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Performance Measurement Methods and the Pitfalls of Manager Universe Comparisons

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Over recent years, we have seen many advances in risk measurement techniques, as well as advances in investment strategies and investment offerings, but we have seen few notable advances in performance measurement techniques.

As far back as June 1995, the Association of Investment Management and Research (AIMR), now called the CFA Institute, hosted a conference in which Michael Flynn, Manager - Stratford Advisory Group and Jeffery V. Bailey, CFA, Managing Director – Richards & Tierney, discussed manager universes and peer group comparisons.

Michael Flynn presented the proper construction and use of universes and peer groups. He noted four reasons for the popularity of these metrics;

1. Universes and peer group comparisons provide *an actively managed benchmark alternative* to a passive index benchmark.
2. Clearly defined and effectively constructed universes and peer groups *can be used to measure almost any well understood investment style.*
3. *Portfolio-specific investment restrictions can be incorporated* into a well constructed universe and peer group.
4. Universe and peer group comparisons are conceptually *easy to explain and understand.*

Jeffery V. Bailey, CFA, discussed the shortcomings of manager universes and peer group comparisons. More specifically;

1. Universe and peer group comparisons have *conceptual shortcomings* compared to an appropriate benchmark index.
2. Universes and peer groups exhibit *survivorship bias*, which become more pronounced over longer time horizons.
3. Manager universes are *poor conveyors of a manager's style.*
4. Manager universes and peer groups *do not pass objective quality tests.*

Even though this conference presentation was in June 1995, the information presented is still relevant in today's world. We have seen advances in more sophisticated techniques, such as performance attribution modeling. We have not, however, seen additional research on improving the universe and peer group ranking methodology that is employed by consultants and investors.

All of Mr. Flynn's points above still hold. In fact, many universes (including Morningstar and Callan) employ more clearly defined groupings than they did 15 years ago. Theoretically, universes can employ portfolio-specific restrictions (such as sin-free restrictions or geographical restrictions), but in the fixed income marketplace, most of the universes are grouped by maturity/duration ranges (core bond, intermediate bond, short/low duration bond) or sector specifics (core plus, mortgage-backed securities, municipal bonds, emerging markets, high yield). For our purposes, the most relevant point that Mr. Flynn discussed is that universes and peer group rankings are easy to explain and understand. This point cannot be understated, especially when discussing complex markets such as fixed income. Until the market crisis in 2008/2009, we believe most investors didn't fully appreciate the nuances of fixed income investing.

Even with the recent market crisis behind us, we believe few fixed income investors truly understand the impact on performance of individual managers' stylistic differences. While universe rankings provide an easy to understand benchmark for evaluating a manager's performance, it is imperative to understand the composition of the universe from which the rankings are derived.

Most fixed income universes are categorized by index or duration target. For example, a "Core Bond" universe may include all managers/funds with an investment style meant to outperform the Barclays Aggregate Bond Index or the Barclays Government/Corporate Index. This certainly seems reasonable when evaluating a mutual fund that is named "ABC Core Bond Fund."

The problem comes in when ABC Core Bond Fund invests meaningfully in non-index investments such as derivatives, leveraged instruments, non-agency mortgage-backed securities, high yield securities (including loans), emerging markets (including currencies), etc. Clearly a fund that invests in these types of investments will exhibit a materially different risk profile than one that invests solely in high-grade, cash-only bonds, even though both may be benchmarked versus the Barclays Capital Aggregate Bond Index.

An example of the perils of categorizing bond funds merely by benchmark objective was seen in the recent market by investors in state-sponsored 529 plans in Illinois, New Mexico, Oregon, and Texas. All of these plans offered a well known bond fund as their "Core Fixed Income" option. After producing a steady stream of performance that was better than the "median manager," the fund's performance started weakening in 2007.

