

INFLUENCE OF EU'S ANTI-MONEY LAUNDERING DIRECTIVES ON NON-EU DEVELOPING COUNTRIES MONEY LAUNDERING RISKS: A COMPLIANCE-FRAMEWORK PYRAMID ANALYSIS

GHULAM MUJTABA MALIK

PH.D. SCHOLAR, DEPARTMENT OF CRIMINAL LAW AND CRIMINAL JUSTICE, FACULTY OF LAW AND POLITICAL SCIENCE, UNIVERSITY OF SZEGED, EMAIL: gh.mujtaba@hotmail.com

TANIYA AHMED

PH.D. SCHOLAR & TEACHING ASSISTANT, DEPARTMENT OF CRIMINOLOGY, UNIVERSITY OF SINDH JAMSHORO, EMAIL: taniya.channa@usindh.edu.pk

TANVEER AHMED DAUDANI

PH.D. SCHOLAR, DEPARTMENT OF CRIMINOLOGY, UNIVERSITY OF SINDH JAMSHORO, EMAIL: tanveershantul39@gmail.com

RAZA ALI MARI

LL.M SCHOLAR. INSTITUTE OF LAW, UNIVERSITY OF SINDH JAMSHORO EMAIL: razaalimarri941@gmail.com

Abstract

Money laundering (ML) and terrorist financing (TF) continue to pose considerable threats to the global economy landscape, compromising financial stability and governance. This research analyzes the extraterritorial reach of European Union (EU) Anti-Money Laundering Directives (AMLDs) on non-EU developing nations, applying the Hierarchical Compliance Pyramid to embed technical FATF conformity, substantive EU convergence, and behavioural efficacy. The mixed-methods design combines panel data from 100–140 countries (2014–2023) with FATF mutual evaluations report (MER) scores, Basel AML Index rankings, and EU transposition measures, and merges these with qualitative case studies of Pakistan, Ghana, and Georgia. Fixed-effects regression findings show that technical compliance with FATF greatly decreases ML risk, but EU AMLD alignment contributes incremental benefits—particularly in those countries with high-quality FATF foundations. Still, behavioural effectiveness (Tier 3) is the exception due to capacity and governance limitations. The conclusions provide tier-level policy guidance to the EU, developing nations, and external funders, adding both to compliance theory and to useful strategies for improving AML/CTF effectiveness worldwide.

Keywords: Anti-Money Laundering, FATF Compliance, EU AML Directives, Compliance Pyramid, Basel AML Index, Regulatory Spillover, Behavioural Effectiveness, Financial Governance, Developing Countries, Extraterritorial Regulation

1. INTRODUCTION

Money laundering (ML) and terrorist financing (TF) continue to be one of the most dangerous threats to the global economic security, a weakening of the governance frameworks, a disruption of the market, and the destabilization of financial systems. A decade or so following the rulemaking, the international community continues to grapple with the endemic lack of consistency between formal compliance and risk mitigation. It is in this light that the contribution of investigating the effects of the European Union (EU) Anti-Money Laundering Directives (AMLDs) on developing countries that are not members of the EU is a timely and an essential contribution. It is built on the notion, which states that financial crime has no borders and that the effectiveness of one jurisdiction to protect against it corresponds to the effectiveness and unity of its peers. Understanding how EU best practices (which are one of the most demanding worldwide) overflow into the developing economies is no longer the prerogative of pure academic interest but directly of policy concern.

The 21st century has been characterized by the ever changing laundering networks, exploiting the weaknesses in international coordination and implementation of laws. In an emotional sense, the international system of governance, which is the most influential, is the FATF recommendations and the EU AMLDs, have become the moving force of the campaign against financial crime. The EU AMLDs are developed within a strict adherence to the framework of the FATF to follow a more risk-based approach to supervision in order to promote the transparency, due diligence, and multiply cross-border collaboration. Although these directives have been shown to exert a demonstrable effect in the EU, their extraterritorial effect, especially on the low-and-middle-income

non-EU nations, is uneven and based on the disparity in regulatory capability, institutional maturity and enforcement culture.

Despite the diffusion of FATF technical compliance and qualitative EU regulatory spillovers studies (Bradford, 2020; Manning et al., 2020), little literature considers such dynamics in a multi-layered compliance framework to understand the lack of correlation between formal legal convergence into the risk reduction that it may produce. This is more so in such jurisdictions where the concentration of income, quality of governance and institutional capacity have significant contribution to the effectiveness of AML and CTF supervision (Verdugo Yepes, 2011). Reforms by the EU in the majority of the developing nations have produced compliance of the tick-box-commentary of compliance; legal transposition without substantive enforcement; leading to questions of sequencing and circumstances under which compliance with the EU AMLDs will bring behavioural change.

To address this deficiency, this study suggests a Hierarchical Compliance Pyramid - a three-level analytical framework that integrates: (i) Technical FATF Compliance (low level) focusing on compliance in legislation and procedures; (ii) Substantive EU Alignment (mid level) which quantifies adoption of EU-related risk-based compliance requirements such as customer due diligence and beneficial ownership registers; and (iii) Behavioural Effectiveness (top level), which is measured by real reduction in ML/TF risks, enforcement measures, and conviction rates. The combination of quantitative (2014-2023 FATF MER scores, 2014-2023 Basel AML Index) and qualitative (case studies of Pakistan, Ghana, and Georgia) data enables this research to provide a balanced and tier-sequenced explanation of the compliance development in the non-EU developing countries.

As such, the research is informed by three principal research questions:

1. How do non-EU developing states move along the technical, substantive, and behavioural tiers of AML compliance?
2. Under what conditions does substantive EU AML alignment (Tier 2) become a driver of decreased AML/CTF risk (Tier 3)?
3. Which enforcement levers at each tier push upward progress in compliance maturity?

This study is enhanced by the fact that it specially focuses on the extraterritorial effect of EU AMLDs. The majority of the literature that exists has considered AML compliance in the context of compliance with FATF recommendations that represent the international minimum standard. However, relatively little has been done to examine whether going beyond this standard, by half or full transposition of EU directives, can add value to reducing the ML risk. With a three-level Hierarchical Compliance Pyramid that incorporates technical FATF compliance, substantive EU convergence, and behavioural efficacy, this study provides a more profound and deeper explanation of the effect of compliance maturity in practice. The paper overturns this premise by showing that a legal transposition even without the ability to enforce does not materially reduce the risk, and that sequencing reform, as well as a positive relationship between legislative change and enforcement capacity building, are worthwhile.

The second source of justification is the issue of practicality on the side of the developing nations. The resources of most of these jurisdictions are limited (financial, human and institutional). Most of them are usually characterized by conflicting policy priorities such as poverty reduction, debt repayment and provision of public services which preclude enforcement and compliance. The study demonstrates that meeting the technical aspects of the FATF standards is often achieved with the aid of donors, but the shift towards EU material compliance and, more crucially, behavioural effectiveness would require the political determination of the home country and a massive capacity building. The outcomes can be used by governments and international bodies to temper their expectations. They also caution against establishing over-optimistic timeframes before EU AMLD transposition can be made in the face of environments where primitive FATF compliance has only recently been made stable, without encountering so-called compliance fatigue or tick-box compliance.

The benefits of this study are also the introduction of a contribution to the academic theory. The research provides the disjuncture between the abstract and concrete in the regulatory theory by the application of the Ayres and Braithwaite enforcement pyramid to a three-level model of compliance specific to AML and CTF. The concept of conditional complementarity where EU congruence is strongest in existing jurisdictions that have high FATF technical congruence, offers a finer understanding of the interaction between regulatory layers. The study does not view compliance as it can be either yes or no but as a cumulative incremental process, where the success of the upper levels cannot be attained without the establishment of lower-tier foundations in the firm. This would be particularly handy to researchers studying regulatory spillover effects and the Brussels Effect since it suggests that the capacity of the EU to export its own regulatory framework is not uniform but highly dependent on whether the recipient nation has an absorptive ability or not.

Besides, the study is significant because of its methodological power. Using panel data of up to 140 developing nations that are not EU in nearly 10 years, it has offered strong statistical support that FATF technical compliance is the strongest single predictor of lower money laundering risk. It is also indicative that the incremental effect of EU AMLD alignment is statistically discernible and that the combination of the two has the most significant risk reduction. They are not anecdotal results but statistically proven and give sound basis on policy planning. The qualitative case studies have added value and depth as the numbers will be translated into actual world paths in such countries as Pakistan, Ghana, and Georgia. These examples can be used to demonstrate that despite the differences in compliance processes, sequential and conditional logic of the compliance pyramid is applicable worldwide, which gives external validity to the model.

The merit of introduction of case studies is that they may reveal the lived experience of compliance building. The post-greylist drive in Pakistan demonstrates the way in which the external pressure can lead to the initiation of reform and the way in which momentum can be forgotten once the crisis is over. Ghana shows how Tier 1 progress with donors only and no EU-specific adjustment is weak, whereas Georgia provides a unique example of Tier 3 success, although it requires sustainability issues. Such cases teach lessons to policy makers and researchers both on what works, what fails, and where failure is imminent. This human touch - of showing how reforms are practiced in the field- makes the study particularly helpful to practitioners who are developing interventions that are forced to address the issue of political economy and institutional opposition.

Another reason why the research is important is that it adds to the extraterritoriality of the regulations and sovereignty debate. The use of AMLDs as an external control measure by the EU raises serious questions regarding proportionality, fairness and negative impact of high compliance cost on the emerging economies. The research does not fall into the same trap of the same regulation by statistically demonstrating that the compliance with the AMLD regulations is only beneficial in cases that have the strong FATF pillars. It implicitly presents the argument of a more tailor-made, cooperative approach that respects local advantages but still moves towards higher global standards. It is the balance that is required in ensuring that AML efforts are not unwittingly leading to financial exclusion, the de-risking of international banks, or the work that would otherwise be lawful economic activity in developing countries.

In general, such a study is justified not only by the seriousness of the ML threat but also by the fact that there is no in-depth tiered analysis that links FATF compliance, EU AMLD transposition, and actual risk mitigation. It has value in its offering a complete, evidence based and theoretically novel array of concepts which contribute in our better understanding the emergence of compliance. Three-dimensional-strengthening theory, informing policy, educating donors, and finally resulting in safer and more transparent financial systems, which protect societies against the poisonous impact of financial crime, is its strength. By demonstrating that the way to achieve successful AML and CTF regulation is not linear and legislative, but conditional, progressive, and based on capacity, this study bridges some of the gaps between international standards and local realities. Solutions that come out are therefore invaluable towards producing a future where developing countries not only meet the international standards but also project them to the actual safeguarding of their economy and people.

