SUPREME COURT

JAN 12 2024

NASSAU, THE BAHAMAS

COMMONWEALTH OF THE BAHAMAS **2022**

IN THE SUPREME COURT **COM/com/00060**

COMMERCIAL DIVISION

IN THE MATTER OF the Digital Assets and Registered Exchanges Act, 2020 (as amended)

AND IN THE MATTER OF the Companies (Winding Up Amendment) Act, 2011

AND IN THE MATTER OF FTX DIGITAL MARKETS LTD.
(A Registered Digital Asset Business)

AFFIDAVIT OF LUKE ANDREW RAYMOND GROTH

I, LUKE ANDREW RAYMOND GROTH, of the Hong Kong Special Administrative Region of the Peoples' Republic of China, make Oath and Say as follows:

1. I am a Partner at the firm PricewaterhouseCoopers Consulting Hong Kong Limited and its related legal entities (collectively, "**PwC Hong Kong**") situated at 22/F, Prince's Building, Central, Hong Kong SAR.

2. I am the leader of PwC Hong Kong's Forensic Technology practice and have over 15 years of experience working in complex forensic investigations with a technology or data aspect. In this time, I have gained extensive experience performing investigations into financial services data and platforms, including cases involving digital currencies. I obtained a Bachelor Degree in Computer Science from Macquarie University, Sydney.

3. I along with members of my team from PwC Hong Kong assist Mr. Peter Greaves, who with Mr. Brian Simms KC of Messrs. Lennox Paton **("LXP")** and Kevin Cambridge of PricewaterhouseCoopers Advisory (Bahamas) Limited **("PwC Bahamas")**, are the Joint Official Liquidators **("the JOLs")** of FTX Digital Markets Ltd. ('In Official Liquidation') **("Company" or "FTX DM")**. I make this Affidavit at the request of the JOLs and the Company. Where I refer to work done by myself in this Affidavit I am referring to work done both by myself and my team members which I oversaw.

4. In or around August 2023, I was instructed by Mr. Peter Greaves to perform an analysis to understand how the assets of Customers of the FTX International Platform were stored, and whether it would be possible to identify separate pools of both customer assets and liabilities that could be attributed to FTX DM and the Debtors separately, or whether they are so intertwined that it is impossible to trace any particular fiat or digital currencies belonging to any particular customer and/or FTX DM. This analysis was substantively completed by December 2023.

5. This Affidavit summarises the findings from the analysis I performed from a forensic investigation perspective, and should be read conjunctively with the Fifth Affidavit of Brian Simms KC **("the Fifth Simms Affidavit")** to be filed herein.

6. The facts and matters referred to herein are, unless otherwise stated, within my own knowledge or are obtained from documents or data in the possession of the JOLs, PwC Hong Kong or the legal teams at LXP and White & Case LLP **("W&C")** as the case may be, and are true to the best of my knowledge, information and belief. Key data used in my analysis was provided to me by via Alvarez & Marsal North America, LLC the "Financial Advisors to the Debtors and Debtors-In-Possession". Where the matters deposed hereto are not within my knowledge, they are derived from the sources which I identify and are true to the best of my information and belief.

7. The FTX International Platform was a complex piece of technology, and it would not be possible to explain all technical aspects of its operations and setup in this Affidavit. For the purposes of this Affidavit, I have simplified and generalised many of my explanations, and focused on the key operational elements that are pertinent to the analysis I was asked to perform. Additionally, I use the term "FTX" to generically refer to the wider FTX Group of entities/operations.

8. Insofar as communications are referred to in this Affidavit which are subject to legal professional or other privilege, such references are made without any intention to waive that privilege, and nothing herein should be taken as waiving such privilege.

9. Unless otherwise stated, the abbreviations, nomenclatures and definitions as set out in the GSA are adopted herein. Reference will also be made to the JPLs' (as they then were) First, Second and Third Interim Reports collectively referred to as **"the JPLs' Reports")** dated 8th February 2023, 24th May 2023 and 9th November 2023 respectively.

10. This Affidavit is made in support of the JOLs' Sanction application made by way of Summons filed on 11th January 2024.

Detailed Background

11. A detailed background is set out in the Fifth Simms Affidavit and the JPLs' Reports which this Honourable Court is invited to revisit in so far as it is necessary to refresh any knowledge of the background to this case beyond what is stated in the Fifth Simms Affidavit. In the interest of proportionality, those matters are not repeated herein. I will however set out several key background facts about the FTX DM business model that are pertinent to my analysis.

12. The analysis I was instructed to perform focuses specifically on assets and liabilities related to Customers who were users of the FTX International Platform **("the Platform")**. For reference, a generalised, simplistic view of how the Platform works is as follows:

    12.1. Users **("Customers")** would initially create a user account on the Platform. In some cases, FTX would then require the Customer to provide certain information before their user account was allowed to perform certain functions such as depositing and trading.

