

September 17, 2026

- via <https://www.sec.gov/comments/4-913/roundtable-preparations-24-hour-trading>

Ms. Vanessa Countryman,
Secretary U.S. Securities and Exchange Commission (SEC)
100 F Street NE., Washington, DC 20549

Re: The Roundtable on Preparations for 24-Hour Trading (File No. 4-913)¹

Dear Ms. Countryman,

On behalf of Data Boiler Technologies, I am pleased to provide the SEC with our comments on the Preparations for 24-Hour Trading. Data Boiler is a Pioneer in FinTech with patented inventions in signal processing, trade analytics, machine learning, time-lock cryptography, etc. We frequently comment on regulatory policy both domestically and abroad with over 13 years in business.

Foreign entities have deployed structural networks that bypass dollar-clearing layers. The London Stock Exchange Group (LSEG) has launched LSE 24 and a blockchain-native Digital Securities Depository (DSD) to execute continuous, on-chain equity settlement overnight using tokenized commercial bank deposits. Simultaneously, China's mBridge platform has scaled its multi-CBDC wholesale ledger to handle tokenized bonds and cross-border corporate acquisitions entirely outside Western market-access rules. The US needs a strategic response with 24-Hour Trading and processing.

We applaud the Commission for approving the National Market System (NMS) Plan to establish temporary price band protections in overnight trading to address extraordinary market volatility.² This 20% Limit-Up Limit-Down (LULD) overnight price band, anchored to the prior daytime closing price, acts as a proactive firewall for the US 23x5 night session. By rejecting orders outside these bands rather than triggering automatic halts and maintaining integration with the consolidated opening auction, this architecture offers superior risk containment compared to LSE 24³ and the decentralized blockchain venues.

Please see the BOX below for an **Executive Summary** of our comments:

1. Can the Market Run Safely 24x7?

The transition of US capital markets to a continuous 23 to "24-hour" trading cycle is **NOT a shift towards uniform, always-on symmetry**. Instead, regulators and market infrastructure providers have engineered a **deliberate two-tier framework**. By maintaining the traditional 9:30 am - 4:00 pm Eastern Time (ET) window (**Tier 1 Core Daytime**), it commands deep institutional liquidity and provides the static **4:00 PM closing anchor** used for portfolio valuations, options expirations, and Value-at-Risk (VaR) clearinghouse models. The **Tier 2 Extended Overnight** operation offers continuous international price discovery and convenience, but is structurally subordinated to the daytime session's closing price.

This safety boundary is enforced by a temporary 20% LULD overnight price band that programmatically rejects orders outside the corridor rather than triggering market-wide halts, ensuring overnight volatility cannot outrun clearinghouse margin models. However, a critical safety blind spot exists because the public SIP is legally prohibited from aggregating non-exchange ATS quotes overnight. This forces overnight liquidity into isolated private pools running on proprietary price collars, allowing a stock to be locked at a ceiling on one ATS while actively trading at a different price on another. True market-wide safety cannot be guaranteed until a unified overnight mechanism links these fragmented pools of capital.

¹ <https://www.sec.gov/newsroom/meetings-events/roundtable-preparations-24-hour-trading>

² <https://www.federalregister.gov/documents/2026/08/10/2026-16201/joint-industry-plan-order-granting-approval-of-the-twenty-seventh-amendment-to-the-national-market>

³ <https://www.lseg.com/en/media-centre/press-releases/2026/london-stock-exchange-to-launch-lse-24>

2. Can It Run Resiliently Without Downtime?

Current financial infrastructure is highly vulnerable without its traditional nightly reset windows, and achieving seamless resiliency requires an extensive overhaul of core systems. Overnight trading potentially could generate massive message volumes that will cause traditional 32-bit tracking numbers to overflow and crash downstream processors mid-session, forcing an industry-wide migration to 64-bit integer tracking fields. While major exchanges have upgraded their systems, smaller brokers, dark pools and OTC platforms face an impending technical cliff before the December 2026 synchronization deadline.

To prevent systemic data bloat, the market requires a mandatory, synchronized one-hour daily pause from 8 pm to 9 pm ET for matching engines to go dark, clear memory caches, and programmatically advance trade-date metadata. Furthermore, matching transactions over weekends when central bank payment rails (Fedwire and NSS) are closed creates an uncollateralized credit vacuum. To prevent hidden insolvencies, clearing firms should either demand massive pre-funded capital buffers from their member firms or bypass central bank hours entirely by migrating to private, 24/7 DLT collateral platforms to transfer tokenized US Treasuries peer-to-peer.

3. What will Continuous Trading do to Liquidity, Investor Protection, and Market Structure?

Continuous trading structurally bifurcates the financial landscape into deep daytime cycles and highly volatile overnight windows where roughly 90% to 95% of institutional volume remains anchored to the daytime session. This creates an *“Overnight Paradox”*: while total volume at 2 am ET is exceptionally low, the volatility risk of order bursts is extremely high because thin order books create *“liquidity holes”* where prices skip violently. To protect their balance sheets without a derivatives safety net, market makers automatically widen their spreads, penalizing retail investors with an *“Illiquidity Tax.”* This environment alters market structure by driving volume away from lit exchanges and into private SDPs and internalizing dark pools, which operate as closed-loop *“Echo Chambers”* utilizing custom proprietary pricing models.

Investor protection is severely compromised by the current operational disconnect where market surveillance and volatility interruptions function as two completely separate silos. Volatility engines operate on blind, reactive mathematics that can treat predatory algorithmic manipulation exactly like legitimate institutional order flow, while surveillance teams rely on post-trade forensic datasets on a T+1 basis (T+5 regulatory access for the opaqued and broken CAT). This lag allows manipulative algorithms to systematically weaponize *“Phantom Halts”* to lock up thin overnight books, utilizing the pause to clear risk or capture arbitrage profits on unlinked venues before human compliance teams can react.

4. What Regulatory Actions Should Follow?

To secure the ecosystem, regulators must mandate a transition away from post-trade forensic queues toward interconnected, real-time inline surveillance that populates compliance dashboards before volatility auctions conclude. Regulators should ban standard *“Stop-Market”* and *“Market Orders”* overnight, enforcing the use of Limit or Stop-Limit orders to prevent stop-loss fills in thin liquidity holes from triggering catastrophic, automated broker liquidation cascades.

To stop overnight shocks from mutating into systemic contagions, the SEC and CFTC must enforce cross-asset symmetrical halts, automatically broadcasting lock packets to clamp cash equity price corridors the moment a correlated index future on CME Globex, for example, breaches a volatility threshold. Finally, instead of draining market liquidity through punitive margin collections like TOCC’s Intraday Risk Charge, the commissions should implement a centralized Copyright Licensing Mechanism. By transforming current wastage on toxic exchange data rents and payment for order flow into performance royalties, clearinghouses can build a robust, non-squeezed \$10+ billion cash cushion to absorb defaults, lower the cost of capital, and preserve the US prominent position.

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A. Preparedness for a 24-Hour Market

1. Are exchanges and broker dealers operationally ready for continuous trading?

Alternative Trading Systems, such as Blue Ocean, have been facilitating overnight trading for select brokerages for years, but they operate as isolated pools of liquidity rather than public exchanges. Because ATSs cannot enforce a market-wide halt, they construct their own price collars (e.g. a static +/- 20% price band anchored on a ticker's official consolidated closing price from the 4 pm ET regular session). If a major corporate announcement or a sudden order imbalance pushes demand past their 20% threshold, the ATS does not pause for an auction. It simply rejects any order above the upper band, or sell order below the lower band. Because these bands are proprietary, a stock can be completely "locked" at a 20% ceiling on one ATS while a different ATS or an overnight market maker is still actively accepting trades at a different price. There is currently no unified overnight mechanism to link these private pools of capital.

The SEC has already granted preliminary or accelerated approvals to 24X National Exchange, NYSE Arca, and Nasdaq to operate 22- or 23-hour daily schedules. While execution matching engines can run 23x5, the lack of synchronized, real-time post-trade infrastructure is a big hurdle. Legacy systems remain heavily reliant on nighttime batch-processing windows to clear trades (see [later section](#) and [Annex 1](#)), reconcile ledgers, and manage risk, creating an active operational gap that the industry is rushing to close. In turn, exchanges have delayed their launches until late 2026.

In a daytime-only market, the sequence numbers where direct exchange feeds track messages (orders, cancellations, fills) are safely reset to zero every night during the maintenance window. In a 24-hour market, the sheer volume of algorithmic traffic will cause sequence numbers to overflow or "wrap around" mid-session. Interface parameters must be upgraded to support 64-bit sequence logging or deploy automated, in-flight reset packets without dropping live connections. Primary public listing exchanges (NASDAQ, NYSE, CBOE) and FINRA Trade Reporting Facilities (TRFs) have upgraded their core binary feeds to 64-bit integer tracking fields to prevent sequence-number overflows.

In a continuous market, the parameters governing session disconnects must become highly dynamic. If an exchange performs an "in-flight" software micro-patch at 2 am ET, the interface must delicately decouple and recouple sessions without triggering a mass-cancel-on-disconnect (MCOD) sequence that pulls all liquidity from the book. In addition, if a market never closes, high-frequency trading (HFT) firms that co-locate their servers inside exchange data centers would need to re-program their algorithms⁴ with segmented rolling cache parameters that periodically flush stale order histories.

