

SUSTAINABLE FAR: RETHINKING TRANSFER PRICING RISK IN CIRCULAR ECONOMY GOVERNANCE

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Abstract

Transfer Pricing (TP) remains a central and contentious issue in international taxation due to its close association with profit shifting and the ongoing challenges of Base Erosion and Profit Shifting (BEPS). The traditional Function–Assets–Risk (FAR) framework, which supports the arm’s length principle, captures mainly financial and operational risks but overlooks sustainability-driven exposures that increasingly shape business models. This paper introduces Sustainable FAR, a framework that integrates environmental, social, governance (ESG), supply-chain, and reputational risks into transfer pricing analysis. Using a qualitative exploratory design, the study combines a PRISMA-guided literature review, regulatory mapping, and a risk-linkage protocol to operationalize ESG risk quantification under the OECD’s “returns follow risks” principle. Findings show that sustainability obligations materially influence value creation and profit allocation, justifying a sustainability risk premium. By aligning OECD comparability factors with Indonesia’s sustainability disclosure regime, POJK 51/2017, Perpres 98/2021, and PSPK 1–2 (aligned with IFRS S1–S2), Sustainable FAR provides a governance-oriented model for integrating fiscal and sustainability objectives. It reframes TP documentation as a strategic instrument linking transparency, accountability, and circular economy governance.

Keywords: *ESG, FAR Analysis, risk, transfer pricing,*

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INTRODUCTION

Transfer Pricing (TP) has long been one of the most debated areas in international taxation, given its direct implications for profit allocation among jurisdictions and its pivotal role in addressing Base Erosion and Profit Shifting (BEPS). The OECD Transfer Pricing Guidelines establish the Function–Assets–Risk (FAR) analysis as the foundation for determining whether intra-group transactions are consistent with the arm’s length principle, ensuring that “returns follow risks.” In practice, however, the traditional FAR framework focused largely on market, credit, operational, financial, and legal risks, no longer adequately reflects the complexities of modern enterprises operating under sustainability-driven mandates and the principles of circular economy governance.

Over the past decade, corporations have encountered growing sustainability-related exposures such as carbon pricing, e-waste management responsibilities, social license requirements, and supply-chain transparency obligations. These non-financial risks exert a direct and often material impact on cost structures, competitiveness, and profit distribution. Yet, despite their relevance, they are rarely captured within existing

TP documentation. Meanwhile, global regulatory developments including the European Union's Corporate Sustainability Reporting Directive (CSRD), the OECD's Tax Administration 3.0 initiative, and the IFRS Sustainability Standards (S1 and S2, to be adopted in Indonesia as PSPK 1 and 2) reflect a clear policy shift: sustainability risks are now both measurable and decision-relevant for financial and fiscal reporting.

Indonesia mirrors this global transformation through several key regulations that institutionalize sustainability governance: POJK 51/2017 on sustainability reporting, Perpres 98/2021 on carbon pricing, and PMK 172/2023 on transfer pricing documentation (Otoritas Jasa Keuangan, 2017). Collectively, these regulations embed disclosure, emission management, and governance transparency within corporate compliance obligations. Nevertheless, neither corporate taxpayers nor the Directorate General of Taxes (DGT) have yet operationalized how these sustainability-related risks should be identified, controlled, and allocated within the traditional FAR analysis. This implementation gap underscores an urgent need for a methodological framework that integrates ESG and circular economy exposures into transfer pricing assessments under the arm's length principle.

From a scholarly standpoint, the integration of sustainability into TP governance remains in its infancy. Recent academic contributions have begun to acknowledge this need. Swain and Bilaney (2022) proposed the FARME approach Functions, Assets, Risks, Market, and Externalities to account for sustainability externalities within TP documentation. Likewise, Burgstaller (2022); Greil, Schwarz, and Stein (2023) highlighted how ESG transformation reshapes both value creation and risk allocation in multinational groups. Yet, these contributions remain conceptual and descriptive, offering neither a clear operational model nor a link to OECD comparability factors and regulatory standards.

Building on these developments, this paper introduces the Sustainable FAR Analysis, an analytical and governance-oriented extension of the traditional FAR framework. The model explicitly integrates sustainability-related risks environmental, social, governance, supply-chain, and reputational into the assessment of functions, assets, and risks in transfer pricing documentation. It connects global and national regulatory frameworks to the OECD's "returns follow risks" principle, aligning fiscal governance with emerging sustainability disclosure standards.

