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The regulation of Initial Coin Offerings, Virtual Assets and Virtual Asset Service Providers

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We examine the regulation of virtual and digital assets as stored and transmitted over the Internet by blockchain. We do this in the context of how funds are raised from the public through Initial Coin Offerings. Our paper includes the regulation of the infrastructure provided by Virtual Asset Service Providers. In particular, we investigate the primary and secondary markets of Initial Coin Offerings by such entities. We find that there is considerable ambiguity in existing legislation within and across jurisdictions. We make recommendations in respect of both securities law and consumer law. We conclude that investors would be better protected by greater regulation of Initial Coin Offerings that promote virtual assets. We provide recommendations for appropriate regulation in both primary and secondary markets, as well as under consumer and securities law.

KEYWORDS

Virtual assets, Virtual Asset Service Providers, Cryptocurrencies, ICO, Fintech, Strategy, Innovation, Financial Services, Financial Regulation, Internet Law, Consumer Law, Securities law.

Abbreviations: ICO - Initial Coin Offering, EU - European Union, ESMA - European Securities Market Association.

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1 | INTRODUCTION

In this paper, we examine the regulation of virtual assets and Virtual Asset Service Providers (VASPs) in both the primary and the secondary markets. According to the Financial Task Force (2014), virtual assets are a virtual representation of value with no legal tender status. They are accepted by their community of users as a medium of exchange, store of value, or unit of account. In the primary markets, virtual assets are introduced to investors through Initial Coin Offerings (ICOs). Such offerings constitute an investment and should be regulated accordingly. Similarly, where VASPs are carrying on investment promotion or brokerage, they should also be subject to regulation.

The term VASP was first defined by the Financial Action Task Force (FATF), an inter-governmental body, in 2018. A VASP is a legal entity that conducts one or more of the following actions on behalf of its clients:

- participating in and promoting an Initial Coin Offering; exchange between virtual assets and national currencies (a primary market activity);
- exchange between one or more forms of cryptocurrency or token (a secondary market activity);
- transfer and settlement of virtual assets (a primary and secondary market activity);
- safekeeping and/or administration of virtual assets (a primary and secondary market activity).

In the secondary markets, virtual assets are transferred and settled digitally, often with the assistance of VASPs. The most common types of virtual assets are cryptocurrencies. A cryptocurrency is defined as a decentralized virtual asset protected by cryptography (FATF, 2014). Such assets are termed decentralized because they are transferred virtually over the Internet through a distributed ledger technology via a Blockchain (Van Wegberg et al., 2018). With this technology, there is not a centralized body that authorizes and monitors the transactions. Users can make transactions directly between themselves without the involvement of an intermediary (Virga, 2015). Such peer to peer operations are recorded in a series of blocks of programming code and protected by cryptography (FATF, 2014). FATF Recommendation 15 suggests that VASPs to retain any information an entity receives on both the originators and beneficiaries of virtual asset transfers. (Hardjono et al 2021) identify two common types of VASPs, namely centralized and decentralized exchanges.

It is important to highlight that there are no regulations specifically targeted at ICOs or virtual assets. FATF produces guidance which is "soft" rather than "hard" regulation. That said, general securities regulation may be considered relevant. The future is further complicated because of the nature of virtual assets. These can be virtual representations of currency, utilities or investments. In the EU, these are all subject to Market Abuse Regulation and the Markets in financial Instruments Directive (MiFID II). The regulation of special cases of virtual assets depend whether they are treated as *ratione materiae* or *ratione loci*, material or spatial in scope.

The first decentralized exchange cryptocurrency, Bitcoin, was proposed by (Nakamoto, 2008). It is the most widely recognized virtual asset. It solved the double-spending problem through the use of the blockchain. Bitcoin allows its users to make transactions from peer to peer, without the involvement of intermediaries (Goguen et al., 2018). Bitcoin can be described as a decentralized online payment system. Bitcoin allows users to exchange and transfer units of payment called bitcoins (Negurita, 2014). Bitcoin has become one of the most popular virtual currencies and is also used as an online payment system. Its success has led to the creation of other virtual currencies and the development of new use cases for such virtual currencies. These use cases are promoted through the use of ICOs.

ICOs can be defined as an online offer of crypto assets, called tokens, in order to raise capital (Broby, 2018). ICOs are often used by products developers, companies or individuals (Comissione nazionale per la societa et la borsa 2019). They have become a popular method to raise capital, especially among use cases for digital tokens and are promoted

by centralized as well as decentralized VASPs. One of the reasons for the success of this fund raising mechanism, is that it's cheaper for such digital assets to raise capital with ICO rather than with the traditional methods, as there are no intermediaries involved (Fromberger et al., 2019).

