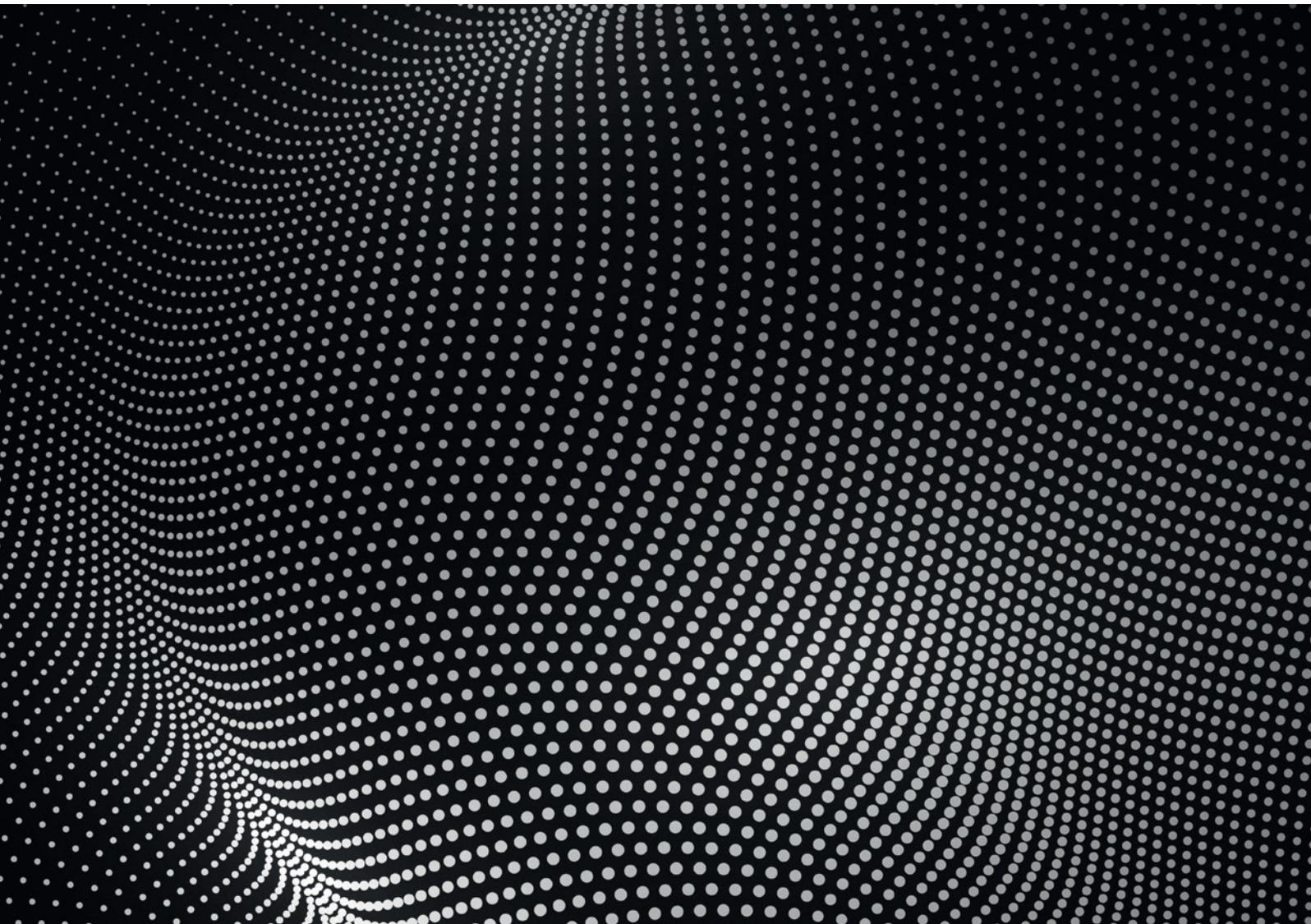


# CAPCO

## DEATH OF T+2

WHERE THERE'S A WILL, THERE'S A WAY

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# INTRODUCTION

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A move to T+0 or near real-time settlement of securities has long been viewed as nirvana by the industry. However, some outliers and anomalies aside, such as China's QFII market or commercial solutions that internalize trade flows, this ultimate target state has proved elusive. Nor, in reality, is there a great appetite to make it happen.

However, given the fundamental changes to the market landscape we are now witnessing, and as the industry continues to digest the consequences of the last, long decade of regulatory reform, we feel the time is right to assess whether the conditions now exist to support a move to T+0 - and how that might be achieved.

