

DOI: [10.26354/bb.11.1.102.2026](https://doi.org/10.26354/bb.11.1.102.2026)

Piotr Wiśniewski*
ORCID: 0000-0002-3255-6180
pwisni2@sgh.waw.pl

Mortgage Bond Institutional Framework Index: A Scoring Framework and Pilot Application to Germany and Poland

Abstract

This article develops the Mortgage Bond Institutional Framework Index (MBIFI), a transparent scoring framework for comparing the institutional design of mortgage bond systems. MBIFI comprises eleven indicators grouped into four pillars: legal protection, collateral safety, cash flow protection, and market infrastructure. Each indicator is scored on a 0–4 ordinal scale using explicitly defined behavioural anchors and is presented primarily as an indicator-level diagnostic profile; an equal-weight composite score (0–100) is reported only as a supplementary summary measure. The framework is illustrated through a pilot application to Germany and Poland. Under the baseline specification, Germany scores 97.73 and Poland 77.27. These scores illustrate the coding architecture rather than constitute independent empirical findings. The observed difference arises from five indicators in collateral, cash-flow, and market-infrastructure dimensions, while the legal-protection pillar shows no cross-country difference. Because the application is limited to two countries and a single assessor, the paper does not claim full validation of the index. Its contribution is instead methodological: it offers a transparent coding architecture, explicit scale anchors, and a replicable basis for future multi-country testing, inter-coder assessment, and validation against market outcomes.

Keywords: institutional quality index, mortgage bonds, covered bonds, Pfandbrief, comparative financial regulation, Germany, Poland

JEL Codes: G21, G28, K22, C43

* Piotr Wiśniewski – College of Management & Finance, Warsaw School of Economics.

Introduction

Mortgage bond systems depend on a legal and supervisory architecture that governs the segregation of cover assets, the protection of investor claims, the quality of collateral, and the continuity of payments under stress (Packer, Stever and Upper 2007). Where these features are robust, mortgage bonds can support durable funding and investor confidence; where they are weak or incomplete, similar product labels may conceal materially different levels of protection.

The covered-bond literature is rich in legal description and jurisdiction-specific analysis, and it includes extensive discussion of European Union (EU) harmonisation and national institutional design (ECB 2008; EBA 2016; ECBC 2024). What it lacks, however, is a transparent and replicable framework for scoring institutional arrangements across jurisdictions. The OECD Handbook on Constructing Composite Indicators (Nardo et al. 2005) emphasises that credible index construction requires explicit indicator selection, published scale anchors, transparent aggregation rules, and sensitivity analysis – conditions that most comparative discussions of covered bonds do not satisfy in a way that permits straightforward replication or recoding by other researchers.

This article proposes the Mortgage Bond Institutional Framework Index (MBIFI) as a pilot framework designed to fill that gap. MBIFI's primary output is not a league table, but an indicator-level diagnostic profile that shows where jurisdictions converge and where they differ across eleven institutional dimensions. A composite score is also reported as a supplementary summary measure, but the indicator-level profile remains the principal analytical product.

The framework is illustrated through a pilot comparison of Germany and Poland. Germany's Pfandbrief covered bond regime (governed by the Pfandbrief Act, Pfandbriefgesetz, PfandBG) is widely regarded as one of the strongest covered-bond systems in Europe (Packer, Stever and Upper 2007). Poland is a useful comparator because it combines a recognisable statutory covered-bond framework with a market that remains less developed in operational and infrastructure terms (Dźuryk 2021). The purpose of the pilot is constrained to demonstrating the transparency and usability of the scoring architecture, without claiming a full validation of the index. Questions of inter-coder reliability, broader cross-country applicability, and predictive validity with respect to market outcomes are left for future research.

The paper makes three contributions. First, it specifies eleven indicators grouped into four pillars and scores them using explicitly defined behavioural anchors. Second, it discloses the aggregation rule, evidentiary hierarchy, and coding logic in a form that other researchers can inspect and revise. Third, it shows, through the Germany–Poland pilot, how the framework can narrow broad comparative claims into a small number of identifiable institutional differences. Beyond methodological transparency, the framework is intended to be of practical relevance to supranational regulators, national supervisors, cross-border investors, and academic researchers.

