Allianz Global Investors White Paper Series

Deconstructing the Mechanics and Market Implications of Financial Repression

Executive Summary

The concept of "financial repression" was developed in 1973 by renowned Stanford University economists Ronald McKinnon and Edward Shaw. It describes a collection of economic policies, regulations and capital controls imposed by governments and central banks to facilitate public-sector deleveraging. Today, with countries across the developed world entangled in debt, financial repression offers a roadmap to fiscal stability and a strong incentive for market intervention. But there are costs. Government intervention can produce market distortions—including today's artificially low interest rates. In an environment of even moderate inflation, these low rates can result in negative real investment returns. That is why we believe it is critical for investors to understand how financial repression works, why governments choose to use it and what tools are best-suited to protect assets and purchasing power.

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For years a dusty chapter in academic textbooks, financial repression is back in the limelight, with major working papers underway at the National Bureau of Economic Research and the International Monetary Fund. In their seminal 2011 study, "The Liquidation of Government Debt," Carmen Reinhart and Belen Sbrancia demonstrated how financial repression—coupled with steady doses of inflation—has built a proven record of eliminating government debt.

Financial repression acknowledges the benefits of deleveraging by increasing government savings, but it also acknowledges the fact that savings alone are insufficient due to debt's corrosive impact on economic growth and tax income. Where outright government default can drive a financial system to its knees, financial repression is a subtle yet effective economic tax.

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Historic Precedent

America's post-war experience is a case study of how financial repression works. In 1946, following years of military spending, the ratio of US debt-to-gross domestic product (GDP) crested above 120% (roughly the same as Portugal today). Policymakers desperately needed to deleverage. This was done by creating a policy backdrop whereby the rate of economic growth could exceed the rate on government debt. The policies worked: Nominal government bond yields stayed below nominal GDP growth by an average of 2.7% per year from 1945 to 1979 (see Exhibit 1).

The government's debt-reduction efforts were successful. By 1974, America's debt-to-GDP ratio had stabilized at 33%, a level that held for almost a decade (see Exhibit 3). This decline corresponds with the roughly 3% per year liquidation effect resulting from financial repression (Reinhart and Sbrancia; 2011). Policymakers supported deleveraging through a range of administrative actions, including the 1951 swap of marketable short-dated bonds into non-marketable long-dated bonds, regulation Q (a ceiling on interest payments from long-term demand deposits), controls on international capital flows and a ban on the private ownership of gold.

> The US government successfully reduced debt using financial repression after World War II

> America's debt-to-GDP ratio improved from 121% in 1946 to 33% in 1974

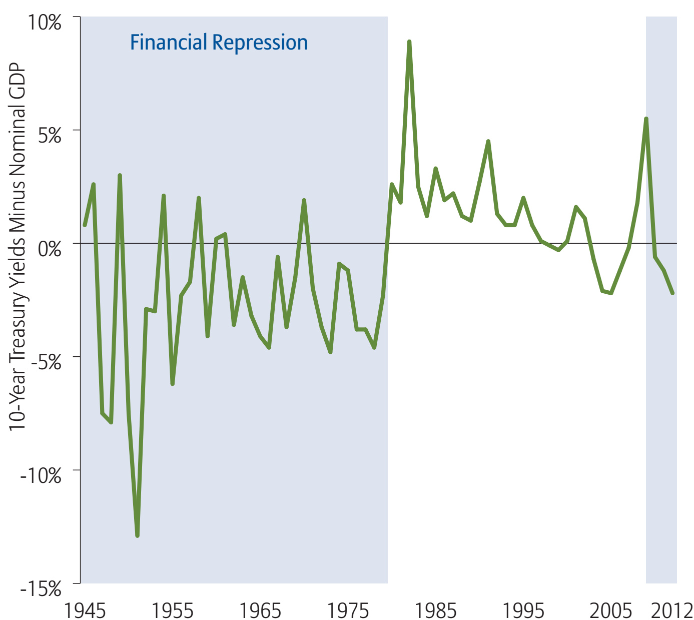
At the same time, annual gains in the consumer price index (CPI) exceeded historic norms more than 20 times between 1945 and 1980. As a result, the average monthly real yield on 10-year Treasuries was negative from 1945 to 1961 and less than 1.0% between 1945 and 1980. Many of today's investors have no experience with this type of environment: Real yields have averaged 3.5% in the 30-plus years since 1980 (see Exhibit 2).