This study is guided by three main research questions focusing on the integration of sustainability-related risks into transfer pricing documentation. First, it seeks to explore how environmental, social, and governance (ESG), supply chain, and reputational risks can be systematically incorporated into the Functional, Asset, and Risk (FAR) framework. Second, it aims to examine the conceptual and operational distinctions between the proposed Sustainable FAR framework and the existing Functional, Asset, Risk, Market, and Economic (FARME) approach. Third, it investigates how sustainability exposures can be quantified and translated into measurable risk premiums within the arm's length profit allocation process. Accordingly, the research objectives are to develop a replicable methodological framework referred to as Sustainable FAR that embeds ESG-related risks within FAR analysis; to establish clear conceptual and empirical differences between Sustainable FAR and FARME, particularly regarding regulatory alignment and risk quantification; and to design a quantifiable template for calculating sustainability-driven risk premiums applicable to Indonesian firms, ensuring compliance with current and forthcoming transfer pricing regulations.

This study contributes theoretically, and practically. It extends the FAR framework to include sustainability-related risks, introduces a transparent and replicable method combining literature review, regulation mapping, and risk-linkage analysis, and provides practical guidance for aligning transfer pricing governance with Indonesia's green fiscal transition and carbon economy agenda.

LITERATURE REVIEW

Transfer Pricing and the FAR Framework

Transfer Pricing (TP) is a key mechanism for allocating income among related entities in multinational enterprises (MNEs). The OECD Transfer Pricing Guidelines (2017; 2022) establish the Function–Assets–Risk (FAR) analysis as the foundation of the arm's length principle (ALP), ensuring that each entity's return corresponds to the functions performed, assets used, and risks controlled. Among these factors, risk analysis is central since "returns must follow risks. Empirical studies show that weak governance and unclear risk ownership often trigger disputes and profit misalignments (Lo, Wong & Firth, 2010; Kovermann & Velte, 2019; Khan, Abraham, Alex, Eluyela, & Odianonsen, 2022). Indonesian evidence likewise highlights the influence of governance on tax risk management and avoidance (Bimo, Prasetyo, & Susilandari, 2019; Kerr, Price, Román, & Romney, 2021).

The traditional FAR approach remains limited to financial and operational risks such as market, credit, and legal exposures. While adequate for conventional business models, this narrow view overlooks emerging non-financial risks environmental, social, supply-chain, and reputational that now shape corporate value creation. As companies increasingly adopt ESG-oriented governance, the classical FAR taxonomy no longer fully captures the realities of modern business and requires conceptual expansion.

From FAR to FARME to Sustainable FAR

The recognition of these non-financial exposures has prompted scholars to expand the traditional FAR construct. Swain and Bilaney (2022) argue that sustainability externalities (e.g., carbon emissions, waste, and community impact) should be explicitly incorporated into transfer pricing documentation (FARME). Their framework acknowledges the moral and economic rationale for sustainability integration, but it stops short of operationalizing how such externalities translate into quantifiable risk adjustments or profit differentials. Subsequent works (Burgstaller, 2022; Greil, Schwarz, & Stein, 2023) further elaborate how ESG transformation reshapes value creation and risk allocation within multinational groups, yet they remain largely conceptual and do not provide a methodological pathway for integrating ESG data into the OECD's comparability analysis.

Building on this scholarship, the present study proposes Sustainable FAR as a pragmatic evolution that bridges theoretical insight with regulatory application. The framework codifies ESG, supply-chain, and reputational risks as measurable and auditable components of risk analysis under the arm's length principle, thereby offering a replicable, policy-grounded structure for incorporating sustainability-related exposures into TP documentation. Table 1 describe evolution of risk frameworks in transfer pricing.

Table 1. Evolution of Risk Frameworks in Transfer Pricing

Dimension	Traditional FAR	FARME	Sustainable FAR
Core Structure	Functions–Assets–Risks	+ Market Externalities	+ + ESG (Environmental, Social, Governance), Supply Chain, Reputation
Type of Risk	Market, credit, operational, financial, legal	Same sustainability externalities	+ ESG risks codified as measurable exposures (carbon, waste, CSR, governance)
Data Sources	Financial statements, contracts	Same + macro data	+ Sustainability reports, POJK 51/2017, PSPK 1–2, ESG indices
OECD Linkage	Comparability factors (functions, assets, risks)	Limited linkage	Explicit mapping: ESG risks → control → financial capacity (OECD §1.60–1.70)
Output	Profit allocation based on commercial risk	Contextual awareness	Quantifiable risk premium integrated into TNMM/PLI
Analytical Value	Compliance assessment	Conceptual extension	Operational framework (replicable and policy-aligned)

Source: Author's elaboration based on OECD (2017, 2022); Swain & Bilaney (2022); Burgstaller (2022); Greil et al. (2023).

