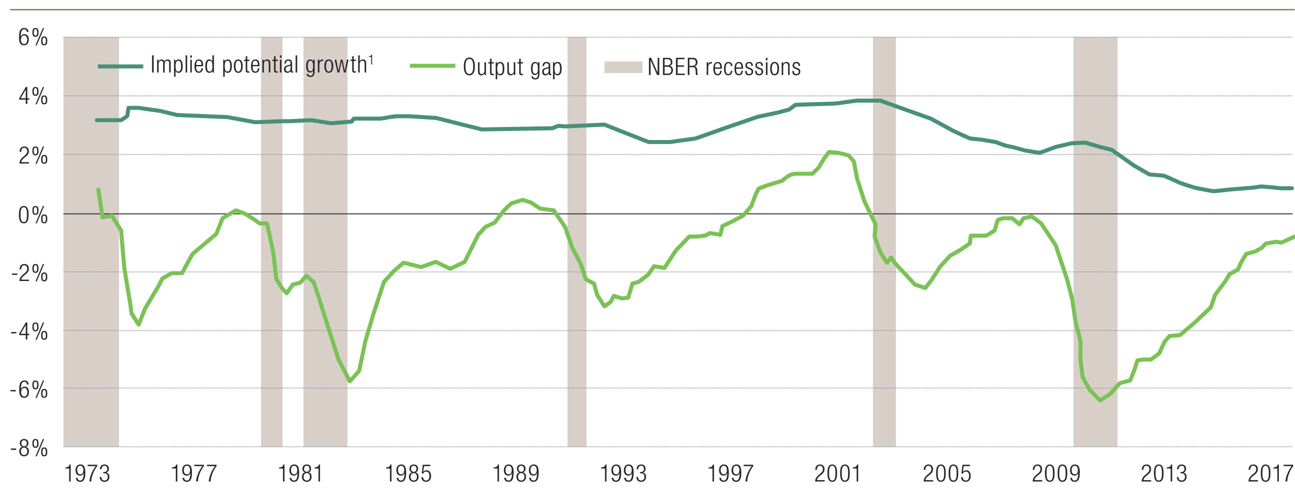
In response, we anticipate a continuation of already ultra-easy central bank policies in Europe and Japan. Europe is likely to have to depend on monetary policy for some time yet, given the tentative nature of its recovery, the rising risk of populist politics, and the unavailability of fiscal tools – indeed, we expect the European Central Bank (ECB) eventually to follow the Bank of Japan in targeting yield levels at the long end of the curve. We also anticipate a sustained period of slower growth in China.

The one place where this scenario of structurally low growth and inflation has been thrown into doubt is **the US, following the election of President Donald Trump** on a campaign platform promising a fiscal "bazooka" of substantial, debt-financed government spending and tax reform.

There is still significant uncertainty about the final timing, shape and scope of this programme, given the priorities that have been expressed during the administration's first couple of months and the power Congress wields over fiscal matters. But if we assume full implementation it could add as much as two percentage points to US GDP growth over a 12-18 month period, widen the fiscal deficit by 5-6% of GDP, and take public debt from our baseline scenario of 86% of GDP to an astonishing 129% over the next decade, according to the Committee for a Responsible Federal Budget (CRFB).

Some observers have drawn bullish parallels with the "Reaganomics" of the early 1980s, but it is worth noting how different the debt, inflation and job-market dynamics are in today's America. The GDP growth rate is comparable to what we had in 1981, but unemployment of 4.7% is very different from Reagan's 8.2%, and public debt at 76% of GDP is three-times greater than it was 35 years ago. Despite the debt implications, we are persuaded that eight years of monetary policy dominance is about to give way to fiscal stimulus, but in an economy at full employment we have no doubt that even a partial implementation of the campaign agenda will be inflationary.

FIG. 1 – THERE IS MUCH LESS SLACK IN THE US ECONOMY TODAY THAN IN 1981 UNDER REAGAN



Source: Goldman Sachs.
[1] Potential growth implied by range of spare capacity measures and GDP growth.

US developments have the potential for “spillover” into Europe, but we do not anticipate such an outcome because the difficulties of pursuing meaningful fiscal stimulus in the region have not changed. A continued sweep of populist politics through the Continent is possible during this very busy electoral year, but that remains an outlying scenario in our eyes. In the meantime, while Europe’s headline inflation has picked up as a result of the recovery in energy prices over the past year, the ECB’s attention is increasingly drawn to the stubbornly unresponsive core inflation data.

A NEW PARADIGM IN FIXED-INCOME MARKETS

An evolving picture in the US does not fundamentally change the legacy of the financial crisis for fixed-income markets, which have been structurally and lastingly altered from what they were a decade ago. The basic reality is still one of low productivity growth and central banks acting as policymakers, asset owners and regulators: policy-induced low interest rates in many markets, with growing upside risks to rates in the US, are striking features of this landscape of compressed risk premia and structurally-fractured liquidity.

Tail risks exist – they could come from signs of weakness in central-bank credibility, or from signs of a loss of control over inflation, especially in the US. But far from easing the problems that traditional fixed-income investors face, these would only make things worse: the best-case scenario is one of low yields in markets such as Eurozone and Japan; the worst case scenario is one of sharp capital losses as central banks lose control and yields surge higher.

