

ESG in Fixed Income: Enhancing Risk Management

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In my first article on ESG and fixed income, we defined ESG, explored [why ESG is increasingly popular among fixed income investors](#), and built a case for its potential growth. Last week, we dove further into [the possibility of ESG's outperformance](#) using a variety of corporate benchmarks to evaluate the implications around the globe.

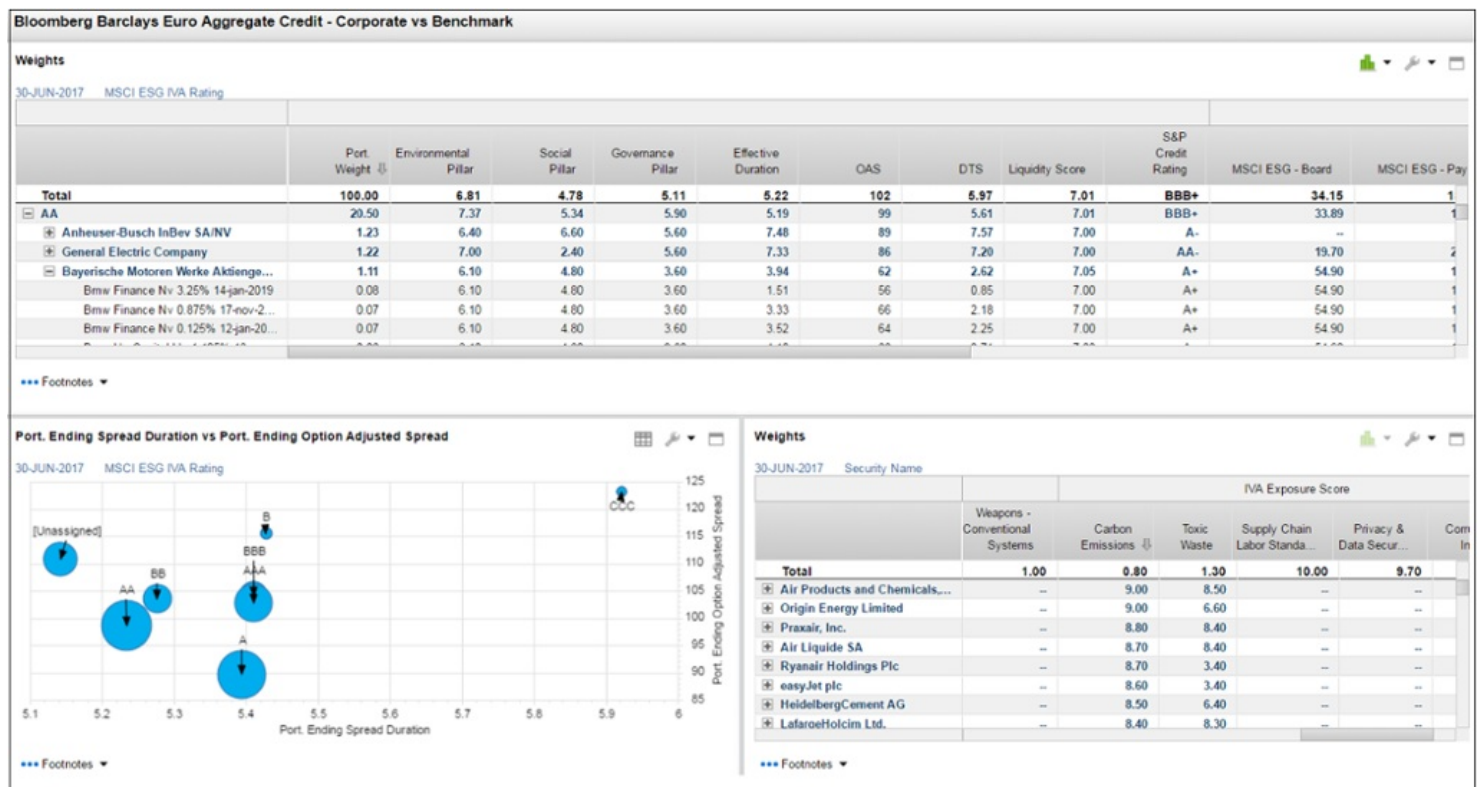
Now that we understand the growth prospects and potential performance impact of incorporating environmental, social, and governance data into the fixed income investment process, we should seek to understand how to use this content. For example, does implementation leverage your existing process, or does it create an additional data burden?