Unlike the FARME model proposed by Swain and Bilaney (2022), which conceptually extends the FAR framework by acknowledging market externalities, the Sustainable FAR developed in this study introduces an operational and regulatory dimension. It not only classifies sustainability-related exposures but also maps them systematically to the OECD's comparability factors of risk identification, control, and financial capacity, as well as to Indonesia's ESG disclosure regime (POJK 51/2017, Perpres 98/2021, and PSPK 1–2). Moreover, Sustainable FAR incorporates a quantifiable adjustment mechanism that links sustainability expenditures and risk ownership to profit level indicators (PLIs) under TNMM, thereby transforming the framework from a conceptual taxonomy into a replicable, evidence-based methodology aligned with fiscal and circular-economy governance.

ESG Risk, Corporate Governance, and Circular Economy

Corporate governance provides a strong theoretical foundation for linking ESG risks to fiscal and operational performance. As defined by Tricker (2019), governance encompasses the systems that ensure corporate behavior aligns with stakeholder expectations, legal obligations, and ethical norms. The OECD Principles of Corporate Governance (2015) and related ESG literature assert that sustainability is now integral to directors' fiduciary duties. Cramer (2022) observes that effective circular economy governance requires ESG integration across organizational levels, while Palea, Migliavacca, and Gordano (2024) find that firms with strong governance structures are better positioned to adopt circular business models. Similarly, Dobrick (2025) demonstrates that ESG ratings function as systemic risk indicators influencing asset pricing and firm valuation further validating the inclusion of sustainability-related risks within FAR analysis.

From a fiscal governance perspective, Pomeranz and Vila-Belda (2019) emphasize that regulatory effectiveness depends on the institutional capacity to enforce risk-based compliance. Integrating sustainability risks into transfer pricing, therefore, is meaningful only when tax administrations can assess and verify ESG exposures through

standardized documentation. In Indonesia, this institutional architecture is already taking shape, POJK 51/2017 mandates sustainability reporting for listed firms, Perpres 98/2021 introduces carbon pricing mechanisms, and PMK 172/2023 aligns transfer pricing documentation with OECD standards. The forthcoming PSPK 1 and PSPK 2, adapted from IFRS S1 and S2, will by 2027 establish standardized, auditable sustainability disclosures (Ikatan Akuntan Indonesia, 2023). Together, these instruments institutionalize sustainability risks as financially relevant and legally reportable laying the groundwork for their integration into tax and transfer pricing frameworks.

Linking ESG Risks to OECD Comparability Factors

For sustainability risks to affect transfer pricing outcomes, they must align with the OECD comparability framework risk identification, risk control, and financial capacity to bear consequences (OECD, 2022). In this study, these criteria serve as the analytical bridge between ESG exposures and arm's length outcomes. The operational mapping matrix that aligns ESG categories with Indonesian and international regulations is provided in Methodology: Stage 2 and subsequently applied to corporate disclosures in Section 4 to guide empirical interpretation.

Research Gap and Theoretical Positioning

The synthesis above reveals several gaps: (i) conceptually, FAR and FARME acknowledge sustainability but lack a structured method to operationalize ESG risks within the ALP; (ii) methodologically, prior studies do not offer a transparent, replicable risk-mapping protocol linking ESG data to OECD comparability factors; (iii) regulatorily, there is limited integration between Indonesia's ESG framework and FAR documentation; (iv) quantitatively, a sustainability risk premium remains underdeveloped; and (v) governance-wise, few works examine Sustainable FAR as a fiscal instrument supporting circular-economy objectives.

To address these gaps, the study positions Sustainable FAR at the intersection of transfer pricing governance, ESG disclosure, and circular-economy policy. It draws on Legitimacy Theory (Suchman, 1995), Stakeholder Theory (Freeman, 1984), and Dynamic Capabilities to explain how firms internalize sustainability risks and why these should be reflected in profit allocation under the arm's length principle.

RESEARCH METHOD

Research Design

This study adopts a qualitative exploratory design, consistent with its objective of developing a conceptual and operational model Sustainable FAR Analysis that extends the traditional Function–Assets–Risk (FAR) framework to include sustainability-related risks. A qualitative approach is particularly suitable for three reasons. First, the integration of sustainability risk into transfer pricing (TP) remains a nascent area of inquiry, with limited prior frameworks; exploratory design allows flexibility in identifying patterns and generating new theoretical insights rather than testing pre-defined hypotheses. Second, as Braun and Clarke (2019) argue, qualitative exploration facilitates the discovery of recurring themes across heterogeneous sources academic research, legal instruments, and corporate disclosures especially when conceptual frontiers are evolving. Third, this approach enables triangulation between

doctrinal (legal and regulatory) analysis, analytical frameworks (OECD comparability principles), and empirical illustrations (corporate reports of Indonesia entities).