In the past, investors relied on traditional fixed income to play three key roles in their portfolios:

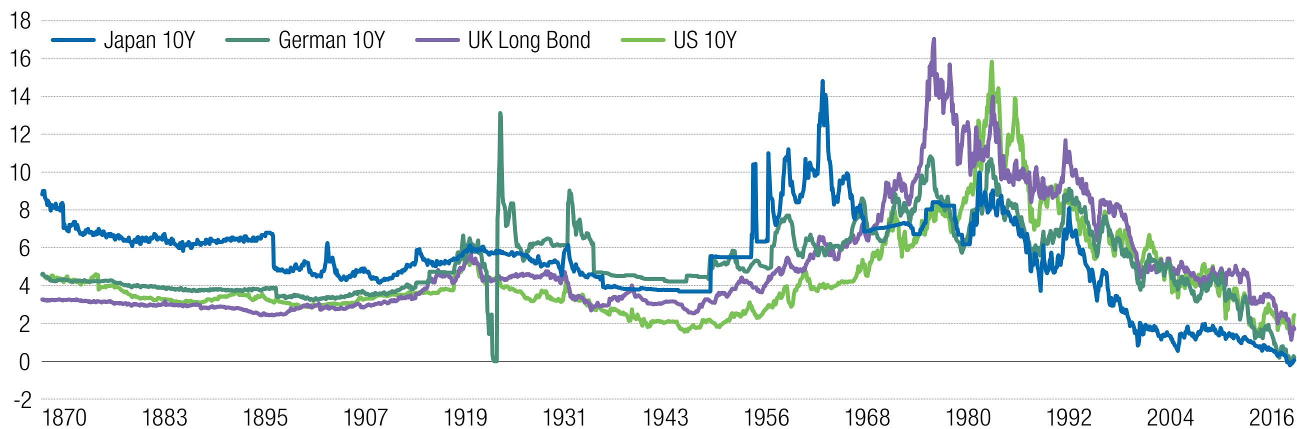
1. Providing yield
2. Preserving capital while also diversifying against growth assets
3. Providing liquidity

Taking each of these one-by-one, we can see that today those properties have been lost.

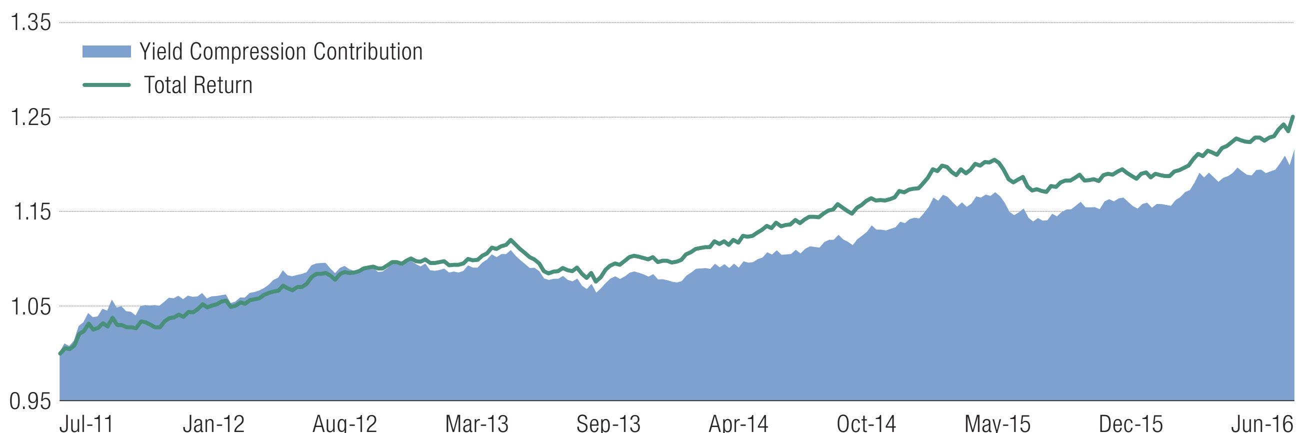
Long-term interest rates in core economies are as low as they have ever been over the past 200 years – save for an outlier or two in the 1920s. Asset owners on flattened yield curves must accept **very low, zero or even negative carry** in their core fixed-income allocations. While Figure 2 shows how they have benefitted a lot from falling yields up to this point, it is very difficult to see how further meaningful capital gains will be possible, given the economic and physical bounds on negative short-term rates. It is, however, all too easy to imagine meaningful capital losses.

Indeed, the interest-rate sensitivity – or “duration” – that has delivered such good returns to traditional fixed-income investors over recent years is now, in our view, a **significant downside risk to capital values**. Moreover, we believe the risk is asymmetric: the downside risk is higher now than the upside risk was before, because duration has lengthened as yield curves have fallen and flattened. This is partly due to the mathematics of fixed-income cash flows, partly because borrowers have taken advantage of flattening curves to issue more and more longer-dated bonds, and partly because investors battling to maintain carry in their portfolios have purchased bonds further and further out on the curve.

FIG. 2 – G4 BOND YIELDS REMAIN CLOSE TO HISTORICALLY LOW LEVELS…



… AND THE BULK OF THE LAST FIVE YEARS' INVESTMENT-GRADE RETURNS HAVE COME FROM THOSE FALLING YIELDS



Source: Barclays, Bloomberg. Past performance is not a guarantee of future results.