If developed beyond the present pilot, periodic computation by a credible institution would be required to maintain comparability and timeliness; the question of which body could host such a process is discussed in Section 6.6.

The paper proceeds as follows. Section 1 reviews the relevant literature. Section 2 presents the conceptual architecture of MBIFI. Section 3 explains the scoring methodology, evidentiary hierarchy, and coding decisions. Section 4 reports benchmark plausibility checks for the pilot application. Section 5 presents the indicator-level and composite results together with sensitivity analysis. Section 6 discusses interpretation and limitations. The last section concludes the study.

1. Literature review

1.1. Covered bond institutions and markets

A first strand of literature examines the German Pfandbrief and its institutional design (Verband deutscher Pfandbriefbanken 2024).

A second strand studies covered bonds as a funding technology: Carbó-Valverde, Rodríguez-Fernández and Rosen (2017) examine whether covered bonds substitute for mortgage-backed securities and find that credible dual-recourse frameworks yield measurable funding-cost advantages; Surti (2010) analyses the conditions under which covered bond frameworks can support stable mortgage funding, with particular attention to the legal-regulatory requirements for market development.

A third strand focuses on EU regulatory architecture. The Covered Bond Directive (EU 2019/2162) harmonises dual recourse (Article 4), asset segregation (Article 12), public supervision (Article 18), and disclosure, while permitting national variation (EBA 2016; European Commission 2015). Critical perspectives caution that uniform harmonisation may not accommodate differences in national legal traditions, market depth, or supervisory capacity (Hardt and Manning 2000).

A fourth strand addresses country-specific transplants, showing that statutory adoption does not ensure equivalent market depth.

In Poland, Dżuryk (2021) examines European covered bonds as a new capital-market asset class, with particular attention to the implications for the Polish market.

1.2. Index construction methodology

The OECD Handbook on Constructing Composite Indicators (Nardo et al. 2005) identifies indicator selection, normalisation, weighting, and aggregation as principal design decisions, each embedding normative judgements. The Handbook warns

against treating equal weighting as neutral and recommends sensitivity analysis. It also notes that when composite scores are highly weight-sensitive, presenting results as a dashboard of individual indicators may be preferable to forcing aggregation.

The literature on measurement error in comparative legal coding further complicates the enterprise. Different coders may reach different judgements on the same statutory text, and scale anchors must be explicit enough to constrain interpretive variance.

MBIFI is positioned between macro-institutional indices, such as the World Bank Governance Indicators (Kaufmann, Kraay and Mastruzzi 2010), and descriptive legal accounts. Unlike the former, it is narrowly targeted at mortgage bond systems. Unlike the latter, it specifies a reproducible scoring rule with explicitly defined behavioural anchors and discloses the complete calculation chain. Its closest methodological analogue is the comparative legal-financial assessment framework discussed in Schwarcz (2011), but it differs by publishing both the scale anchors and the full evidentiary trail alongside the results.

2. Conceptual architecture of MBIFI

MBIFI uses eleven indicators grouped into four pillars (Table 1). Each indicator is scored on a 0–4 ordinal scale. To address the concern that ordinal scales become opaque without anchor definitions, Table 2 provides explicit behavioural anchors for each score level. The anchors are common across indicators rather than indicator-specific; this improves parsimony and comparability across pillars but leaves some judgement at the boundary between adjacent scores, particularly between scores of 2 and 3.

Table 1. MBIFI indicator architecture by pillar. All indicators scored 0–4

Pillar	Code	Indicator
Legal protection	L1	Bankruptcy remoteness of cover pool
Legal protection	L2	Priority rights of bondholders
Legal protection	L3	Specialised issuer or ring-fencing strength
Collateral safety	C1	Mandatory overcollateralisation
Collateral safety	C2	Independent cover pool monitor
Collateral safety	C3	Asset eligibility and valuation rules
Cash flow protection	P1	Prepayment and cash flow stability
Cash flow protection	P2	Servicing continuity in distress

Table 1. (cont.)

Pillar	Code	Indicator
Market infrastructure	M1	Market transparency and disclosure
Market infrastructure	M2	Repo and central bank collateral usability in practice
Market infrastructure	M3	Foreign investor accessibility

Source: own elaboration.

