Western Asset
A LEGG MASON COMPANY

Legg Mason
Thought Leadership™

IN BONDS, ACTIVE BEATS PASSIVE

Ellen Cammer
Product Specialist

- The median active manager has outperformed both the median passive manager and the Bloomberg Barclays U.S. Aggregate Index on a one-, three-, five-, seven- and 10- year basis as of December 31, 2017.
- Over most time periods, active higher levels of risk efficiency than have passive managers.
- The composition of the fixed income market has changed and we believe the Aggregate Index is more limiting than many investors realize. Most passive bond strategies do not provide the multi-sector exposures that most active managers invest in.
- We believe value investing is particularly powerful in capitalizing on persistent market inefficiencies.

[1] Morningstar. As of December 31, 2017.

FEB 2018

ELLEN S. CAMMER
Product Specialist

In Bonds, Active Beats Passive

Executive Summary

- The median active manager has outperformed both the median passive manager and the Bloomberg Barclays U.S. Aggregate Index on a one-, three-, five-, seven- and 10-year basis as of December 31, 2017.
- Over most time periods, active managers have also exhibited higher levels of risk efficiency than have passive managers.
- The composition of the fixed-income market has changed and we believe the Aggregate Index is more limiting than many investors realize. Most passive bond strategies do not provide the multi-sector exposures that most active managers invest in.
- We believe value investing is particularly powerful in capitalizing on persistent market inefficiencies.

Introduction

We believe your bond allocation is the place for active management. Since the financial crisis, passive flows into equities have accelerated and as of late they seem to have accelerated on the bond side of the equation as well. Buying inexpensive index performance may, on the surface, look like a good solution for your fixed-income allocation, but fixed-income is different from equities. Bowing to the Bloomberg Barclays U.S. Aggregate benchmark construction criteria may dramatically inhibit your return potential. There are structural reasons why fixed-income managers, and value investors in particular, may outperform the index and provide better risk-adjusted returns to investors. In fact, the median active manager has consistently outperformed the index.

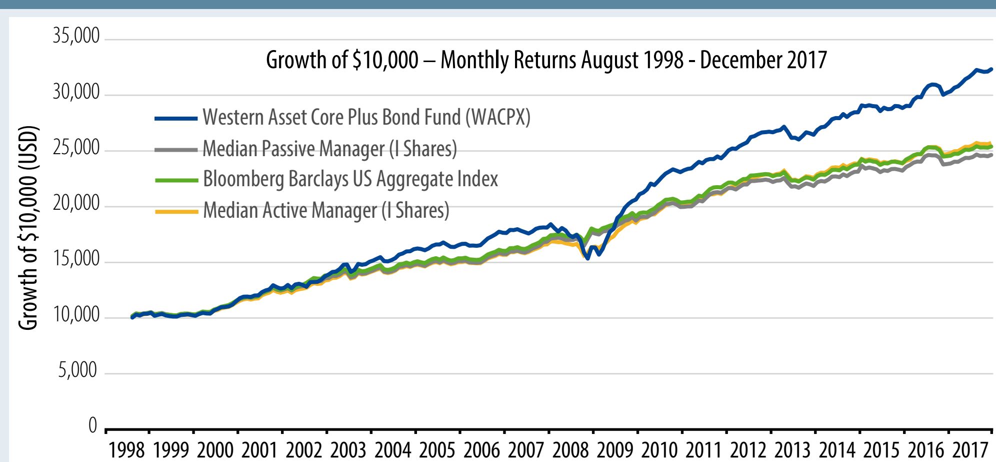
In this paper we compare active and passive investment choices in fixed-income. First we look at the data, then we elaborate on why they are occurring and outline why we believe that in bonds, active beats passive.

Over Time Active Management Has Outperformed

Median passive fixed-income has generally performed as expected. With tight tracking error around the benchmark, passive managers lock in underperformance roughly in line with their fee levels. Meanwhile, the median active manager has outperformed the median passive manager over time (Exhibit 1).

This picture holds across all time periods we analyzed. The median passive manager locks in underperformance, while the median active manager has outperformed the median passive manager and the Aggregate Index (Exhibit 2). This holds across one, three, five, seven and 10 years. This indicates that fixed-income managers with broad capabilities have outperformed the passive alternative on a consistent basis.

Exhibit 1
The Median Active Manager Has Outperformed the Median Passive Manager Over Time



Source: Morningstar. As of 31 Dec 17
Past performance is no guarantee of future returns.