Historically, this fund emphasized mortgage-backed securities (including those non-index sectors previously cited) as a means for adding value. In 2008, the fund earned a -35.83% return. Clearly, this is not the performance expected by someone investing in a "Core Bond" fund. The fund has been party to numerous lawsuits as a result of this performance, and settlements have been agreed to in a number of these cases. This is a clear example that universes can be a poor conveyor of a manager's style, as Mr. Bailey presented in 1995.

Recent Market Performance Attribution

If we look at the last two calendar years (2008 and 2009), within any fixed income universe, we would see that those managers/funds that were the best performers in 2009 probably had a negative (and as we have seen, in some cases a double-digit negative) return in 2008.

If we look at the market performance in 2008, we would see that few fixed income managers earned returns in excess of the Barclays Capital Aggregate Bond Index, which earned +4.58%, a top-quartile return in most consultant universes. Those fixed income managers that performed well in 2008 were those that invested heavily in U.S. Treasuries, as Treasuries were the only major market sector to earn a positive return in 2008. Most of these managers probably emphasize duration strategy, rather than sector rotation or security selection, as a means to add alpha.

As in our previous example, the worst-performing fixed income managers in 2008 were those that invested heavily in non-agency mortgage backed securities, including commercial mortgage-backed securities (CMBS), securities backed by sub-prime mortgages, and asset-backed securities (ABS) backed by home equity loans. Of course, all three of these sectors were primary means for adding alpha versus the Barclays Aggregate Bond Index (which has/had limited exposure to any of these sectors) prior to the market collapse in September 2008.

In 2009, with the help of government intervention, the markets rebounded sharply, and higher yielding (even distressed) securities rebounded more so than higher quality, lower yielding securities. In fact, in 2009, the high yield and commercial mortgage-backed securities sectors both produced returns (58.2% and 28.5%, respectively) on par with common stocks! In both of these years, structured products markets (non-agency mortgages, CMBS, ABS) exhibited an extreme lack of liquidity, which resulted in massive price swings in many of the underlying securities.

During the housing market boom, structured products produced incremental yield for fixed income investors with what seemed to be little incremental risk. In hindsight, we now know that investors in these securities were assuming significantly more risk than they had modeled. The markets once again taught the lesson that in the absence of real bids, valuations are subjective at best and liquidity non-existent.

The Big Bond Bust

In October 2009, *Financial Analysts Journal* Executive Editor, Richard Ennis, CFA, wrote an editorial entitled, "the Big Bond Bust", in which he discussed the excessive risk taking allowed in recent years under the auspices of "core bond management." Mr. Ennis raises the point that the recent market reminded us that high quality fixed income investments remain the one and only true defense against loss in growth-oriented portfolios.

The point is that more aggressive strategies certainly have their place in a well diversified investment portfolio, but probably not as the "core fixed income" component, which should be constructed more to provide protection in a bear market than to add growth in a bull market.

Unfortunately for fixed income investors, merely selecting managers on the basis of top-quartile results or other peer group rankings can be misleading.

As most manager universes are constructed merely segmenting managers/funds by their target benchmark index and not other risk measurements, it is clear that a "Core Bond Universe" will likely include managers that emphasize non-index sectors, interest rate timing/duration management strategies, sector rotation, security selection, and every other fixed income management strategy.

Because of the broad range of strategies included in any universe, individual managers' rankings will exhibit more volatility than other measures of relative performance. We therefore believe that in order for an individual manager to consistently earn top-quartile results in any universe or peer group, they would have to have expertise not only in every fixed income discipline, but they would have to time their decisions appropriately too.

Winning Strategies

As an example, if we think about the last two calendar years, most managers that earned top-quartile returns in 2008 were heavily invested in U.S. Treasuries and also held a longer-than-market duration in the last quarter of the year. These same managers, holding an overweight in U.S. Treasuries and a longer-than-market duration, no doubt would have underperformed materially in 2009 as both decisions would have worked against their relative performance.

In order to maintain top-quartile performance in 2009, these same managers would have had to shift out of Treasuries and into corporates (investment grade and below investment grade), emerging market debt, and commercial mortgage-backed securities, while lowering the portfolio's overall duration. In addition, those decisions would have had to have been executed and in place by the end of the first quarter of 2009, in order to fully benefit from the market rebound.