When a retail broker internalizes fractional share orders and absorbs customer exposure overnight on its own balance sheet, it cannot rely on traditional daytime clearinghouse mechanisms to manage the resulting market risk. Because the

⁴ Institutional trading firms do not always specify handling instructions on an order-by-order basis. Instead, they configure the port itself to automatically apply default behaviors to every incoming order – such as price sliding, short-sale presentation rules, or self-trade prevention. We do recognize that in algorithmic driven capital markets, when the code, configuration, or speed threshold of a broker's outbound port mismatches the exchange's inbound data port, catastrophic, ultrafast market events can occur.

Exchanges enforce strict "Message-per-Second" throttling limits on every physical 10Gb or 40Gb cross-connect port a broker rents. If a broker's algorithm miscalculates and floods the port past its hard-coded ceiling, the exchange engine automatically rejects the excess messages. If the broker's system is misconfigured, it may interpret those exchange rejections as a technical connectivity loss and instantly attempt to cancel and resubmit all resting quotes over that same port. This creates an exponential, self-reinforcing loop. Within microseconds, the broker's port completely jams, preventing their market-making system from updating quotes while the broader market moves. HFTs' arbitrage algorithms detect this stale, locked liquidity and immediately "pick off" the frozen quotes, causing an instant, sharp price dislocation in that stock.

Exchanges treat co-location and customized high-speed ports as high-margin, proprietary product suites. They create unique, non-standardized port configurations (like Self-Trade-Block-01) to "LOCK IN" clients and "[optimally restricted access to price information](#)." Rather than building their own native compliance interfaces to resolve the naming conflicts their proprietary systems create, exchanges push the raw data into the CAT. See our response to Q21 ([port-level setting](#)) in our [June 22, 2026 comment letter](#).

National Securities Clearing Corporation (NSCC) and commercial banking networks do not run real-time clearing operations outside standard banking hours, the broker must manage its overnight margining activities through pre-funded liquidity pools, proprietary intra-day risk engines, and specialized clearing arrangements with prime brokers. During regular hours, FINRA require a minimum maintenance margin of 25% for most long equities. A stock that requires a 30% margin during regular hours may demand a 60% to 100% margin overnight, drastically reducing the amount of leverage a retail investor can deploy.

Brokers also pledge high-quality collateral (like US Treasuries) into an automated tri-party shell, extracting immediate cash from the bank within the private ledger to keep their position liquid. If the market moves sharply overnight and the value of a retail broker's internalized stock inventory drops significantly, their pre-allocated credit lines at clearing banks will charge aggressive, automated intraday overdraft fees. The prime broker's institutional risk desk will also issue an intraday margin call to the broker. If the retail broker cannot meet this call using their pre-funded cash buffer, the prime broker has the authority to halt their connection to the overnight liquidity network, or forcibly liquidate their institutional hedges.

Systemic market risk of extended hours is thus trapped within these bilateral agreements between brokers and prime brokers. We are pleased that NSCC has rolled out phased night-cycle clearing windows. While they still do not settle cash transactions overnight, they provide real-time risk tracking and trade capture during extended hours. To eliminate the risk of the [1-hour gap](#) between 8 pm to 9 pm ET, the major clearing firms are bypassing central bank operating hours entirely by shifting to private Distributed Ledger Technology (DLT) collateral platforms (e.g., Canton Network, JPMorgan's Onyx).

2. *How closing price processes will function if markets never fully close?*

The industry needs more clarity on how the closing price processes will function if markets never fully close. Following the SEC's accelerated approval of the "[NASDAQ 23/5 Rule](#)," NASDAQ will launch its extended schedule on Sunday, December 6, 2026. The weekday trading lifecycle is being split into two highly distinct blocks:

- **The Day Session:** Running from **4:00 AM to 8:00 PM ET** (encompassing traditional pre-market, regular, and post-market hours).
- **The Synchronized Pause:** A mandatory, market-wide maintenance window from **8:00 PM to 9:00 PM ET**. During this hour, the matching engines are dark to process corporate actions (splits, dividends) and programmatically advance the logical trade-date metadata to the next business day.
- **The Night Session:** Running continuously from **9:00 PM to 4:00 AM ET** the following calendar day. Clearinghouses would create a separate "[night-cycle](#)" segment that automatically tags overnight executions, holding them in a temporary risk bucket until they can be legally merged into the next official business day's clearing stream.

Given US securities must remain natively bound to US NMS and clearing infrastructures, our understanding is NASDAQ would handle the launch via localized structural setups instead of leveraging NASDAQ Nordic for trade matching. The matching engine for the overnight session will run out of NASDAQ's bare-metal data centers (Carteret, NJ) and leverage its newly acquired Level Alternative Trading System (ATS) to reinforce the baseline order-matching plumbing required for nonstop trading volumes. Assuming "[Follow-the-Sun Staffing](#)" is permissible for human supervisory oversight, NASDAQ can leverage its European and Asian entities to staff regulatory and operational desks during their local daytime hours, avoiding the operational strain of domestic night-shift compliance teams.

For the Night Session, liquidity provision is governed by voluntary electronic market makers with dynamic quote widths. Electronic market makers, such as Citadel Securities, Virtu Financial, and Jane Street are not bound by the same tight daytime quoting constraints. Because individual equity **options markets are closed during overnight hours**, these firms

cannot buy puts or calls to hedge their directional stock inventory conventionally. To protect their balance sheets against thin overnight order books, their algorithms can be expected to automatically widen their bid-ask spreads significantly.

At exactly 4:00:00pm ET, exchanges execute a standard closing auction to establish the official “*Consolidated Closing Price*” for fund NAV calculations and options contracts. The matching engine continues running without pausing, but all trades executed at 4:00:01 PM ET or later are stamped with a *metadata marker designating them as part of the next business day’s trading session*, segregating overnight statistics from daytime historical records. Liquidity is expected to be fragile during the pilot night session. Trading overnight is thus initially capped at a select basket of highly liquid, heavily capitalized S&P 500 mega-caps and prominent Exchange Traded Products (ETPs) before expanding to the broader small-cap market.⁵

3. *What clearance and settlement changes are required to support trading in hours markets have never operated before?*

The US clearing mechanics reached a major milestone on June 28, 2026. The SEC approved NSCC’s rule changes, allowing it to operate its Universal Trade Capture (UTC) system continuously from Sunday at 8pm ET to Friday at 8pm ET. The NSCC provides a central counterparty (CCP) guarantee for overnight trades executed on ATS and participating electronic venues using pre-funded operational constraints and risk caps to absorb extended-hours price variances while commercial banking networks are closed. NSCC ingests and nets trade records continuously throughout the night session.⁶ Automated 15-minute intra-night risk evaluation slices are deployed that compare overnight positions against the prior 4pm close to detect clearing member capital drift.

While we are glad that legacy clearance and settlement end-of-day batch processing is migrating towards an **event-driven, multi-segmented real-time framework**, the options market handles overnight risk very differently than equities.

Erroneously treating the US equity market as an isolated ecosystem is wrong. Policy makers cannot ignore the profound downstream effects of an equity regime change will have on the listed options markets.⁷ See [Annex 1](#) regarding clearing of overnight trades for options, the on-going industry pushback against the Intraday Risk Charge (IRC) that was instituted by the Options Clearing Corporation (TOCC), and the SEC and FINRA abolishment of the Pattern Day Trader (PDT) designation and its \$25,000 minimum equity requirement.

Because traditional banking infrastructure cannot move collateral outside standard business hours, clearinghouses require brokers to post advance excess collateral (a buffer) during the regular daytime settlement cycle. The *rising cost of clearing member defaults* and the *risk of systemic flash crashes* are the Clearinghouses’ two biggest operational threats. Brokers despise pre-execution collateral buffers, multiplier-based margin requirements, and the real-time risk cap and hard limits.

It is not wrong to consider possible expansion of portfolio margining and cross-margining programs for regulatory relief. However, we are skeptical towards “*Partial Recognition with Conservative Haircuts*,” warning that such arbitrary constraints erode capital velocity and make expansion programs ineffective. We counter suggest “*Two Accounts, One Margin Link*”, connecting an SEC/CFTC declared stress condition to an automotive-style adjustable damper system. Also, our Copyright Licensing Mechanism turns the current wastage on toxic exchange data rents and payment for order flow into a robust vulnerability defense mechanism. Clearinghouses via their role as royalty collection administrator, can provide a \$10+ billion-dollar cash cushion to absorb defaults without constantly squeezing brokers for margin collateral. See our August 31, 2026 comment letter⁸ for an elaborated discussion.

⁵ <https://www.marketbeat.com/articles/nasdaq-23-hour-trading-push-could-turn-global-liquidity-into-a-growth-engine/>

⁶ <https://www.stl.news/market-infrastructure-reconfigured-nscc/>

⁷ https://www.databoiler.com/index_htm_files/DataBoiler%20SEC%20OPR%2020260817.pdf

⁸ https://www.databoiler.com/index_htm_files/DataBoiler%20CFTC%20SEC%2020260831.pdf

Regarding Corporate Actions and post-trade adjustments in a 23x5 trading environment, clearinghouse systems must be upgraded to apply critical corporate restructuring on live, actively running trading platforms without causing crashes or erroneous executions, see [later section](#). Clearinghouses also need real-time protocols to instantly reverse or adjust trades flagged as algorithmic errors, or “*fat-finger*” mistakes, during the night. The goal of a Multi-Step Continuous Clearly Erroneous (CCE) resolution process is to isolate bad data before it affects morning settlement ledgers.

4. *How will overnight risk management and surveillance work when fewer personnel are monitoring markets?*

When a thin overnight order book suffers a “*fat-finger*” error or an algorithmic glitch that causes an artificial price spike, trades that execute during that spike are subject to the CEE rules. The multi-step resolution process works as follow. If a broker-dealer executes a client's trade at a price they believe is erroneous, they must formally file a CEE petition with the operating ATS. Under standard rules, this petition must be submitted **within 30 minutes of the execution time**. For a trade to be “*busted*” or price-adjusted, the spike must exceed a standard numerical price band.