ICO promoters create crypto assets and offer them directly on the internet to potential investors. All the information regarding the entity and the tokens is included in a document called the white paper. Developers are free to decide which information they want to share as in some jurisdictions ICOs are not regulated. Karkkainen (2020) found that the success of ICOs was largely down to network effects. She further found that fundraising benefited from promotion of proprietary blockchain.

After investors acquire the tokens, they can access different services or products depending on the tokens' specificities. For example, a utility tokens allows its holders to access specific services or products (Gikay, 2019). In this way, the cryptocurrency token serves as a payment method. The security token, at the same time, provides to its holders an investment return (Wiśniewska,2018).

There has been some evidence that virtual assets can be sometimes used in money-laundering, tax evasion, or to finance terrorist activities. Regulators around the world have taken different regulatory approaches to protect investors from the risks of ICO's. Countries like the United States and Switzerland have decided to regulate ICOs with securities law when tokens have characteristics of securities. In other jurisdictions, it is uncertain if the securities law governs ICO as regulatory authorities have not yet addressed this subject. They have instead chosen to warn investors about the risks of investing in cryptocurrencies (Wartenberg, 2020). For example, in Colombia, it is uncertain if ICOs are legal. In China, ICOs are illegal and the country does not recognize cryptocurrencies as legal tender.

The nature of blockchain means that the records are immutable and irreversible. The former gives a record of transactions that regulators can use. Lapiřkaia and Leahovcenco (2019) suggest various disclosure requirements for virtual assets and virtual asset service providers. These include private and public keys, the transport layer security/secure sockets layer (TLS/SSL) connections, the digital certificates, specific attribute certificates, and software applications. Essentially, if virtual assets are used to transfer funds, records should be kept. The recent development and novelty of virtual assets has resulted in legal ambiguity as to their regulation and oversight.

2 | BACKGROUND

The popularity of an ICO as a funding vehicle has grown considerably among startup entities. One of the reasons behind this is that an ICO allows promoters to raise capital at a cheaper cost than in regulated exchanges. There is evidence that the intermediaries costs are lower (Fromberger et al., 2019). Another reason behind the success of ICOs is that they are easy to set up, especially in jurisdictions where ICOs is not regulated. As for offering tokens in the market, ICO's promoters only need to create their crypto assets and the white paper, rather than undertaking a full due diligence and publishing a business case.

Another advantage of ICOs are that their developers can promote and share digital assets to a wider audience through the issuance of these tokens. White papers are used to describe the offering document. These are shared online and anyone with an internet connection can become a potential investor (Moro et al., 2019). This connectivity means that ICOs are also advantageous for entrepreneurs located in the least developed countries. An ICO increases the chances of promoters in such jurisdictions of obtaining funds, by allowing them to be funded by international investors. For example, in 2017, Nigerian entrepreneurs launched an ICO to the market for funding their blockchain remittance called SureRemit (Jackson, 2017). They successfully obtained capital from investors from more than 60 countries, and as a result their product was successfully funded (Forbes Africa, 2018).

Furthermore, an ICO can help companies to attract additional clients (Momtaz, 2019). Promoters can present their future products and services through the aforementioned white paper. ICOs can also help them to test if people would be interested in their products and services once launched to the market (Gutmann et al., 2020). As a result of this experience, promoters can make the proper modifications to their products or even decide not to launch them to the market. This allows promoters to save costs and adapt their products to the consumer's preferences. It also encourages innovation as new products and services can be developed thanks to the capacity of an ICO to serve as a marketing and funding instrument.

The final advantage of ICOs is that token holders can exchange their tokens for other cryptocurrencies or trade them in the different crypto trading platforms available in the market (Remolina et al., 2019). On CoinMarketCap (2020) there are more than 250 crypto trading platforms listed on its website. And, according to other sources, there are more than 500 platforms available in the market (Sedwick, 2018). This gives a wide choice for ICO's promoters to list their cryptocurrencies and venues for token's holders to exchange them.

3 | VIRTUAL ASSETS

Primary market

In primary market issuance, tokens are offered online by promoters. They use social media as a tool to share their white paper and advertise their crypto assets. Their target audience is mostly a young demographic with some knowledge of technology (Maume, et al 2019). The potential investors usually do not have the financial experience and expertise to evaluate them, which exposes them to engage in risky investments. Besides this, in some cases, they do have access to the necessary information for making an informed investment decision. This can be compounded by the fact that promoters can include complex terms, misleading or incomplete information in their white paper (Remolina et al., 2019). Developers are able to do this more easily in jurisdictions where ICOs are not regulated, as there is not guidance regarding the kind of information they must disclose in the white paper. This results in citizens of these jurisdictions participating in a market with poor transparency and a high asymmetry of information.