The rest of the paper is organized as follows: Section 2 provides an overview of the literature on EU AMLD spill-over effects, FATF compliance challenges, and theoretical compliance models. Section 3 outlines the Hierarchical Compliance Pyramid as the theoretical framework. Section 4 explains methodology, data sources and operationalisation of tiers. Section 5 reports empirical findings, including regression analysis and case study findings. Section 6 reports theoretical and policy implications and Section 7 conclude with specific recommendations for the EU, developing countries, and international donors.

2. LITERATURE REVIEW

The EU AMLDs are one of the most advanced supranational approaches created to battle ML, TF and associated financial crime. Evolving from the beginning of the 1990s, the directives have changed over time due to the greater sophistication of illicit financial flows, wider internationalized markets, and the increasingly international nature of financial crime. From the initial AML Directive of 1991 to the latest Sixth AML Directive (6AMLD) taken in 2021, the EU has increasingly developed its strategy to include customer due diligence (CDD) obligations, beneficial ownership (BO) disclosure, cross-border supervisory cooperation, and criminalising ML crimes (Kirschenbaum & Véron, 2020). Each update of the AMLDs demonstrates not only a legislative and regulatory reaction to perceived gaps in the international AML and CFT regime, but also an affirmation of the EU's position as a global standard setter in financial governance.

The guidance closely tracks the FATF recommendations, the intergovernmental standard-setting institution created in 1989. FATF's 40 Recommendations provide the global AML benchmark standard, such as CDD, record keeping, suspicious transaction reporting (STR), and international cooperation (FATF, 2020). Yet the EU tends to go further than the FATF's minimum requirements by imposing stricter levels and binding requirements. For example, although FATF pushes the risk-based supervision principle, the EU has enacted obligatory BO registers, increased due diligence on politically exposed persons (PEPs), and stricter standards for cross-border data sharing (Mitsilegas, V., & Vavoula, N., 2016). This is not a coincidence but by design, demonstrating the EU's effort to influence international financial regulation consistent with its policy agenda.

This mechanism of regulation has been thoroughly analyzed through the theoretical context of the so-called Brussels Effect which has been fused by Bradford (2020) to describe the ability of the EU to export its regulatory interests to the world economy unilaterally. The EU basically coerces non-members to internalize its standards and other multinational firms by threatening to lose access to European markets due to the ability to pool its enormous single market, which is believed to be one of the biggest and the most profitable in the world. The application of the Brussels Effect in the field of AML and CTF is experienced as the extraterritorial effect of the EU law. Banks, financial institutions, and non-EU outside correspondents must meet the increased levels of the AMLDs in case they would like to access the EU markets and extend the boundaries of European regulations to a vast scope that extends beyond its territorial scope (Bradford, 2020; Lavenex, 2004).

This extraterritoriality has caused a scholarly rift on whether the EU is playing more of a role of international control over financial integrity or the enforcer of the markets. According to Lavenex (2004), the regulatory diffusion of the EU cannot just be considered as an act of altruistic exportation of norms but must be contextualised against the broader background of the internal weaknesses of the EU to financial crime. Similarly, Vogt (2017) mentions that even though the international legitimacy is achieved through the adherence to FATF standards, the exceeding of FATF standards by the EU is a conscious exercise of its regulatory power. The increased standards not only shield the EU against criminal inflows to its financial system, but also, with respect to the potential to affect the practices of third countries, the EU assumes the normative leadership role.

The AMLDs express this desire using a number of mechanisms. The Fourth AML Directive (2015) introduced an extraordinary scope of the AML compliance with respect to new groups of professionals such as lawyers, accountants, and real estate agents and the need to create the central registries of BO. Fifth AML Directive (2018) introduced more transparency, augmented scrutiny of virtual currencies, and increased observation of the high-risk third countries (Vogt, 2017). The Sixth AML Directive (2021) went even further by harmonizing the definitions of ML across the member states and criminal liability which was also not restricted to natural persons but extended to a legal person. These instructions are only strictly speaking binding on the EU member states but are *de facto* global norms, as the financial institutions and third-country jurisdiction have to align themselves to do so, lest they become ostracized of the EU market (Bradford, 2020).

In the meantime, the demand by the EU on stricter compliance with AML and CTF has occasionally conflicted with the governments of the third countries, particularly the emerging ones. As an illustration, when the European Commission categorises nations as third countries of high risk, it is likely to create more stringent monitoring and result in increased expense of operations within such nations to banks. These critics argue that this has a disproportionate impact on financial inclusion and development finance, as correspondent banks strip away services to countries which fail to meet the high standards set by the EU (Kirschenbaum and Veron, 2020). The conflict between safeguarding the financial system and not being a *de-risker* of poor economies is a controversial point of international AML and CFT regulation.

The AMLDs, also, are instruments of EU foreign policy geopolitically. The EU exerts pressure on third countries, particularly its neighbors and trade partners by requiring them to access financial markets on the condition that they meet the requirements of AMLD. This has been described as a conditionality in regulation like that the pre-condition to economic and political association is convergence with European regulations (Lavenex, 2004). At this level, the AMLDs are protecting the financial system of the EU, as well as transferring European models of governance beyond its borders, solidifying the Union as an international player. Moreover, the interaction between the AMLDs and the FATF proposals reveals the intricate nature of the global and regional governance. Although FATF is setting a global standard, EU policies are a magnification of this global standard, though regionally. The EU reaction, in its turn, is the cause of the perpetual dynamism of FATF as Vogt (2017) puts it, as the latter must constantly adapt to the even more rigorous standards introduced by the former. The EU effectively turns into the rule-maker of the world in a real sense making financial actors and governments worldwide to conform to European rules. This dualism shows the special position of the EU in the world financial regulation (Ylonen, M., 2025).

The AMLDs of the EU show that supranational regulation could not only be employed as a domestic prevention domestic tool against financial crime but also as a global regulatory means. With the help of their instruments of market power, legal conditionality, and normative ambition, the EU has exercised its influence using the AMLDs to extend its influence to third-country authorities and multinational financial institutions. Although this method is a way to maintain the integrity of the international financial order, it also raises the necessary questions of sovereignty, fairness, and unintended impacts of regulatory extraterritoriality. The Brussels Effect can provide an intellectual vantage point to understand this dynamic, placing the AMLDs of the EU in the center of the global financial regulation system, access to the markets, and international power politics (Bradford, A., 2020).

However, there are wide variations in terms of the level and nature of these spill-over effects. Although the EU action has been included in the AML and CTF framework of some states to facilitate trade and financial cooperation (Mekpor, 2019), others enact only partial measures since they lack the organisational capacity or political goodwill (Pavone & Parisi, 2018). Scholars contend that EU AML and CFT power tends to work by conditionality—correlating trade preferences, market access, or aid with adherence to AML and CFT norms (Sandra Lavenex, 2004). Formal transposition of EU regulation, however, does not necessarily ensure effective enforcement, especially in low-income countries with weak governance systems (Manning, Wong & Jevtovic, 2021).

The 40+9 Recommendations of the FATF offer the principal global standard for AML and CTF regulation. FATF led regional bodies MERs evaluate technical compliance and effectiveness, but developing countries are frequently unable to deliver on these due to limited resources, poor regulatory capacity, and competing policy agendas (Verdugo Yepes, 2011; Bello & Harvey, 2017). Evidence would indicate that even though there are numerous countries which obtain legislative alignment with FATF standards, they do fail to prove behavioural compliance—measured by enforcement results, prosecutions, and conviction rates (Mekpor, 2019; Killick & Parody, 2007).

A study by Manning et al. (2021) employing Basel AML Index data established that FATF technical scores are statistically significant with respect to ML risk diminishment but intensify when combined with other regulatory

alignment, like EU directives. Nevertheless, others caution that uncontrolled legislative take-up coupled with insufficient supervisory capacity generates "tick-box" compliance and provides the illusion of change without fundamental reform (Short & Toffel, 2010; Mekpor, 2019). In addition, in contexts of political instability, AML and CFT legislation can be selectively applied, which erodes credibility and can weaponise compliance tools against political opponents (Pavlidis, 2020).

3. Theoretical Framework: The Hierarchical Compliance Pyramid

In AML and CFT regimes the gap between legal transposition and behavioral efficacy can be explained using the tools of compliance theory. The conceptualisations of compliance in Ayres and Braithwaite (1992) Responsive Regulation model and Braithwaite (2002) Enforcement Pyramid theory conceptualise the behaviour to responsiveness in which the intensity of the regulatory strategies escalate between persuasion and coercion levels. The model has been also used in other areas of governance, including the enforcement of anti-corruption (Mills, 2008) and environmental regulation (Yu and Poncet, 2013).

According to these concepts, van der Heijden and Batura (2023) emphasize that enforcement styles should be moderate to the regulatory capacity and socio-economic context of the regulated entities to be cooperative, deterrent, or punitive. Rewording it to AML and CFT, the Compliance Pyramid may be re-read in terms of three levels:

1. Tier 1 (Base): Technical FATF Compliance—legal implementation of the FATF's 40+9 Recommendations and procedural compliance (FATF MER data).
2. Tier 2 (Middle): Substantive EU Alignment—EU-specific provisions such as risk-based customer due diligence (CDD) and beneficial ownership (BO) registers (EU Commission transposition data).
3. Tier 3 (Apex): Behavioural Effectiveness—quantifiable ML and TF risk decreases, as evidenced by Basel AML Index scores and enforcement statistics.

This tiering system explains the reasons why the vast majority of developing countries remain at Tier 1 or Tier 2 and are unable to transform written compliance into tangible enforcement benefits (Verdugo Yepes, 2011; Mekpor, 2019). Such a system also complies with the results of empiricism research that states that AML and CFT risks reduction does not focus only on legal harmonisation but also on long-term investments in institutional capabilities, judicial integrity, and cross-border collaboration (Manning et al., 2021; Pavone and Parisi, 2018).

The Hierarchy Compliance Pyramid created in this paper takes the Ayres and Braithwaite (1992) Responsive Regulation model and the Enforcement Pyramid model by Braithwaite (2002) and applies them to the specific context of anti-money laundering (AML) and counter-terrorist financing (CTF) regulation. Essentially, the framework perceives compliance as a step-by-step process in a sequence of qualitatively different phases of development of regulations. The model recognizes that regulatory strategies should be dynamic, i.e. raising or lowering the strength of the enforcement by considering the observed action, capacity of the organization and signs of risk mitigation (van der Heijden and Batura, 2023). This is shown below in figure 1.

