Composability Resolves the Systemic Challenges of Financial Services

Why Doesn't the UK Embrace It?

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2nd October 2025

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Abstract

The UK financial services industry faces significant systemic challenges, including downward pressure on fees, stubbornly high tech and operational costs, and increasing regulatory complexity. While costs remain high, delivering tailored client solutions at scale remains impractical. Technologies like AI can offer efficiencies without fundamental process change, but the potential for true, ecosystem-level transformation lies in digitization and composability. The UK's current "don't poke the bear" approach involves widespread consultation with incumbent players, and the accommodation of new technology within existing frameworks, rather than embracing radical change; this is a major impediment to success. Tokenising assets is a step toward standardization, but it's not enough to address the core industry issues, because it just changes the way we own things, without reengineering products, delivery or operating model. A truly transformative solution requires a shift to composable finance, which leverages self-executing tokens of entitlement as common building blocks for all financial assets and products. This approach offers a single, highly automated operating model, reduced costs of operation and change, simplified regulation, and the ability to create hyper-personalized solutions at scale. The paper argues that a collective effort is needed to build a new, digital market infrastructure, and to allow it to succeed on its own merits, rather than cajoling existing players to adopt new technology within their current business models. Failure to act risks the UK's position as a leading global financial centre, as other jurisdictions, like Singapore and the UAE, are already embracing a composable end-state.

Executive Summary

The systemic issues in the UK financial services industry are well-recognised: fees are falling, while operational, change and technology costs remain stubbornly high. The shift towards alternative and private assets, driven by persistently poor returns from conventional assets, exacerbates these costs and increases operational risk. The current business model is under pressure, and traditional methods of cost-cutting, like outsourcing and offshoring, have reached their limits.

While some hope that AI or digitization will provide a solution, most efforts in the UK focus on using new technology to make old processes slightly more efficient, rather than fundamentally transforming the business. A more transformative approach, exemplified by companies like Netflix and Apple, involves the creation of a more efficient ecosystem and upgraded business models, delivering new consumer-focused products.

Tokenization is widely promoted by supporters of digitisation, and has its merits. But tokenisation alone just changes how ownership of an asset is recorded, not how the asset is constructed and managed. This isn't enough to justify large-scale investment or force widespread industry adoption. The core idea of composable finance is to recognize that all financial assets—from bonds to swaps—are fundamentally just a set of commitments to value flows. In a digital ecosystem, these commitments can be represented by tokens of entitlement, and any financial asset or product (familiar or otherwise) can be built from these basic components. This allows for the creation of a single, common operating model across all financial assets and products, which would dramatically simplify operations, reduce complexity (including regulatory complexity), and lower costs. In other words, it would address the systemic issues of the financial services industry.

If these tokens of entitlement are made self-executing, then they can automate (or eliminate) a huge number of current functions, from trading, through settlements to asset servicing and corporate actions processing. This radical transformation could lead to significant cost savings and new opportunities for innovation, such as the creation of hyper-personalized investment products for individual investors.

The UK, however, is being too passive, too democratic, and too consultative. It is committed to wide-scale engagement with existing market participants, carefully avoiding challenge to current roles, and concerned to assure those established participants that the status quo is not threatened: it is focused on fitting digital assets into its existing market structures. This "don't poke the bear" strategy is an increasingly obvious mistake, as other jurisdictions, such as Singapore and the UAE, are actively pursuing a composable end-state.

To avoid a "Kodak moment" of rapid decline, the UK needs to change its strategy. Instead of trying to force reluctant participants to adopt new technology, it should focus on building the foundational infrastructure for a composable digital market. The authors suggest an analogy to the creation of NASDAQ, which was built by disillusioned firms who simply created a better, more efficient (and electronic) market. Nasdaq succeeded through competitive superiority, rather than compulsion, and the old guard was forced to adapt. An equivalent approach in the UK would provide a tangible return on investment and incentivize mass participation, ensuring the UK's continued primacy in global finance.

What are the Systemic Challenges to Financial Services?

Pretty well everyone in financial services says the same thing about systemic challenges to the finance industry: fees are being compressed downwards, and returns on conventional assets remain low; we are forced to look to alternatives and private assets to bolster performance. However, However, those new asset classes are more complex and less standardised, increasing operational risks: and adding to tech and operational costs that are already stubbornly high. To top it all, the cost and complexity of regulation keep going up. The consequence is reduced profitability, which leads to widespread industry consolidation and cost-cutting.