The indicator set was designed to capture four dimensions that jointly define the institutional completeness of a mortgage bond regime from an investor-protection perspective: legal enforceability of claims, safety and monitoring of collateral, continuity of cash flows under issuer stress, and the infrastructure through which bonds are disclosed, funded, and accessed in practice. The selection is therefore purposive rather than exhaustive. It prioritises features that are both conceptually central to covered-bond protection and observable from public legal, supervisory, and market-structure sources. Other potentially relevant features could be added in future extensions, but the present framework aims to balance conceptual coverage, transparency, and replicability.

Table 2. Behavioural anchors for the MBIFI 0–4 scoring scale

Score	Behavioural anchor
0	Feature is absent from the statutory and supervisory framework.
1	Feature is mentioned in law or regulation but lacks operational specificity, enforcement mechanism, or supervisory follow-through.
2	Feature is present in a functioning statutory framework with identifiable provisions, but implementation is partial: the regime lacks one or more of a quantified statutory threshold, dynamic supervisory monitoring, or demonstrated enforcement track record.
3	Feature is substantially developed with specific statutory provisions and supervisory enforcement, but at least one design element falls short of full coverage (e.g., reliance on contractual rather than statutory mechanisms for a specific sub-risk, or absence of a quantified floor alongside an otherwise strong qualitative mandate).
4	Feature is fully developed: a specific statutory mandate exists, is quantified or precisely defined, is subject to active supervisory monitoring, and has a demonstrated enforcement or compliance track record.

Source: own elaboration.

2.1. Legal protection

This pillar captures bankruptcy remoteness (L1), priority rights (L2), and ring-fencing or specialised issuer structure (L3). These features govern what investors can rely on in issuer distress (Diamond, 1984; Schwarcz, 2011).

2.2. Collateral safety

This pillar captures overcollateralisation (C1), independent monitoring (C2), and asset eligibility rules (C3). Strong collateral controls constrain risk-taking ex ante (EBA, 2014; Schwarcz, 2011).

2.3. Cash flow protection

This pillar addresses prepayment and cash flow stability (P1) and servicing continuity in distress (P2) – an operational dimension often less visible than legal structure but important for resilience (Borio 2014; Duffie 2010).

2.4. Market infrastructure

This pillar captures disclosure arrangements (M1), collateral usability in repo and central-bank operations (M2), and foreign investor accessibility (M3) (ECB 2025; ECBC 2024). These indicators sit at the boundary between formal institutional design and the infrastructure that supports market use. Accordingly, the pillar is intended to capture not only the existence of legal or regulatory permissions, but also whether the surrounding operational framework makes those permissions usable in practice. M3 specifically captures formal and operational accessibility to foreign investors – such as legal openness, settlement infrastructure, and absence of discriminatory restrictions – rather than secondary-market depth or the level of international investor participation, which are market outcomes rather than institutional features.

3. Scoring methodology

3.1. Aggregation and presentation

Each raw indicator score (0–4) is normalised to a 0–1 scale by dividing by 4. MBIFI results are reported in two formats. The primary format is the indicator-level profile, which shows side-by-side country scores for each institutional dimension and requires no weighting assumptions. The secondary format is an equal-weight composite on a 0–100 scale, calculated as the arithmetic mean of the eleven normalised indicators multiplied by 100.

The composite is included because single summary measures can be useful for communication, but it is not the principal analytical product. As the OECD Handbook warns (Nardo et al. 2005, pp. 31–33), equal weighting assumes all indicators are equally important – a pragmatic default in the absence of an empirical basis for differential weights, but not a neutral one. Discretion is relocated from weights to indicator selection. Section 5.3 reports sensitivity to alternative weighting schemes. Because the composite’s magnitude is weight-sensitive (Section 5.3), readers who find the sensitivity range unacceptable can rely on the indicator-level profile alone, which is weighting-invariant.

3.2. Evidentiary hierarchy

The coding relies on evidence with differing levels of precision. The strongest category consists of exact article-level statutory anchoring. The second consists of statute-identified provisions supported by supervisory or official interpretive materials. The third consists of EU-level anchors paired with identified national legal sources where article-level domestic pinpointing is incomplete.