Exhibit 2
The Median Active Manager Has Consistently Outperformed the Median Passive Manager and the Aggregate Index

	Total Return Net of Fees (%) through 12/31/2017				
	1 Year	3 Year	5 Year	7 Year	10 Year
Bloomberg Barclays U.S. Aggregate Index	3.54	2.24	2.10	3.20	4.01
Median Passive Manager[1]	3.50	2.16	2.03	3.12	3.89
Median Active Manager[2]	**4.07**	**2.49**	**2.33**	**3.64**	**4.47**
Top Quartile Active Manager[3]	4.78	2.92	2.79	4.08	4.88

Source: Morningstar. As of 31 Dec 17
Past performance is no guarantee of future returns. There is no assurance active strategies will outperform passive strategies.

Looking at overall performance, however, is only a part of the picture. We also need to look at the risk level and risk efficiency of these strategies. Exhibit 3 compares Sharpe ratios for the Bloomberg Barclays U.S. Aggregate Index, the median active and median passive mutual funds as well as the top-quartile active manager. The Sharpe ratio is a measure of the returns achieved per unit of risk, thus a measure of how well the risk budget is used. We note that over time, active management has resulted in a higher Sharpe ratio than either the Aggregate or the median passive alternative, with the exception of the very challenging financial crisis captured in the 10-year numbers.

Exhibit 3
Active Managers Have Exhibited Higher Levels of Risk Efficiency Over Most Time Periods

	Sharpe Ratios through 12/31/2017				
	1 Year	3 Year	5 Year	7 Year	10 Year
Bloomberg Barclays U.S. Aggregate Index	1.64	0.64	0.64	1.09	1.12
Median Passive Manager	1.57	0.57	0.56	1.00	1.06
Median Active Manager	**1.99**	**0.77**	**0.73**	**1.24**	**1.08**
Top Quartile Active Manager	2.54	0.92	0.87	1.37	1.23

Source: Morningstar. As of 31 Dec 17

We Expect Bond Markets to Remain Inefficient

We believe the reason that active managers, including Western Asset, have been able to consistently outperform the market is that there are structural aspects of the fixed-income market that make it very inefficient. Active managers with a broad set of capabilities generally have been able to capitalize on these inefficiencies.

1 Median Passive Manager consists of all institutional share classes of index funds benchmarked against the Bloomberg Barclays Aggregate Bond Index included in the Morningstar US Intermediate Term Bond Universe.

2 Median Active Manager consists of all institutional share classes of actively managed funds benchmarked against the Bloomberg Barclays Aggregate Bond Index included in the Morningstar US Intermediate Term Bond Universe. .

3 Top Quartile Active Manager indicates the lowest return in each period required to be in the top quartile amongst all institutional share classes of actively managed funds benchmarked against the Bloomberg Barclays Aggregate Bond Index included in the Morningstar US Intermediate Term Bond Universe.

The negotiated nature of fixed-income trading provides opportunities for active fixed-income managers not paralleled in the exchange-traded equity market. Today, inefficiencies also arise from the current regulatory environment creating a liquidity-constrained backdrop that results not only in potential peril but also in potential opportunities for active managers to add value. Additionally, rating-agency moves have the effect of forcing issues in and out of benchmarks, as well as forcing ratings-constrained investors to buy and sell securities based on these changes. Last, the growth of fixed-income opportunities and the increasing complexity of available options may provide active managers with many more options than passive strategies that mirror the benchmark.

We believe these inefficiencies will persist.

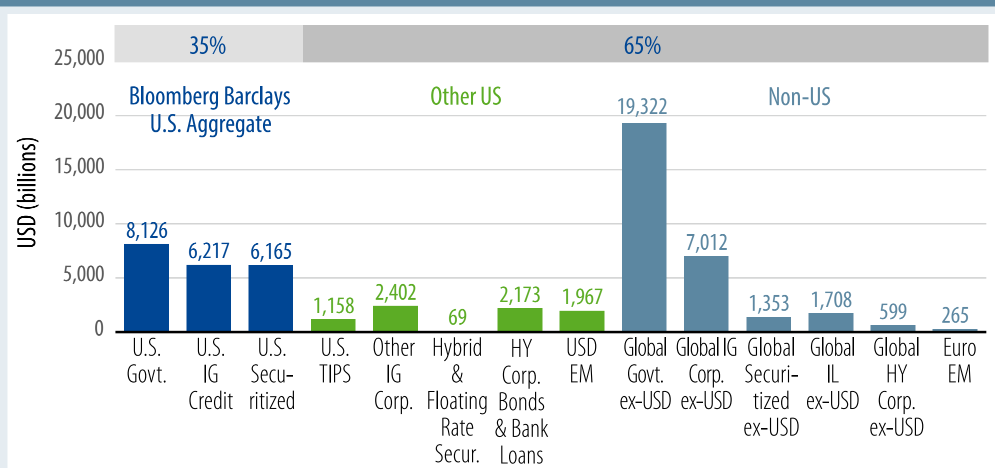
What's in the Aggregate Benchmark?