Accordingly, the research follows a multi-layered three-stage procedure, Stage 1–Literature Selection and Synthesis A systematic, PRISMA-guided integrative literature review (ILR) to synthesize prior research and identify conceptual gaps. Stage 2–Regulation Mapping The alignment of national and international regulatory instruments with OECD risk categories, the last Stage 3–Risk-Linkage and Quantification Protocol The design of a structured procedure to translate ESG exposures into measurable risk premiums under the arm’s length principle. Through these stages, the study produces both conceptual depth and operational clarity, positioning Sustainable FAR as a robust and replicable framework that connects regulatory requirements, theoretical constructs, and empirical practice.

Data Sources

The study utilizes both primary and secondary sources to ensure methodological rigor and triangulation. All data were collected from public and verifiable sources to ensure transparency and reliability. The use of both regulatory and corporate disclosures allows for a grounded understanding of how sustainability risks are articulated and managed in practice.

Stage 1: Literature Selection Protocol

The literature synthesis follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach, adapted for qualitative inquiry. The following process was undertaken a. Search Strategy: Databases searched include *Scopus*, *Google Scholar*, and *OECD iLibrary*. Boolean combinations of keywords were used, such as (“transfer pricing” AND “FAR analysis”), (“transfer pricing” AND “ESG” OR “sustainability”), (“circular economy” AND “tax governance”), and (“FARME” OR “sustainable tax framework”). Inclusion Criteria: The review primarily covered studies published between 2017 and 2025 to capture recent developments in ESG, sustainability governance, and transfer pricing. However, several earlier works predating this range were retained when they provided essential conceptual, historical, or methodological context such as earlier OECD guidelines or empirical benchmarks that shaped the evolution of the FAR framework. Exclusion Criteria: Studies unrelated to fiscal or tax dimensions of sustainability (e.g., purely environmental science) and publications predating 2017 that lack conceptual or methodological relevance to the current FAR or ESG framework. However, earlier works were retained when they provided essential theoretical, regulatory, or contextual grounding. The last, do Screening and Synthesis, from 120 initial records, duplicates and non-relevant items were removed, leaving 42 studies categorized into three thematic clusters: (1) FAR and TP methodology, (2) ESG and sustainability governance, and (3) circular economy and fiscal policy linkages.

The synthesis of these studies forms the theoretical foundation summarized in the literature review and serves as the conceptual input for developing the Sustainable FAR framework.

Stage 2: Regulation Mapping

Stage 2 focuses on developing an operational matrix that embeds sustainability-related regulations into transfer pricing risk analysis. The mapping aligns Indonesian and international regulatory instruments with OECD risk categories and identifies

embedded ESG elements such as carbon costs, CSR expenditure, or governance disclosure. The resulting *Regulation–Risk Mapping Matrix* serves as the methodological foundation for later empirical interpretation in Chapter 4. Regulation risk mapping matrix can be seen at Table 2.

Table 2. Regulation Risk Mapping Matrix

ESG Risk Category	OECD Comparability Factor	Indonesian Regulation / Global Standard	Example of Control & Financial Capacity	Implication for TP
Environmental (carbon, waste)	Operational & Financial risk	Perpres 98/2021; Permendag 10/2021; IFRS S2	Local entity bears cost of carbon credits, waste recycling	Entitles higher margin for risk-bearing entity
Social (CSR, community)	Market & Operational risk	POJK 51/2017	Subsidiary manages local CSR programs & labor compliance	CSR expenditure treated as controlled risk
Governance (ethics, oversight)	Strategic & Legal risk	PSPK 1 (IFRS S1)	Board-level ESG oversight; compliance cost	Governance costs reflected in profit level
Supply Chain	Market & Operational risk	CBAM readiness; ISPO/RSPO standards	Supplier audit costs borne locally	Risk premium through functional comparability
Reputation	Market & Strategic risk	Soft law & stakeholder expectations	ESG branding and stakeholder trust managed locally	Intangible control premium recognized

Source: Author's synthesis of OECD (2022), POJK 51/2017, Perpres 98/2021, PSPK 1–2, IFRS Foundation (2023).

This matrix operationalizes the link between ESG obligations and the OECD's comparability criteria, forming the analytical bridge for Stage 3.

