

Liquid Insight

A new look at EGB spread categories

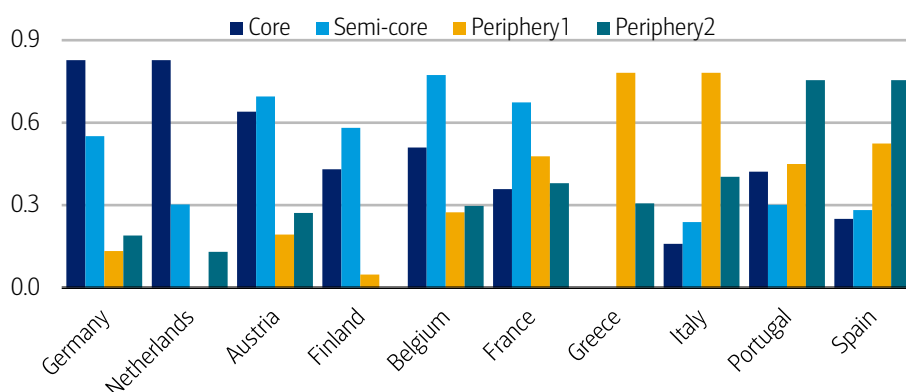
Key takeaways

- Does the current mix of macroeconomic data support a change in the compositions of the core/semi-core/periphery categories?
- The Netherlands is "more core" than Germany, Belgium "more semi-core" than France. Portugal may migrate vs Spain
- 2025 projections support the current general spread tightening trend. France and Austria may decorrelate

By Erjon Satko

Chart of the day: K-means "likeness" of EGB issuers to each cluster type

The Netherlands is "more core" than Germany, Belgium "more semi-core" than France...



Source: ECB, national statistical agencies. The values represent the opposite of the cluster distance, rebased to the 0-1 interval for each issuer. Therefore a higher value indicates a more ressemblant economy to that of the cluster it compares to.

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More nuance to core/semi-core/periphery framework

We note that an abstract look at the set of macroeconomic variables that matter for credit worthiness largely matches the market heuristic of bucketing them in core, semi-core and periphery (split in two versions).

The exercise shows that Austria, Finland and to a certain extent France, while labelled as semi-core, are relatively unstable. France is seen becoming more of a "special case" but transitioning towards core in relative terms (reforms permitting).

Within periphery, the framework sees Portugal more similar to core/semi-core vs Spain agreeing with richer PGBs.

Looking at 2025, we note that this exercise would support the current spread compression trend and France/Austria decorrelating to the rest of the EGB block.

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An abstract look at the core, semi-core, periphery bond baskets

Since the Covid crisis in particular, the core/semi-core/periphery categorization of sovereign debt seems, to some, to have lost some of its relevance. The jump in “core” deficits first and the deceleration in relative growth gives support to these narratives.

In the periphery, issuers such as Portugal have seen aggressive upgrades to credit ratings towards the A bucket and with a positive outlook. The semi-core block on the other hand is seeing drops in credit ratings, and the outlook is mostly negative.

The increase in investor risk propensity across the board in the context of monetary policy’s soft landing is one reason why credit spreads are tightening aggressively more recently but can this also have a macro backing?

In the charts below we ask the K-means algorithm to find the three/four macroeconomic sets that best explain the differences between member states in the Euro Area.

What we like from this exercise is the fact that inputs are completely independent from market variables and therefore it can be useful to identify brittle market heuristics.

In order to do this, we select the main macroeconomic indicators that agencies look at in order to derive credit ratings – these are listed in Exhibit 1 along with their typical standardized values (0-1 intervals) for each category of sovereign issuer. We decide to exclude Ireland from this exercise given the high volatility of certain macro variables.

The distance of each country’s set of macroeconomic variables relative to a given category is then a proxy of “likeness”. The lower the distance, the more resemblant that country’s macro is to the typical composition of either core, semi-core or the periphery.

With some nuance, the algorithm provides results that are consistent with how the market typically thinks of sovereign debt in the Euro Area: Germany and the Netherlands are stable within the core category, France and Belgium in the semi-core one.

For the model to fit the data consistently, we need to define two categories for the periphery – the first one (Greece and Italy typically belong here) has lower trend growth and higher public sector gearing relative to the second (Portugal and Spain).