Germany is coded predominantly from exact or near-exact PfandBG provisions (Germany 2024). Poland is coded from the Act of 29 August 1997 on Mortgage Bonds and Mortgage Banks, as reflected in the consolidated text available through 2022 (Poland 2022), as amended to transpose Directive (EU) 2019/2162, supplemented by the Polish Financial Supervision Authority, *Komisja Nadzoru Finansowego* (KNF) supervisory identification and the Covered Bond Directive (Council of the European Union 2019). This asymmetry reflects a structural difference in legislative drafting style rather than a language or access barrier: the Polish 1997 Act is less prescriptive in its statutory specificity than PfandBG, which means that the evidentiary gap is itself a substantive feature of the two frameworks rather than an artefact of incomplete research. This asymmetry affects the confidence attached to each country’s scores and is therefore disclosed explicitly. It does not imply that the gap is merely an artefact of differential documentation: the five indicators where Poland scores below Germany reflect substantive differences in statutory design and market infrastructure. Nevertheless, part of the gap could narrow if more granular Polish legal evidence revealed protections not captured here. The companion replication workbook, available from the author upon request, includes a confidence field (High/Medium) for each indicator to help readers assess this risk.

A complementary approach to reducing coding subjectivity involves triangulating indicator scores against available external data as an auxiliary plausibility check. The World Bank Governance Indicators (WGI) – particularly Rule of Law and Regulatory Quality – overlap conceptually with MBIFI’s legal-protection and collateral-safety pillars (Kaufmann, Kraay and Mastruzzi 2010). It is important to emphasise that WGI scores are not components of MBIFI and are not a substitute for sector-specific legal coding: they are too aggregate, and they describe general governance quality

rather than covered-bond institutional design. Their role here is limited to that of a red-flag diagnostic. A large and unexplained divergence between an MBIFI legal-protection or collateral-safety score and the corresponding WGI score would not automatically change the MBIFI score; it would trigger re-examination of the underlying coding decision, which would then be confirmed or revised on the basis of statutory and supervisory evidence. The present pilot does not implement this cross-check because WGI signals are uninformative in a two-country setting; future multi-country applications should consider building it into the validation protocol.

3.3. Coding decisions

All coding was performed by a single assessor. Inter-coder reliability is unknown and should be obtained in any extension. Table 3 documents the rationale for each contested coding decision, referenced explicitly against the behavioural anchors in Table 2.

Table 3. Coding rationale for contested indicators, referenced to behavioural anchors (Table 2)

Code	Indicator	DE	PL	Coding rationale
P1	Cash flow stability	3	–	Score 3 (not 4) per anchor: PfandBG § 4(1a) mandates 180-day liquidity matching and continuous nominal coverage (statutory + supervisory = strong), but prepayment risk transfer to the cover pool relies on contractual rather than statutory mechanisms (one sub-risk managed non-statutorily). A score of 4 would require statutory prohibition or quantified limitation of maturity mismatch, which PfandBG does not provide.
C1	Overcollateralisation (OC)	–	2	Score 2 per anchor: the 1997 Act establishes coverage requirements (feature present in functioning framework), but lacks a quantified statutory net present value (NPV) buffer and dynamic supervisory OC monitoring comparable to PfandBG § 4(1a). The regime is operational but partial in specificity and enforcement depth.
M2	Repo/Central Bank (CB) collateral usability in practice	–	2	Score 2 per anchor: Polish mortgage bonds satisfy formal eligibility conditions for use in Eurosystem and NBP collateral operations, but the surrounding operational environment does not support the same degree of routine collateral usability observed in the German Pfandbrief market. The score therefore captures practical usability within market infrastructure, not legal eligibility in isolation.

Note: DE = Germany, PL = Poland.

Source: own elaboration based on PfandBG (January 2024 consolidated text), Act of 29 August 1997 on Mortgage Bonds and Mortgage Banks (2022 consolidated text, Dz.U. 2022, item 581), KNF supervisory materials.