From my perspective, this is a low-risk, high-reward activity. A firm should be able to maintain the same fundamental analysis, review of debt structure, tracking of new issuance, and feedback loop while overlaying the dataset.

Let's explore ex-post and ex-ante use cases.

Ex-Post Uses for ESG

ESG dashboards, pillar detail reports, and visualization are natural uses of ESG content. A dashboard view that incorporates point-in-time analytics, ESG summary statistics, and visuals helps to tell the combined quantitative and qualitative story of a portfolio or issuer and can enhance the conversation with clients as well as engagement teams.



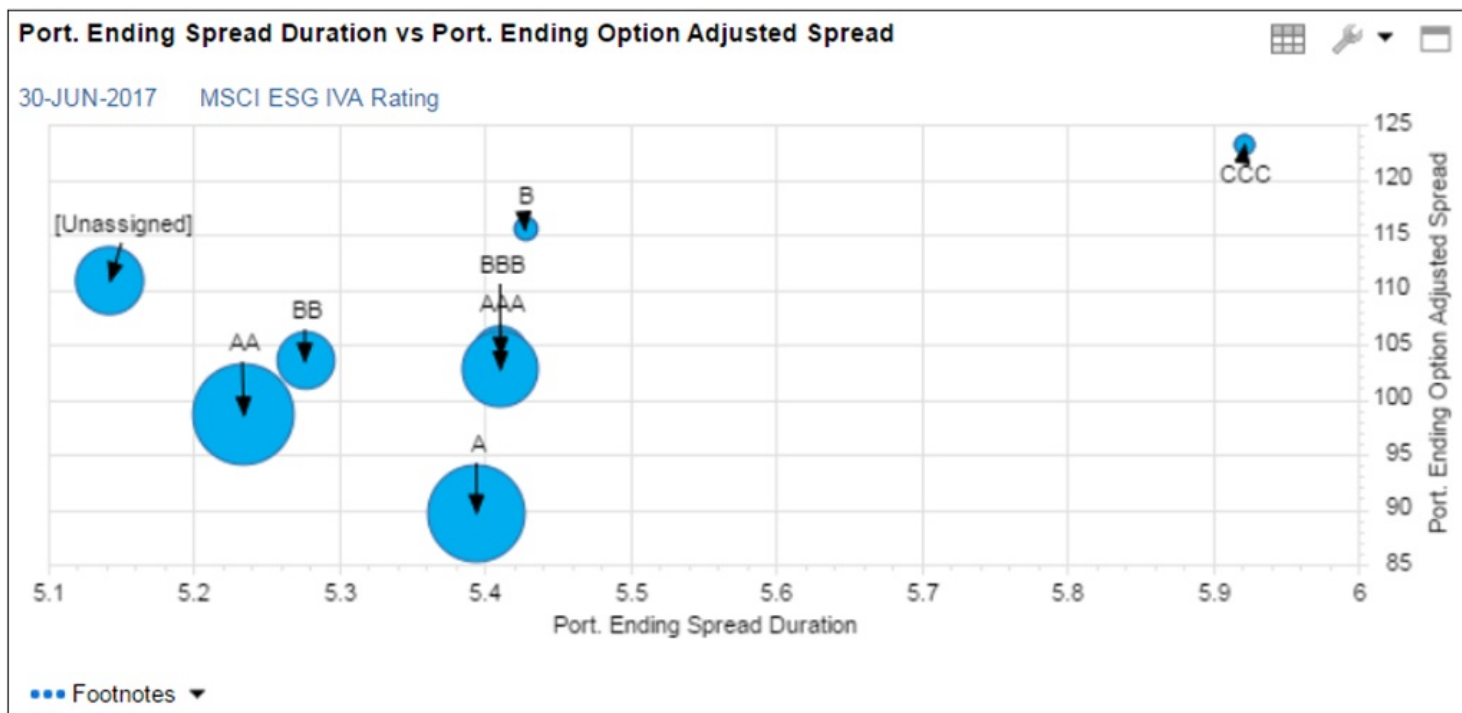
Going beyond this summary view, it is possible to utilize the available detail for a look into how a company self-reports and how its involvement and measurement compares against other issuers in a given sector or industry. A great example is a deep dive on the governance pillar.

