



## Passive-Aggressive: Index Funds and Risk in the Barclays U.S. Aggregate Today

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Since the financial crisis, government policy and direct issuance of Treasury securities have resulted in increased duration and lower yields in the Barclays U.S. Aggregate Index. These changes pose a direct challenge to investors in bond index funds, which are fully exposed to the concentrated risks that are now embedded in the index. Unlike index funds, actively managed funds seek to mitigate concentrated or poorly compensated risks while identifying pockets of value across the broad bond markets. We believe modest return expectations and the prospect for higher interest rates favor active management, which provides investors with the benefits of core bonds while potentially mitigating risk and earning higher returns.



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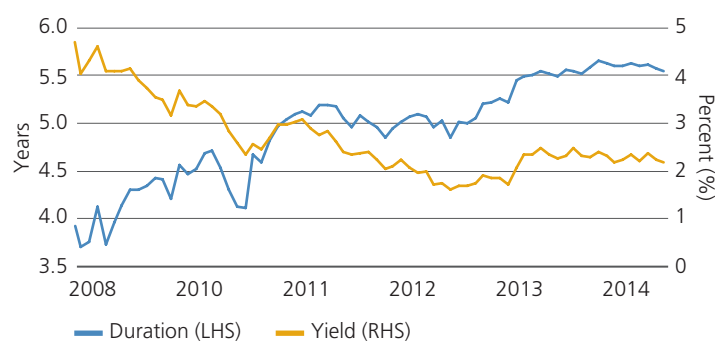
Investors typically rely on core fixed income to dampen volatility and generate a high quality source of return in portfolios. Importantly, the combination of duration and yield in a core bond portfolio generally functions as the primary diversifier to equity exposure.

We expect core bonds to continue to play a key role in portfolio risk management and asset allocation. The Barclays U.S. Aggregate Index represents the attributes sought by core bond investors: intermediate duration, high quality U.S. fixed income.

Policy responses to the financial crisis, however, have altered the risk characteristics of the U.S. Aggregate. Investors who have not revisited the index recently might be surprised at the extent of the changes.

As noted in Figure 1, duration on the U.S. Aggregate increased from 3.7 years at the end of 2008, as the financial crisis peaked, to 5.6 years currently. Yield-to-maturity fell from 4% at the end of 2008 to 2.2% currently. What this means for investors is that the yield per unit of duration has decreased from 1.1 to 0.4 over the past six years. So using a core bond index fund today exposes portfolios to greater interest rate risk with limited compensation in the form of yield.

**FIGURE 1: BARCLAYS U.S. AGGREGATE INDEX: DURATION HAS INCREASED WHILE YIELDS HAVE FALLEN**



Source: Barclays, PIMCO, as of 30 November 2014

The U.S. Aggregate is the most common proxy for the U.S. investment grade bond market – and the primary tracking benchmark for core bond index funds. The index is a representation of U.S. dollar-denominated, investment grade, fixed-rate, taxable bonds. It includes 9,100 issues totaling \$17.6 trillion as of the end of November – comparable to the market capitalization of the S&P 500, which was \$19.5 trillion. Yet the U.S. Aggregate represents only 49% of the U.S. bond market and a mere 17% of the \$100 trillion global bond market.

Some investors believe the U.S. Aggregate represents the total bond market. It does not. It is simply the aggregate of the Barclays U.S. Treasury, Government-Related,\* Investment Grade Corporate and Securitized\*\* indexes. The bond market has grown considerably since the launch of the U.S. Aggregate in 1986 and now includes a broader, more diversified opportunity set. That said, the U.S. Aggregate still remains more narrowly focused, as shown in Figure 2.

**FIGURE 2: THE U.S. AGGREGATE DOES NOT REPRESENT THE TOTAL U.S. BOND MARKET**

Barclays Capital U.S. Aggregate Bond Index	
Instruments included	Instruments not included
Nominal Treasuries	Treasury Inflation-Protected Securities
Agency mortgage-backed securities	Non-agency MBS
Investment grade corporates	High yield corporates
Government-related*	Tax-exempt municipal bonds
Consumer asset-backed securities	Floating-rate bonds
Commercial mortgage-backed securities	

Source: Barclays, PIMCO, as of 30 November 2014

The U.S. Aggregate is a subset of the domestic bond market, much as the S&P 500 is a subset of the domestic equity market. Just as investors regularly seek to diversify their large-cap stock exposure by including a range of complementary sectors, styles and market caps, they should consider a similar approach in fixed income.

