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Domus Tower, Inc.
Industry

PATENT 114872-8001.US00

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EXECUTIVE SUMMARY

Domus uses blockchain technology to Straight-Through Process (STP) U.S. securities to Real-Time Gross Settlement (RTGS), on a Domus Network of financial institutions. Trades settled on the Domus Network will reduce costs and counterparty risk. The Domus Network achieves the benefits of "internalization" across Domus Network participants, and is designed work without disrupting current industry relationships. Our solution is scalable so it can accommodate increasing trading volumes and the need for speed from high frequency traders.

The Domus solution is engineered so that if any party to a trade is not on the Domus Network, settlement will revert to the current Depository Trust and Clearing Corporation (DTCC) process. This practical feature allows the Domus Network to go live in the near term while the current DTCC system provides backup and resiliency.

Participants in the Domus Network will utilize a Domus FIX Tag which will be part of the client order entry screen. The Domus FIX Tag is encrypted and hashed for security and to minimize pre-trade data transfer (latency).

Domus' 5 Pillars' strategy is to offer an opportunity to five early adopters. Domus will build the Domus Network with a partner from each of five industry sectors using a hub and spokes approach.

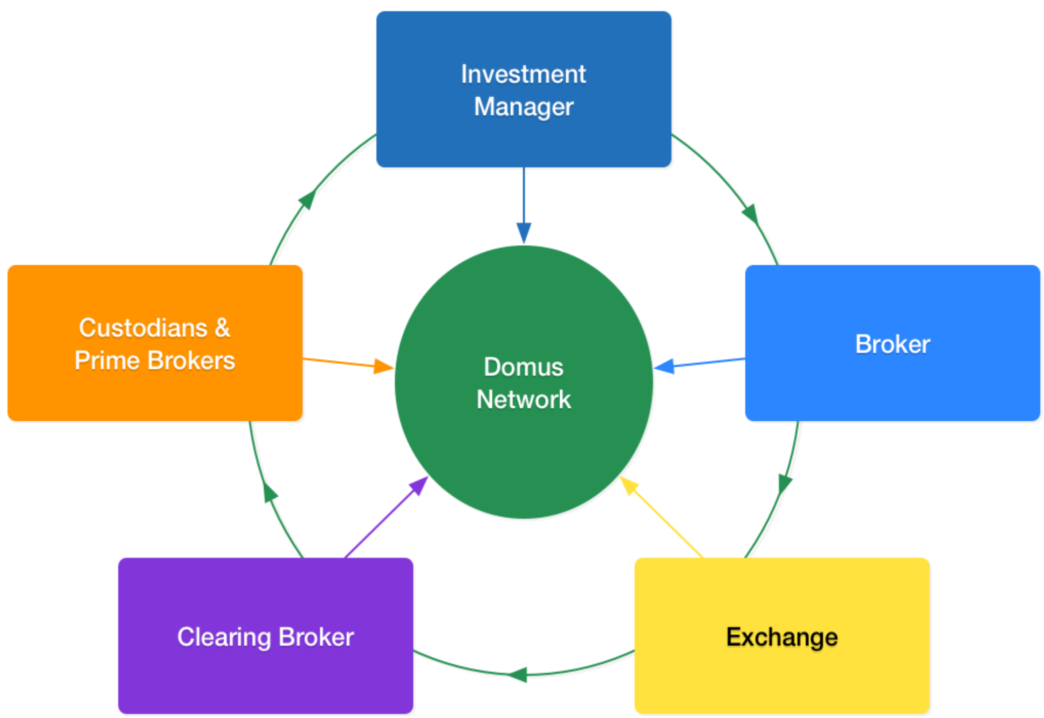

Figure 1

Domus will administer a main blockchain Level 1 (L1) and sidechains Levels 2-5 (L2-L5). The main blockchain will record all assets for Domus Clearing Corporation. Sidechains will record assets and transactions for subsets of L1. For example custodians (L2) can allocate and service subsets of assets for their Investment Manager clients (L3), who can allocate subsets of assets to different funds within the group (L4), who can allocate permissions to individual traders (L5).

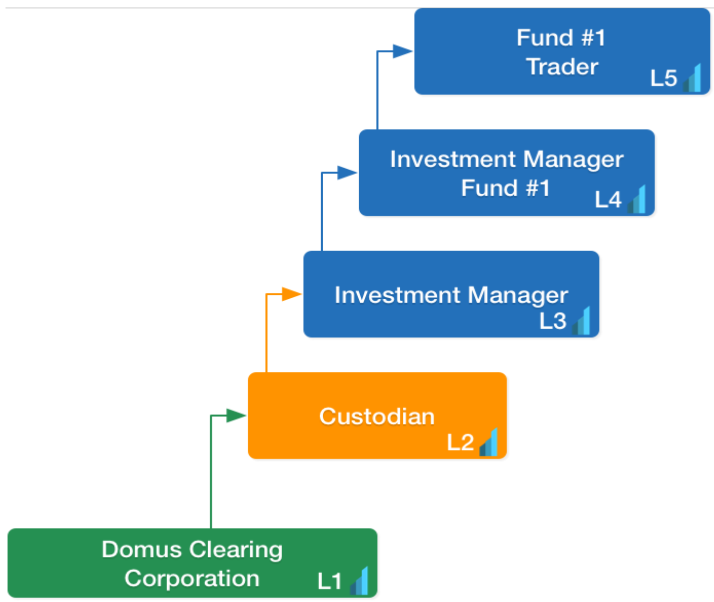

Figure 2

Domus will raise money based on the Pillars being in place. Each Pillar will assign two or three advisors to a working group. Pillars will influence the R&D budget. Domus will allocate Domus engineers to work with Pillars to build out the Domus Network.