There are over 90 governance factors across Board, Pay, Ownership and Control, and Accounting activities in the

MSCI GMI database. This type of view acts as a tool for your regular due diligence and enhances your process by highlighting potential issues or areas of concern that may not have been obvious across issuers. You can then use this information to enhance conversations with firm management, pricing or covenant negotiations, or pure due diligence. The environmental and social pillars are the building blocks of values-based mandates.

Bloomberg Barclays US Aggregate Credit - Corporate - Investment Grade & High Yield vs Benchmark									
Weights									
30-JUN-2017 Security Name									
	Port. Weight	ESG Accounting Investigations ↓	Asset-Liability Valuation	Expense Recognition	Internal Controls	Late Filings	Qualified Auditor Opinion	Restatements	
Total	100.00	--	--	--	--	--	--	--	
⊗ Alibaba Group Holding Ltd.	0.09	1.00	1.00	1.00	--	--	--	1.00	
⊗ Allergan plc	0.30	1.00	1.00	1.00	1.00	--	--	1.00	
⊗ BT Group plc	0.07	1.00	1.00	--	--	--	--	1.00	
⊗ Bankrate, Inc.	0.00	1.00	--	--	1.00	1.00	--	--	
⊗ Boeing Company	0.11	1.00	--	--	--	--	--	1.00	
⊗ CBL & Associates Properties,...	0.02	1.00	1.00	--	--	--	--	--	
⊗ Commerzbank AG	0.02	1.00	--	--	--	--	--	--	
⊗ Diageo plc	0.08	1.00	--	--	--	--	--	--	
⊗ Ocwen Financial Corporation	0.00	1.00	--	--	1.00	--	--	1.00	
⊗ Orbital ATK, Inc.	0.01	1.00	--	--	1.00	1.00	--	1.00	
⊗ RPM International Inc.	0.02	1.00	--	--	--	--	--	--	
⊗ Valeant Pharmaceuticals Inter...	0.26	1.00	1.00	1.00	--	1.00	--	1.00	
⊗ 212F Holdings LLC	0.00	--	--	--	--	--	--	--	
⊗ 24 Hour Fitness Worldwide, L...	0.01	--	--	--	--	--	--	--	
⊗ 3G Capital Partners LP	0.07	--	--	--	--	--	--	--	
⊗ 3M Company	0.08	--	--	--	--	--	--	--	
⊗ A. Schulman, Inc.	0.01	--	1.00	--	1.00	--	1.00	--	
⊗ AB Acquisition LLC	0.03	--	--	--	--	--	--	--	

Visualization also helps you see your portfolio or universe in new ways. The bubble chart below compares the spread duration and OAS for the MSCI Intangible Value Assessment (IVA) rating buckets for the Bloomberg Barclays Euro Credit Aggregate universe. The size of the bubble is indicative of the weight in the index universe.



I referenced a similar chart last week [breaking down the U.S. benchmark performance](#). How do we interpret this?