The Least Bad Option

Today, government debt is again a headline issue—not just in the US, but across the industrialized world. On a questionable trajectory before the 2008 financial crisis, deficit spending ballooned as governments rescued failing private institutions and tried to rekindle growth with tax cuts and stimulus spending. Investors now question how those obligations will be resolved.

Exhibit 1: When debt-financing costs are below the pace of economic growth, a country's debt-to-GDP ratio declines

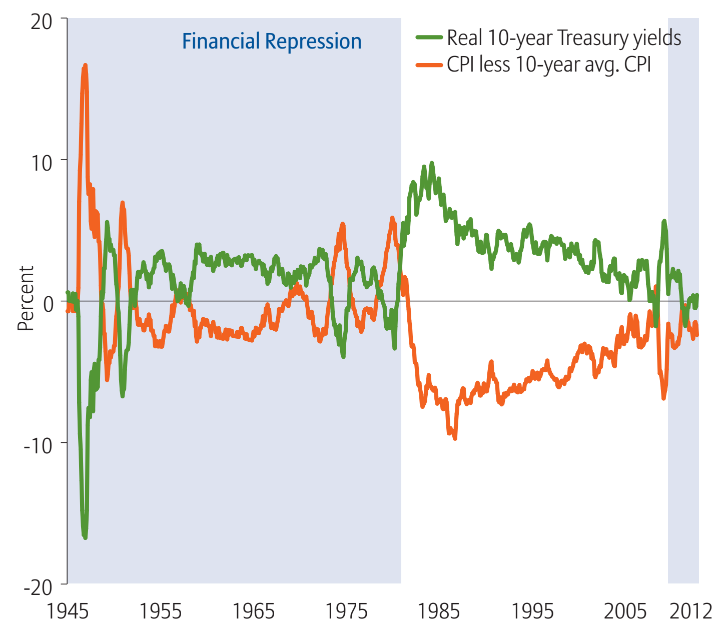
Nominal bond yields versus nominal GDP



Sources: Congressional Budget Office; Federal Reserve; US Treasury; Robert Shiller; FactSet; Allianz Global Investors. Data as of 12/31/12.

Exhibit 2: Financial repression results in market distortions that will feel foreign to many investors

Unexpected inflation and negative government bond yields



Sources: US Treasury; Robert Shiller; FactSet; Allianz Global Investors. Data as of 12/31/12.

We see four possibilities for governments that need to deleverage; each approach has varying degrees of merit and prospects for implementation.

1. **Growth.** Empirical evidence suggests output will remain tepid. In a 2012 investigation, the economists Carmen Reinhart, Vincent Reinhart and Kenneth Rogoff examined 26 episodes of public debt overhangs since 1800. They found that in 23 of 26 cases, countries experienced "substantially slower growth" when the debt-to-GDP ratio was above 90%. Beyond that point, average annual output was 1.2% lower than it would have been otherwise.

2. **Austerity.** Belt tightening requires time and a willing electorate, neither of which are in great supply. Anti-austerity movements are big and vocal along Europe's struggling southern perimeter. Unemployment regionally is at a record 11.8% and rising. Joblessness in Spain and Greece is comparable with levels seen during the Great Depression in the US. In Washington, where fiscal deficits are far more common than not, prospective budget cuts remain deeply contentious.

3. **Debt restructuring or default.** A key problem with default is that it erodes the private-sector's balance sheet. Systemic shocks resulting from a major developed-market government default could do lasting economic harm.

4. **Financial repression.** Given weak growth prospects, the time and political challenges associated with austerity and the systemic damage wrought by default, we believe this is the least bad option. Policymakers in Washington, London, Tokyo and Brussels have already established conditions for financial repression. We believe this will be a multi-year process that will occur without fanfare and is happening now.

