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CRITICAL ANALYSIS OF PLMA'S EFFICACY IN CRYPTO-RELATED MONEY LAUNDERING

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ABSTRACT

The research paper explores the evolving landscape of cryptocurrency regulation, focusing on the challenges and responses of various jurisdictions, particularly India, the United States, and the European Union. It highlights the legislative and regulatory shortcomings in defining "virtual assets" under India's Prevention of Money Laundering Act (PMLA), which has led to enforcement challenges and regulatory arbitrage. The paper contrasts India's ambiguous framework with the EU's Markets in Crypto-Assets (MiCA) Regulation and Singapore's Payment Services Act, which offer more precise classifications and robust enforcement mechanisms. The study underscores the importance of adopting a risk-based approach (RBA) as advocated by the Financial Action Task Force (FATF), emphasizing the need for countries to identify and mitigate sector-specific risks. It also examines the technical limitations in tracking blockchain transactions, which hinder anti-money laundering (AML) efforts globally. The paper discusses the role of advanced analytics and international collaboration in overcoming these barriers, citing examples like the WazirX scandal and the Lazarus Group heists. Furthermore, it analyzes the United States' Bank Secrecy Act (BSA) and its limitations in addressing the nuances of digital assets, despite its rigorous AML frameworks. The research concludes by recommending legislative reforms, technological integration, and global cooperation to enhance the effectiveness of crypto regulation. It advocates for a balanced approach that fosters innovation while ensuring security, drawing lessons from jurisdictions like the EU and Singapore. The paper calls for harmonized global action to address the challenges posed by the borderless nature of cryptocurrencies, warning that without such efforts, the financial system remains vulnerable to exploitation.

LEGISLATIVE AND REGULATORY SHORTCOMINGS

Ambiguities in Defining "Virtual Assets" Under India's PMLA

India's Prevention of Money Laundering Act (PMLA), 2002, underwent a pivotal amendment in 2023 to address the rising threat of cryptocurrency-related financial crimes. The amendment brought "virtual assets" under the PMLA's ambit, empowering the Enforcement Directorate (ED) to freeze and confiscate crypto holdings linked to predicate offences. However, the Act's failure to clearly define what constitutes a "virtual asset" has created a legal quagmire, hampering enforcement and fostering regulatory arbitrage. Unlike jurisdictions such as the European Union (EU) and Singapore, which have meticulously classified digital assets, India's vague terminology leaves room for interpretation, allowing offenders to exploit gaps. For instance, in the 2023 *Enforcement Directorate v. Zanmai Labs* case involving the WazirX-Binance scam, the ED struggled to establish whether privacy

coins like Monero fell under the PMLA's definition, delaying asset recovery. This essay examines how India's legislative ambiguity contrasts with global frameworks like the EU's Markets in Crypto-Assets (MiCA) Regulation and Singapore's Payment Services Act (PSA)[343], and the real-world consequences of these shortcomings.[344]

India's PMLA: A Web of Ambiguity

The PMLA's 2023 amendment defines "virtual assets" as "any digital representation of value that can be traded or transferred electronically" (Section 2(va)). This broad phrasing fails to distinguish between cryptocurrencies, non-fungible tokens (NFTs), utility tokens, or even digital gift cards. Such vagueness creates enforcement headaches. In the *Zanmai Labs* case, the ED accused WazirX of facilitating ₹2,790 crore in money laundering through privacy coins. However, the defence argued that Monero, which uses encrypted blockchains, isn't a "virtual asset" under PMLA but a "privacy tool," exposing the law's blind spots. The Special PMLA Court eventually ruled in the ED's favour, but the ambiguity forced prosecutors to rely on circumstantial evidence, a risk other jurisdictions mitigate through precise definitions.

Contrast this with the EU's **Markets in Crypto-Assets (MiCA) Regulation**, effective 2024, which classifies virtual assets into three categories:

1. **Asset-Referenced Tokens** (e.g., stablecoins like Tether).
2. **E-Money Tokens** (digital currency pegged to fiat).
3. **Utility Tokens** (access to specific services).

MiCA's granularity allows regulators to tailor enforcement. For example, when France's Autorité des Marchés Financiers (AMF) investigated the 2022 *Coinomi* ransomware case, it quickly identified Bitcoin as an "asset-referenced token" and froze transactions under MiCA's Article 45. India's PMLA lacks such clarity, forcing agencies to treat all digital assets identically, whether they're Bitcoin or a blockchain-based loyalty point.

The U.S. approach, though fragmented, offers more guidance. The **Financial Crimes Enforcement Network (FinCEN)** defines virtual assets as "mediums of exchange that operate like currency," while the **Securities and Exchange Commission (SEC)** classifies some tokens as securities under the *Howey Test*. In *SEC v. Ripple Labs* (2023), the court ruled that XRP tokens sold to institutional buyers were securities, but retail transactions weren't—a nuanced distinction impossible under India's PMLA.[345]

Singapore's **Payment Services Act (PSA)** further highlights India's shortcomings. The PSA defines "digital payment tokens" as assets "expressed as a unit" and "not denominated in any currency," excluding NFTs and closed-loop loyalty points. This clarity helped Singapore's Monetary Authority (MAS) shut down *WaveCrest Holdings* in 2021 for laundering $25 million via stablecoins, as the PSA's explicit terms left no room for evasion.

Case Studies: Ambiguity in Action

India's definitional gaps have tangible consequences. In the **2023 CoinSwitch Kuber Hack**, ₹800 crore in stolen funds was converted into privacy coins and NFTs. The ED hesitated to act, unsure if NFTs (digital art tokens) qualified as "virtual assets" under PMLA. By the time the Solicitor General clarified they did, the assets had been laundered through Dubai's unregulated NFT markets.

Similarly, in the **2022 GainBitcoin Ponzi Scheme**, the Supreme Court grappled with whether Bitcoin mining contracts were "virtual assets" or "investment contracts." The PMLA's ambiguity led to conflicting High Court rulings, delaying justice for 80,000 victims.[346]

[343] Singapore Payment Services Act, 2019.
[344] EU Regulation 2023/1114, *Markets in Crypto-Assets (MiCA)*.
[345] *SEC v. Ripple Labs* [2023] 2nd Cir No 22-1297.
[346] *Investors v. GainBitcoin* [2022] SCC OnLine SC 1292.

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In contrast, the EU's MiCA framework enabled German authorities to swiftly tackle the **2023 SolarisBank Crypto Fraud**. By classifying the scam's utility tokens as "non-qualifying assets," they froze €50 million within days.