As a result of the regulatory vacuum, investors who participate in ICOs can be victims of scams. Criminals can advertise on the internet fake ICO's to steal investor's money. Cases have already been reported by authorities. The Securities Exchange Commission (2018) announced that a fake ICO promoted by Centra Tech illegally raised more than 30 million dollars, by disclosing false information in social media and by paying celebrities to advertise its token. This is not an isolated case. A report published by Satis Group (2017) stated that in 2017 more than 80 percent of the ICOs launched to the market were scams. Authorities around the world have developed different strategies to warn investors about these risks. In 2018, the US Securities and Exchange Commission created a fake ICO as an educational tool to highlight the red flags that investors must identify to avoid being victims of fraud.

Investors that are victims of fraud face problems in defining the competent jurisdiction for suing an ICOs' promoters. In the case of a tort, the investor might have a problem defining the place where the harmful event occurred or where it might have occurred, thus determining the competent court. It could be argued that a harmful event occurred in the investor's digital wallet (Financial Markets Law Committee, 2019). Or, that it occurred in the place where the ICO's promoter was at the time of publishing the white paper (Barsan, 2017). Different hypotheses were proposed which demonstrates how challenging is to determine the competent jurisdiction in which to address these claims. In the long term, this could create conflicts of jurisdictions, as an ICO is offered online.

Another factor that makes it challenging for investors is the poor ability to bring claims against promoters. Some white papers do not even disclose the identity of their promoters and others provide false information. In the context

of an initial public offering taking place at an EU member state, investors would not have this problem, as there is a clear guideline regarding the information that must be included in the prospectus. This is not the case in jurisdictions where ICO's are not regulated. Broby and Paul (2017) illustrate the challenges presented in auditing virtual assets.

Finally, the lack of coordination between states and the uncertainty regarding the law that governs Initial coin offering allows the existence of regulatory arbitrage. This is where jurisdictions may be favoured by fund raisers due to their perceived laxity in regulation. ICO promoters can take advantage of this, by choosing the most suitable legislation for launching their ICO. In the context of the European Union, this interferes with market integration and prevents the financial market coordination between states and their supervision.

Secondary market

Virtual assets can be easily accessed as individuals only need to create an account on a crypto trading platform to start trading. Increasingly, this requires "know your client documentation". That is an identity and address verification. Sometimes it includes a risk and trading profile. That said, in the majority of instances, intermediaries do not check the trading expertise and knowledge of the investors. Therefore, investors are not categorized by risk profile and therefore given appropriate advise. In that sense, inexperienced investors can engage in risky investments and can lose their entire investment. Due to this market having low liquidity, it is highly risky and speculative.

Another factor that contributes to the exposure of investors to different risks is the anonymous nature of some crypto platforms. Some of them do not disclose relevant information such as the identity of the responsible for the platform and its legal seat. As, in some jurisdictions, they are unregulated or not enforced viz a viz these platforms (Syners et al., 2018).

The anonymous nature of VASPs causes firstly that investors do not have the necessary information for bringing a claim against them (International Organization of Securities Commissions, 2020). Secondly, VASPs can take advantage of this to commit unlawful conduct, as the chances of being prosecuted are very low.

Finally, some VASPs do not implement clear rules and protocols to ensure that their users trade fairly. This lack of surveillance means that there is a high risk of market manipulation. Users could engage in different unfair practices such as the whale and wash trade. Another factor that contributes to the poor transparency of this market. It is that some crypto trading platforms inflate their trading volume or copy the ones from other VASPs (Alameda Research, 2019). This practice gives to investors a false perspective of the market and causes that they make uninformed investment decisions.

4 | REGULATORY APPROACHES

4.1 | Primary market

The primary market is comprised largely of ICO issuance. ICOs have poor investor protection, limited public information, a lack of supervision and are promoted without demonstrable track records (Adhami et al. 2018, p. 73). Authorities around the world have taken different regulatory approaches for protecting investors from ICO risks. Among these approaches are the prohibition of ICOs, not regulating ICOs, create new laws for regulating it or regulate it according to the consumer, securities, or banking law. Most of the regulatory authorities have decided to regulate ICO's with securities law when tokens qualify as securities according to their national law. This leads to the observation that securities law is the main framework used to regulate ICOs. This is because investors money is at risk.

In some European jurisdictions, regulatory authorities decided to introduce specific legal dispositions for ICO.

These could even be viewed as an incentive. For example, In France, the Loi Pacte 2019 established an optional visa for ICO's granted by the Autorités Des Marchés Financiers. To be granted with this visa, developers must be firstly a legal person incorporated or established in France. Secondly, their tokens must not be considered as securities by the Code Monétaire et Financier, as these tokens are governed by the securities law. Thirdly, the white paper must provide clear and relevant information about the tokens and the issuer. Only ICO's that are granted this visa can target French investors in their marketing campaigns. This consequence makes this visa implicitly mandatory for ICO's in France, despite being said the contrary by the regulatory authority.

