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Could Instant Payments or Stablecoins Be the Answer to 24/7 Margin Calls?

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Financial Economics

"Time equals risk" is an adage that policymakers and market participants have invoked for decades in favor of shortening the settlement cycle in financial markets.[1] Today it has taken on new significance as U.S. market regulators consider opening segments of the securities and derivatives markets to 24/7 trading.[2] Many have highlighted that one challenge to expanding trading hours over the weekend would be the current lack of availability of large-value payment systems like Fedwire to manage related settlement risks.[3]

In this article, I focus on the management of settlement risk with variation margin calls in exchange-traded derivatives markets.[4] I explore two hypothetical options for enabling these payments during the weekend: 1) instant payment networks (IPNs), including FedNow and RTP, and 2) U.S. dollar (USD) stablecoin arrangements. For the purposes of this article, USD stablecoin arrangements are those involving a crypto-asset designed to maintain a stable value relative to the U.S. dollar and to function as a means of payment.[5]

Considering the critical role of central counterparties (CCPs) in managing settlement risk with variation margin calls, I conclude that using IPNs for this purpose may not be practical because of the current IPN limits on maximum transaction values. While using USD stablecoin arrangements would overcome these limits, they could introduce other risks to CCPs and their participants, such as issues with settlement finality and convertibility into commercial or central bank money at par. Neither option appears ready to substitute for the large-value payment systems upon which CCPs and their clearing members currently rely.

Background: Why and how CCPs collect margin payments

I begin with a description of CCPs and margin payments. As Norman (2011, p. 7) explains, the core responsibility of CCPs is "to ensure that a security or derivatives trade between two of its users will not fail because the buyer or the seller are [*sic*] unable to fulfil their side of the bargain." One way CCPs manage this risk is by collecting margin payments. They collect initial margin (IM) from clearing members to protect against a clearing member defaulting and to cover the risks of a trade until it is closed out; they also collect and pay variation margin (VM) on trades while they remain open, reflecting the mark-to-market losses and gains on positions as prices change (see note 4 for definitions of initial and variation margin).

Throughout this process, CCPs face settlement risk, i.e., the risk that a counterparty will not deliver funds or securities as expected. To mitigate this risk, CCPs have increasingly imposed time-critical liquidity requirements in recent decades. As described by Marshall and Steigerwald (2013, p. 30), these are conditions that "a settlement payment … must be made at a *particular location, in a particular currency (or securities issue)*, and *in a precise time frame* measured not in days, but in hours or even minutes."

Here are three ways this concept shows up in CCPs' current settlement requirements for VM payments:

- *Precise time frame*. CCPs conduct at least one settlement cycle per day, and these have precise payment deadlines. More than two-thirds of responding CCPs to a recent survey by the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions (CPMI–IOSCO) indicated they have at least one scheduled intraday VM call per day, with the grace period to pay varying between no more than 2.5 hours and as little as 10 minutes.[6] A clearing member's failure to meet this obligation can have immediate consequences, with the clearing member being declared in default, its membership in the CCP suspended, and its trading positions liquidated. In the event those

steps are not sufficient to cover the loss and return the CCP to a matched book status, the CCP may continue down its "default waterfall," of which some of the steps (such as using the clearing members' contributions to the CCP's guarantee fund) can result in losses for the nondefaulting clearing members.

- *Particular currency*. To minimize credit and liquidity risk to the CCP, requirements for VM payments are highly prescriptive: CCPs only accept cash as the settlement asset for VM (whereas they accept a variety of high-quality collateral to hold as IM).[7] In addition, these cash payments are typically expected to be made in the currency in which a derivatives contract is settled.[8]
- *Particular location*. Major U.S. CCPs typically require clearing members to make or receive payments with banks designated by the CCP for such activity, commonly known as "settlement banks." A CCP will consider a VM payment to be final when posted to its account at the settlement bank. Some of this VM payment activity can occur as book-entry transfers between clearing member and CCP accounts held at the same settlement bank. However, some of it requires interbank wire transfers between settlement banks. According to McPartland (2009), "this has an important implication—a CCP can only remove market risk from its clearing system when the national banking system is open."