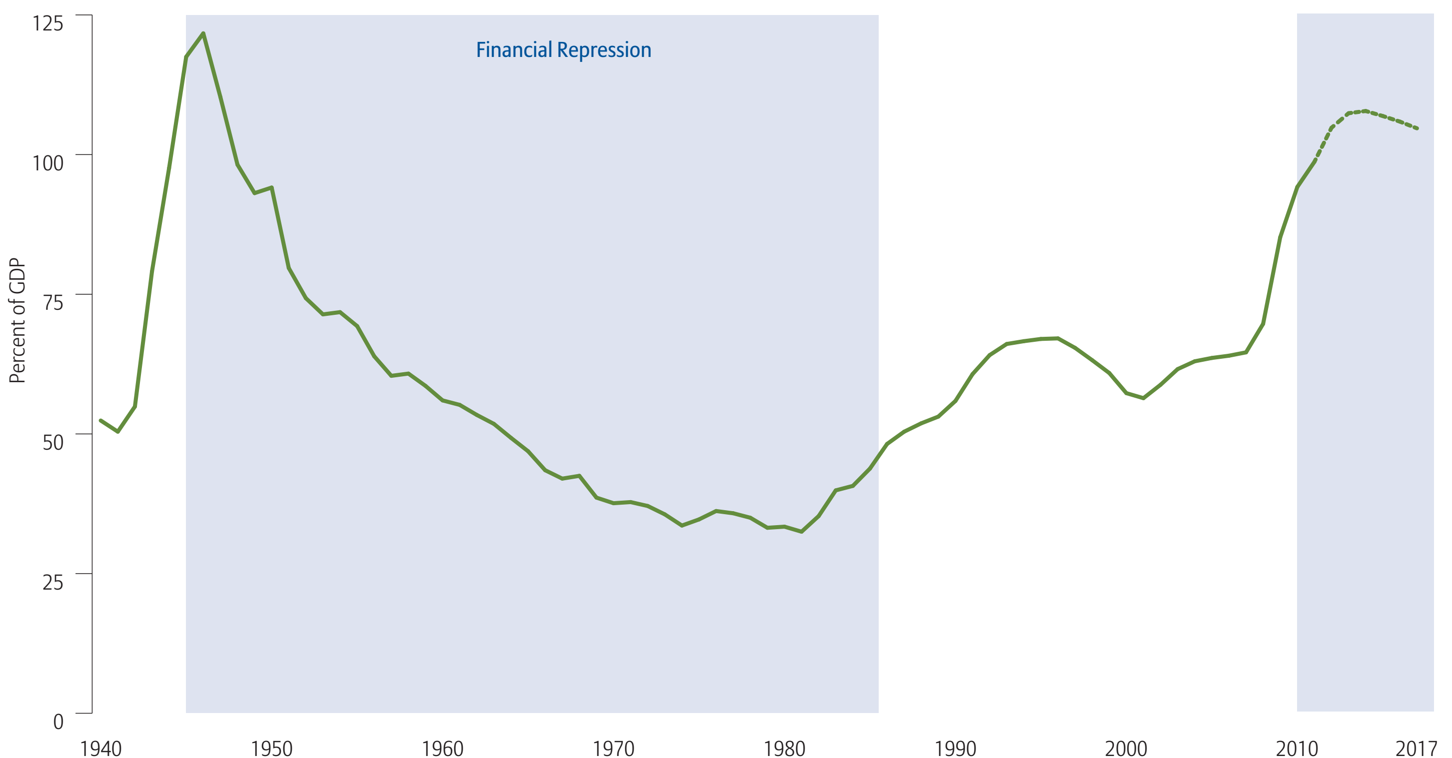
The principal characteristics of financial repression*

- Direct and indirect interest-rate caps
- Reduced incentives for private-sector investment in asset classes beyond government bonds
- Controls over financial institutions
- Creation and maintenance of a government-bond market that is regulated and controlled by the government
- International capital controls

*Reinhart and Sbrancia (2011).