While it may be possible for a bond manager to have the expertise to effectively manage all of these strategies, and it may be possible for that same bond manager to be prescient enough to properly time these decisions, we believe it is highly unlikely that a manager can do this effectively over multiple market cycles.

In fact, we believe that a manager that employed all of the possible strategies for fixed income management would quite likely have excessive portfolio turnover that would in itself degrade the manager's returns given the high cost of transacting in the over-the-counter fixed income market with bid/ask spreads ranging from a few basis points in high grade corporates to multiple points in sectors like high yield and emerging markets.

A quick perusal of the Morningstar database for "Intermediate-Term Bond" funds would confirm that most of the managers that produced top-quartile returns in 2009 also earned negative returns in 2008. Following is a table that shows a list of 33 bond funds in Morningstar's "U.S. Intermediate-Term Bond" category.

Morningstar Category: US Intermediate-Term Bond. Returns Through 12/31/09 (Ranked by YTD Total Return)

YTD Rank	Name	Total Return *Annualized (Net of Fees) 1 Mo	3 Mo	YTD	1 Yr	3 Yr*	5 Yr*	10 Yr*	15 Yr*	2008 Ret.	Net Assets	Exp. Ratio	Ticker	Avg Eff Dur	Avg Credit Qual	Credit Qual BBB%	Credit Qual BB%	Credit Qual B%	Morningstar Rating
1	Putnam Income A	0.59	4.78	44.68	44.68	6.63	5.26	5.91	6.11	-20.32	679,144,394	0.99	PINCX	5.48	AA	11.27	1.79	3.34	**
2	MFS Bond A	0.27	2.82	28.40	28.40	6.16	5.01	6.56	6.83	-9.98	750,170,143	0.89	MFBFX	5.22	BBB	46.53	15.51	3.92	**
3	Western Asset Core Bond FI	0.04	3.04	23.37	23.37	3.66	3.71	6.12	6.67	-11.12	1,203,528,492	0.72	WAPIX	4.23	AA	16.88	2.93	4.13	***
4	TCW Total Return Bond I	-1.85	1.03	19.88	19.88	8.91	7.05	7.72	8.04	1.09	4,055,897,331	0.44	TGLMX	2.90	A	2.20	2.70	10.50	*****
5	Dreyfus/Standish Fixed-Income I	-0.50	1.93	18.32	18.32	5.22	4.59	6.01	6.48	-5.01	245,714,976	0.50	SDFIX	4.11	AA	19.73	7.73	1.69	***
6	Neuberger Berman Core Bond Inst	-0.61	2.04	18.15	18.15	5.77	4.98	6.07		-3.97	77,552,529	0.45	NCRLX	4.32	AA	18.32	0.15	0.98	***
7	Bernstein Intermediate Duration	-0.53	1.58	17.29	17.29	5.71	4.82	5.58	6.11	-4.43	5,238,919,931	0.57	SNIDX	4.44	AA	19.92	2.70	2.31	***
8	BlackRock Total Return I	-0.69	1.53	16.31	16.31	2.66	2.46			-11.31	455,652,827	0.58	MAHQX	3.97	AA	6.50	9.00	0.00	**
9	Dodge & Cox Income	-0.10	1.76	16.05	16.05	6.60	5.40	6.81	7.20	-0.29	19,289,793,112	0.43	DODIX	3.87	AA	10.55	2.65	1.26	****
10	Fidelity Investment Grade Bond	-0.92	1.69	16.02	16.02	3.51	3.67	5.63	6.00	-7.12	6,228,391,182	0.46	FBNDX	4.10	AA	19.30	4.90	0.80	**