Lack of large-value payment systems over the weekends

Major U.S. CCPs, their clearing members, and their settlement banks currently rely on large-value payment systems for any necessary interbank wire transfers associated with VM payments. In derivatives markets, this may include the Fedwire Funds Service (Fedwire) or The Clearing House Interbank Payments System (CHIPS). In securities markets, the two major securities CCPs—the Fixed Income Clearing Corporation (FICC) and the National Securities Clearing Corporation (NSCC)—primarily rely on the National Settlement Service (NSS) to effect net end-of-day settlements, although FICC and NSCC also rely on Fedwire for other purposes.

However, these large-value payment systems are not available over the weekend—and may not become available around the clock for some time. Fedwire and NSS are currently available during the weekdays (excluding holidays) on a 22-hour and 21.5-hour basis, respectively. Figure 1 provides a comparison of key attributes of U.S. payment systems.

1. Comparison of U.S. payment systems

Name	Operator	Settlement	Settlement finality	Transaction value limit	Hours	Cutoff time
Fedwire	Fed	Gross	Real time	<$10 billion	22/5	7:00 pm
CHIPS	TCH	Net	Intraday	n.a.	21/5	6:00 pm
National Settlement Service	Fed	Net	Intraday	<$100 billion for each entry in settlement file and <$10 trillion for entire settlement file	21.5/5	6:30 pm
RTP	TCH	Gross	Real time	$10 million	24/7	n.a.
FedNow	Fed	Gross	Real time	$10 million	24/7	n.a.

Notes: Fed is short for the Federal Reserve System; CHIPS, The Clearing House Interbank Payments System; TCH, The Clearing House; RTP, Real-Time Payments network; and n.a., not applicable. While TCH does not disclose any limit on transaction value for CHIPS, it does disclose other risk controls, such as position requirements (The Clearing House, 2024, p. 118). Hours indicate the number of hours per day (the first number) and the number of days per week (the second number) that the payment system is open. Cutoff time denotes the latest time of the day in Eastern Time at which transactions can be sent to the system for settlement on the same day.
Sources: Board of Governors of the Federal Reserve System, The Clearing House, and the Bank for International Settlements.

After requesting public comments on whether to operate these systems seven days per week, the Board of Governors of the Federal Reserve System (the Board) recently announced plans to expand Fedwire and NSS operations to six days per week (22/6 and 21.5/6, respectively), either by 2028 or 2029. The issues of "time-critical payments" and "enabling additional days for trade settlement in financial markets" were raised during the public comment period, with "some commenters representing FMUs [(financial market utilities)] not[ing] that expanded hours could support additional collection periods for cash margin and liquidity" (Board of Governors of the Federal Reserve System, 2025, p. 51359). However, many small institutions expressed concerns about increased operational costs. Ultimately, the Board settled on the interim step of six-day

operations to balance the concerns of a variety of large and small institutions. Participation in the expanded hours will also be optional. In its *Federal Register* notice, the Board suggests the possibility of future expansion to seven-day operations, no sooner than two years after the implementation of six-day operations in 2028 or 2029 plus additional public comment (Board of Governors of the Federal Reserve System, 2025, p. 51356).

Given the constraints on the operating hours of the large-value payment systems at present and for the foreseeable future, market participants and market regulators have been evaluating stablecoins and other tokenized collateral as potential alternatives. But enabling VM payments over the weekend is not the only risk-management tool available to CCPs. CCPs and market regulators may, for instance, be open to instead requiring that positions going into a weekend be prefunded with additional IM as a cushion against price changes or imposing other risk controls on clearing members. One U.S. derivatives CCP started clearing crypto-related derivatives 24/7 in May 2025, reportedly after consultations with the Commodity Futures Trading Commission (CFTC) that led to additional risk controls, including requiring that new weekend positions be prefunded and that clearing members who support weekend trading pay a surcharge to the CCP's guarantee fund. However, these kinds of requirements may be more capital intensive for clearing members and other market participants, which has likely motivated the ongoing search for a way to settle VM over the weekend.