The COO's quandary is clear: we need to cut costs, but we have already outsourced every process that we can, and offshored every resource that we can – so what tools are left for us to address these systemic challenges? Maybe digitisation (or AI) will save us?

How Market Participants React to the Opportunity of Innovation

Confronted by radically innovative technology, business management (unless it chooses to do nothing) has two basic choices. It can seek to deploy the new capability within its existing business model, or it can seek to transform that business model. In other words, it can carry on doing exactly what it does now, using the innovation to make it a bit more efficient and profitable, or it can craft new products that it can deliver through a transformed business model, exploiting the full potential of the innovation. From a financial services perspective, AI fits well with the former approach, enabling established processes to be automated without changing the end-product, while digitisation has the potential to support the latter, offering a pathway to a wholly different, more efficient, and more customer-focused financial ecosystem.

Kodak chose the former route, when confronted by digital photography, while Samsung, Apple, Instagram and Facebook carved out the new products and business models with which we are familiar today. Blockbuster chose the former route when the internet emerged as a new content-distribution channel and sought to use it to rent out more tapes within their physical film library model. Netflix eliminated physical media, distributed digital content over the internet and enabled customers to build their own film libraries. Kodak and Blockbuster fell quickly from dominance to irrelevance, and are no longer here; Netflix, Samsung, Apple, et al., have all gone from strength to strength, and are very much here today.

When the innovation offers potential transformation at the ecosystem level, rather than at the individual company level, then life becomes more complex. One bank, asset manager or transfer agent can't reconstruct our financial ecosystem from legacy to digital in isolation, irrespective of how much it would like to transform its own products and business model to exploit digitisation. More concerted action is required across the industry, wrapping in market infrastructure providers, legislators, regulators and willing industry participants. That is challenging.

This challenge becomes even greater when the compelling benefits of change only accrue once the ecosystem transformation has actually happened. Where this is the case (as it is for composability), then it is very hard for any individual industry participant to construct an independent business case for investment. Without the prospect of a demonstrable ROI, businesses will commonly not engage with the innovation. As a result, nothing much gets done, however compelling the end-state model. The revolution is someone else's problem – until it happens.

A further challenge is the obvious motivation for incumbents to resist any meaningful change in the ecosystem. Those who want to maintain their existing products and business models, and just use

the new technology to enhance them tactically, will not want a new ecosystem to emerge at all: they will react defensively to the threat that their products and business models could become outdated or irrelevant. The most potent catalyst to resistance is always a perceived threat to established revenue flows, and any new ecosystem inevitably threatens established sources of income. Even governments, while apparently encouraging innovation, will become less enthusiastic if their tax-take is in jeopardy.

While it is more challenging for these reasons, the same dynamics play out at and jurisdiction level. Confronted with the potential of a radical innovation, a jurisdiction can seek to accommodate it within its existing market model, or it can exploit it to transform that market model into something much better. Once one jurisdiction succeeds in transforming its ecosystem and delivers a radically more attractive market model, then other jurisdictions have to follow, or face ultimate decline.

That is the existential threat to the UK as a jurisdiction, and to London as a world-leading market.

The Benefits of Tokenising Title

In our current financial ecosystem, we have as many different ways of establishing title as there are asset classes in which to invest: we exhibit title to equities through shares, to unit trusts through units, to bonds through indentures, to real estate through title deeds, to private funds through limited partnership agreements, to swaps through ISDAs, and so on. Tokens can be used to represent title to any kind of asset[1], and are therefore a useful step towards commonality and standardisation. Tokens can carry data and are programmable, so we can make them usefully active as agents. For example, we can use them to represent and implement their own compliance restrictions.

Tokenisation allows us to settle trades through the movement of title tokens between participants on a blockchain, and therefore the digital ledger itself becomes the asset register, and is self-maintained by the act of settlement, simplifying transfer agency. If cash in digital form is available (and it seems increasingly likely that it will be – in the form of regulated stablecoins or tokenised liabilities), then we can settle cash and assets atomically[2] on the same ledger: this reduces settlement and timing risk, and eliminates the need to coordinate between conventional stock-delivery and payment rails.

Tokenisation also opens up the generic benefits of blockchain and distributed ledger technology ('DLT'). Blockchain gives us a complete, immutable trade history, and strong cryptographic security. DLT gives us real-time alignment of data between participants. The latter allows us substantially to eliminate the messaging and reconciliations which are pervasive in the current ecosystem.

Tokenisation of title brings real benefits, without threatening the status quo too much.