During regular market hours, the threshold is typically 3% to 5% for most stocks. During the highly volatile, illiquid overnight sessions, regulators and ATS operators expand this cushion to 20%. Those intervening would review transaction logs to determine if the spike was caused by an actual structural platform error (such as a data feed disconnection) or simply an aggressive trader clearing out a thin book. “*Clearly Erroneous*” trades will either bust the trade entirely or force a price adjustment to the edge of the allowable threshold. The ATS then broadcasts a drop-copy execution correction to the clearing firms involved.

The industry handles **market risk** and **margining** during extended trading hours via three approaches:

First, brokers originally meant to absorb customer exposure during normal hours, but on an interim basis during overnight hours, their internal risk management platform serves as the immediate clearinghouse. Rather than calculating account health via end-of-day batch processing, overnight risk engines run continuous, real-time algorithmic calculations on an investor's **Net Liquidation Value (NLV)** by cross-referencing the live bid-ask spreads on overnight ATS platform (like Blue Ocean) against the user's positions. The engine automatically adjusts a client's margin ratio with no “*Grace Period*” or soft edge margin if a client's position falls short overnight. They also act as the principal counterparty to the retail trade. In effect, this **conflates clients with counterparties**, heightening potential **conflict of interest** that regulators should scrutinize.

Secondly, a broker's accumulated corporate inventory and structural market risk may be managed via Specialized Extended-Hours Clearing Agreements with top-tier prime brokers or wholesale clearing firms (such as Apex Clearing or Instinet). How risks may be transformed or spread to other areas via exotic derivatives, portfolio compression, and/or other means is difficult to detect as there is **no delta-hedge timing loop to track during overnight hours**. Assessing changes in market dynamics, understanding where frictions and liquidity concentration may shift before the next morning is even more challenging than regular cross-markets, cross-assets surveillance.

Thirdly, the DTCC recently began to utilize advanced Value-at-Risk (VaR) models that ingest continuous trade data from overnight ATS platforms. This allows the clearinghouse to calculate a broker's systematic risk profile continuously, ensuring that when the official morning margin call occurs at 7:30 am, the capital required to cover overnight volatility is already systematically accounted for.

The Federal Reserve and other global central banks view the rise of continuous equity trading outside traditional hours as a major systemic risk, primarily due to the “**Timing Asymmetry**” between real-time stock execution and delayed cash settlement.⁹ To identify stress and weak links where the next flash crash or systemic risks may emerge, traditional

⁹ <https://www.federalreserve.gov/econres/notes/feds-notes/central-bank-liquidity-facilities-around-the-world-20250226.html>

surveillance or forensic tools would NOT help. Especially those using “Z-score” anomalies to flag *spikes*.¹⁰ Small, legitimate trades can look like aggressive manipulation (*price bias*) under traditional rules, leading to a flood of **false positives**.

Shifting away from the current human-reactive monitoring to the Extended Overnight “*wide-west*” with broader LULD price bands and the reliance on fully / semi-automated pre-trade compliance framework is challenging given the additional **blind spots**. Some are attempting to use machine learning models trained specifically on thin-liquidity environments. Instead of relying on rigid, pre-set percentage triggers, these AI systems dynamically adjust to overnight baseline volumes. There is nothing wrong with surveillance systems flagging anomalies like **spoofing** (placing fake orders to manipulate prices), **layering**, and **wash trading** instantly, and automatically freezing suspicious algorithmic patterns before they cascade.

However, to legally prove manipulation, regulators must demonstrate *Scienter* – the explicit intent to deceive or defraud the market. In overnight trading, opportunists could use cross-market and cross-asset structures to create a legal “*alibi*.”

The Loophole: A firm can short a stock aggressively on an overnight ATS while simultaneously holding a massive long or short position in a highly correlated index future or a foreign dual-listed asset in Tokyo or London (Correlated Index Futures Arbitrage, Cross-Border ADR and Dual-Listing Arbitrage).

The Extended-Hours Application: If the SEC flags the overnight equity dump as an artificial attempt to distort prices, the firm can present their global ledger and claim: “*We were not manipulating that specific stock. We were dynamically rebalancing our macro-correlated risk exposure across multiple time zones while options markets were closed.*” Because the options market is offline, market participants may hedge their positions using unconventional equity sweeps.

In a low-participation window, an algorithm might rapidly input and cancel thousands of limit orders to test the depth of the remaining market makers. While this mimics the mechanics of quote stuffing or layering, the firm can legally argue they were conducting “*price discovery*” or “*algorithmic probing*” to gauge overnight execution slippage. Unless the regulator has internal communications explicitly stating an intent to trick other participants, the trade logs alone are legally ambiguous.

Alerts that do not require an immediate trading halt would be funneled into automated, post-trade forensic queues and the core morning-shift US compliance teams’ priority dashboard of overnight anomalies. Such an approach allows the smaller night crew to focus exclusively on critical, live emergencies. We doubt the effectiveness of post-trade forensic batches. While automation fills the headcount gap, it creates an operational risk: **algorithmic synchronization**.

If multiple brokerages utilize similar automated risk-mitigation software, a sudden price drop from an overnight corporate announcement could cause all automated surveillance systems to *simultaneously trigger risk-reduction algorithms*. Without human market makers present to manually inject liquidity and evaluate the nuance of the news, these automated systems risk triggering a **self-reinforcing downward spiral** or an unnecessary market-wide halt.

Instead of trying to prove “*intent*” under complex manipulation statutes, regulators are increasingly enforcing pre-trade algorithmic compliance rules (like SEC Rule 15c3-5, the Market Access Rule). SEC Rule 15c3-5, a.k.a. Market Access Rule, was enacted to eliminate “*naked*” or unfiltered market access. Passing every order through a set of **hard-coded, automated pre-trade risk checks** under the broker’s direct and exclusive control for things like “*fat-finger*”, or blocking short-sales on stocks that breached Reg. SHO circuit breakers and following regulatory and compliance halts deem applicable for both day and night hours. Yet, the “*dynamic multipliers*” that shrinks credit thresholds by 50% or more for

¹⁰ <https://arxiv.org/pdf/2308.08683>

overnight adjustment is generating a controversy. Also, what constitutes relevant **price caps** for different tickers during night hours could be **subjective**.

Major Wall Street firms are not keeping their primary New York compliance teams awake all night. Instead, they are routing overnight surveillance to **overseas subsidiaries and affiliates** in time zones like London, Singapore, Tokyo, and Sydney. When the US market enters its overnight session, a fully staffed, daylight-operating compliance desk in Asia or Europe takes over monitoring duties. However, if a broker routes overnight orders to an overseas subsidiary or uses a “*follow-the-sun*” compliance model across global desks, **Rule 15c3-5** prohibits outsourcing the ultimate risk.

The primary US broker’s internal automated surveillance systems must ingest real-time drop-copies of all overnight executions instantly, constantly calculating aggregate, firm-wide capital exposure to prevent a systemic clearing failure before morning settlement begins. We are skeptical whether the existing internal automated surveillance used by overnight brokers are effective. “**Direct Retail Clearing Model**” **conflated the legal boundaries between clients and counterparties**.¹¹

Allowing market surveillance and volatility interruptions to function as two completely separate silos is a fatal defense weakness.¹² The ONLY effective ways to identify suspicious activities and deter bad actors and foreign adversaries are:

- (1) Continuously capturing “*triggers*” – a subset of an irregular pattern, captured throughout the day via Agentic AI and use targeted search of the next onset signal + reinforcement learning loops for TPU verification (including reverse engineering of portfolio compression to gauge where risks may shift). See pages 52-59 in Annex 2 of our June 22 comment letter on the Consolidated Audit Trail (CAT);¹³
- (2) To prevent predatory algorithms from manipulating **funding intervals** calculations during low-liquidity overnight windows, the system architecture requires blending TWAP and VWAP over a continuous rolling window, filter out extreme outlier price spikes, and cross-check cash prices against CME Globex index futures to override anomalous macro drifts. This ensures benchmark integrity until deep institutional liquidity returns to primary exchanges during normal market hours.
- (3) Develop mitigation protocols with more effective and timely **volatility interruption mechanisms**.¹⁴ In a leveraged margin account, a stop-loss order filling at a severely distorted price at 2 am ET can instantly trigger a secondary systemic liquidation by the broker’s automated risk engine. The moment the stop-loss order locks into that catastrophic slippage, the automated engine steps in and forcibly liquidates the client’s other unrelated positions at whatever thin overnight prices are available to cure the margin deficit. Thus, regulators should **ban stop-market orders overnight** and impose a 20% **Overnight LULD Cushion**; and
- (4) **22x6 Fedwire Expansion**: The Fed has officially announced that beginning no earlier than 2028, it will expand the operating days of both the Fedwire Funds Service and the National Settlement Service (NSS) to run 22 hours a day, 6

¹¹ https://www.databoiler.com/index_htm_files/DataBoiler%20CFRC%20ReportEC%2020260731.pdf

¹² <https://www.outtengolden.com/newsroom/the-secs-enforcement-agenda-defined-market-manipulation/> ; <https://www.steel-eye.com/news/why-surveillance-and-sanctions-must-align-in-volatile-markets>

¹³ https://www.databoiler.com/index_htm_files/DataBoiler%20SEC%20CAT%2020260622.pdf

¹⁴ **NOTE:** Volatility interruption mechanisms (e.g., replacing Single-Stock Circuit Breakers with the LULD Mechanism; overhauling Market-Wide Circuit Breakers; banning Stub Quotes and regulating Market Maker obligations; standardizing “*Clearly Erroneous*” trade executions) were piloted or implemented before the Congress’ CAT mandate in 2012. The subsequent transitioning from “pilots” to **permanent laws** was a natural progression. Credits should be given to **Reg. SCI** that mandates all major proprietary trading firms and broker-dealers to participate in at least one coordinated cross-market Level 1 and Level 2 circuit breaker test per year.

days a week.¹⁵ By extending the Fedwire's operating window closer to an “*always-on*” state, the central bank aims to provide a direct wholesale backbone. This allows commercial clearing banks to move final, risk-free settlement cash in lockstep with the extended-hours trading platforms. In turn, it significantly reduces multi-hour private credit gaps.