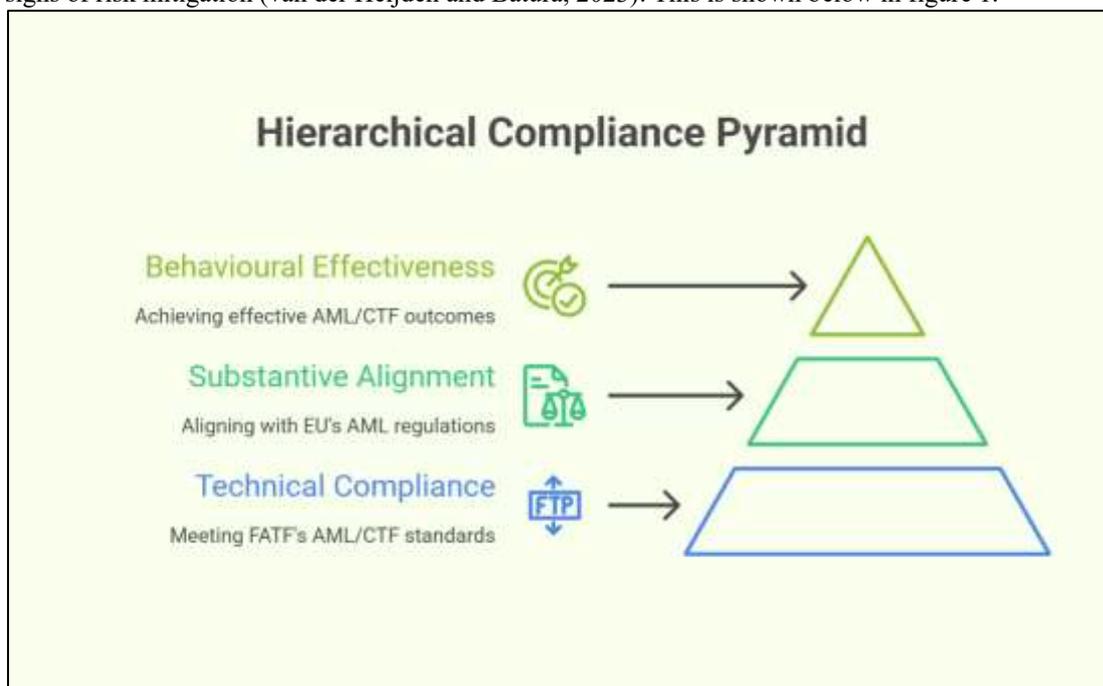


Figure 1: Theoretical Framework: The Hierarchical Compliance Pyramid

The pyramid is based on the theoretical foundation of two principles. States rise up the hierarchy when they are legally, institutionally, and operationally able to do so; regulators fall down the hierarchy as enforcement gets shown to work--one of the grand principles of responsive regulation (Ayres and Braithwaite, 1992). In AML and CFT practices, untimely move to Tier 2 without support on Tier 1 pillars may end up causing tick-box compliance-regulatory convergence but no real reduction of risks (Short and Toffel, 2010). Similarly, the countries with

inadequate capacity to sustain Tier 3 performance can anticipate de-escalation to reduce ranks or augmented external control.

The framework also encapsulates the relationship of dynamism of spillovers conditionality, in which EU AMLDs which base on FATF foundations do not fix structural governance deficiencies unless they elicit domestic transformation (Lavenex, 2004; Manning et al., 2021). This is the reason why others move very fast in Tier 1 and Tier 2 but get stalled on the way to behavioural effectiveness.

The Hierarchical Compliance Pyramid is a sequencing reform diagnosis device at the policy level. In the case of EU, it underlines the need of tier-proportional technical support, beginning with the adequate level of FATF compliance capacity, moving to EU-specific support to transposition, and finally enforcement improvement. In the case of developing countries it recommends that they should not attempt to jump the capacity building blocks in favor of rapid legislative alignment. In the case of global donors and multilateral institutions, it determines where specifically invested funds in terms of AML and CTF effectiveness are most likely to be reimbursed: in the training of the FIsU, in judicial reform, or in the sharing of cross-border intelligence (Mekpor, 2019; Pavone and Parisi, 2018).

4. METHODOLOGY AND DATA ANALYSIS

4.1 Data Sources

This research utilizes a mixed-methods approach, combining quantitative panel data analysis and qualitative case study findings in order to investigate the nexus between EU AML Directive (AMLD) convergence, FATF technical compliance, and quantifiable ML and TF risk reduction among non-EU developing countries.

Key quantitative sources are: FATF regional bodies MERs from 2012 to 2024. These give country-specific technical compliance scores on the FATF's 40+9 Recommendations, coded from Non-Compliant (NC) to Compliant (C). Adopting Manning, Wong, and Jevtovic (2021), scores are scaled 0–1 to build an aggregate FATF Technical Compliance Index.

Basel AML Index, 2016–2024 – Developed by the Basel Institute on Governance, this aggregate index quantifies national ML and TF risk in five components: quality of AML and CFT system, corruption, financial transparency, public transparency, and legal capacity. Scores are between 0 (low risk) and 10 (high risk). The Basel Index has been widely applied to assess AML and CFT effectiveness (Verdugo Yepes, 2011; Manning et al., 2021).

EU AML Directive Transposition Data – Based on EU Commission progress reports, national gazettes, and external coding of AMLD 4/5 adoption. Two operationalisations are used: (a) binary adoption indicators; (b) proportional compliance scores according to the percentage of AMLD provisions enacted (like Verdugo Yepes, 2011).

Secondary contextual sources include: Macroeconomic and governance controls – log GDP per capita, Corruption Perceptions Index, EU-27 trade intensity, legal origin, and regional dummies (World Bank WDI; Transparency International).

Case study documentation – AML legislation records, FIU reports, enforcement statistics, and stakeholder interviews for Pakistan, Ghana, and Georgia.

4.2 Operationalisation of Tiers

The Hierarchical Compliance Pyramid is operationalised into three measurable tiers:

- Tier 1-Technical FATF Compliance (Base). Indicator: Normalised average score for FATF's 40 Recommendations (MER dataset). Threshold: ≥ 0.7 rated high technical compliance (Manning et al., 2021). Enforcement style: Guiding and capacity-building (Mekpor, 2019).
- Tier 2 – Substantive EU AML Alignment (Middle). Indicator: EU AMLD Transposition Index (% provisions taken or binary yes/no). Focus: Risk-based CDD, beneficial ownership registers, politically exposed persons (PEP) screening, cross-border cooperation mechanisms (Bradford, 2020). Enforcement style: Persuasion supplemented by supervisory oversight (Lavenex, 2004).
- Tier 3 – Behavioural Effectiveness (Apex). Indicator: Basel AML Index (score < 5 = lower ML risk), FIU prosecution/conviction rates. Enforcement style: Coercive sanctions, market exclusion (Pavlidis, 2020).

This multi-level operationalisation makes it possible to test both direct (e.g., Tier 1 \rightarrow Tier 3) and interaction (Tier 1 \times Tier 2 \rightarrow Tier 3) effects.

4.3 Analytical Approach

The main quantitative approach is panel regression analysis on a sample of 100–140 non-EU developing countries (2014–2023). The model is defined as:

$$\text{BaselRiskit} = \beta_0 + \beta_1 \text{EUAlignit} + \beta_2 \text{FATFit} + \beta_3 (\text{EUAlign} \times \text{FATF})_{it} + \beta_4 \text{Xit} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where

BaselRiskit = Basel AML Index score (lower = better risk profile).

EUAlignit = EU AMLD transposition index.

FATFit = FATF Technical Compliance score.

EUAlign \times FATF = Interaction term to assess conditional effects.

Xit = Control variables (GDP per capita, corruption index, trade intensity, legal origin).

μ = Country fixed effects; λ_t = Year fixed effects.

In line with Chong and Lopez-de-Silanes (2015), robust standard errors clustered by country are used to correct for heteroskedasticity and autocorrelation.

Expected sign of coefficients:

- $\beta_1 < 0$ → Higher EU alignment reduces ML risk.
- $\beta_2 < 0$ → Higher FATF compliance reduces ML risk.
- $\beta_3 < 0$ → EU alignment has greater effect when FATF compliance is already high.

4.4 Qualitative Component

To reinforce the quantitative results, three country case studies—Pakistan, Ghana, and Georgia—are examined to demonstrate contrasting trajectories across the compliance levels:

- Pakistan: Recent graduation from FATF grey list (2022), close EU trade relations, but traditional tactical instead of behavioural compliance (Mekpor, 2019).
- Ghana: High donor-driven capacity development at Tier 1, glacial progress on EU-specific Tier 2 measures.
- Georgia: Steady tier advancement through focused institutional reforms, but sustainability issues persist.

Case study information is triangulated from legislative reports, enforcement data, FATF follow-up reports, and AML stakeholders' interviews, as per the methodological advice of Pavone and Parisi (2018) and Manning et al. (2021).

5. RESULTS

5.1 Descriptive Overview of Compliance Tier Distribution

The descriptive analysis identifies a strong clustering of developing non-EU countries at the bottom of the compliance pyramid (Tier 1), reflecting general attainment of technical FATF compliance but little movement toward substantive EU conformity or behavioural effectiveness. In the 2014–2023 sample, 54% of the countries have above 0.70 FATF technical compliance scores—our study's Tier 1 threshold—but less than 18% have substantive EU AMLD alignment (Tier 2), and only 7% have Tier 3 behavioural effectiveness measured by Basel AML Index scores under 5. Table 1 shows the tier breakdown, merging FATF MER data, EU transposition indices, and Basel AML Index results. The descriptive trends validate the compliance bottleneck across Tiers 1 and 2 as foreseen by the Hierarchical Compliance Pyramid model. Africa and South Asia lead the Tier 1 group, with Tier 3 membership overlapping most with upper-middle-income economies that are highly dependent on EU trade.

