December 2021

A sustainable government bond index using ESG tilts

For professional clients only

"A universal owner will view the goals [of sustainable growth and well-functioning financial markets] holistically and seek ways to reduce externalities that produce economy-wide efficiency losses"

– Roger Urwin, Thinking Ahead Institute, 2011

DWS

About the client

Profile

The client, DWS Group, is one of the world's largest asset managers, with €859bn under management (as of June 2021), across a range of active, passive and alternative funds.

Objectives

To reflect sovereigns' environmental, social and governance (ESG) performance in a government bond index, designed for use in an index-tracking ETF.

Solution

The FTSE ESG Select WGBI-DM index incorporates tilts towards the best ESG performers, while excluding 'unfree' countries and countries with the lowest 10% of ESG scores.

DWS: Client profile

DWS Group (DWS) is one of the world's leading asset managers with EUR 859bn of assets under management (as of 30 June 2021). Building on more than 60 years of experience, it has a reputation for excellence in Germany, Europe, the Americas and Asia. DWS is recognized by clients globally as a trusted source for integrated investment solutions, stability and innovation across a full spectrum of investment disciplines.

Objective: ESG integration in government bonds

Over the past decade, Environmental, Social and Governance (ESG) considerations have become part of mainstream fixed income investing. While ESG corporate bond solutions are widely established, and benefit from the transferability of ESG mechanics popular within equity investing, such as business activity and controversies screens, systematic ESG integration continues to be rarely applied to sovereign debt analysis.

To date, investors remain accustomed to utilizing credit ratings to assess and compare financial risks and returns. However, given longer investment horizons and a higher degree of risk aversion, ESG integration may be particularly worthwhile, especially since traditional credit rating models continue to draw an incomplete picture of ESG risks. In fact, primarily Governance aspects appear to be captured by traditional rating assessments (Figure 1). Social and Environmental scores, however, are mostly uncorrelated to credit ratings. The information content of ESG metrics to sovereign investors is therefore considerable.

Figure 1. Similarity of ESG ratings and traditional credit ratings

Correlation between E,S & G-Pillar and Credit Rating	
Governance	0.75
Social	0.58
Environmental	0.09

G-scores show high association with credit ratings → **G is reflected in Credit Rating**

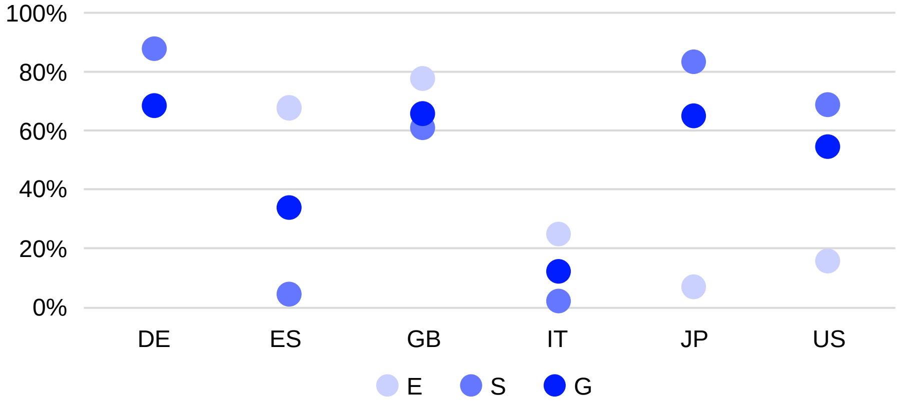
E-scores show no association with credit ratings → **E is less reflected in Credit Ratings**

Source: DWS International GmbH calculations, as of June 2021. The analysis determines the correlation between the credit rating (numerically transformed) and the relative percentile E, S, G score (ranging from 0-100).

Such content is of growing relevance to investors, with the emergence of climate risks, governance issues and social unrest, that can have a direct financial impact on a government's finances, or on the value of its currencies. Given that government bonds make up the lion's share of traditional fixed income indices (approx. 50% weight in the FTSE WorldBIG or Bloomberg Global Aggregate), they also present a significant lever for investors to accelerate the move into sustainable fixed income investments.

