ARE CRYPTOCURRENCY TRANSACTIONS PRIVATE IN THE EUROPEAN UNION? EXAMINING THE EFFECTS OF REGULATION (EU) 2015/847'S AMENDMENT, PROPOSED REGULATION (EU) 2021/0241, AND THE GENERAL DATA PROTECTION REGULATION

Ashton Holland

In July 2021, the European Union proposed Regulation (EU) 2021/0241 to regulate the rise of cryptocurrency within its member countries. Proposed Regulation (EU) 2021/0241 is an amendment to Regulation (EU) 2015/847, and its main purpose is to augment the current legal definition of "funds" to include cryptocurrency. Moreover, proposed Regulation (EU) 2021/0241 attempts to tackle criminal activity by forcing crypto wallets to divulge personal identifiable information to European Union financial regulators. This change, however, does not come without concern as it has potential ramifications for proposed Regulation (EU) 2021/0241 to work with the current General Data Protection Regulation. The General Data Protection Regulation's main purpose is to provide privacy to individuals from third-party and governmental interests, which also includes their financial transactions. This note examines the effects of proposed Regulation (EU) 2021/0241 and highlights the current deficiencies where the regulation would fall short, mainly through the lens of the General Data Protection Regulation.

I. INTRODUCTION

Since the beginning of time, societies have crafted laws to uphold morals and ideologies; however, they were also created to minimize chaos and prevent society from falling into a frightening dystopia. These laws presented themselves in a multitude of ways but were typically mandated by a controlling body that would either prohibit or allow its citizens to participate in certain acts. As a result, actions such as bartering, the exchange of a good or service for another good or service, grew in importance for individuals across the world. Bartering was necessary, as individuals needed to share certain tangible objects with one another. Eventually, bartering became a way of the past as individual governments began to institute tokens or coins known as currency.[1] Early governments implemented standardized currency to allow individuals the ability to purchase goods or services for a particular standardized value.[2]

Standardized currency is especially prevalent in modern times, where groups of individuals around the globe have joined together in efforts to introduce currency for tradable items.[3] Moreover, entities such as the European Union, a governing body that oversees twenty-seven countries on the European continent, have been created to set numerous plans and objectives that would allow countries and/or geographic areas to come together rather than operate independently.[4] Although this may seem desirable at first glance, certain problems, particularly in the financial area have arisen due to the advancement of technologies. In particular, the European Union has recently faced issues in regulating cryptocurrency in the financial realm while "ensuring [a] data subject[']s privacy."[5]

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1. *The History of Money: From Barter to Banknotes*, INVESTOPEDIA (Aug. 22, 2021) https://www.investopedia.com/articles/07/roots_of_money.asp.

2. *Id.*

3. *Id.*

4. The Maastricht Treaty of 7 February 1992, CVCE, https://www.cvce.eu/en/education/unit-content/-/unit/d5906df5-4f83-4603-85f7-0cabc24b9fe1/e038b310-f139-407f-9bfb-a1b2e901fb56 (last visited Feb. 9, 2022).

5. Mani Karthik Suhas Suripeddi & Pradnya Purandare, *Blockchain and GDPR – A Study on Compatibility Issues of the Distributed Ledger Technology with GDPR Data Processing*, 1964 J. PHYSICS: CONF. SERIES, 2021, at 1, 2.

The European Union has mandated that privacy is one of the most important rights and enacted the General Data Protection Regulation to protect its citizens' privacy.[6] Since the creation of the General Data Protection Regulation, it has protected citizens from Big Data and overzealous entities that want to process multiple forms of personal identifiable information.[7]

Before the rise in cryptocurrency, the European Union enacted Regulation (EU) 2015/847 to monitor financial transactions.[8] This Regulation, however, has its flaws and did not address virtual currency. It did, however, operate within the limits that were imposed by the General Data Protection Regulation.

In response to the rise of cryptocurrency, the European Union has proposed Regulation (EU) 2021/0241.[9] Proposed Regulation (EU) 2021/0241 aims to reduce the anonymity in cryptocurrency while also providing the European Union's anti-money laundering task forces with the ability to hone in on financial crimes.[10] Even though proposed Regulation 2021/0241 attempts to fill in the gaps missed by Regulation 2015/847, it will need to deal with multiple obstacles to comply with the General Data Protection Regulation.

This note will examine the effects of proposed Regulation 2021/0241 on the European Union, particularly how it impacts the General Data Protection Regulation. First, this note will explain cryptocurrency and the underlining technology of blockchain. Next, it will examine the effects of cryptocurrency on the current Regulation (EU) 2015/847 and how it has complied with the General Data Protection Regulation. The effects of Regulation (EU) 2015/847 will include concerns surrounding jurisdiction, privacy, and criminal activity. Finally, this note will examine the potential effects of proposed Regulation (EU) 2021/0241 on the European Union

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6. Regulation 2016/679 of the European Parliament and of the Council on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of such Data, and repealing Directive 95/46/EC, 2016 O.J. (L 119) 1.

7. *What is Big Data?,* ORACLE, https://www.oracle.com/big-data/what-is-big-data/ (last visited Feb. 12, 2022) (explaining the terminology coined "Big Data").

8. Regulation 2015/847 of the European Parliament and of the Council of 20 May 2015 on Information Accompanying Transfers of Funds and Repealing Regulation 1781/2006/EC, 2015 O.J. (L 141) ¶ 1.

9. Huw Jones, *EU to Tighten Rules on Cryptoasset Transfers*, (July 20, 2021) https://www.reuters.com/technology/eu-tighten-rules-cryptoasset-transfers-2021-07-20/.

10. *Id.*

and its ability to comply with the General Data Protection Regulation. These effects will also include jurisdiction, privacy, and criminal issues that proposed Regulation (EU) 2021/0241 aims to address.

A. New Financial Technologies

Since the turn of the twenty-first century, technologies have continued to advance far beyond the previous anticipation of the Y2K bug.[11] Blockchain, biometrics, robotic process automation, and multiple advances in technology have continuously advanced the financial industry.[12] Humankind's future, which was previously believed to rest upon whether banks could appropriately calculate interest rates after the turn of the century, is vastly different now due to the advancement of financial technologies.[13] These financial technologies, specifically those known as cryptocurrency, have transformed the ideology of how individuals create currency and the intrinsic value placed upon these tokens.

II. CRYPTOCURRENCY

A. History of Cryptocurrency

In 2009, Satoshi Nakamoto began to develop the process of decentralized cryptocurrency by creating the popular coin—Bitcoin.[14] Although Bitcoin is one of the most popular cryptocurrencies, cryptocurrencies of all kinds are utilized throughout the world as a currency to exchange items.[15] Like the Euro and Pound, cryptocurrencies

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11.   Kim   Rutledge   et   al,   *Y2K   Bug*,   NAT'L   GEOGRAPHIC, https://www.nationalgeographic.org/encyclopedia/Y2K-bug/ (last visited Mar. 27, 2023). A computer flaw that led many to believe that computer systems could not correctly interpret "00," thus creating a major problem in the system. *Id.*

12.   *Id.*

13.   *Id.*

14.   Grace Kay, *The Many Alleged Identifies of Bitcoin's Mysterious Creator, Satoshi   Nakamoto*,   BUSINESS   INSIDER   (Nov.   28,   2021,   12:49   PM) https://www.businessinsider.com/bitcoin-history-cryptocurrency-satoshi-nakamoto-2017-12. Bitcoin is not a tangible coin, rather it is an intangible instrument utilized to purchase items. *Id.*

15.   *Id.*

are coins that individuals have placed an exchange value upon within their respective organization or community.[16] However, unlike the Euro or Pound, cryptocurrency do not typically receive oversight by a governing body.[17] Instead, they were created to act as a new, unregulated currency "that [is] independent of central authority."[18]

Cryptocurrency is a token utilized like any other currency around the world. The main difference between cryptocurrency and other generally recognized currencies is the method of creation and distribution.[19] Cryptocurrency, unlike the Euro or Pound, is generally not created by a governing body to be circulated amongst a government's individual population.[20] Instead of the traditional path, "[c]ryptocurrencies use a variety of mining technologies" to create the token.[21]

These mining technologies "validate transactions and add[] them to [a] public ledger" by verifying the transaction.[22] Simply put, the mining process consists of multiple complicated mathematical equations that verify the authenticity of a specific transaction.[23] This verification process is extremely cumbersome; therefore, the entire process can be overly extensive and resource-intensive.[24] Once the token is created and validated, the process of distributing the token to another party commences as long as the transaction is legitimate.[25]

Cryptocurrencies are distributed on digital public ledgers referred to as blockchain.[26] A blockchain "is a database that stores the transactions and can share [them] among[st] a distributed network of computers."[27] Similar

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16. Stephen C. Wingreen et al., *Source of Cryptocurrency Value Systems: The Case of Bitcoin*, 24(4) INT'L J. ELEC. COM. 474 (2020).