Figure 3 shows that duration of outstanding sovereign debt in Europe has increased from less than six years back in 2011 to more than seven years today, and things do not get any easier when we move into investment-grade corporate credit. Duration now accounts for almost 90% of the risk in the Barclays USD Aggregate Corporate Bond Index, up from just 37% just four years ago. Duration contributes 60% of the risk in the EUR corporates index.

In addition, the risk-reward trade off of holding fixed income is changing: German government bond yield data since 1840 tells us that volatility is higher than its long-term median even as yields flirt with all-time lows. Traditional fixed-income investors are simply not being paid for the risks they must assume.

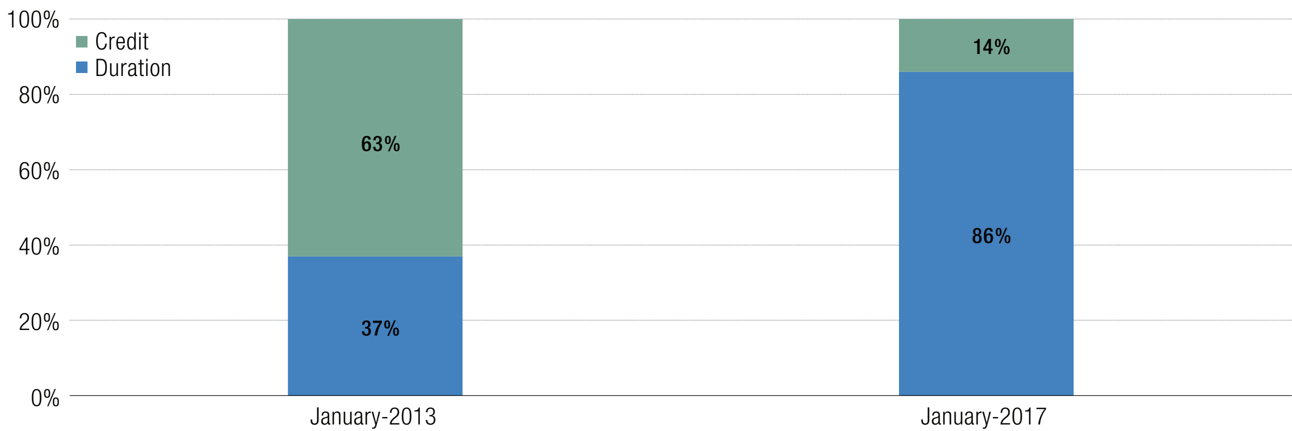
Furthermore, it is the potential for yields to fall when risk aversion or deteriorating fundamentals stalk the markets that has historically been the source of bonds' low correlation with equities. When there is so little room for yields to fall and prices to rise, **bonds' diversifying qualities are in serious doubt**. We have already seen a worrying shift in the correlation between bonds and equities in both US and European markets (Figure 4).

FIG. 3 – INTEREST-RATE SENSITIVITY HAS INCREASED ACROSS INVESTMENT-GRADE BOND MARKETS

BARCLAYS EURO AGGREGATE GOVERNMENT BOND INDEX

Source: Bloomberg. Duration of the Barclays Euro Aggregate Government Bond index.

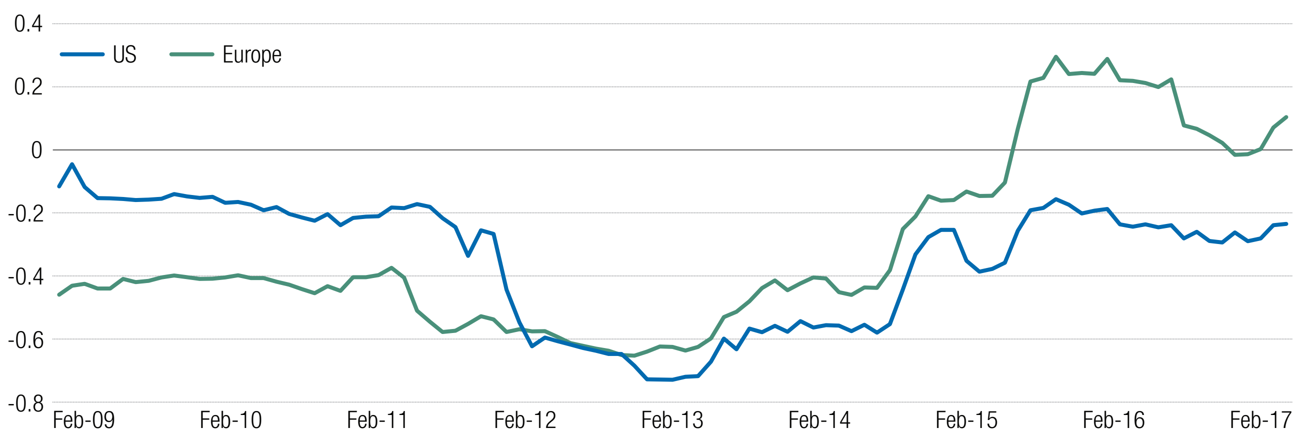
RISK CONTRIBUTION (%), BARCLAYS USD AGGREGATE CORPORATE BOND INDEX



Source: Bloomberg, Barclays, LOIM. Past performance is not a guarantee of future results. Risk contributions account for spread-duration correlations.