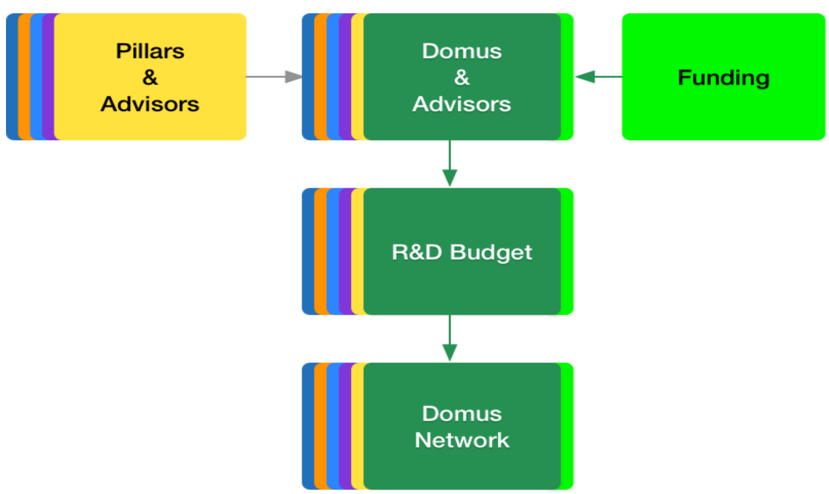

Figure 3

Domus has patented this technology and processes, and has working prototype.

THE DOMUS NETWORK

Investment Manager

A trader at BlackRock, for example, uses existing order entry software that has a Domus FIX Tag. The Domus FIX Tag allows the trader link an order to a funding asset recorded on sidechain L5. The Domus FIX Tag will authorize the broker to send settlement instructions to Domus, and instruct Domus to STP and RTGS the trade. The message will be encrypted and hashed to reduce latency.

The trader will have a copy of sidechain L5 on his server or PC. During order entry, the Domus software will designate funding assets on sidechain L5, locking that asset to the order. Domus software will create a new block on sidechain L5 that moves the funding asset out of an "available" account to a "locked" account. For example, if the trader's sidechain L5 shows 1,000 AAPL available, and he enters a limit order to sell 200 AAPL, then 200 AAPL will be moved into a "locked account". The movement of 200 AAPL to a locked account is propagated to L1-L5, establishing a consensus. This prevents double spending, practically eliminating counterparty risk. (If the trade cancels the order the locked AAPL will move back to the available for sale account.)

Figure 4

When the trade is executed Domus will use settlement instructions and authorizations to STP and clear the trade. Domus will then RTGS (reduce locked AAPL, increase cash vs. the counter party), by applying ledger updates to L1 and propagating the updates to sidechains, establishing a new consensus.

Integration work

- Install Domus Network software

The benefit to the investment manager is that they cannot mistakenly sell something they don't own, and they are a preferred counterparty because their trades STP and RTGS. This reduces risk and settlement costs.

Broker Dealer

Morgan Stanley, for example, runs normal checks through is Order Management System (OMS) and Client Master List and Security Master List.

Simultaneously, the OMS will send the Domus FIX Tag to a new Hardware Security Module (HSM), called the Domus Node[1]. The Domus Node will be provided by Domus, and will be installed in the broker's data center.

The Domus Node will receive the Domus FIX Tag, process it and then send it to the Order Routing System (ORS), which will also receive the legacy FIX message.

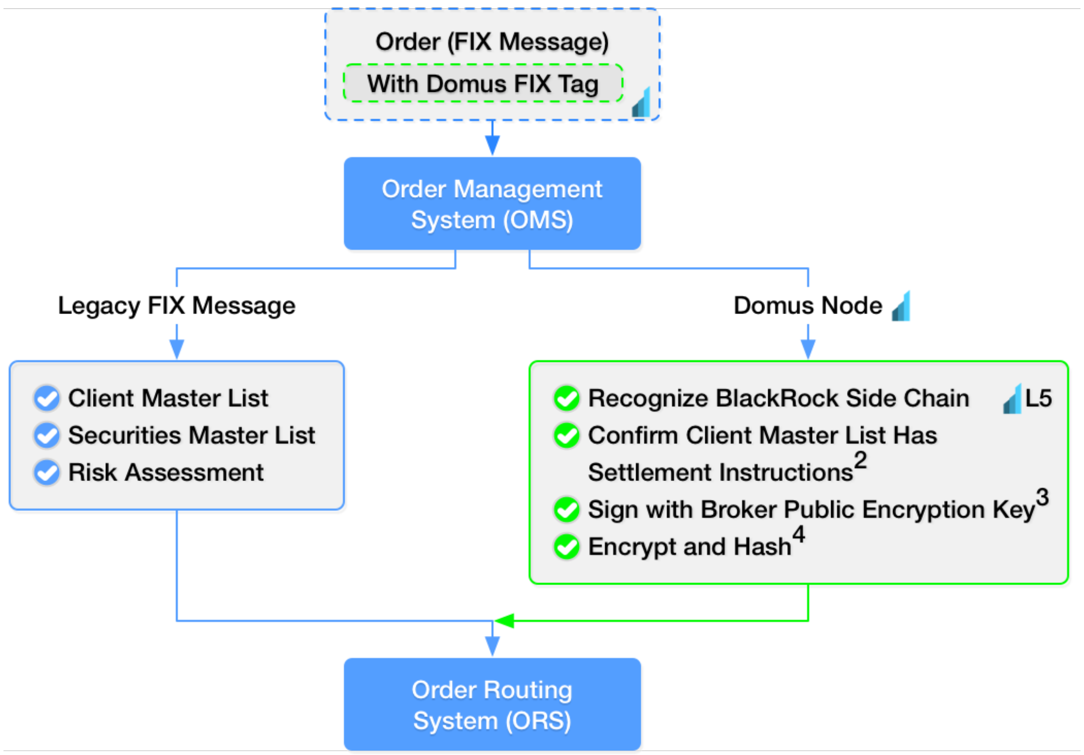

Figure 5 [234]

The executing broker's ORS sends the order out for best execution. The ORS process is not affected by the Domus FIX Tag.