What about instant payment networks?

Two instant payment networks in the U.S.—the public sector FedNow, operated by the Federal Reserve, and the private sector RTP, operated by The Clearing House Payments Company—are available 24/7. But their current transaction value limits of $10 million, though increased in 2025, remain significantly smaller than those applicable to Fedwire and NSS (see figure 1 in the previous section). As a result, the IPNs are typically associated with consumer and corporate use cases rather than the large-value settlement requirements of financial markets. In an apparent demonstration of a higher-value financial market use case, BNY (Bank of New York Mellon Corporation) and The Clearing House touted in 2025 a $10 million payment over RTP related to a stock transfer service.

However, the $10 million limits are still unlikely to cover the largest potential payment obligations to U.S. derivatives CCPs based on my analysis of available data from their public quantitative disclosures (PQDs). The public quantitative disclosures include two potential ways to measure this liquidity risk. First, on a quarterly, forward-looking basis, the CCPs report the estimated largest payment obligation that would be caused by a single participant in extreme but plausible market conditions (PQD 7.3.1). Second, on a quarterly, backward-looking basis, they report the largest actual payment obligation of a single participant during the previous year (PQD 7.3.4). I calculated the medians of these estimated and actual largest payment values reported over the past three years for several U.S. derivatives CCPs. As shown in figure 2, the median estimated stress scenario payments disclosed by the CCPs range from $56 million for MIAX (MIAX Futures Exchange, LLC) to $24.3 billion for CME (Chicago Mercantile Exchange Inc.). The median actual largest payments reported by the CCPs range from $21 million for MIAX to $3.7 billion for CME.

2. Largest single payment obligation to CCP, estimated stress scenario versus actual, medians of values reported from 2022:Q3 through 2025:Q3

	CME base	CME IRS	ICE Clear Credit	ICE Clear U.S.	MIAX	Nodal Clear
Estimated	24,310	3,923	2,201	2,240	56	610
Actual	3,735	753	535	577	21	128

Notes: All values are in millions of U.S. dollars. CME stands for Chicago Mercantile Exchange Inc., with CME base representing the clearing service for primarily exchange-traded derivatives and CME IRS representing the service for interest rate swaps; ICE, Intercontinental Exchange; MIAX, MIAX Futures Exchange, LLC (formerly, MGEX, or Minneapolis Grain Exchange).
Source: Author's calculations based on data from Clarus Financial Technology, CCPView.

There are important caveats to this analysis because the historical data points on estimated and actual payment obligations reflect current weekday trading and clearing patterns across all derivatives products. On the one hand, the largest payment obligations to be expected over the weekend could be smaller than those shown in figure 2 if only a subset of products move to 24/7 trading and clearing. On the other hand, to the extent that liquidity is worse and volatility is higher over the weekend than during the week, that would tend to result in larger VM payments for a given product.

Another factor not reflected in this analysis is that some portion of VM payment activity can be netted down and settled through book-entry transfers depending on how much overlap there is in using the same settlement bank across clearing members. This overlap would tend to reduce the potential remaining payment obligations that need to occur via interbank

wire transfers between settlement banks.

Nonetheless, an increase in the IPNs' transaction value limits appears likely to be a prerequisite for this use case, even for the smaller U.S. CCPs. Hypothetically, the limit applicable to these kinds of transactions and similar time-critical payments could be set higher than that applicable to other instant payments. FedNow's capabilities include liquidity management transfers (LMTs), which are only available during nights, weekends, and holidays, and can be set at higher transaction limits than those applicable to other transactions on the network.