    12.2. Each user account had its own internal 'wallet'[1], which was simply a ledger record in the Platform's database which recorded how much of each fiat currency and digital currency the user transferred to the Platform or had left on the Platform after using their balances as described below. Note in some cases user accounts could have multiple sub-accounts, each with their own separate balances, but still linked to the same Customer. For simplicity I will use the term **"Platform account"** to collectively refer to all sub-accounts linked to a single Customer's user account.

[1] I put this term in quotation marks since software applications used to interact with digital currencies stored on blockchain public addresses are also commonly referred to as wallets (and are referred to in my Affidavit). This internal Platform account is distinct from any public blockchain address/wallet.

12.3. Once a Platform account was created, Customers could then deposit fiat currency into a nominated FTX-owned bank account or transfer digital currency to a nominated FTX controlled digital address/wallet. Upon FTX confirming receipt of the currency, they would credit the Customer's Platform account with those amounts deposited (less any fees).

12.4. Customers could then use the amounts in their Platform account to engage in trading activity. This trading activity is understood to have been only with other Customers of the Platform (rather than with FTX directly). Trading activity would impact the balances in the Customer's Platform account – e.g., a spot trade to sell BTC for USD would add the USD bought to that Customer's Platform account and decrease the BTC sold in their same account (net of any fees).

12.5. Customers could request to withdraw the balances of fiat currency or digital currency attributed to them in their Platform account. In the case of fiat currency, FTX would send the funds from one of their bank accounts to the Customer's nominated bank account. In the case of digital currency, FTX would send the digital currencies from their own address/wallet to the Customer's nominated address/wallet.

13. In performing my analysis, the term "Customer Asset" refers to the underlying fiat currency or digital currency assets that Customers originally deposited and FTX purportedly held to support the balance of each customer's Platform account, and the term "Customer Liability" refers to the balance amounts attributed to each Customer on their Platform account – that is what FTX would be expected to transfer to them should a Customer wish to withdraw fiat currency or digital currency from the Platform. By the term "support" of the balance of a Platform account, I simply mean to refer to where an FTX entity held fiat and/or digital currency equal to the fiat or digital currency standing to the credit of such Platform accounts. I am not to be taken as implying that any FTX entity held any assets on trust for any Customer.

14. The primary and exclusive purpose of this Affidavit is to describe the results of my analysis of the Customer Assets and Liabilities on the Platform, including the extent to which they can be attributed to FTX DM and/or the Debtors' estates, and the extent to which they have been commingled such that a reconstruction of and re-allocation of the assets and liabilities between FTX DM and the Debtors' estates is practically impossible.

Summary of findings from the analysis

15. The analysis performed by me primarily involved a review of the Platform's database, which stored the electronic records used to operate the platform. I also performed a review of the Platform's codebase, in order to understand how it operated, as well as reviewed other available records kept by FTX DM and other FTX entities, such as accounting records and communication records, where required.

16. In summary, it is my view that it is generally not possible to separate Customer Liabilities and Customer Assets into separate legal entity pools in a way that would allow multiple independent liquidation/bankruptcy processes to repay Customers based on being able to accurately allocate the assets and liabilities between the different companies in the FTX Group, and then each relevant legal entity making distributions based on a reconstruction of the books and records of the FTX Group which is accurate and reliable.

17. The key findings from my analysis that led me to form this conclusion are:

    17.1. **Attributing Customers to FTX legal entities**: Customers of the Platform did not clearly interface with a single, specific legal entity of the FTX Group during its operation – they were only internally categorised as Customers of the Platform as a whole (with some minor exceptions for specific customer groups such as FTX Japan). I understand that there is an open legal question as to which FTX entity has the contractual liability for Customer claims based on their Platform account balances. However, even if this could be determined legally now, it would be challenging to retrospectively apply some form of segmentation to the population of Customers, as the Platform records were not segregated in this way over the life of its operation.

17.2. **Single Balance Pool on the Platform**: Platform accounts for each Customer only recorded a single balance entry for each type of fiat currency and digital currency. The Platform did not record which underlying bank account or digital currency address/wallet held the corresponding Customer Assets represented by this balance.

17.2.1. In the case of fiat currency, the underlying Customer assets were purportedly held in bank accounts marked as "FBO" (For Benefit Of) or similar, and each can be attributed to specific FTX legal entities. However, many of the common fiat currencies the Platform used had multiple bank accounts in the name of multiple FTX entities, which different accounts used interchangeably over the life of the platform to accept deposits or make withdrawals. *See Appendix A - Summary of Platform Bank Accounts* at page 14.