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1 The Domus Node is hardware with software provided by Domus. It will have processors, a communications module, and encryption module, a validation module and an affirmation module, as well as storage among other things.

2 This confirms the broker has instructions, but does not attach them for latency reasons.

3 This broker's public key changes for every trade.

4 Encrypting prevents information leakage, and hashing reduces data transfer and latency.

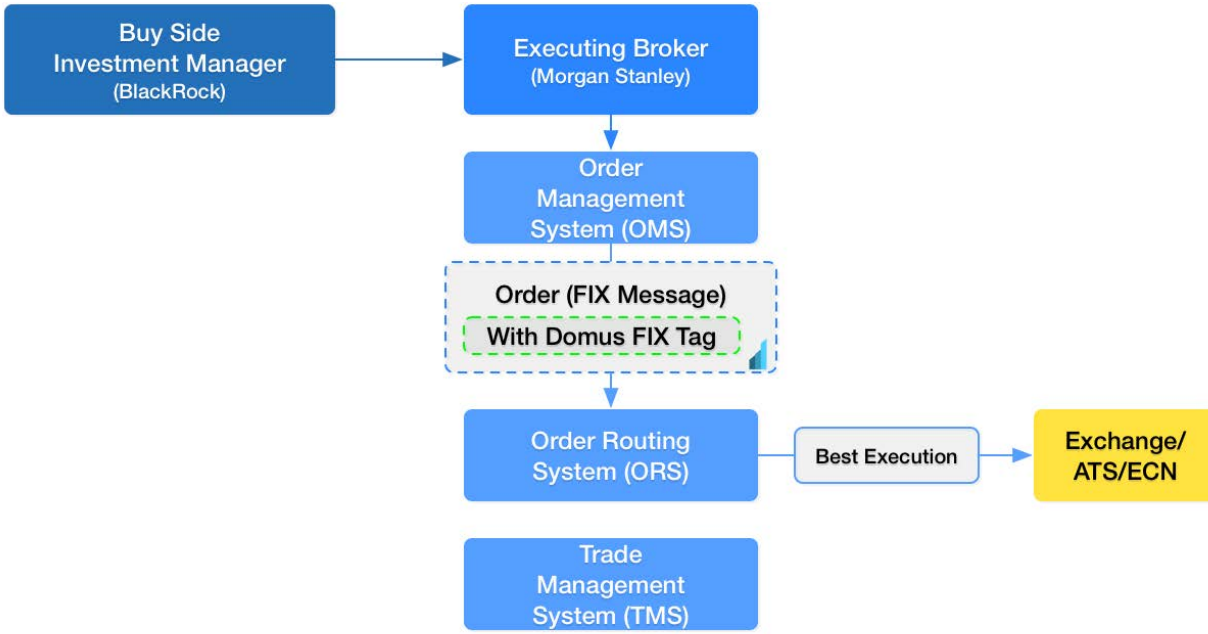

Figure 6

Integration work

- The broker installs a Domus Node in their data center.

The benefits to the broker include RTGS for their clients, reducing risk, middle and back office costs.

Exchange / ATS / ECN

The exchange receives the order and recognizes the Domus FIX Tag. The exchange forwards a copy of the trade report to Domus Clearing Corporation.

Because the Domus FIX Tag has been encrypted and hashed, only Domus Clearing Corporation can see the data, so there is no information leakage.