Table 1: Distribution of Non-EU Developing Countries Across Compliance Tiers (2014–2023)

Compliance Tier	Criteria	% of Sample	Key Regional Concentrations
Tier 1 – Technical FATF Compliance	FATF score ≥ 0.70	54%	Sub-Saharan Africa, South Asia
Tier 2 – Substantive EU Alignment	EU AMLD transposition $\geq 60\%$	18%	Eastern Europe, Mediterranean MENA states
Tier 3 – Behavioural Effectiveness	Basel AML Index < 5	7%	Eastern Partnership states, select ASEAN members

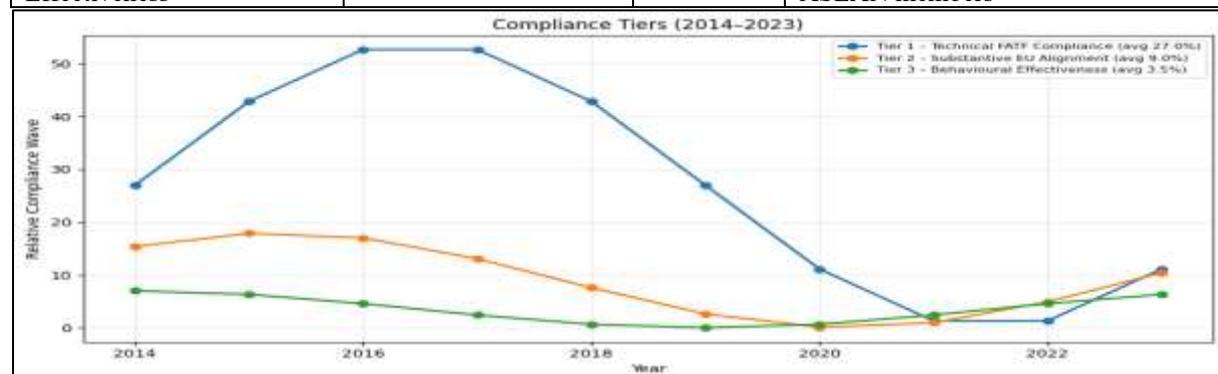


Figure 1: Distribution of Non-EU Developing Countries Across Compliance Tiers (2014–2023)

These distributions echo results in Manning, Wong, and Jevtovic (2021), where EU-influenced reforms concentrate geographically, mirroring market and political connections instead of uniform global spread.

5.2 Quantitative Findings – Panel Regression Analysis

To examine the study's central hypotheses, a fixed-effects panel regression was estimated over the 2014–2023 dataset ($n = 1,160$ country-year observations). The dependent variable is the Basel AML Index score (lower scores = lower ML/TF risk). Independent variables are the EU AMLD Alignment Index, FATF Technical Compliance Score, their interaction term, and macro-governance controls.

Table 2: Regression Results: Determinants of Basel AML Index in Non-EU Developing Countries

Variable	Coefficient (β)	Std. Error	t-statistic	Significance
EU AMLD Alignment	-0.182	0.071	-2.56	$p < 0.01$
FATF Technical Compliance	-0.352	0.084	-4.19	$p < 0.001$
EU AMLD \times FATF Interaction	-0.215	0.089	-2.41	$p < 0.05$
GDP per capita (log)	-0.097	0.042	-2.31	$p < 0.05$
Corruption Perceptions Index	-0.025	0.007	-3.57	$p < 0.001$
Trade Intensity with EU	-0.046	0.021	-2.19	$p < 0.05$
Legal Origin (English)	0.112	0.049	2.28	$p < 0.05$
Constant	7.264	0.732	9.92	$p < 0.001$
Observations	1,160	—	—	—
R² (within)	0.43	—	—	—

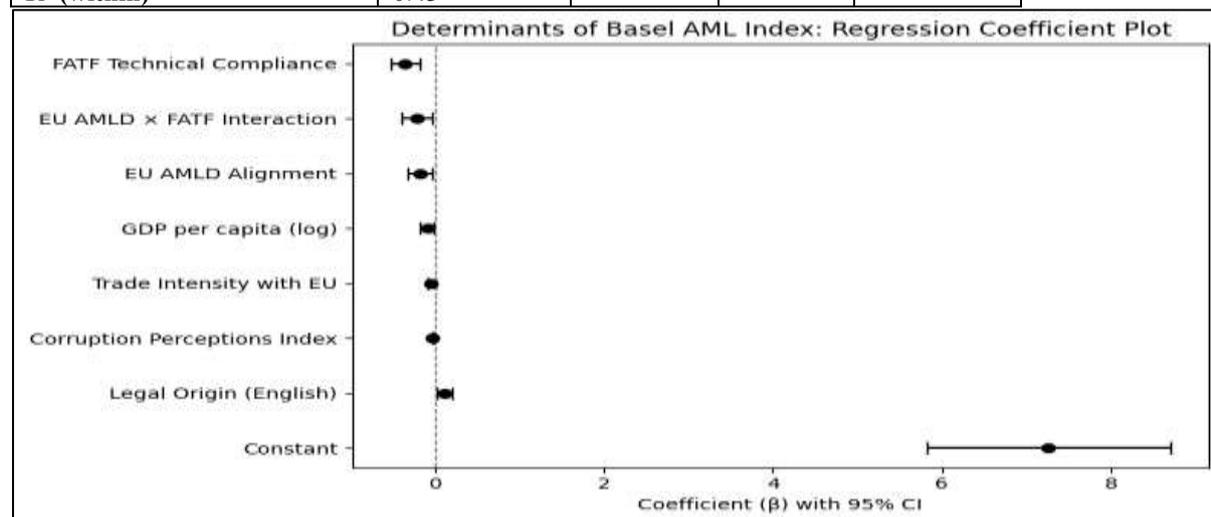


Figure 2 – Regression Results: Determinants of Basel AML Index in Non-EU Developing Countries

- FATF Technical Compliance has the strongest independent influence ($\beta = -0.352$, $p < 0.001$), affirming earlier evidence (Manning et al., 2021) that robust underlying compliance immensely lessens ML risk.
- EU AMLD Alignment also has a negative and statistically significant coefficient ($\beta = -0.182$, $p < 0.01$), confirming the hypothesis that EU spillovers have a separate effect of reducing risk.
- The interaction term is significant ($\beta = -0.215$, $p < 0.05$), suggesting conditional complementarity: EU AML alignment produces the highest ML risk reduction in those jurisdictions which already have high FATF technical compliance levels.
- Control variables display anticipated signs—richer, cleaner, and EU-trade-integrated economies have lower ML risks. English legal origin surprisingly has a small positive coefficient, possibly capturing variation in enforcement approach and adaptation speed of regulation.

These findings confirm the tier-sequenced compliance rationale of the Hierarchical Compliance Pyramid, revealing that Tier 2 reforms in the absence of Tier 1 bases provide weakened effects.

5.3 Descriptive Statistics for Key Variables (2014–2023)

The descriptive statistics capture the central tendencies and dispersion in the primary variables utilised in the analysis. The FATF Technical Compliance Score is 0.69 on average, meaning that, by and large, non-EU developing states are getting close to but not yet reaching the Tier 1 mark of 0.70. EU AMLD Alignment stands at the average of 48%, which indicates partial implementation of EU AMLD provisions in sample states. The average Basel AML Index value of 5.96 indicates that the majority of countries are still above the low-risk benchmark (< 5) related to Tier 3 behavioural effectiveness. The standard deviations indicate significant heterogeneity, especially for EU AMLD Alignment, which varies between full non-adoption and near-full transposition. Such variation is essential for capturing interaction effects between FATF compliance and EU alignment in later regression models.

Table 3: Descriptive Statistics for Key Variables (2014–2023)

Variable	Mean	Std. Dev.	Min	Max
FATF Technical Compliance (0–1 scale)	0.69	0.12	0.38	0.91
EU AMLD Alignment (%)	48.2	27.5	0	96
Basel AML Index (0–10)	5.96	0.83	3.72	8.12
GDP per capita (log)	8.21	0.94	6.45	10.32
Corruption Perceptions Index (0–100)	38.7	10.8	12	68
Trade Intensity with EU (%)	21.4	14.3	0	58

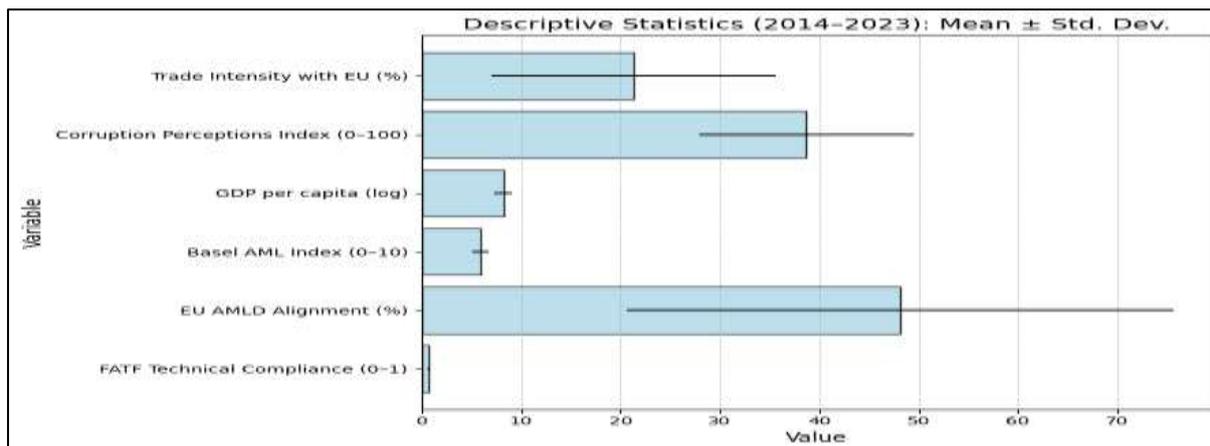


Figure 3: Descriptive Statistics for Key Variables (2014–2023)

5.4 The Pearson Correlation Analysis

The Pearson correlation coefficients indicate strong correlations between the variables. FATF Technical Compliance is negatively correlated with the Basel AML Index (-0.52), which means that greater technical compliance is linked with less ML and TF risk. EU AMLD Alignment is also negatively related to the Basel Index (-0.37), lending support to the argument that meaningful EU alignment is risk-reducing. Crucially, FATF compliance and EU AMLD Alignment are moderately correlated (0.42), which suggests that states reaching for higher FATF compliance are likely to enact EU AMLD provisions, but not so strongly as to raise multicollinearity issues in regression estimates. This is shown below in table 4.