17.2.2. In the case of digital currencies, I am not aware that there is any register of the public blockchain addresses/wallets attributing purported ownership or control to any specific FTX legal entity. The Platform used common 'sweep' addresses, as well as warm and cold storage wallets, to store Customer digital currencies together. Platform records indicate that hundreds of thousands of digital currency addresses were generated and utilised over the life of the Platform. My understanding from interviews with FTX DM employees is that several senior individuals, likely employed by multiple legal entities within FTX Group, had access to the passwords/private keys (or parts of them) required to control addresses/wallets. *See Appendix B – Summary of Platform Addresses/Wallets* at page 16.

17.2.3. Therefore, whilst the ownership of certain pools of assets, such as fiat currencies, can be easily attributed to individual legal entities, this is not immediately the case with digital currencies. However in any case, for both fiat and digital currencies, it is not possible to attribute/reconcile those assets to individual (or a specific group of) Platform Customers.

17.3. **Exchange mechanics between Customers on the Platform:** The Platform allowed Customers to execute trades with each other. When trades were executed, Customers' Platform account balances were credited (increased), or debited (reduced) based on the trade characteristics. However, other than the credit or debit of Customer balances on the Platform account database ledger, there was generally no other internal record or corresponding 'physical' transfer of fiat/digital currency to support the trade. This means that even if Customers and Customer Assets were capable of being segregated at the time of account creation/deposit into specific legal entities, exchange trading between individual Customers would immediately create a change of ownership of funds in those accounts which was not matched by either a 'physical' transfer of assets between bank accounts or blockchain addresses/wallets. Consider the hypothetical example where an FTX DM Customer opens a Platform account and deposits fiat currency into an FTX DM bank account. This Customer might initiate a transaction on the Platform to exchange fiat in its account for a particular digital currency where the counterparty is an FTX Trading Customer. As no physical transfer of fiat currency or digital currency from the underlying bank accounts and addresses/wallets occurs, subsequent to the execution of this trade between the FTX DM Customer and FTX Trading Customer, the fiat asset that supports the amount in the FTX Trading Customer's account is still residing in the FTX DM bank account that it was originally deposited into. This creates a situation where the Customer Asset in the FTX DM bank account is now supporting the balance of the non-FTX DM Customer (in this example, the FTX Trading Customer). In this way, even if Customers and Customer Asset pools were segregated to start with (which they were not), trading activity would effectively commingle the Customer Asset pools on the Platform every time a trade was executed between customers in different pools.

17.4. **Platform fees were not segregated from Customer assets:** Based on a review of sample trades, the Platform earned revenue each time a trade was executed. In these situations, a portion of the Customer assets in the FBO bank accounts or address/wallets became 'due' to FTX. However, I found no records to show how FTX accounted for fees it had earned in each underlying bank account or address/wallet, or how or whether these amounts were then segregated from Customer Assets.

17.5. **Issues tracing source of funds:** Due to the size and complexity of the Platform, especially the volume of trades, which was in the range of millions per week, it would not be feasible to perform any sort of tracing to determine which 'ending' Platform account balances were supported by which deposits, and which bank accounts or addresses/wallets such deposits originated from. It may be the case that deposits made just prior to the date of the winding up petition could still reside in the original bank account or address/wallet they were deposited into (prior to transfers by the JOLs or the Debtors), but this would be in a small minority of cases. Based on a review of deposits that occurred on 10 November 2022, commingling of assets still occurred up until this date.

17.6. **Lack of reconciliation between FTX Platform account balances and Customer assets:** In performing a review of the Platform's database, I could not identify any reconciliation or ledger which identified FBO bank accounts or addresses/wallets that held assets against individual Customers or Customer groups. Furthermore, no Platform-wide reconciliation could be found showing the total FTX Platform account balances and the bank accounts and addresses/wallets which held these assets.

18. In the round, taking all these factors together, it is simply not possible to attribute Customer Assets or Customer Liabilities to individual legal entities that are subject to separate bankruptcy or liquidation processes, because:

18.1. Customers could deposit or withdraw funds with bank accounts owned by any FTX entity – not necessarily the one the Customer might be determined to be a counterparty to (in itself a complex task);

18.2. Trading activity on the Platform between Customers, without a corresponding movement of the underlying fiat currency or digital currency, would change the Customer who 'owned' the underlying asset, but would not move the underlying asset from its pre-trade bank account or address/wallet; and

18.3. There were no records kept by FTX showing which FTX Platform accounts map to which underlying Customer Asset pools.

Intercompany transfers

19. A review of the FBO bank accounts in the name of FTX DM also identified material transfers with accounts in the name of FTX Trading. No internal documentation has been identified to date which outlines either the basis for these transfers or the process for their approval. I believe this may have arisen, in part, due to the manner in which some larger customers interacted with bank accounts on the Platform, for example depositing into or withdrawing from an FTX DM bank account if they were a member of the Silvergate Exchange Network or depositing into or withdrawing from an FTX Trading bank account if they were a member of the Signature Signet Network.