17. *Id.* at 474–75.

18. *Id.*

19. Ujan Mukhopadhyay et al., *A Brief Survey of Cryptocurrency Systems*, 14th ANN. CONF. ON PRIV., SEC. & TR. 1 (2016).

20. Wingreen, *supra* note 16, at 474–75.

21. Mukhopadhyay, *supra* note 19.

22. *Id.*

23. *Id.*

24. *Id.* at 1-3.

25. *Id.* Legitimacy is established through the verification process; thus, once the currency is validated, "peer-to-peer" digital exchange is permitted. *Id.*

26. *Id.*

27. D. Towne Morton, *The Future of Cryptocurrency: An Unregulated Instrument in an Increasingly Regulated Global Economy*, 16 LOY. U. CHI. INT'L L. REV. 130 (2020).

to that of a traditional bank, the blockchain can only approve transactions that have a necessary supply of currency in a user's account.[28]

It is very easy to spend the same digital coin more than once since there is no tangible object that is being gained or lost.[29] To prevent the double-spending problem, the blockchain acts as "a trusted ledger" that does not require a central authority or governing body.[30] This record is publicly maintained through a "peer-to-peer process of consensus rather than one authority" to make decisions.[31] Peer-to-peer processing, rather than the typical process of validating transactions through an intermediary, minimizes the need for a central server.[32] For an added layer of security, the entire operation utilizes "digital signatures . . . [to] guard against . . . [security] attacks."[33] In sum, by utilizing blockchain, the "double-spending problem" is solved and "does not require a trusted third party" like a bank.[34]

B. Cryptocurrency Exchange Platforms

Cryptocurrency exchanges, known as cryptocurrency wallets, are important to the overall use of cryptocurrency and the blockchain.[35] These wallets are much different from a traditional tangible wallet, as a cryptocurrency wallet allows "user[s] to create an account . . . , [which is a] private [] and public key" and store it in a wallet.[36] These keys allow the user to authenticate that the coins are their property, which is "much more secure than [simply] exchanging."[37] The public and private keys process allows the user to send and receive coins using their individual wallet.[38]

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28.   James Grimmelmann, Internet Law: Cases & Problems 715 (11th ed. 2021).

29.   David Lee Kuo Chuen et al., *Cryptocurrency: A New Investment Opportunity?*, 20 (3) J. ALT. INVS. 16, 18 (2018).

30.   *Id.*

31.   Grimmelmann, *supra* note 28, at 715–16.

32.   Lee Kuo Chuen, *supra* note 29, at 17–18.

33.   Grimmelmann, *supra* note 28, at 715–16.

34.   Lee Kuo Chuen, *supra note* 29, at 16.

35.   SAURABH SURATKAR ET AL., CRYPTOCURRENCY WALLET: A REVIEW, 4TH INTERNATIONAL CONFERENCE ON COMPUTER, COMMUNICATION AND SIGNAL PROCESSING 1 (2020).

36.   *Id.* at 1-2. Private keys are like that of individual passwords and public keys are used by other members to initiate transactions with a specific private key. *Id.*

37.   *Id.*

38.   *Id.*

Since the entire process is digital, the keys act as a security mechanism that prevents intruders from accessing the wallet.[39]

Cryptocurrency wallets come in two primary forms—hardware and software wallets.[40] Hardware wallets are typically "physical vaults that store cryptocurrency data on a specially designed hard drive."[41] In contrast, software wallets are generally software programs that are easily accessible via a computer or cell phone.[42] A few software programs, such as Binance and Coinbase, are accessible via computer or mobile device.[43] These wallets collect information from the owner such as their name, address, date of birth, social security number, passport identification number, account number, and other personal identifiable indicators that usually represent an individual person.[44]

III. FINANCIAL TECHNOLOGIES AND PRIVACY IN THE EUROPEAN UNION

The rise of cryptocurrencies and new financial technologies forced the European Union to begin to craft ways to monitor and regulate the newfound digital currency.[45] These regulations provide clarity to the various industries, organizations, and individuals that utilize cryptocurrency to provide a clear and defined framework to follow.[46] The European Union also plans to regulate funds to cut down on financial crimes and terrorism.[47] Due to the rise in popularity and expanding use of cryptocurrency, the European Union believes that cryptocurrency needs to fall under the term "funds."[48]

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39. *Id.*
40. *Id.*
41. *Id.*
42. *Id.*
43. *Id.*
44. Michele Finck, *Blockchain and the General Data Protection Regulation: Can Distributed Ledgers be Squared with European Data Protection Law?*, EUR. PARLIAMENTARY RES. SERV. 1, 14 (2019).
45. Marek Bocanek, *First Draft of Crypto-Asset Regulation (MiCA) with the European Union and Potential Implementation*, 22(2) FIN. L. REV. 37–39 (2021).
46. *Id.*
47. *Id.* at 40.
48. *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets*, COM (2021) 422 final (July 20, 2021).

A. The European Union Enacts Regulation (EU) 2015/847 on
     Transfers of Funds to Further Control Over Financial
     Transactions

   In 2015, the European Union passed Regulation (EU) 2015/847 on
information accompanying transfers of funds, which repealed Regulation
(EC) 1781/2006 that governed the "information accompanying transfers
of funds with relation to the payer."[49] Regulation (EU) 2015/847 extends
the current jurisdictional reach of the European Union over certain funds.[50]
These funds include any currency sent or received by a payment service
provider or an intermediary payment service provider that is within the
European Union.[51] These payment service providers are generally
described as independent third-party systems that companies use to create
transactions with external companies or individuals in the world of e-
commerce.[52] However, the funds in Regulation (EU) 2015/847 do not
pertain to crypto-asset transfers.[53] This new advancement in digital
currency baffled European Commission financial regulators since existing
legislation did not effectively address concerns with cryptocurrency.[54] As
a result, this became an important issue for the European Union since
regulators are unable to track crypto-asset transfers, which can transfer

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49.   Elvinger Hoss Prussen, *European Union: Information Accompanying
Transfers of Funds*, MONDAQ (Jan. 3, 2018) https://www.mondaq.com/fund-management-
reits/660200/information-accompanying-transfers-of-funds;   Regulation   (EC)   No.
1781/200 of the European Parliament and of the Council on Information on the Payer
Accompanying Transfers of Funds; Regulation (EU) 2015/847, *supra* note 8.
    50.   *EU Funds Transfer Regulation 2015: A Regional Regulation with a Global
Impact*,   DEUTSCHE   BANK   GLOBAL   TRANSACTION   BANKING,   1,   4,
https://corporates.db.com/files/documents/EU-Funds-Transfer-Regulation-2015-A-
Regulation-with-global-impact.pdf?language_id=1.
    51.   *Id.* at 3.
    52.   Guoling Lao et al., *Study of Mobile Payment Business Model Based on Third-
party Mobile Payment Service Provider*, 2011 International Conference on Management
and Service Science 1 (2011).
    53.   *Proposal for a Regulation of the European Parliament and of the Council on
Information Accompanying Transfers of Funds and Certain Crypto-assets*, *supra* note 48.
    54.   Bocanek, *supra* note 455 (explaining that the European Commission is an
organization within the European Union tasked with approving/enacting European Union
policy).