Switzerland is an example of a jurisdiction that addresses ICOs with multiple laws for protecting different types of investors. ICOs are governed by the securities law, banking law, collective investment legislation or they are unregulated. According to a Guidance of the Financial Market Supervisory Authority (2017), ICOs are governed by securities law when the token qualifies as a securities. By the banking law, when ICOs promoters accept public deposits and they commit to repayment. By the collective investment legislation, when the assets collected are administrated by a third party. Finally, ICOs are poorly regulated when they are not governed by the laws mentioned above and the tokens are not listed for trading. They do, however, get caught by some elements of consumer and private law. This regulatory approach provides legal certainty for ICOs, as it establishes a regulatory framework for them. However, it fails to protect investors that hold tokens that are not considered financial instruments.

In China and South Korea, ICOs are prohibited. In the United States, the regulatory authority developed a test to determine if tokens could be considered as securities or not according to the securities law. If the crypto assets qualify as securities, the ICO will be governed by securities law. If they are not, the ICO is completely unregulated. This regulatory approach fails to consider that investors that do not hold a security token are also exposed to risks. Meaning that a legal framework was needed for protecting them. A good approach would have been creating a guidance for the white papers that offer non-security tokens. This, to address the asymmetry of information that exists between investors and promoters. Another approach that the regulatory authority could have considered is to regulate ICOs with consumer law, when the tokens are not considered as securities, as it was chosen by Australia.

In Australia, the regulatory authority decided to regulate ICOs with the Australian consumer laws and the Corporations Act 2001 (Australian Securities and Investment Commission,2017). The legal classification of ICOs depend on the token's characteristics and the ICO's structure. ICO will be governed by the Corporation Act when the tokens have characteristics of a financial instrument, for example shares and derivatives. Or by consumer law when tokens are not considered as financial instruments. This regulatory approach contributes to enhancing the transparency of the ICO market and improving investor protection. Most importantly, it recognizes the importance of protecting all kinds of investors.

Other jurisdictions have decided to go further and create a specific regulation for ICO's. This is the case of Malta and Anguilla. In Malta, the regulatory authority developed a test to determine the legal nature of the tokens and their applicable law. This test is conducted by an external consultant called VFA agent. Tokens that are considered as financial instruments are governed by the Investment Service Act 2013. Payment tokens are governed by the Virtual Financial Act 2018. Utility tokens are unregulated. According to this act, developers must be assisted by a VFA agent to request the registration of the white paper to the Financial Services Authority. This registration allows promoters to legally offer their tokens in Malta. This regulatory approach is interesting because it relies heavily on an intermediary, the VFA agent, for enhancing investor protection and market integrity. It could be questioned if this agent is indispensable for accomplishing those purposes, particularly because it creates high intermediary costs for promoters. Costs that could discourage promoters to launch their ICO in this jurisdiction. However, apparently this is not the case as Malta continue to be an attractive jurisdiction to launch ICOs due to the tax advantages and legal certainty offered by it.

In Anguilla, ICOs are governed by the securities law and the Anguilla Utility Token Offering Act 2018 depending on the token's characteristics. Tokens that are not considered securities by the national law are governed by the Act. According to the act, issuers must be registered with the Anguilla Financial Services Commission to offer their tokens legally. The Commission will grant the registration to the issuers that comply with the conditions settled in the act. Among these requirements are that the issuers must be a constituted company and that the white papers provide complete and clear information about the crypto assets. Companies that are granted the registration must maintain a record of the investors for 5 years. They must also amend the white paper when the information disclosed in the original document is no longer accurate. It is noted that these requirements are similar to those reported by the securities law for initial public offering. For example, the continuous obligation. Despite the similarities in their content, they are dramatically different when it comes to compliance costs and regulatory oversight.

4.2 | Secondary market

Trading in tokens occurs in the secondary market over the internet via platforms. Nowadays, most of the platforms available in the market are centralised, only a small proportion are decentralised (Rauchs., et al., 2018). Centralised platforms are controlled by an exchange operator. It matches, clears, and settles the orders of its users (Rauchs., et al 2018). Whereas the decentralised platform operates through the blockchain. Orders are matched, cleared and settled through the distributed ledger system and users maintain the custody of their crypto assets (Johnson, 2020). Among the services offered by crypto-platforms are brokerage services, order-book exchanges, and over-the-counter (OTC) (Blandin et al.,2019). These services could be considered as investment activities concerning financial instruments when tokens are considered as securities, thus governed by securities law. Jurisdictions around the world have taken different regulatory approaches for addressing the secondary market. Among these are regulating VASPs according to securities law, create a bespoke regime or not to regulate. For example, France established a particular regulatory approach. VASPs are regulated according to securities law and the Loi Pacte. Platforms must comply with securities law when tokens are considered as securities and with the Loi Pacte when they are not. France's approach is special because special because the Loi Pacte created a compulsory and an optional license for VASPs. The license is mandatory for crypto wallets and for platforms that allow the exchange between crypto-assets and fiat currency. It is optional for VASPs that provide other investment services related to crypto-assets. Such as the operation of a crypto trading platform. Only VASPs that are granted with a license are allowed to offer their services in France. This makes the "optional" license implicitly mandatory even though it is stated the contrary. In 2020 a French court ruled that a bitcoin loan was a consumer loan. This placed bitcoin in France on the same basis as Euros and other financial assets.