Why have stablecoin arrangements emerged as an alternative?

At the Federal Reserve Bank of Chicago's Financial Markets Group Fall Conference in November 2025, the plurality of participants in an audience poll (45%) selected 24/7 settlement as the financial market use case for stablecoins most likely to gain traction over the next three years (see figure 2 in the summary of this event). What accounts for this forecast?

First, market participants often cite stablecoin arrangements as an alternative for managing settlement risk simply because stablecoins are transferable 24/7, whereas the traditional large-value payment systems, as discussed previously, are not available on weekends and holidays. While the issuance and redemption of USD stablecoins still require the use of traditional payment systems (to transfer U.S. dollars to/from the stablecoin issuer in exchange for the USD stablecoin), once in circulation, USD stablecoins can be transferred 24/7 among market participants via blockchain transactions.

Second, proponents of this use case have argued that stablecoins have proven their usefulness as a 24/7 settlement asset in crypto-asset markets, which already trade around the clock. Since the launch of Tether (USDT) as the first stablecoin in 2014, the total market capitalization of stablecoins has grown to roughly $290 billion as stablecoins have become the predominant way to trade crypto-assets. In spot markets for crypto-assets, over 80% of trading volume today involves a stablecoin, such as USDT or Circle's USDC, while less than 15% of trading volume involves a fiat currency, such as the U.S. dollar or the euro. Stablecoins also underpin futures contracts for crypto-assets on offshore exchanges. For example, the Bitcoin futures contracts offered by Binance, a large offshore exchange, are quoted, margined, and financially settled in USDT or USDC.

Besides their 24/7 availability, another driver of the use of stablecoins in crypto markets could be that the offshore exchanges do not typically support connectivity to USD bank accounts.[9] On these non-USD exchanges, USD stablecoins may therefore substitute for lack of direct access to USD bank accounts. In contrast, on the USD-supporting exchanges, the vast majority of trading volumes appear to continue to involve U.S. dollars rather than USD stablecoins.[10]

Finally, the Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), enacted in July 2025, hints at the possible use of stablecoins for margin calls. Section 3(g)(2) of the GENIUS Act states that only those stablecoins that meet its requirements will be "eligible as cash or cash equivalent margin and collateral for futures commission merchants, derivative clearing organizations, broker-dealers, registered clearing agencies, and swap dealers." Although this provision does not require the acceptance of GENIUS-Act-compliant stablecoins as cash or cash-equivalent margin, it may give them an advantage over noncompliant stablecoins. In recent months, leaders of the CFTC have discussed initiatives for the use of such stablecoins and other tokenized collateral as derivatives margin and suggested that rule proposals may be forthcoming.

What challenges could impede stablecoin use for margin calls?

In this section, I address two obstacles to the use of stablecoins for VM calls by CCPs and their participants: settlement finality and convertibility at par. I rely on aspects of the *Principles for Financial Market Infrastructures*[11] (PFMIs) relevant to these two issues. A full application of the PFMIs and related standards to stablecoin use by CCPs is beyond the scope of this article. I also do not address additional issues applicable to stablecoin use in general, such as cyber security, operational risk, illicit finance, and other challenges.

Lack of settlement finality on permissionless blockchains

First, the current lack of settlement finality for stablecoin transfers relying on certain kinds of distributed ledger technology poses an obstacle to their use for margin calls. Principle 8 of the PFMIs requires CCPs' rules and procedures to clearly define the point at which settlement is final. This is a legal concept "defined as the irrevocable and unconditional transfer of an asset or financial instrument, or the discharge of an obligation by the FMI [(financial market infrastructure)] or its participants in accordance with the terms of the underlying contract."[12]