Stage 3: Risk-Linkage and Quantification Protocol

The third stage represents the methodological innovation of this study. A structured protocol that connects sustainability exposures to the OECD's framework of risk control and financial capacity. The protocol involves four sequential steps: (1). **Identification of ESG Risks:** Extract relevant indicators from corporate sustainability reports and the PSPK 1–2 disclosure taxonomy. Classify them into environmental, social, governance, supply-chain, and reputational categories; (2). **Determination of Risk Ownership:** Assess which entity within the value chain exercises control over the sustainability-related risk. Under OECD (2022) control implies decision-making authority combined with the ability to manage outcomes; (3). **Assessment of Financial Capacity:** Evaluate whether the entity has sufficient financial capability to bear the consequences of the risk, as specified in OECD (2022). Measurement proxies include compliance costs, ESG expenditure ratios, carbon credit costs, and assurance/audit expenses; (4). **Computation of the Sustainability Risk Premium:** Where ESG risks are

demonstrably controlled and financed by the local entity, a risk premium is warranted. The formula applied is as Formula 1 below.

$$\Delta P = (\Delta ESG_Cost \times Control_Factor) \quad (1)$$

The Control Factor, adapted from OECD (2022) and UN DESA (2021), ranges between 0.1 and 0.3 to reflect variations in managerial control intensity and risk complexity.

Illustrative Computation Example

Environmental compliance costs (e.g., carbon credits and waste management) typically represent about 0.8% of sales among Indonesian listed firms (e.g., Astra International, 2023). Applying a control factor of 0.2 yields a margin uplift of approximately +0.8 percentage points (pp). Similarly, CSR expenses averaging 0.3% of OPEX result in a +0.3 pp uplift for social risk, while governance and supply-chain exposures justify additional adjustments of +0.2 pp and +0.5 pp, respectively.

These indicative margin uplifts (ΔP) are not empirical test results, but *policy-calibrated estimates* grounded in publicly available sustainability data and OECD guidance. They illustrate how ESG-related exposures can be expressed as quantifiable risk premiums consistent with the arm's length principle that "returns must follow all risks."

Data Analysis and Interpretation

Data were analysed using reflexive thematic analysis (Braun & Clarke, 2019), enabling iterative interpretation of relationships among literature, regulatory mapping, and corporate disclosures. The process involved three analytical coding cycles: a. Descriptive Coding: Tagging ESG risk categories, regulatory anchors, and control indicators., b. Analytical Coding: Identifying cross-linkages between ESG exposures and risk control under OECD guidelines. And c, Interpretive Coding: Theorizing how sustainability risks substantively justify profit reallocation under the arm's length principle. The resulting thematic synthesis is later summarized in Tables 3 and 4 within the Results and Discussion section.

Validity, Reliability, and Trustworthiness

To ensure methodological rigor, this study adopted validation strategies adapted from Nowell, Norris, White, and Moules (2017), covering four trustworthiness criteria: credibility, dependability, confirmability, and transferability. Credibility was ensured through triangulation across literature, regulations, and corporate disclosures to verify consistency of findings. Dependability was maintained through a transparent audit trail documenting data selection, coding, and mapping processes. Confirmability relied on reflexive journaling, which recorded analytical reflections to reduce researcher bias and strengthen interpretive transparency. Transferability was achieved by providing thick descriptions of Indonesia's regulatory and institutional context, enabling comparison with similar governance settings. Together, these measures ensured transparency, consistency, and reliability in developing the Sustainable FAR framework.

RESULTS AND DISCUSSION

This section presents and interprets the empirical and analytical results derived from the study’s three-stage methodological framework: literature synthesis, regulation mapping, and risk-linkage quantification. The findings confirm that sustainability-related risks can be systematically embedded within the FAR framework, thereby operationalizing the OECD principle that “*returns must follow risks*”. Four main dimensions structure the discussion: (1) the conceptual transition from traditional FAR to Sustainable FAR, (2) the mapping of ESG risks within Indonesia’s regulatory context, (3) the quantification of sustainability-related risk premiums, and (4) empirical illustrations drawn from Indonesian listed firms. Collectively, these results underscore that sustainability obligations are not peripheral to transfer pricing analysis; rather, they constitute measurable and allocable business risks that justify adjustments in profit allocation.

From Traditional FAR to Sustainable FAR

The first key finding highlights the conceptual transformation of the traditional FAR framework when sustainability-related risks are incorporated. Table 3 compares the traditional and Sustainable FAR approaches, showing how the latter expands the analytical scope beyond financial and operational categories to include environmental, social, governance, and reputational dimensions.