5. *What liquidity conditions should be expected during overnight or low participation windows?*

Rather than standardizing market conditions, continuous trading bifurcates the financial landscape into deep daytime cycles and highly volatile overnight windows. Instead of adding a smooth, continuous layer of volume, 24/7 trading creates a **highly unequal, two-tiered liquidity environment**:

Daytime Core versus Overnight Void: Roughly 90% to 95% of institutional trading volume will remain anchored to the traditional 9:30 am to 4:00 pm ET regular session. Large asset managers operate under strict mandates to trade only when markets are the thickest to minimize execution slippage – **Market-on-Close Algorithmic Hooks**.

The Overnight Paradox: While the total volume traded at 2 am ET is very low, the *volatility risk of order bursts* is extremely high. Because the order books are so thin, a relatively small retail or international institutional order can easily clear out the available bids, creating deep “**liquidity holes**” where prices skip violently from tier to tier before snapping back.

Inter-Venue Fragmentation: Because lit exchanges and private ATSs operate separate matching engines overnight, liquidity is siloed – the **Fragmentation Problem**. An investor may find no buyers for a stock on one platform while active trading is occurring at a completely different price on another.

Bid-ask spreads will change drastically depending on the clock. During regular hours, intense competition keeps spreads on large-cap stocks at just \$0.01. Overnight, because the options markets are completely closed (see [Annex 1](#)), market makers cannot buy puts or calls to hedge their directional equity risk. To compensate for this unhedged risk, they automatically widen their spreads (e.g., from \$0.01 to \$0.25 or \$0.50). Overnight quote engines will utilize predictive “*inventory skewing*.” If a market maker accumulates an unwanted long position overnight, they will automatically lower both their bid and ask quotes to discourage further buying and aggressively clear out their inventory, causing localized price distortions.

HFTs view overnight spread widening not as a lack of efficiency, but as an incredibly lucrative, high-margin trading environment. Because traditional market makers stand down or widen their quotes to protect themselves, HFTs use advanced hardware and statistical modeling to capture these wide spreads while minimizing risk.

Spread Harvesting: The HFT's server acts as a pseudo-market maker, placing a buy order at the wide bid (e.g., \$100.00) and a sell order at the wide ask (e.g., \$100.30). When a retail investor places a limit order that fills against the HFT's quote, the HFT instantly captures a \$0.30 arbitrage premium – 30 times their typical daytime margin per share.

Instant Cross-Border Hedging: given equity options markets are closed overnight, HFTs overcome this limitation by using cross-border, cross-asset latency pipelines. The microsecond an HFT is forced to buy a stock at 2 am on a US ATS, its algorithm does not wait to find a matching buyer in New York. For the hedge, HFT instantly short-sells a highly liquid, 23-hour E-Mini index future on the CME, or a highly correlated dual-listed asset or ADR on the Tokyo Stock Exchange or London Stock Exchange to offload the directional market risk to an open global market.

Exploiting Retail Slippage via Latency Arbitrage: If a retail broker's pricing engine updates its customer dashboard slightly slower than an exchange's direct proprietary feed during thin hours, HFTs exploit this gap. They buy shares at the stale, pre-news price on the slower retail platform and instantly dump them onto a faster institutional venue, capturing a risk-

¹⁵ <https://www.frb services.org/news/communications/100925-fedwire-nss-expand-operating-days>

free profit derived directly from the widened spread and retail execution slippage. In turn, retail investors trading during extended hours will face a built-in transaction premium – the “**Illiquidity Tax**.” Because market makers must absorb overnight inventory without a derivatives safety net, they pass the insurance cost directly to the trader via wider quotes.

Single-Dealer Platforms (SDPs) Take Center Stage

In a 24-hour market, the lack of a derivatives options market means market makers cannot buy puts or calls to hedge their overnight stock inventory. On a **lit exchange**, a market maker’s algorithm must display its quotes to the entire world, leaving them highly vulnerable to predatory HFT firms. To protect themselves, wholesale market makers will route the vast majority of their overnight liquidity through their own SDPs.

- **Selective Liquidity Provision:** Unlike a lit exchange, an SDP allows a market maker to pick and choose who they trade with. They can use private APIs to stream tight quotes exclusively to “*non-toxic*” retail brokerages while completely shutting out predatory HFT algorithms.
- **The Custom Pricing Power:** Because the OBBO is highly fragmented or empty at 3 am ET, SDPs are free to decouple from traditional pricing. They can quote unique, proprietary prices backed by their massive corporate balance sheets, effectively acting as private central clearinghouses during the night. Again, this **conflates clients with counterparties**, heightening potential **conflict of interest** that regulators should scrutinize.

Dark Pools become “Semi-Lit” Aggregators

We foresee dark pools will evolve from a tool for quiet institutional block trading into a vital infrastructure web for retail order aggregation. Retail brokers who support fractional share orders overnight (like CMC Markets) will rely heavily on dark pools and internal crossing networks to match buyers and sellers within their own user bases.

Because dark pools must report their trades to the FINRA TRF within 10 seconds, these platforms will technically provide the only real price discovery for the rest of the market during inactive hours. The consolidated tape overnight market data feed will be almost entirely composed of dark pool prints rather than lit exchange executions.

A deliberate two-tier framework sustains Lit Exchanges by day, but no such expectation exists at night

The structural mechanics that make lit exchanges great during the day – equal access, transparent books with tight spread and constantly refreshing NBBO enforced by order protection rules,¹⁶ and automatic volatility halts – make them look less appealing overnight. Because an exchange cannot discriminate against toxic flow, any market maker posting a quote on a public lit book at 2 am must assume they are about to get picked off by a faster algorithm. To protect themselves, they will quote highly punitive, artificially wide spreads on lit exchanges off hours.

If an aggressive algorithm sweeps a thin lit book, it can pin a stock to its 20% overnight limit boundary quickly - the “**Phantom**” **Halt loophole**. This locks the exchange engine into a state where it automatically rejects further orders. Consequently, savvy trading desks will avoid lit exchanges overnight and treat them as a “*venue of last resort*” – only routing orders to them if private dark pools and SDPs are unable to fill them.

In an always-on market, different SDPs and internalizing dark pools create their own closed-loop “**Echo Chambers**”. Because they are not bound by a tightly synchronized public price during thin overnight hours, they construct their own “*truths*” using proprietary pricing models. Because the lit exchanges have little transactions overnight, its spreads widen even further, making it an even less attractive destination. This pushes participants into private bilateral agreements, starving the public market of the very data it needs to calculate a reliable price.

¹⁶ https://www.databoiler.com/index_html_files/DataBoiler%20SEC%20OPR%2020260817.pdf

A deliberate two-tier framework as [discussed earlier](#) preserves the core daytime trading at lit exchanges. One needs not worry that everything will move to bilateral trading, we still need lit exchange marketplaces, because bilateral trading cannot survive without a centralized, lit marketplace to act as its mathematical anchor. Dark pools Internalizers and HFTs are NOT necessarily “*free-riders*” of price discovery. To some extent, they are a counter force against initial bias¹⁷ and rent seeking behaviors of the exchanges, if they pass payments for order flow and other rebates back to end-investors.

Nevertheless, when two parties trade bilaterally at 3 am ET, they are exposed to counterparty credit risk. Centralized public markets solve this by routing all transactions through NSCC or DTCC. The clearinghouse acts as the buyer to every seller and the seller to every buyer, guaranteeing settlement even during catastrophic failures. Without the centralized clearing framework backing the ecosystem, bilateral trading networks would freeze up the moment a major global credit scare occurred.

The verdict is – fragmentation can only run for so long before 9:30 am ET. Lit exchanges open their doors, pooling millions of global buyers and sellers into a single centralized auction block. This daytime core instantly crushes the overnight echo chambers, resets the fragmented private prices back to a tight and constantly refreshing NBBO, and provides the essential baseline that allows the private bilateral networks to spin out and trade in the dark all over again the following night.

6. *What investor protection practices must be adapted for overnight and continuous trading?*

Explicit extended-hours risk disclosures detailing the risks of wider spreads and lower liquidity should be a mandatory requirement. Also, trading platforms should systematically deactivate standard “*Stop-Market*” and “*Market Orders*” overnight. Encouraging the use of “*Limit Orders*” or strict “*Stop-Limit Orders*” and embedding relevant **price caps** to prevent orders from executing into deep “*liquidity holes*” are the responsible things to do. Nevertheless, off-exchange Internalizers and SDPs matching trades in the dark must match or beat the active public overnight quotes, preventing predatory broker pricing.

If the Order Protection Rule is rescinded, thin overnight volume will fracture across unlinked venues, widening spreads and causing erratic mini-flash crashes. Choosing the Venue Trading Volume Threshold alternative avoids this by funneling 23x5 order flow into protected core exchanges, keeping the overnight public NBBO tight.