Exhibit 1: Standardized value of each cluster-macro combination

The table allows to see what drives differences between clusters

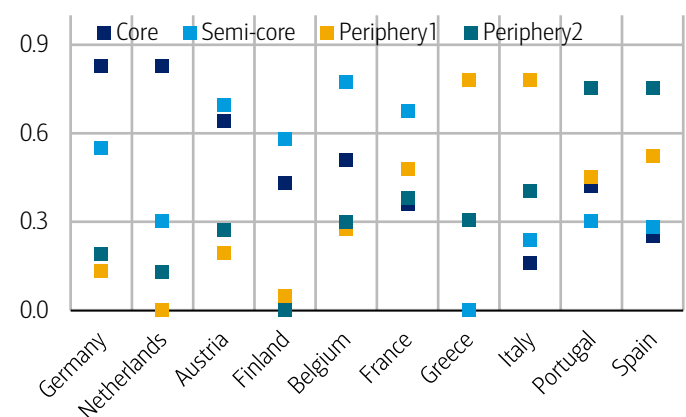
	Core	Semi-Core	Periph1	Periph2
R&D expenditure, % GDP	0.66	0.77	0.04	0.12
Debt/Revenue	0.06	0.28	0.90	0.64
Public Debt Growth	0.13	0.76	0.24	0.45
Public Expenditure, % GDP	0.13	0.79	0.70	0.15
Interest/Revenue	0.75	0.48	0.05	0.11
Potential GDP growth, %	0.74	0.46	0.05	0.78
Proj. Nominal GDP growth, %	0.33	0.40	0.53	0.41
Nominal GDP Per Capita	0.90	0.77	0.19	0.18
Public Debt % of GDP	0.08	0.46	0.97	0.54
Unemployment	0.04	0.39	0.68	0.70
Corruption Perceptions	0.11	0.22	0.85	0.58
Governance Quality	0.75	0.73	0.00	0.39

Source: ECB, national statistical agencies. Each value is standardized in the 0-1 interval in order to provide equal weight contribution when calculating countries’ distances to each cluster and therefore assign labelling.

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Exhibit 2: “Likeness” of EGB issuers w.r.t. core/semi-core/periphery

A higher (lower) value in this chart indicates the issuer is more (less) similar to a cluster’s typical macroeconomic composition



Source: ECB, national statistical agencies. The values represent the opposite of the cluster distance, rebased to the 0-1 interval for each issuer

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Adding nuance to markets’ heuristics on EGBs

Exhibit 2 shows a score of member states’ similarity to each credit worthiness category: for example, **Germany** and **the Netherlands** have a high value in the “core” category, meaning that these two countries can be considered as core according to this

framework. That said, Germany is also much closer to the semi-core category relative to the Netherlands – the interpretation of this is that the Netherlands is a better, more robust/resilient, version of core than Germany.

If we were to include **Ireland** in this exercise, we would notice that it would form a special type of core, closer to the Netherlands than Germany.

Austria and **Finland** are seen as hybrids in this framework, with distances with respect to the core and semi-core cluster relatively close to each other. That said, with 2024 data, this exercise labels them as semi-core – Finland more so than Austria.

France and **Belgium** are resiliently labelled as semi-core, albeit the first displays both more similarities to core as well as to Italy (essentially “Periphery1”) standing out therefore as a special case.

Thinking of the periphery as a single cluster does not allow clusters to align in an economically sensible way. It is very likely the case that, now, the periphery category needs to splinter into the version grouping **Italy** and **Greece** together vs the other doing the same with **Spain** and **Portugal**. The difference between the two is mainly driven by long-term potential growth (proxied by GDP growth over the last couple of decades), the size of public debt as well as public sector gearing – the first kind shows deteriorated macro variables in this respect.

This framework supports the market’s assessment of Portuguese debt vs Spanish debt (with the first one scoring closer to core). The Greek case is strongly influenced by trailing data, especially for what concerns the assumption around growth (because of the impact the debt restructuring had on it) and therefore, in the future, is more likely to transition towards the Portuguese version of the periphery, reforms allowing.

Sneak peak into 2025

This exercise allows to project such scores into the future on the basis of the variables’ projections, which in our case are in line with European Commission’s (when available).

Keep in mind that we do not have official projections for many of the macro variables included so depending on the data flow, this picture may change.

Exhibit 3: Change in the distance in 2025 vs 2024

A negative number indicates a reduction in distance to the cluster (more likeness)

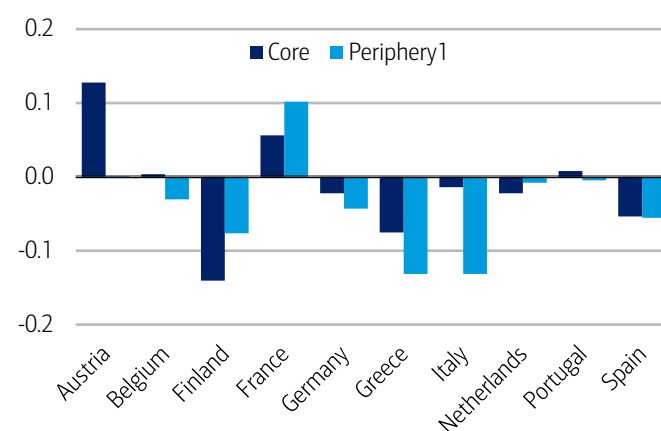
25 vs 24	Core	Semi-core	Periphery1	Periphery2
Austria	0.13	0.13	0.00	0.11
Belgium	0.00	0.00	-0.03	-0.01
Finland	-0.14	-0.14	-0.08	-0.12
France	0.06	0.12	0.10	0.09
Germany	-0.02	-0.01	-0.04	-0.03
Greece	-0.08	-0.08	-0.13	-0.06
Italy	-0.01	-0.02	-0.13	-0.07
Netherlands	-0.02	-0.01	-0.01	-0.01
Portugal	0.01	0.04	0.00	-0.04
Spain	-0.05	-0.07	-0.06	-0.04

Source: ECB, national statistical agencies

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Exhibit 4: Change in the distance in 2025 vs 2024 – core/periphery1

A negative number indicates a reduction in distance to the cluster (more likeness)



Source: ECB, national statistical agencies

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Exhibit 3 shows a general convergence of scores to one another with Finland, Spain and Greece showing the strongest moves. Finland in particular shows the biggest

convergence to the “Core” cluster, followed by Greece. Notably, Spain also converges to core relatively to Portugal in the 2025 projections.