Exhibit 3: The US has previously used financial repression to reduce debt

US public debt ratios



Sources: Congressional Budget Office; Allianz Global Investors. Data as of 1/14/13.
Note: Years 1940–2011 are actual; years 2012–2017 are White House projections.

Financial Repression Now

Evidence of the presence of financial repression today is extensive. Benchmark interest rates have been driven to extreme lows in all major developed markets. With traditional monetary options exhausted, the Fed, the Bank of England, the Bank of Japan and other central banks have engaged in non-standard measures, including large-scale government bond purchase programs known as quantitative easing (QE). These purchases have made the Fed the largest single owner of US government debt. Across the Atlantic, European Central Bank (ECB) President Mario Draghi has pledged to do "whatever it takes" to preserve the euro, intimating potentially unlimited QE.

Financial repression is a global phenomenon

Central bank actions are usually judged on the basis of how they help spur economic activity and mitigate inflation/deflation concerns. But that is not the whole story. By anchoring short rates near zero and intervening directly in private markets to suppress long rates, central banks are mid-stroke in the broadest effort to reduce public financing costs since the end of World War II.

> We haven't seen public-debt-deleveraging efforts on this scale in the industrialized world in more than 60 years

Administrative decisions support financial repression

Regulation is biased toward government debt. Rules like Basel III and Solvency II, though designed primarily to improve the quality of collateral on bank balance sheets and prevent another Lehman-style collapse, invariably involve private-sector accumulation of public-sector assets. Government bonds are considered the safest form of risk asset, and as such, receive preferential treatment in the calculation of bank balance-sheet liquidity.

And there has been broader pressure on banks to purchase government bonds. For example, peripheral euro-zone banks have been encouraged by local policymakers to exchange non-domestic bonds held with the ECB for money that can be reinvested in domestic securities. The self-funding of deficits on a national scale features prominently in financial repression.

The nationalization of banks, even on a partial scale, such as the Royal Bank of Scotland, also allows governments to potentially control lending and the amount of government debt on a bank's balance sheet, in turn helping to fund the country's deficit.

> Government-borrowing costs can be suppressed by forcing banks to hold more public debt

Pension-fund assets have been transferred to the public sector in France, Portugal, Ireland and Hungary, reducing government-debt ratios by boosting assets. The most recent example of this was in the UK, where the Royal Mail Pension Scheme was transferred to the public balance sheet.

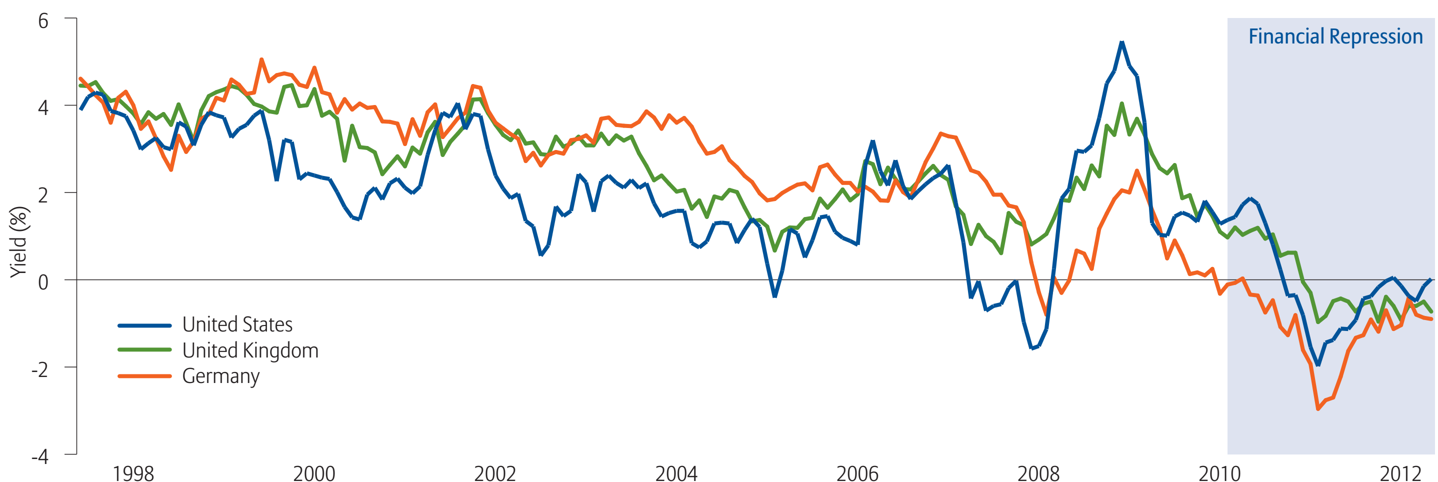
Direct interventions in capital markets are occurring