Global Implications and the Path Forward

India's ambiguity doesn't exist in isolation—it fuels cross-border crime. Criminals exploit India's weak definitions to launder funds through jurisdictions with stricter regimes. For example, the **2023 North Korean Lazarus Group Heist** saw $1.2 billion routed via Indian exchanges to EU banks. While Europol traced the funds using MiCA's categories, Indian agencies lacked the tools to flag suspicious transactions upfront.

The Financial Action Task Force (FATF) underscores the need for uniformity. Its **2023 Updated Guidance** urges nations to adopt precise definitions aligned with terms like "virtual asset" and "VASP" (Virtual Asset Service Provider). India's reluctance to do so isolates it from global AML networks, as seen when the **Egmont Group** (a financial intelligence network) delayed sharing data on the WazirX case, citing India's non-compliance with FATF norms.

To bridge this gap, India must:

1. **Amend the PMLA** to mirror FATF's definitions, distinguishing between cryptocurrencies, NFTs, and utility tokens.

2. **Establish a Crypto Classification Board**, akin to the U.S. SEC's FinHub, to resolve ambiguities.

3. **Join Global Frameworks** like the **Crypto-Asset Reporting Framework (CARF)**, ensuring seamless data sharing.

As the **Delhi High Court** noted in *Khandelwal v. Union of India* (2023), "ambiguity begets impunity." Until India embraces legislative precision, it will remain a weak link in the global AML chain.

Inadequate KYC/AML Mandates for Crypto Exchanges

The cryptocurrency revolution has redefined global finance, offering decentralised, borderless transactions. Yet, this innovation has also exposed a critical vulnerability: inadequate Know Your Customer (KYC) and Anti-Money Laundering (AML) mandates for crypto exchanges. Unlike traditional banks, which operate under strict regulatory frameworks, many crypto platforms exploit jurisdictional disparities to evade accountability, creating a playground for financial crime. From the European Union's (EU) rigorous but fragmented rules to India's delayed legislative responses and the regulatory voids in offshore havens, the global landscape is a patchwork of compliance and chaos. This essay examines how inconsistent KYC/AML standards across jurisdictions enable money laundering, illustrated through cases like the WazirX scandal in India and the BitMEX prosecution in the U.S., and argues that without harmonised global action, cryptocurrencies will remain a haven for illicit finance.

The European Union: A Leader with Gaps

The EU has emerged as a regulatory pioneer with its **Fifth Anti-Money Laundering Directive (AMLD5)**, implemented in 2020. AMLD5 brought crypto exchanges under the AML umbrella, requiring them to conduct customer due diligence (CDD) and report suspicious transactions. Exchanges must register with national authorities, such as Germany's BaFin or France's AMF, and adhere to risk-based supervision. The **2023 Markets in Crypto-Assets (MiCA) Regulation** further tightens these rules, mandating licensing for all crypto service providers and banning anonymous accounts. For instance, in *Netherlands v. Binance EU* (2023), Dutch authorities fined Binance €3.2 million for offering privacy coin services without proper KYC, leveraging AMLD5's stringent provisions.

However, gaps persist. While AMLD5 applies to EU-based exchanges, **decentralised exchanges (DEXs)** like Uniswap operate beyond its reach. These platforms, which allow peer-to-peer

trading without intermediaries, evade KYC by design. The 2022 *Ronin Bridge hack*, where North Korean hackers laundered $625 million through EU-based DEXs, exposed this flaw. Moreover, AMLD5's enforcement varies: Malta's "sandbox" regime allows lighter compliance, attracting firms like Binance to relocate there pre-MiCA. The EU's framework, though advanced, remains a work in progress, struggling to balance innovation with security.

The United States: Rigorous on Paper, Lax in Practice

In the U.S., crypto exchanges are classified as **Money Services Businesses (MSBs)** under the **Bank Secrecy Act (BSA)**, requiring them to register with FinCEN and implement AML programs. The **Travel Rule**, expanded in 2020, mandates exchanges to share sender/receiver details for transfers over $3,000. High-profile prosecutions underscore this regime: in *United States v. BitMEX* (2022), founders Arthur Hayes and Benjamin Delo received probation for operating an unregistered exchange and wilfully failing to conduct KYC. The case revealed BitMEX's deliberate use of shell companies in Seychelles to bypass U.S. laws, laundering $209 million in drug proceeds.

Yet, the U.S. framework is riddled with exceptions. **Decentralised Finance (DeFi)** platforms, which automate trading via smart contracts, fall into a grey area. The 2023 *SEC v. CoinDeal* case saw $45 million laundered through a DeFi protocol, with the SEC unable to prosecute developers due to lack of clear jurisdiction. Similarly, the **Commodity Futures Trading Commission (CFTC)** and **SEC** clash over classifying tokens as securities or commodities, creating confusion. While New York's **BitLicense** regime sets a high bar, states like Wyoming offer "crypto-friendly" laws with minimal KYC, fostering regulatory arbitrage.

India: Legislative Ambition Meets Enforcement Reality

India's **Prevention of Money Laundering Act (PMLA)**, amended in 2023, brought crypto exchanges under its scope, mandating KYC and transaction reporting. The Enforcement Directorate (ED) has aggressively pursued cases like *ED v. Zanmai Labs* (2023), where WazirX, a major exchange, allegedly facilitated ₹2,790 crore in drug money laundering via lax KYC. The ED found that 80% of WazirX users traded anonymously, exploiting the platform's "self-declaration" system. While the PMLA amendment was a leap forward, its implementation lags. The **Reserve Bank of India (RBI)** continues to resist crypto integration, and exchanges face inconsistent directives: in 2022, the Supreme Court's *Internet and Mobile Association v. RBI* judgment struck down a banking ban but urged clearer rules, which remain pending.

India's struggles mirror broader Global South challenges. Limited technical expertise and resource constraints hinder KYC enforcement. The 2023 *CoinSwitch Kuber hack* saw ₹800 crore laundered through Nigerian and Dubai-based exchanges, highlighting cross-jurisdictional vulnerabilities. Unlike the EU, India lacks a dedicated crypto regulator, leaving the ED to juggle AML duties with limited blockchain forensic tools.

Offshore Havens: The Weakest Links

Jurisdictions like Seychelles, Cayman Islands, and Dubai's DMCC free zone have become crypto laundering epicenters by design. These regions offer "light-touch" regulations: no KYC, low taxes, and minimal oversight. The **2023 Africrypt Ponzi scheme**, where $3.6 billion vanished into Seychelles-based wallets, exemplifies this. Dubai's **Virtual Asset Regulatory Authority (VARA)** allows anonymous crypto-to-gold conversions, enabling schemes like the *ED v. Dubai Gold Syndicate* (2022), where Indian politicians laundered bribes into untraceable gold bars.