FIG. 4 – LOW YIELDS AND LONG DURATION HAVE ERODED BONDS' DIVERSIFICATION QUALITIES

36-MONTH ROLLING CORRELATION OF GOVERNMENT BOND AND EQUITY RETURNS



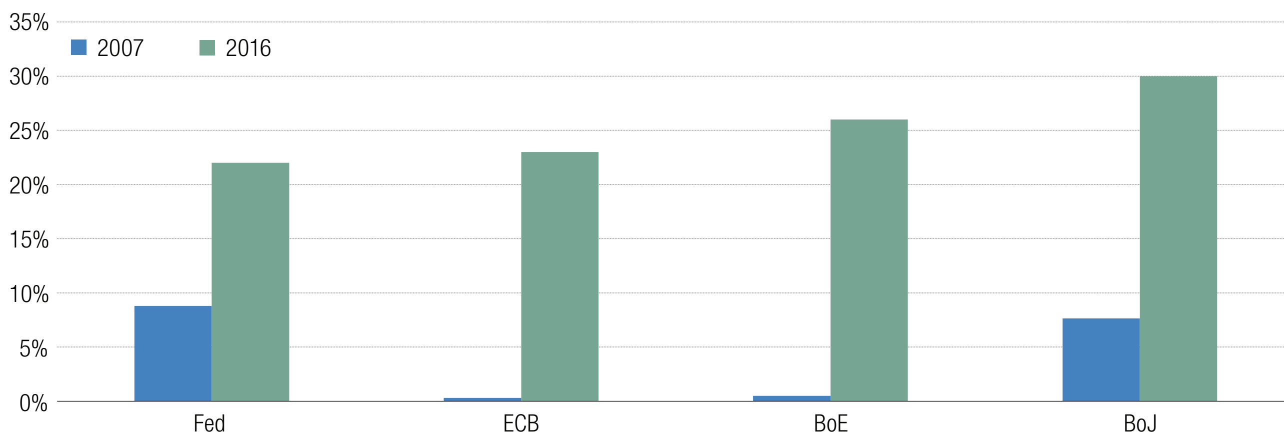
Source: Bloomberg, Barclays. The correlations shown are between the Eurostoxx 50 Index and German government bonds; and between the S&P 500 Index and US Treasuries.

Finally, whereas traditional fixed income used to be a ready source of liquidity, that **liquidity is now so badly fractured** that investors can no longer count on being able to buy or sell bonds when they need to. The causes are threefold: central bank purchases; regulatory constraints on traditional fixed-income market participants; and crowding by investors.

After years of extraordinary monetary policy central banks now dominate the fixed-income landscape, sitting on more than 20% of outstanding government debt in the major developed economies (Figure 5). Once central banks have bought their positions they are unlikely to relinquish them until their policy stances change. While those changes may be upon us in the US, in Japan and Europe we expect central bank intervention in bond markets to deepen and the liquidity conditions to remain fractured.

FIG. 5 – CENTRAL BANKS HAVE COME TO DOMINATE CORE BOND MARKETS

CENTRAL BANK OWNERSHIP OF OUTSTANDING GOVERNMENT DEBT (AS A % OF TOTAL PUBLIC DEBT)



Source: Goldman Sachs Research, Bruegel database of sovereign bond holdings developed by Merler and Pisani-Ferry.
2016 figures are year-end projections by GS Research. ECB figures are based on German government debt.

If central bank involvement were not enough, tighter regulation was passed after the financial crisis that strongly discourages banks from trading and holding inventory in securities. This has significantly curtailed their ability to provide liquidity and make markets – a traditional role of the broker-dealer in the economy.

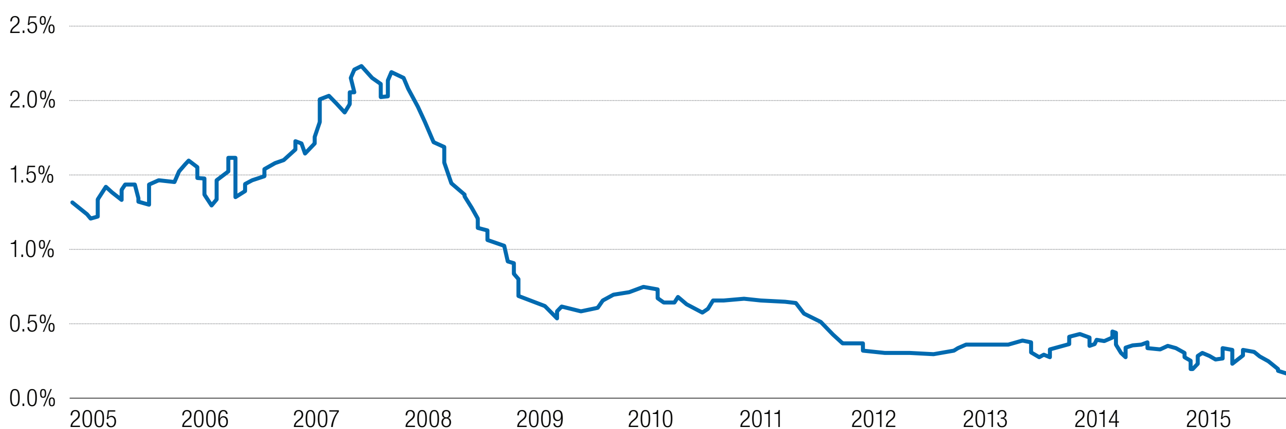
The key regulations have come in the third instalment of the Basel Accords ("Basel III") and the US Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank").