20. Further, as a consequence of a review of the FTX DM bank accounts, it was also identified that there were material cash transfers between FTX DM and Alameda entities. At certain times Alameda was a market maker on the Platform and so some of the transfers may relate to deposit or withdrawal activity.

21. Ultimately, the JOLs ascertained and as reflected in the Second Interim Report:

21.1. From January 2022 onwards, Customers began depositing USD and subsequently other currencies and were directed by the Platform website to send the funds to a bank account in FTX DM's name; and

21.2. There was limited accounting for intercompany transfers of Customer fiat from bank accounts held in FTX DM' s name to bank accounts operated by other entities in the FTX Group. Of $15bn in fiat deposited by Customers to FTX DM, $5.6bn was transferred to FTX Trading and $2.1bn to Alameda Research.

Consideration of assets from the Chapter 11 general pool as Customer assets

22. According to the admitted evidence in the criminal trial of Samuel Bankman-Fried before the United States District Court for the Southern District of New York beginning on 3 October 2023, Customer Assets were likely used for a variety of unauthorised purposes including venture investments, repayment of loans, the equity buyout of Binance, political party donations, charitable donations and the purchase of real estate. Therefore, Customers of the Platform could have been entitled to repayment from pools of assets held outside the FBO accounts and addresses/wallets that can be attributed to the Platform.

Pooling of Digital Currency assets

23. Another matter which should be considered is the pooling of digital currency assets received by the Platform. While many public blockchains maintain 'traceability' of transactions and assets, the Platform's design appears to have used a pooled approach for many common digital currencies, where the amount of digital currency deposited by one Customer would be transferred to a blockchain address with amounts deposited by other Customers, which then could be used for the processing of a withdrawal for another unrelated Customer.

24. My analysis identified two features of the Platform that created a common pool and render it difficult to attribute underlying blockchain assets to individual Customers:

24.1. **Sweeping:** Although some digital currencies had a single unique deposit address per Customer, FTX often did not use these addresses to store digital currencies long term and in these cases promptly moved the assets onto other addresses/wallets (known as "sweeping"). Sweeping appears to have occurred periodically (e.g., at least daily) for many digital currencies, whereby the value from the single Customer addresses were combined and sent to a different address as a single bulk amount. Between May 2019 and

November 2022, some 22 million deposit sweep entries were recorded in the Platform database records.

24.2. **Withdrawal address selection approach:** When a Customer requested a withdrawal of digital currency, it is not known exactly how the Platform decided which address to disburse the amount from (and this may have differed per digital currency/wallet type). However, from looking at examples for common digital currencies like BTC, it appears the disbursement address used was not necessarily related to the Customer who requested the disbursement. Furthermore, in many cases for BTC, the 'change' (or residual balance) from the transaction was sent to a new address, which was in turn used in the next withdrawal regardless of the Customer making the withdrawal request.

25. These features effectively break the ability to trace the digital currency without resorting to a model such as First in, First Out ("FIFO") or Last in, First out ("LIFO"). Even if using a FIFO/LIFO model, the sheer number of transactions, combined with the changing ownership due to trade executions, render it impractical, if not impossible, to determine which address/wallets held which Customer's digital currency amounts. *See Appendix C – Tracing of 11 October 2021 Deposit* on page 18.

26. It is noted that for digital currency deposits made very close to the collapse of FTX, sweeps may not have occurred, and certain Customers may be able to see their digital currency still residing in the same Platform controlled addresses/wallets to which they originally sent that digital currency. However, this might only occur for a very small number of cases shortly before the collapse of FTX and relate to a de minimis portion of the total Platform activity. *See Appendix D – Tracing of 10 November 2022 Deposit* on page 20.

27. A lack of clarity remains as to which FTX entity controlled which addresses/wallets, which is complicated by the fact that the individual employees with access to private keys stored on the Platform or held offline were often employed by and/or performed functions for more than one FTX entity.

Ledger Reconciliation Deficiencies

28. Typically, when assets are held in any form of client money account, or trust arrangement, there should be a ledger detailing the assets held and the owner/beneficiary of each asset, with mechanisms in place to ensure that client money is subject to effective segregation. Where client money arrangements involve the use of omnibus bank accounts or pooling addresses/wallets, a regular reconciliation from the balances in the accounts to the totals from the individual customer ledger accounts should be performed, in order to validate that the amounts recorded in the ledger as owed to Customers, and the amounts actually held, do indeed match.

29. Technically, the Platform did keep a record of each Customer's assets in the form of their Platform account balances. This could be considered a form of ledger, detailing how much each Customer was owed from the overall Customer Asset pool. However, for this ledger to be relied upon as a proper record of each Customer's Assets, it would be necessary to maintain a reconciliation from the total of the ledger to the total balances in the FBO bank accounts and addresses/wallets held across FTX entities.