Table 3. Comparative Overview: Traditional FAR vs. Sustainable FAR

Aspect	Traditional FAR	Sustainable FAR (This Study)
Risk Types	Market, credit, operational, financial, legal	+ ESG (environmental, social, governance), supply-chain, reputational
Data Sources	Financial statements, intercompany contracts	+ Sustainability reports, PSPK 1–2 disclosures, POJK 51/2017 data
Analytical Logic	Profit margin based on commercial risks	Profit margin adjusted for sustainability exposures
Outcome	Arm’s length return limited to traditional risks	Arm’s length return incorporates ESG risk premium
Policy Orientation	Compliance mechanism	Governance instrument aligned with circular economy policy

Source: Compiled and interpreted by the author

These findings suggest that the conventional FAR captures only part of the risk landscape faced by modern enterprises. Sustainable FAR introduces a broader and more adaptive structure that recognizes sustainability obligations as both financial and strategic exposures, enabling tax authorities and corporations to align TP practices with broader governance and sustainability goals.

ESG Risk Mapping within Indonesia’s Regulatory Framework

The second finding builds on the Stage-2 Regulation Mapping developed in Chapter 3. Indonesia’s evolving regulatory framework spanning fiscal, environmental, and governance domains already provides clear entry points for embedding ESG risks into transfer-pricing documentation. Table 4 illustrates how selected Indonesian listed firms reflect these regulatory linkages in their sustainability reporting.

Table 4. ESG Dimensions, Regulations, and FAR Implications

ESG Dimension	Key Regulation	Example (IDX Firm)	Source	FAR Implication
Environmental	Perpres 98/2021 (carbon pricing), Permendag 10/2021 (e-waste)	Astra International (ASII)	Sustainability Report 2023, p.72 (KPI ESG), p.76 (emission reduction initiatives), pp.88–91 (solid waste tables & consolidation notes), p.98 (environmental cost)	Compliance with carbon credit & waste obligations borne locally → upward margin adjustment (TNMM) for risk-bearing entity
Social	POJK 51/2017 (CSR disclosure)	Unilever Indonesia (UNVR)	Sustainability Report 2023, p.98	CSR & community obligations managed and financed locally → supports risk ownership & profit attribution
Supply Chain	EU CBAM readiness, ISPO/RSP0	UNVR	Sustainability Report 2023	Supplier audit & traceability costs borne locally → functional comparability adjustment
Reputation	Stakeholder and brand expectations	ASII, UNVR	ESG reports, pp.70–75	Local stewardship of brand/reputation under ESG → potential intangible control premium

Source: Compiled and interpreted by the author

These illustrations show that sustainability exposures once viewed as qualitative are now financially measurable and institutionally anchored. Each ESG dimension corresponds to a regulatory mandate and a clear control structure, satisfying the OECD comparability tests of risk identification, control, and capacity. For example, ASII’s carbon-credit expenditure under *Perpres 98/2021* demonstrates local risk assumption, while UNVR’s CSR initiatives under *POJK 51/2017* reflect direct financial responsibility. BCA’s governance disclosures under *PSPK 1–2* further confirm that oversight costs are embedded within fiscal performance validating ESG costs as legitimate elements in profit allocation under the arm’s-length principle.

Quantification of Sustainability Risk Premiums

The third finding applies the Stage-3 Risk-Linkage and Quantification Protocol. ESG exposures are translated into measurable adjustments in profit margins through the following relationship as Formula 2.

$$\Delta P = (\Delta ESG_Cost \times Control_Factor) \quad (2)$$

Where ΔP denotes the indicative margin uplift and the Control Factor (0.1–0.3) reflects the degree of risk controllability. Table 5 presents the resulting model and indicative values.

Table 5. Sustainability Risk Premium Computation Matrix

ESG Category	Cost/Variance Driver	Measurement Proxy	Calculation Formula	Indicative Margin Impact (ΔP)
Environmental	Carbon credit & waste compliance	Δ ESG-related OPEX / Revenue	Premium = $(\Delta \text{Cost Control Factor}) \times$	+0.8 percentage point (pp)
Social	CSR expenditure & local labor compliance	Δ CSR / OPEX	Premium = $(\Delta \text{Cost} \times 0.15)$	+0.3 pp
Governance	Audit, reporting, compliance oversight	Δ G&A / Profit	Premium = $(\Delta \text{Cost} \times 0.10)$	+0.2 pp
Supply Chain	Supplier audit & traceability	Δ Audit Cost / Revenue	Premium = $(\Delta \text{Cost} \times 0.20)$	+0.5 pp
Total ESG Premium				1.5–2.0 pp

Source: Author’s calibration based on OECD (2022), UN DESA (2021), and public ESG disclosures (Astra, Unilever, BBCA 2023).