Basel III is introducing the Liquidity Coverage Ratio (LCR) between 2015 and 2019, which defines the amount of liquid assets that financial institutions must hold to meet short-term obligations. As banks are forced to hold more liquid assets on their balance sheets there is less free-float available to traditional investors.

Basel III has also increased banks' capital requirements and introduced more conservative risk definitions for use in calculating the capital required to support assets. This has increased the cost of holding corporate bonds, which discourages banks from their traditional inventory-holding, market-making and liquidity-providing roles. Basel IV could extend this effect to sovereign bonds. Banks are now acting as brokers (connecting buyers and sellers) rather than true market makers (using their own balance-sheet for liquidity provision). We estimate that inventory levels for corporate bonds are now 75% lower than before the financial crisis in 2007 (Figure 6).

While the new US administration is talking about a roll-back of Dodd Frank – which contains rules that have severely limited banks' proprietary trading activities – in our view even a successful re-think is unlikely to release significant inventory back into the market: reputational risks will probably ensure that proprietary trading remains below its pre-financial crisis levels.

FIG. 6 – DEALERS' FIXED-INCOME INVENTORIES COLLAPSED AS BANKS PREPARED FOR TIGHTENING REGULATIONS



Source: RBS Macro Credit Research, SIFMA, Federal Reserve Bank of New York.

On top of all this, IMF data suggests that many investors have exacerbated their exposure to fractured liquidity in bond markets by herding into over-crowded positions over recent years. Ironically, one reason for this has been the widespread use of benchmarks and portfolio allocations based on market-capitalisation weightings – which was perceived to be the most liquid approach. In fact, more and more investors have squeezed into the same room just as the exit door has been shrinking.

We have already seen frequent liquidity-induced accidents as the rewired financial system struggles to cope with shifts in investor sentiment. The most extreme example occurred in mid-2015, when German Bund markets seized up, pushing yields from five basis points to over 100 in a matter of days. Anecdotal evidence suggests similar disruption as the results of last year's US Presidential election came in, especially in emerging markets. This imposes sharp increases in price and transaction-cost volatility for investors, who are not being compensated for such risks and, outside of the crowding problem, have little influence on the underlying factors.

A NEW PORTFOLIO FOR A NEW PARADIGM

In short, we believe that the days when traditional fixed income provided a decent return as well as the secure, liquid and diversifying foundation to investment portfolios are over. So what can investors do? Their risk profiles have not changed overnight, simply because the market paradigm has changed. They still need some kind of asset – or collection of assets – that perform these same functions.

We believe investors need to observe the following **five principles** to replace the old, investment-grade part of their portfolios.

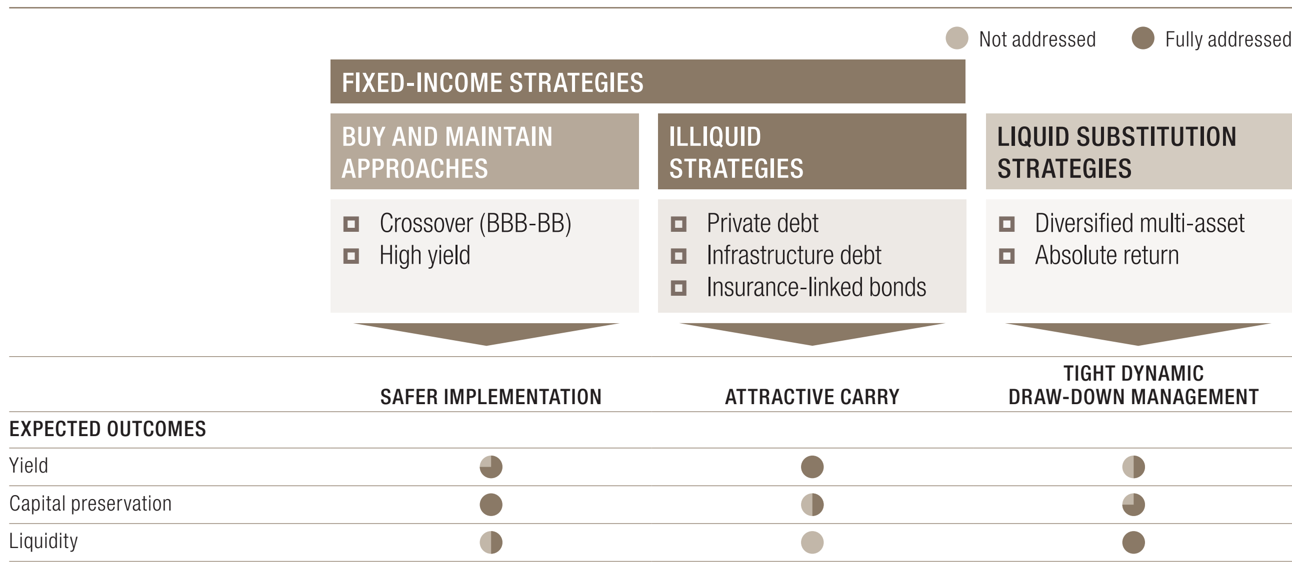
Investors need to maintain yield, but as we have seen it is risky to do that by extending duration. In any case yield curves are now so flat that the yield pick-up in exchange for more duration is minimal. Instead, we believe they should **(1) search for yield outside traditional fixed income**, in **lower-rated "crossover" and high-yield credit,** high-yield convertible bonds, and in illiquid income assets where possible.