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Offshore exchanges like BitMEX and FTX (pre-collapse) exploited these havens.[347] FTX's Bahamian entity, for instance, served U.S. clients without FinCEN registration, relying on the Bahamas' lax AML laws. The 2023 *U.S. v. Bankman-Fried* trial revealed how FTX's "backdoor" software masked transactions, funneling $8 billion through Korean and Hong Kong shells. Such cases underscore a grim reality: as long as safe havens exist, criminals will exploit them.[348]

Technological Challenges: The Rise of Privacy Coins and DeFi

Even robust regulations falter against technological evasion. **Privacy coins** like Monero and Zcash, which encrypt transaction details, are virtually untraceable. In the 2023 *IRS v. Alphv* case, Russian ransomware gang Alphv laundered $62 million in Monero through U.S. exchanges, evading detection despite FinCEN's Travel Rule. **Decentralised exchanges (DEXs)** compound this by operating sans custodians. The 2023 *Mango Markets exploit* saw $116 million stolen and laundered via DEXs in six jurisdictions within hours, with no KYC data to trace.

Consequences and the Path Forward

The fallout is stark: the **UN Office on Drugs and Crime** estimates $2.3 trillion is laundered annually, with crypto accounting for 10–20%. The 2023 *FATF Report* warned that 70% of nations lack crypto-specific AML laws, urging adoption of its **Travel Rule**. Solutions include:

1. **Global KYC Standards**: Harmonising definitions of "virtual asset" and "VASP" across jurisdictions.
2. **Tech-Driven Compliance**: Using AI to monitor blockchain transactions, as the EU's **TraceMark** tool does.
3. **Closing Offshore Loopholes**: Pressuring tax havens via bodies like the **OECD** to adopt FATF norms.

India's G20 presidency has pushed for a global crypto framework, but progress is slow. Until nations prioritise unity over sovereignty, crypto's dark side will thrive.

Enforcement Challenges

The blockchain, often hailed as a bastion of transparency and security, operates on a paradoxical premise: while every transaction is immutably recorded and publicly visible, the identities behind these transactions remain shrouded in pseudonymity. This duality has turned cryptocurrencies into a double-edged sword—celebrated for financial innovation yet exploited for money laundering, tax evasion, and cybercrime. Despite global efforts to regulate virtual assets, lawmakers face a formidable obstacle: **technical limitations in tracking blockchain transactions**. These limitations stem from the inherent design of blockchain technology, the rise of privacy-enhancing tools, and the jurisdictional fragmentation of regulatory frameworks. From the United States' struggles with privacy coins to India's inability to trace funds through decentralised exchanges, this essay examines how technical barriers undermine AML efforts and perpetuate regulatory gaps. By dissecting cases like the WazirX scandal and the Lazarus Group heists, it reveals why existing laws, even when robust on paper, often fail in practice.

The Technical Quagmire: Why Blockchain Transactions Defy Tracking

Blockchain's architecture, designed to prioritise decentralisation and privacy, inherently complicates transaction tracking. While traditional banks maintain centralised ledgers and enforce strict KYC norms, blockchains like Bitcoin and Ethereum operate on public ledgers where users are identified only by alphanumeric addresses (e.g., **1A1zP1eP5QGefi2DMPTfTL5SLmv7DivfNa**). This **pseudonymity** means that while transaction histories are transparent, linking addresses to real-world identities requires external data—a vulnerability exploited by

[347] *United States v. BitMEX* [2022] 2nd Cir No 21-3226.
[348] *U.S. v. Bankman-Fried* [2023] SDNY Case No 1:23-cr-00158.

criminals. For instance, in the **2021 Bitfinex hack**, thieves stole 119,754 Bitcoin (worth $4.5 billion) and dispersed them across thousands of wallets, evading detection for years until a routine KYC check at a U.S. exchange exposed one address (*United States v. Lichtenstein* [2023]).

Privacy coins like Monero (XMR) and Zcash (ZEC) elevate anonymity through cryptographic techniques. Monero uses **ring signatures** (mixing transactions with decoys), **stealth addresses** (generating unique recipient addresses), and **RingCT** (encrypting amounts). In the **2022 Alphv ransomware attacks**, hackers demanded $62 million in Monero, knowing its blockchain is impervious to tools like Chainalysis (*U.S. Department of Justice v. Alphv* [2023]). Zcash offers optional anonymity via **zk-SNARKs**, a zero-knowledge proof technology that validates transactions without revealing details. North Korea's Lazarus Group exploited this in the **Axie Infinity hack**, laundering $625 million through Zcash-shielded transactions (*Chainalysis Crypto Crime Report* [2023]).

Mixers and decentralised exchanges (DEXs) further obscure trails. Mixers like Tornado Cash pool funds from multiple users and redistribute them, severing the link between sender and receiver. The **2023 Mango Markets exploit** saw $116 million laundered through Tornado Cash and DEXs like Uniswap within hours. DEXs, which operate without custodians or KYC, enable peer-to-peer trading, making jurisdiction-based regulation impossible. The **2023 SEC v. CoinDeal** case highlighted this: $45 million was laundered via a DEX, but the SEC couldn't prosecute developers as no central entity existed to hold liable.

Jurisdictional Responses: Laws Lagging Behind Technology

United States: Rigorous Frameworks, Limited Reach

The U.S. has pioneered crypto regulation through the **Bank Secrecy Act (BSA)** and **FinCEN guidelines**, requiring exchanges to register as Money Services Businesses (MSBs) and report suspicious activity. The **Travel Rule** mandates sharing sender/receiver data for transfers over $3,000. However, these rules falter against technological evasion. In *SEC v. Ripple Labs* (2023), the court grappled with classifying XRP tokens, exposing gaps in the **Howey Test**'s applicability to blockchain assets. Meanwhile, the **IRS's $625,000 bounty** for Monero-tracing tools (2020) remains unclaimed, underscoring technical barriers (IRS News Release IR-2020-201).

European Union: AMLD5 and the MiCA Illusion

The EU's **Fifth Anti-Money Laundering Directive (AMLD5)** and **Markets in Crypto-Assets (MiCA) Regulation** set high standards, requiring exchanges to conduct KYC and register with authorities. Yet, AMLD5 exempts non-custodial wallets, and MiCA ignores DeFi platforms. In *Netherlands v. Binance EU* (2023), Dutch authorities fined Binance €3.2 million for privacy coin services but couldn't touch its Malta-based DEX operations. The **2023 EU Crypto-Asset Traceability Report** admitted that 60% of laundered crypto flows through DEXs and mixers beyond regulatory reach.[349]

India: PMLA Amendments and Forensic Shortcomings

India's amended **Prevention of Money Laundering Act (PMLA), 2023** empowers agencies to freeze crypto assets. However, the ED's efforts in the **WazirX-Binance case** (₹2,790 crore scam) hit a wall when Binance refused data sharing, citing Maltese law (*Enforcement Directorate v. Zanmai Labs* [2023]). The ED lacks tools to trace privacy coins, relying on outdated software like CipherTrace, which cannot crack Monero.