Two features deserve emphasis. First, C1 for Germany scores 4 despite operating through dynamic supervisory monitoring rather than a fixed percentage floor. The score reflects functional overcollateralisation under the MBIFI anchor, not the presence of a fixed statutory percentage floor: it rewards the outcome (continuous, legally mandated excess coverage with quantified NPV buffer and active BaFin enforcement) per the anchor for score 4 in Table 2. A reviewer who defines overcollateralisation as requiring a fixed statutory floor would code differently; the explicitly defined anchors make this disagreement visible and resolvable. Second, M2 for Poland scores 2 despite formal Eurosystem and NBP eligibility. The anchor for score 2 specifies that the feature is ‘present in a functioning statutory framework’ but ‘partial’ in implementation. Formal eligibility combined with a less developed operational framework for routine repo use fits that description.

4. Benchmark plausibility checks

Because the present application is limited to two countries, the pilot is not designed to test causal hypotheses. Instead, it uses two benchmark plausibility checks to assess whether the framework yields outputs that are broadly aligned with informed expectations from the covered-bond literature.

Check 1. Germany should score above Poland under the baseline specification. This would be consistent with the literature treating the Pfandbrief regime as a benchmark covered-bond framework.

Check 2. Any observed difference should be concentrated outside the core legal-protection pillar. This would be consistent with the expectation that formal legal recognition has converged more strongly across EU jurisdictions than operational and infrastructure features have.

Failure on either check would not invalidate the framework, but it would indicate that the current specification or coding rules require reconsideration.

5. Results

5.1. Indicator-level profile

Table 4 presents the primary analytical output: a side-by-side indicator-level comparison. Six of eleven indicators are coded identically at the maximum (L1, L2, L3, C2, C3, M3). The remaining five (C1, P1, P2, M1, M2) show Poland at 2 and Germany at 3 or 4. No weighting or aggregation is needed to identify this pattern.

Table 4. Indicator-level scores: Germany and Poland

Code	Indicator	DE raw	PL raw	DE norm.	PL norm.
L1	Bankruptcy remoteness	4	4	1.00	1.00
L2	Priority rights	4	4	1.00	1.00
L3	Ring-fencing strength	4	4	1.00	1.00
C1	Overcollateralisation	4	2	1.00	0.50
C2	Cover pool monitor	4	4	1.00	1.00
C3	Asset eligibility	4	4	1.00	1.00
P1	Cash flow stability	3	2	0.75	0.50
P2	Servicing continuity	4	2	1.00	0.50
M1	Transparency/disclosure	4	2	1.00	0.50
M2	Repo/CB collateral usability in practice	4	2	1.00	0.50
M3	Foreign accessibility	4	4	1.00	1.00

Source: MBIFI replication workbook (available from the author upon request).

The gap arises entirely from five indicators where Poland receives partial scores. All three legal protection indicators show no difference. The operational and market-infrastructure dimensions – servicing continuity, overcollateralisation, disclosure, repo usability, and cash flow stability – account for the entire divergence. This pattern is a direct restatement of the coding, not an independent empirical finding. Its value lies in specifying exactly where the institutional divergence resides, narrowing the conversation from a diffuse ‘Germany is stronger’ claim to five arguable dimensions.

5.2. Pillar-level and composite scores

The equal-weight composite produces Germany 97.73 and Poland 77.27, a gap of 20.45 points. Both scores are derived mechanically from the indicator values in Table 4 with no post-hoc adjustments. The composite is an optional summary; the indicator-level profile in Table 4 is the primary output.

Table 5. Pillar-level comparison and composite MBIFI scores (equal-weight baseline)

Pillar	Germany (%)	Poland (%)	Gap (pp)
Legal protection	100.00	100.00	0.00
Collateral safety	100.00	83.33	16.67
Cash flow protection	87.50	50.00	37.50
Market infrastructure	100.00	66.67	33.33
Overall MBIFI	97.73	77.27	20.45

Source: own calculations based on MBIFI replication workbook.

5.3. Sensitivity analysis

The gap ranges from 16.07 (Scheme B: legal double-weighted) to 25.00 (Scheme C: stress pillars double-weighted) – a swing of approximately 9 index points. This sensitivity is material and confirms that the composite’s magnitude is weighting-dependent. Two features are invariant across all specifications: Germany always exceeds Poland, and the gap always originates entirely outside the legal protection pillar. These invariances hold by construction because both countries score identically on all three L-indicators. The invariant finding is the indicator-level pattern, not the composite number. Readers who find the 9-point sensitivity range unacceptable should rely on the indicator profile (Table 4) rather than the composite.