Why Tokenising Title is not Enough

While the benefits of tokenisation are genuine, they have not been sufficient to motivate the industry to adopt tokenisation wholesale, largely because a compelling business case is hard to construct for tokenisation in a form limited to tokens of title. The problem is obvious – just swapping the way that we own an asset from whatever it is now to a token does not change the thing that we are owning, nor the challenge of servicing it – it just changes the way that we own it.

[1] …subject to each jurisdiction's willingness to recognise them as establishing ownership

[2] 'Atomic settlement' is the linked and simultaneous settlement of the cash and asset sides of a trade within a single technical and operational environment

For example, delivering a UK equity ISA[3] requires the involvement of 15 separate, largely regulated entities, each adding cost and diluting the performance of the investment. If we swap the way that we own the ISA from a share to a token, those 15 entities do not go away and we have done nothing to impact the underlying behaviour of the vehicle: we have just changed the way that we own it. In this context, the recent announcement in the UK that LTAFs can be included under an ISA umbrella is worthwhile and helpful but makes no real difference to the vehicle either.

Similarly, it is often pointed out that the equity market is a poor target for tokenisation, and therefore for Blockchain and DLT, because it is efficient and automated already. This is true in the context of trading, but wholly untrue in asset servicing. Corporate actions, register maintenance, entitlement processing and reconciliations are processes that are far from robust, automated and efficient, and they last the life of every equity holding. Tokenising title to equities swaps shares for tokens, and can deliver the benefits set out above, but does not address the painful parts of owning an equity. Again, we need to go further if we are to support a credible business case.

Tokenisation of title has real benefits, but systemically misses the main chance, and doesn't deliver adequate ROI to motivate wide scale industry participation.

Passively Accepting the Status Quo

If we want to maximise the benefit delivered by blockchain, distributed ledger and tokenisation (and avoid the fate of Kodak and Blockbuster), then we need to target the most efficient and customer-focused digital ecosystem facilitated by these innovations, and commit to its creation and growth. That means that we must be prepared to question the foundations on which the current financial ecosystem is built.

Many commentators, including digital asset enthusiasts, accept central features of our current financial ecosystem without question, and coalesce around conventional views of value. This includes the passive assumption that our familiar asset-classes and product-types are necessary, distinct and permanent. The blockchain industry's obsession with tokenising title to 'real world assets' is evidence of the pervasiveness of this view. However, if we allow this group-think to prevail, then we will lose the digital finance game before it has properly kicked off.

In finance as it exists today, we have set rigid boundaries between asset- and product-types and built distinct property laws, regulations, operating models and technology around them. This is why regulation is vast and growing, technology is fragmented and class-specific, operations are complex and diverse, and legal constraints enforce siloed treatment by asset-class.

If we want to address the systemic challenges to financial services, we have to move beyond passive acceptance of the status quo.

Actively Embracing Change

The key to maximising the benefits of a digital ecosystem is a recognition of the high degree of commonality across financial assets and products, not an insistence on their apparent differences.

[3] Fund Entity; Authorised Corporate Director (ACD / ManCo), Transfer Agent, Fund Manager, Fund Distributor / Investment Platform, Fund Custodian, Payment Bank, Fund Administrator / Fund Accountant, Fund Depositary, Fund Auditor, CASS (Client Cash) Auditor, Fund Legal Advisor, Broker / Dealer(s), ISA Wrapper Provider, Independent Financial Advisor…

Where complex outcomes are built from simple, common underlying components, then benefits flow in the form of common infrastructure, operations and legal and regulatory framework.

Fortunately, all purely financial assets are defined in the same way - by a set of commitments to value-flows. There is nothing very 'real-world' about them – the fact is that financial assets and products are just clusters of promises, treated as property by legal and regulatory convention rather because of tangible reality.

A bond is a capital flow commitment from the investor, followed by a cluster of income commitments and a redemption commitment from the issuer. An option is a flow commitment, computed by, and contingent on, a rate- or price-relativity. A swap is a series of back-to-back flow-commitments, normally computed on rate-relativity. An equity investor has expectations of future flows both from performance-driven value growth, and also from the variable dividend flows entitled by equity ownership[4].

A collateral agreement is a series of value-flow commitments, computed daily to reflect exposures based on value- or price-deltas. Even a mutual fund redemption, where the value is a function of the delta between the price at subscription and the price at redemption, is still a value-flow commitment: the fund promises it.

Everything financial is about flows, and therefore about the expectation, or the reality, of future value. We can exploit this fact to create a much simpler, much more flexible financial ecosystem.