illegal funds.[55] Consequently in 2021, regulators decided to exercise power over cryptocurrency.[56]

B. The General Data Protection Regulation and its Purpose

The General Data Protection Regulation was created by the European Commission to protect citizens of the European Union from third-party and governmental interests intruding into their privacy.[57] Moreover, the General Data Protection Regulation's goal is to protect the "free flow of data across the Digital Single Market."[58] This is not the first enactment of the General Data Protection Regulation; rather, it is a response to the current state of e-commerce by "updat[ing] and moderniz[ing] the principles . . . in the 1995 Data Protection Directive."[59] This version of the General Data Protection Regulation aims to allow individuals to have more authority over their own personal data while protecting that data from individuals inside and outside of the European Union.[60] An individual's personal data includes "data relating to an identified or identifiable living individual, whether on its own or in combination with another data set, and whether directly or indirectly."[61] Moreover, the legal "concept of personal data is non-exhaustive," within the definition of the Regulation, as it may also include "unique identifiers" like identification numbers and "online identifiers (such as IP addresses)."[62]

The General Data Protection Regulation amplifies the jurisdictional scope of previous European Union laws and applies to processors or controllers outside of the European Union.[63] This, however, is only

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55. *Id.*

56. Huw Jones, *EU to Tighten Rules on Cryptoasset Transfers*, REUTERS (July 20, 2021), https://www.reuters.com/technology/eu-tighten-rules-cryptoasset-transfers-2021-07-20.

57. Michelle Goddard, *The EU General Data Protection Regulation (GDPR): European Regulation that has a Global Impact*, 59 INT'L J. OF MKT. RES. 703 (2017).

58. *Questions and Answers – General Data Protection Regulation*, EUROPEAN COMMISSION   (Jan.   24,   2018), https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_387.

59. *Id.*

60. *Id.*

61. Sahar Bhaimia, *The General Data Protection Regulation: The Next Generation of EU Data Protection*, 18 LEGAL INFO. MGMT. 21, 24 (2018).

62. *Id.*

63. *Id.*

allowed if the organization outside of the European Union is "offering goods or services to individuals within the EU, or if it is monitoring the behaviour . . . of individuals in the EU."[64]

Citizens of the European Union benefit from this regulation in multiple ways.[65] The benefits include, but are not limited to: "1) A 'right to be forgotten'; 2) 'Easier access to one's data'; 3) A 'right to data portability'; 4) 'The right to know when one's data has been hacked'; and 5) 'Data protection by design and by default'."[66] Each of the benefits allows for a citizen to take control of their personal data, rather than it being on the internet for billions of individuals to inspect.

Although there are clear benefits for citizens, there are also numerous benefits for businesses.[67] Prior to the advancement of the General Data Protection Regulation, companies had multiple different laws that governed how they may control personal data.[68] The General Data Protection Regulation provides "clarity and consistency of the rules to be applied and restores trust of the consumer."[69] In the current age of Big Data, "[d]ata is the currency of today's digital economy."[70] Through the use of the General Data Protection Regulation, businesses are able to evolve by following one concise guideline rather than multiple conflicting laws.[71] In addition, businesses are able to utilize techniques to promote "anonymization . . . , pseudonymization . . . , and encryption . . . to protect personal data."[72]

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64. *Id.*
65. *Questions and Answers – General Data Protection Regulation*, *supra* note 58.
66. *Id.*
67. *Id.*
68. *Id.*
69. *Id.*
70. Vera Jourova, *Protecting our Personal Data in a Digital Economy*, THE EUROPEAN FILES (Sept. 28, 2017), https://www.europeanfiles.eu/digital/protecting-personal-data-digital-economy. Big Data is large, more complex data sets that are used by companies. *Id.*
71. *Questions and Answers – General Data Protection Regulation*, *supra* note 58.
72. *Id.*

C. Regulation (EU) 2015/847 and the General Data Protection
    Regulation

The General Data Protection Regulation created major challenges for
regulations around the European Union.[73] First and foremost, the General
Data Protection Regulation is a complex regulation that peers into the
realm of Big Data.[74] As imagined, compliance was difficult for large
entities to process data, as it could directly affect "the way Big Data
analysis is conducted."[75] This analysis usually includes personal data,
which directly coincides with the purpose of the General Data Protection
Regulation.[76]

Similarly, the issue revolving around Big Data and its compatibility
with the General Data Protection Regulation also included other forms of
processed data, like data in the financial realm.[77] Although data is
generally used to help law enforcement catch criminals under the
exceptions to the General Data Protection Regulation, more exceptions
may need to be added to protect an individual's data.[78] The effectiveness
of regulations like Regulation (EU) 2015/847 has, and will continue to be,
tested to see whether the General Data Protection Regulation aligns well
with the overall rule. Multiple portions of the General Data Protection
Regulation may need to be examined to see if it works alongside
Regulation (EU) 2015/847 so that the Regulation has no negative
ramifications with jurisdiction, privacy, and crime considerations.

1. *Jurisdiction*

Regulation (EU) 2015/847 extends the current jurisdictional reach of
the European Union. This regulation "applies to a transfer of funds, in any
currency, sent or received by a PSP [payment service provider], or an
intermediary PSP, established in the EU or any of the three additional
countries of the [European Economic Area] EEA (Iceland, Liechtenstein,

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73.   Tal Zarsky, *Incompatible: The GDPR in the Age of Big Data*, 47 SETON HALL
L. REV. 996 (2017).
74.   *Id.*
75.   *Id.*
76.   *Id.*
77.   *Id.* at 1015.
78.   *Id.*

and Norway)."[79] Moreover, Regulation (EU) 2015/847 "may also apply to countries/territories sharing a monetary union with an EU member [country], such as Monaco and the Channel Islands."[80]

Comparing Regulations and Directives

The European Union passes several types of legislation for its twenty-seven member countries.[81] The two main types are Regulations and Directives, which are defined in Article 288 of the Treaty on the Functioning of the European Union.[82] Regulations are "binding legislative acts . . . [that] must be applied in its entirety across the [European Union]."[83] Once passed, a regulation has immediate force and does not require an individual member country to pass the legislation into their local statutes.[84] Additionally, these regulations must be "directly applicable [to] all Member [countries]."[85] This is vastly different from a Directive, which "is a legislative act that sets out a goal that all [European Union] countries must achieve."[86] Although each member country must achieve the goal, "it is up to the individual counties to devise their own laws on how to reach these goals."[87] Directives allow a member country to find its own way to conform to overall European Union goals, which allows for more freedom and fewer restrictions on member countries.[88]

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79.   DEUTSCHE BANK, *supra* note 50.
80.   *Id.*
81.   *Types of Legislation*, EUROPEAN UNION, https://european-union.europa.eu/institutions-law-budget/law/types-legislation_en (last visited Dec. 19, 2021).
82.   *European Union Law: Secondary Legislation,* BODLEIAN LIBR. UNIV. OF OXFORD (Dec. 16, 2021) https://ox.libguides.com/c.php?g=422926&p=2888217 (explaining the establishment of Regulations and Directives in the European Union through Article 288); Consolidated Version of the Treaty on the Functioning of the European Union EC 326/47 ¶ 288 (2012).
83.   *Types of Legislation*, *supra* note 81.
84.   European Union Directives*, Summary of Article 288 of the Treaty on the Functioning of the European Union (TFEU) – Directives*, http://publications.europa.eu/resource/cellar/5b4f77fd-7c73-40a3-ab5e-7a0ff2d61d7d.0005.03/DOC_1 (last visited Dec. 19, 2021).
85.   BODLEIAN LIBRARIES UNIVERSITY OF OXFORD, *supra* note 82.
86.   *Id.*
87.   *Id.*
88.   *European Union Directives*, *supra* note 84.