30. I conducted a review of data collected from FTX DM's accounting systems, as well as email and chat records from key senior management made available to me, in order to identify any evidence of reconciliation activities between Platform account balances and bank accounts and address/wallets holding customer funds. I also performed a review of records from the Platform database.

31. After performing my review, I did not locate records or any evidence that showed regular (or any) reconciliations were being conducted between Platform account balances and bank accounts/wallets, except for certain Japanese Customers who were a special case. Certain policy documents produced by FTX DM provided to the SCB stated that reconciliations would take place, but there is no evidence that these processes had actually occurred.

32. The lack of reconciliation records means there is no additional detailed information to assist in determining which Customers or Customer groups (if any) on the Platform mapped to which specific underlying FBO bank accounts or addresses/wallets.

Conclusion

33. As described above, despite spending many hours investigating and scrutinising the information provided to the JOLs by the Debtors, my team and I have found it impossible to be able to allocate Customer Assets and Customer Liabilities to specific companies in the FTX group and in particular to FTX DM.

34. It is my opinion that any attempt to assign legal entity ownership to both Customers and underlying fiat bank accounts or digital currency addresses/wallets, while possible, would still result in a situation where it would likely be impossible (and certainly not practical from a cost and time perspective) to retrospectively disentangle and unravel the Platform records in a way that Customer Assets and Customer Liabilities could be fairly attributed. Even if it were possible (which I am of the firm belief it is not), any such attribution would require the use of assumptions that would be inconsistent with how the Platform was actually operated over its lifetime, and these assumptions would nonetheless require agreement between FTX DM and the Debtors.

SWORN TO before me this
12 day of January, 2024 at
Hong Kong Special Administrative Region
of the Peoples' Republic of China

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Before me,

LEE Kwan Chun Jeff
Notary Public, Hong Kong SAR
22nd Floor, Bank of China Tower
1 Garden Road, Central
Hong Kong

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NOTARY PUBLIC

Appendix A - Summary of Platform Bank Accounts

35. The Platform operated several fiat bank accounts to receive Customer deposits and process Customer withdrawals. The specific bank accounts used, and the currencies accepted, changed over time. By examining a record of the Platform code and bank account statements where available, I was able to identify the main accounts into which Customers deposited funds.

36. Note the list in this section is not exhaustive, and is based on the main instructions identified from the Platform's deposit instructions page. I did sight evidence of other currencies also being accepted by the platform in historical periods, or via other deposit methods, that are not detailed here.

Bank Accounts used for USD Deposits

37. A review of the Platform's code indicates the following with respect to USD bank accounts:

37.1. The Platform originally instructed regular Customers to deposit USD via a Silvergate USD account in the name of North Dimension Inc., which was an entity related to Alameda.

37.2. In April 2021, the Platform added the Silvergate Exchange Network ("SEN") option for USD deposits, with the account beneficiary listed as FTX Trading. SEN was a special account type for institutional Customers to deposit/withdraw from, which enabled faster transfers.

37.3. In September 2021, the Platform added the Signature Bank SIGNET ("SIGNET") option for USD deposits, with the account beneficiary listed as FTX Trading. SIGNET was a special account type at Signature Bank for institutional Customers to deposit/withdraw from, which faster transfers.

37.4. In January 2022, the Platform instructions for regular Customers changed, to direct Customers to deposit USD via a new Silvergate USD account in the name of FTX DM.

37.5. Also in January 2022, the Platform SEN instructions were amended to include a new SEN account number, which was in the name of FTX DM.

37.6. Note The SIGNET bank account number and beneficiary was never changed from the original FTX Trading account added in September 2021.

38. The impact of this is that, by February 2022, at least five different bank accounts had been used to receive USD from Customers , including three that remained active (across two entities – FTX DM and FTX Trading) until the Platform's end of life.

Bank accounts used for other major fiat currencies

39. A review of the Platform's code indicates the following with respect to other non-USD bank accounts:

39.1. Deposits in Canadian Dollars ("CAD"), British Pounds ("GBP"), Euros ("EUR") and Swiss Francs ("CHF") were originally accepted in bank accounts that were not in the name of FTX DM.

39.2. Over the period April 2022 to June 2022, the deposit instructions on the Platform for these four currencies were amended to instruct Customers to deposit funds into different bank accounts that were opened in the name of FTX DM.

40. Therefore, for each of these four currencies, at least two bank accounts were historically used to accept Customer deposits, both an FTX DM bank account and a non-FTX DM bank account.

Appendix B – Summary of Platform Addresses/Wallets

41. Over its life, my understanding is that the Platform used a number of interfaces/technologies to communicate with different public blockchains to receive Customer deposits and process Customer withdrawals of digital currencies. I was only able to obtain limited information on the specifics of how the Platform managed this process, however through a review of platform code and high level discussions with FTX Group employees, I understand that:

    41.1. For certain digital currencies, a series of code/interfaces were used to automatically or semi-automatically generate public blockchain addresses, store private keys, and then send and receive digital currencies from these addresses as part of the Customer deposit and withdrawal process; and

    41.2. Senior FTX employees had the ability to send digital currencies from these aforementioned Platform addresses to, and back from, certain 'warm' and 'cold' wallets, which were purportedly wallets not directly connected to the Platform for security purposes.