In Austria, the central bank and the financial supervisor implemented rules restricting capital flows to foreign subsidiaries in Central and Eastern Europe. Here again, financial regulation isn't explicitly designed to lower government financing costs, but it helps keep capital in the home country.

Yet lowering the nominal cost of government financing is only half the equation. As seen in post-war America, the key is keeping financing costs below the rate of economic growth. This can be facilitated via inflation in excess of market expectations, the outline of which is apparent today in the negative inflation-adjusted yields accepted by investors in US, UK and German government debt (see Exhibit 4).

Exhibit 4: Financial repression is evident in negative real government bond yields

Inflation-adjusted 10-year bond yields



Sources: US Department of Labor; Eurostat; Tullett Prebon Information; Allianz Global Investors. Data as of 12/31/12.

Redefining Risk

Financial repression favors debtors and punishes savers. It is redefining the very nature of investment-management risk and forcing a paradigm shift.

US government bonds—normally considered "risk-free" assets—are particularly affected. While bond investors have benefited enormously from a 30-year bull-market run, the current environment is a substantial departure from the past. Today's "safe-haven" government bond is caught between the hammer of negative inflation-adjusted yields and the anvil of price losses should nominal interest rates rise.

> Bond investors would not accept negative inflation-adjusted yields under "normal" circumstances

Rising rates are a considerable threat

Because (nominal) bond yields and prices move inversely, when prices fall, yields rise. During the first week of 2013, a relatively modest increase in 10-year Treasury yields from 1.76% to 1.90% resulted in a more than 2% loss in Treasury prices. Within four days, an entire year of income was erased. Consensus estimates suggest rates could rise further, ending 2013 at 2.25%. So-called "safe-haven" assets may prove riskier than some investors expect.

While we believe the outlook for equities is bright compared with government bonds, stock investors also face financial repression-related challenges. Economic growth will likely remain weak. As a result, corporate earnings should be constrained, which would dampen prospects for share-price gains. We expect dividends to increase in importance. Dividends typically constitute a substantial part of total stock returns when GDP growth is low or negative. At 2.20% on December 31, 2012, the dividend yield on the S&P 500 Index was above both the yield on 10-year Treasuries and the rate of CPI inflation.