Individual Member Countries

There has not been a specific mandate for regulating cryptocurrencies across the European Union; however, there have been multiple attempts to understand how this new currency works within European Union member countries.[89] Generally, European Union member countries acknowledge cryptocurrency as legal.[90] A few countries within the European Union have attempted to address cryptocurrencies by showing their alignment with traditional currency and finance.[91] Although there has been an attempt to accept cryptocurrency as a viable currency across the European Union, most countries have treated cryptocurrency as an asset rather than a currency.[92] This treatment is arguably due to the "inherent volatility" of cryptocurrency, "which is the by-product of [its] inelastic supply."[93] This inherent volatility has many regulators believing that cryptocurrency is a speculative asset rather than its actual intended use as a method of currency.[94] For example, "[i]n 2015, the Court of Justice of the European Union ruled that exchanges between traditional currency and crypto or virtual currencies should be [taxed differently] as cryptocurrencies constitute services rather than goods."[95] Moreover, the Court of Justice of the European Union ruled that Bitcoin, specifically, is not a legal tender of currency.[96] By failing to address cryptocurrency as a viable currency, the European Union has struggled to capture the jurisdictional issues of it as a

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89. David Walsh, *Majority of Europeans Want Their Countries to Regulate Crypto, Not the EU – Exclusive Euronews Poll,* (Sept. 1, 2021) https://www.euronews.com/next/2021/09/01/majority-of-europeans-want-their-countries-to-regulate-crypto-not-the-eu-exclusive-euronew.

90. *Cryptocurrency Regulations Around the World*, COMPLY ADVANTAGE (Feb. 6, 2020), https://complyadvantage.com/insights/cryptocurrency-regulations-around-world.

91. *Id.*

92. Gregory Claeys et al., *Cryptocurrencies and Monetary Policy,* POL'Y DEP'T FOR ECONOMIC, SCI. AND QUALITY OF LIFE POL'YS 1, 5 (2018).

93. *Id.*

94. *Id.*

95. *Crypto Travel Rule in European Union by European Banking Authority (EBA)*, NOTABENE, https://notabene.id/world/eu (last visited Feb. 12, 2022).

96. Value Added Tax Committee, *Issues Arising from Recent Judgements of the Court of Justice of the European Union*: *Case C-264/14 Hedqvist: Bitcoin*, EUROPEAN COMMISSION 1, 4 (Feb. 4, 2016), https://circabc.europa.eu/sd/a/add54a49-9991-45ae-aac5-1e260b136c9e/892%20-%20CJEU%20Case%20C-264-14%20Hedqvist%20-%20Bitcoin.pdf (analyzing Bitcoin as a type of cryptocurrency).

monetary item and any concerns that might stem from the utilization of blockchain.

Cross Border Issues

Enforcement of judgments across the European Union is complex, and there are many stipulations on the recognition and enforcement of judgments across its internal borders.[97] Regulation (EU) 1215/2012 expanded the scope of requirements for member courts to exercise jurisdiction over each other, thus allowing for courts of different jurisdictions to create their own judgments.[98] For example, an exclusive jurisdiction clause no longer prevents member countries from exercising jurisdiction even if court proceedings have already begun in another member country.[99] This will be important in the onslaught of cryptocurrency, as regulating cryptocurrency in the European Union will be extremely complex due to the characteristics of blockchain.

Initially, Regulation (EU) 2015/847 was created as an amendment to cut down on the potential of money laundering and other crimes in the European Union by targeting the types of funds that were received and forcing each party to divulge identifiable information.[100] Since cryptocurrencies run on blockchains and are thus decentralized, the mechanisms courts can use to exert jurisdiction are vastly different than in the centralized system. The decentralized system allows "multiple nodes [to] carry identical copies of the same information—nodes that may not even be within a court's jurisdiction."[101] Therefore, controlling the information, rather than enforcing an injunction, may be extremely difficult for European Union member countries, as the actual information often travels far outside a country's physical jurisdiction.

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97. *Jurisdiction and Governing Law Rules in the European Union*, HOGAN LOVELLS 1,1 (Jan. 2016), https://www.hoganlovells.com/~/media/hogan-lovells/pdf/2017-general-pdfs/jurisdiction-and-governing-law-rules-in-the-european-union-2016.pdf.

98. Sarah Garvey, *Brussels Regulation (Recast): Are You Ready?*, ALLEN & OVERY (Mar. 18, 2015), https://www.allenovery.com/en-gb/global/news-and-insights/publications/brussels-regulation-recast-are-you-ready.

99. *Id.*

100. Þorbjörg Sveinsdóttir, *Assessing the effectiveness of the EU AMIL regime: Detecting and Investigating Cases of Trafficking in Human Beings*, 9(4) New J. of Eur. Crim. L. 464 (2018).

101. Garry Gabison, *Policy Consideration for the Blockchain Technology Public and Private Application*, 19 SMU Sci. & Tech. L. Rev. 327, 332 (2017).

European Union Law and Non-European Union Residents

Data that is transferred outside of the European Union poses problems for the flow of personal data and cryptocurrency. Additionally, since cryptocurrency is decentralized and manifests itself on the blockchain, it is difficult for the General Data Protection Regulation and Regulated (EU) 2015/847 to control the spread and protection of information.

2. Privacy

Privacy bears huge importance in the advancement of new financial technologies, especially as users are exchanging large sums of money for various reasons. Governments and individuals deem entities that control the private secrets of millions of individuals in the world of cryptocurrency as capable of exercising power that may have economic and societal consequences.[102] These consequences are of great concern to the European Union, as these entities, mostly involved in Big Data, possess the strength to send shockwaves throughout Europe and the world.[103] Big Data is defined as complex data sets that may contain personal identifiable information.[104] Moreover, those that "min[e] customer information" and utilize personal identifiable information have caught the eye of consumer protection agencies within the European Union.[105] To protect its citizens and govern its territory, the European Union has enacted legislation to "regulate the processing of personal information" using the General Data Protection Regulation and the second Regulation (EU) 2015/847 on information accompanying transfers of funds.[106] Although these measures have been brought to prominence as mechanisms to protect consumers and provide anonymity, these measures could do more harm than good.

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102.   Orla Lynskey, *The Problem of Theorizing Privacy: Grappling with "Data Power": Normative Nudges from Data Protection and Privacy*, 20 Theoretical Inq. L. 190 (2019).

103.   Gianclaudio Malgeri, *'Ownership' of Customer (Big) Data in the European Union: Quasi-Property as Comparative Solution?*, 20(5) J. of Internet L. 1 (2016).

104.   ORACLE, *supra* note 7.

105.   Malgeri, *supra* note 103; *Big Data & Digital Clearinghouse*, EUROPEAN DATA PROTECTION SUPERVISOR, https://edps.europa.eu/data-protection/our-work/subjects/big-data-digital-clearinghouse_en (last visited Feb. 12, 2022).

106.   Lynskey, *supra* note 102.

Consumer Privacy

Privacy is paramount, especially in the rise of the digital economy.[107] This right to privacy is not only the right to be left alone or to prevent governments from overbearing intrusion, but it also includes the concept of privacy in private property.[108] In the digital age, private property is both tangible and intangible as it also includes "access to personal data."[109] The European Union acknowledges this right in the Charter of Fundamental Rights of the European Union, as "[t]he right to respect of private data is . . . guaranteed."[110]

Anonymity

The General Data Protection Regulation aims to protect private individuals from government and third-party interests.[111] Anonymity is promoted by the General Data Protection Regulation, as technology companies cannot store an overwhelming amount of information on individuals.[112] Although entities may process specific information, they may not process personal data such as race or ethnic origin, sexual orientation, or religious beliefs.[113] Anonymity is difficult to maintain in the field of financial transactions, as the General Data Protection Regulation promulgates that certain personal identifiable information cannot be processed.[114] The processing of personal identifiable information is required in Regulation (EU) 2015/847, which on its face, makes its compliance with the General Data Protection Regulation

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107.   Antonina Astone, *Personal Data between GDPR and Blockchain*, KNOWLEDGE – ECONOMY – SOCIETY: CONTEMPORARY TRENDS AND TRANSFORMATIONS OF ECONOMIES AND ENTERS. (2019).