It is also important to note that a number of the sectors excluded from the U.S. Aggregate – TIPS, non-agency MBS and high yield – have typically outperformed during periods of rising rates. We believe these securities can help improve the risk/reward profile of a core bond portfolio when actively managed in a carefully monitored, risk-focused manner.

Investors are attracted to indexes for a number of reasons. High on the list is consistency. Most asset allocators assume that the risk characteristics of their benchmarks maintain similar attributes over time. The U.S. Aggregate provides consistency in terms of the methodology it employs to construct the index; however, it does not necessarily provide stable risk exposure over time.

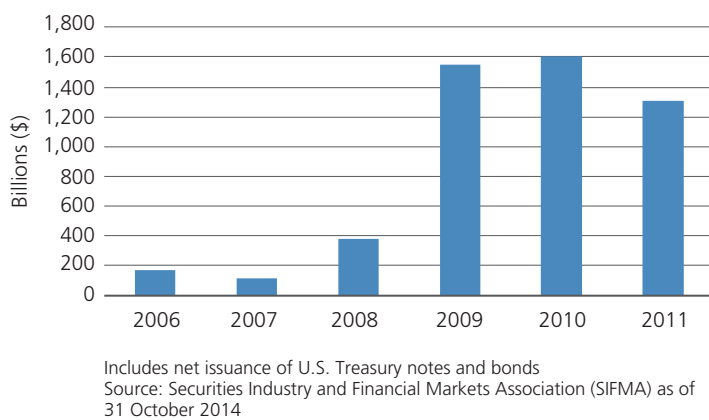
Barclays determines the weighting of the U.S. Aggregate by the amount of outstanding debt. In other words, as an issuer floats more bonds, that issuer becomes a bigger proportion of the index. Indexes that are weighted by the amount of debt that a bond issuer floats require careful monitoring whenever one or more issuers can materially affect the overall composition of the index. Since the financial crisis, the government assumed an even greater presence in the U.S. bond market and is now the effective backer of approximately 70% of the debt in the U.S. Aggregate.

\*Government-related debt includes agency, local authority and U.S. dollar-denominated sovereign and supranational debt, from both developed and emerging markets.

\*\*Securitized debt includes agency mortgage-backed securities, consumer asset-backed securities and commercial mortgage-backed securities.

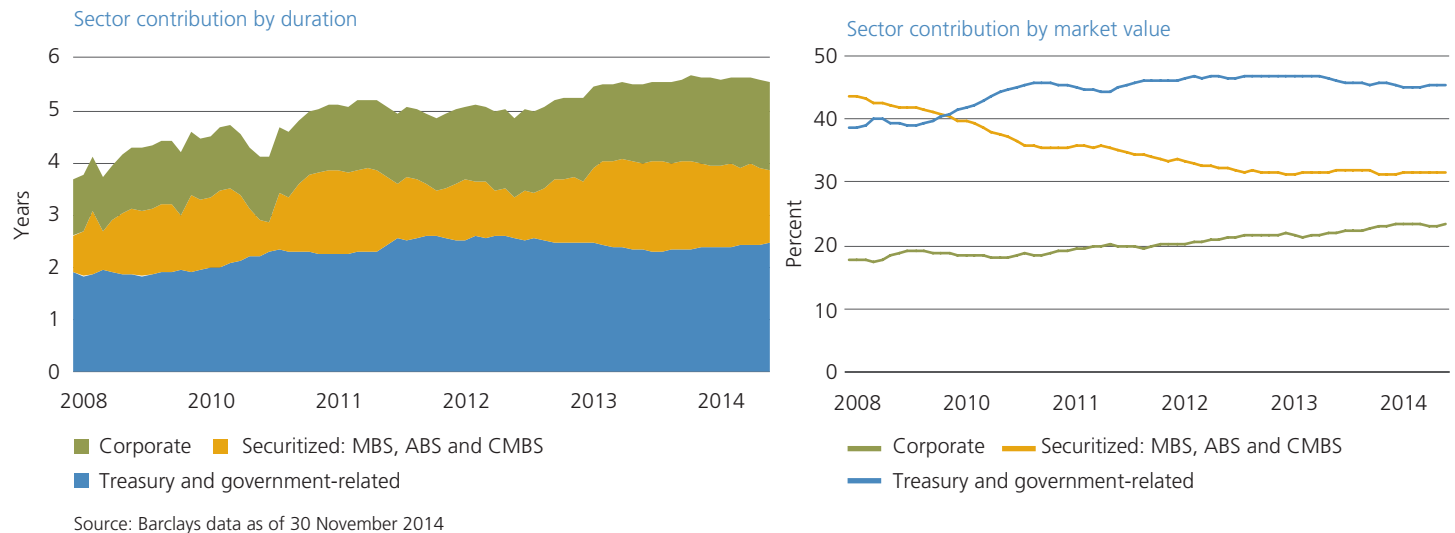
The conservatorship of Fannie Mae and Freddie Mac in 2008 increased the amount of debt with effectively explicit government backing. This modification was followed by an unprecedented level of direct Treasury issuance, as Figure 3 illustrates.