A particular area of inefficiency is the composition of the Aggregate benchmark. It's not that the Aggregate benchmark serves no purpose—it's widely used for providing an apples-to-apples comparison of traditional active managers. In our view, however, it's making a leap to move from seeing it as a useful measurement tool to always using it as the best investment. By choosing active management, you don't have to throw out the benchmark, but you don't have to mimic it either. For a full and detailed exploration of the Aggregate benchmark, see the related white paper, "Trends and Opportunities in the Bloomberg Barclays Aggregate Index," by Western Asset Portfolio Manager Bonnie Wongtrakool.

Investment opportunities have grown dramatically over the last few decades, providing a large opportunity set both in the US and around the globe (Exhibit 4). The composition of the market has changed, but the index has remained the same. Allowing prudent allocations to "plus" sectors from today's global opportunity set may go a long way to fix what's limiting with the Aggregate benchmark—*something index-based passive investing can't do.*

As a point of reference, the Aggregate Index has a correlation of 0.91 to the performance of US Treasuries over the past 20 years. When you take a peek under the hood of the Aggregate Index, it is easy to see why this strong correlation persists.

Exhibit 4
Fixed-Income Opportunities – The Aggregate Index Represents Only 35% of the Global Debt Market



Source: Bloomberg Barclays, S&P. Investible universe represented by various Bloomberg Barclays indices. As of 31 Dec 17
Past performance is no guarantee of future returns. An investor cannot invest directly in an index. Unmanaged index returns do not reflect any fees, expenses or sales charges.

__The Bloomberg Barclays Aggregate Index__ is a market-cap-weighted index including bonds with more than one year left until maturity, is fixed-rate only (which is why TIPS are not included), investment-grade and must meet a minimum issue size. If you're a big issuer of debt, then you're a bigger piece of the index than a company that issues less debt. Also, the major components tend to be pretty tightly correlated with each other. Roughly 95% of the index is Treasuries (36%), pass-through mortgage-backed securities (28%) and investment-grade credit (32%). Adhering to these weightings makes it nearly impossible to embed a variety of different themes, leaving you with less of the benefits you'd hope to see from a diversified portfolio.

As of 10 Aug 16

Most traditional active bond managers in the core space are benchmarked to the Aggregate and while risk and return measures are benchmark-relative, within some defined boundaries, most utilize non- benchmarked or plus-sector exposure as part of a core allocation to a fixed-income portfolio. Active management may opportunistically provide access to:

- Opportunities for higher income
- Better diversification with inclusion of sectors not tightly correlated with US interest rates
- Diversification away from the US business cycle
- Securities with adjustable-rate features

The Power of Value Investing

The core belief driving Western Asset's decision-making process is that markets often misprice securities. While prices can deviate from fundamental fair market value, over time prices will typically readjust to reflect credit quality, liquidity conditions and inflation. The magnitude of the mispricing, coupled with our confidence in our view of fundamentals, determines the emphasis in our clients' portfolios. Additionally, we look to diversify and add value through interest rate duration, positioning along the yield curve, sector allocation decisions, currency and country allocations as applicable, and the specific issues that make up those allocations. Deploying multiple diversified strategies that benefit in differing market environments so that no one strategy dominates performance has enabled us to provide value to our clients over multiple time periods.

The power both of value investing and of focus on risk-adjusted returns is evidenced by Western Asset Core Plus Bond Fund's outperformance of both the Aggregate Index and the median passive manager over all time periods.

Exhibit 5
The Western Asset Core Plus Bond Fund Has Outperformed Both Active and Passive Managers

	Total Return through 12/31/2017				
	1 Year	3 Year	5 Year	7 Year	10 Year
Western Asset Core Plus Bond Fund - I	**6.96**	**4.33**	**3.88**	**4.92**	**5.96**
Top Quartile Active Manager[2]	4.78	2.92	2.79	4.08	4.88
Median Passive Manager[3]	3.50	2.16	2.03	3.12	3.89
Bloomberg Barclays U.S. Aggregate Index	3.54	2.24	2.10	3.20	4.01

Source: Morningstar. As of 31 Dec 17
Past performance is no guarantee of future returns. There is no assurance active strategies will outperform passive strategies.

The performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown. Principal value and investment returns will fluctuate, and investors' shares, when redeemed, may be worth more or less than the original cost. Total returns assume the reinvestment of all distributions at net asset value and the deduction of all Fund expenses. Total return figures are based on the NAV per share applied to shareholder subscriptions and redemptions, which may differ from the NAV per share disclosed in Fund shareholder reports. Performance would have been lower if fees had not been waived in various periods. Periods of more than one year are annualized. For the most recent month-end information, please visit www.leggmasonfunds.com.