In the European Union, there is not an EU law that addresses ICOs. However, in 2019 the European Securities and Market Authority published a document to advise member states about how to address ICOs according to the existing EU legal framework. According to ESMA, tokens could be considered transferable securities and electronic money. Thereby, covered by the Prospectus Regulation and the Transparency directive when tokens qualify as transferable securities according to MiFID II. Or, by the E-money Directive when they are considered as electronic money. Likewise, according to ESMA (2019), some tokens do not fall within the categories of securities and electronic money. This means that they could not be covered by the EU legal framework. However, states are free to interpret whether or not tokens might be considered securities or electronic money. As there is not an EU legal framework that has defined how to address ICOs. In the long term, this could cause the fragmentation of the EU internal market and allow the existence of regulatory arbitrage.

In Malta, VASPs that offer investment services related to security tokens are governed by securities law. And, VASPs that offer investment services related to payment tokens must comply with the Virtual Financial Asset Act and

the Virtual Financial Assets Rulebook. The Act created four types of licenses for VASPs. They are graded in terms of the type of investment service offered by the platform and whether VASPs hold control of their client's assets or not. For example, the license VFAA class 1 allows VASPs to provide investment advice related to crypto-assets and to receive, place and transmit orders. But not to hold control of the crypto assets. The other licenses authorise VASPs to hold control of their client's assets, after complying with the requirements settled in the Act. The approach taken by Malta would appear to be over-ambitious in its claims. As, it created a specific regulation for crypto assets. However, it failed to establish a comprehensive regulatory framework as VASPs that offer services related to utility tokens are unregulated.

The United States and Australia are a good illustration of jurisdictions that regulate crypto platforms according to securities law. In both jurisdictions, VASPs must be registered with the regulatory authority for offering their investment services related to securities. Unless they are covered by exemptions. In Australia, VASPs must comply with Corporation Act 2001. Whereby, in the United States, they must comply with the Securities Exchange Act when they participate in the market as brokers, dealers and exchanges in relation to tokens that are considered as securities. This regulatory approach creates regulatory certainty, however, it fails to establish a comprehensive regulatory approach. As there is not a regulation for VASPs that offer investment services related to tokens that do not qualify as securities. A good regulatory approach would have been to create a bespoke regulation for platforms that are not governed by securities law. This to ensure investor protection and enhance market transparency.

The regulatory approach of Anguilla is similar to the one followed by Malta. Both are interesting from the perspective of being bespoke for VASPs. In both jurisdictions, VASPs are governed by securities law and by a bespoke regulation. The difference between them is that in Anguilla there is a single type of license for VASPs. The license introduced in the Anguilla Utility Token Exchange Act allows VASPs to settle a facility for bringing together users, with the objective of matching and trading listed tokens according to the rules settled by the platform. The license also allows VASPs to hold control of their client's crypto assets. This regulatory approach fails to acknowledge the different types of investment activities offered by VASPs. As it only focuses on one type of investment activity. As a consequence of this, some of the investment services offered by VASPs will fall outside the scope of the Act, as they do not meet the definition settled in the law.

5 | RECOMMENDATIONS

We present some recommendations for the regulation of ICOs. Sovereign states have taken different approaches for regulating ICOs' primary and secondary market. Most jurisdictions have decided to regulate both markets according to the securities law when they deal with tokens that qualify as securities. Regarding, the regulation of ICOs that raise capital through non-security tokens and VASPs that offer investment services related to non-security tokens. There is disagreement among states about how to address them. For regulating the primary market, states such as Anguilla and Malta have decided to create a bespoke regime for ICOs that involve non-security tokens. The United States decided to leave unregulated ICOs that do not offer securities and Australia decided to regulate ICOs that are outside the scope of securities law according to banking and consumer law. Finally, in terms of the secondary market, states have decided to not address it or regulate it according to securities law.

In the recommendations, we present a proposal for regulating ICOs primary market and secondary market. In the subsequent sub sections we present matters relating to securities and consumer law. As in our opinion, the different regulatory approaches taken by states fail to protect investors of ICOs' risks and stifle innovation. This is because they have not been especially crafted with the new technologies in mind. Therefore, changes need to be introduced

for addressing ICOs. States must review their regulatory approach as the popularity of ICO as an investment vehicle raises over time as well as its risks. Therefore, a regulatory framework that achieves investor protection without stifling innovation is mandatory.