11	RiverSource Diversified Bond I	-1.27	1.00	15.36	15.36	4.54	4.40	5.12	6.16	-6.07	853,520,485	0.47	RDBIX	4.12	AA	16.39	4.08	1.34	***
12	American Funds Bond Fund of Amer A	-1.05	1.12	14.91	14.91	1.39	2.38	4.89	5.99	-12.33	27,836,365,472	0.63	ABNDX	4.19	AA	16.55	2.68	2.79	**
13	MStar Cat: Intermediate-Term Bond	-0.85	1.17	13.97	13.97	4.45	3.85	5.54	6.04	-4.70		0.95		4.37	AA	16.19	3.20	1.75	***
14	Harbor Bond Instl	-0.64	1.05	13.84	13.84	8.54	6.39	7.35	7.69	3.34	6,021,600,645	0.55	HABDX	4.64	AA	4.18	0.22	0.33	*****
15	PIMCO Total Return A	-0.90	0.88	13.33	13.33	8.68	6.35	7.15	7.48	4.32	23,822,669,597	0.90	PTTAX	4.79	AA	6.00	3.00	0.00	****
16	T. Rowe Price New Income	-0.90	0.97	12.31	12.31	6.59	5.34	6.35	6.40	1.41	9,640,770,184	0.67	PRCIX	4.27	AA	16.40	4.80	0.00	****
17	Morgan Stanley Inst Core Plus FI Instl	-0.97	1.25	11.62	11.62	-0.64	1.36	4.43	5.70	-16.42	841,842,059	0.49	MPFIX	6.70	AA	15.40	1.93	0.17	**
18	William Blair Bond Inst	-1.10	1.10	11.47	11.47					1.95	16,252,006	0.35	BBFIX	4.49	AA	12.40	2.30	2.60	
19	William Blair Bond I	-1.11	1.05	11.40	11.40					1.72	127,740,489	0.50	WBFIX	4.49	AA	12.40	2.30	2.60	
20	William Blair Bond N	-1.22	0.93	11.11	11.11					1.64	3,586,083	0.65	WBBNX	4.49	AA	14.40	2.30	2.60	
21	Baird Aggregate Bond Inst	-1.20	0.97	10.88	10.88	4.57	4.28			-2.36	1,363,305,891	0.30	BAGIX	4.43	AA	20.70	0.90	1.30	***
22	Payden Core Bond	-1.35	0.77	10.73	10.73	5.28	3.98	5.94	6.29	-0.17	511,169,907	0.60	PYCBX	4.50	AA	25.00	0.00	0.00	***
23	UBS US Bond A	-0.27	1.80	10.62	10.62	-1.24	0.42	3.67		-14.21	8,593,161	0.85	BNBDX	4.39	AA	8.97	0.04	0.17	*
24	SSgA Bond Market	-0.95	0.99	9.66	9.66	-0.29	0.97	4.05		-1.86	42,653,073	0.50	SSBMX	3.79	AA	12.84	0.11	0.00	*
25	JPMorgan Core Bond A	-0.96	0.76	9.52	9.52	6.69	5.18	6.40	7.17	3.79	2,938,878,239	0.75	PGBOX	3.44	AAA	4.54	0.48	0.22	***
26	Allegiant Bond I	-1.52	0.32	9.13	9.13	5.28	4.45	5.48	6.02	0.61	233,556,766	0.61	AIGIX	4.31	AA	11.40	0.30	0.00	***
27	Calamos Total Return Bond A	-1.32	0.33	8.17	8.17					5.85	98,033,359	0.83	CTRAX	4.30	AA	18.90	1.80	0.00	
28	DWS Core Fixed Income A	-1.49	0.20	7.32	7.32	-1.18	0.54	4.01	5.14	-14.34	295,741,955	0.80	SFXAX	3.91	AA	18.00	0.00	0.00	*
29	Oppenheimer Core Bond A	-0.46	2.08	7.29	7.29	-10.40	-5.05	0.67	2.73	-35.83	371,460,181	0.90	OPIGX	4.68	AA	8.53	4.39	2.57	*
30	Northern Fixed Income	-1.27	0.62	6.91	6.91	4.97	4.18	5.43	5.93	3.90	1,127,490,573	0.90	NOFIX	4.34	AA	16.24	0.00	0.03	***
31	Vanguard Total Bond Market Index Inst	-1.66	0.11	6.09	6.09	6.11	5.04	6.19	6.69	5.19	15,356,555,980	0.07	VBTIX	4.27	AAA	8.09	0.00	0.00	****
32	Index: BarCap US Agg Bond	-1.56	0.20	5.93	5.93	6.04	4.97	6.33	6.80	5.24				4.57	AA	8.15	0.00	0.00	
33	MEMBERS Bond A	-1.82	-0.35	2.68	2.68	4.30	3.73	4.86		5.36	43,773,631	0.90	MBOAX	4.00	AAA	5.12	0.88	0.00	**