Table 6. Sensitivity of composite MBIFI scores to alternative weighting schemes

Weighting scheme	DE	PL	Gap	vs. A
A: Equal weight (baseline)	97.73	77.27	20.45	–
B: Legal pillar double-weighted	98.21	82.14	16.07	–4.38
C: Cash flow + Market double-weighted	96.88	71.88	25.00	+4.55
D: Collateral pillar double-weighted	98.21	78.57	19.64	–0.81

Source: own calculations.

5.4. Assessment against benchmark checks

Check 1 is satisfied: Germany exceeds Poland by at least 16.07 points under every weighting scheme. Check 2 is also satisfied: no legal-protection indicator shows a gap between the two countries.

6. Discussion

6.1. What the indicator-level profile reveals

The pilot produces a result that an experienced analyst would anticipate: Germany's Pfandbrief system is institutionally more developed than Poland's mortgage bond regime. A brief descriptive paragraph could establish that much. The value added by MBIFI is not the ranking itself but the structured specification of where the gap resides. The five-indicator concentration (C1, P1, P2, M1, M2) narrows the conversation to specific, arguable dimensions with published coding rationales and behavioural anchors, allowing a reader who disagrees with any individual score to recode and see how the profile changes.

Within the present framework, a threshold of 3 or above on all indicators can be read as a practical marker of broadly developed institutional coverage. This is a heuristic interpretation rather than a validated cutoff and is used only to summarize the indicator profile reported here. Germany meets this threshold (its lowest score is 3 on P1). Poland does not, with five indicators at 2.

6.2. EU harmonisation context

Poland's gaps align with the minimum harmonisation agenda of the Covered Bond Directive (EU 2019/2162), which mandates standards for asset segregation (Article 12), public supervision (Article 18), and dual recourse (Article 4). In parallel, Regulation (EU) 2019/2160 amended the Capital Requirements Regulation to align the prudential treatment of covered bond exposures with the new harmonised framework, but MBIFI does not directly code these capital-treatment provisions. Poland's transposition creates a regulatory trajectory that should progressively narrow the MBIFI gap in market infrastructure and cash flow protection. The indicator-level profile could be useful for tracking whether EU harmonisation produces real institutional convergence or merely formal legislative compliance.

6.3. Why present a composite at all?

A legitimate question is whether aggregation into a single number adds anything beyond the indicator-level profile. The present pilot suggests a qualified answer. The composite is useful as a compact summary for communication and as a potential input for future cross-country regression analysis (testing whether aggregate MBIFI scores predict spreads or issuance depth). However, the sensitivity analysis shows its magnitude is weighting-dependent, and it conveys less information than the indicator profile. Accordingly, this paper treats the indicator-level profile as the

primary analytical product and the composite as supplementary. Future work that validates the composite against external criteria would strengthen the case for aggregation. Until then, the indicator-level pattern is the more defensible output.

6.4. What the paper does not show

The paper does not demonstrate that MBIFI scores predict any market outcome. It does not show that the 20-point composite gap is associated with differences in covered bond spreads, issuance resilience, investor demand, or recovery rates. It cannot support policy recommendations of the form ‘Poland should change X to achieve Y.’ The indicator profile identifies where the scoring gap lies; it does not establish that closing the gap would produce measurable benefits.