Financial Repression: Here to Stay

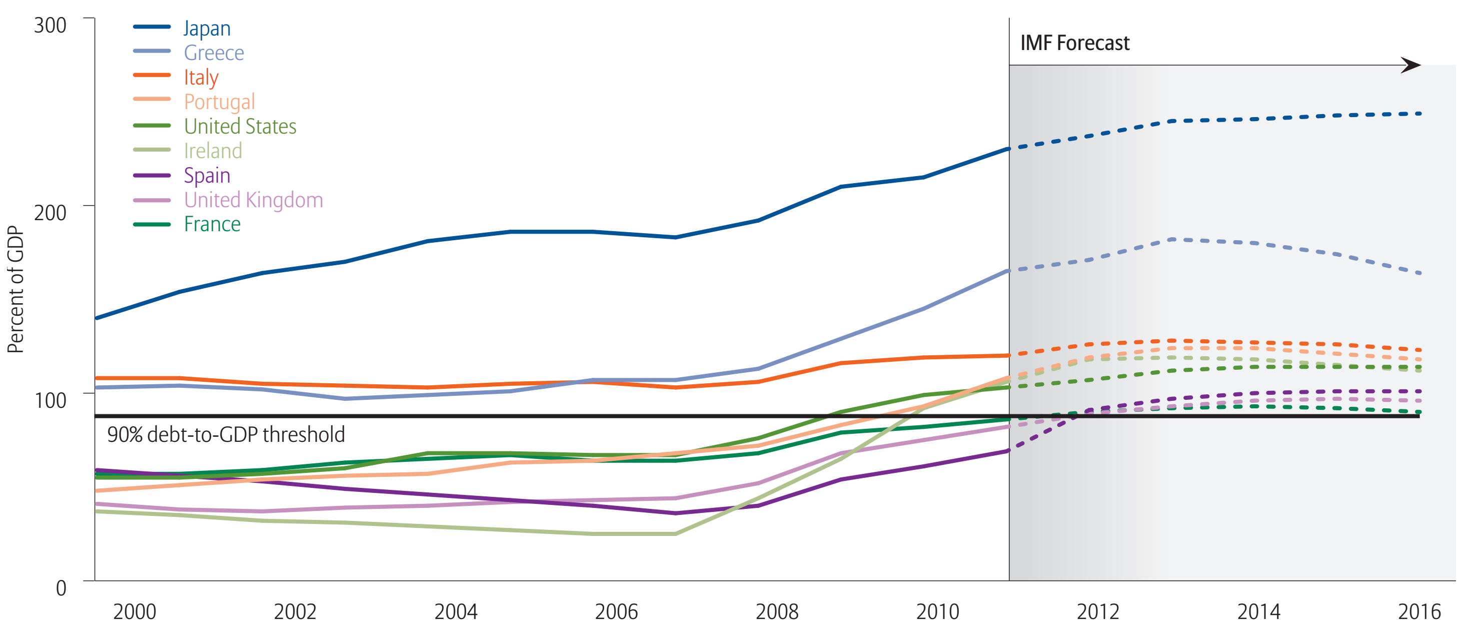
Despite Europe's ongoing debt crisis, most developed countries are still running budget deficits, spending more than they raise from taxes. This simply compounds the need for financially repressive policies and the time it will take to normalize public finances.

While austerity is a laudable goal for governments addicted to overspending, budget cuts and tax hikes dampen economic activity, making the task of reducing a nation's debt-to-GDP ratio more arduous. All else equal, if GDP contracts, a country's debt-to-GDP ratio rises.

> Economic contraction makes it more difficult to reduce a nation's debt-to-GDP level

Exhibit 5: Industrialized countries face an extended period of public-sector deleveraging

Public debt ratios



Sources: International Monetary Fund; Allianz Global Investors. Data as of 10/31/12.

Europe is learning an important lesson

Hamstrung by a shrinking economy and the deepest austerity in 30 years, Spanish politicians have backpedaled on budget-deficit targets every year since 2009. Similar challenges are sprinkled throughout the euro zone, which, as a whole, contracted at the fastest pace in four years during the fourth quarter of 2012. In a world of massively over-leveraged governments, we believe that, increasingly, policymakers will find that financial repression is the course of least resistance on the road to fiscal stabilization.

A historic debt crisis that could take years to resolve

We expect problems relating to public debt will continue for at least several years. For many countries, it will be difficult to bring debt below 90% of GDP—a level above which economic growth is typically impaired. Japan, in particular, is on a troubling fiscal trajectory (see Exhibit 5). To paraphrase Fed Chairman Ben Bernanke, the current environment of artificially low government interest rates could persist for an "extended period." Academic research suggests that, in some cases, government deleveraging can require 20 years or more to resolve (Reinhart, Reinhart and Rogoff; 2012). In our view, financial repression is a long-term trend. For market participants, it should continue to impact not just asset returns, but how they invest and think about risk.