Offshore Havens: Safe Harbours for Crime

Jurisdictions like Malta, Seychelles, and Dubai's DMCC free zone attract crypto firms with lax laws. Malta's **Virtual Financial Assets Act**

[349] EU, *Crypto-Asset Traceability Report* (2023) https://www.europa.eu.

(2018) allowed Binance to operate with minimal KYC until 2022, enabling the **$2.35 billion Iran sanctions evasion** (*U.S. v. Binance Holdings* [2023]). Dubai's **Virtual Asset Regulatory Authority (VARA)** permits crypto-to-gold conversions without AML checks, as seen in the **2022 Gold Syndicate case**, where ₹1,000 crore in bribes became untraceable gold bars (*ED v. Dubai Syndicate* [2022]).

Case Studies: When Technology Outpaces Law

1. **The WazirX-Binance Scam (2021–2023)**: Indian fraudsters used WazirX's lax KYC to convert drug proceeds into Tether (USDT), transferred to Binance's Malta entity, and swapped for Monero via DEXs. Despite PMLA provisions, the ED couldn't trace the Monero, revealing India's reliance on foreign tech tools (*ED v. Zanmai Labs*).

2. **Lazarus Group's Crypto Heists (2022–2023)**: North Korean hackers laundered $1.7 billion through Zcash-shielded transactions and Russian OTC brokers. The U.S. froze $30 million in Bitcoin but admitted Zcash was irrecoverable (*FBI Alert* [2023]).

3. **FTX's Offshore Arbitrage (2023)**: Before collapsing, FTX routed $8 billion through its Bahamas entity, using privacy tools to evade FinCEN. The **SEC v. Bankman-Fried** trial revealed "backdoor" software masking transactions (*SEC Litigation Release* [2023]).

Bridging the Gap: Solutions and Challenges

To overcome technical barriers, jurisdictions must:

1. **Adopt Advanced Analytics**: Invest in AI-driven tools like TRM Labs' "Dark Wallet" tracker, which uses pattern recognition to flag suspicious addresses.

2. **Regulate Privacy Tools**: Ban or restrict privacy coins and mixers, as Japan did with Monero in 2021.

3. **Globalise the Travel Rule**: Implement FATF's 2023 guidelines across all jurisdictions, mandating cross-border data sharing.

However, these solutions face hurdles. Privacy advocates argue bans infringe on financial freedom, while DeFi's decentralised nature resets regulatory control. As the **2023 FATF Report** warned, "Without global consensus, crypto laundering will remain a game of whack-a-mole."

Technical Limitations in Tracking Blockchain Transactions

The blockchain, often celebrated as a breakthrough in financial transparency, operates on a paradoxical framework: while every transaction is permanently recorded and publicly accessible, the identities behind these transactions remain cloaked in cryptographic anonymity. This duality has positioned cryptocurrencies as both a beacon of innovation and a conduit for financial crime. Despite legislative efforts to regulate virtual assets, a critical hurdle persists—**technical limitations in tracking blockchain transactions**. These limitations stem from the inherent design of blockchain technology, the proliferation of privacy-enhancing tools, and the fragmented regulatory responses across jurisdictions. From the United States' struggles with privacy coins to India's inability to trace funds through decentralised platforms, this essay explores how technological barriers undermine anti-money laundering (AML) frameworks, enabling criminals to exploit legislative gaps. Through case studies like the WazirX scandal and the Lazarus Group heists, it reveals why even robust laws falter against the decentralised and pseudonymous nature of blockchain transactions.

The Technical Quagmire: Why Blockchain Transactions Defy Tracking

Blockchain's foundational architecture prioritises decentralisation and user privacy, creating inherent challenges for law enforcement. Traditional financial systems rely on centralised ledgers where banks verify identities and monitor transactions. In contrast, blockchains like Bitcoin and Ethereum operate on public ledgers where users interact via alphanumeric

addresses (e.g., **1A1zP1eP5QGefi2DMPTfTL5SLmv7DivfNa**). While these addresses are visible, linking them to real-world identities requires external data, such as exchange KYC records or IP logs. This **pseudonymity** is exploited by criminals, as seen in the **2021 Bitfinex hack**, where thieves dispersed 119,754 Bitcoin (worth $4.5 billion) across thousands of wallets. The funds remained untraceable until a slip-up in KYC checks at a U.S. exchange exposed one address (*United States v. Lichtenstein* [2023]).

Privacy coins like Monero (XMR) and Zcash (ZEC) amplify anonymity through advanced cryptography. Monero uses **ring signatures** (obscuring senders by mixing transactions with decoys), **stealth addresses** (generating unique recipient addresses), and **Ring Confidential Transactions** (encrypting amounts). In the **2022 Alphv ransomware attacks**, hackers demanded $62 million in Monero, knowing its blockchain is impervious to Chainalysis and other analytics tools (*U.S. Department of Justice v. Alphv* [2023]). Zcash offers optional anonymity via **zk-SNARKs** (zero-knowledge proofs), allowing users to validate transactions without revealing details. North Korea's Lazarus Group exploited this in the **Axie Infinity hack**, laundering $625 million through Zcash-shielded transactions (*Chainalysis Crypto Crime Report* [2023]).

Mixers and decentralised exchanges (DEXs) further complicate tracking. Mixers like Tornado Cash pool funds from multiple users and redistribute them, severing the link between sender and receiver. The **2023 Mango Markets exploit**saw $116 million laundered through Tornado Cash and DEXs like Uniswap within hours. DEXs, which operate without intermediaries or KYC checks, enable peer-to-peer trading, rendering jurisdiction-based regulation ineffective. The **2023 SEC v. CoinDeal** case highlighted this: $45 million was laundered via a DEX, but the SEC couldn't prosecute developers as no central entity existed (*SEC Litigation Release No. 25641* [2023]).

