DRIVING MARKET CONSENSUS OF KPIS IN KPI-LINKED BANKING PRODUCTS

Background & Motivation

Sustainability-Linked Bonds (SLBs) & Sustainability-Linked Loans (SLLs) are rising as ESG financing tools, aiming to incentivise sustainability, align financing with climate goals, and enhance corporate accountability.

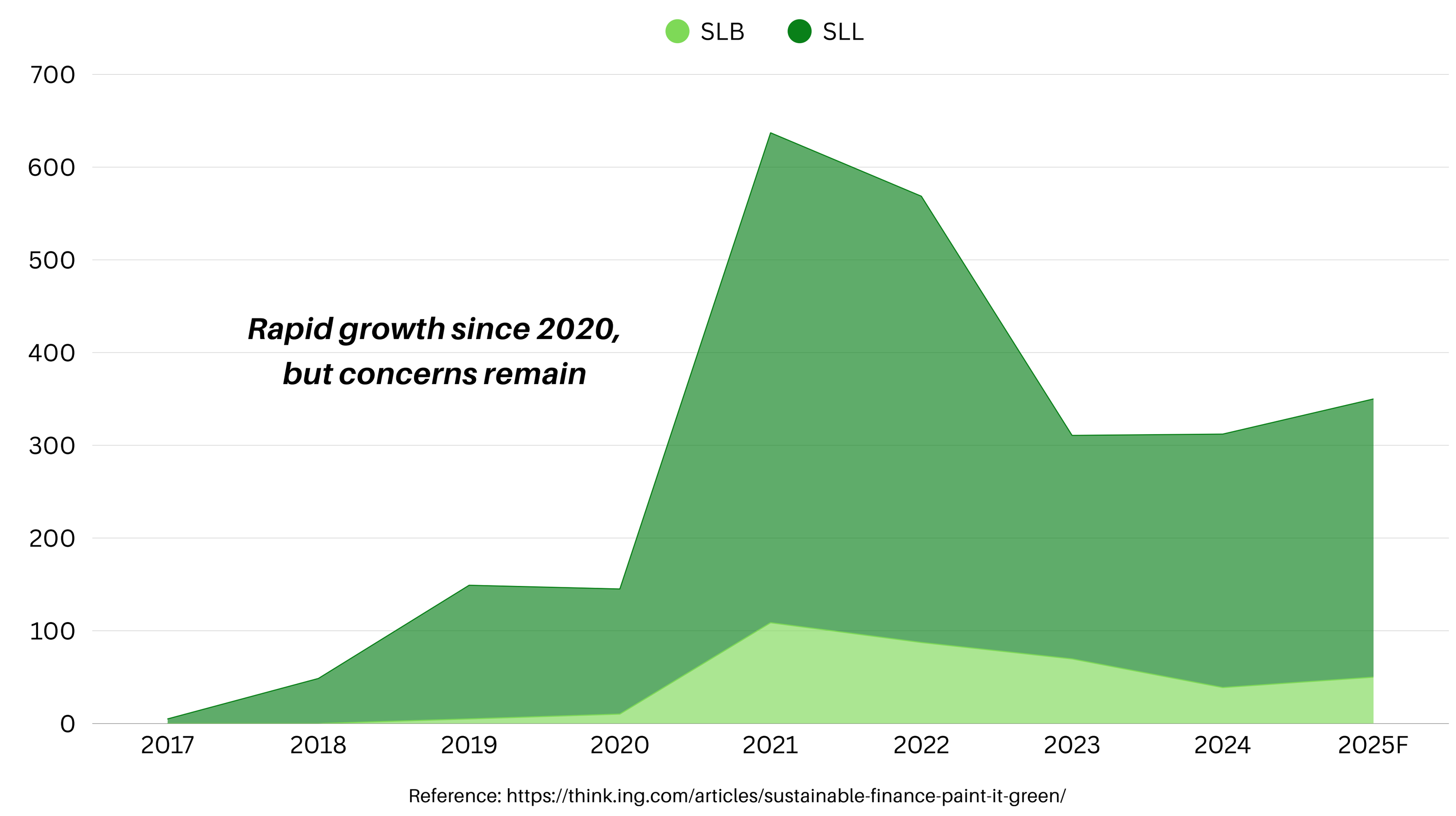
But growing evidence suggests a credibility gap:

The Promise	The Reality
Incentives for sustainability	Vague or broad KPIs
Link finance to ESG goals	Weak penalties for underperformance
Drive real climate action	Greenwashing concerns persist

Du et al. (2023): SLLs often used by **high-emitting firms but lack impact** due to weak incentives

Affolter et al. (2024): SLBs with **science-aligned KPIs trigger stronger market reactions**

Poggensee (2025): Market values **credibility over cost**



Reference: https://think.ing.com/articles/sustainable-finance-paint-it-green/

Analysis focused on the Energy, Agriculture, and Transportation sectors due to:

- Their role as major emitters, placing them at the center of climate mitigation efforts
- Investor and regulatory pressure to adopt science-based, material KPIs

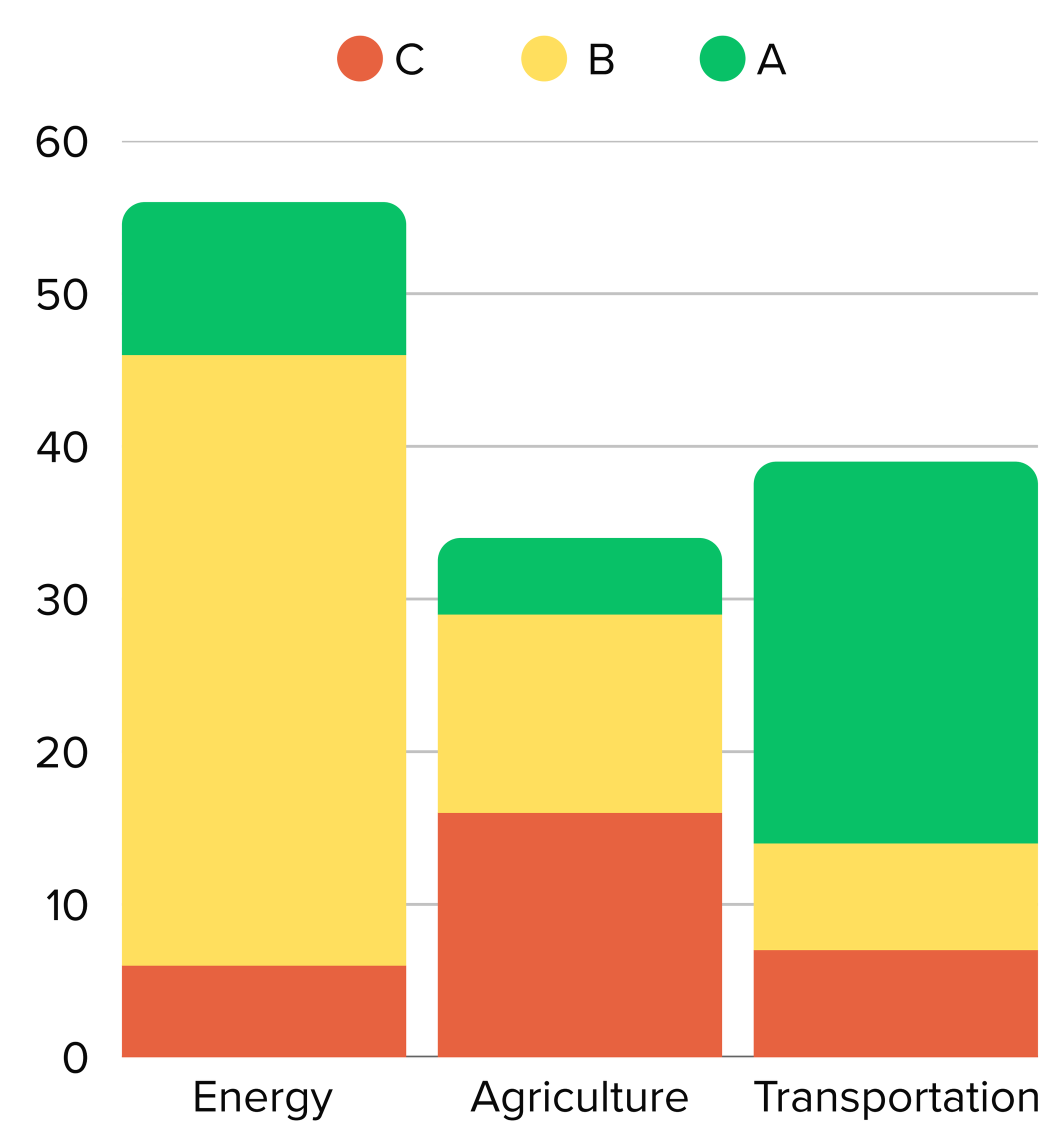
Methodology

Market Scan of Existing Sustainability-Linked Instruments → **KPI & SPT Extraction and Analysis** → **Evaluation Using SMART + Risk Assessment Framework** → **Classification and Benchmarking** → **Industry Insights & Recommendations**

Evaluation Matrix

Dimension	Evaluation Criteria	A (Ambitious) score ≥ 11	B (Good) 8 ≤ score < 11	C (Poor) score < 8	Remark
Ambitiousness (4/2/0)	Whether scientific pathways/SBTi or the industry benchmarks are referenced and exceeded	Clearly aligned with scientific pathways	Vaguely aligned with scientific pathways	No explanation or pseudo-science	SLBP: SPTs should reflect "measurable ambition" SLLP: Indicators should "go beyond business as usual" We give this metric more marks to distinguish highly ambitious targets (Grade A) and relatively Ambitious targets (Grade B)
Specificity (2/1/0)	Whether the KPI is clearly defined (e.g., clear indicator name, scope, unit)	Clearly defined	Generally clear	Missing or irregular	SLBP/SLLP: KPI should be relevant, core, and material to the issuer's overall sustainability profile
Quantitative (2/1/0)	Whether it includes quantifiable targets (e.g., numerical value/percentage) & measurability	Clearly quantified	Roughly quantified	Not quantifiable	SLBP: "measurable against a defined baseline" SLLP: "quantifiable and benchmarkable"