42. Platform records indicate that for at least some digital currencies, FTX used its own code to interface directly with public blockchains and create new addresses as needed, rather than use a single set of wallets. Due to this design feature, the Platform would routinely (and likely automatically) create new public blockchain addresses, with the keys kept in the Platform's control.

43. This design led to the Platform utilising a significant number of addresses over its life – both to receive and send digital currencies. The Platform's deposit records indicate that around 3.5 million different public blockchain addresses were used by the Platform to receive digital currency deposits from Customers (accounting for each address and digital currency combination). The high volume is due to the fact that for some digital currencies, the Platform would generate a unique deposit address for each Customer, and then would 'sweep' the funds from these individual addresses into combined omnibus addresses/wallets.

44. For example, it appears that common digital currencies such as Bitcoin ("BTC") and Tether ("USDT") seem to have designated deposit address for each Customer Platform account. However, some other digital currencies do appear to use a smaller set of common addresses.

45. Between March 2019 and November 2022, around 31.5 million digital currency deposit entries were recorded by the Platform. The following table shows the count of unique addresses by each digital currency type that these customer deposits were for (totalling the approx. 3.5 million addresses as referred to above).

Number of unique addresses per digital currency type

Coin name	Count of addresses
USD Tether	947,194
TRON	491,204
Ethereum	380,012
USD Coin	265,457
Bitcoin	256,054
Solana	202,952
Binance USD	122,180
Binance Coin	115,007
Litecoin	84,399
Matic	52,167
Other coins	564,474
Total	**3,481,100**

Appendix C – Tracing of Example Customer 1

46. To identify if Customer digital currencies could indeed be 'traced' in the Platform, I analysed the deposit and withdrawal flows for a sample Customer. For the purposes of this example, actual blockchain addresses have been truncated and times are in UTC.

47. This Customer setup their FTX Platform account on 11 October 2021. Their account had no activity until late in 2022 when two deposits of BTC were made onto the Platform by the Customer:

- 2.9997 BTC into the blockchain address RLND on 4 October 2022 at 16:35
- 2.44064186 BTC into the blockchain address RLND on 6 October 2022 at 03:31

48. A total of 5.44034186 BTC was therefore deposited into RLND, the Platform controlled address allocated to this Customer, which in turn resulted in them being credited with the same amount in their Platform account. Following these deposits, this Customer made no trades or withdrawals, and at the end of the Platform's life their closing balance was still 5.44034186 BTC, as expected.

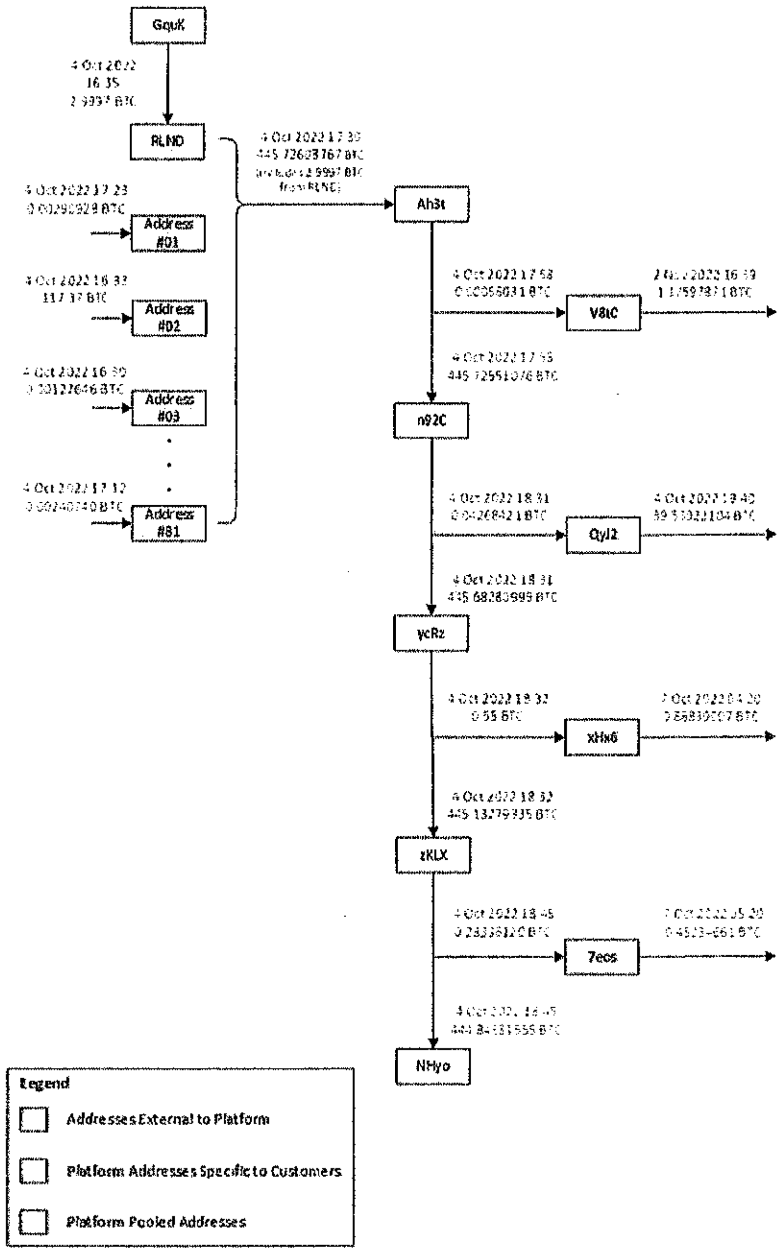
49. However, while this Customer did not trade in or withdraw the BTC that was recorded in that Customer's Platform account, the following occurred on the blockchain in relation to the BTC they originally deposited:

    49.1. On 4 October 2022 at 17:30, the 2.9997 BTC transaction was used as an input, along with 81 other transactions, to create a single output of 445.72608767 and sent to Platform address Ah3t.

    49.2. On 6 October 2021 at 04:24, the 2.44064186 BTC transaction was used as an input, along with 58 other transactions, to create a single output of 606.02147354 BTC and sent to Platform address SaTK.

50. This blockchain activity appears to be the 'sweep' from the individual deposit addresses given to Customers into a single pooled address. A sample review of the other blockchain transactions used as inputs along with this Customer's deposit shows that they also relate to other Customers' BTC deposits onto the Platform.

51. As a result of this, immediately following the sweep on 4 October 2022, 2.9997 of the 445.72608767 BTC at address Ah3t could still be attributed to this Customer, with the balance belonging to the other Customers whose deposits were also swept into this address. However, this address was then almost immediately used by the Platform to send BTC out to other Customers who requested withdrawals or, as the case may be, to addresses/wallets of other FTX Group entities. This process is illustrated in the diagram below:



52.

53. On 4 October 2022 at 17:58, the 445.72608767 BTC at address Ah3t was used as an input for a Customer withdrawal, which sent 0.00056031 BTC to address V8tC, which is understood to be that Customer's nominated withdrawal address. The remainder of the output, 445.72551076 BTC, was sent to address n92C, which appears to be a new address created by the Platform to receive the residual balance (or 'change').

54. On 5 October 2022 at 18:31, the 445.72551076 BTC at address n92C was then used to process another Customer withdrawal, sending 0.04268421 BTC to address QyJ2, which is understood to be that Customer's nominated withdrawal address. The remainder of the input, 445.68280995 BTC, was sent to address ycRz, which again appears to be a new address created by the Platform to receive the 'change'.

55. In both of the transactions above, the Customers who withdrew BTC from the Platform (which was transferred to them from the pool of 445.72608767 BTC) were not in the original group whose deposits were originally swept into this pool of 445.72608767 BTC. Therefore, almost immediately after they were received, the Platform had used these deposits fungibly across customers of the Platform generally – that is, the Platform used the digital currency deposited by one party or group to immediately send out as withdrawals to another.

Appendix D - Tracing of Example Customer 2

56. To determine if deposit sweeping and the fungible use of addresses for withdrawals continued to occur until the Platform's end of life, I looked at an example Customer who made a deposit on 10 November 2022. For the purposes of this example, actual blockchain addresses have been truncated and times are in UTC.