While crypto venues capture retail volume with 24/7 liquidity, integrating Time-Lock Encryption (TLE) creates a synchronized starting line. This neutralizes predatory front-running, offering global developers a level of trading integrity that crypto cannot match. Running this engine through a centralized clearinghouse also allows institutions to cross-margin 23x5 equities against deep derivatives and Treasury books, lowering capital costs and enhancing pricing efficiency.

Furthermore, a regulated, price-protected US core tape is superior to a foreign tokenized clone prone to sudden sovereign capital controls. This threshold model claws back \$10+ billion annually from traditional exchange data monopolies and toxic rebate games, redirecting those funds into performance royalties for content creators. Instead of fleeing overseas, global capital will be attracted to the US market because it champions intellectual property protection and provides unmatched recurring royalty streams.

¹⁷ Without [TLE](#) to make market data available securely in synchronized time, it causes “*initial bias*” that exacerbates the gap between subscribers of proprietary feeds and the public consolidated tape. NYSE’s rooftop antenna service is a [controversy](#), it is used by high frequency trading (HFT) firms such as Virtu, as well as McKay Brothers and its sister company Quincy Data that advocate for “*level the playing field*.” NASDAQ’s [equalization project](#) in removing its GPS antenna may ease conflicts among subscribers of collocation service. Yet, a directive like China banning HFTs from using client-dedicated servers co-located within exchange data center, it merely pushes the latency arms race to the nearest neighborhood. We criticize the SEC for not going far enough with the [latency requirement](#) (same manner and using the same methods) in Market Data Infrastructure Rules. Not until a mandate of [market data available securely in synchronized time](#) and the questions of [who owns the data](#) being addressed, inequitable situations would remain.

B. Resiliency in a 24-Hour Market

1. *How will market data continuity be ensured across overnight hours?*

The SEC has approved joint NMS amendments authorizing the Securities Information Processor (SIP) to stream data during extended night hours. However, to ensure uninterrupted market data continuity across overnight hours, the industry cannot rely on the traditional daytime data setup. Continuous market data streaming is being systematically structured across four operational fronts:

1. **Dual-Tape Bifurcation:** key market data vendors (Bloomberg and Refinitiv) isolate the core session (9:30 am – 4 pm ET). For newly authorized 9 pm to 4 am ET Night Session, data is published on an isolated extended-hours lane. *Extended Session High/Low* metrics however it is blocked from corrupting the official historical daily chart.
2. **The 1-Hour Synchronized “Data Purge” Pause:** from 8 pm to 9 pm ET, the SIP and TRFs enter a synchronized disconnect. All exchanges drop their data connections simultaneously, allowing the central processors to clear memory caches, run diagnostic system loops, and programmatically advance the logical Trade Date metadata to the next business day before restarting at 9pm ET.
3. **Exegy’s Overnight Best Bid and Offer (OBBO) Feeds as Backups:** We are not against private-public partnerships. The CTA (CQ/CTS) and UTP SIP lines feature state-of-the-art active hot-hot redundancy. We acknowledge that the SIP is legally prohibited from aggregating non-exchange ATS quotes overnight.

Yet, this operational toggle creates a perverse incentive. **Exchanges and market makers are disincentivized from funding rapid public SIP upgrades** because every delay or limitation on the public tape drives high-paying institutional clients away from the public utility and directly into Exegy’s Axiom platform. This shift leaves retail investors relying on a rigid public tape that struggles to capture overnight price discovery, while institutional players execute trades using optimized, private data ledgers.

4. **Mandatory 64-Bit Integer Infrastructure Upgrades:** running a 23-hour continuous session generates such massive, uninterrupted quoting volume that 32-bit fields would hit their maximum integer boundary (~4.29 billion messages) and overflow mid-session, completely crashing the feed. Major exchanges and FINRA TRFs have already transitioned their core internal protocols to 64-bit integer fields. The remaining “*not yet 64-bit*” or 32-bit dependent areas are concentrated in specific downstream connections, localized message fields, and specialized boutique platforms. Exchanges running translation gateways that truncate 64-bit tracking tags into 32-bit alphanumeric string buffers to accommodate broker-side order management systems that still parse certain localized parameters using 32-bit.¹⁸ We foresee niche segments of the OTC reporting facility or localized fixed-income tracking branches (like legacy TRACE sub-stamps for thin asset classes) that still rely on 32-bit sequence architectures would have little to no risk of running into sequence number exhaustion within a standard daylight window, given these systems undergo a hard-reset every single evening at 6:30 pm ET.

Some smaller broker-internalized dark pools still maintain 32-bit logic within their matching core memory layers. If these private venues intend to route data or print trades to the TRFs during extended hours, they are facing an impending technical cliff to upgrade their systems before the December 2026 deadline.¹⁹

An upstream bottleneck – ticker plant readiness directly determines if the December 6, 2026 industry-wide launch date for 23-hour trading is doable. Ticker plants cannot logically stream data forever without crashing due to data bloat. They

¹⁸ <https://www.utpplan.com/DOC/UtpBinaryOutputSpec.pdf>

¹⁹ <https://www.b2bits.com/insights/fixconnect247>

require a structural period to clear internal caches, test disaster recovery loops, and reset software. To handle maintenance, the ticker plants will implement a synchronized, mandatory one-hour daily pause from 8 pm to 9 pm ET (Monday through Thursday). During this exact hour, all exchange data feeds will disconnect simultaneously so ticker plants can perform rapid-fire systemic refreshes before the 9 pm session open.

In an uninterrupted 23-hour market, high-frequency quoting traffic will cause traditional 32-bit tracking numbers to overflow (exceeding the maximum ~4.29 billion limit) mid-session, which would freeze or crash downstream data processors. Given that ticker plants are forcing an industry-wide transition to 64-bit integer tracking fields and new binary message formats across direct proprietary feeds (such as Nasdaq TotalView and NYSE Integrated Feed), the SIP needs corresponding upgrading of data format to prevent sequence bloat and avoid mid-day rollover freezes.

We are thankful that ticker plants at major exchanges have been reconfigured to programmatically roll the trade date forward at **8:00 pm ET**. Any transaction executed during the overnight session starting at 9:00 PM is automatically tagged on the outbound data feed with the following business day's timestamp. A trade at 9:30 pm on Monday night is immediately published to the tape as a Tuesday trade. This makes the job for SIP much easier, given SIP is fundamentally a pass-through entity.

As long as the Commissions and SROs can clearly define:

- how the SIP should calculate the National Best Bid and Offer (NBBO) and the **Overnight BBO** (OBBO) reference prices;
- how they would like the SIP to send regulatory message concerning multi-exchange LULD volatility lock enforcement;

The SIP, as a consolidated tape provider, should have no problem following standard protocols to run their bare-metal system to handle situations, such as:

- dynamically isolate a venue that is lagging or experiencing an overnight system glitch, adjust the NBBO / OBBO calculation on the fly, and ensure that stale overnight quotes do not corrupt the public tape; and
- when a ticker enters a core daytime or overnight LULD state and the SIP receives an incoming price spike from one of the exchanges, the SIP computes the universal price band – outside of which no trades are allowed to happen, and blasts an administrative lock packet out to all other active ticker plants to freeze the boundaries market-wide.

To address scenario where a live data center failover or database synchronization gap at overnight hour, FINRA/Nasdaq TRF Carteret, FINRA/Nasdaq TRF Chicago, and FINRA/NYSE TRF – collectively referred as FINRA TRFs, already put together a series of improvements, such as a structured daily **1-hour maintenance pause** that matches with the exchanges, and dual-hub **active-active hot routing**.

When the SIP flashes an overnight administrative halt message upon instruction, it legally freezes trading for that specific ticker. However, a dark pool might match an order at 2:05:01 AM. At 2:05:02 AM, the primary exchange instructs the SIP to blast a regulatory halt. Dark pools' trade print might hit the TRF after the SIP has already broadcasted the halt to the public. The SIP ticker plant is forced to log an *"Out-of-Sequence"* trade execution during a live regulatory freeze.

To protect firms from the strict 10-second reporting penalties when a system rollover or outage occurs, FINRA provides a built-in reporting buffer. If an OTC transaction is executed while the TRFs are experiencing an infrastructure rollover or are closed during the 8 pm – 9 pm pause, the 10-second clock is legally suspended. The executing broker-dealer is permitted to queue those trades internally. The moment the TRF data center completes its rollover and restarts at 9:00 PM, the firm's ticker plant must flush its accumulated queue into the TRF within **15 minutes of the system reopening**. This prevents a localized data center transition from creating artificial trade reporting errors on the public tape.

The SIP infrastructure is moving to a near-continuous operating model, compressing its entire physical infrastructure data-purge down to a **synchronized 1-hour window**. The modernization of SIP to comply with Market Data Infrastructure Rules (MDIR) is being rolled out in staggered phases²⁰—extended-hours synchronization is set for the December 6, 2026 implementation. Data continuity is achieved through strict transmission boundaries and private aggregation fallbacks. SIP can use “*follow-the-sun-staffing*” to leverage overseas personnels for their regulatory and operational desks to avoid the operational strain of a domestic night-shift.

Downstream readiness is the remaining challenge for market data continuity. Among subscribers of SIP feeds – including legacy accounting networks, retail brokerages, and retail charting sites, many of whose internal ticker plants are incapable of processing 23-hour data streams. The SIP is in no position to ask downstream vendors/ broker gateways to eliminate legacy 32-bit translations and migrate to native 64-bit string tracking. If SEC wants the SIP to manage technical formatting for backward-compatibility, ensuring that pushing out extended-hours data packets does not systematically crash the 32 bit ticker plants of downstream parties, who would bear those extra costs of making it backward compatible?