Source: Morningstar, Barclays Capital Family of Indices, CMS BondEdge, William Blair Investment Management.
Past performance is no guarantee of future results. Morningstar Ratings™ are as of 12/31/2009 and are subject to change every month. The ratings are based on a risk-adjusted return measure that accounts for variation in a fund's monthly performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of funds in each category receive 5 stars, the next 22.5% receive 4 stars, the middle 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The overall Morningstar Rating for a fund is derived from a weighted average of the performance figures associated with it three, five, and ten year (if applicable) Morningstar Rating metrics.

In the box, we note 2009 (labeled "YTD") return. In the middle column, we also show the 2008 calendar year return. We can clearly see that of the top 15 performers in 2009, 12 of the 15 bond funds earned negative returns in 2008. We also see that the top-performing bond fund in 2009 earned a -20.32% return in 2008. We believe this is not the type of performance that most investors expect when they consider their "core fixed income" investments. The effect of this volatility on a universe and peer group ranking is that in any given year, the rankings are biased upward by funds taking higher levels of risk.

Survivor Bias

In addition to this inherent volatility of peer group rankings, Mr. Bailey and others have pointed out that survivor biases exist in any universe because underperforming managers close shop or have their funds absorbed into better performing funds, so only the surviving managers/funds are included in the universe data for any given time period. This results in an upward bias in the universe peer group rankings.

Using the Morningstar database, we calculated the cumulative, annual returns for the median manager for the Intermediate-Bond Category by arithmetically linking (and then annualizing) the annual returns. The linked median manager return for the three-year and five-year periods was 4.59% and 3.90%, respectively. These results are each more than 30 basis points lower than the median manager return reported by Morningstar for each of these periods ended December 31, 2009, which was 4.93% and 4.26%, respectively. The difference between the two can be attributed to the difference in the universe constituents from year to year.

In order to confirm this thesis, we looked at all of the constituents in the Morningstar database. As of year-end 2009, there were 1,128 individual share classes (any one fund may include multiple share classes). This total number is roughly consistent with 2007, when there were 1,155 share classes in the same category. When we look at the individual years, however, we see that the number of funds that dropped out (either because of liquidation or being acquired) were meaningful with 82 share classes eliminated in 2008 and 92 in 2009. If we also remove the number of new share classes launched, which numbers 128 in 2008 and 100 in 2009, we see that only 73.8% of the original constituents in 2007 still existed at the end of 2009.

Clearly, high turnover exists among the constituents in any universe, and we believe this turnover results in an upward bias of periodic returns for the universe. In the case of the Intermediate Bond category, a 30+ basis point annual difference is a meaningful impact to a core bond manager's total return.

Conclusion

Over the last three years, the bond market has given us a remarkable period in which to evaluate individual managers and the merits of various strategies. The market volatility that started in 2007 gave way to one of the biggest market crises since the Great Depression. This unprecedented volatility allows for investment advisors and consultants to better understand and quantify fixed income portfolio risks.

Given the pitfalls of using universes and peer group rankings, investment advisors would be wise to incorporate other metrics when evaluating fixed income managers, and in so doing we believe their clients will be better served by having a stronger understanding of the risks they are assuming in their portfolios.