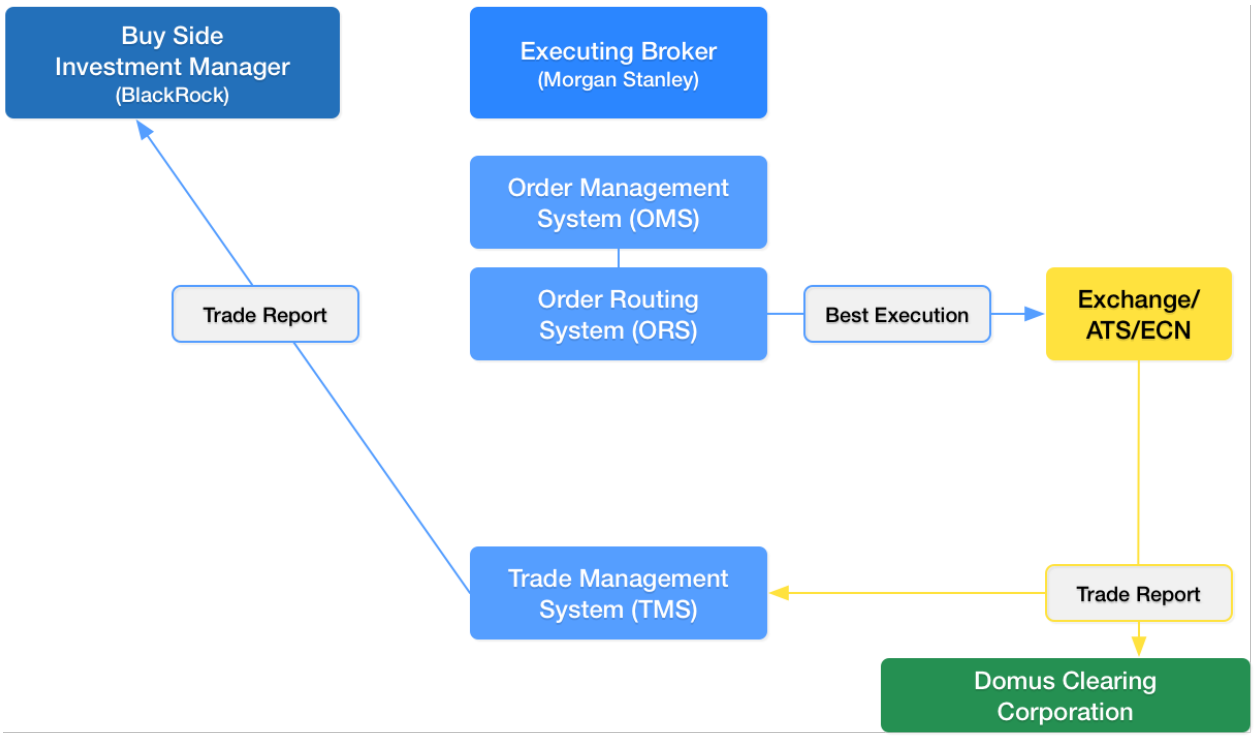

Figure 7

Integration work

- The exchange installs Domus software.

The benefit to the exchange is that industry participants will prefer exchanges that supports STP and RTGS. The exchange cuts costs of managing fails.

Clearing Broker

Dark pools send trade reports to clearing brokers. The clearing broker installs the same software that exchanges use to forward the trade report to Domus Clearing Corp.

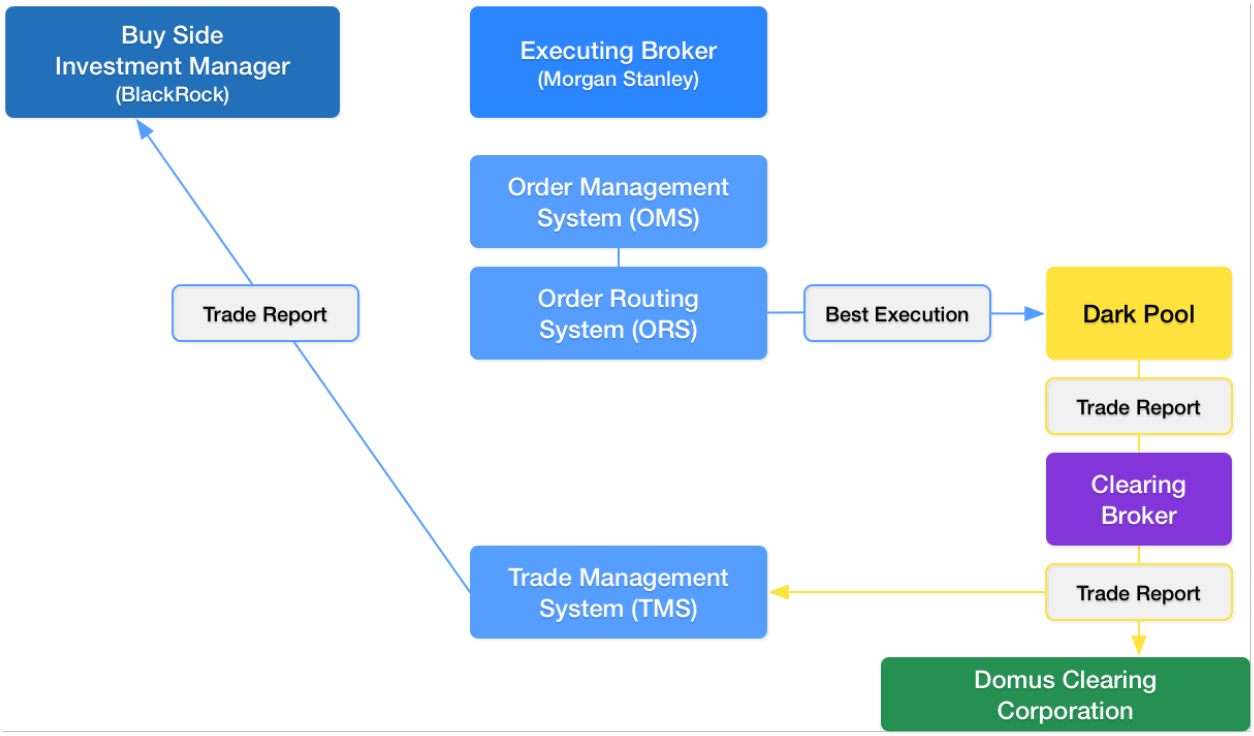

Figure 8

Integration work

- Domus software installed at the clearing broker.

The benefit to clearing brokers is dark pools will prefer exchanges that support STP and RTGS. The exchange clearing broker cuts costs related to managing fails.

Domus Clearing Corporation

Domus Clearing Corporation will receive the trade report from the exchange, and will use the Domus FIX Tags (which are 40-character hashes) to request settlement instructions from executing brokers. The Domus Nodes collect settlement instructions from the client master list, and reply to Domus using the brokers' encrypted signatures.