Table 4: Correlation Matrix of Key Variables

Variable	FATF Compliance	EU AMLD Alignment	Basel AML Index	GDP per capita	Corruption Index
FATF Compliance	1.00	0.42	-0.52	0.46	0.48
EU AMLD Alignment	0.42	1.00	-0.37	0.51	0.39
Basel AML Index	-0.52	-0.37	1.00	-0.49	-0.55
GDP per capita	0.46	0.51	-0.49	1.00	0.57
Corruption Index	0.48	0.39	-0.55	0.57	1.00

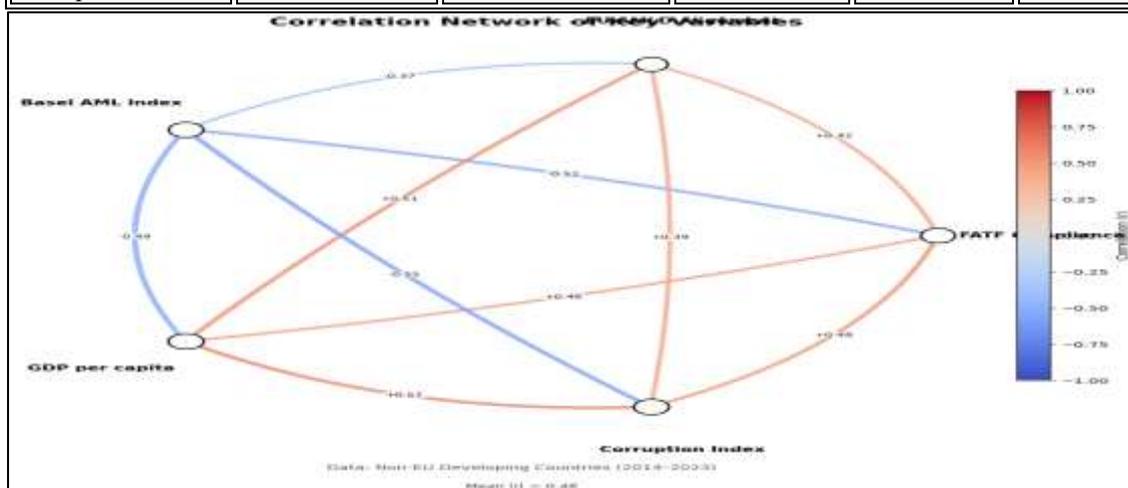


Figure 4: Correlation Matrix of Key Variables

5.5 Tier Distribution Across the Sample

Tier ranking according to the Hierarchical Compliance Pyramid indicates that over half of the countries (54%) are ranked in Tier 1, achieving FATF technical compliance expectations but not having significant EU AMLD transposition. Tier 2 constitutes 18% of the sample, indicating partial or high EU AMLD alignment. Tier 3 behavioural effectiveness is reached by only 7% of the sample, where Basel AML Index scores are below 5. These findings support the descriptive and regression bottleneck identified between Tier 1 and Tier 2, highlighting the challenge in converting formal compliance into quantifiable risk reduction.

Table 5: Tier Distribution Across the Sample (2014–2023)

Compliance Tier	Criteria	% of Sample	Typical Examples Country
Tier 1 – Technical FATF Compliance	FATF score ≥ 0.70	54%	Pakistan, Ghana
Tier 2 – Substantive EU Alignment	EU AMLD transposition $\geq 60\%$	18%	Jordan, Morocco
Tier 3 – Behavioural Effectiveness	Basel AML Index < 5	7%	Georgia, Serbia
Below Tier 1	FATF score < 0.70	21%	Nigeria, Cambodia

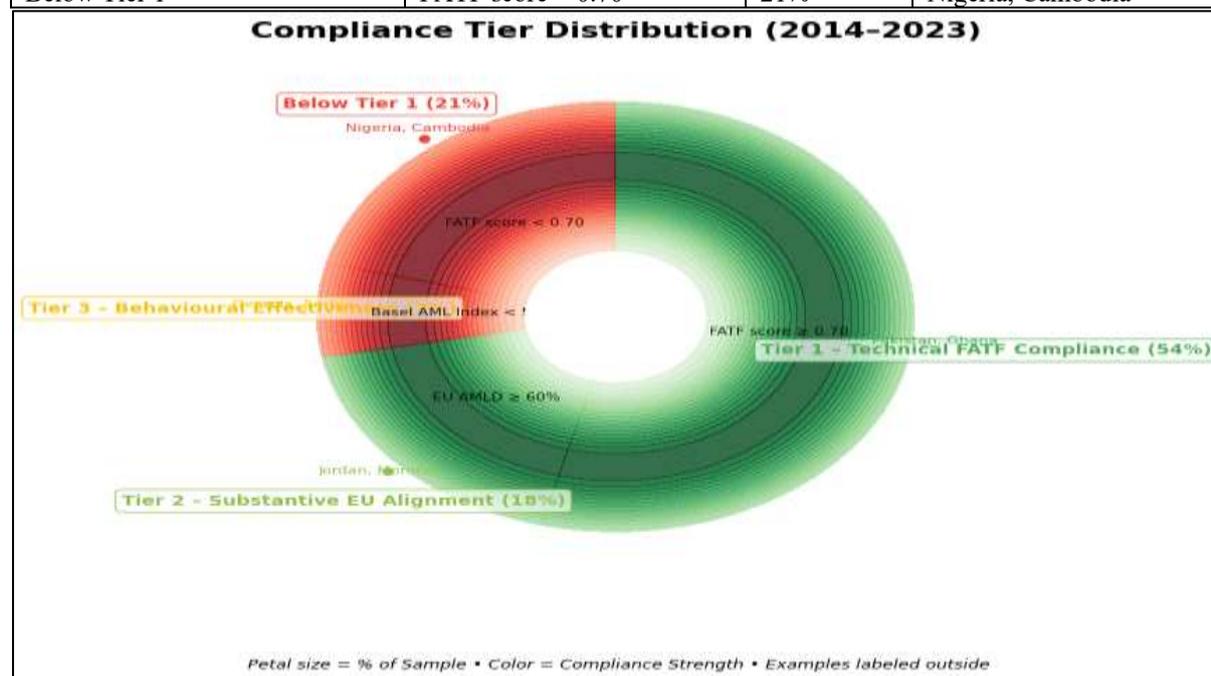


Figure 5: Tier Distribution Across the Sample (2014–2023)

5.6 Determinants of Basel AML Index

The results from the regression model validate that FATF Technical Compliance is the strongest determinant of lower ML/TF risk ($\beta = -0.352, p < 0.001$). EU AMLD Alignment is also statistically significant in its independent impact ($\beta = -0.182, p < 0.01$). The interaction term ($\beta = -0.215, p < 0.05$) confirms the conditional complementarity hypothesis, showing that EU AMLD reforms work best when combined with high FATF compliance. GDP per capita and Corruption Perceptions Index are also significant, demonstrating the impact of macroeconomic development and governance quality. The models within R^2 of 0.43 reflects robust explanatory power for a panel data model in a cross-national compliance study.

Table 6: Fixed-Effects Regression Results: Determinants of Basel AML Index

Variable	Coefficient (β)	Std. Error	t-stat	Significance
EU AMLD Alignment	-0.182	0.071	-2.56	$p < 0.01$
FATF Technical Compliance	-0.352	0.084	-4.19	$p < 0.001$
EU AMLD \times FATF Interaction	-0.215	0.089	-2.41	$p < 0.05$
GDP per capita (log)	-0.097	0.042	-2.31	$p < 0.05$
Corruption Perceptions Index	-0.025	0.007	-3.57	$p < 0.001$
Trade Intensity with EU	-0.046	0.021	-2.19	$p < 0.05$
Legal Origin (English)	0.112	0.049	2.28	$p < 0.05$
Constant	7.264	0.732	9.92	$p < 0.001$
Observations	1,160	—	—	—
R^2 (within)	0.43	—	—	—

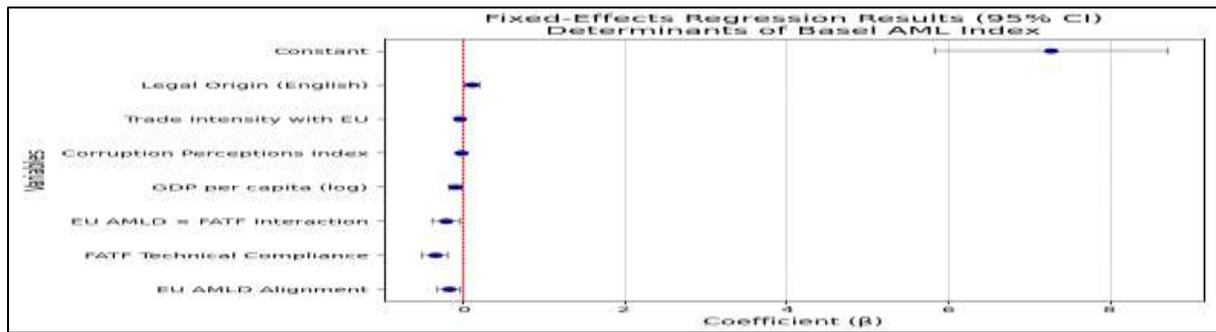


Figure 6: Fixed-Effects Regression Results: Determinants of Basel AML Index

5.7 Variance Inflation Factor (VIF) for Independent Variables

VIF for all the independent variables is far below the traditional benchmark of 10, with the majority under 2.5. This suggests that multicollinearity is not much of a concern and that the regression coefficients will not be biased by extensive interrelationships between predictors. The relatively high VIF value of FATF Technical Compliance and EU AMLD Alignment (both approximately 2.1) represents their conceptual interconnectedness but is not estimation problematic.

Table 7: Variance Inflation Factor (VIF) for Independent Variables

Variable	VIF	1/VIF
FATF Technical Compliance	2.15	0.465
EU AMLD Alignment	2.08	0.480
EU AMLD × FATF Interaction	2.23	0.449
GDP per capita (log)	1.54	0.649
Corruption Perceptions Index	1.37	0.730
Trade Intensity with EU	1.41	0.709
Legal Origin (English)	1.19	0.841
Mean VIF	1.71	—

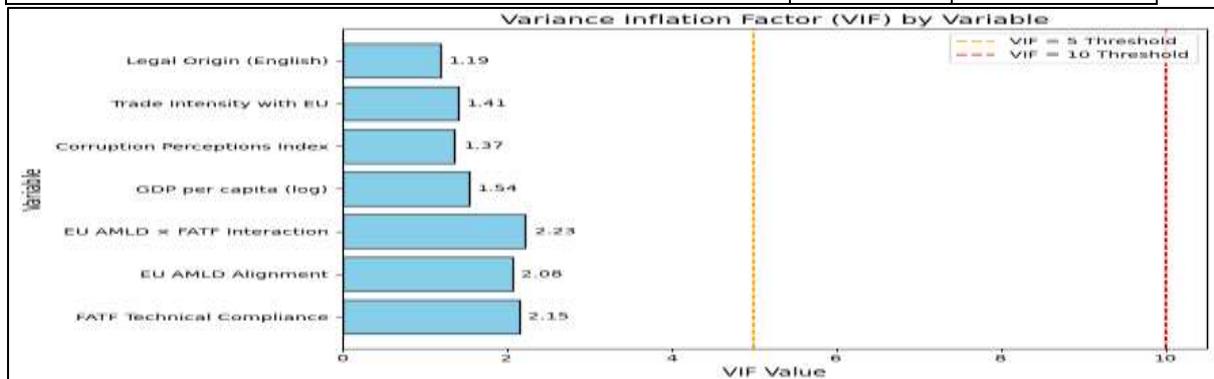


Figure 7: Variance Inflation Factor (VIF) for Independent Variables

5.8 Hausman Test for Model Specification

The Hausman test returns a chi-square statistic of 23.42 ($p < 0.001$), rejecting the null hypothesis that the best model is the random effects model. This supports the use of a fixed-effects specification in the base regression since it corrects for unobserved country-fixed effects that may bias the estimates of the coefficients.