2. *Are systems ready for continuous operation without traditional overnight maintenance windows?*

Legacy monolithic architectures are highly vulnerable without a nightly reset window. To survive continuous operations, peripheral financial systems are transitioning to a cloud-native, microservices-based containerized architecture. Database infrastructure is moving away from offline midnight backups to Change Data Capture (CDC) and continuous active-active replication, allowing systems to run diagnostic loops, manage database storage, and deploy code updates without dropping active network connections.

In traditional markets, trade log and sequence numbers reset at end-of-day. Without a night window, letting sequence numbers run infinitely leads to data bloat and integer overflows. Systems are implementing **state-machine replication and versioned session protocols**.²¹ The arbitrary cutoff is at exactly 8 pm ET, the logging software cuts off the day’s record and routes any trade executed at 8:00:01 pm ET into the next business day’s settlement bucket in real-time, all while the primary engine is actively matching orders.

On a separate note, rigid database schemas are only for the most essential time-sensitive machine-read low-latency data. Non-time sensitive data (tolerable to 100 milliseconds) should be layered, parsed and use a semantic database to pull relevant contents on demand. Unlimited desires in wanting “*everything everywhere all at once*” to everyone is impractical.

Regarding reconciliations and position ingestion, middle-office software would need a complete overhaul or be rewritten to use event-driven, real-time message streaming queues. Instead of a compliance team reviewing a list of trade discrepancies the next morning, brokers should deploy Robotic Process Automation (RPA) exception engines. If an international trade mismatch or a data desynchronization occurs at 3 am ET, the RPA engine isolates, flags, and attempts to auto-reconcile the error instantly to prevent overnight position exposure from locking up clearing lines.

3. *How should Regulation Systems Compliance and Integrity (SCI) obligations be adapted for 24-hour uptime?*

Reg SCI should shift from day-based recovery targets to continuous, multi-region geographic survival. The legacy standard mandating “*next business day resumption of trading*” ought to be updated to demand failovers across decoupled nodes in less than 2 minutes if not instantly or sub-second. Also, manual human escalation workflows may be replaced with automated API alerts that securely transmit initial incident logs to the SEC the microsecond a matching engine queue or

²⁰ SIP is already capable to dynamically assigns round lot sizes (100, 40, 10, or 1 share) every six months based on a stock’s average closing price. Also, the SIP feed actively streams the best odd-lot bid and offer (BOLO), amid depth-of-book, tick-size and access fee alignment are delayed or under temporary exemptive relief.

²¹ <https://weareadaptive.com/trading-resources/24-7-sequencer-architectures-capital-markets/>

price collar lags overnight. Nevertheless, we encourage the use of “*Thin Market Liquidity Shock Simulations*” to stress test and ensure **ticker plants** can ingest algorithmic quote bursts during low-volume hours.

4. *What failover, redundancy, and capacity-planning changes are needed for nonstop markets?*

The traditional “*Primary versus Backup*” data center paradigm is obsolete. Non-stop markets demand a stateless, **active-active** infrastructure. To prevent synchronization gaps or “*split-brain*” states (where Node A thinks a stock sold at \$100 but Node B thinks it sold at \$101), matching engines must utilize ultra-low-latency *distributed consensus* algorithms. Every microscopic state change – every entry, fill, or cancellation – is confirmed by a majority of the active nodes before an execution confirmation is blasted back to the participant.

Under a continuous 24/7 or 23/5 model, background systems are shifting to a zero-downtime, immutable, and cloud-native architecture, except collocation would still persist. If Region A suffers a catastrophic power or network failure, co-located algorithms and broker routers do not wait for an exchange operator to manually declare a disaster. The network protocols automatically drop the dead TCP/IP session. Traffic is seamlessly shunted away from one cluster to another at the microsecond level, allowing updates without dropping a single active network connection.

Capacity models must be engineered to handle a peak-to-average quoting multiplier of 50x to 100x overnight, using Field Programmable Gate Array (FPGA) network cards to enforce hardware-level rate limiting to drop malicious packet bursts at the physical port layer. System upgrades and security hot-fixes should avoid dropping a single active network connection.

5. *What cybersecurity risks increase when systems run continuously, and how should they be mitigated?*

Continuous uptime permanently removes the overnight maintenance window, converting the infrastructure into an always-on, high-velocity target. Threat actors target transient, in-flight rolling reboots to bypass security perimeters. Hackers weaponize overnight algorithmic DDoS quote-stuffing to crash ticker plants. They may time Advanced Persistent Threat (APT) injections for 2 am ET to exploit smaller nighttime security teams.

In the past, critical OS patches, firewall updates, and security software upgrades were scheduled for 2 am ET on a Tuesday. In an unaligned always-on market, taking a system offline for 20 minutes to patch a critical security flaw creates an unhedged operational risk.²² Thus, infrastructure is encouraged to move away from monolithic physical servers into cloud-native, microservice-based containerization. When a security patch is deployed, it is pushed out as a “*Canary*” or rolling restart across individual microservices. The patch goes live on 1% of the exchange’s execution gateways at a time. If any latency anomaly or dropped network packet is detected, the gateway is automatically isolated and rolled back, while the remaining 99% of the system handles the continuous market load uninterrupted.

To prevent overnight quoting blasts or algorithmic DDoS attempts from destabilizing matching engines, security controls must be pushed to the outermost edge of the network – the physical hardware layer. If an incoming connection at 3 am ET spikes past strict pre-set message-per-second capacities, the FPGA chip instantly drops the malicious network packets at the physical network port layer. This network-level isolation protects the central matching engine’s CPU and memory capacity from bottlenecking without requiring software-level processing intervention.

Last but not least, because human escalation channels are inherently slower during overnight hours, firms cannot rely on a manual ticket-triage process to stop an active cyber intrusion. Security operations must deploy advanced, AI-driven **SOAR (Security Orchestration, Automation, and Response) platforms** to instantly *isolate compromised network segments*, *revoke the hijacked API credentials*, and shunts clean live order flow to a synchronized active-active backup node in sub-milliseconds – neutralizing the attack overnight, *without shutting down the market*.

²² <https://www.energysys.com/cloud-platform/maintenance-windows-vs-zero-downtime-deployments/>

C. Other Remarks and Next Steps

1. Capital Formation and how Public Companies would alter Public Disclosure schedules

For decades, public companies intentionally released quarterly earnings or major merger headlines after 4:00 PM or before 9:30 AM. This gave the market hours to read the financial notes, let analysts write reports, and establish a balanced consensus before trading resumed. The advent of 24/7-matching-engines destroys the historic “[Earnings Announcement Buffer](#).” In a 24/7 market, dropping news at 2 am ET means the headline hits an illiquid, highly volatile, algorithmically dominated book.

To protect their stock from extreme, artificial overnight manipulation, public companies will alter their investor relations and disclosure protocols. Corporations are working with listing exchanges to coordinate structural [corporate-sponsored trading halts](#). If a company plans to release earnings during extended hours, their legal team must notify the exchange’s Market Operations desk at least 10 to 15 minutes prior to publication. The exchange then issues an administrative halt packet via the SIP, freezing overnight trading globally across all platforms before the press release hits the wire, mimicking the daytime regulatory news-dissemination halt protocol.

Corporate news that drops directly onto a live, running matching engine, will cause extreme, instantaneous price shocks in an illiquid overnight book. To find a safe haven, companies would alter their timing to make use of the newly mandated 8 pm to 9 pm ET synchronized daily pause. By hard-coding their press wires to release exactly at 8:05 pm ET, executives ensure that the data hits public channels while the central SIP plant, TRFs, and primary exchange matching engines are completely offline for maintenance. This gives automated trading desks and human portfolio managers 55 minutes to read the earnings notes and recalibrate their risk profiles before the market reopens for the next business day’s session at 9 pm ET.

Complex corporate actions, such as stock splits and ex-dividend adjustments, must be executed “[in-flight](#)” while the order book is live. Exchange matching engines must use automated software multipliers to recalculate resting limit orders on the fly without dropping network packets or pausing the queue.

While secondary market trading runs 24/7, primary capital raising (Initial Public Offerings and massive secondary block additions) will still rely on daytime pricing. Investment banks require deep institutional banking rails to underwrite and clear multi-billion-dollar stock allocations, which cannot legally settle outside standard central bank operating hours.

2. What opportunities and challenges arise from expanding access to round the clock trading?

Opportunities	Challenges
Instantaneous Global Price Discovery : Investors react to macro shocks instantly, eliminating overnight position gap risk.	The “Illiquidity Tax” : Retail capital faces high slippage and punitive, widely expanded overnight bounds.
Increased Global Retail Engagement : Captures non-traditional international daytime capital within U.S. ecosystems.	Credit Timing Asymmetries : Trading while central bank cash rails are offline forces aggressive account closures.
Premium Revenue for Market Makers : Allows HFT desks to harvest highly lucrative overnight spread cushions.	Transmission Belt for Volatility : Uninterrupted asset links instantly spread night shocks across global asset classes.

The “Blind Weekend” Data Gap and Central Bank Mismatch

Because trading venues match transactions over the weekend while central bank wholesale payment rails (Fedwire, NSS) are completely offline, clearinghouses are exposed to an uncollateralized credit vacuum. To prevent a “[hidden insolvency](#)”

from breaking the ledger before Monday morning, clearinghouses would require clearing members to lock in **pre-funded weekend cash and Treasury buffers** prior to the Friday afternoon banking close. Simultaneously, clearing networks may integrate with private, 24/7 DLT collateral networks, allowing institutions to legally transfer ownership of tokenized US Treasuries peer-to-peer on a Saturday afternoon to instantly satisfy emergency margin calls without waiting for the Federal Reserve's clock.