To illustrate, consider a limited-risk distributor (LRD) with an existing margin of 3 percent. Suppose new e-waste compliance costs under *Permendag 10/2021* increase operating expenses by 0.8 percent of revenue. Applying a control factor of 0.2, the sustainability risk premium equals:

$$\Delta P = (0.8\% \times 0.2) = 0.16\%$$

The revised arm’s length margin thus becomes:

$$3.00\% + 0.16\% = 3.16\%$$

This simple computation demonstrates how sustainability-related costs, once verified and attributable, can justify upward margin adjustments. Beyond compliance, the approach introduces a standardized method for comparing ESG related exposures across industries thereby enhancing fairness and transparency in transfer pricing assessments.

Empirical Illustrations: IDX-Listed Firms

Empirical evidence from selected Indonesian listed companies further validates the Sustainable FAR framework. Table 6 summarizes key ESG initiatives and profitability indicators.

These examples confirm that strong ESG governance coexists with solid profitability. Sustainability obligations enhance rather than diminish firm performance, reinforcing the premise that ESG-related risks when controlled locally should be recognized in transfer-pricing outcomes.

Table 6. Sustainability Disclosures and Profitability Indicators

Company	Sector	Key ESG Initiatives	Net Profit Margin	Evidence of ESG Risk Control
ASII	Conglomerate	Carbon reduction; e-waste compliance; circularity	10.3%	Subsidiaries directly manage carbon & waste obligations; consolidated measurement and environment cost recognized
UNVR	Consumer Goods	Plastic reduction, waste collection, supplier traceability, CSR	9.6%	Local entity funds CSR & supplier audits; social/reputation risk borne locally
BBCA	Banking	ESG governance & risk oversight; audit & compliance	57.8%	Board/committee oversight; documented audit/compliance workload & processes

Source: Compiled selected IDX companies (FY 2024) and interpreted by the author

Discussion

Alignment with OECD Framework

The integration of sustainability risks into FAR is consistent with the OECD's overarching principle that *"returns must follow risks."* Under Sustainable FAR, this maxim is expanded to include ESG and circular-economy risks, acknowledging that entities assuming sustainability-related obligations perform value-creating functions deserving of appropriate returns. By grounding ESG risk attribution in verifiable disclosures such as *POJK 51/2017* and *PSPK 1–2* the framework ensures that claims of sustainability exposure are evidence-based and auditable, not narrative assertions. Just as Palea et al. (2024) demonstrate that stakeholder engagement and sustainability reporting act as primary governance drivers of circular economy adoption globally. This alignment strengthens the credibility and defensibility of TP documentation for both taxpayers and tax authorities.

Integration with Circular Economy Governance

Sustainable FAR also contributes to the broader paradigm of Circular Economy Governance (CEG) by linking fiscal mechanisms to environmental and social objectives. Three distinct pathways emerge from the analysis, 1. Resource Recovery: Entities responsible for recycling and e-waste management incur additional costs and risks, warranting higher profit margins. 2. Waste Reduction: The implementation of carbon pricing and green logistics introduces new operational exposures that reshape value creation and justify risk-based adjustments. The last one, 3 Fiscal Incentivization: Integrating sustainability risk premiums with carbon credit mechanisms and tax incentives aligns corporate taxation with environmental and circular economy policies. Through these channels, transfer pricing evolves from a compliance mechanism into a proactive fiscal policy instrument supporting sustainable development. Research Cramer (2022) highlights that circular economy transitions require effective integration

of ESG risks. Empirical evidence from Indonesia supports this, showing that sustainability disclosure correlates with firm performance (Zarefar et al., 2022).

Policy and Governance Implications

For tax authorities (DGT), the Sustainable FAR model provides a structured basis for risk-based audits that identify sustainability obligations as indicators of value creation and control. For corporate taxpayers, it offers a defensible and transparent documentation framework that aligns TP compliance with ESG reporting. For policymakers, it bridges fiscal and environmental regulation, reinforcing Indonesia's commitments under the Paris Agreement and national carbon economy policies. This interpretation is consistent with Burgstaller (2022) and Greil et al. (2023), who emphasize that ESG reshapes value creation and risk allocation.

Theoretical Synthesis

From a theoretical standpoint, Sustainable FAR synthesizes three key perspectives, by Legitimacy Theory, firms achieve fiscal and social legitimacy through transparent recognition of sustainability risks within their profit allocation structures. In other side, Stakeholder Theory, Corporate tax behavior reflects the growing stakeholder demand for ethical, responsible, and sustainable governance, while Dynamic Capabilities Theory: Organizations that proactively manage ESG risks develop adaptive fiscal competencies that enhance long-term resilience and compliance. These perspectives collectively illustrate that Sustainable FAR transforms transfer pricing from a static administrative requirement into a dynamic governance architecture integrating fiscal fairness, sustainability accountability, and institutional adaptability.