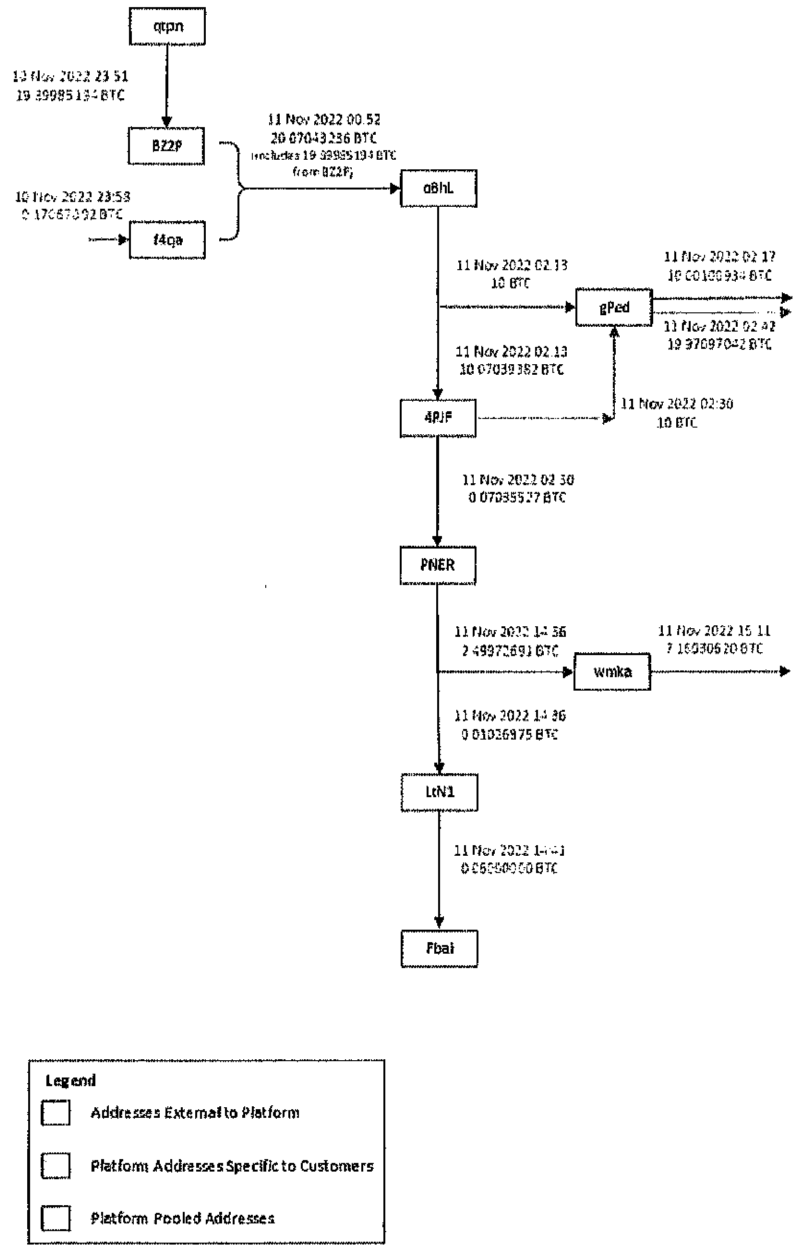
57. This example Customer setup their FTX Platform account on 9 May 2019. Their account had no activity until late in 2022, when four deposits of BTC were made onto the Platform by the Customer on 10 November 2022, including:

    - 0.10 BTC into the blockchain address BZ2P on 10 November 2022 at 22:50
    - 20 BTC into the blockchain address BZ2P on 10 November 2022 at 23:15
    - 20 BTC into the blockchain address BZ2P on 10 November 2022 at 23:29
    - 19.89985194 BTC into the blockchain address BZ2P on 10 November 2022 at 23:51

58. A total of 59.99985194 BTC was therefore deposited into address BZ2P, the Platform controlled address allocated to this Customer, which in turn resulted in them being credited the same amount in their FTX Platform account. Following these deposits, this Customer made no trades or withdrawals, and at the end of the Platform's life their closing balance was still 59.99985194 BTC, as expected.

59. Note that these deposits were some of the last that occurred on the Platform before its shutdown. It is not clear why this Customer deposited such a large amount of digital currency at this stage.

60. Examining what occurred on the blockchain, the diagram below shows that this deposit was, similar to the previous example, combined with another Customer's deposit and swept into what appears to be a Platform pooled address. That single pooled address was then used to process withdrawals for different Customers. However, note these Customer withdrawals occurred during the period during which only Bahamian withdrawals from the Platform were purportedly allowed, and as such the Platform might not have been operating completely in a 'business as usual' fashion. Refer to the below diagram for details of the flows for one of the deposits.



qtpn
BZ2P
f4qa
11 Nov 2022 00.52
20 07043 236 BTC
a8hL
11 Nov 2022 02.13
10 BTC
gPed
11 Nov 2022 02.13
10 07039 382 BTC
4PJF
11 Nov 2022 02:30
10 BTC
11 Nov 2022 02 30
0 07035527 BTC
PNER
11 Nov 2022 14 36
wmka
11 Nov 2022 15 11
11 Nov 2022 14 36
0 01026975 BTC
LtN1
Fbai
Legend
Addresses External to Platform
Platform Addresses Specific to Customers
Platform Pooled Addresses

COMMONWEALTH OF THE BAHAMAS

IN THE SUPREME COURT

Commercial Division

IN THE MATTER OF the Digital Assets and Registered Exchanges Act, 2020 (as amended)

AND IN THE MATTER OF FTX DM MARKETS LTD.
(A Registered Digital Asset Business)

AND IN THE MATTER OF the Companies (Winding Up Amendment) Act, 2011

FIRST AFFIDAVIT OF LUKE AR GROTH

2022
COM/com/00060

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