First, notice that higher-rated IVA issuers trade at tighter spreads than lower-rated issuers; the IVA rating should be independent of credit worthiness, it is not credit rating, yet it appears to behave very similarly. Next, notice the clustering around ~5.5 years for spread duration. Is the clustering a function of benchmark construction, or is something else at play? From here we could also look at other relative value measures (credit rating, DTS, OAS relative to sector/rating, fundamental analysis, etc.). These tools are designed to enhance opportunity recognition and risk mitigation.

Ex-Ante Uses for ESG

Switching focus to ex-ante use cases, the three scenarios we want to address are portfolio construction, early identification of a credit event (e.g., downgrade, default), and downside risk capture (e.g., VaR, ETL, stress tests).

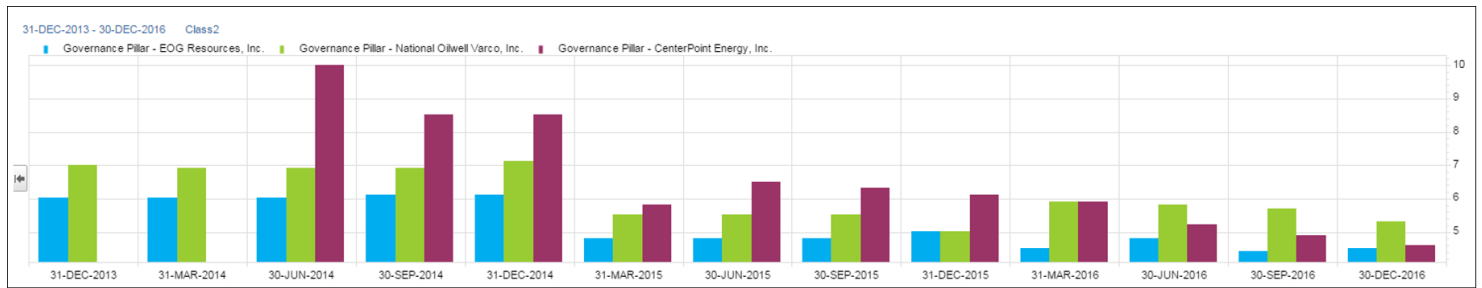
In terms of portfolio construction, we need to first identify our mandate. Are we benchmark-aware/relative or absolute? Are we pursuing values-based investing (e.g., no alcohol production or gambling) or looking to maintain caps on specific themes for inclusion (e.g., percent of revenue from coal production)? This is key because it determines how we construct our investable universe via a positive or a negative screen. A negative screen is more restrictive as it eliminates issuers and securities based on participation in an activity. We want flexibility in screening to adapt across mandates.

We also want to identify security types across the capital structure for inclusion; detailed entity data mapping is a prerequisite. If we are benchmark-aware, we also need to source single security analytics, and be able to solve for a portfolio that aligns with the benchmark around key indicatives like effective duration, OAS, years to maturity, and average credit rating. While ESG would seem to be active management, this aligns with passive approaches, at least quantitatively.

Finally, we need to automate this entire process in order to achieve some semblance of scale and repeatability.



Using time series analysis with the governance pillar, it is easy to identify deterioration across issuers. The below example uses a quarterly frequency over the past three years and compares EOG (blue), National Oilwell Varco (green), and Centerpoint Energy (purple). Let's focus on National Oilwell Varco as our example.



Notice how the governance pillar starts to deteriorate in Q1 2015, dropping throughout the rest of the year? The issuer actually experienced a two-notch downgrade in March 2016, another notch downgrade in November 2016, and remains on negative outlook.