CONCLUSION AND SUGGESTIONS

This study set out to reformulate the FAR framework within transfer pricing analysis by embedding sustainability-related risks environmental, social, governance (ESG), supply-chain, and reputational into a unified analytical model termed Sustainable FAR Analysis. Through a qualitative exploratory approach combining an integrative literature review, regulation mapping, and a structured risk-linkage protocol, the study demonstrates that sustainability risks are not peripheral to fiscal analysis but are material and measurable factors that influence profit allocation.

Three principal findings emerge. First, the conceptual expansion of FAR is both necessary and feasible. Sustainable FAR corrects this limitation by formally incorporating ESG-related risks into the analytical process. Second, the regulatory and methodological integration achieved through this study shows that Indonesian regulations already provide a solid institutional foundation for incorporating sustainability disclosure into tax governance. Sustainable FAR operationalizes these regulations by aligning ESG data with the OECD's comparability factors of risk identification, control, and financial capacity. Third, the research introduces a quantifiable mechanism for incorporating sustainability exposures into arm's length profit determination. The proposed computation template yields a measurable sustainability risk premium of approximately 1.5–2.0 percentage points, reflecting the incremental costs and responsibilities borne by entities managing ESG risks. This mechanism provides both analytical transparency and practical utility for taxpayers, advisors, and regulators.

Collectively, these findings establish Sustainable FAR not merely as a theoretical contribution but as a practical governance tool capable of linking fiscal transparency with sustainability accountability under the emerging paradigm of circular economy governance.

This research contributes to the understanding of international taxation and corporate governance in three keyways. First, it redefines risk under the arm's length principle by expanding the OECD's notion that "returns must follow risks" to include sustainability-related exposures. It recognizes that ESG compliance and circular economy commitments represent genuine business risks that should influence profit allocation. Second, it integrates multiple theoretical perspectives to explain how firms internalize sustainability responsibilities within their fiscal and organizational practices. In this view, tax behavior becomes part of strategic governance that strengthens both fiscal credibility and stakeholder confidence. Third, it connects fiscal and sustainability reporting, linking transfer pricing documentation with mandatory sustainability disclosures. This integration advances the concept of Sustainable Tax Governance, in which taxation and sustainability operate as complementary pillars of corporate accountability.

The Sustainable FAR framework has several practical implications across corporate, regulatory, and policy domains. The Corporate Taxpayers can use ESG disclosures as verifiable proof of risk control and value creation, thereby justifying equitable profit allocations and reducing exposure to tax disputes. For the Directorate General of Taxes, Sustainable FAR introduces a risk-based audit instrument that identifies sustainability exposures as key indicators of complexity and value creation. This enables more precise risk scoring and resource allocation in audit selection. By adopting such an approach, the DGT can strengthen fiscal transparency, minimize litigation, and demonstrate readiness for the OECD's Tax Administration 3.0 era, where data-driven governance is central. In addition, at the policy level, Sustainable FAR supports the integration of fiscal, environmental, and sustainability objectives. The framework thereby positions Indonesia as a regional leader in developing sustainable tax governance practices bridging ESG compliance, fiscal fairness, and economic resilience.

While the study provides a novel and operationally feasible framework, several limitations should be acknowledged. First, data availability remains a constraint, as ESG disclosure quality and depth vary considerably across firms, limiting cross-industry comparability. Second, measurement consistency is still evolving. Differences in assurance standards and rating methodologies among ESG evaluators create potential disparities in quantifying sustainability risks. Third, the research remains conceptual and exploratory, focusing on model development rather than large-scale empirical validation. Finally, institutional constraints such as the administrative capacity of tax authorities to process and verify ESG data may affect the short-term applicability of the model. These limitations are, however, transitional, and are expected to diminish as standardized sustainability reporting (PSPK 1–2) becomes mandatory by 2027.

Building on this study, future research could proceed along primary directions, (1) Quantitative Validation: Empirical testing of the Sustainable FAR framework using financial and sustainability data to measure the relationship between ESG exposures and profit level indicators (PLIs) across sectors; (2) Comparative Jurisdictional Analysis: Application of the framework in other emerging economies such as Malaysia, Vietnam,

or India to assess institutional adaptability and alignment with OECD comparability standards.

This study concludes that transfer pricing should move beyond its traditional function as a compliance tool and serve as a strategic governance framework that reflects a company's real exposure to sustainability and circular economy risks. Integrating ESG dimensions into the FAR framework, the Sustainable FAR model provides a forward-looking approach that connects fiscal policy with the broader goals of sustainable development. In essence, Sustainable FAR redefines how taxation, sustainability, and corporate governance interact.

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