On the other hand, at the moment, Austria and France display deviations from most clusters in 2025 marking them as “special cases”. That said, relative to other clusters, France’s distance to the core one is smaller. The same is true for Austria relative to the “Periphery1” one.

Exhibit 5: Common acronyms/abbreviations used in our reports

This list is subject to change

Acronym/Abbreviation	Definition	Acronym/Abbreviation	Definition
1H	First Half	IT	Italy
2H	Second Half	Jan	January
1Q	First Quarter	Jul	July
2Q	Second Quarter	Jun	June
3Q	Third Quarter	lhs	left-hand side
4Q	Fourth Quarter	m	month
ann	annualized	MA	Moving Average
APP	Asset Purchase Programme	Mar	March
Apr	April	MBM	Meeting-by-meeting
AS	Austria	mom	month-on-month
Aug	August	Mon	Monday
BdF	Banque de France (Bank of France)	MPC	Monetary Policy Committee
BE	Belgium	MWh	Megawatt-hour
BEA	Bureau of Economic Analysis	NGEU	NextGenerationEU
BLS	Bank Lending Survey	NE	Netherlands
BoE	Bank of England	Nov	November
BofA	Bank of America	NRRP	National Recovery and Resilience Plan
BoI	Banca d'Italia (Bank of Italy)	NSA	Non-seasonally Adjusted
BoJ	Bank of Japan	OAT	Obligations assimilables du Trésor
BoS	Banco de España (Bank of Spain)	OBR	Office for Budget Responsibility
bp	basis point	Oct	October
BTP	Buoni Poliennali del Tesoro	OECD	Organisation for Economic Co-operation and Development
Buba	Bundesbank	ONS	Office for National Statistics
c	circa	p	preliminary/flash print
CA	Current Account	PBoC	People's Bank of China
CPI	Consumer Price Index	PEPP	Pandemic Emergency Purchase Programme
CSPP	Corporate Sector Purchase Programme	PMI	Purchasing Managers' Index
d	day	PSPP	Public Sector Purchase Programme
GE	Germany	PT	Portugal
Dec	December	QE	Quantitative Easing
DS	Debt sustainability	qoq	quarter-on-quarter
EA	Euro area	QT	Quantitative Tightening
EC	European Commission	RBA	Reserve Bank of Australia
ECB	European Central Bank	RBNZ	Reserve Bank of New Zealand
ECJ	European Court of Justice	rhs	right-hand side
EFSF	European Financial Stability Facility	RPI	Retail Price Index
EGB	European Government Bond	RRF	Recovery and Resilience Facility
EIB	European Investment Bank	SA	Seasonally Adjusted
EMOT	Economic Mood Tracker	SAFE	Survey on the access to finance of enterprises
EP	European Parliament	Sat	Saturday
SP	Spain	Sep	September
ESI	Economic Sentiment Indicator	SMA	Survey of Monetary Analysts
ESM	European Stability Mechanism	SNB	Swiss National Bank
EU	European Union	SPF	Survey of Professional Forecasters
f	final print	Sun	Sunday
Feb	February	SURE	Support to mitigate Unemployment Risks in an Emergency
Fed	Federal Reserve	S&P	Standard & Poor's
FR	France	Thu	Thursday
Fri	Friday	TLTRO	Targeted Longer-term Refinancing Operations
GC	Governing Council	TPI	Transmission Protection Instrument
GDP	Gross Domestic Product	TTF	Title Transfer Facility
GNI	Gross National Income	Tue	Tuesday
GR	Greece	UK	United Kingdom
HICP	Harmonised Index of Consumer Prices	US	United States
HMT	His Majesty's Treasury	WDA	Work-day Adjusted
IMF	International Monetary Fund	Wed	Wednesday

Exhibit 5: Common acronyms/abbreviations used in our reports

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Acronym/Abbreviation		Definition	Acronym/Abbreviation		Definition
INSEE		National Institute of Statistics and Economic Studies	y		year
IP		Industrial Production	yoy		year-on-year
IR		Ireland	ytd		year-to-date
PCA		Principal Component Analysis	EGB		Eurozone Governmeny Bond
ORI		Optional Reverse Inquiry	C&R		Coupons and redemptions
DV01		Dollar Value of one basis points change			

Source: BofA Global Research

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- **Global Rates Year Ahead 2024** – [Cloudy with a chance of landing](#), 19 Nov 2023
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