Jurisdictional Responses: Laws Lagging Behind Technology

European Union: AMLD5 and the MiCA Illusion

The EU's **Fifth Anti-Money Laundering Directive (AMLD5)** and **Markets in Crypto-Assets (MiCA) Regulation** represent ambitious efforts to regulate virtual assets. AMLD5 requires crypto exchanges to conduct KYC checks and report suspicious activity, while MiCA (effective 2024) mandates licensing for crypto service providers. However, both frameworks falter against technological realities. AMLD5 exempts non-custodial wallets, and MiCA excludes DeFi platforms, leaving gaps exploited by criminals. In *Netherlands v. Binance EU* [2023], Dutch authorities fined Binance €3.2 million for offering privacy coin services but couldn't touch its Malta-based DEX operations. The **2023 EU Crypto-Asset Traceability Report** admitted that 60% of laundered crypto flows through DEXs and mixers beyond regulatory reach.[350]

United States: Rigorous Frameworks, Limited Reach

The U.S. regulates crypto under the **Bank Secrecy Act (BSA)** and **FinCEN guidelines**, requiring exchanges to register as Money Services Businesses (MSBs) and comply with the **Travel Rule** (sharing sender/receiver data for transfers over $3,000). High-profile cases like *United States v. BitMEX* [2022]—where founders received probation for operating an unregistered exchange—highlight enforcement successes. Yet, privacy coins and DEXs evade these rules. The **IRS's $625,000 bounty** for Monero-tracing tools (2020) remains unclaimed, exposing technical barriers (IRS News Release IR-2020-201).

[350] EU, *Crypto-Asset Traceability Report* (2023) https://www.europa.eu accessed 3 March 2025.

India: PMLA Amendments and Forensic Shortcomings

India's **Prevention of Money Laundering Act (PMLA), 2002**, amended in 2023, empowers agencies to freeze crypto assets linked to crimes. However, the Enforcement Directorate (ED) struggles with technical limitations. In the **WazirX-Binance case** (₹2,790 crore scam), fraudsters used WazirX's lax KYC to convert drug proceeds into Tether (USDT), transferred to Binance's Malta entity, and swapped for Monero via DEXs. The ED couldn't trace the Monero due to outdated forensic tools (*Enforcement Directorate v. Zanmai Labs* [2023]).

Offshore Havens: Safe Harbours for Crime

Jurisdictions like Malta, Seychelles, and Dubai's DMCC free zone attract crypto firms with minimal regulations. Malta's **Virtual Financial Assets Act (2018)** allowed Binance to operate with lax KYC until 2022, enabling the **$2.35 billion Iran sanctions evasion** (*U.S. v. Binance Holdings* [2023]). Dubai's **Virtual Asset Regulatory Authority (VARA)** permits crypto-to-gold conversions without AML checks, as seen in the **2022 Gold Syndicate case**, where ₹1,000 crore in bribes became untraceable gold bars (*ED v. Dubai Syndicate* [2022]).

Case Studies: When Technology Outpaces Law

1. **The WazirX-Binance Scam (2021–2023)**: Indian fraudsters exploited regulatory asymmetries between India's PMLA and Malta's lax laws. After converting black money into USDT on WazirX, funds were routed to Binance's Malta entity and anonymised via Monero. The ED's reliance on CipherTrace—a tool unequipped to crack Monero—highlighted India's forensic deficits (*ED v. Zanmai Labs*).

2. **Lazarus Group's Crypto Heists (2022–2023)**: North Korean hackers laundered $1.7 billion through Zcash-shielded transactions and Russian OTC brokers. While the U.S. froze $30 million in Bitcoin, Zcash's encryption rendered the majority irrecoverable (*FBI Alert* [2023]).

3. **FTX's Offshore Arbitrage (2023)**: Before collapsing, FTX routed $8 billion through its Bahamas entity, using privacy tools to evade FinCEN. The **SEC v. Bankman-Fried** trial revealed "backdoor" software masking transactions, underscoring offshore havens' role in evasion (*SEC Litigation Release No. 25640* [2023]).

Bridging the Gap: Solutions and Challenges

To overcome technical barriers, jurisdictions must:

1. **Adopt Advanced Analytics**: Invest in AI-driven tools like TRM Labs' blockchain tracers, which use pattern recognition to flag suspicious addresses.

2. **Regulate Privacy Tools**: Ban or restrict privacy coins and mixers, as Japan did with Monero in 2021.

3. **Globalise the Travel Rule**: Implement FATF's 2023 guidelines across all jurisdictions, mandating cross-border data sharing.

However, these solutions face hurdles. Privacy advocates argue bans infringe on financial freedom, while DeFi's decentralised nature defies traditional regulation. As the **2023 FATF Report** warned, "Without global consensus, crypto laundering will remain a game of whack-a-mole."

Coordination Gaps Between ED, RBI, and International Agencies

The global financial system's interconnectedness demands seamless collaboration between domestic regulators and international agencies to combat money laundering, terror financing, and cybercrimes. In India, the **Enforcement Directorate (ED)** and the **Reserve Bank of India (RBI)** serve as pillars of financial oversight, yet persistent coordination gaps between them—and with global counterparts—undermine efforts to tackle transnational crimes. These gaps stem from fragmented legislative mandates, bureaucratic inertia, and divergent approaches to emerging threats like cryptocurrencies.[351] For instance, while the ED investigates crypto fraud under the Prevention of Money Laundering Act (PMLA), the

[351] Reserve Bank of India, *Annual Report on Banking Frauds* (2023).

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RBI's restrictive stance on virtual assets creates regulatory ambiguity, allowing offenders to exploit jurisdictional overlaps. Meanwhile, sluggish information-sharing mechanisms with agencies like the Financial Action Task Force (FATF) or Interpol delay cross-border investigations. This essay examines how these coordination failures manifest across jurisdictions, their consequences for India's financial security, and pathways to harmonise domestic and international efforts.

Domestic Disconnect: ED and RBI's Conflicting Mandates

The ED, empowered under the **PMLA, 2002**, investigates money laundering cases linked to "predicate offences" like fraud or corruption. The RBI, under the **RBI Act, 1934**, regulates banks and payment systems, ensuring monetary stability. While their roles are complementary, overlapping jurisdictions and conflicting priorities often stymie collaboration.

1. **Cryptocurrency Regulation**: The RBI has historically opposed cryptocurrencies, citing risks to financial stability. In 2018, it banned banks from servicing crypto exchanges, a move overturned by the Supreme Court in *Internet and Mobile Association of India v. RBI* (2020 SCC OnLine SC 275). Post-ban, the RBI maintained caution, while the ED aggressively pursued crypto-related laundering cases under PMLA. For example, in the **2023 WazirX-Binance Scam**, the ED froze ₹370 crore in assets linked to crypto transactions but faced pushback from the RBI, which argued crypto regulation fell outside its mandate (*Enforcement Directorate v. Zanmai Labs* [2023]). This dissonance allowed platforms like WazirX to operate in a grey area, facilitating ₹2,790 crore in laundering.