Cross-Margining and Product Silos (SEC vs. CFTC)

We encourage the SEC to review the following comment letters, which is relevant and should be read in conjunction with our response here:

- Further Implementation of Portfolio Margining and Cross-Margining of Securities and Derivatives (SEC: File No. S7-2026-23),⁸ dated August 31, 2026.
- Standard Futures Contracts to 24/7 Trading and on Perpetual Contracts Referencing Physically Delivered or Storable Energy Commodities (RIN 3038-AF75),²³ dated August 26, 2026.
- Definition of "Swap" and "Security-Based Swap" and on Alternative Compliance (SEC: File No. S7-2026-21) and related Data Reporting Provisions (SEC: File No. S7-2026-22),²⁴ dated August 24, 2026

To stop an overnight shock from mutating into a systemic contagion, the cash and derivatives matching engines must be tightly bound. The SEC and CFTC should consider enforcing **Overnight Cross-Asset Symmetrical Halts**: if a 23-hour equity index future on CME Globex or a global index option on CBOE triggers an overnight volatility threshold, the system should instantly broadcast automated lock packets to clamp the price corridors of the underlying cash equities concurrently. Furthermore, to eliminate the invisible leverage generated by unregulated, offshore 24/7 Perpetual Swaps, the SEC and CFTC should enforce jurisdictional extraterritoriality, classifying these instruments as unregistered security-based swaps and legally barring US prime brokers from providing the overnight custody or dollar liquidity lines required to back them.

Insulating the Secured Overnight Financing Rate (SOFR)

The SOFR is the bedrock for pricing overnight Treasury repo loans. It must be completely insulated from extended-hours trading defaults. If a broker-dealer suffers a catastrophic algorithmic wipeout at 2 am ET, their resulting clearing freeze must never be allowed to trigger a liquidity gridlock across the Treasury repo desk. The clearinghouse must mandate that all extended-hours transaction risks be cleared out of segregated, pre-funded overnight margin pools. If an institutional default occurs, the clearinghouse seizes this isolated night buffer to absorb the entire shock, ensuring the critical SOFR wholesale funding market remains perfectly stable, resilient, and uncorrupted by night-session anomalies.

3. Macro-Systemic Regulatory Implementation Roadmap

Phase 1: Institutional Integration & Risk Baselining

Target Horizon: September 15, 2026 – December 5, 2026

Finalizing the hardcoded parameters for the continuous Night SIP, embedding optimized sub-100ms automated Self-Help triggers to insulate the network from frozen overnight nodes. Kick-start rulemaking in adopting our cross-margining recommendations – *"Two Accounts, One Margin Link"* via Inter-Account Pledges; a *"Smart Suspension"* connecting an

²³ https://www.databoiler.com/index_html_files/DataBoiler%20CFTC%2024xPP%2020260826.pdf

²⁴ https://www.databoiler.com/index_html_files/DataBoiler%20CFTC%20SEC%2020260824.pdf

SEC/CFTC declared stress condition;²⁵ Realign \$10+ Billion to create a robust Defaulters' Insurance Fund; a Triple-Lock system allows retroactive claw backs; and modernize market monitoring with our 3-Tiers distributed Agentic solution.

Meanwhile, clearing members should post pre-funded weekend cash and Treasury buffers before the Friday afternoon banking close to isolate the system from the "*Blind Weekend*" data gap.

Phase 2: Controlled Asymmetric Pilot & Symmetrical Halts

Target Horizon: December 6, 2026 – June 30, 2027

- **Core 23-Hour Exchange Launch (December 6, 2026):** Activation of public continuous sessions restricted strictly to highly liquid S&P 500 mega-caps and select high-volume ETPs.
- **Bifurcated Two-Tier Tape Deployment:** Launch of separate data reporting channels. This locks overnight and weekend trade prints onto a modified tape, explicitly preventing overnight volatility spikes from overwriting the official 4:00 PM consolidated closing price anchor.
- **CME Globex-CBOE Symmetrical Halts:** Activating automated cross-venue links. If an equity index future or global index option triggers an overnight volatility threshold, the system automatically broadcasts lock packets to clamp the corresponding underlying cash equities simultaneously.
- **Blended TWAP/VWAP Funding Engine Testing:** Deploying rolling lookback calculation matrices and median-outlier filters to insulate overnight funding intervals from tape-painting and predatory micro-burst manipulation.

Phase 3: Macro Leverage & Evasion Audits

Target Horizon: January 1, 2027 – June 30, 2027

- **Monitoring Tokenized Weekend Collateral Rails:** Tracking the efficiency of private, 24/7 DLT ledgers in transferring tokenized U.S. Treasuries to satisfy emergency Saturday clearinghouse margin calls.
- **Extraterritorial Perpetual Swap Audits:** Aggressive monitoring by the SEC's Division of Economic and Risk Analysis and the CFTC should jointly identify unregistered, offshore 100x leveraged perpetual swap networks, preparing legal actions to sever their US prime broker liquidity lines.
- **Off-Exchange Bilateral Volume Tracking:** Assessing the migration rate of overnight volume to ensure private Single-Dealer Platforms are strictly complying with overnight trade-through price rules.

Phase 4: Final Systemic Codification

Target Horizon: July 1, 2027 – December 31, 2027

Formalizing rules that completely ban overnight market-wide halts, replacing them with matching engine price rejections. Also, isolating bad data before it affects morning settlement ledgers should be fully implemented. Overhauling uptime rules to legally support continuous, cloud-native containerization, canary deployments, and in-flight zero-downtime micro-patching. Activating final compliance parameters to eliminate legacy 32-bit translations across downstream broker gateways, achieving native 64-bit string tracking across the entire NMS.

²⁵ This works across the SEC, CFTC, and major CCPs to dynamically adjust risk floors and stiffens margin requirements in milliseconds based on live exchange circuit breakers or LULD bands, mitigating procyclical fire sales without sending a market panic signal. By linking it directly to volatility interruption mechanisms, it creates a powerful, automated framework for managing systemic risk.

4. *Overnight Market is an Incubator to Pilot a Copyright Licensing Mechanism*

The Structural Opportunity of Tier 2 Architecture

As the Commission prepares for the historic shift toward near-continuous equity trading, market architecture faces a fundamental choice: perpetuate legacy, rent-seeking data models that incentivize informational arbitrage, or pioneer a resilient infrastructure that protects domestic intellectual property (IP). The upcoming rollout of the Tier 2 Extended Overnight session represents a ring-fenced sandbox to pilot an automated market data copyright licensing mechanism.

Because the overnight session operates under a distinct, low-volume profile structurally segregated from primary daytime clearing models, the Commission can deploy this pilot program with zero systemic risk to core US financial operations. By embedding encrypted copyright validation logic directly into the overnight data-dissemination and trade-clearing streams, the SEC can test a modern, automated IP paradigm. This framework turns passive public data pipes into a proactive compliance shield, protecting the integrity of the US financial system.

The Technical Rationale for an Overnight Incubator

Implementing real-time IP verification during standard market hours is currently prohibited by the sheer velocity of data. During the Tier 1 Core Daytime session, ticker plants and the SIP ingest and distribute billions of high-frequency messages per second. Injecting complex, real-time cryptographic validation scripts into this live network stream would create computational latency, risk message queueing, and threaten systemic system freezes. The Tier 2 overnight window eliminates these technical constraints through three distinct attributes:

Isolation of Data Bloat: Overnight quoting traffic regularly drops by 90% to 95% relative to daytime baselines. This low-density data environment provides the essential processing headroom required to run real-time tracking engines and validation scripts without compromising execution speeds or introducing latency into matching engines.

Targeting Machine-to-Machine Consumption: The overnight session is populated almost exclusively by HFT algorithms, predictive text-parsers, and single-dealer scrapers. This provides the environment needed to test how effectively copyright controls operate against machine-to-machine data consumption – the primary front of modern corporate IP disputes.

Capitalizing on the 64-Bit NMS Upgrade Mandate: Pursuant to the upcoming December 6, 2026 NMS exchange upgrades, all overnight trading venues are legally required to transition to 64-bit integer tracking fields to prevent sequence number overflows. Because ticker plants are already undergoing code rewrites, the pilot can append encrypted metadata identifiers or digital watermarks into the new 64-bit message strings as they are being deployed across the network.

Core Architecture of the Pilot: Programmatic Ingestion and Verification

The proposed pilot architecture operates seamlessly across the execution lifecycle through two sequential layers:

i. The Metadata Tagging Mandate

Every market data packet broadcast by an exchange ticker plant or print routed through a dark pool's TRF between 9 pm and 4 am ET must be appended with a unique, encrypted Copyright Metadata Tag. This tag technically defines the origin venue, precise millisecond timestamp, and specific intellectual property parameters governing that data point.

ii. Automated API Handshake Verification

When a downstream consumer—such as an alternative data vendor or institutional charting platform—attempts to ingest the live Night SIP feed, their data gateways must execute an automated, sub-millisecond licensing handshake. If the consumer's API key matches authorized parameters (e.g., "internal consumption only; replication barred"), the stream unlocks natively. If an unlicensed entity or automated scraper attempts to access the pipe, the engine triggers an immediate network-level port rejection.