Nevertheless, as any ESG approach, ESG integration in sovereigns must face market realities. Most institutional asset owners continue to pursue strategies in which the allocations of their sovereign bond portfolios are based on market capitalization-oriented benchmark weights. Tracking error versus such indices, hence, becomes an important focal point. Furthermore, investor consensus on exact ethical principles, other than core democratic values and freedoms, is limited. The combination of these factors naturally makes highly exclusive approaches currently impractical.

Figure 2: Relative E, S and G scores for major countries



Source: DWS International GmbH calculations, as of November 2021. Relative score refers to percentile distribution of score compared to WGBI Universe.

However, investors should not be under the impression that these realities limit their scope of action. Even in the developed market context, dispersion in E, S and G performance is substantial (figure 2). Relying on separate E, S and G scores (rather than an averaged-out ESG score) offers a transparent route to drive significant ESG improvement. At the same time, penalizing E, S and G underperforming sovereigns must not detract from other investor motives, most notably diversification and representativeness, often translating into limited tracking error.

Solution: the FTSE ESG Select WGBI-DM index

Building on the principles of the FTSE ESG WGBI Index, DWS engaged with FTSE Russell to design a version of its flagship FTSE World Government Bond index, aimed at significantly improving the ESG component, while maintaining the diversification and representation investors value in traditional sovereign benchmarks. The index achieves this by introducing the following:

– **Use of an established and comprehensive sustainability risk analysis framework.** ESG in government bonds – a multi-facetted and diverse set of indicators – is essential for comprehensive ESG assessments. The index uses the full LSEG Sovereign Sustainability Solutions profile that has 40+ indicators.
– **Optimal ESG uplift using stronger ESG geometric tilts.** Although when combined, ESG scores of most developed market (DM) countries appear homogeneous, performance of countries across E, S and G pillars varies substantially. Single pillar E, S and G discrepancies provide relevant insights. Using higher-than-standard geometric tilts, the index methodology magnifies differences and highlights laggards across E, S and/or G pillars.
– **The right balance of active share compared to traditional indices.** ESG investing is about making a difference, and this necessarily translates into active share. In developed markets sovereigns, high levels of active share do not preclude limited tracking error versus non-ESG benchmarks.
– **Exclusion of countries lagging in democratic principles and most severe ESG underperformers.** Using data from the NGO Freedom House, which provides the most widely established report on issues such as electoral process, political pluralism, functioning of government, freedom of expression and rule of law, the index excludes countries not classified as “Free”. This reflects consensus investors’ expectations towards ESG controversies in DM and provides an essential backstop when political landscape is changing. The index also excludes DM countries that very severely underperform (1st decile) when benchmarked against a broad, global country universe.

Indexing outcomes

The FTSE ESG Select WGBI-DM index uses the benchmark FTSE World Government Bond index (WGBI) as its starting point. A country's weight within the ESG Select WGBI-DM is calculated as the product of its individual environmental, social and governance scores (together, these produce an ESG tilting factor for that country). This allows to accurately reflect and magnify relative differences in E, S and G scores across WGBI countries and promotes a significant level of active share.

The ESG tilting approach leads to notable changes in index weights: as the figure below suggests, a 15-percentage point reduction in the US' weight and a 13-percentage point absolute increase in that of Germany. In aggregate, the FTSE ESG Select WGBI-DM has historically shown active shares ranging between 30–35%, compared to the non-ESG index.

