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Tema:Returns and network growth of digital tokens after cross-listings

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Fichamento

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| 1 | During 2019,Binance was the largest marketplace by trading volume with a 20% global market share and earned an estimated trading revenue of $800 million. This figure is roughly equal to the revenues received from equity trading by the Intercontinental Exchange Inc. (ICE, parent company of the NYSE, among others) and five times those of NASDAQ Inc. (the parent company of the Nasdaq and 79 other exchanges in 50 countries). Most importantly, digital marketplaces have developed without any explicit regulatory oversight of the procedures and policies that govern their operation  The lack of specific regulations provides marketplaces with incomparable flexibility regarding operational strategies on the part of token-issuers and user/investors, resulting in a set of heterogeneous policies and practices. Moreover, this heterogeneity has resulted in user/investor segmentation and significant differences in information production across marketplaces. |  |
| 3 - 4 | 1 Differences in the regulatory environment  The differences between traditional security exchanges and crypto-marketplaces can be attributed primarily to two main sources with possible implications as discussed in 2.3. The main differences are in the regulatory environment and differences in the technological features inherent to blockchain–enabled tokens. We briefly discuss each and illustrate how they could potentially influence the pricing of, and trading behavior associated with tokens.  The most salient difference in the regulatory environments in which traditional securities and digital tokens are traded is the lack of regulations tailored to token marketplaces. Money transmission laws, KYC (know your customer) and AML (anti money laundering) procedures, reserve requirements, and cybersecurity targeted at tokens have all improved, but up to June 2019 there is no specific enacted regulation to ensure token-marketplace integrity, and transparent, and orderly trading. This, in turn, translates into a considerable degree of freedom for marketplaces when setting up their policies and practices.  The most significant difference in token-issuer operational strategies is the lack of legal and financial disclosure requirements pertaining to token issuers with respect to the marketplace and the general public. None of the sample marketplaces requires any legal or financial documentation from token issuers, either before listing as part as the listing review and selection process or going forward after a token is listed. Some marketplaces require token issuers to disclose material business information to the marketplace, not to the public. The content of and details in this information are not consistent across marketplaces, relating primarily to software issues (upgrades, bugs, hacks, forks, etc.), liquidation (large sales of tokens by an issuer or founding team that could impact prices), and project termination (team dissolution, as most issuers are not legal entities). Some marketplaces do not utilize any selection process and list any token that is compatible with their software protocols.  Some marketplaces, in addition to utilizing some sort of selection process, charge listing fees. These can be publicly disclosed or privately negotiated and vary from a few thousand to a few million US dollars. On top of listing fees, some marketplaces require token issuers to maintain “security deposits” in the form of some quantity of tokens, donate tokens for marketplace giveaways, contract market-maker services and liquidity “insurance” from the marketplace, and maintain a minimum level of daily trading. Another nuance in the selection process is the practice of user-voting systems, whereby a marketplace holds periodic rounds of voting to select new tokens to be listed. |  |
| 4 - 5 | Some marketplaces require comprehensive identification verification with passports or government-issued identification documents (IDs), bank account linkages, physical address and cell phone validation, while others apply no requirements at all (not even user sign-ups). Marketplaces with strict identity verification can ban users from certain jurisdictions, limit users to one transaction per ID, create special users for institutional use, impose temporal bans and de-register noncompliant users, and, if required, disclose trade information to regulators. Some exchanges impose geographic bans by blocking IP addresses, limiting user access in specific locations (common banned locations are the United States, China, and the countries in United States’ Office of Foreign Asset Control list).  These user/investor-oriented practices effectively provide market segmentation, by either outright blocking certain users from accessing a given marketplace or providing services tailored to a specific type of user to the detriment of others. The theoretical implication would be that cross-listings that reduce market segmentation by allowing new users/investors to access a token would in turn reduce the cost of capital and raise valuations. A complementary interpretation is that new users/investors not only enjoy a lower cost of capital but also directly increase the value of a token by increasing the size and interconnectedness of the users’ network.  