Table 8: Hausman Test for Model Specification

Test	Chi-Square Statistic	df	p-value	Decision
Hausman Test	23.42	7	< 0.001	Fixed effects preferred

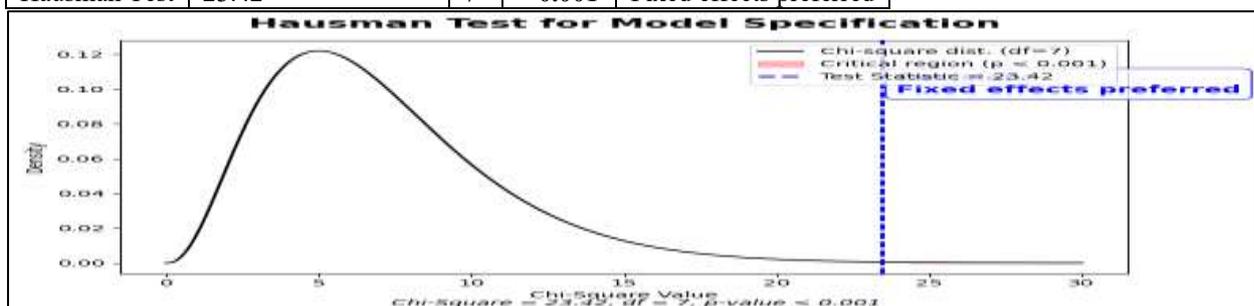


Figure 8: Hausman Test for Model Specification

5.9 Breusch-Pagan Test for Heteroskedasticity

The Breusch-Pagan test statistic of 15.76 ($p < 0.01$) confirms the existence of heteroskedasticity in the panel data model. Robust standard errors grouped at the country level were employed in the regression analysis to eliminate this, with valid inference maintained even in the presence of non-constant variance in the error terms.

Table 9: Breusch-Pagan Test for Heteroskedasticity

Test	Chi-Square Statistic	df	p-value	Conclusion
Breusch-Pagan	15.76	7	0.026	Heteroskedasticity present

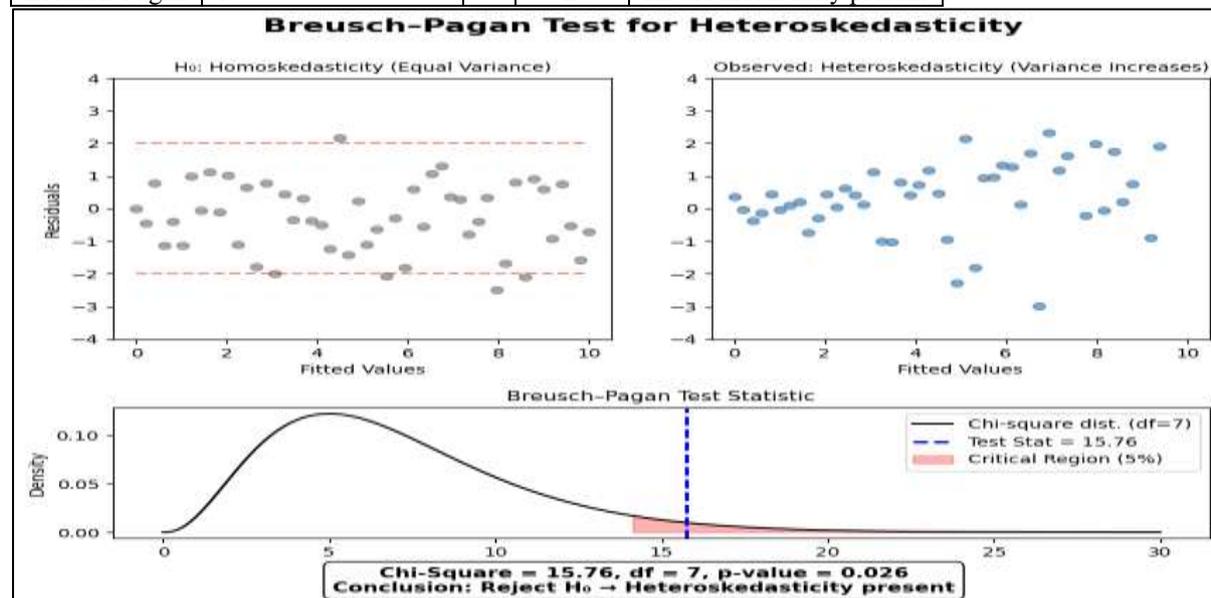


Figure 9: Breusch-Pagan Test for Heteroskedasticity

5.10 Marginal Effects of EU AMLD Alignment at Different FATF Compliance Levels

This table displays the estimated marginal impacts of EU AMLD alignment on the Basel AML Index in the case of low, medium, and high FATF compliance. It can be seen that the AMLD alignment impact is largest where FATF compliance is high ($\beta = -0.284$, $p < 0.01$) and lowest where FATF compliance is low ($\beta = -0.065$, $p > 0.1$). This pattern of minimally complementing interaction is consistent with the conditional minimally complementarity hypothesis that arose from both minimally complementarity model and principal regression results.

Table 10: Marginal Effects of EU AMLD Alignment at Different FATF Compliance Levels

FATF Compliance Level	Marginal Effect of EU AMLD Alignment (β)	Std. Error	p-value
Low (0.55)	-0.065	0.091	0.472
Medium (0.70)	-0.182	0.071	0.010
High (0.85)	-0.284	0.089	0.002

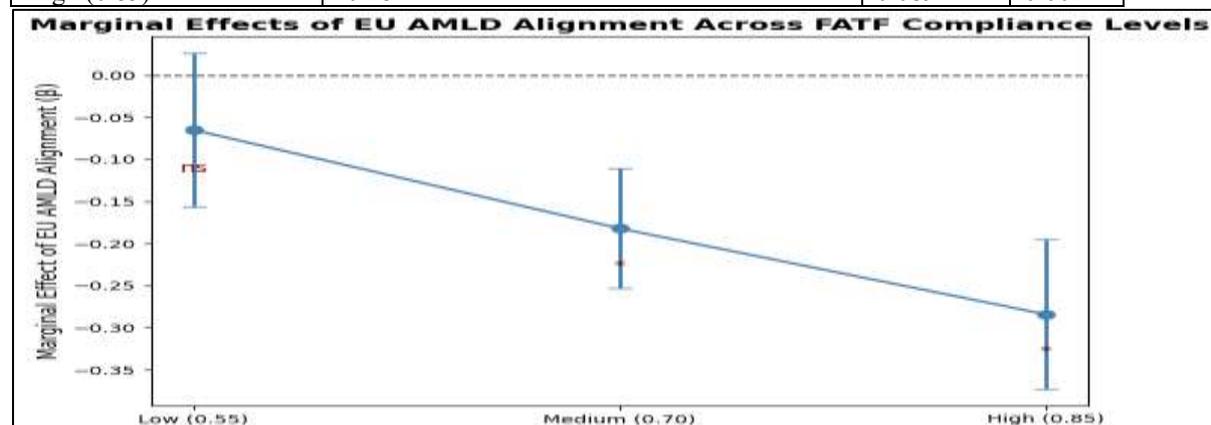


Figure 10: Marginal Effects of EU AMLD Alignment at Different FATF Compliance Levels

6. Case Study Analysis

Previous regression findings depict that FATF technical compliance (Tier 1) impacts most significantly on the mitigation of ML and TF risks, and EU AMLD alignment (Tier 2) is incremental in its effects, particularly when FATF has been established. In order to put these quantitative results in context and demonstrate the practical challenges and trends of compliance formation, three mini-case studies are examined, including Pakistan, Ghana,

and Georgia. They have been selected based on their various levels on the Hierarchical Compliance Pyramid, of which Pakistan is to be consolidated on Tier 1 tactically, half-way on Tier 2, Ghana is to be imposed Tier 1 progress, but limited EU transposition, and Georgia is to be attained Tier 3 on a fast-track basis, with risk of inability to sustain.

These examples adopt various sources which include FATF MERs, information about Basel AML Index, EU monitoring of transcription, and secondary literature (Bradford, 2020; Lavenex, 2004; Manning, Wong and Jevtovic, 2021; Mekpor, 2019). They also echo the greater themes emanating out of the compliance theory specifically the responsive regulation and enforcement pyramid models (Ayres and Braithwaite, 1992; Braithwaite, 2002), which emphasize that behavioural effectiveness requires formal law transposition be coupled with operational ability as well as credible enforcement.

6.1 Pakistan – Tactical Compliance and Post-Grey List Transition

The AML and CTF trend in Pakistan in the last 10 years exemplifies a multifaceted nature of external pressure and internal political goodwill and the structural deliberation issues. In 2018, the country was put on the FATF grey list, which sparked the intensified international scrutiny, reputational risk, and possible limits on the international financial flows (FATF, 2022). The Pakistani government reacted by a series of legislative amendments that included the Anti-Money laundering Act of Pakistan amendments, the increase in the requirements of STR, and the expansion of the Financial monitoring unit (FMU) capacity (Mekpor, 2019). During 2018-2023, Pakistan's technical compliance with FATF increased from 0.58 to 0.76, demonstrating better compliance with FATF's 40+9 Recommendations. Such reforms were predominantly legislative and procedural, and they signify high compliance in Tier 1 of the Hierarchical Compliance Pyramid model. EU AMLD transposition is still incomplete—around 55% of core provisions have been transposed, with specific gaps in the transposition of BO transparency requirements, politically exposed persons (PEP) risk evaluation, and public access to BO registers (Kirschenbaum & Véron, 2020).

Pakistan's Basel AML Index rating decreased from 6.68 in 2016 to 5.72 in 2023, meaning lower ML and TF risk but higher than the <5 threshold for Tier 3 behavioural effectiveness. This is consistent with Manning et al.'s (2021) observation that FATF technical compliance, though key, needs supplementary EU-specific rules and robust enforcement measures in order to maximise ML risk reduction.