108.   *Id.*

109.   *Id.*

110.   *Id.*; *Charter of Fundamental Rights of the European Union 2012/C 326/02* ¶ 8 (2012).

111.   *Data Protection Under GDPR*, YOUR EUROPE, (March 26, 2021) https://europa.eu/youreurope/business/dealing-with-customers/data-protection/data-protection-gdpr/index_en.htm.

112.   *Id.*

113.   *Id.*

114.   *Id.* (emphasizing the personal identifiable information may be gathered by any entity that transacts online).

difficult.[115] Despite this assumed difficulty, "personal data collected for the purpose of complying with [Regulation (EU) 2015/847] should not be [further] processed . . . in a way that is incompatible with [the General Data Protection Regulation]."[116] Although this is the case for typical funds established defined under Regulation (EU) 2015/847, the definition does not include crypto-assets.[117] Since there is not a definition for crypto-assets under the requirements of Regulation (EU) 2015/847, it is difficult for cryptocurrency to align well with the principle of "data minimization."[118]

3. Crimes

Regulation (EU) 2015/847's main purpose is to prevent crime in the European Union Financial sector.[119] Accordingly, the European Union is under the impression that "[f]lows of illicit money through transfers of funds can damage the integrity, stability and reputation of the . . . Union."[120] Specifically, these flows of illicit money have been determined to consist of "[m]oney laundering [and] terrorist financing" along with other significant sources of nefarious activity.[121]

Financial Crimes

Criminals usually launder funds to protect "the proceeds of their crimes."[122] These crimes vary from human trafficking to drug crimes, but to utilize this "dirty money," criminals usually have to launder the money to appear legitimate.[123] The European Union has taken multiple steps to

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115.   Regulation (EU) 2015/847, *supra* note 8, ¶18.

116.   *Id. at* ¶ 11.

117.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.

118.   Abigail Goldsteen et al., *Data Minimization for GDPR Compliance in Machine Learning Models*, AI AND ETHICS 2, 477 (2021). Data minimization "requires that organizations and governments collect only data that is needed to achieve the purpose at hand." *Id.*

119.   Regulation (EU) 2015/847 *supra* note 8, ¶ 1.

120.   *Id.*

121.   *Id.*

122.   Sveinsdóttir, *supra* note 100, at 465.

123.   *Id.* at 469; Valsamis Mitsilegas, et al., *The Eu Legislative Framework Against Money Laundering and Terrorist Finance: A Critical Analysis in the Light of Evolving Global Standards*, 56(1) Int'l and Compar. L. Q. 119 (2007).

prohibit money laundering, most notably "when it involves the proceeds of drug trafficking."[124] Multiple directives and countermeasures have been passed by the European Union electorate to combat these issues, mainly through an "evolution of the EU anti-money laundering framework."[125]

Anti-money laundering mechanisms within the European Union have been utilized to "prevent[], investigat[e] and detect[] . . . [money laundering]."[126] Regulation (EC) 1781/2006 established that "special Recommendation VII concerning wire transfers obliged payment service providers to" maintain meaningful and correct information on the individual making the payment.[127] The requirements within the Regulation (EC) 1781/2006 focused mostly on the payer rather than on the payee.[128]

In 2015, the European Commission changed the anti-money laundering mechanisms in Regulation (EU) 2015/847 and "increase[d] the obligation of the payment service providers" by requiring them to establish a risk-based approach.[129] This requirement forces the payment services providers to have a risk-based procedure to "evaluate whether insufficient information on the payer or payee poses a risk" to participate in money laundering or other similar financial crimes.[130] If a payment service provider receives incomplete information, that payment service provider must "suspend or reject the transfer."[131] These guidelines are specific but are concise and focused on eliminating the possibilities of money laundering activities within the European Union while adhering to the General Data Protection Regulation.[132]

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124.   *Id.*
125.   *Id.* at 120.
126.   Sveinsdóttir, *supra* note 100, at 469.
127.   *Id.*
128.   Hoss Prussen*, supra* note 49.
129.   Sveinsdóttir, *supra* note 100, at 469.
130.   *Id.*
131.   *Wire Transfer Regulation 2 (WTR2)*, DE NEDERLANDSCHE BANK (Oct. 27, 2021),   https://www.dnb.nl/en/sector-information/supervision-stages/regular-supervision/supervision-of-financial-crime-prevention-integrity-supervision/wire-transfer-regulation-2-wtr2.
132.   Regulation (EU) 2015/847, *supra* note 8, ¶ 2.

Terrorist Activities

Terrorists utilize cryptocurrency due to its "anonymity, decentralization, and globalization."[133] These specific characteristics entice many terrorist organizations, as they provide multiple ways to participate in money laundering campaigns and raise money from interested supporters.[134] To fight terrorist activities, the European Union utilizes Regulation (EU) 2015/847 to prevent or discourage terrorist financing.[135] Preventing "financiers of terrorism" from participating in the freedom of moving capital from one entity to another makes the entire illegal funding process much more difficult.[136] One of the main objectives of the revision was to "update and strengthen . . . counter-terrorist financing (CTF) regulation by ensuring the traceability of payment transactions, thereby facilitating the prevention, detection and investigation of . . . terrorist financing."[137] This approach has been successful, but Regulation (EU) 2015/847 does not fully address the nuance of cryptocurrency within the context of the General Data Protection Regulation.[138]

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133.   *See* Schacheng Wang & Xixi Zhu, *Evaluation of Potential Cryptocurrency Development Ability in Terrorist Financing*, 15 POLICING: J. POL'Y & PRAC. 2329, 2330 (2021),   https://academic.oup.com/policing/advance-article/doi/10.1093/police/paab059/6365869.

134.   Peter D. Hardy et al., *The EU's Efforts to Combat Money Laundering, the Financing of Terrorism and Corruption Seem to Overlook a very American Approach: Prosecute   People*,   NAT'L   L.   REV.   (Sept.   17,   2019), https://www.natlawreview.com/article/eu-s-efforts-to-combat-money-laundering-financing-terrorism-and-corruption-seem-to (showing an example of money laundering in the EU through the Danske Banke scandal).

135.   Mark Tarallo, *EU Targets Money Laundering and Terror Financing*, SEC. MGMT. MAG. (Oct. 1, 2020), https://www.asisonline.org/security-management-magazine/articles/2020/10/eu-targets-money-laundering-and-terror-financing/ (providing an example of how Anti-Money Laundering/Combating Terrorism Financing rules work to address terrorist financing).

136.   Regulation (EU) 2015/847, *supra* note 8, ¶ 2.

137.   Hoss Prussen*, supra* note 49.

138.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets*, *supra* note 48 (failing to address cryptocurrency as a fund).

IV. OVERVIEW: PROPOSED REGULATION (EU) 2021/0241

In July 2021, the European Commission proposed a regulation known as the Travel Rule.[139] The travel rule, known formally as Regulation (EU) 2021/0241, is in line with Regulation (EU) 2015/847 and only seeks to bolster the current law to regulate cryptocurrency exchanges.[140] The travel rule's main purpose is to tighten regulations on "[c]ompanies that transfer [B]itcoin or other cryptoassets [and force them] to collect details of senders and recipients to help authorities crack down on dirty money."[141] This proposal seeks to respond to ongoing changes in cryptocurrency across the European Union by amending "the current Regulation (EU) 2015/847."[142] European Commission proposed this amendment to revise the current laws in Regulation (EU) 2015/847, which "were adopted to ensure [compliance with] the International Standards on Combating Money Laundering and the Financing of Terrorism and Proliferation" since Regulation (EU) 2015/847 only "defined [funds] as 'banknotes and coins, scriptural money and electronic money' . . . [but did] not include crypto-assets."[143]

A. Proposed Regulation (EU) 2021/0241 and Cryptocurrency

Proposed Regulation (EU) 2021/0241 intends to regulate the decentralized world of cryptocurrency.[144] This proposed regulation would force "compan[ies] handling cryptoassets for a customer to [divulge] the customer's name, address, date of birth and account number, and the name of the person who will receive the cryptoassets."[145] The originator's personal identifiable information will also be included, such as their "address, official personal document number, customer ID number, or date