Fee Waiver: Gross expenses are the Fund's total annual operating expenses for the share class(es) shown. Net expenses for Class I reflect contractual fee waivers and/or reimbursements, where these reductions reduce the Fund's gross expenses, which cannot be terminated prior to Dec. 31, 2017 without Board consent.

Important Definitions:

Correlation is a measure that determines the degree to which two variable's movements are associated.

The yield to worst (YTW) is the lowest potential yield that can be received on a bond without the issuer actually defaulting.

Option Adjusted Duration is a duration calculation adjusted for embedded options. Duration measures the sensitivity of price (the value of principal) of a fixed-income investment to a change in interest rates

U.S. Treasuries are backed by the "full faith and credit" of the United States government and offer return of principal value if held to maturity. The U.S. government guarantees the principal and interest payments on U.S. Treasuries when the securities are held to maturity.

TIPS: U.S. Treasury Inflation Protected Securities (TIPS) are bonds that receive a fixed, stated rate of return, but they also increase their principal by the changes in the CPI-U (the non-seasonally adjusted U.S. city average of the all-item consumer price index for all urban consumers, published by the Bureau of Labor Statistics). TIPS, like most fixed-income instruments with long maturities, are subject to price risk.

Important Information:

Fixed-income securities involve interest rate, credit, inflation, and reinvestment risks; and possible loss of principal. As interest rates rise, the value of fixed-income securities falls. High yield bonds are subject to greater price volatility, illiquidity, and possibility of default. Derivatives, such as options and futures, can be illiquid, may disproportionately increase losses, and have a potentially large impact on Fund performance. International investments are subject to special risks, including currency fluctuations and social, economic and political uncertainties, which could increase volatility. These risks are magnified in emerging markets. Asset-backed, mortgage-backed or mortgage-related securities are subject to prepayment and extension risks. Potential active and frequent trading may result in higher transaction costs and increased investor liability. Active management does not ensure gains or protect against market declines.

TN16-478

Legg Mason
Global Asset Management

Brandywine Global

Clarion Partners

ClearBridge Investments

EnTrustPermal

Martin Currie

QS Investors

RARE Infrastructure

Royce & Associates

Western Asset

Legg Mason is a leading global investment company committed to helping clients reach their financial goals through long term, actively managed investment strategies.

- Over $767 billion* in assets invested worldwide in a broad mix of equities, fixed income, alternatives and cash strategies
- A diverse family of specialized investment managers, each with its own independent approach to research and analysis
- Over a century of experience in identifying opportunities and delivering astute investment solutions to clients

LeggMason.com

IMPORTANT INFORMATION:
All investments involve risk, including possible loss of principal.

The value of investments and the income from them can go down as well as up and investors may not get back the amounts originally invested, and can be affected by changes in interest rates, in exchange rates, general market conditions, political, social and economic developments and other variable factors. Investment involves risks including but not limited to, possible delays in payments and loss of income or capital. Neither Legg Mason nor any of its affiliates guarantees any rate of return or the return of capital invested.

Equity securities are subject to price fluctuation and possible loss of principal. Fixed-income securities involve interest rate, credit, inflation and reinvestment risks; and possible loss of principal. As interest rates rise, the value of fixed income securities falls.

International investments are subject to special risks including currency fluctuations, social, economic and political uncertainties, which could increase volatility. These risks are magnified in emerging markets.

Commodities and currencies contain heightened risks that include market, political, regulatory, and natural conditions and may not be suitable for all investors.

Past performance is no guarantee of future results. Please note that an investor cannot invest directly in an index. Unmanaged index returns do not reflect any fees, expenses or sales charges.

The opinions and views expressed herein are not intended to be relied upon as a prediction or forecast of actual future events or performance, guarantee of future results, recommendations or advice. Statements made in this material are not intended as buy or sell recommendations of any securities. Forward-looking statements are subject to uncertainties that could cause actual developments and results to differ materially from the expectations expressed. This information has been prepared from sources believed reliable but the accuracy and completeness of the information cannot be guaranteed. Information and opinions expressed by either Legg Mason or its affiliates are current as of the date indicated, are subject to change without notice, and do not take into account the particular investment objectives, financial situation or needs of individual investors.

The information in this material is confidential and proprietary and may not be used other than by the intended user. Neither Legg Mason nor its affiliates nor any officer or employee of Legg Mason accepts any liability whatsoever for any loss arising from any use of this material or its contents. This material may not be reproduced, distributed or published without prior written permission from Legg Mason. Distribution of this material may be restricted in certain jurisdictions. Any persons coming into possession of this material should seek advice for details of, and observe such restrictions (if any).

This material may have been prepared by an advisor or entity affiliated with an entity mentioned below through common control and ownership by Legg Mason, Inc. Unless otherwise noted, the “$” (dollar sign) represents U.S. dollars.

For Financial Professional use only. Not for public distribution.

* As of December 31, 2017.