**FIGURE 3: BIG SPENDER – U.S. TREASURY ISSUANCE IN THE YEARS SURROUNDING THE FINANCIAL CRISIS**



Lower interest rates have also led investment grade companies to issue more debt. The volume of corporate issuance increased both the percentage of corporate bonds in the U.S. Aggregate and the duration that the sector contributes to the index, as shown in Figure 4.

**FIGURE 4: THE PATH TO INCREASED DURATION IN THE U.S. AGGREGATE**



Since the financial crisis, many companies have used bond proceeds to buy back shares. This altered the firms' capital structures and, in a number of cases, increased their leverage. Taken together, this means that index investors have assumed greater exposure to more levered companies, highlighting the need for an active credit-review process. The average credit quality of the corporate bond component in the Aggregate index has slipped from A2/A3 to A3/Baa1 as the proportion of Baa rated bonds has increased, as shown in Figure 5.

**FIGURE 5: BARCLAYS U.S. AGGREGATE: CORPORATE BOND SECTOR – THEN AND NOW**

Weighting by credit quality in the corporate component of the U.S. Aggregate			
	Dec '08	Nov '14	Difference
Aaa	5%	1%	-4%
Aa	12%	9%	-3%
A	50%	46%	-4%
Baa	33%	43%	+10%

Source: Barclays, PIMCO, as of 30 November 2014

## Considering risk in core bond allocations

Armed with this information, investors should determine the best approach for gaining core bond exposure today. How does the current risk profile of the index affect the choice between indexing or active management?

The case for indexing is based on gaining market exposure at low fees. By design, index funds have no mechanism to actively manage risks inherent in the index. Lacking this active risk management, index investors are simply along for the ride, fully exposed to all of the changes to the index, including a 50% increase in duration since the end of 2008.

The case for active management is most often associated with the opportunity to outperform a benchmark. An equally important advantage today, however, is the potential to improve upon the risk profile of the index.

**All investments** contain risk and may lose value. Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and the current low interest rate environment increases this risk. Current reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed.

**Management risk** is the risk that the investment techniques and risk analyses applied by an active manager will not produce the desired results, and that certain policies or developments may affect the investment techniques available to the manager in connection with managing the strategy. Investors should consult their investment professional prior to making an investment decision. It is not possible to invest directly in an unmanaged index.

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Skilled managers seek to mitigate outside or poorly compensated risk within the benchmark while identifying pockets of value. In addition, active managers have the ability to employ investments outside the benchmark that can enhance diversification and return potential.

Given that the duration of the U.S. Aggregate is near all-time highs, risk management in core bonds is paramount. In addition, in the current low-return environment, the excess returns generated by skilled active managers contribute a larger proportion of total portfolio return.

While the U.S. Aggregate may serve well as a benchmark, we believe it does not serve well as the basis for an index fund for core bond investors today. Active management can be a better solution – offering investors the benefits of core bonds while retaining a focus on mitigating risk and generating higher returns.

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