

FIXED INCOME

Four-Dimensional Chess

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Data science has brought investors powerful new tools to help generate returns, so is there still need for a human touch? Franklin Templeton Fixed Income CIO Sonal Desai weighs in on the role of quantitative science within the active-passive investment debate.

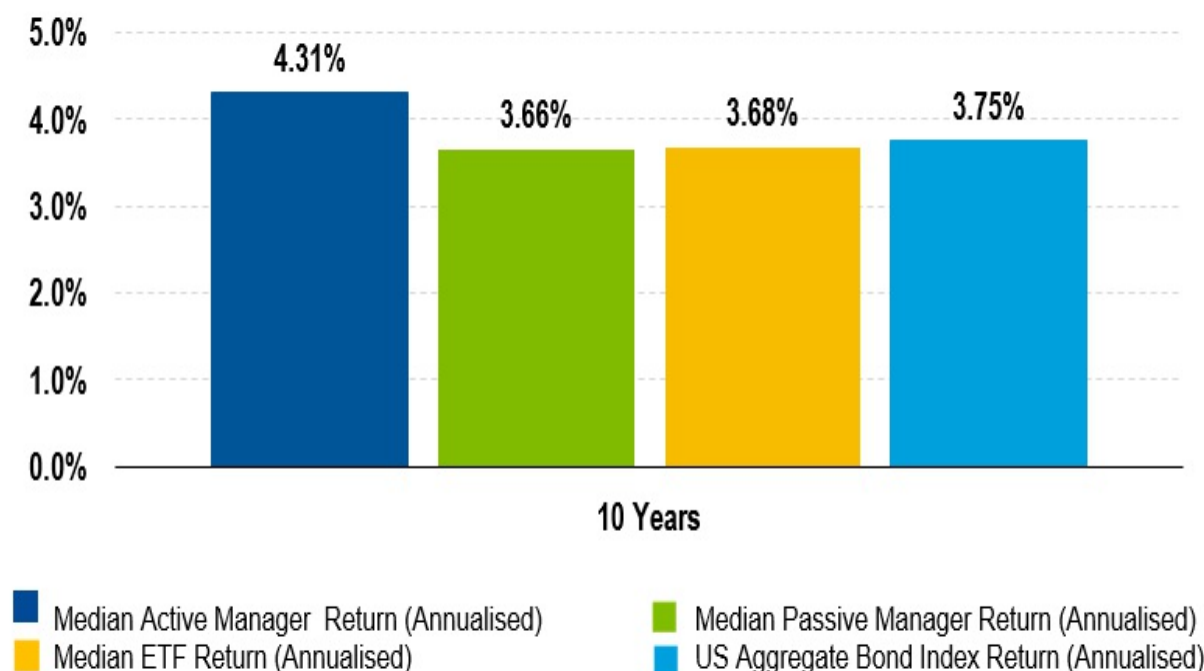
As data science has made its way into investment management, it has generated a polarised debate—as fierce as the one between passive and active investment and, in my view, a lot more interesting and consequential.

Before I get to it, though, let me point out one thing on the active versus passive choice: in the fixed income world, active investment has historically beaten passive hands down. Over the past 10 years, the median active fixed income investment manager has beaten the median passive strategy by 65 basis points¹ (bps) and median exchange-traded fund (ETF) strategy by 63 bps on an annualised basis (as at 30 September 2019, with manager performances measured net of expenses).

Active Management Has Historically Outperformed Passive in Fixed Income

Active Manager vs. Passive Manager Performance

As at 30 September 2019



For illustrative purposes only. Not reflective of the performance or portfolio composition of any Franklin Templeton fund.

Source: Morningstar, including open-end mutual funds and ETFs. Fixed income represented by the Intermediate Core Bond and Intermediate Core-Plus Bond categories, net of expenses as at 30 September 2019. Benchmark used is the BBgBarc US Agg bond TR USD. Indices are unmanaged, and one cannot directly invest in an index. They do not include fees, expenses or sales charges. **Past performance is not an indicator or a guarantee of future results.**

So, in fixed income, active investment historically has been the winning strategy. The question is what kind of active investment works best.

Quantitative Science—Actively Adding to Fixed Income Decisions

Advocates of the quantitative (or “quant”) approach argue that it beats traditional, fundamentals-based investing. They say their algorithms can identify rules-based factors that generate alpha² more effectively and reliably. Supporters of a more traditional active approach counter that experienced economists and credit analysts will always have the edge over algorithms that mine data without context.

I think the entire active versus quant debate is a false dichotomy.

At Franklin Templeton Fixed Income Group, we bring the two approaches together. We believe the future of fixed income investing lies in marrying quantitative science with fundamentals-based active management.

We have just released a [white paper](#) outlining how we do it, and why we believe it’s by far the best strategy for us.

Top-down fundamental analysis plays a crucial role in our approach (I am an economist, after all). Our process starts with the macroeconomic outlook our economists have built, articulated in a range of economic forecasts. The quant and data science teams then jump in and translate the economists' views into standardised macro variables that feed into a regression tree algorithm. This translates the macroeconomic outlook into sector views—making it easier to compare and debate sector views. In turn, this forms the basis for our proprietary sector allocation process.

Meanwhile, our factor models generate prioritised buy and sell recommendations within corporate credit, independently from the analysts. Then we compare the “best ideas” from factor models and credit analysts on an industry-by-industry basis. The process is especially useful when the fundamental views of our analysts diverge from the models' recommendations—that's when we learn the most. Through debate and reconciliation, we get to our highest-conviction investment views and positions.

Working together, our analysts and the models our quants generate challenge each other and seek to make each other better.

An example I love is how we developed our dynamic factor tilts: our data scientists have programmed a gradient-boosting algorithm to incorporate a series of macroeconomic variables that capture the credit cycle. The algorithm can predict the relative performance of different factors (in the value, quality and momentum categories) based on the evolution of the credit cycle indicators. It can then tilt the factor weights, giving more power to those factors that we think should perform best based on the evolution of the credit cycle.

Data science has brought us a powerful new set of tools to generate excess returns. But algorithms are not enough; algorithms cannot drive themselves in noisy financial and economic environments—they need the support of human reasoning and experience.

The future of fixed income has already arrived—it lies in successfully marrying quantitative science with fundamentals-based active management. Today that's what we at Franklin Templeton Fixed Income Group do. Our economists, analysts, data scientists and portfolio managers work together. They push and challenge each other, and create a virtuous loop between quantitative and fundamental analysis.

It's not easy—but this is the future.

What used to be a simple two-dimensional process (top-down and bottom-up) becomes a four-dimensional chess game as fundamentals and quants feed into each other. That's where we find the insights and the competitive edge to navigate an especially uncertain and challenging investment environment.

I hope you will be curious enough to read the paper, “[Quantitative Science—Actively Adding to Fixed Income Decisions](#)”, and learn more about our approach.

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[1.](#) A basis point is a unit of measurement. One basis point equals 0.01%.

[2.](#) Alpha is a risk-adjusted measure of the value that a portfolio manager adds to or subtracts from a fund's return.