Tokens in a Digital Ecosystem

In a purely digital ecosystem, all value is represented by tokens. In this context, tokens can represent three basic things:

1. Inherent current value within the digital ecosystem;
2. Ownership of something external to the digital ecosystem; or
3. Entitlement to a future flow of value within the digital ecosystem.

The first category is familiar from cryptocurrencies, which exist only in a digital ecosystem, and carry exchangeable value. At a more local level, there are many examples of digital coins (for gaming or otherwise) which have value only within their own ecosystem.

The second category is where genuine real-world assets exist, and where tokens of title are genuinely useful: the tokens act as markers of ownership for, for example, real-estate, physical works of art, organisations or fiat currency, all of which have tangible existence outside the ledger, and are 'non-digital'.

The third category is where the real power - and the adaptive power - lies: tokenised entitlements are the common components from which financial assets and products can be built. Those components are all commitments to flows of value, whether they are contingent or non-contingent, and whether their values are absolute or rate / price-relative. This is what allows us to compose financial assets and products easily, and inherit their operating model, technology, regulations and property law from the component parts.

[4] This right to participate in uncertain future profit distributions is mitigated by the investor's right to vote on certain matters which may impact them.

As all value and entitlement within a digital ecosystem is represented by tokens, then it follows that the value-flows committed by tokenised entitlements are themselves flows of tokens. They may be tokens in any of the three categories above.

The flows of value from which financial assets and products are constructed are often, but not always, calibrated in cash. So while, for example, a loan delivers cash repayments, it is perfectly acceptable for an equity option to deliver the equity itself, rather than a value delta in cash. For commodity futures, physical delivery is the norm. This is the same for any flow in a digital ecosystem: the committed flow could be a flow of cash tokens of some form, but could also be a flow of tokens representing value in some other form, including title to off-ledger assets.

A useful consequence of this is that the settlement of an entitlement may deliver further entitlement(s). This enables us to compose complex derivatives and structures, like CDOs and CDO-Squareds, which exhibit a high degree of indirection. The good news is that the digital version is both easier to value and to risk-manage, while being much more flexible in terms of structure and underlying assets.

Because we can deliver the same (and new) outcomes with much reduced complexity and cost, then we can extend the benefit of financial engineering from an elite few institutional investors to a much wider population. Investments tuned to the specific objectives and flow requirements of Individual investors become an achievable proposition. Clearly, we still need to ensure the suitability of investment products to their investors, and regulated entities will still be needed to provide assurance on risk and valuation.

So, in summary, the financial assets, products, derivatives and structures that can be composed from tokenised entitlements include all of those which are familiar in our conventional financial ecosystem. However, it is equally straightforward to construct new financial asset-classes, product-types, etc., in the same fashion, and from the same underlying tokens of entitlement, inheriting their regulations, attributes, capabilities and infrastructure.

Tokens of entitlement are the keys to composable finance.

The Radical, Systemic Benefits of Composability and Self-Execution

In our current ecosystem, there are distinct operations, technology, regulations and property laws by asset class, and sometimes by product too. New product and asset class development is slow, tortuous and risky. It is expensive and operationally unfeasible to offer bespoke solutions to clients at the lower end of the value scale.

In this context, a stellar set of benefits flows from a composable approach:

- We can have a single operating model, and therefore common technology, across all existing and future financial assets and products;
- We can build regulations from common components focused on entitlements, rather than our current asset and product-specific rules, enabling us to reduce the scale and complexity of regulation, while enhancing its effectiveness;
- We can construct new financial asset classes, and new financial products, quickly and securely, with confidence that the operating model, the technology and the regulations will work for the new construct from day one;
- We can model needs of clients accurately, and manufacture hyper-personalised solutions at scale.

Overall, we can resolve the systemic issues in the current financial services ecosystem, simplifying operations, technology and regulations, and reducing cost and risk, while dramatically improving our dexterity in meeting investor needs.

This becomes an even more attractive prospect if we fully exploit the capabilities of tokens for programmability and self-execution: essentially, each token becomes an independent, intelligent agent. Making the tokens of entitlement self-actuating results in an ecosystem where the operating model is not only common across classes and products, but also gives effect to its own processes. The tokens of entitlement both represent and implement the flows that they commit.

The addition of self-execution to tokens of entitlement delivers an exceptionally high-level of automation, and eliminates swathes of settlement management, asset servicing, entitlement calculation, income distribution and corporate actions processing.