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139.   Jones, *supra* note 56.
140.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.
141.   Jones, *supra* note 56.
142.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets*, *supra* note 48.
143.   *Id.*
144.   *Id.*
145.   Jones, *supra* note 56.

and place of birth."[146] Similar to Regulation 2015/847, the "[b]eneficiary's crypto-asset provider would also need procedures in place to detect whether the information for the originator of the transfer is included or missing."[147] Moreover, "anonymous crypto-asset wallets will also be prohibited" so that cryptocurrency is regulated and governed under the European Union's anti-money laundering initiatives.[148] These initiatives have spurred additional requirements to prevent money laundering through the use of cryptocurrency.[149] Once a "transfer exceeds 1,000 euros or when a series of payment[s] appears to be linked and the total exceeds 1,000 euros," the payment service providers must verify the information on both the originator's and beneficiary's accounts.[150]

B. Proposed Regulation (EU) 2021/0241 and How it will Align with the General Data Protection Regulation

In proposed Regulation (EU) 2021/0241, the European Union boasts that it is "committed to ensuring high standards of protection of fundamental rights."[151] Although proposed Regulation (EU) 2021/0241 will collect personal data, its standards specifically include the right to privacy as defined in the General Data Protection Regulation.[152] In this way, the European Union acknowledges that the personal data processed by the proposed Regulation must adhere to the General Data Protection Regulation.[153]

The General Data Protection Regulation applies to the processing of an individual's personal data by service providers established in the European Union and other entities that affect the processing of personal data in the

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146.   Landon McBride, *New EU Proposal Looks to Tighten Regulations for Sending Cryptocurrency*, COINTELEGRAPH (July 20, 2021), https://cointelegraph.com/news/new-eu-proposal-looks-to-tighten-regulations-for-sending-cryptocurrency.

147.   *Id.*

148.   Jones, *supra* note 56.

149.   McBride, *supra* note 146.

150.   *Id.*

151.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.

152.   Vivek Krishnamurthy, *A Tale of Two Privacy Laws: The GDPR and the International Right to Privacy*, 114 AJIL UNBOUND 26 (2020).

153.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.

European Union.[154] Personal data is information relating to an identified or identifiable natural person.[155] The General Data Protection Regulation is "tailored towards centralized networks, where there is a clear controller of the data and defined third parties who merely process the data."[156] This will likely become an issue with proposed Regulation (EU) 2021/0241 as there are multiple business enterprises that process personal data in the European Union.[157] Moreover, since cryptocurrency is decentralized, it may be difficult for the General Data Protection Regulation to provide oversight.[158]

There are also massive challenges with the General Data Protection Regulation, as there are several issues with storing and processing client data.[159] The General Data Protection Regulation typically requires "that data can be modified or erased where necessary to comply with legal requirements."[160] Several concerns must be addressed for proposed Regulation (EU) 2021/0241 to be effective and comply with the General Data Protection Regulation.

C.   Potential Implications: Proposed Regulation (EU) 2021/0241

On its face, proposed Regulation (EU) 2021/0241 tackles any concerns that might arise in the ever-changing world of cryptocurrency. However, in practice, there are several potential implications that proposed Regulation (EU) 2021/0241 might face due to the General Data Protection Regulation. Furthermore, it is vital to understand what issues might arise in the form of jurisdictional, privacy, and criminal activities that the Regulation may endure in relation to the General Data Protection Regulation.

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154.   McBride, *supra* note 146.

155.   *General Data Protection Regulation*, INTERSOFT CONSULTING, https://gdpr-info.eu (last visited Dec. 19, 2021).

156.   Bruce Bennett et al., *The GDPR and Blockchain*, (July 24, 2018) https://www.insideprivacy.com/international/european-union/the-gdpr-and-blockchain.

157.   *Who does the Data Protection Law Apply to?,* EUROPEAN COMM'N, https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/application-regulation/who-does-data-protection-law-apply_en (last visited Mar. 11, 2022).

158.   Gabison, *supra* note 101.

159.   Bennett, *supra* note 156.

160.   Finck, *supra* note 44.

1. Jurisdictional Insight

Jurisdiction concerns will arise when the European Union attempts to enforce proposed Regulation (EU) 2021/0241 on an international scale. It is important for the European Union to finalize its plans over jurisdiction to exercise it correctly. For example, the Regulation (EU) 1215/2012 also modified the way the courts in the European Union exercise jurisdiction over disputes occurring outside the European Union.[161] Regulation (EU) 1215/2012 directly addresses any domicile and special jurisdiction issues that European Union member courts may oversee.[162]

For domicile, a claimant is given the flexibility to choose an appropriate jurisdiction, as "it provides that a company or other legal person or association of natural or legal persons is domiciled at the place where it has its: (a) statutory seat, (b) central administration; or (c) principal place of business."[163] This provision allows the European Union to oversee parties with domiciles within and outside of the European Union.[164] In special jurisdiction matters, the courts have the ability to exercise jurisdiction where the subject matter of the litigation occurs, which may be outside of the jurisdiction of the European Union.[165] These are not the only ways courts in the European Union exercise control over their territory, but these are two vital provisions establishing their jurisdiction and authority.

For non-residents outside of the European Union, proposed Regulation (EU) 2021/0241 must also deal with how it will exercise jurisdiction over those that do not comply with its orders. Usually, the European Union exercises jurisdiction over non-residents using treaties and other policies

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161.   HOGAN LOVELLS, *supra* note 97.

162.   *Id*.; Regulation (EU) No 1215/2012 of the European Parliament and of the Council on Jurisdiction and the Recognition and Enforcement of Judgments in Civil and Commercial Matters 2012 O.J. (L 351) 9.

163.   *Id*. (explaining the different acceptable locations for exercising domiciliary status).

164.   *Id*.

165.   *Id.;* FABIEN CADET, MAIN FEATURES OF REGULATION NO 1215/2012 OF DECEMBER 2012 ON JURISDICTION AND THE RECOGNITION AND ENFORCEMENT OF JUDGEMENTS IN CIVIL AND COMMERCIAL MATTERS (Brussels I) 5, http://www.era-comm.eu/Cross_border_civil_litigation/kiosk/PDF/113DT99_Cadet_features.pdf   (last visited Dec. 19, 2021).

to control foreigners that are present within the European Union.[166] However, for illegal acts committed by non-residents not physically within the European Union's jurisdiction, the European Union may still exercise special jurisdiction since the act infringed on the European Union's territory.[167] Jurisdiction is established even if "the defendant had no connection" with the territory, "[a]s long as the claim is connected with the territory of the forum."[168] This overarching policy will allow proposed Regulation (EU) 2021/0241 to reach individuals who are not residents of the European Union.

Proposed Regulation (EU) 2021/0241 must also combat the decentralization of cryptocurrency. Blockchain allows for multiple transfers of funds without an overseeing governmental body.[169] In the case of money laundering, criminals may attempt to move funds repeatedly until there is little to no trace of where the fund originated.[170] Moreover, by transferring funds "through as many institutions and jurisdictions in order to bring them as far as possible from their origin," it will be extremely difficult for local investigators of European Union members to track if the funds originated or ended within their own jurisdiction.[171]

Additionally, there are concerns involving the movement of cryptocurrency data beyond the European Union borders with proposed Regulation (EU) 2021/0241.[172] Currently, the European Union and the United States have legislation - called the Safe Harbour Framework - to allow data to flow between both countries.[173] The Framework "provides a

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166.   Paul Beaumont, *Forum Non Conveniens and the EU Rules on Conflicts of Jurisdiction: A Possible Global Solution*, 3 DANS REVUE CRITIQUE DE DROIT INT'L PRIVE 447, 448 (2018) (Article 220(4) of the EEC Treaty).