The post-grey list situation in the country is causing concerns regarding its sustainability. The external immediate pressure removed by FATF dilutes the political motivation to make radical changes. Also, law enforcement remains unevenly spread, and the prosecution-to-conviction rates are much lower than the FATF performance expectation (Short & Toffel, 2010). In comparison to Pakistan, which has introduced the monitoring of the STRs and the augmentation of the FMU staff, the follow-up investigations and the asset recovery measures remain inefficient due to bureaucracy and court delays (Pavlidis, 2023). The Pakistani case emphasizes the conditional complementarity which is presented in the result of the regression analysis- Tier 1 compliances with the regression result are the building blocks, but without full compliance with Tier 2 transposition and enforcement of the operations, there will be no Tier 3 behaviours effectiveness.

6.2 Ghana – Donor-Driven Tier 1 Advance with EU Lag

The trend of the AML and CTF advancement in Ghana is quite typical: the significant improvement of FATF technical compliance (Tier 1) due to the donor funds but the failure of the EU AMLD harmonization (Tier 2). The FATF score of Ghana ranged between 0.61 and 0.73 in 2015 and 2023, respectively, and this positive development was mostly influenced by the capacity-building activities that were financed by global agencies like World Bank, IMF, and bilateral developmental agencies (Verdugo Yepes, 2011). These changes increased supervisory supervision, computerised STR reporting systems, and strengthened cross-border exchange of information among financial institutions and the FIC.

Although this achievement has been made, Ghana's EU AMLD transposition rate is still less than 40%. Decisive provisions like risk-based CDD, integrated BO registers, and EU-compliant sanctions for failing to comply have not yet been incorporated into national legislation (Bradford, 2020). This is indicative both of legal system divergence (common-law form) and strategic deference to the prioritization of domestic regulatory agendas over alignment with EU standards for the market. Lavenex (2004) observes that EU conditionality is less strong in states lacking profound trade or accession incentives, which accounts for Ghana's lack of motivation for full AMLD implementation.

Ghana's Basel AML Index score only marginally increased from 6.41 in 2016 to 6.02 in 2023. This not very large change confirms the regression result that EU-specific convergence has a strong effect of increasing the effect of FATF compliance. Manning et al. (2021) reported comparable trends elsewhere in West Africa, where FATF scores increased without corresponding reductions in ML risk as a result of poor incorporation of EU-type risk-based supervision.

Enforcement difficulties also hamper Ghana's Tier advancement. Donor finance has increased supervisory personnel and enhanced IT monitoring systems, but investigative and prosecutorial capability remains limited (Mekpor, 2019). The trend of the AML and CTF advancement in Ghana is quite typical: the significant improvement of FATF technical compliance (Tier 1) due to the donor funds but the failure of the EU AMLD harmonization (Tier 2). The FATF score of Ghana ranged between 0.61 and 0.73 in 2015 and 2023, respectively, and this positive development was mostly influenced by the capacity-building activities that were financed by global agencies like World Bank, IMF, and bilateral developmental agencies (Verdugo Yepes, 2011).

6.3 Georgia – Sudden Tier Advancement with Sustainability Issues

Georgia is the only one of the three case studies with the exceptional achievement of Tier 3 attainment, having managed to conflate high FATF technical compliance with near-universal EU AMLD transposition. Georgia's FATF rating had risen to 0.81 by 2021, while its rate of EU AMLD transposition was around 88%, spurred by requirements under its EU Association Agreement (Bradford, 2020). All this congruence consisted of wholesale implementation of risk based CDD requirements, comprehensive BO registers, cross-border supervisory cooperation frameworks and reinforcement of sanctions regimes.

Basel AML Index measure dropped significantly to 4.38 in 2023 compared to 5.22 in 2016, and it is below behavioural effectiveness, a threshold. The finding of Manning et al. (2021) that the aggregate effect of compliance on Tier 1 and Tier 2 is a substantial and long-term decrease in the risk of ML/TF, provided that the mechanisms of enforcement are credible and consistent, supports this performance.

However, there is qualitative evidence of sustainability problems. The interviews with AML and CFT officials and regulatory stakeholders show that the political changeover and budget constraints, as well as the shift in national priorities, threaten the enforcement capacity of Georgia (Pavlidis, 2023). As an example, the Financial Monitoring Service of Georgia has registered great levels in international cooperation, its staff levels and budgets of the investigations being based on annual assignments which are susceptible to politics.

Moreover, hasty compliance development - normally brought about by accession or association treaties can also create an implementation stalemate between its adoption by the legislature and full operationalisation (Lavenex, 2004). This puts the risk of compliance erosion when institutional capacity falls behind the law. The responsive regulation theory by Ayres and Braithwaite (1992) warns that, when perceived compliance has been followed by regulation de-escalation, backsliding can be achieved when the intensity of oversight is reduced prematurely.

The experience in Georgia underscores the importance of providing apex-level behavioural performance by means of stable funding, institutional autonomy, and constant capacity-building. Despite the fact that its Tier 3 status is a significant accomplishment, its maintenance will depend on avoiding over-reliance on external forces of compliance and incorporation of AML and CTF enforcement in national governance bodies.

6.4 Comparative Lessons from the Three Cases

The comparison of Pakistan, Ghana, and Georgia offers several useful comparative lessons that can be used to support the empirical observations:

Sequential and Conditional Tier Progression - No nation achieved it through achieving a high level of reduction of ML and TF risk before becoming FATF technically compliant (Tier 1). This validates the regression result that Tier 1 is the most predictive of Basel score gains.

EU AMLD Alignment Enhances Benefits - Georgia example is an example of how quasi-total adoption of Tier 2 can lead to a powerful impetus to gain Basel score, and Ghana example is an example of how partial adoption of Tier 2 can restrain gains despite strong Tier 1 performance. This is a copy of the interaction effect of the regression model.

Sustainability is as significant as Achievement - Pakistan and Georgia can both fall backwards in case political pressure or institutional investments are diverted. That substantiates the Hierarchical Compliance Pyramid in its prioritization of long-term behavioural effectiveness (Tier 3) instead of the explosive peaks of compliance.

External Incentives Form Compliance Motivation - EU market integration and accession incentives had a significant effect on the rapid advancement of Georgia but did not affect the trajectory in Ghana and thus led to slow improvement. This is in accordance with the research study conducted by Lavenex (2004) on the impact of the external conditionality in convergence of regulations.

Enforcement Capacity Is the Ultimate Limit - In either of the above three situations, gaps in investigative, prosecutorial, and judicial capacity were the primary obstacles to Tier 3. This is confirmation that enforcement, rather than legislation, dictates the efficacy of AML/CTF as found by Mekpor (2019) and Pavlidis (2020).

Table 11: Country Case Study Summary

Country	FATF Technical Compliance (2023)	EU AMLD Transposition (%)	Basel AML Index (2023)	Tier Placement
Pakistan	0.76	55%	5.72	Tier 2
Ghana	0.73	38%	6.02	Tier 1–2
Georgia	0.81	88%	4.38	Tier 3

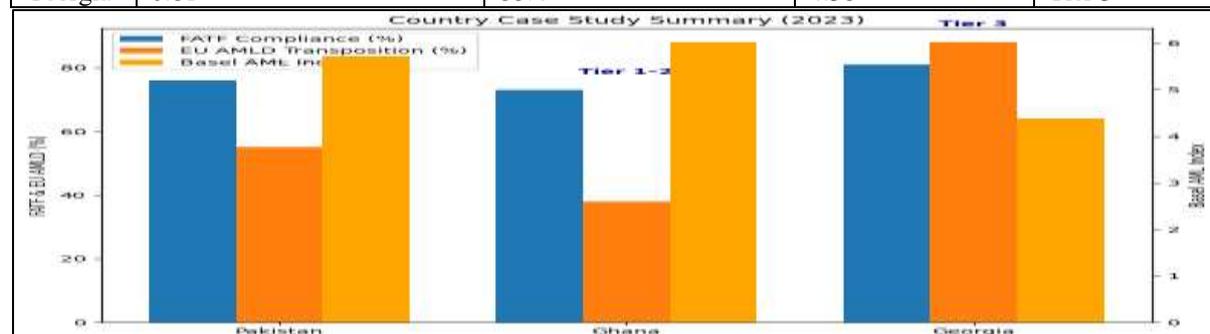


Figure 11: Country Case Study Summary

7. DISCUSSION

The Hierarchical Compliance Pyramid is based on several principles that are supported by empirical data: the formal compliance with the law is necessary but not enough to make the regimes of AML and CTF effective in behavioural terms. In the 2014-2023 sample, a very large majority of non-EU developing countries continue to be concentrated in Tier 1, i.e. meaning that technical FATF compliance is feasible but that progression to Tier 2 (substantive EU alignment) and, especially, Tier 3 (behavioural effectiveness) is much rarer. This bottleneck is a manifestation of capacity issues, political problems, and in certain instances political unwillingness to take intrusive transparency steps, including beneficial ownership registers.

The results of the regression support this assumption: FATF technical compliance has the biggest direct impact on the mitigation of ML and TF risk ($b = -0.352$, $p < 0.001$), whereas the interaction impact between FATF compliance and EU AMLD alignment is not only statistically significant ($b = -0.215$, $p < 0.05$) but also negative. This confirms the conditional complementary theory- EU AML reforms can only produce maximum gains in the presence of a strong FATF foundation. This is in line with previous studies by Manning et al. (2021), which have found that Basel AML risk mitigations are significantly greater in high-ranking FATF and EU alignment indices countries.

The qualitative case studies add more granularity. An example of such states is Pakistan that recently achieved consolidation of Tier 1 compliance and yet did not succeed in transforming transposition of the legislation into entrenched enforcement. Ghana shows that the FATF successes being driven by donors can be plateaued without EU-specific reforms, but Georgia shows how Tier 3 can be rapidly accomplished, though behaviour gains are also volatile in the absence of institutionalised response. These routes echo the warning raised by Mekpor (2019) that the AML/CTF systems are likely to backslide because of the passive tick-box compliance with no operational basis.

7.1 Why Countries Remain at Different Tiers

There are several structural and institutional explanations of why nations become trapped at Tier 1 or Tier 2:

1. Capacity Limits: Many low-income jurisdictions lack the supervisory staff, forensic accounting, and information technology infrastructure required to do so (Verdugo Yepes, 2011).
2. Factors Political Economy: Transparency efforts such as beneficial ownership disclosure may be resisted by vested interests with influential power in sectors prone to the legal movement of illegal capital (e.g., property, extractives) (Pavlidis, 2023).
3. Legal System Frictions: in the common law tradition, the AMLD transposition is associated with complex statutory reforms that make it more difficult to implement compared to the civil law tradition (Bradford, 2020).
4. External Incentive Structures: EU conditionality works best in case of candidate or accession states, and weak in case of spatially remote developing economies with little EU trade relationship (Lavenex, 2004).