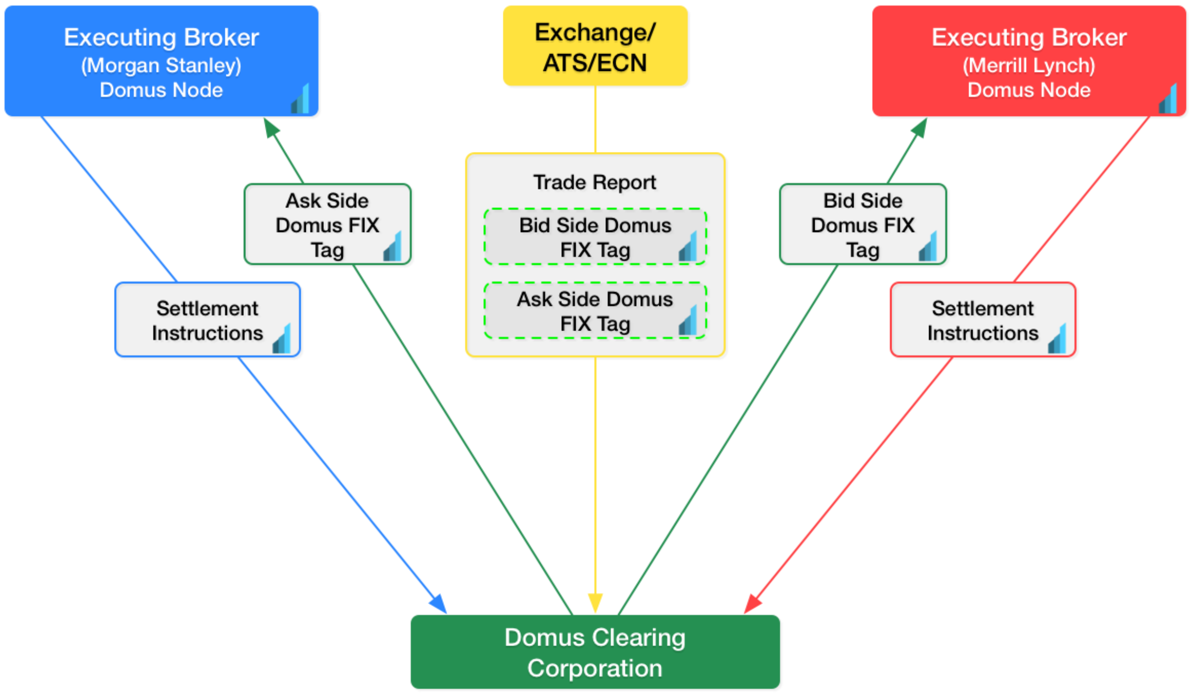

Figure 9

Domus effects RTGS by updating ledgers on blockchain L1 and propagating changes to sidechains L2-L5. Domus internalizes settlement, and DTC records do not change.

Custodian and Prime Broker

Investment Mangers hold stock at Custodians. The Custodian's relationships with their clients do not change. Custodians continue to services their clients and their clients' assets. Custodians can now provide enhanced services to their clients by offering STP and RTGS. Custodians can administer assets more efficiently on Domus sidechains.

Custodians will instruct DTC to move securities onto Domus' blockchain L1. Domus will be a thin layer between DTC and Custodians, where Domus is a "fully disclosed" custodian of custodians. DTC receives daily batch updates from Domus, and continues to service its custodian customers. By holding securities for multiple custodians, Domus can internalize and RTGS trades that would otherwise settle at DTC.

Domus will use the broker's encrypted signatures to STP and clear trades, and will apply ledger updates to the Domus blockchain L1 to achieve RTGS. Ledger updates will automatically propagate sidechains L2-L5. The Custodians, Investment Managers, families of funds and individual traders can view and move assets based on permissions.