The first in a series that looks to explore the mechanics of a transition to T+0 and the role that distributed ledger technology (DLT) and other digital technologies might play in its facilitation, this paper sets out the key drivers and barriers to achieving T+0.

## The history of T+ settlement

The need to effect the transfer of share certificates alongside a secured payment historically came up against some very real physical barriers, whether those involved the cross-border transfer via boat and horseback of share certificates or the cross-town delivery of such certificates. To accommodate, early settlement cycles were fixed at up to 14 days -T-plus-two weeks. As share trading volumes increased in the late 1960s, the US Depository Trust Company (DTC, now DTCC) introduced a centralized depository for all shares with an electronic ledger to handle daily transactions. This innovation reduced settlement times further from T+7 to T+3.

Similarly, the UK migrated to a T+5 settlement cycle following the launch in 1993 of the CREST electronic settlement system project (operated since 2002 by Euroclear). This came after years of operating two-week trading account periods followed

by paper-based settlement (certificates and transfer forms) on the Monday ten calendar days after the last trading day of the account period.

Other markets, like FX, had experienced defaults between trading and settlement (giving rise to Herstatt risk), creating a domino effect that in some cases brought heavy losses. As a consequence, the industry established the Bank of International Settlements (BIS) and in time went on to establish the Continuous Linked Settlement (CLS) platform. Over the past few years the industry has struggled to align around a standardized two-day settlement period, even as other asset classes have adopted T+1 (government bonds, options) or even end-of-day settlement (futures).

## T+0 – A pipe dream or reality?

It's an ambitious target - but it is one worth pursuing. Clearly, it cannot be achieved overnight across all venues and settlement systems, but some markets and trade types would benefit from a T+0 environment. At Capco we believe the industry is now better placed to push towards T+0 through the application of DLT and other technologies such as AI and robotic process automation (RPA), which offer the tools and capability to support the end-to-end trade lifecycle via speedier processes and more accurate outcomes. As such, they are capable of removing some of the key barriers to T+0.

As a first step, it is worth reviewing the drivers for T+0 as new rules reshape the allocation of assets for regulatory capital purposes, and the potential consequence this has on liquidity in the cash and securities financing markets.

# DRIVERS FOR ADOPTION

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Regulatory reform is forcing markets and firms to rethink the way they do business. There is an increasing emphasis on utilizing ever more capital resources as a protective measure rather than for generating alpha. This ramps up demand for liquid assets, leading in turn to market contraction and price distortion as firms retain such assets to meet their own capital and risk management demands.

## Liquidity

Same day settlement in the cash and securities financing markets would have a significant and positive effect on liquidity. The ability to settle securities and cash on T+0 basis would enhance liquidity flows while reducing overnight and short-term funding costs, and would also allow for the optimal use of proprietary assets for collateral and capital purposes.

## Credit and Counterparty Risk

An automated, legally-binding smart contract could provide 'near-time' collateralization, whilst reducing exception errors and delay. There are multiple benefits from a credit and counterparty risk perspective that can be realized within a T+0 environment.

Primarily, it would remove the need to centrally clear cash trades through a central counterparty (CCP), thereby freeing up cash and collateral used for initial and variation margin, as well as contributions to the CCP's default fund. This would reduce the dependency on short-term cash liquidity transactions for margin purposes, reduce liquidity funding costs and alleviate stresses on collateral liquidity both internally and externally.

In OTC cash markets the reduction of counterparty exposures would have positive consequences for trade volumes and by extension market liquidity.

## Capital Efficiency

The capital used to offset counterparty exposures would also be reduced by returning more capital to the balance sheet. This represents further cost savings in terms of capital requirements.

## Innovation

The emergence of digital assets and the ability to process transactions on DLT allows for settlement processes to be significantly more efficient than those that support the trade lifecycle in conventional assets.

T+0 is very much a reality in a DLT environment - and even more effective if it captures all participants in a transaction chain and provides full transparency of asset and cash availability across all those participants and allows them to take immediate action to remediate potential fails.

We are already seeing this concept emerge as some market infrastructures look to adopt DLT to drive market efficiency (i.e. Digital Asset's solution for ASX) or as an intrinsic component to support their move into the digital asset space (SIX Group's offering SWX).

## Competition

Innovation encourages competition. As new digital asset classes come into existence and adopt T+0 through the use of DLT, we would expect existing post-trade infrastructures to respond positively not only to potential threats and also respond to growing demand from participants to become more innovative and responsive to the changing market landscape to make markets cheaper and more efficient.