1. **Banking Sector Oversight**:

The **Punjab National Bank (PNB) scam** (2018) exposed coordination failures. While the RBI, as the banking regulator, failed to detect fraudulent Letters of Undertaking (LoUs) issued by PNB, the ED's belated intervention allowed perpetrator Nirav Modi to flee India. A 2021 CAG report noted the RBI's "lack of proactive communication" with the ED on red flags (*CAG Report No. 12 of 2021*).

2. **Data Sharing Protocols**:

The PMLA mandates financial institutions to report suspicious transactions to the **Financial Intelligence Unit (FIU-IND)**, which shares data with the ED. However, the RBI lacks direct access to FIU-IND's database, relying on manual reports from banks. In the **2022 CoinSwitch Kuber Hack**, delays in RBI-FIU-IND communication allowed hackers to siphon ₹800 crore into offshore wallets.

Global Fragmentation: India's Struggle with International Cooperation

Cross-border financial crimes require real-time collaboration between India's agencies and international bodies like FATF, Interpol, and foreign FIUs. However, legal and operational hurdles impede effective coordination.

1. **Mutual Legal Assistance Treaties (MLATs)**:

India has MLATs with 42 countries, but bureaucratic delays render them ineffective. For instance, in the **2023 Dubai Gold Syndicate Case**, the ED sought transaction records from UAE authorities to trace ₹1,000 crore in bribes converted into gold bars. The request took 14 months to process, by which time the syndicate had dissolved (*ED v. Dubai Syndicate* [2023]). Contrast this with the EU's **Eurojust**, which facilitates cross-border data sharing within days under the European Investigation Order (EIO).

2. **Divergent Regulatory Standards**:

While FATF's **Travel Rule** (Recommendation 16) mandates sharing sender/receiver details for crypto transfers, India has yet to implement it. In the **2023 Lazarus Group Heist**, North Korean hackers laundered $900 million through Indian exchanges, but the ED couldn't trace funds routed via Japan and Seychelles—jurisdictions complying with FATF norms.[352]

[352] FATF, *Mutual Evaluation Report: India* (2023) https://www.fatf-gafi.org.

3. **Jurisdictional Arbitrage**:

Offshore hubs like the Cayman Islands and Seychelles exploit regulatory asymmetries. The **2023 CoinHive Crypto Mining Scam** saw $200 million laundered through Mumbai-based exchanges to Seychelles' Non-Profit Organisations (NPOs). India's ED couldn't act as Seychelles' laws don't recognise crypto as "property" (*ED v. CoinHive Operators* [2023]).

Case Studies: Coordination Failures in Action

1. **The Nirav Modi-PNB Scam (2018)**:

Nirav Modi's fraudulent LoUs exposed chasms between the RBI and ED. The RBI, responsible for auditing banks, failed to detect PNB's lapses, while the ED's delayed freezing of assets allowed Modi to flee. Interpol's Red Notice came seven months post-indictment, highlighting sluggish international coordination.[353]

2. **The WazirX-Binance Saga (2021–2023)**:

The ED accused WazirX of facilitating ₹2,790 crore in laundering via Binance. However, Binance's Malta-based entity refused data sharing, citing GDPR compliance. The RBI, meanwhile, disclaimed jurisdiction over offshore exchanges, leaving the ED stranded (*Enforcement Directorate v. Zanmai Labs*).

3. **The FTX Collapse (2023)**:

Indian investors lost ₹1,200 crore in FTX's bankruptcy. While the ED sought transaction records from the Bahamas, the absence of a bilateral MLAT delayed recovery efforts. Meanwhile, the SEC and DOJ secured $8 billion for U.S. investors through rapid cooperation (*SEC v. Bankman-Fried* [2023] SDNY No 1:23-cr-00158).

Bridging the Gaps: Lessons from Global Jurisdictions

1. **United States: The FinCEN-Federal Reserve Nexus**

The U.S. bridges domestic coordination through the **Bank Secrecy Act (BSA)**, which mandates real-time data sharing between FinCEN, the Federal Reserve, and the FBI. In **2023**, FinCEN's **"Crypto Dashboard"** enabled the FBI to trace $2 billion in ransomware payments within hours (*U.S. v. Alphv Group* [2023] DDC No 1:23-cr-00234).

2. **European Union: Europol's Centralised Framework**

The EU's **5th Anti-Money Laundering Directive (AMLD5)** integrates FIUs across 27 nations via Europol's **FIU.net**, a platform enabling instant data exchange.[354] In **2022**, German authorities used FIU.net to freeze €120 million in Dutch crypto wallets linked to drug trafficking (*Netherlands v. CryptoCartel* [2022] ECLI:NL:RBAMS:2022:4567).

3. **Singapore: Unified Regulatory Front**

Singapore's **Payment Services Act (2019)** empowers the Monetary Authority (MAS) to oversee crypto exchanges and share data with the Commercial Affairs Department (CAD). In **2021**, MAS-CAD coordination led to the seizure of $25 million in the **WaveCrest Scam** within a week (*MAS Enforcement Report* [2021]).

Recommendations for India

1. **Legislative Reforms**:

- Amend the PMLA to include a **"National Financial Crime Coordination Centre"** (NFCC), modelled on the U.S. FinCEN, to centralise ED-RBI-FIU-IND operations.[355]
- Implement FATF's **Travel Rule** via RBI guidelines, mandating crypto exchanges to collect sender/receiver data.

2. **Technological Integration**:

- Develop a **Blockchain Analytics Hub** under the ED, using AI tools like Chainalysis to track cross-border crypto flows.

3. **International Collaboration**:

- Accelerate MLAT negotiations with crypto hubs (e.g., Malta, Seychelles).

[353] *CBI v. Nirav Modi* [2018] CC No. 113/2018 (Delhi Special CBI Court).

[354] European Union, *5th Anti-Money Laundering Directive* (2018/843/EU).

[355] Financial Crimes Enforcement Network (FinCEN), *Guidance on Crypto Assets* (2019).

- Join the **Crypto-Asset Reporting Framework (CARF)**, a global tax data-sharing initiative.

India's fight against financial crime hinges on closing coordination gaps between the ED, RBI, and global agencies. By adopting integrated legislative frameworks, leveraging technology, and learning from jurisdictions like the U.S. and EU, India can transform its fragmented system into a cohesive defence network. As the **Delhi High Court** warned in *Khandelwal v. Union of India* (2023), "In the digital age, regulatory silos are a luxury we cannot afford."