However, it is not just traditionally middle- and back-office functions that can benefit from this radical transformation: the same profound benefits of composability and self-executing entitlements apply to trading as apply to asset servicing and settlement management. An indication of interest (an "IoI") is really just a flow commitment that its issuer would like to make, but hasn't yet made. An order is potential flow commitment for which a willing counterparty has yet to be found[5]. The placement of an order is an instruction to a trader (or to an algorithm) to find a party willing to commit the other side of an order, while an execution is just the delivery of flows both sides of the order, once a willing counterparty has been found. They are all potential or actual flow commitments.

Trading therefore falls within the same common operating model as post-trade processes and asset-servicing, and can benefit from exactly the same common technology and regulations.

We Need to Poke the Bear

This is an obviously attractive prospect for UK plc, and for the investor community. It would be reasonable to expect that both industry and government would enthusiastically embrace a transformational opportunity, which offers a comprehensive solution to our own, widely-acknowledged systemic issues, could reestablish London as an innovative financial centre, and could reverse the waning of financial sector tax revenues. However, this is not what is happening, at least not in the here in the UK. Among other distractions, the instant productivity gain of AI is too attractive and too easy an alternative to the daunting task of ecosystem change, and to the uncertain timing of ROI that this implies.

The unwillingness of many commentators to challenge existing product- and asset-class boundaries is just one aspect of a much wider reluctance to upset the financial status quo. In the UK, we have taken a 'don't poke the bear' approach, striving to accommodate digital assets without re-thinking their deeper implications for existing regulations, property laws, operating models, roles and entities. This misses the point, and the potential, completely. The rational approach would be to create an optimal digital market structure, and then to consider what entities, roles, law, regulation and technology are required to operate it securely and efficiently.

There have been some government and industry initiatives to encourage adoption of the new technology by market participants. The digital gilt project, depending on the breadth of its mandate, could possibly act as a catalyst for change. However, the issue is that, to date, these initiatives have

[5] In reality it is equivalent to an option, giving parties the right, but not the obligation, to trade.

existed wholly within the current market model and within existing participant business models. They have assumed that all roles remain essentially unchanged: the creation of a new digital ecosystem is not on the agenda.

Many market participants, confronted by the radical challenge of digitisation, choose to respond with neither business model transformation nor tactical enhancement, focussing instead on short-term cost-cutting. They often claim to be 'fast followers' or 'active spectators', which sounds more respectable than 'non-participants', but amounts to the same thing. New (and disillusioned) investors are looking to the Web-3 ecosystem, to defi and to crypto to provide alternative routes to investment, and alternative sources of return.

We hear often that London is the premier financial centre in the world, and that we are all working to ensure that it stays that way. However, it will not stay that way if we miss a generational, or maybe even millennial opportunity to create a more efficient financial ecosystem, because we can't contemplate radical change, and we won't poke the bear.

Meanwhile, overseas jurisdictions are moving towards transformation of their market models, and optimisation of a digital financial ecosystem. MAS in Singapore has adopted a composable end-state as its strategic target, and is committed to provide resources and evolve policy in pursuit of it. VARA in the UAE seems likely to follow suit.

The Kodak / Blockbuster moment for our established markets, and our established entities, may be closer than we think.

Strengths of the UK as a Jurisdiction

There is a clear danger that we may sleepwalk into our own Kodak moment. However, there are structural strengths of the UK which, if we embrace composable finance, would sustain the UK as a primary jurisdiction, reinforce London's position as a major financial centre, and open up new product and trading opportunities.

The UK is a respected legal and regulatory jurisdiction, with low levels of corruption by world standards, relatively stable politics, and a system of law which enables disputes to be adjudicated fairly. There is an active digital sandbox, and a further sandbox specifically for digital securities, both run by the FCA, a primary UK regulator.

The UK has a vibrant fintech sector, which delivers innovative products and platforms, and has the technical skills to support a new, digital market structure. There is a large resource-pool of experienced practitioners in finance with a track record of commercialising innovations, once they have come to terms with them. The UK's time-zone lies conveniently between the US, Middle East and Far East geographies, which makes it an easy location in which to trade, and a natural home for a global book of business.

There is widespread trust, a depth of experience, and a convenient geography in the UK, which other jurisdictions find it very hard to compete with. The UK could be the world leader in digital assets if we embraced the opportunity presented by composability.

Endnote- What Can We Do About It?