Materiality (2/1/0)	Whether it focuses on key industry-related issues (e.g., GHG, pollution, H&S)	Core key issues	Relevant but secondary	Not related to core business	SLBP: KPI is core to the issuer's business SLLP: KPI should be material to borrower's core operations
Verifiability (2/1/0)	Whether implementation can be verified through external audits, public data, and other means through clear methodology	Directly related	Indirectly related	Not related	SLBP: "issuer should seek independent and external verification"
Time-bound (2/1/0)	Whether the KPI has clear deadlines or time frames	Clearly defined timeframe	Generally clear timeframe	No timeframe	SLBP/SLLP: "clearly pre-defined timeline" and "target observation dates"

KPI Grade Distribution



Weaknesses

Incomplete KPI Coverage

Many KPIs fail to address full emissions scopes—particularly Scope 3, which often represents the largest share of a company's carbon footprint.

Lack of Disclosure and Specificity

Oftentimes, KPIs are vaguely defined or lack sufficient disclosure, reducing credibility and accountability

Neglect of Critical Environmental Issues

Important environmental dimensions such as air quality are frequently overlooked, despite their material impact on public health and local ecosystems.

Recommendations

Comprehensive GHG Emission Coverage

Sustainability-linked instruments should mandate full coverage of Scope 1, 2, and 3 emissions, especially for high-emitting sectors.

Consider Full Spectrum of Material Issues

Incorporate sectors with high local environmental impact particularly for air pollutant metrics (e.g., NO_x, SO_x, $PM_{2.5}$) in KPI frameworks.

Strengthen Oversight by Investors and SPOs

Investors & Second-Party Opinion (SPO) providers should flag incomplete KPIs & demand greater transparency, third-party verification, & robust penalty mechanisms to enhance the credibility of sustainability-linked financing.