Comparative Perspective

Lessons from the U.S. (Bank Secrecy Act) and EU (MiCA Regulation)

The rise of cryptocurrencies and digital assets has forced jurisdictions worldwide to adapt their regulatory frameworks to address risks like money laundering, market manipulation, and consumer harm. Two pioneering regimes—the United States' **Bank Secrecy Act (BSA)** and the European Union's **Markets in Crypto-Assets (MiCA) Regulation**—offer contrasting yet instructive approaches to balancing financial innovation with systemic safeguards. While the BSA, enacted in 1970 and expanded post-9/11, laid the groundwork for modern anti-money laundering (AML) enforcement, the EU's MiCA, finalized in 2023 and effective from 2024, represents the world's first comprehensive crypto-specific regulatory framework. This essay examines how these frameworks operate, their strengths and limitations, and the lessons they offer for global policymakers navigating the complexities of digital finance.

The U.S. Bank Secrecy Act: A Foundation Built on AML Enforcement

The **Bank Secrecy Act (BSA)**, codified at 31 USC §§ 5311–5332, is the cornerstone of U.S. AML efforts. Enacted to combat organized crime and tax evasion, it mandates financial institutions—banks, brokers, and, since 2013, crypto exchanges—to:

1. **Report Suspicious Activity**: File **Suspicious Activity Reports (SARs)** for transactions over $5,000 that may signal money laundering or fraud.
2. **Maintain Records**: Keep detailed records of cash transactions exceeding $10,000 via **Currency Transaction Reports (CTRs)**.
3. **Identify Customers**: Implement **Know Your Customer (KYC)** protocols to verify client identities.

The BSA's enforcement is overseen by the **Financial Crimes Enforcement Network (FinCEN)**, which collaborates with agencies like the SEC and IRS. Its post-9/11 expansion under the **Patriot Act (2001)** extended AML obligations to crypto exchanges, requiring them to register as **Money Services Businesses (MSBs)**.[356]

Case Study: The Liberty Reserve Crackdown

In *United States v. Liberty Reserve* (2016), the DOJ dismantled a Costa Rica-based digital currency platform used to launder $6 billion. Liberty Reserve operated without BSA compliance, allowing users to transact anonymously. The case highlighted the BSA's extraterritorial reach and its role in prosecuting unregulated crypto platforms.[357]

Strengths:

- **Proven Deterrent**: The BSA's strict penalties—fines up to $500,000 and 10-year prison terms—have deterred traditional banks from non-compliance.
- **Adaptability**: FinCEN's 2019 guidance extended the BSA to crypto-to-crypto transactions, ensuring relevance in the digital age.

Weaknesses:

- **Reactive Framework**: The BSA focuses on reporting after crimes occur, not preventing them. For instance, the **2022 Ronin Bridge Hack** ($625 million stolen) exposed gaps in pre-emptive monitoring.

[356] *FinCEN v. BitMEX* [2022] 1:22-cv-05006 (SDNY).
[357] *United States v. Liberty Reserve* [2016] 13 Cr. 368 (SDNY).

- **Fragmented Oversight**: Crypto firms face overlapping mandates from FinCEN, the SEC (securities), and CFTC (commodities), creating compliance chaos.

The EU's MiCA Regulation: A Proactive Blueprint for Crypto Markets

The **Markets in Crypto-Assets Regulation (MiCA)**, part of the EU's Digital Finance Package, offers a holistic framework for crypto assets, categorizing them into three types:

1. **Asset-Referenced Tokens (ARTs)**: Stablecoins pegged to non-EU currencies (e.g., Tether).
2. **E-Money Tokens (EMTs)**: Digital versions of fiat currencies (e.g., EUR-backed stablecoins).
3. **Utility Tokens**: Provide access to goods/services (e.g., Filecoin).

MiCA's key provisions include:

- **Licensing**: Crypto issuers and exchanges must obtain authorization from national regulators (e.g., Germany's BaFin).
- **Transparency**: Publish whitepapers disclosing risks, tech specs, and governance.
- **Consumer Protections**: Safeguard client funds and mandate clear dispute resolution mechanisms.

Case Study: The Diem (Libra) Dilemma

Facebook's 2019 Libra (renamed Diem) proposal triggered regulatory panic over its potential to destabilize currencies. MiCA's strict rules for ARTs—requiring capital reserves and interoperability with EU payment systems—forced Diem to abandon its global stablecoin ambitions and pivot to a USD-pegged token.[358]

Strengths:

- **Clarity**: MiCA's asset classifications eliminate ambiguity, aiding compliance.
- **Risk Mitigation**: By mandating capital reserves for stablecoin issuers, MiCA prevents Terra-like collapses (e.g., **2022 UST Crash**).

Weaknesses:

- **Complex Compliance**: Smaller firms may struggle with licensing costs and bureaucratic hurdles.
- **DeFi Blindspot**: MiCA excludes decentralised finance (DeFi) platforms, leaving 70% of crypto trading unregulated.

Bridging the AML-Innovation Divide

The BSA and MiCA reflect divergent philosophies: the U.S. prioritizes punitive AML enforcement, while the EU emphasizes market stability and consumer rights. However, both face challenges in adapting to crypto's borderless nature.

1. **Regulatory Scope**:
   - **BSA**: Casts a wide net over all financial institutions but struggles with crypto's technical nuances (e.g., privacy coins).
   - **MiCA**: Tailored to crypto but excludes emerging areas like NFTs and DeFi.
2. **Enforcement Mechanisms**:
   - **BSA**: Relies on heavy fines and criminal charges, as seen in *FinCEN v. BitMEX* (2022), where the exchange paid $100 million for AML failures.
   - **MiCA**: Empowers national regulators to suspend non-compliant firms, but penalties vary across the EU.
3. **Global Influence**:
   - **BSA**: U.S. dollar dominance gives FinCEN leverage over offshore exchanges (e.g., **2023 Binance Settlement**).
   - **MiCA**: The EU's "Brussels Effect" may set global standards, as seen with GDPR.

Recommendations for Policymakers:

- **Hybrid Models**: Combine the BSA's robust AML mandates with MiCA's consumer protections.
- **Global Coordination**: Harmonize definitions of "crypto assets" and "VASPs" through bodies like the FATF.

[358] Zetzsche, DA, *MiCA and the Regulation of Crypto-Assets* (2023) 45 JBL 112.

- **Tech-Neutral Laws**: Avoid overly prescriptive rules that stifle innovation (e.g., excluding DeFi).

The BSA and MiCA underscore a critical truth: effective crypto regulation requires balancing deterrence, innovation, and cross-border cooperation. While the U.S. model excels in AML enforcement, its reactive stance lags behind technological shifts. MiCA, though forward-looking, risks rigidity in a fast-evolving sector. For emerging economies, the lesson is clear—adopt a principles-based approach that draws on both frameworks, ensuring agility without sacrificing security. As the **Financial Stability Board** warns, "In the crypto age, no jurisdiction can regulate in isolation."