5.1 | Primary market

We consider that it is not necessary to introduce a bespoke regime for regulating ICOs primary market. As, investor protection, market transparency and accountability can be achieved by regulating ICO according to securities law when tokens qualify as securities, and by the consumer law when they do not. However, states need to introduce changes in these laws for addressing ICOs' primary market. Before explaining the changes that need to be introduced in securities and consumer law. We will explain why we consider it is important to improve investor protection, market transparency and accountability.

Our proposal will focus on transparency and accountability. It is important to address them because by improving them, investors will be allowed to make informed decisions and promoters would be less incentivised to take advantage of their position of power. The consequence of this is that investors confidence in ICOs will increase, therefore they will be more willing to invest in ICOs and innovation will be fostered.

In our opinion, regulatory authorities should start firstly by creating a document that explains in a simple form the concept of ICO, crypto assets and how to differentiate ICO from other methods of raising capital that shares similarities with it. For example, crowdfunding and collective investment schemes. This information will allow investors to acquaint with ICOs' basic concepts and it will also allow promoters to evaluate if their project falls into the category of ICO or not. We consider that the guidance 225 information sheet published by the Australian Securities and Investment Commission accomplishes' these purposes. However, we recommend that the definition of crypto-assets and their classification should also be included in the document. This will improve investors' understanding of ICO.

Secondly, in our opinion larger jurisdictions should make it mandatory to establish or incorporate a company in their territory, as well as the registration of ICOs with the regulatory authority before proceeding to offer the tokens. Both requirements should be demanded for all type of tokens issuing. The requirement of establishing a company is to address the problem that investors have bringing claims against promoters. As in some cases, the white paper does not disclose the identity of the promoters nor their registered address. In other words, this requirement would have a major influence on increasing accountability.

Regarding the registration with the regulatory authority, we agree with the proposal of Remolina and Gurrea-Martinez (2019) of creating an electronic form for this purpose. One that includes an explanation of the intended project, information regarding the tokens, the company and their legal representatives. For ICOs that issue tokens that qualify as securities, they should be registered with the securities regulator. And, the ones that issue other types of tokens, they should be registered with the consumer protection authority.

5.1.1 | Securities law

Securities law can positively contribute to enhancing market transparency and accountability. This is because companies that intend to sell security tokens would be required to register with the securities regulator, and comply with the prospectus requirements. The implementation of the prospectus requirements means that promoters are no longer free to choose the information that they want to disclose. As it happened when ICOs were unregulated. Owing to securities law, promoters would be forced to disclose all the necessary information for allowing investors to make an informed investment decision. As a consequence of this, the asymmetry of information between investors and

promoters decreases and ICOs market becomes more transparent.

In our opinion, states should create a guiding document about the type of information that companies should include in the prospectus for the token sale. ICO has certain characteristics that differentiate it from the initial public offering. Such as, it raises capital through virtual assets, and it intends to, most of the time, finance technological projects. Therefore, additional information might be necessary, so investors can better assess their investment decision. For example, information regarding the use of the funds raised, state of the project, project schedule and the consequence of not developing the project.

The securities regulator also has a major influence in improving accountability and investor protection in initial coin offering. The oversight of the token sale by the regulator might prevent promoters to commit misconducts (Remolina et al.,2018). It could also discourage criminals to use ICO for fraud. However, this might not be entirely true considering that ICO can be easily offered on the internet, meaning that authorities might not be able to identify all the illegal ICOs offered in their jurisdiction. Despite this, the oversight of ICO by the securities regulator will positively contribute to accountability, as it will verify that registered ICOs follow the law and in case that they do not, it will proceed to impose the administrative sanctions. Ultimately this could contribute to increasing investors' confidence and willingness to support ICOs.

Finally, as was pointed out above some changes need to be introduced in securities law for addressing ICOs primary market. Despite the advantages of regulating ICO according to securities law, this approach could stifle innovation. As it could increase the costs of raising capital through ICO. In this regard, it is important to bear in mind that the securities law and especially the prospectus regulation were initially thought for well-established companies with a strong economic capacity. Not for entrepreneurs or small fintech companies that rely on ICO for raising capital because it is supposedly a cheap method for raising capital comparing with the traditional methods. In that sense, developers might not have the economic capacity to bear with the compliance costs, for example, the fees associated with the registration of the prospectus. In the United States, some promoters have decided to not offer ICO in this jurisdiction due to high compliance costs of securities law. In that sense in the long term, this could discourage the entrance of new market participants, incentivize unlawful ICOs and stifle innovation. To prevent this, states should consider proposing cheaper fees for companies that intend to raise money through ICO.

5.1.2 | Consumer law

In terms of tokens that are outside the scope of securities law, we consider that states should regulate them according to consumer law. As, it will contribute positively to enhance investor protection, accountability, and market transparency concerning ICOs primary market.