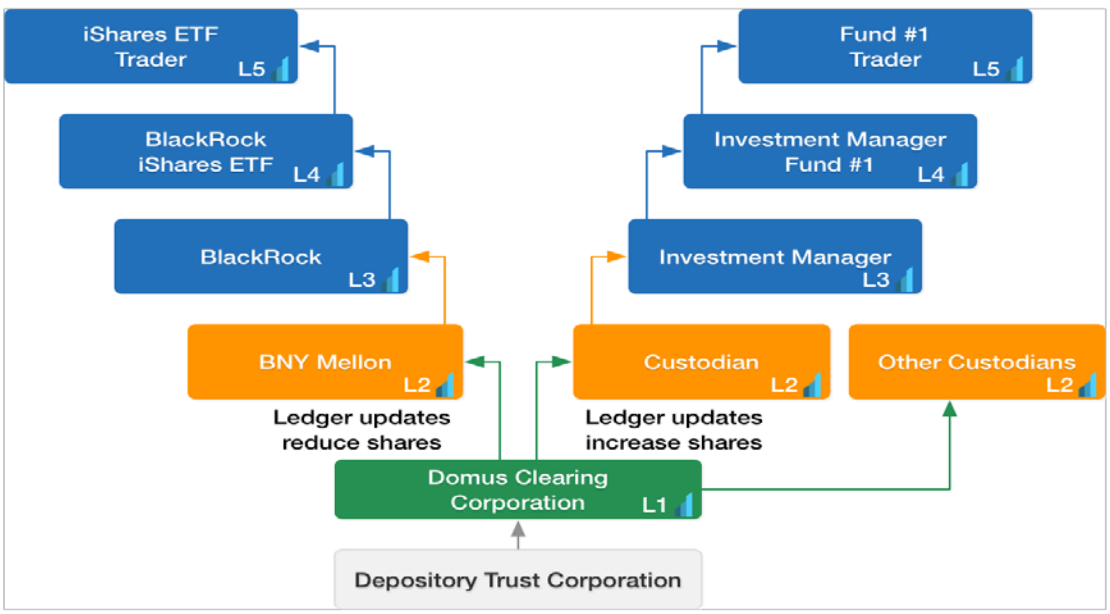

Figure 10

If a Custodian wants to offer RTGS to a client, they will instruct DTC to deposit assets with Domus Clearing Corporation for the benefit of the custodian. Domus Clearing Corporation will record the securities on the Domus blockchain L1. This can be done promptly. If an executed trade does not have Domus FIX Tags for both sides, the settlement diverts to DTCC. In this case, Domus will deliver the securities to DTC for the custodian's account. When reporting to its clients, custodians will provide consolidated reports showing assets held directly at DTC and at DTC through Domus Clearing Corporation.

Integration work

- Develop new reporting systems for clients that consolidate securities held at DTC and securities held at DTC through Domus.

The benefits to custodians is that they can provide a better service to their clients.

Settling Cash Side

Domus will establish a system that borrows best practices established by the Federal Reserve's National Settlements Service (NSS) and The Clearing House Interbank Payment System (CHIPS). Like CHIPS, Settlement Banks will open accounts with Domus Interbank Settlement System (DISS). Settlement Banks will instruct the Fed, using Fedwire, to fund the accounts at DISS on a daily basis. Domus will record funds deposited with DISS on L1, and propagated through L2-L5 before the start of trading.

Traders can then place orders using Domus FIX tags, which will move cash required to settle trades to a locked account on L5. When trades are executed Domus Clearing Corporation will act as "Settlement Agent" and send ledger updates to DISS, and DISS will send ledger updates to settlement banks in real time. Similar to the CHIPS system, Settlement Banks instruct use Fedwire to increase their balances at DISS during trading hours if necessary. At the end of the day, Domus will send all funds back to the Settlement Bank's account at the Fed, so their account at DISS is flat overnight.

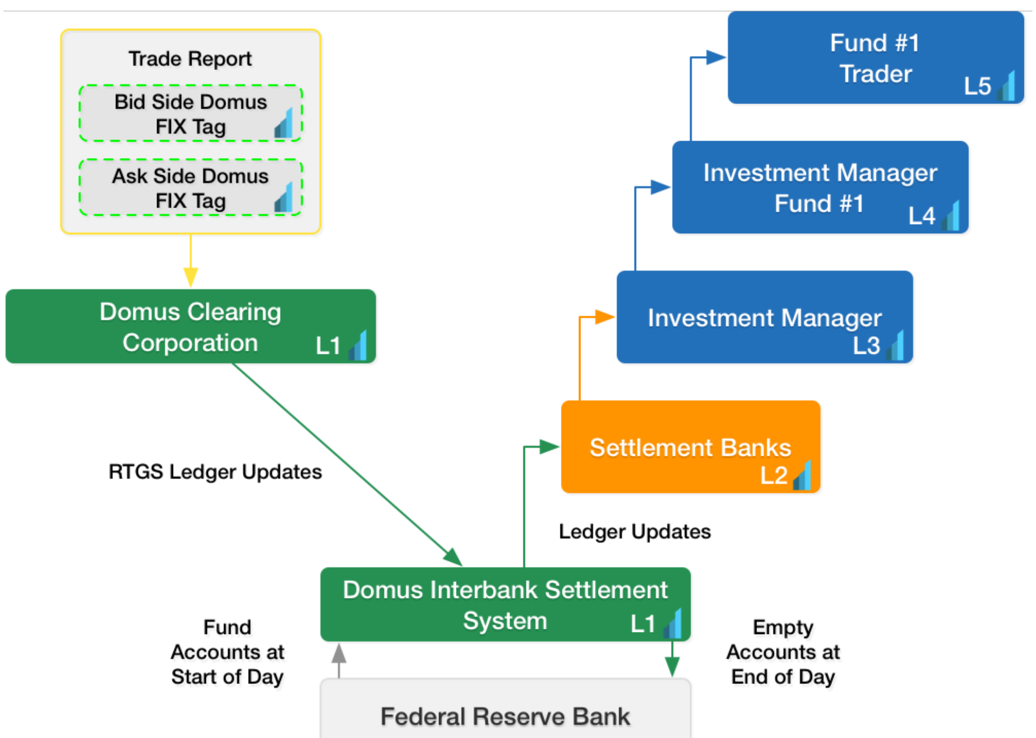

Figure 11

Verifying the Domus Ledgers

Domus will utilize distributed ledgers, building consensus on private nodes. Domus will hire as many private nodes as it takes to make the SEC and FINRA comfortable that assets are secure. Nodes can also be maintained by the SEC, FINRA, our auditor, and others.

Domus will make and propagate special blockchains that only contain hashed data. These will be make available publicly for audit purposes.

The entire history of the Domus ledgers can be audited and confirmed by regulators and accountants in real time, any time, against Domus' immutable content.

Regulatory issues

Domus Clearing Corp will be licensed by the SEC, and a member of FINRA. As a clearing broker Domus Clearing Corp will join DTCC. Custodians and Prime Brokers will instruct DTCC to move assets to Domus, FBO the custodian. Domus, now has centralized assets and can internalize settlement. Domus prefers that custodians and prime brokers are disclosed to and transparent to DTCC. Domus would like to make L2 ledgers available to DTCC, and for DTCC to service custodian assets directly.