Because liquidity is so fractured and prohibitively costly when it is most needed, investors should, in our view, **(2) build portfolios that do not rely on the ability to trade actively**. That implies safer, higher-quality investments, which means **(3) moving away from portfolios and benchmarks based on market-capitalisation weights** towards **(4) trading less and if possible adopting buy-and-maintain "pull-to-par" credit strategies** that can disregard mark-to-market interest-rate risk and instead focus on fundamental credit risk.

Because the two solutions of buy-and-maintain credit and more illiquid income assets compound the problem of fractured market liquidity, we think investors must also **(5) find a liquid investment that provides the diversification benefits and return expectations that traditional bonds provided a decade ago**.

Following these principles leads to a new portfolio of three objectives-oriented buckets, which take the place of traditional bonds by each replicating one or two of the three functions of providing yield, preserving capital and providing liquidity (Figure 7).

FIG. 7 – A NEW PORTFOLIO FOR A NEW FIXED-INCOME PARADIGM



	SAFER IMPLEMENTATION	ATTRACTIVE CARRY	TIGHT DYNAMIC DRAW-DOWN MANAGEMENT
EXPECTED OUTCOMES			
Yield	◔	●	◑
Capital preservation	●	◑	◕
Liquidity	◑	○	●

Source: Lombard Odier. For illustrative purposes only.

Now let's take a closer look at those five principles.

WHERE TO SEARCH FOR YIELD…

When it is too risky and of little benefit to extend portfolio duration in the search for yield, one has to consider taking more credit risk, more liquidity risk, or both. We think that private debt, infrastructure debt and some alternative income-generating assets such as insurance-linked securities are useful for adding illiquidity premia to a portfolio, and that emerging markets, high-yield bonds and high-yield convertibles still offer attractive spreads.

Nonetheless, in our view the true "sweet spot," especially for more conservative investors, is in "crossover credit" – corporate bonds rated at the lower end of investment-grade (BBB) and the higher end of high-yield (BB).

Lower-rated bonds offer higher yields and a better balance between duration and credit risk than investment-grade bonds. There is a particularly sharp pick up in yield between BBB and BB rated bonds because most investment mandates are either investment-grade or high-yield and very few can hold much in both BBBs and BBs: almost 80% of USD BBB corporate bond risk comes from duration, versus just 15% for BBs.

However, it is also true that BB rated bonds have in the past delivered better returns, when adjusted for downgrades and defaults, than either higher-rated or lower-rated bonds. This is also partly due to the general lack of "crossover" mandates: more than 20% of EUR BBs and almost 40% of USD BBs are "fallen angels" that have been downgraded from BBB. This means that many BBs look a lot like BBBs in terms of credit quality. But when the downgrades occur they can become attractively-priced for dedicated crossover investors, because funds that are only able to hold investment-grade bonds are forced to sell to funds that are only able to hold high-yield bonds – and therefore demand higher yields from the fallen angels. Those higher yields tend to generate an excess return as prices gradually re-align with credit fundamentals.

… AND HOW TO DO IT SAFELY, WHILE TRADING LESS

Moving from investment grade to crossover and high yield introduces more credit risk into portfolios, which can be managed in two ways. One can rely on one's ability to sell bonds should their underlying fundamentals deteriorate, or one can take extra care to focus on fundamental credit quality as the first step in the portfolio construction process.

Given the fractured liquidity of fixed-income markets, relying on the ability to sell is a broken approach, in our view. And yet much active bond management relies precisely on high-turnover strategies that require a lot of trading. Why is that?

The most important reason is that their starting point is deeply flawed. For over 40 years the starting point for most investors has been the market capitalisation-weighted portfolio. During a long bull market there was very little reason to question it, and the fact that it favours issuers with the most outstanding debt meant that buying and selling your biggest positions was relatively easy. Today, that liquidity advantage is much diminished – and the disadvantages of the market-capitalisation approach come to the fore.

Put simply, market capitalisation-weighted portfolios give a higher weighting to the most indebted issuers, regardless of their capacity to repay their debt. As shown in Figure 8, Japan's weight in the sovereign bond index is six-times higher than Germany's, which benefits from much stronger credit fundamentals. The Barclays Global Aggregate Corporate Bond Index is dominated by the financial sector in a way that is totally out of proportion to its contribution to GDP. In emerging markets, things get even worse: most standard benchmarks not only reward leveraged issuers, but also exclude China and India – economies that generate more than half of the emerging world's GDP.

Instead of starting with the market-capitalisation weights, we advocate starting with a rules-based “Fundamental Fixed Income” approach that allocates larger weights to better-quality issuers, across both sovereign and corporate bond universes, by identifying favourable factors such as lower debt levels, stronger revenues, and larger economic size.

The aim is to minimise default risk to create a robust portfolio that investors can hold more securely for the long term, with turnover similar to a purely passive strategy and significantly lower than traditional active management. Moving away from a benchmark that rewards leverage leads an investor into higher-quality credits, and greater confidence that he or she can hold those credits to maturity, simply collecting the coupons and the principal repayment.