As an additional observation, while there is no corporation represented by the token, the issuer and token holders have a vested interest in the appreciation of token value, which is linked to the network value.  The public nature of most blockchain protocols provides universal token access to anyone with an internet connection. However, this access could be limited by factors such as token awareness (difficult to discover and evaluate the universe of available token projects), uncertainty of token quality, technical knowledge on specific blockchain programing language, and more mundane as geographic restrictions, means of payment and currency restrictions, language barriers, and even supply constraints for highly sought ICOs, among others. Exchanges can reduce some of these restrictions, hence become a key element in the ecosystem, by not only creating a market for tokens, but also reducing those access constraints, by providing signals of token quality and serving as an easy onramp for users lower technical blockchain knowledge  2 - Differences in technological features and processes  The technological features of blockchain–enabled tokens, which provide both benefits and limitations in the shaping of the overall digital token ecosystem, mark an important difference between traditional and token marketplaces. In the absence of a centralized custodian, clearing, or settling entity, the cryto-marketplace becomes the depository and takes the custody of the tokens, meaning that users transfer tokens from their personal “accounts” (blockchain “addresses” or “wallets”) to the marketplace’s “account.” In turn, the marketplace creates an internal and private ledger to keep track of the deposits, trades, and withdrawals of each user. This implies that all transactions that take place in a token marketplace should be fully backed by tokens held in its custody (creating a higher operational risk of hacks, given the large number of tokens held in custody).  as trading in a token marketplace requires digital custody of a token, deposits of the token must be made before trading can begin. For a new listing, this implies that some party (the issuer, a large block investor, a market-maker, a marketplace proprietary account) must acquire tokens elsewhere and deposit them in the marketplace. For initial listings, this does not affect the pricing and trading of the token, as there is no market for it yet. This would not be the case for cross-listings, however, for two main reasons. If the token is withdrawn from the initial listing marketplace, it would result in lower liquidity, potentially affecting the price. If the token is not withdrawn from a marketplace but transferred from a large stakeholder account then, as all account transfers are publicly visible on the blockchain, investors and analysts that monitor for such movements could observe the transfers, infer that a cross-listing is likely, and act accordingly. Hence, even without inside trading by any of the parties directly involved, the market could observe information production before a cross-listing is officially announced.  In most public equity markets, investors do not trade directly with each other, but through intermediaries that interact in a centralized marketplace (the securities exchange). Such a centralized marketplace is itself supported by a centralized custodian and a centralized clearing-and-settlement entity, all of which are overseen by one or more regulatory institutions. In contrast, blockchain–enabled tokens, by design, do not require a central entity to process and settle transactions. This is the central element that makes it possible to remove intermediaries from peer-to-peer token transactions. Peer-to-peer token transactions are possible, however, only if users/investors already hold tokens to trade (both to buy and to sell).  3 Possible implications of the differences in the regulatory environment and technical features  A major implication in the aftermath of cross-listings of digital tokens is the higher risk of exasperated corporate governance and new agency problems as a result of possible transferring of governance from one entity to another and/or sharing surveillance among different settings. There is currently no clear and legally binding set of straightforward and enforceable rules in place as to which jurisdictions are responsible when conflicts arise. Thus, the introduction of multiple channels of trading cross-listed digital tokens may bring incremental risks to market function and investor protection, creating a need for putting these activities into a global and multilateral regulatory framework. Although governance issues are not within the scope of this paper, the findings of attractive returns and more volume and activities, post cross-listings, have policy implications for scrutiny and transparency to reduce financial misconduct in the digital marketplace. Cohney et al. (2019) reveal and deliberate the “failure” of many ICOs in upholding the standards of integrity to protect the rights of the investors. Consistently, Cumming et al. (2019) discusses inadequate regulations, unvetted advisors, and different possible forms of hacking, among other reasons that may all contribute to the returns of digital assets. Despite growing trends in regulations in different countries, it is plausible to infer that the new phase of trading on different platforms (cross-listings of digital tokens) would add another layer of complexity and disclosure requirements that demands a closer attention of the regulators at both domestic and global levels. |  |