Figure 3: Applying an ESG tilting approach

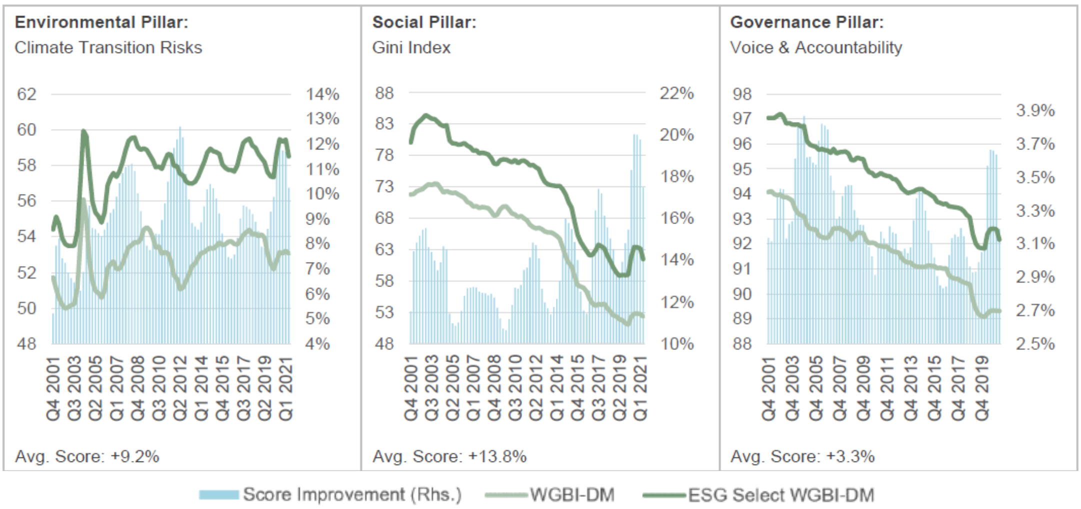
	Germany	United States
Environmental Score	66	53
Social Score	82	76
Governance Score	94	91
ESG tilting factor	*0.41*	*0.06*
WGBI-DM Weight	**6%**	**40%**
ESG Select WGBI-DM Weight	**16%**	**29%**

Source: FTSE, DWS International GmbH calculations, as of October 2021.

Performance outcomes: Financial and non-financial

Active share is the foundation of any ESG improvement. Using its increased tilt-strength (multiplying E,S and G scores successively, instead of their square root), the index achieves tangible improvements along E, S and G dimensions, when compared to the starting universe.

Figure 4: ESG improvements across selected sub-indicators



Source: FTSE, DWS International GmbH calculations, as of November 2021.

ESG-improvements, however, remain balanced with tracking error. Using more than 20 years' history of the LSEG Sovereign Sustainability Solutions, the index has shown a moderate ex-post annual tracking error of approximately 100bps on a USD hedged basis.

Figure 5: Performance comparison of FTSE ESG Select WGBI-DM versus FTSE WGBI-DM

	USD performance			EUR-hedged performance		
	WGBI DM	WGBI DM ESG	Differ-ence	WGBI DM	WGBI DM ESG	Differ-ence
Annualized Return	4.38%	5.25%	0.87%	3.50%	3.80%	0.30%
Volatility	6.42%	7.51%	1.09%	3.06%	3.69%	0.63%
Max. Drawdown	-10.16%	-13.46%		-5.52%	-4.87%	
Tracking Error		2.44%			1.09%	
Credit Rating	AA+/AA	AAA/AA+		AA+/AA	AAA/AA+	
Rolling performance						
10/20–10/21	*-3.02%*	*-2,79%*		*-2.96%*	*-3.90%*	
10/19–10/20	*3.19%*	*6.66%*		*1.69%*	*3.38%*	
10/18–10/19	*8.04%*	*8.20%*		*11.54%*	*7.36%*	
10/17–10/18	*-2.04%*	*-1.97%*		*0.64%*	*-0.72%*	
10/16–10/17	*-1.46%*	*2.86%*		*-5.74%*	*-1.41%*	

Source: FTSE, DWS International GmbH calculations, 31/12/2001 to 29/10/2021.

A truly differentiated sovereign bond index

By combining the comprehensive sovereign sustainability risk framework of LSEG Sovereign Sustainability Solutions with FTSE Russell's factor tilting methodology, the FTSE ESG Select WGBI-DM suggests a comprehensive ESG approach to global government bonds. It rewards countries with high environmental, social and governance performance, while underweighting poorer performing sovereigns and excluding those at the bottom of the sustainability scale, including countries perceived as only partially democratic.

Additional information

Click here to find out more about FTSE Russell's ESG government bond index series

Further information on our range of products and services is available at lseg.com/ftse-russell

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For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

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