It's also the case that, if we go back to basics and focus entirely on whether or not a bond issuer is secure enough to pay all of its coupons and repay our principal, then we can afford to pay much less attention to fluctuations in a bond's market price. Recall that 90% of a US investment-grade bond's price fluctuations are due to changes in interest rates, and you can see that what we are doing is enabling ourselves to focus on fundamental credit risk rather than interest-rate risk: we can be confident that any fall in a bond's price is likely to be due to interest-rate risk, and that as long as the credit quality of issuer is not impaired and we are prepared to hold until maturity, that fall will gradually be reversed by the “pull to par.”

Of course, it is important to note that sometimes the credit quality of an issuer can become impaired. Buy-and-maintain does not mean “buy-and-forget.” Continuous credit-risk monitoring is critical. But ultimately, the buy-and-maintain approach is a simple trade-off between liquidity and credit quality: when liquidity is fractured, investors should take the credit-quality trade.

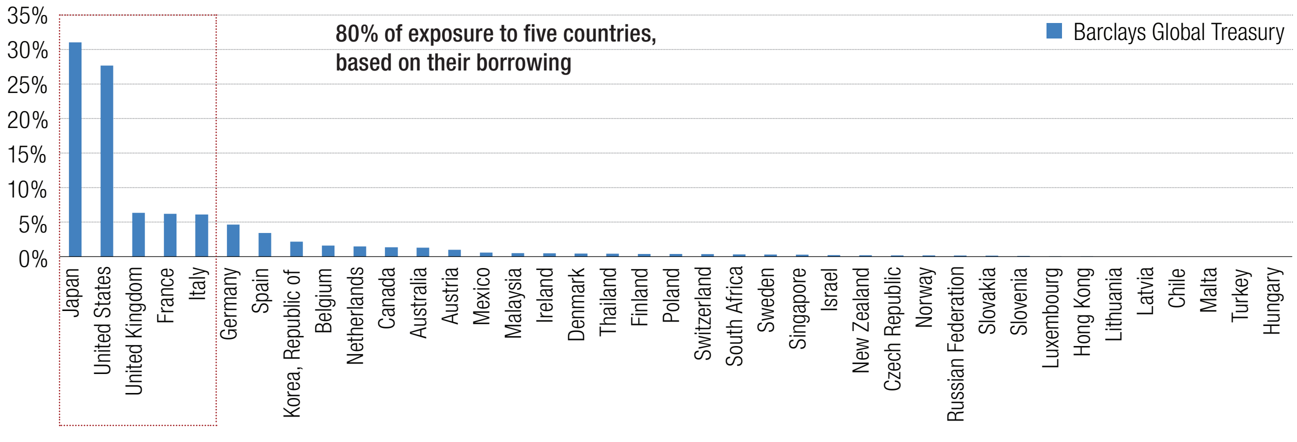
REPLACING LOST LIQUIDITY

When we choose less liquid investments in an environment where liquidity is already fractured, we have to find our liquidity elsewhere. Moreover, when traditional fixed income becomes more correlated with growth assets and we respond to low yields by increasing credit risk, we also have to find our portfolio diversification elsewhere. Can we do this with an asset that also has expected returns in line with those expected from investment-grade bonds a decade ago?

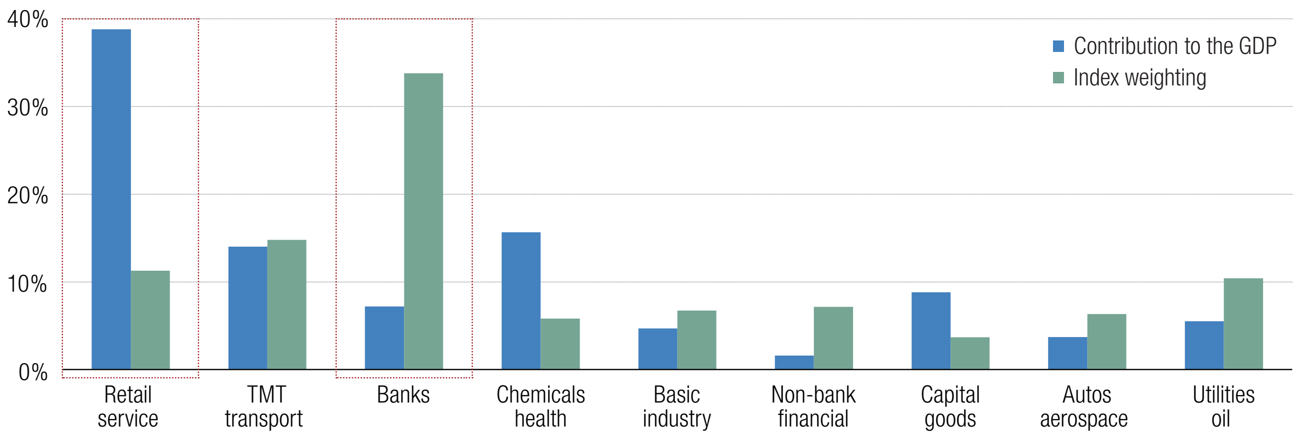
Illiquid income assets can help solve the expected-return and diversification problems, but we believe that multi-asset investing is the best way to solve the illiquidity problem as well, as long as it respects three critical rules: maximising diversification; actively managing drawdowns; and using liquid derivatives for implementation.