Operational Breakthrough: Clearinghouse-Administered Royalties

The defining structural innovation of this pilot is the relocation of the royalty administration layer away from data vendors and directly into the CCP clearinghouse infrastructure, such as the NSCC. The clearinghouse is already uniquely engineered to calculate, collect, and enforce complex financial obligations across its Clearing Members. The pilot integrates data-rights administration directly into the existing post-trade settlement architecture through four automated steps:

- i.) **In-Flight Royalty Tag Parsing:** When an overnight transaction executes on an ATS or exchange, the execution record is instantly ingested by the NSCC's continuous night-cycle trade capture network. The clearinghouse ingestion gate parses the 64-bit encrypted copyright metadata tags embedded in the order string to instantly identify which vendor's proprietary quote or routing feed was utilized to generate that specific execution.
- ii.) **The Fractional Intellectual Property Surcharge:** The clearinghouse programmatically calculates a fractional, non-negotiable IP surcharge (e.g., a tiny fraction of a cent per share) for every matched trade utilizing copyrighted data. Rather than requiring independent billing systems, the clearinghouse merges this charge straight into the broker's daily Margin Requirement Differential (MRD) or clearinghouse fee sheet.
- iii.) **Automated Industry Netting:** Utilizing its core netting engines, the clearinghouse tracks both sides of the asset and data ledgers throughout the night session.
- iv.) **The 8 pm ET Settlement and Distribution:** At the 8 pm ET logical trade-date changeover, the system aggregates all collected overnight IP surcharges across the entire industry network. It executes a single, synchronized cash pull from the brokers' pre-funded accounts and directly credits the aggregated royalty pool to the respective data creators or exchanges as the morning market cycle commences.

Systematic Enforcement and Resiliency Against Evasion

Rogue algorithmic trading desks or automated SDPs cannot hide from or manipulate the clearinghouse ledger. For any overnight transaction to legally clear and settle under the structural safety of the US Default Waterfall Model, it must pass through the NSCC's trade capture engine. This infrastructure provides regulators with a strict compliance leash. If a broker attempts to default on or manipulate their clearinghouse copyright royalty bill during the night shift, the clearinghouse does not resort to protracted civil litigation. It treats the unpaid royalty exactly like a margin default – exercising its immediate power to freeze the broker's clearing access, lock their pre-funded collateral lines, or trigger an automated default liquidation. This compliance shield supports the NMS run safely 24x7.



Feel free to contact us with any questions and please keep us posted where our expertise might be helpful.

Sincerely,

Kelvin To

Founder and President

Data Boiler Technologies, LLC

This letter is also available at: https://www.DataBoiler.com/index_htm_files/DataBoiler%20SEC%2024H%2020260917.pdf

CC: The Honorable Paul S. Atkins, Chairman
 The Honorable Hester M. Peirce, Commissioner
 The Honorable Mark T. Uyeda, Commissioner
 Mr. Jamie Selway, Director of the Division of Trading and Markets
 Mr. Jon Kroeper, Deputy Director, Division of Trading and Markets
 Ms. Peggy Sullivan, Senior Policy Advisor, Division of Trading and Markets
 Mr. Dan Mathisson, Senior Advisor, Office of Analytics and Research
 Mr. Patrick Norton, Policy Advisor, Division of Trading and Markets

ANNEX 1 – Controversy of Options IRC: Mechanical Righteousness vs Market Liquidity

The Options Clearing Corporation (TOCC) currently clears overnight trades, but only for select index derivatives (e.g., SPX and VIX options) that trade on CBOE's Global Trading Hours (GTH) from 8:15 pm to 9:25 am ET. TOCC requires clearing members to post an additional margin requirement – pre-fund the lesser of \$10 million or 10% of their net capital just to qualify for the overnight session, which is much stricter than NSCC.²⁶

For single stocks, true 24-hour options trading does not exist yet. To accommodate the SEC's newly approved rule allowing CBOE Options Exchange to offer early morning GTH (7:30 am to 9:25 am ET) and afternoon Curb sessions (4pm to 4:15 pm ET) for select liquid equity option,²⁷ TOCC applies its 10%/\$10M capital pre-funding buffer to these newly expanded morning windows to cover the banking gap. This pre-funding requirements that clearing firms lock up overnight would drain much daily capital, particularly for smaller market makers. Unlike equities, TOCC's System for Theoretical Analysis and Numerical Simulations (STANS) requires intense **end-of-day calculations** to joint behavior of risk factors.²⁸ The industry is still negotiating how to have a 1-to-2-hour(s) nightly downtime window to anchor risk analytics.

The clearinghouse and industry's disagreement is driven by the explosive growth of Zero Days to Expiration (ODTE) options – which now account for roughly 60% of the S&P500 options market – exposed a blind spot in legacy clearing mechanics.²⁹ Because ODTE options are minted, traded, and expire completely within a single trading day, billions of dollars in risk vanished before the end-of-day STANS calculations could even capture them. If a major intraday market spike wiped out a broker's retail clients at 1:00 PM, TOCC was exposed to systemic credit risk without having collected any money in collateral to cover it.³⁰ High capital *concentration* can move prices faster than official news **disclosures**, especially in "*thin*" markets during **Extended Overnight hours** with *low liquidity*.

To capture fleeting intraday exposures, TOCC instituted an Intraday Risk Charge (IRC).³¹ By forcing clearing members to backstop ODTE options risk on an hourly basis, the OCC effectively pushed the entire brokerage ecosystem into a **real-time ledger system**. It is a catalyst for the SEC and FINRA to **abolish the Pattern Day Trader (PDT) designation and its \$25,000 minimum equity requirement**.³² Risk-Based Floor is replaced by dynamic **Intraday Margin Level (IML)** calculations.

IRC aims to insulate the financial system from a catastrophic ODTE default. Mandating a strict 25% minimum maintenance margin may be a straight forward approach to align with a clearinghouse's actual intraday exposure. However, this structurally shifted the immense capital-funding burden directly onto the balance sheets of clearing brokers. Maintaining an intolerable "*buffer*" to shelter mechanical righteousness, it undermines the need of lubrication (flexibility) for any well-running systems. SIFMA and broker-dealers pushed back, arguing that IRC strains market liquidity during periods of high

²⁶ <https://www.theocc.com/getcontentasset/a0af3374-e838-484e-a09e-969a8f34bee9/dfc3d011-8f63-43f6-9ed8-4b444333a1d0/occ-considerations-continuous-trading-final.pdf>

²⁷ <https://ir.cboe.com/news/news-details/2026/Cboe-Receives-SEC-Approval-to-Offer-Extended-Trading-Hours-for-Select-Multi-Listed-Single-Stock-Options/default.aspx>

²⁸ <https://www.theocc.com/risk-management/margin-methodology>

²⁹ <https://blog.roundhillinvestments.com/the-next-generation-of-income>

³⁰ Unlike securities markets defined by continuous **price discovery**, trading in Prediction Markets function as short-lived exposures to the "*cause*" while ODTE Options and Securities Based Swap (SBS) provide exposure to the "*effect*." The **decoupling of Event and Price Risk** is the growing trend for simultaneous hedging strategies. However, decoupled risks introduce noise. A price shift often happens in response to [alternate data](#) rather than internal trade mechanics. A gradual deterioration of odds (*chronic*) and sudden anomalies (*acute*) caused by *misinformation campaigns* or the use of Material Non-Public Information (MNPI) are not easily distinguishable even after the fact.

³¹ <https://infomemo.theocc.com/infomemos?number=56867>

³² <https://docs.alpaca.markets/us/docs/understanding-finras-new-intraday-margin-rule-and-the-end-of-pdt>

volatility.³³ In turn, the revised IRC **limited intraday margin collections to a single fixed daily window**. Specific lookback windows used to calculate the risk charge was narrowed. Wall Street continues to push for a two-year “*sunset provision*” of this IRC add-on charge. Meanwhile, the SEC-CFTC jointly solicited public comments on further implementation of portfolio margining and cross-margining of securities and derivatives in attempt to enhance capital efficiency.

Given the US equity option markets are closed during the overnight session, Market Makers rely on alternative risk-mitigation strategies: correlation index futures arbitrage (e.g., E-mini S&P 500, NASDAQ-100 futures), cross-border American Depositary Receipts (ADRs), dynamic spread widening to acts as a built-in insurance premium, and inventory skewing – by skewing its public quotes downward, it discourage more retail investors from selling shares to them, forcing the order flow to clean-out and flatten the firm’s overnight inventory.

Continuous 24/7 derivatives trading runs directly into a structural gridlock over weekends when legacy commercial banking facilities, Fedwire, and CHIPS remain closed. In the event of an off-hours geopolitical shock or a targeted liquidity raid, market participants face an operational impossibility when trying to transfer margin collateral or satisfy sudden variation demands. This lack of financial backing forces a dangerous delay in risk recognition, threatening to trigger automated liquidation cascades that can push mid-tier clearing firms and FCMs into immediate insolvency. State-backed adversaries can use massive leverage to ram thin weekend order books, settling instantly via non-Western rails like mBridge while US desks are dark. On Monday morning, domestic market makers face warped forward curves. Forced to maintain delta-neutrality, their automated hedging programs trigger self-reinforcing liquidation loops.

Clearinghouses’ two biggest modern operational threats: the *rising cost of clearing member defaults* and the *risk of systemic flash crashes*. We urge the Commissions to realign \$10+ Billion to create a robust Defaulters’ Insurance Fund, consider a discretionary claw back mechanism, and other measures to deter foreign adversaries and response to vulnerabilities that threaten US financial stability.

³³ <https://www.sifma.org/advocacy/letters/occ-intraday-risk-charge>