The capital requirements will be determined by regulators based on the risk profile of Domus. Because Domus settles RTGS, and novates asset servicing to existing industry participants, we believe capital requirements should be contained to reflect Domus activities.

THE EXISTING CLEARING ENVIRONMENT

In response to settlement bottlenecks that developed during the 60's and 70's, the securities industry developed the Depository Trust Company (DTC)/National Securities Clearing Corporation (NSCC) system as an industry owned solution to centralize settlement and clearing. The system operates based on two key assumptions:

1. Paper securities need to be "immobilized" at a central location and converted to electronic form.

2. NSCC, an industry sponsored and insured clearing house, is responsible for confirming trades for a given day.

Trade Date - Trade Reports Are "Batched"

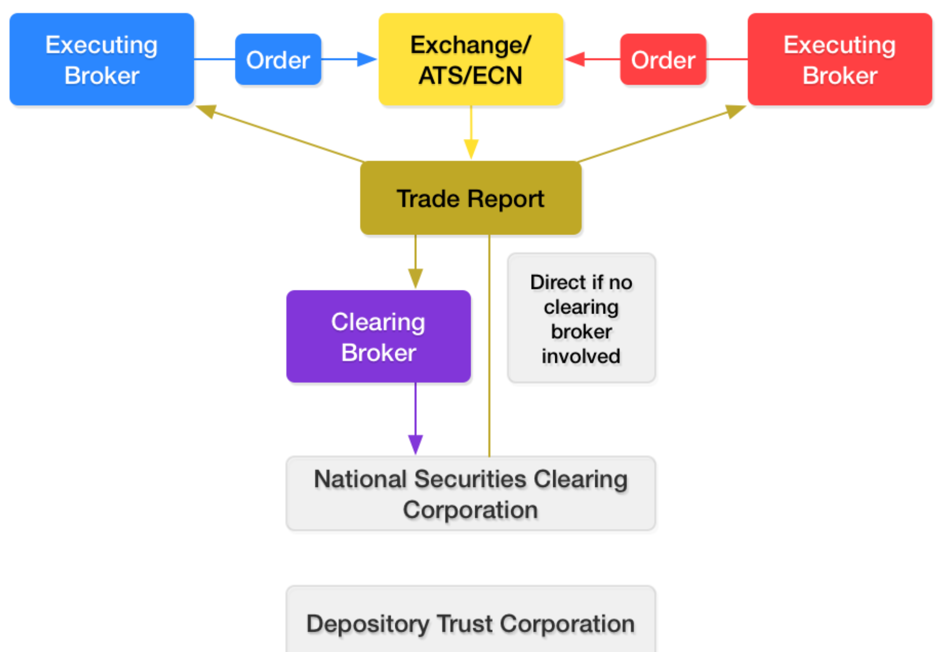

Figure 12

After a trade is executed, the exchange, Alternative Trading System (ATS) or Electronic Communication Network (ECN) generates a trade report.

This trade report is routed to the executing broker's Trade Management System (TMS). In the case of "lit exchanges," report is sent directly to NSCC. In the case of dark pools, ATS, and ECN's, the trade report is sent to a clearing broker that consolidates it with other trade reports and it sends to NSCC.

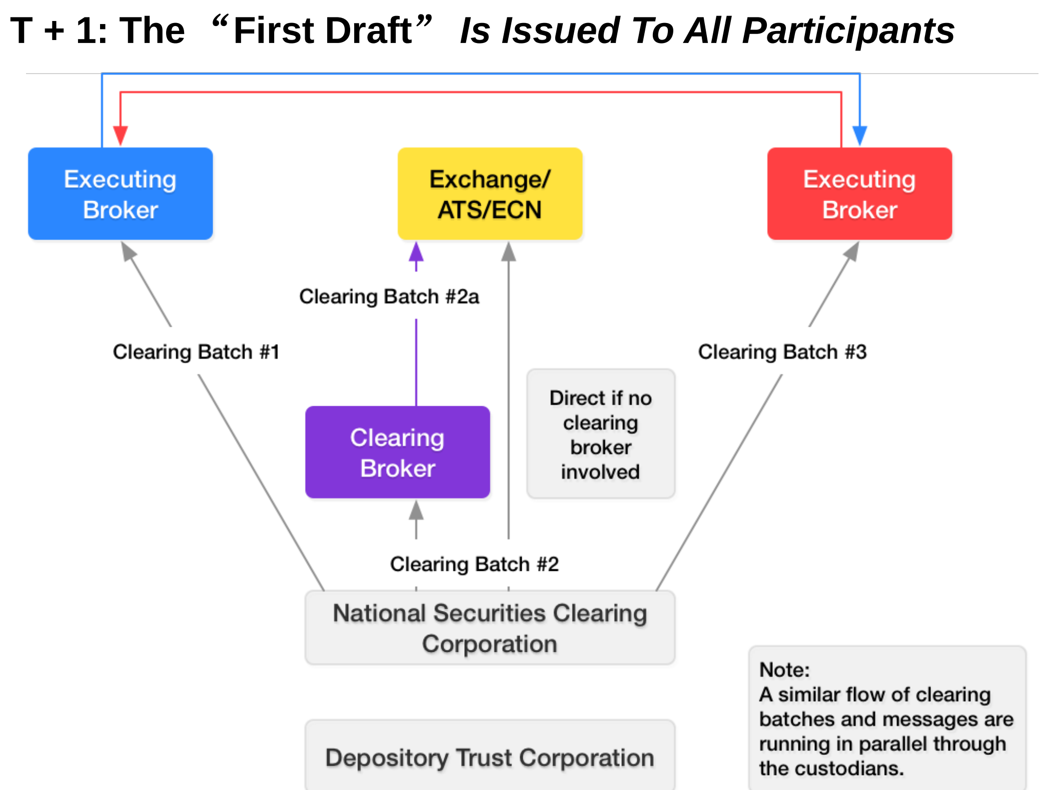

Figure 13

The day after a trade, NSCC prepares a trial balance of all trades it has collected and sends clearing batches to participating firms and lit exchanges. In parallel, executing brokers send contra reports to each other. DTC is not involved at this stage.