6.5. Limitations

First, all coding was performed by a single assessor; inter-coder reliability is unknown. Second, the two-country sample can establish replicable ordinal rankings but not criterion or construct validity. Third, the index is cross-sectional, coding PfandBG through its January 2024 consolidated text (last amended 29 December 2023) and the Polish 1997 Act through its 2022 consolidated text, and does not track institutional change over time. Fourth, equal weighting is pragmatic, not validated; the composite’s magnitude is sensitive to weighting choices, which constitutes a recognised element of subjectivity in the design. The sensitivity analysis in Section 5.3 maps how alternative weighting schemes affect the composite, but it does not eliminate this subjectivity. Future extensions covering a larger country sample could explore data-driven alternatives – for instance, principal component analysis or factor analysis – to reduce reliance on the equal-weight default and test whether differential weights improve the composite’s criterion validity. Such data-driven weighting requires a sufficiently large country panel and cannot be applied meaningfully in the present two-country pilot. Fifth, the evidentiary hierarchy is disclosed but not translated into formal error bounds; readers must rely on the confidence fields in the replication workbook to assess score certainty. Triangulation against external datasets – such as the World Bank Governance Indicators (Kaufmann, Kraay and Mastruzzi 2010) – offers one tractable path toward formalising uncertainty bounds at the indicator level and toward addressing the residual subjectivity of indicator scoring discussed above, although, as noted in Section 3.2, WGI signals function as auxiliary plausibility checks rather than as scoring inputs. Sixth, the behavioural anchors, while explicit, still require interpretive judgement – particularly at the boundary between scores of 2 and 3, where the distinction between ‘partial’ and ‘substantially developed’ implementation involves unavoidable subjectivity.

6.6. Institutional home and user base

As foreshadowed in the Introduction, the question of who should compute MBIFI on an ongoing basis, at what frequency, and for what purposes is not directly addressed by the present pilot but is central to any future use of the framework. If MBIFI were to move beyond a pilot framework, periodic computation would most naturally fall to a body with an existing mandate in covered-bond oversight or financial stability monitoring. Without advocating that any specific institution should adopt the framework, plausible candidate hosts include the European Banking Authority (EBA) – which already coordinates covered-bond supervisory convergence across member states – the European Covered Bond Council (ECBC), which maintains the most comprehensive comparative data infrastructure for the sector, and the financial stability function of the European Central Bank (ECB). Given that the institutional features captured (statutory frameworks, supervisory structures, market infrastructure) change slowly, an annual or biennial update cycle appears proportionate and could be embedded into existing reporting cycles of whichever body assumed this role.

As for end users, MBIFI indicator profiles are relevant to at least four audiences. Supranational regulators – particularly the EBA and the European Commission – can use the framework to assess whether EU harmonisation under the Covered Bond Directive produces genuine institutional convergence or merely formal legislative transposition. Cross-border investors can use the indicator profile to identify jurisdiction-specific risks that aggregate spread data may not fully price. National supervisors can use it to benchmark their own frameworks against peer systems and prioritise reform efforts. Finally, academic researchers can use multi-country MBIFI profiles as an independent variable in studies of covered bond spreads, issuance depth, or resilience under stress – filling a gap in the current empirical literature that the present pilot cannot address.

Conclusion

This article has proposed MBIFI as a transparent framework for structuring comparative assessment of mortgage bond institutions. The framework organises eleven indicators into four pillars, scores them using explicitly defined behavioural anchors, and reports them primarily as an indicator-level diagnostic profile, with a composite score included only as a supplementary summary measure.

The Germany–Poland pilot illustrates how the framework can turn a broad qualitative comparison into a small number of identifiable institutional differences. In the present application, the two countries do not differ on the legal-protection pillar, while the observed gap is concentrated in collateral, cash-flow, and market-infrastructure dimensions.

The paper's contribution is methodological rather than fully validation-based. It offers a transparent coding architecture that can be extended, challenged, and recoded by other researchers. Future work should apply the framework to a larger set of jurisdictions, assess inter-coder reliability, refine indicators that sit at the boundary between institutional design and market functioning, and test whether MBIFI profiles are associated with observable market outcomes such as spreads, issuance depth, or resilience under stress. Moving from a pilot to an operational framework would additionally require multi-country testing, formal inter-coder reliability assessment, and an institutional process for periodic updates by a credible body, as outlined in Section 6.6.