167.   Trevor Hartley*, Basic Principles of Jurisdiction in Private International Law: The European Union, the United States and England*, 71 INT'L & COMP. L. Q. 211, 215-216 (2021).

168.   *Id.* at 215.

169.   Wingreen, *supra* note 16, at 474-75.

170.   *What is Money Laundering?,* FATF, https://www.fatf-gafi.org/faq/moneylaundering/ (last visited Feb. 12, 2022).

171.   Henri Heikura, The Role of Companies and Private Sector in Prevention of Money Laundering – Is the Current Legal Framework and Obligations it Places for Entities Efficient or Burdening? (May 2021) (M.A. thesis, University of Helsinki).

172.   *U.S.-EU Safe Harbour Framework*, FEDERAL TRADE COMMISSION, https://www.ftc.gov/tips-advice/business-center/privacy-and-security/u.s.-eu-safe-harbor-framework (last visited Dec. 19, 2021).

173.   *Id.*

legal mechanism for companies to transfer personal data from the EU to the United States."[174] The hallmark case, *Schrems v. Data Protection Commissioner*, further broke down the importance of "whether transfer[s] of data to third countries comply with directives" in the European Union using the Safe Harbour Framework.[175] The Framework aligns well with proposed Regulation (EU) 2021/0241, as the new proposal requires much more personal data from individuals. However, by requiring cryptocurrency wallets to divulge their customer's personal identifiable information, following the Framework may lead directly to complications with the General Data Protection Regulation.[176]

2.   *Privacy*

Another main purpose of proposed Regulation (EU) 2021/0241, is to "expand[] traceability requirements to crypto-assets."[177] Therefore, although proposed Regulation (EU) 2021/0241 will face compatibility issues with the General Data Protection Regulation, compliance may not be impossible.[178]

Consumer Privacy

For cryptocurrency to work, it must run on the blockchain.[179] Blockchain's main advantage is "its ability to secure old data against modification . . . where new data can be added but never removed."[180] This inability to remove data from the blockchain poses a huge challenge when dealing with strict consumer privacy laws such as the General Data

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174.   *Id.*

175.   Maria Tzanou, *European Union Regulation of Transatlantic Data Transfers and Online Surveillance*, 17 HUM. RTS. L. REV. 545, 547 (2017); *See also* Court of Justice of the European Union Press Release *106/15,* Advocate General's Opinion on Case C-362/14 *Maximillian Schrems v. Data Protection Commissioner* (Sep. 23, 2015).

176.   Suripeddi, *supra* note 5.

177.   *Proposal for a Regulation of the European Parliament and of the Council on information accompanying transfers of funds and certain crypto-assets*, *supra* note 48.

178.   Simon Farshid et al., *Design of A Forgetting Blockchain: A Possible Way to Accomplish GDPR Compatibility*, 52 HAW. INT'L CONF. SYS. SCIS. 7087, 7087 (2019).

179.   Mukhopadhyay, *supra* note 19.

180.   Farshid*, supra* note 178.

Protection Regulation.[181] Proposed Regulation (EU) 2021/0241 requires cryptocurrency exchanges to collect personal identifiable information.[182] This information is shared in transactions between individuals and corporations.[183] Due to proposed Regulation (EU) 2021/0241, the sharing of this information, which may be on the blockchain itself, will be seen by governmental officials under the law.[184] Even if the blockchain does not contain personal identifiable information, "historical data can be analyzed to reveal identities of pseudonyms."[185] Due to this, it may be vital for the blockchain to remove "unnecessary information . . . as a preventive measure."[186] While this is unlikely to remove all the information, it is a step for cryptocurrency exchange platforms to be compliant with both proposed Regulation (EU) 2021/0241 and the General Data Protection Regulation. Implementing preventive measures will remove issues that will occur when dealing with an individual's privacy.

Anonymity

The General Data Protection Regulation mandates that "[p]ersonal data shall be: adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed."[187] This process or technique is known as data minimization, which is key to achieving compliance with the General Data Protection Regulation.[188] Under proposed Regulation (EU) 2021/0241, cryptocurrency exchanges would be required to provide "[t]he originator's address, official personal document number, customer ID number, or date and place of birth."[189] Since all of this information is required, it appears to be a far cry from data minimization, as a payment service provider will be required to divulge all of this information to

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181.   *Id.*
182.   McBride, *supra* note 146.
183.   *European Union – Data Privacy and Protection*, Priv. Shield Framework, https://www.privacyshield.gov/article?id=European-Union-Data-Privatization-and-Protection (last visited Mar. 10, 2022).
184.   McBride, *supra* note 146.
185.   Farshid*, supra* note 178.
186.   *Id.*
187.   Goldsteen*, supra* note 118.
188.   *Id.*
189.   McBride, *supra* note 146.

European Union officials.[190] If this occurs, individuals will no longer be anonymous, which may discourage individuals with legitimate transactions from participating in cryptocurrency transactions. Of course, many cryptocurrency transactions are legitimate. However, since the European Union appears to be subjecting every user to anti-money laundering preventive measures, an individual may reasonably believe their right to privacy is under attack.[191]

This attack on privacy does not align well with the General Data Protection Regulation, as it prevents individuals from being anonymous. This anonymity is a primary motivator of many cryptocurrency users and individuals rely on the ability to exchange currency without knowing the identity of the other party to the transaction.[192]

3. *Crimes*

As mentioned, the main purpose of Regulation (EU) 2015/847 is to monitor crime.[193] In response to the development of cryptocurrency, the European Commission has proposed Regulation (EU) 2021/0241 to address the nuances of this new technology.[194] Specifically, for proposed Regulation (EU) 2021/0241 to work, it must fundamentally understand blockchain.

Many individuals misunderstand the difference between blockchain and distributed ledger technology ("DLT").[195] Blockchain is a type of DLT, whereas DLT is a "type of database spread across multiple sites, regions, or participants."[196] For the proposed Regulation (EU) 2021/0241 to work, while still upholding the standards of the General Data Protection Regulation, it may have to be more directed at DLT, rather than cryptocurrency utilized on a blockchain.

The United Kingdom's Financial Conduct Authority ("FCA") authored a paper on DLT that discussed regulatory implications of current and

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190.   *Id.*
191.   *Id.*
192.   Lee Kuo Chuen, *supra* note 29, at 18.
193.   Jones, *supra* note 56; *See* discussion *infra* Section III.C.3.
194.   McBride, *supra* note 146.
195.   *Difference   Blockchain   and   DLT*,   (Jan.   30,   2018) https://marcopolonetwork.com/articles/distributed-ledger-technology.
196.   *Id.*

potential developments of DLT in the financial markets.[197] According to the FCA, DLT "represent[s] an improvement on other available technology" for law enforcement actions as it has the ability to "prevent and track financial crime" through its record-keeping system, encryption, and ability to audit user adjustments trails.[198] Many of proposed Regulation (EU) 2021/0241's goals align well with the process of DLT, as it aims to track everything from the payor to payee.[199] This improvement might allow for proposed Regulation 2021/0241 and the General Data Protection Regulation to work better together.

Financial Crimes

The value of cryptocurrency to criminals has grown through its ability to provide anonymity to their activities.[200] These activities, primarily money laundering, are much more appealing to criminals due to the ability to "produce exchanges in a manner that does not require the players to either know or trust each other."[201] This anonymity is paramount to criminals, as they would previously have had to enter into agreements with bankers to help launder their money via credit.[202] Now, instead of the older form of money laundering, criminals are able to perform illegal "transactions [since they] are not automatically screened for illegal activities by a party that is centrally responsible" to regulatory agencies for those activities like banks.[203]

In order for the criminals to receive the cryptocurrencies, "funds to be laundered may originate from outside the cryptocurrency sphere."[204] Once the laundered funds are gathered, those funds are "converted into

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197.   FINANCIAL CONDUCT AUTHORITY, *Discussion Paper on Distributed Ledger Technology*, 1, 5, (Discussion Paper DP17/3, 2017), https://www.fca.org.uk/publication/discussion/dp17-03.pdf.

198.   *Id.* at 27.