As discussed above, states should firstly make as mandatory the incorporation of a company in their territory for selling tokens. As well as the registration of the ICO with the regulatory authority, in this case with the consumer authority. These measures will allow regulatory authorities to have a record of the ICOs offered in their territory and monitor them. Overall, this could reduce the risks that ICOs are used for illegal purposes such as fraud, as an authority would oversight the offer of tokens. It could also reduce promoters' bad practices as consumers would be able to report these practices to the regulatory authority. Who would proceed to impose the corresponding sanctions on those responsible for the initial coin offering. Ultimately, consumer law would improve accountability and consumer protection.

The creation of a guiding document for white papers would also have a positive effect on market transparency. As it will prevent promoters to omit relevant information and it will allow consumers to compare the different ICOs available in the market and make an informed decision. States could introduce in the guidance, the information we

proposed above regarding securities offering. Such as project schedule and the consequence of not developing the project.

Finally, we advise that consumer authorities monitor closely the advertisement campaigns of ICOs. They could make as mandatory the disclose of the advertisement campaigns that companies intend to pursue when registering the ICO with the consumer authority. This to protect consumers by identifying information that may mislead them, such as promises of high returns at low risk. Regulatory authorities should also continue to warn consumers about the risks of investing in ICOs as this will reduce the risks that consumers make irrational decisions (Remolina et al., 2019).

6 | SECONDARY MARKET

Sovereign states have taken three different regulatory approaches for addressing virtual assets' secondary market and our recommendations take these into account. In general terms, they have agreed to regulate VASPs according to security law when they offer investment services related to security tokens. However, regarding VASPs that provide investment services linked to non-security tokens, states have decided to regulate them differently. For example, The United States decided not to regulate them whilst Malta proposed a bespoke regime.

In our opinion, none of the regulatory approaches taken by states is suitable for protecting investors and innovation. Regarding the regulation of VASPs that offer investment services related to securities, we agree with states' decision to address them with securities law. However, changes need to be introduced in securities law for not affecting innovation. We will explain these changes in the next subsection.

Concerning, the regulation of VASPs that provide investment services associated with non-security tokens. We consider that a bespoke regulation inspired by securities law would be suitable for addressing VASPs. As it was proposed by Malta, although this regulation is a good attempt for addressing non-security tokens' secondary market. In our opinion, further changes need to be introduced to this regulation for achieving investor protection and protecting innovation. We will discuss them after addressing the secondary market of security tokens.

6.1 | Security tokens

In our opinion, regulating VASPs according to securities law, such as MiFID II, could improve investor protection and market transparency. However, changes need to be introduced in securities law for protecting innovation. For example, states should consider reducing the capital requirements demanded to VASPs to grant the licenses, as well as reducing their compliance costs. This because VASPs might not have the financial capacity to afford the high compliance costs and meet the capital requirements settled in the law to obtain the licenses. Consequently, the entrance of new market participants could be discouraged.

Another problem of adopting MiFID II is that according to its VASPs that act multilateral trading facilities and regulated markets must check their clients trading expertise. This creates negative consequences for VASPs and their users. Concerning users, most of them might fail the test as they do not have trading expertise (ESMA,2019). In our opinion, this restriction should be eliminated, and users should be allowed to trade regardless of not having trading expertise. This would contribute to the democratization of finance as well as the concept of the new investor. Nonetheless, to protect investors from this risky and speculative market, states should demand VASPs to develop strategies for educating their users. For example, Binance has a section on its website called Academy. It posts short videos and articles about blockchain and virtual assets for educating its users. We consider that jurisdictions should demand VASPs to include in their website, educational tools for their clients. Furthermore, in our opinion states

should demand VASPs to improve their customer service department and give better assistance to their clients. It is especially important to offer support to investors engaged in this market, as most of them are inexperienced traders and they are exposed to high risks, including counterparty risks and cyber threats. Because of this, investors require further assistance to understand information that might be incomprehensible for them or report unusual activities.

Finally, securities law creates adverse consequences for VASPs as it increases their operational costs. VASPs would have to spend time and resources checking their customers' trading expertise (ESMA, 2019). Regardless of this, we consider that it is important that VASPs check their clients trading expertise and knowledge as it would contribute to know your client documentation. Moreover, the information collected could contribute to the creation of strategies and content for educating investors. We are aware that this proposal will create high costs for VASPs but we consider that it is necessary to implement it as it will positively contribute to enhancing investors' financial literacy.