References

- Borio C. (2014), *The financial cycle and macroeconomics: what have we learnt?*, "Journal of Banking and Finance", 45, pp. 182–198.
- Carbó-Valverde S., Rodríguez-Fernández F. and Rosen R. (2017), *Are covered bonds a substitute for mortgage-backed securities?*, "Journal of Economic Policy Reform", 20(3), pp. 238–253.
- Council of the European Union (2019), Directive (EU) 2019/2162 of the European Parliament and of the Council of 27 November 2019 on the issue of covered bonds and covered bond public supervision and amending Directives 2009/65/EC and 2014/59/EU. Official Journal of the European Union, L 328, pp. 29–57. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019L2162> (accessed: 19.05.2026).
- Diamond D. (1984), *Financial intermediation and delegated monitoring*, "Review of Economic Studies", 51(3), pp. 393–414.
- Duffie D. (2010), *Asset price dynamics with slow-moving capital*, "Journal of Finance", 65(4), pp. 1237–1267.
- Dżuryk A. (2021), *Europejskie obligacje zabezpieczone jako nowa klasa aktywów rynku kapitałowego*, "Bezpieczny Bank", 84(3), pp. 65–80.
- European Banking Authority (2014), EBA report on EU covered bond frameworks and capital treatment. London: EBA. Available at: <https://www.eba.europa.eu/publications-and-media/press-releases/eba-supports-capital-treatment-covered-bonds-calls-additional> (accessed: 19.05.2026).
- European Banking Authority (2016), Report on covered bonds: recommendations on harmonisation of covered bond frameworks in the EU. London: EBA. Available at: <https://www.eba.europa.eu/publications-and-media/press-releases/eba-recommends-harmonised-eu-wide-framework-covered-bonds> (accessed: 19.05.2026).
- European Central Bank (2008), Covered bonds in the EU financial system. Frankfurt: ECB. Available at: https://www.ecb.europa.eu/pub/pdf/other/coverbondsintheeufinancialsystem200812en_en.pdf (accessed: 19.05.2026).
- European Central Bank (2025), Euro Money Market Study 2024: Key developments in 2023 and 2024. Frankfurt: ECB. Available at: <https://www.ecb.europa.eu/press/euromoneymarket/pdf/ecb.euromoneymarket202504.en.pdf> (accessed: 19.05.2026).

European Commission (2015), Green Paper on Building a Capital Markets Union. COM(2015) 63 final.

European Covered Bond Council (2024), European Covered Bond Fact Book. Brussels: ECBC. Available at: https://hypo.org/app/uploads/sites/3/2024/08/FactBook-2024_web.pdf (accessed: 19.05.2026).

Germany (2024), Pfandbrief Act (Pfandbriefgesetz – PfandBG), consolidated text of January 2024, last amended 29 December 2023. Berlin: Verband deutscher Pfandbriefbanken. Available at: https://www.pfandbrief.de/wp-content/uploads/2024/11/PfandBG_DE_web.pdf (accessed: 19.05.2026).

Hardt J. and Manning D. (2000), *European mortgage markets: structure, funding and future development*. Brussels: European Mortgage Federation.

Kaufmann D., Kraay A. and Mastruzzi M. (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues*. World Bank Policy Research Working Paper No. 5430. Washington DC: World Bank. Available at: <https://openknowledge.worldbank.org/entities/publication/4e535db9-672d-5897-a6cd-feb4df55208f> (accessed: 19.05.2026).

Nardo M., Saisana M., Saltelli A., Tarantola S., Hoffman A. and Giovannini E. (2005), *Handbook on Constructing Composite Indicators: Methodology and User Guide*. OECD Statistics Working Papers 2005/3. Paris: OECD. Available at: https://www.oecd.org/en/publications/handbook-on-constructing-composite-indicators-methodology-and-user-guide_9789264043466-en.html (accessed: 19.05.2026).

Packer F., Stever R. and Upper C. (2007), *The covered bond market*, BIS Quarterly Review, September, pp. 43–55. Available at: https://www.bis.org/publ/qtrpdf/r_qt0709.htm (accessed: 19.05.2026).

Poland (2022) Act of 29 August 1997 on Mortgage Bonds and Mortgage Banks, consolidated text. Dziennik Ustaw 2022, item 581. Available at: <https://eli.gov.pl/api/acts/DU/2022/581/text.html> (accessed: 19.05.2026).

Schwarcz S. (2011), *The conundrum of covered bonds*, “The Business Lawyer”, 66(3), pp. 561–586.

Surti J. (2010), *Can Covered Bonds Resuscitate Residential Mortgage Finance in the United States?*, IMF Working Paper WP/10/277. Washington DC: International Monetary Fund.

Verband deutscher Pfandbriefbanken (2024), *Facts and figures on the German covered bond market*. Berlin: vdp.