199.   McBride, *supra* note 146.

200.   Raffaella Barone et al., *Cryptocurrency or Usury? Crime and Alternative Money Laundering Techniques*, 47 EUR. J. L. & ECON. 232, 241 (2019).

201.   *Id.* at 240–41.

202.   *Id.* at 236.

203.   Lars Haffke et al., *Cryptocurrencies and Anti-Money Laundering: The Shortcomings of the Fifth AML Directive (EU) and How to Address Them*, 21 J. BANKING REGUL. 125, 129 (2020).

204.   *Id.* at 130.

[cryptocurrency] . . . in a country with low [anti-money laundering standards]."[205] This process can occur multiple times, and "[t]okens [may be] exchanged back and forth into different cryptocurrencies traded on different [b]lockchains, making it harder to connect traces between these [b]lockchains."[206] The difficulty in trading cryptocurrency has been inferred by the proposal of Regulation (EU) 2021/0241, but its suggested requirements may not be enough to stop the process of money laundering.[207]

By regulating the "providers engaged in exchange services between virtual currencies," proposed Regulation (EU) 2021/0241 can access software wallets that users use to manage their cryptocurrency.[208] Although this appears to be a step in the right direction, two major issues are likely to rear themselves. First, these cryptocurrency software wallets are only required to provide certain information, and there is no mention of hardware wallets.[209] Hardware wallets are generally kept on personal drives, which crypto-asset service providers may not see.[210] If the proposed Regulation (EU) 2021/0241 is attempting to regulate hardware wallets as well as software wallets, is it possible for them to access these personal wallets? Understanding whether proposed Regulation (EU) 2041/0241 can reach personal hardware wallets remains to be seen, because this intrusion may be against the General Data Protection Regulation. Privacy is a fundamental right in the European Union, and potentially accessing information that is under the personal control of a citizen without any significant purpose may infringe upon that right.[211]

Second, this process merely deters or delays the process of money laundering—it does not stop it altogether. If criminals utilize cryptocurrency to launder money, they will likely start the transaction far from European Union territory and move it through several networks.[212]

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205.   *Id.*
206.   *Id.*
207.   McBride, *supra* note 146.
208.   Haffke, *supra* note 203, at 134.
209.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.
210.   Suratkar, *supra* note 35, at 1.
211.   Astone, *supra* note 107.
212.   *Cryptocurrencies: Tracing the Evolution of Criminal Finances*, Europol, 10, 12 https://www.europol.europa.eu/cms/sites/default/files/documents/Europol%20Spotlight%

Since this is likely the case, proposed Regulation (EU) 2021/0241 would not come into play until the cryptocurrency is washed of its history. Moreover, if proposed Regulation (EU) 2021/0241 is able to reach beyond the jurisdictional border of the European Union, will law enforcement and the courts adhere to privacy rights under the General Data Protection Regulation?[213] This second point causes more problems than it may be worth since proposed Regulation (EU) 2021/0241 must follow the General Data Protection Regulation guidelines.[214] In sum, proposed Regulation (EU) 2021/0241 tackles the issue of money laundering in financial crimes, but it is difficult to see if it complies with the General Data Protection Regulation.

Terrorist Activities

The European Union has utilized multiple legal instruments to regulate cryptocurrencies to prevent terrorist financing.[215] Due to blockchain's popularity in the financial arena, many regulations have been passed to address cryptocurrency "as an intangible asset or commodity, [but] not as currency or money."[216] By not addressing cryptocurrency as currency, there has been little attempt to prevent the financing of terrorism. Proposed Regulation (EU) 2021/0241 attempts to address terrorist financing by providing the necessary legal framework to "prevent[] the use of the financial system for the purpose of . . . terrorism financing."[217] This attempt is in good faith, but it will still be difficult for proposed Regulation (EU) 2021/0241 to combat terrorism while complying with the General Data Protection Regulation. Terrorist financing, generally, is well-aligned with money laundering, and is often a predicate offense to money

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20-.%20Cryptocurrencies%20-
%20Tracing%20the%20evolution%20of%20criminal%20finances.pdf (last updated Jan. 26, 2022).

213.   YOUR EUROPE, *supra* note 111.

214.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets, supra* note 48.

215.   Oleksandra Nestertosova-Sobakar, *Legal Approaches to the Regulation of Cryptocurrency and Business Ethics of ICO in the European Union*, 22 J. LEGAL, ETHICAL & REGUL. ISSUES 1, 1-2 (2019).

216.   *Id.* at 2.

217.   *Id.* at 4.

laundering.[218] For proposed Regulation (EU) 2021/0241 to work as designed, it must also prevent money laundering. On its face, Regulation (EU) 2021/0241 will likely be able to improve previous anti-money laundering initiatives since it regulates "anonymous products, customer identification, and new unregulated products like virtual assets."[219]

V. Will it Work?

It will be challenging for proposed Regulation (EU) 2021/0241 to co-exist with the General Data Protection Regulation. The European Union has issued mandates to keep its citizens from diving into chaos from the beginning of its creation.[220] As time passes, these mandates have become more encompassing, and the regulations are consistently updated as new technologies develop.[221] This adaptation to new technologies is very apparent in the financial realm, including the intangible item known as cryptocurrency.

Cryptocurrency was created to act as a new currency that a typical government, such as European Union, does not regulate.[222] One of the explicit purposes of cryptocurrency is to provide individuals around the world with the ability to make transactions with more trust and anonymity than ever before.[223] To facilitate its use, individuals must store their cryptocurrency in wallets.[224] Due to the rise in the popularity of cryptocurrency, the European Union has proposed a new regulation to regulate the new technology since Regulation (EU) 2015/847 only covers "[funds] . . . [like] banknotes and coins, scriptural money and electronic money."[225] According to the European Union, cryptocurrency was not defined correctly in Regulation (EU) 2015/847, and thus, the European

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218.   Thai Van Ha, *The Development of the European Union Legislative Framework Against Money Laundering and Terrorist Financing in the Light of International Standards,* 18 TECHNIUM SOC. SCI. J. 187, 188 (2021).

219.   *Id.* at 192.

220.   The Maastricht Treaty of 7 February 1992, *supra* note 4.

221.   *Id.*

222.   Wingreen, *supra* note 16, at 475.

223.   Suratkar*, supra* note 35, at 1-2.

224.   *Id.*

225.   *Proposal for a Regulation of the European Parliament and of the Council on Information Accompanying Transfers of Funds and Certain Crypto-assets*, *supra* note 48.

Union proposed Regulation (EU) 2021/0241.[226] Proposed Regulation (EU) 2021/0241's main purpose is to identify cryptocurrency as a regulated fund while also extending the governmental reach of financial regulators to include cryptocurrency as an asset tracked by anti-money laundering task forces.[227]

These Regulations, however, face a multitude of jurisdictional, privacy, and criminal concerns, due to the infamous General Data Protection Regulation.[228] For proposed Regulation (EU) 2021/0241 to work effectively, it must meet or exceed these concerns; otherwise, it may be overturned or further amended. The issue of jurisdiction is complex when it deals with multiple countries that have formed coalitions amongst themselves, as seen in the European Union.[229] Furthermore, the European Union's objectives have changed over the years, especially dealing with the onslaught of the digital age. New technologies, especially those in the finance arena, have made it difficult for the European Union to regulate control and obtain its goals.[230] The issue is similar for privacy, as the General Data Protection Regulation protects citizens from governmental and third-party interests. Lastly, while these regulations were created to act as a deterrent to criminals doing business in the European Union, the regulations still pose problems with the General Data Protection Regulation.[231] Due to this, proposed Regulation (EU) 2021/0241, if approved, will most likely be challenged by multiple Directives and Regulations, particularly the General Data Protection Regulation.

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226.   *Id.*
227.   McBride, *supra* note 146.
228.   *Questions and Answers – General Data Protection Regulation*, *supra* note 58.
229.   HOGAN LOVELLS, *supra* note 97.
230.   Suripeddi, *supra* note 5, at 1-3.
231.   *Id.*