Application of the Principles for Financial Market Infrastructures to Stablecoin Arrangements highlights the issue that certain stablecoin arrangements on permissionless blockchains provide only "probabilistic settlement" because "a misalignment between the state of the [distributed] ledger and legal finality may occur."[13] As an example of the misalignment that can occur, this report suggests that "the probability of revocation of a transaction validated by nodes [on a distributed ledger] converges to, but never reaches, zero with the passage of time with certain consensus mechanisms used."[14]

Circle has similarly recognized that "existing public blockchains present fundamental limitations that impede institutional and enterprise adoption" of its USDC stablecoin, and has proposed a new permissioned blockchain with "clear and certain final settlement in less than one second, aligned with the Principles for Financial Market Infrastructures" (Liao et al. 2025, p. 1). The over $70 billion of USDC in circulation today is currently available on about 30 blockchain networks, the vast majority of which is on Ethereum and other permissionless blockchains. Instead of relying on the same consensus mechanisms that make transfers on these existing blockchains merely probabilistic, Circle's proposed new blockchain will attempt to achieve settlement finality by relying on trusted intermediaries to confirm transactions.

Circle's proposal for a permissioned blockchain to facilitate financial-market-related transfers of its USDC stablecoin may be one potential approach, but it is not the only such project reportedly under way. CME Group announced last year that it was exploring collateral transfers and margin payments on a permissioned distributed ledger operated by Google. CME Group also recently confirmed on an earnings call that it expects to announce later this year a "tokenized cash" initiative with a bank (though it remained unclear whether this meant a tokenized deposit issued by the bank or a stablecoin issued by a subsidiary of the bank or even CME Group itself). However, these kinds of projects are still in development, and therefore, it is not yet clear if they will be widely adopted or prove to be practical for VM payments.

Convertibility at par and stablecoin runs

Second, while USD stablecoins are pegged to the U.S. dollar, they trade at varying exchange rates on secondary markets rather than par value. This may present a problem for their use by CCPs for money settlements, such as margin calls. Principle 9 of the PFMIs requires CCPs to conduct their money settlements in central bank money "where practical and available"; otherwise, the principle requires CCPs to use "a settlement asset with little or no credit or liquidity risk."[15] Here, rather than focusing on adequately managing any credit risks related to stablecoin issuers, I consider the liquidity risk that may stem from CCPs' inability to "transfer readily" any stablecoin holdings into "other liquid assets."[16] Principle 7 of the PFMIs notes that "liquidity risk arises in an FMI when it, its participants, or other entities cannot settle their payment obligations" and that such risk can come not only from CCP participants but also from its settlement banks or "linked FMIs and service providers, if they fail to perform as expected."[17]

Studies on stablecoin "depeggings"—e.g., Kosse, et al. (2023)—have shown extensive evidence that stablecoins frequently depart from par and sometimes significantly so, with the latter episodes associated with runs on the stablecoins issuers. This is similar to money market mutual funds "breaking the buck" during the 2008 financial crisis. It remains to be seen whether the GENIUS Act will make payment stablecoins regulated under the act more financially stable. Even if significant depeggings become less frequent, however, any continuing deviations from par will require CCPs and their participants to evaluate the risks of stablecoins versus those of other settlement assets and assess how to mitigate them.

Solutions to the stablecoin par value problem in the context of VM payments have not yet been widely proposed. But one thing is clear: Even if a stablecoin issuer provides CCPs and clearing members with the legal right to redeem the stablecoin directly with the issuer at par value, they will not have the practical ability to do so during weekends and holidays. Until large-value payment systems like Fedwire are available 24/7, a stablecoin issuer could only initiate a transfer of funds to the CCP or clearing member's account when such systems are operational.

That last point is not merely hypothetical. As documented by Du et al. (2025), during the failure of Silicon Valley Bank (SVB) in March 2023, Circle publicly disclosed that billions of dollars of its reserve assets backing USDC were tied up in uninsured deposits at the bank. This prompted a run on USDC that continued into the weekend. The value of USDC dropped to an intraday low of $0.86 on Saturday, March 11, 2023, as Circle announced that redemptions were "constrained by working hours of the U.S. banking systems." The price of USDC did not fully recover until after U.S. officials announced that all depositors would be made whole and redemptions began processing on Monday, March 13, 2023.