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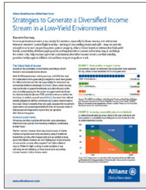
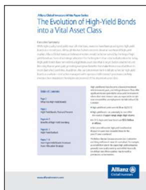
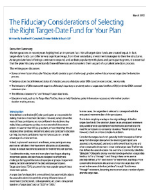
Today's global investment landscape is more complex than ever before. To stay ahead of the curve, investors need cutting-edge, expert analysis of the trends shaping today's markets. That's why we are dedicated to providing tools to help you make the most informed investment decisions possible.



Strategies to Generate a Diversified Income Stream in a Low-Yield Environment | High-yield bonds, convertibles, dividend-paying stocks and equities with a covered-call overlay may help investors generate a substantial diversified income stream, combat volatility and provide a hedge against rising interest rates.



The Evolution of High-Yield Bonds into a Vital Asset Class | With high-quality bond yields near all-time lows, investors have been pouring into high-yield bonds at a record pace. Although this has fueled concerns about an overheated high-yield market, we believe investors would be better served by thinking of high-yield bonds as more of a strategic allocation for the long term than a tactical allocation for today.



The Fiduciary Considerations of Selecting the Right Target-Date Fund for Your Plan | Market gyrations in recent years highlighted an important fact: Not all target-date funds are created equal. In fact, target-date funds can differ in very significant ways, from their underlying investment strategies to their fee structures. As target-date fund offerings continue to expand, and as their popularity with plans and participants grows, it is essential that the plan fiduciary understands these differences and considers them as part of a prudent selection process.

Managing Tail Risk | Tail risk is the possibility that unusual events will occur and cause negative consequences. It often occurs faster and more often than predicted, requiring investors to take preventative action. This white paper examines the causes of fat-tailed market outcomes, addresses common misconceptions about "normal" market returns and discusses three rules for managing tail risk in investment portfolios—specifically within qualified default investment alternatives (QDIAs).

Water: A Key 21st-Century Growth Opportunity | The worldwide demand for fresh, clean water has never been greater, making access to this precious commodity a matter of global concern. Governments and businesses are investing heavily to solve what is likely to be a key 21st-century challenge—and a major growth opportunity for investors.

Short-Duration High-Yield Bonds: An Attractive Solution for a Low-Yield Rising-Rate Environment | Income generation remains a primary concern for many investors, but historically low-yielding Treasuries aren't providing sufficient income—and they leave investors exposed to potential price depreciation from rising interest rates. High-quality short-duration high-yield bonds provide much-needed income, have held up well in rising-rate environments and can help reduce volatility without a significant drop in yield.

More Perspective on the Target-Date "To-Versus-Through" Choice | In recent years, one of the most frequent debates about target-date funds (TDFs) has been whether TDFs should be managed "to" or "through" the target date. In this paper, Target Date Analytics LLC aims to bring clarity to that question—and in the process examines the underlying assumptions in the to/through distinction to provide plan sponsors and their advisors with firm ground from which to make informed TDF decisions.

EMU Debt Crisis | The European debt crisis has been roiling global markets for more than three years. Progress has been made, but further steps are required to reach resolution. This paper explores those steps and how we see events evolving into our baseline scenario of a more integrated monetary union.

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Allianz Global Investors is a diversified active investment manager with a strong parent company and a culture of risk management. With 23 offices in 18 countries, we provide global investment and research capabilities with consultative local delivery. We have $405 billion in assets under management for individuals, families and institutions worldwide, and employ over 500 investment professionals.*

At Allianz Global Investors, we follow a two-word philosophy: **Understand. Act.** It describes how we look at the world and how we behave. We aim to stand out as the investment partner our clients trust by listening closely to understand their challenges, then acting decisively to provide them with solutions that meet their needs.

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A Word About Risk: Equities have tended to be volatile, and unlike bonds do not offer a fixed rate of return. Dividend-paying stocks are not guaranteed to continue to pay dividends. Bond prices will normally decline as interest rates rise. US government bonds and Treasury bills are guaranteed by the US government and, if held to maturity, offer a fixed rate of return and fixed principal value.

*Combined worldwide AUM as of March 31, 2013.

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