FIG. 8 – MARKET-CAPITALISATION WEIGHTING SERIOUSLY MISREPRESENTS BOND MARKET FUNDAMENTALS

SIX COUNTRIES ACCOUNT FOR 80% OF THIS SOVEREIGN BOND INDEX…

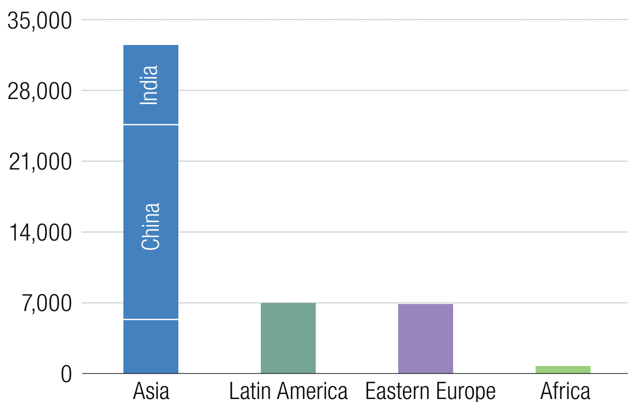


… THE FINANCIAL SECTOR DISPROPORTIONATELY DOMINATES THIS CORPORATE BOND INDEX…

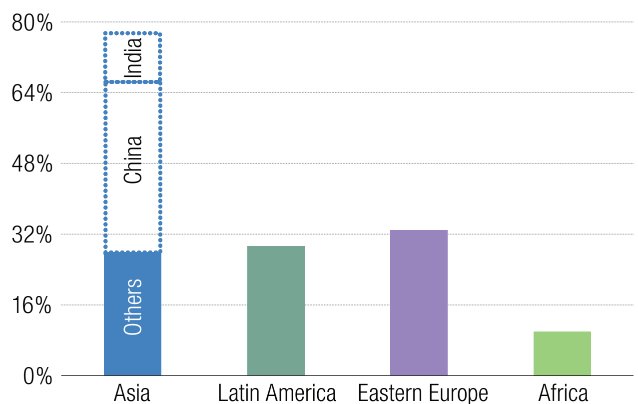


… AND THIS EMERGING MARKETS INDEX DOES NOT EVEN INCLUDE CHINA AND INDIA

GDP (PPP) BY REGION (USD BILLION)



MARKET-CAP WEIGHTING BY REGION



Source: Barclays, Eurostat, IMF. The sovereign bond index is the Barclays Global Treasury Index, data as at November 2016. The corporate bond index is the Barclays Global Aggregate Corporate Bond Index, data as at December 2016. The emerging market index is the JPMorgan Government Bond Index-Emerging Markets Global Diversified. Corporate sectors' contributions to GDP from Eurostat. Emerging-market regions' contribution to GDP from the IMF World Economic Outlook, at 2015. Holdings and/or allocations are subject to change.

Maximising diversification means balancing the risk contributions of assets rather than the capital allocations; as well as adding alternative risk premia such as"momentum" and "carry" to the traditional assets of investment-grade bonds, credit, equity, emerging market equities and commodities. Managing drawdowns is essential if a multi-asset strategy is intended to replace part of a core fixed-income portfolio, and this can be done by setting a strict risk budget and intervening to reduce total-portfolio risk when a large portion of that budget gets used up.

Following these rules helps to reproduce the stable returns and capital preservation that core fixed income used to provide a decade ago. To maintain an equivalent level of liquidity the strategy should be implemented with liquid instruments such as exchange-traded futures. This enables investors to take cash from their multi-asset allocation when they need to, and also to move further into low-turnover and buy-and-maintain credit strategies and illiquid assets to boost their fixed-income portfolio yield.

Our own Lombard Odier Pension Fund took this approach when it reviewed its strategy two years ago, cutting back its high-quality bonds allocation while putting 25% of its assets into a liquid multi-asset strategy alongside new allocations to buy-and-maintain global credit, convertible bonds and infrastructure debt.

CONCLUSION

Traditional fixed-income investment has benefitted from decades of declining interest rates – and especially the plummeting rates we have seen since the financial crisis of 2007-09. However, that has left us with today's reality of historically low and even negative interest rates, high levels of duration risk, little benefit in terms of portfolio diversification, and fractured market liquidity. These are unprecedented challenges for fixed-income investors that must be addressed.

When interest-rate movements threaten such a substantial **downside** to capital, we believe investors must rethink their search for yield by moving away from taking duration risk and instead taking more credit risk, in portfolios built on the twin foundations of lower turnover and higher quality. This can be achieved by turning away from market capitalisation-based portfolios and towards less liquid alternative income assets, on the one hand, and a low-turnover, buy-and-maintain, fundamentals-based approach to credit markets, on the other.

While this approach does not eradicate interest-rate risk, it does tip the balance more in favour of credit risk, and under buy-and-maintain the "pull-to-par" focus of holding bonds to maturity makes it easier to ignore the price-volatility noise that comes from any interest-rate risk that remains.

Finally, the combination of suitable returns and liquidity that traditional bonds used to provide can be re-instated by adding well-managed multi-asset strategies and other liquid alternatives into the portfolio, in our view.

We believe that reducing the need to trade and placing a strong emphasis on quality leads to a much safer implementation of investors' ongoing search for yield. In this paper we have presented the five principles of the objectives-oriented approach to fixed income that we think can achieve this, and in our view these principles can mitigate the substantial challenges faced by investors.

IMPORTANT INFORMATION

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