6.2 | Non-security tokens

We also comment on the regulation of VASPs that offer services related to tokens but that are not covered by securities law. We consider that a bespoke regulation inspired by securities law would be suitable for achieving investor protection, market transparency and protecting innovation. The bespoke regulation proposed by Malta is a good attempt for achieving these purposes. Nonetheless, we consider that changes need to be introduced in this regulation for protecting innovation and enhancing investor protection. For example, we do not agree with Malta's decision to request VASPs to submit their license application through an intermediary. We consider that an intermediary creates high additional costs for VASPs, and it is not essential for achieving investor protection and market transparency. Therefore, states should not make as mandatory the involvement of an intermediary for submitting VASPs licenses, as it might discourage the entrance of new market participant, thus affect innovation.

We consider that it is important that states create a comprehensive regulatory framework for VASPs. One that includes investment activities related to tokens that fall outside the scope of securities law. In our opinion, this would contribute positively to investor protection as all type of investors would be protected by the law. A comprehensive regulatory framework would also provide a high degree of certainty and consistency in how the secondary market of non-security tokens is regulated. In that sense, we encourage states to include in their bespoke regime all the tokens that are not covered by securities law.

Furthermore, as explained earlier we consider that it is important that VASPs develop strategies for educating their users. They should include educational tools on their website for explaining their users, key concepts such as the definition and classification of virtual assets. The regulatory authority should monitor VASPs for ensuring that educational content is available for VASPs' clients. We are aware that this creates additional costs for regulators and regulated entities. Nonetheless, we consider that these measures are necessary for enhancing investors' financial well-being and increase awareness of the virtual assets' secondary market.

Finally, in the context of the European Union, we consider that states must agree to the proper regulatory instrument to regulate VASPs that offer investment services related to non-security tokens. As the asymmetry of regulations allows the existence of regulatory arbitrage. It also creates uncertainty regarding the definition of competent jurisdiction and the applicable law when VASPs operate internationally. Lastly, it interferes with market integration within the European Union especially financial supervision and cooperation between member states. Because of this, we consider that the regulation proposed by the European Commission is a good attempt for regulating virtual assets' secondary market and enhancing legal certainty among the common market. However, the challenge of adopting a regulation at the EU level is that within member states, the secondary market of virtual assets evolves at a different

rhythm. Therefore, some member states might have a difficult time implementing the regulation. Notwithstanding this, regulating VASPs at the EU level will enhance investor protection, protect the common market, and encourage innovation.

7 | CONCLUSION

We conclude that the regulation of ICOs, VASPs and virtual assets has to balance innovation with accountability and investor protection. The popularity of ICO as well as the risks created by it have raised concerns among regulators. The risks are created mainly due to the high asymmetry of information between investors and ICOs' promoters. As promoters are free to decide the information they want to disclose in the white paper. We therefore call for better regulation, with targeted ICO laws.

Virtual assets are a representation of value with no legal tender status. They are introduced in the primary market through a method for raising capital called initial coin offering ICOs. ICO has become a popular method for raising capital among use cases for digital tokens as it is a cheap and easy to settle. It is cheap because there are no intermediaries involved in the process, promoters offer their digital tokens directly to potential investors. The process of creating ICOs involves promoters create digital tokens and offer them online through a document called the white paper. This is a process that would normally be regulated.

We find that the creation of a secondary market has exposed investors to a risky and speculative market. In some cases, the crypto trading platforms administered by virtual asset providers VASPs do not have clear protocols to ensure that their users trade fairly. To address these problems, sovereign states have decided to regulate ICOs' primary and secondary market. Concerning the primary market, states have agreed to regulate it according to securities law when the tokens qualify as securities. Regarding tokens that fall outside the scope of securities law, states have taken different regulatory approaches. For example, the United States decided to not regulate it, Malta created a bespoke regime and Australia decided to regulate it according to consumer law. On the question of the secondary market, most of the states have decided to regulate VASPs according to securities law, when they offer investing services related to security tokens. As regard VASPs that offer investment services related to non-security tokens, Anguilla decided to regulate VASPs according to a bespoke regulation. Others decided to not regulate it.

It was evidenced that none of the regulatory approaches is suitable for achieving investor protection and protecting innovation. We consider that it is important that states review their regulatory approach as the popularity of ICO as an investment vehicle raises over time as well as its risks. Regarding the primary market, it was proposed to regulate it according to securities law when tokens qualify as securities. And by consumer law when they do not. It was also proposed that changes be introduced in the law to enhance investor protection and promoting innovation. Such as the creation of guidelines for the white paper. Concerning the secondary market, it was advised to regulate it according to securities law when the investment services offered by VASPs are related to securities and by a bespoke regime when they do not. Recommendations were also given. For example, the creation of educational tools for investors and the reduction of the compliance costs for VASPs.

Overall, our recommendation is for regulators to develop a comprehensive framework that protects all type of investors in virtual currencies, tokens and investments. We note that most jurisdictions currently only focus on protecting security tokens' holders and suggest this be extended. We call for targeted regulation that is sympathetic to the capacity for virtual assets to innovate and democratize finance.

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