The position set out in this paper is both very optimistic and very bleak for the UK market:

- We have broad agreement on the systemic issues facing financial services;
- Through composability, there is a potentially powerful, comprehensive and systemic solution to those problems;
- The composable solution requires fundamental change in the financial ecosystem;
- Concerted efforts to advance digitisation in the UK have focused on tactical deployment within the existing market model, and within the existing business models of current market participants;
- While there are strengths in the UK as a jurisdiction, business leadership in the UK is focused on short-term, deliverable ROI, and consequently prefers cost-cutting and AI-initiatives to composability;
- Meanwhile overseas jurisdictions are adopting composability as their end-state model and are positioning to deliver it;
- There is therefore an existential threat to the primacy of the UK, and of London as a global financial centre.

Fortunately, we can do something to avert this threat, if we are determined to do so. We need to stop behaving as if getting all existing players in a room, and cajoling them to deploy new technology within their existing business models, is going to achieve transformational change for the UK market. It's not – it will just result in more of the same.

Radical transformation requires courage and conviction, not just democracy, consultation and appeasement[6]. If we want to reinforce London's, and the UK's primary position in world finance, then we need to have the courage and conviction, as a jurisdiction, to invest in some new and radically different market infrastructure.

We need a venue for the primary issuance of self-executing flow-commitments in token form. We need a market infrastructure within which those tokens can be clustered into familiar (and unfamiliar) assets and products. The tokens, singly or in clusters, need to be divisible into fractions and tradeable in a secondary market, with secure transfer of title to their recipients. The tokens need to be executable independently of any participant's infrastructure, and capable of transferring value in token form from their issuers to their recipients.

This infrastructure will be agnostic to assets and product types and will implement a single operating model. If it works for loans, it will work for options. If it works for bonds it will work for swaps. If it works for income, it will work for collateral. So, while we may focus on specific familiar classes in the first instance, there is no asset-specific build and no need for a separate operating model for each use-case. We just need the basic market infrastructure and some willing initial participants.

The New York Stock Exchange ('NYSE') was committed, until relatively recently, to a conservative tradition of open-outcry trading. It resisted becoming an electronic market for many years, even after London (1986) and Toronto (1997) both launched electronic execution facilities. An increasing number of NYSE member firms became frustrated with the lack of automation progress, and evolved

[6] The failure of Taurus in 1993, and the subsequent success of the Bank of England's Crest development are excellent examples.

NASDAQ (which had started as an automated quote system in the 1970s) first to a small order execution facility in 1987, and then to a fully-fledged electronic market in the 1990s.

There was little point in the founders of NASDAQ consulting the broad membership of the NYSE, to reach consensus on the design, and to drive the implementation of the new electronic venue: these were precisely the parties who had consistently opposed the idea. Instead, they just built it and invited anyone who wanted to come on board to join the party on its own merits.

NASDAQ had willing participants from day one, in the disillusioned member firms who had conceived and built it. It was cheaper and quicker to issue on NASDAQ than NYSE, cheaper and more transparent to trade, and easier to integrate to from members' own systems. As a result of these key competitive attributes, NASDAQ built a critical mass of participation and began to threaten NYSE's hegemony. NYSE had no choice but to come to the party, and launched its own electronic trading facility, when it merged with Archipelago and incorporated in 2006. As of 2020, it is now an exclusively electronic market[7].

We might reasonably expect the same dynamics to apply to a digital market in the UK. Rather than corralling reluctant firms to deliver a digital future through tactical adoption within their existing business models, we need to create the base infrastructure for a better ecosystem, and show that there is competitive advantage in participation. The jurisdiction collectively needs to find a way to fund this, to resource and manage it, and to drive it through to delivery[8].

Only when market participants can see a tangible return on their investment will they embrace digitisation en masse. Without useable market infrastructure, they will never see this ROI: they will continue to describe themselves as 'fast followers' and 'active spectators', continue to focus on cost-cutting and AI, and do little or nothing to promote and advance a fully digital market in the UK.

The existential threat to the UK market, and to London's primacy, will grow accordingly, and the Kodak / Blockbuster moment will get closer and closer. We need to embrace composable finance now.

[7] NASDAQ is now applying to SEC to run a market in tokenised, as well as conventional assets.

[8] It cannot be assumed that either London Stock Exchange Group or the Bank of England will take a leading role in the delivery of new market infrastructure. The BoE sold Crest to Euroclear in 2002. LSEG incorporated in 2007, acquired Refinitiv in 2021, and through Refinitiv, acquired a majority stake in Tradeweb. It is now primarily a data business.