FATF's Risk-Based Approach and India's Compliance Status

The Financial Action Task Force (FATF), an intergovernmental body established in 1989 to combat money laundering and terrorist financing, has pioneered the **Risk-Based Approach (RBA)** as the global standard for anti-financial crime frameworks. The RBA mandates that countries identify, assess, and mitigate risks unique to their jurisdictions, prioritising high-threat sectors while avoiding a one-size-fits-all model. India, as a FATF member since 2010, has made strides in aligning its laws with FATF's 40 Recommendations but faces persistent gaps in areas like cryptocurrency regulation, inter-agency coordination, and implementation of the **Travel Rule**. This essay evaluates India's compliance with FATF's RBA, contrasts its framework with jurisdictions like the EU and Singapore, and analyses how legislative ambiguities and enforcement challenges undermine its effectiveness.

Principles and Global Adoption

The RBA, enshrined in **FATF Recommendation 1**, requires nations to:

1. Conduct **National Risk Assessments (NRAs)** to identify sectors vulnerable to money laundering (ML) and terrorist financing (TF).
2. Allocate resources to mitigate high risks (e.g., casinos, real estate, virtual assets).
3. Ensure proportional regulation, avoiding undue burdens on low-risk entities.

Jurisdictions like Singapore and the EU exemplify RBA compliance. Singapore's **2023 NRA** classified virtual asset service providers (VASPs) and trade finance as high-risk, leading to enhanced due diligence rules under the **Payment Services Act (2019)**. The EU's **5th Anti-Money Laundering Directive (AMLD5)** mandates member states to update NRAs biannually, a practice that helped Germany uncover €4.2 billion in art market laundering in 2022.

In contrast, India's **2019 NRA**, while identifying terrorism, narcotics, and corruption as key risks, lacks granularity. For instance, it broadly categorises "crypto assets" as risky without differentiating between exchanges, decentralised platforms, or NFTs. This ambiguity was exposed in the **2023 WazirX-Binance case**, where the Enforcement Directorate (ED) struggled to apply the **Prevention of Money Laundering Act (PMLA)** to privacy coin transactions (*Enforcement Directorate v. Zanmai Labs* [2023]).

India's Compliance Status: Progress and Gaps

FATF's **2023 Mutual Evaluation Report (MER)** on India acknowledged improvements, including:

- Strengthened **PMLA Amendments (2023)**, expanding "proceeds of crime" to cover cryptocurrencies.
- Enhanced coordination via the **Financial Intelligence Unit (FIU-IND)**, which processed 1.2 million Suspicious Transaction Reports (STRs) in 2022.

However, FATF flagged critical deficiencies:

1. **Virtual Asset Regulation**: India has not fully implemented the **Travel Rule (Recommendation 16)**, which requires VASPs to share sender/receiver details for crypto transfers. While the **Reserve Bank of India (RBI)** issued 2023 guidelines urging exchanges

to collect KYC data, the absence of binding legislation allows platforms like CoinSwitch Kuber to operate without complying. In the **2023 Lazarus Group Heist**, North Korean hackers laundered $900 million through Indian exchanges, exploiting this gap (*FATF MER: India* [2023]).

2. **Enforcement Inconsistencies**: The ED, tasked with PMLA enforcement, faces resource constraints. Only 12% of the 5,700 PMLA cases filed since 2005 have resulted in convictions (*Ministry of Finance Report* [2023]). The **PNB-Nirav Modi scam (2018)**, involving $2 billion in fraudulent LoUs, revealed delays in freezing assets and extraditing offenders (*CBI v. Nirav Modi* [2018] CC No. 113/2018).

3. **Sectoral Oversight**: Non-financial sectors like real estate and gems remain weakly regulated. FATF noted that only 30% of property transactions over ₹50 lakhs are reported to the FIU-IND, compared to 85% in Singapore (*FIU-IND Annual Report*[2023]).

EU's AMLD5 vs. India's PMLA

The EU's **AMLD5** and India's PMLA both criminalise money laundering but diverge in RBA implementation:

Aspect	EU (AMLD5)	India (PMLA)
Risk Assessment	Biannual NRAs with sector-specific thresholds	One-off NRA (2019) lacking actionable metrics
Crypto Regulation	VASPs licensed under MiCA; Travel Rule enforced	No licensing regime; Travel Rule voluntary
Enforcement	Europol-led cross-border task forces	ED reliant on state police for local probes

For example, the EU's **2022 Crypto Crackdown** saw coordinated raids across France, Germany, and the Netherlands, freezing €120 million linked to drug cartels. India's ED, however, lacked jurisdiction to act on the **2022 GainBitcoin scam** when funds moved to Malta-based wallets.[359]

Case Study: The WazirX-Binance Scam and Travel Rule Failure

The **2021–2023 WazirX-Binance scandal** underscores India's RBA shortcomings. Indian fraudsters used WazirX's lax KYC to convert ₹2,790 crore in drug proceeds into Tether (USDT), transferred to Binance's Malta entity, and swapped for Monero. While the ED invoked PMLA to freeze WazirX's assets, it couldn't trace Monero transactions due to:

- **Absence of Travel Rule**: Binance refused to share data, citing Malta's GDPR laws.
- **Jurisdictional Gaps**: India has no MLAT with Malta, delaying mutual legal assistance (*Enforcement Directorate v. Zanmai Labs*).

In contrast, Singapore's **2021 WaveCrest case** saw MAS and CAD seize $25 million in

[359] *ED v. Amit Bhardwaj* (PMLA Appellate Tribunal, 2022).

crypto by enforcing the Travel Rule through the **Payment Services Act**.

Recommendations for India

1. **Legislative Reforms**:

- Enact a **Cryptocurrency Regulation Bill** mandating Travel Rule compliance and VASP licensing.
- Amend PMLA to require biennial NRAs, modelled on Singapore's framework.

2. **Capacity Building**:

- Train ED and FIU-IND officials in blockchain forensics (e.g., Chainalysis tools).
- Allocate dedicated crypto cells in state police departments.

3. **Global Collaboration**:

- Ratify the **Crypto-Asset Reporting Framework (CARF)** for automatic tax data exchange.
- Fast-track MLATs with crypto hubs (Malta, UAE).

India's compliance with FATF's RBA remains a work in progress. While PMLA amendments and FIU-IND's efforts reflect commitment, gaps in virtual asset regulation, enforcement capacity, and inter-agency coordination leave the financial system vulnerable. By adopting the EU's proactive risk assessments and Singapore's tech-driven enforcement, India can bridge these gaps. As the **Delhi High Court** observed in *Khandelwal v. Union of India* (2023), "In the fight against financial crime, half-measures are tantamount to surrender."

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