| 5 | Lack of marketplace-specific regulation coupled with technological features of blockchain also may provide- leeway for creativity in trading practices, for example in token-pricing denominations (fiat currency, main tokens, marketplace proprietary tokens, multitokens), order types (market, limit, hidden, iceberg, fill or kill, etc.), trading fee policies (fee per trade, percentage of traded amount, volume discounts, maker–taker pricing, payment for order flow, trading mining (payback of trading fees in the form of a marketplace’s proprietary token), types of participants (market-makers, proprietary trading desks, institutional only, automated/algorithmic trading support), alternative parallel venues (over-the-counter, dark-pool), and additional non-regulated products (contracts for difference, collateralized and non-collateralized derivatives, margin trading, gambling products). This ample set of unregulated practices provides an ideal setting for empirical research, not commonly available in traditional equity markets. By including and controlling for each marketplace choice in trading practices, we are able to identify their impact on the pricing of the marketplaces’ listed tokens. In the following section we present the data, calculation algorithm and the different samples used in our research |  |
| 8 | As presented by Li et al. (2020), pump and dump schemes have occurred rather frequently in the crypto-ecosystem. These events last for only several minutes, with the run-up in price and increased trading volume being quickly reversed. These schemes are not associated with token issuer actions such as software upgrades, news announcements or cross-listings  At conceptual level, it is reasonable to expect network growth (a positive network externality) arise as more users and participants are enabled to enter the space for trading crypto-assets. |  |
| 9 | While it is possible to trade tokens without interacting with an exchange, the trading options are more limited (in terms of available order types, trading fees and execution speed), hence most active traders prefer to store their tokens on an exchange, and long term investors and potential users store tokens using individual addresses.  A plausible explanation for such network growth is the adoption by new users brought forward by the cross-listing marketplace, encouraging investors’ participation and attention. The increase in total positive balance addresses is consistent with sustained network growth around the date of cross-listing. |  |
| 15 | Apart from the applicable jurisdiction, marketplaces can also be regulated according to the services they provide or the types of customers they choose to accept. For instance, marketplaces that accept US residents could be subject to jurisdiction of US institutions and hence are likely to be more selective in the set of tokens they list, as to comply with US regulations. Marketplaces that accept fiat currencies must maintain banking relationships and are usually subject to money-transmitter regulations.  It is important to mention that most of the potential regulations, whether they arise from the marketplaces’ services or jurisdictions, will affect marketplaces and their customers, not token issuers. This is significantly different from what occurs in most equity markets, where listings require adherence to specific regulations, provision of timely financial and business disclosures, payment of transparent listing fees, and so on. In the current state of regulations, for the set of marketplaces and jurisdictions in the sample, the closest direct effect on token issuers relates to the ensuing risk of a token’s being considered a security and therefore making any marketplace that lists it potentially liable for operating without compliance with the proper security market regulations. This in turn would influence the token-selection process performed by the marketplace. |  |
| 15 – 16 | e use heterogeneity in token and marketplace characteristics to identify specific mechanisms for value creation. With heterogeneity in the practices and policies of token marketplaces, we identify the specific characteristics that are relevant to value creation within each channel. We find that digital tokens that enable platforms and peer-to-peer networks earn higher returns and generate higher abnormal trading. This is consistent with current digital-token valuation theories that rely on network effects. To the best of our knowledge, this is the first paper to provide evidence of such a mechanism, which does not exist in traditional securities.  As a caveat, the introduction of multiple channels of trading cross-listed digital tokens may create additional risks to market function and investor protection. Our reported findings of attractive returns and more volume and activities, post cross-listings, have policy implications in terms of scrutiny and more transparent regulations to reduce financial misconduct in the digital marketplace. Despite growing trends in regulations in different countries, it is plausible to anticipate that the new phase of trading on different platforms (cross-listings of digital tokens) would add another layer of complexity and disclosure requirements that demands a closer attention of the regulators at both domestic and global levels. |  |