T + 2: Firms Issue Contra Reports and Reconciliation Batches

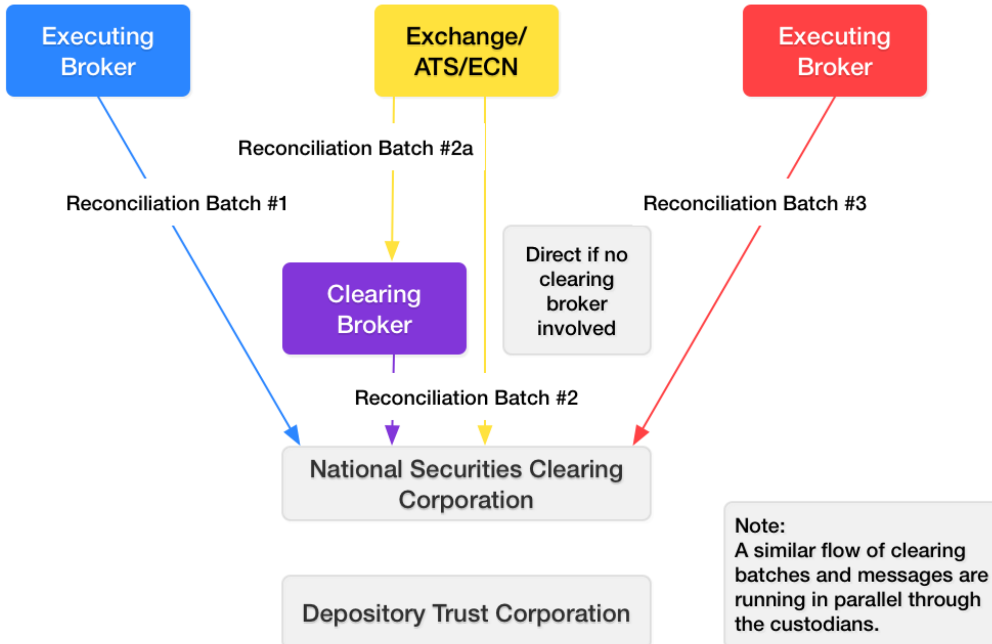

Figure 14

After comparing a day's trades, on T+2, executing brokers, clearing brokers, exchanges, and custodian firms affirm or decline the trade reports in the draft clearing batches. DTC is not involved at this stage.

T + *3:* NSCC *Issues Changes* to DTC *Records to Settle*

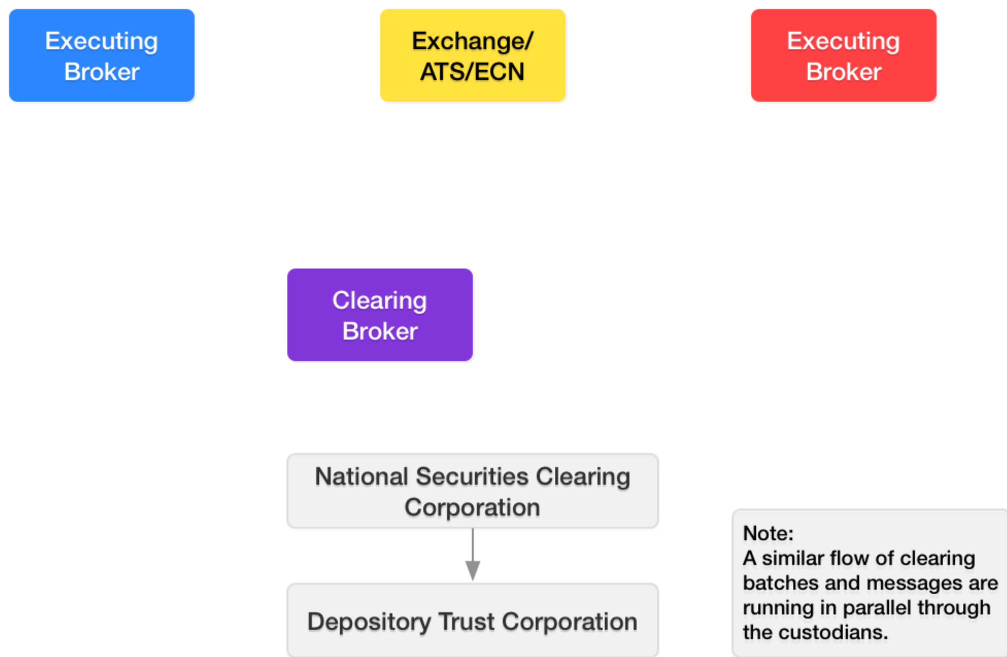

Figure 15

On T+3 the clearing house, NSCC, instructs DTC to adjust the participating firms' accounts. This is done on a net settlement basis, so that each participant will only see one net change per security per day. After securities are moved, cash moves in the opposite direction.