Conclusion

Anticipating a future when more financial markets move to 24/7 trading, market regulators and participants have been exploring stablecoins as a 24/7 settlement asset. The large-value payment systems currently used by CCPs are not available on a 24/7 basis. Instant payment networks' current transaction value limits are potentially too small to handle the largest payment obligations to CCPs that could arise. Meanwhile, despite their ubiquity in 24/7 offshore crypto markets, USD stablecoins still face obstacles to their adoption by U.S. CCPs and their participants in exchange-traded derivatives markets because of challenges with settlement finality and par convertibility, among other issues.

As the public and private sectors look for ways to reduce settlement risks posed by timing mismatches between expanded trading hours and the traditional large-value payment systems, no single solution seems ready to check all the boxes. Therefore, it's not surprising to see market regulators and participants evaluating a variety of options, ranging from requiring prefunded margin buffers and other weekend risk controls to using stablecoins or other tokenized collateral for

VM payments. Additional alternatives that merit further investigation include permitting higher-value liquidity management transfers over the weekend on the instant payment networks or ultimately increasing the opt-in expanded operating hours for Fedwire from 22/6 to 22/7.

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Notes

[1] See, e.g., Bachmann Task Force (1992) and Gensler (2024).

[2] See, e.g., Commodity Futures Trading Commission (2025) and Atkins and Pham (2025).

[3] See, e.g., the comment letter from the Futures Industry Association (FIA) (FIA, 2025) and the joint comment letter from the International Swaps and Derivatives Association (ISDA) and Securities Industry and Financial Markets Association (SIFMA) plus its Asset Management Group (AMG) (ISDA, SIFMA, and SIGMA AMG, 2025) in response to the Commodity Futures Trading Commission's April 21, 2025, Request for Comment on Trading and Clearing of Derivatives on a 24/7 Basis.

[4] The definitions for margin (initial and variation), settlement risk, and several other key terms related to central counterparty clearing are available online from the Basel Committee on Banking Supervision and in the Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012, annex H). (Note that as of September 2014, the Committee on Payment and Settlement Systems became the Committee on Payments and Market Infrastructures.)

[5] For more information, see the definitions of "stablecoin arrangements" used in the Financial Stability Board (2023) and the Committee on Payments and Market Infrastructures and Board of the International Organization of Securities Commissions (2022).

[6] Committee on Payments and Market Infrastructures and Board of the International Organization of Securities Commissions (2025, p. 10).

[7] ISDA (2025, p. 13). A survey indicates that the cash collateral VM requirement of major CCPs differs from that of uncleared markets, where the composition of VM has shifted away from cash in recent years (ISDA, 2025, p. 9).

[8] See, e.g., CME Group (2025, p. 89).

[9] For example, during the month of November 2025, trading volumes across crypto exchanges totaled $1.66 trillion, consisting of $1.38 trillion (83% of total) on Binance and other exchanges without USD support and $276 billion (17%) on Coinbase, crypto.com, Kraken, and other exchanges with USD support (according to the author's calculations based on cryptocurrency spot market data from The Block).

[10] For example, of the nearly $95 billion traded on Coinbase during the month of November 2025, less than $2 billion, or 2%, consisted of stablecoins as the base pair (according to author's calculations based on cryptocurrency spot market data from The Block).

[11] Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012).

[12] Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012, p. 64).

[13] Committee on Payments and Market Infrastructures and Board of the International Organization of Securities Commissions (2022, p. 16).

[14] Committee on Payments and Market Infrastructures and Board of the International Organization of Securities Commissions (2022, p. 16). See Lewis et al. (2017) for an explanation of the consensus mechanisms.

[15] Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012, p. 67).

[16] Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012, p. 68).

[17] Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2012, pp. 58–59).

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