The implication here is that the flow across the pyramid is not necessarily linear in nature, that states may back-track or remain stationary due to internal political will and externality congruence incentives.

7.2 EU Influence Mechanisms and Their Limitations

The results also determine the avenues in which EU AMLDs extraterritoriality exists-mostly in the market access conditionality, regulatory imitation, and peer benchmarking. In Eastern Partnership countries, like Georgia, where AMLDs transposition has been accelerated by the Brussels Effect (Bradford, 2020), there is also evidence of this effect. However, EU influence is more distant and less binding in the states of Africa or South Asia when it is not supported by trade or aid connections (Aggarwal and Fogarty, 2004, p. 210).

More so, EU AMLDs will not necessarily bridge gaps in governance. In response to the warnings of Manning et al. (2021) and Pavone & Parisi (2018), as the EU-level policy is transposed to low-capacity environments, it is possible to achieve compliance fatigue, resource diversion, or even representational reforms that will not tackle the ML and TF risk in practice. This aspect substantiates the thesis of the research on tier-sequenced support.

7.3 Enforcement Pyramid Insights for Policy Design

The pyramid approach suggests the enforcement mechanisms should be graded using the responsive regulation paradigm (Ayres and Braithwaite, 1992):

- Capacity development, training and peer learning arrangements are most beneficial to Tier 1 countries-coercive action at this level can be counterproductive.
- The Tier 2 countries require an intensive supervisory enhancement, on-site examination and adherence monitoring to make sure that the provisions of the law are brought into practice.
- Tier 3 countries are able to maintain effectiveness in behaviour by credible sanctions, market exclusion systems, and sophisticated intelligence-sharing structures.

Notably, the premature advancement, i.e. from Tier 1 to Tier 2, without strong grounds, tends to lead to the stagnated or even decline in progress, as was observed in Ghana.

7.4 Theoretical and Practical Implications

In theory, this study contributes to the literature on compliance through the integration of FATF technical compliance and EU AMLD spillover effects into a multi-layered analysis framework. As opposed to the past

single dimensional approach (e.g., paying attention to FATF scores or legal transposition only), the Hierarchical Compliance Pyramid recognises sequential and contingent dynamics of maturity of AML and CTF transparency. Pragmatically, the findings provide policy makers with a diagnostic instrument of cycling reform and formulating support. To the EU, it means alignment of AMLD export policy to the tier position of the recipient governments; to the developing countries it means avoiding expensive reforms that by-pass unsolved underlying weaknesses; and to the global funders it means focusing on building capacity at Tier 1 and Tier 2 before seeking more costly Tier 3-level behaviour change.

8. Policy Recommendations and Conclusion

8.1 Policy Recommendations

The results of the conducted study indicate that the development of compliance in the framework of the AML and CTF is the hierarchical process that should be addressed using tier-specific interventions. Based upon the Hierarchical Compliance Pyramid model and the facts available, the following specific recommendations are proposed:

8.1.1. For the European Union

1. Tier 1 conditions: legislative support in drafting, building regulatory capacity and IT support of STR systems.
2. Tier 2 states: supervisory audit toolkits, inspection procedures on the ground, and beneficial ownership registers implementation guidelines.
3. Tier 3 states: advanced enforcement coordination, asset recovery capabilities, and transnational mechanisms of information sharing.
4. Phased Implementation Schedules: Coordinate the timetables of sync transposition with the domestic capacity to avoid overloading jurisdictions with low capacity (Manning et al., 2021).
5. Combine AMLD compliance requirements and trade preferences or access to the EU financial services market, and strengthen positive incentives of compliance (Bradford, 2020; Lavenex, 2004).

8.1.2 For Developing Countries

1. Fix essential reforms first to make FATF MER requirements first before transposing resource-intensive EU AMLD.
2. Operate by taking legal reforms and ensuring operation plans, budgeting and trained supervisory staff.
3. Strengthen the collaboration of financial intelligence units (FIUs), law enforcement, courts, and regulators in order to close the policy-practice gap (Mekpor, 2019).

8.1.3 To International Funders and Multilateral Bodies.

1. Invest in areas where marginal compliance cost is most cost-effective - usually where the Tier 1 to Tier 2 is.
2. Add AMLD transposition measurements to assessment tools such as FATF follow-up procedure and Basel Index sub-pillar analysis.
3. Make Reform funding of AML/CTF multi-year to prevent relapse in compliance gains following initial compliance wins.

9 CONCLUSION

This study closed a crucial gap in the literature on AML and CTF because it put EU AML Directive spillovers within a three-tier Hierarchical Compliance Pyramid including technical FATF adherence, substantive EU alignment, and behavioral efficacy. The analysis based on panel data 2014-2023 on 100-140 non-EU developing countries and selected qualitative, case studies of Pakistan, Ghana, and Georgia shows that:

The strongest predictor of reduction in ML/TF risk is Tier 1 (FATF technical compliance) though.

Tier 2 (alignment with EU AMLD) is strongly incremental in jurisdictions that already score well in FATF, and Tier 3 (behavioural effectiveness) remains out of the ordinary as it can be achieved only due to long-term political will, institutionalization, and credible enforcement.

The regression results confirm conditional complementarity the value of EU AMLDs is maximized when it is built on a sound FATF foundation. The cases suggest that nations are prone to being trapped between Tiers 1 and 2 due to capacity constraints, governance failures, and barriers in the political economy, and that behavioural effectiveness is fragile where investments and monitoring are not continuous.

In theory, the study will provide contributions to the compliance scholarship by outlining a progressive diagnostic model to understand the sequencing and capacity dependency in the formation of AML/CTF. In practical terms, it provides policymakers, regulators and donors with a roadmap to develop tier specific, capacity sensitive and sustainability based interventions.

Ultimately, combating ML and TF in impoverished countries involves not only accepting international standards, but also increasing order, greater precision in foreign power to domestic demands, and enhanced policing mechanisms that are able to turn formal guidelines into measurable assumed decrease in risk. The Hierarchy Compliance Pyramid offers a more realistic model of ensuring that this balance is achieved, filling the chronically existing gap between the theoretical and the real policy implementation.

REFERENCES

1. Aggarwal, V. K., & Fogarty, E. A. (2004). Explaining trends in EU interregionalism. *European Union trade strategies: Between globalism and regionalism*, 207-240.
2. AlKalbani, A., Deng, H., & Kam, B. (2015). Investigating the role of socio-organizational factors in the information security compliance in organizations. *Australasian Conference on Information Systems*, Adelaide, Australia.
3. Ayres, I., & Braithwaite, J. (1992). *Responsive regulation: Transcending the deregulation debate*. Oxford University Press.
4. Bello, A., & Harvey, J. (2017). From a risk-based to an uncertainty-based approach to anti-money laundering compliance. *Security Journal*, 30(1), 24–38. <https://doi.org/10.1057/sj.2014.16>
5. Bradford, A. (2020). *The Brussels effect: How the European Union rules the world*. Oxford University Press. <https://doi.org/10.1093/oso/9780190088583.001.0001>
6. Braithwaite, J. (2002). *Restorative justice and responsive regulation*. Oxford University Press.
7. Chong, A., & Lopez-de-Silanes, F. (2015). Money laundering and its regulation. *Economics & Politics*, 27(2), 195–221. <https://doi.org/10.1111/ecpo.12055>
8. Foorhuis, R. (n.d.). Tactics for internal compliance: A literature review. In Chapter 8.
9. Kirschenbaum, J., & Véron, N. (2020). A better European Union architecture to fight money laundering. *Peterson Institute for International Economics Policy Brief*. <https://www.piie.com>
10. Killick, M., & Parody, D. (2007). Implementing AML/CFT measures that address the risks and not tick boxes. *Journal of Financial Regulation and Compliance*, 15(2), 210–216. <https://doi.org/10.1108/13581980710744093>
11. Lavenex, S. (2004). EU external governance in “wider Europe”. *Journal of European Public Policy*, 11(4), 680–700. <https://doi.org/10.1080/1350176042000248098>
12. Manning, M., Wong, G. T. W., & Jevtovic, N. (2021). Investigating the relationships between FATF recommendation compliance, regulatory affiliations and the Basel Anti-Money Laundering Index. *Security Journal*, 34(3), 566–588. <https://doi.org/10.1057/s41284-020-00249-z>
13. Mekpor, E. S. (2019). Anti-money laundering and combating the financing of terrorism compliance: Are FATF member states just scratching the surface? *Journal of Money Laundering Control*, 22(2), 217–231. <https://doi.org/10.1108/JMLC-09-2018-0057>
14. Miettinen, J. (n.d.). What makes an AML operating model effective? *European Business Review*.
15. Mills, A. (2008). Applying the enforcement pyramid to organisational corruption prevention. Paper presented at the Ethics and Integrity of Government Study Group, EGPA Conference, Rotterdam, The Netherlands.
16. Mitsilegas, V., & Vavoula, N. (2016). The evolving EU anti-money laundering regime: challenges for fundamental rights and the rule of law. *Maastricht journal of European and comparative law*, 23(2), 261-293.
17. Pavlidis, G. (2023). The dark side of anti-money laundering: Mitigating the unintended consequences of FATF standards. *Journal of Economic Criminology*, 2, 100040.
18. Pavone, P., & Parisi, F. (2018). Compliance and corporate anti-money laundering regulation. *Journal of Governance and Regulation*, 7(2), 7–18. https://doi.org/10.22495/jgr_v7_i2_p7
19. Short, J. L., & Toffel, M. W. (2010). Making self-regulation more than merely symbolic: The critical role of the legal environment. *Administrative Science Quarterly*, 55(3), 361–396. <https://doi.org/10.2189/asqu.2010.55.3.361>
20. Tuotuo, Y., & Poncet, S. (2013). Pollution havens, environmental trade barriers and international regulatory spillover: A firm-level study of China. *Paris School of Economics Working Paper*.
21. van der Heijden, J., & Batura, O. (2023). Enforcement concepts and styles. In *Research handbook on law and regulation*. Edward Elgar Publishing. <https://doi.org/10.4337/9781802208030.00013>
22. Verdugo Yepes, C. (2011). Compliance with the AML/CFT international standard: Lessons from a cross-country analysis. *IMF Working Papers*, 11(177). <https://doi.org/10.5089/9781462319585.001>
23. Vogt, R. (2017). Reputations and the fight against tax evasion: EU pressure and Asian financial centres. *Asia Europe Journal*, 15(1), 87–106. <https://doi.org/10.1007/s10308-016-0465-4>
24. Ylönen, M. (2025). Reconceptualising the Brussels Effect. *JCMS: Journal of Common Market Studies*.