Rating Type	Rating Date	Rating	Action	Watch	Outlook
Local Currency LT	02 Nov '16	BBB+	Downgrade	-	Negative
Foreign Currency LT	02 Nov '16	BBB+	Downgrade	-	Negative
Local Currency LT	10 Mar '16	A-	Downgrade	-	Stable
Foreign Currency LT	10 Mar '16	A-	Downgrade	-	Stable
Local Currency LT	12 Dec '13	A+	Upgrade	-	Stable
Foreign Currency LT	12 Dec '13	A+	Upgrade	-	Stable
Local Currency LT	26 Nov '13	A	-	Positive	-
Foreign Currency LT	26 Nov '13	A	-	Positive	-
Local Currency LT	25 Apr '12	A	Upgrade	-	Stable
Foreign Currency LT	25 Apr '12	A	Upgrade	-	Stable

Source: S&P

We could drill down into the four underlying pillars (Board, Pay, Ownership and Control, and Accounting) to identify specific drivers of this deterioration. In terms of ease of use and automation, this type of approach is a meaningful addition to a credit review process and is sector-agnostic.

The other area we want to address is downside risk capture. Here I used FactSet's [multi-asset class model](#) to calculate a series of one week, 95% confidence interval figures. While the portfolio-level value at risk (VaR) and expected tail loss (ETL) numbers are interesting, the Standalone VaR figures were more telling. Standalone VaR views each rating tier, issuer, and security in isolation – at the most granular, it is true security level downside risk.

JP Morgan JACI Corporates vs Benchmark

Risk Asset Detail

30-JUN-2017 MSCI ESG IVA Rating

	Port. Weight	5 Day, 95% CI VaR	5 Day, 95% CI ETL	5 Day, 95% ... Marginal VaR	5 Day, 95% CI Standalone VaR
Total	100.00	0.57	0.75	--	0.57
+ BBB	10.28	0.05	0.06	0.00	0.57
+ A	3.97	0.02	0.02	0.00	0.60
+ AA	2.55	0.01	0.01	0.00	0.61
+ [Unassigned]	52.76	0.32	0.42	0.01	0.65
+ B	15.63	0.09	0.12	0.01	0.69
- BB	10.79	0.06	0.08	0.01	0.74
+ Transport	0.06	0.00	0.00	0.00	0.38
+ Utilities	0.06	0.00	0.00	0.00	0.53
+ Oil & Gas	0.07	0.00	0.00	0.00	0.71
+ Real Estate	0.61	0.00	0.00	0.01	0.86
+ Financial	6.23	0.04	0.05	0.01	0.93
- Diversified	3.01	0.02	0.02	0.01	0.94
Ck Hutchison Internationa...	0.21	0.00	0.00	0.00	0.06
Ck Hutchison Internationa...	0.17	0.00	0.00	0.00	0.09
Cheung Kong Bond Secur...	0.09	0.00	0.00	0.00	0.35
Ck Hutchison Capital Sec...	0.21	0.00	0.00	0.00	0.53
Hutchison Whampoa Inter...	0.34	0.00	0.00	0.00	0.92
Hutchison Whampoa Inter...	0.22	0.00	0.00	0.00	1.01
Ck Hutchison Internationa...	0.15	0.00	0.00	0.01	1.05
Sm Investments Corporat...	0.11	0.00	0.00	0.00	1.11

Similar to the bubble chart, the Standalone VaR moves almost in lock step with the IVA ratings, even though they are not a measure of credit worthiness. The exception here (using the JP Morgan JACI Corporates index) is that the uncovered assets are actually less risky on a standalone basis than the lower-tier covered assets. More research is required here, but it is an interesting takeaway. We could also apply other analytics, incorporate issuer fundamentals, or ESG pillars to further that analysis.

In conclusion, it is early days, but there appears to be an upshot to asset gathering, potential for outperformance, and improved risk management by incorporating ESG into the fixed income space. How a firm pulls this together is the clearest indicator of how the sausage is made. Content; entity data mapping across issues, issuers, and ultimate parents; tools for portfolio construction; and flexible reporting mechanisms are a pre-requisite to avoiding a heavy manual lift and benefiting from the value-add this evolving content set can lead to.



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