# BARRIERS TO ADOPTION

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There are a variety of factors that make T+0 adoption a challenge. Here we focus on the most common and biggest obstacles the industry faces.

## **Technology Capabilities**

Many market infrastructures and market participants operate on ageing and/or legacy technology that has been adapted over the years to accommodate changes to market settlement cycles and functionality in order to enhance settlement efficiency. This has been achieved with limited success at best, and we are now at the point where operational constraints and complexity are preventing a move to T+0.

This is further compounded by firms whose platforms cannot process in real-time and still depend upon overnight maintenance windows to ensure they are operationally ready for the next business day. This is further complicated by the fragmented nature of IT infrastructure in general, with many firms employing multiple systems to do the same thing.

## **Settlement liquidity**

CSDR's settlement discipline regime goes a long way to enforcing timely settlement via the threat of financial penalties and, ultimately, enforced buy-ins. However, it will not necessarily solve the issue of short-traded positions and the need to cover those positions to avoid settlement failure.

Inventory management remains highly fragmented, manual and time-consuming, and even in a T+2 settlement environment the ability to borrow securities in a timely fashion can be challenging. Operational infrastructures are not adequately resourced in terms of process capability and tooling or access to securities pools to support a T+0 environment whilst remaining CSDR compliant.

## **Cross-border inefficiencies**

Increasingly, holdings in the same instrument are distributed across multiple CSDs (often in different time zones), making it difficult to effectively manage the inventory and ensure there is sufficient securities in any given depository to meet local settlement needs. Technology plays a key part, as very few firms operate a single inventory management platform that provides real-time intelligence on holdings and settlement exposures across multiple markets. Without this capability, effective management of inventory in a T+0 environment is unachievable - potentially leading to more settlement failures and increasing settlement costs.

## **Market operating hours**

Settlement cycles are governed by pre-defined hours of operation and market cut-off times. Internal processes and systems are aligned to the processing windows of CSDs, central banks, custodian and cash correspondent banks across all time-zones. The ability to settle cross-border transactions across different time zones is extremely limited due to little overlap between operating hours - and in some cases no overlap - meaning T+0 settlement is impossible.

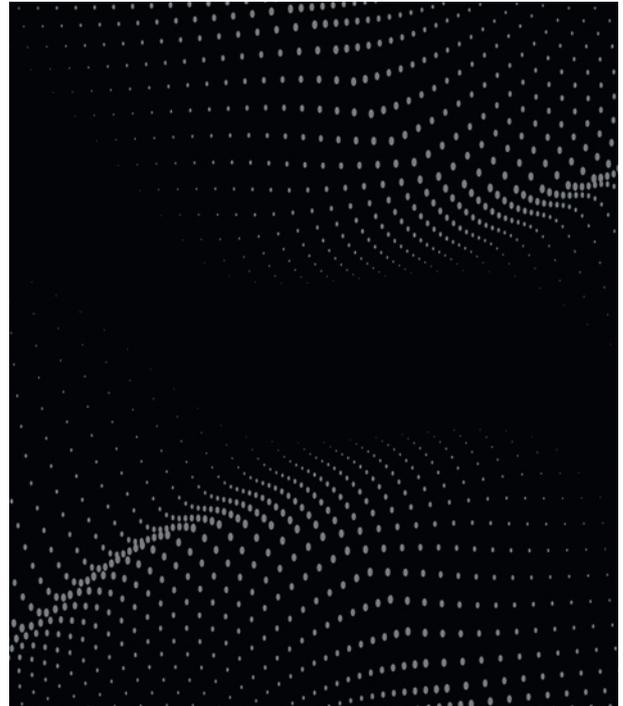
# TIME TO RETHINK SETTLEMENT

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In the context of current market practices, IT platform limitations and the lack of cross-border settlement harmonization across different time-zones, a move to T+0 is an extremely challenging objective.

However, DLT offers the opportunity to reimagine settlement in a true borderless, 24/7 operating environment - providing access to, and transparency around, securities and cash pools to facilitate real-time, intra-day settlement whilst delivering near 100% settlement rates. Why should settlement in wholesale markets be different to how retail payments work today? Why do we continue to follow analogue ways of working in a digital age?

In the next paper in this series Capco will explore how DLT and other digital technologies can help overcome these barriers and provide additional benefits that enhance both the market landscape and firms' own internal infrastructures.



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## ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward.

Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

To learn more, visit our web site at [www.capco.com](http://www.capco.com), or follow us on Twitter, Facebook, YouTube, LinkedIn and Instagram.

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