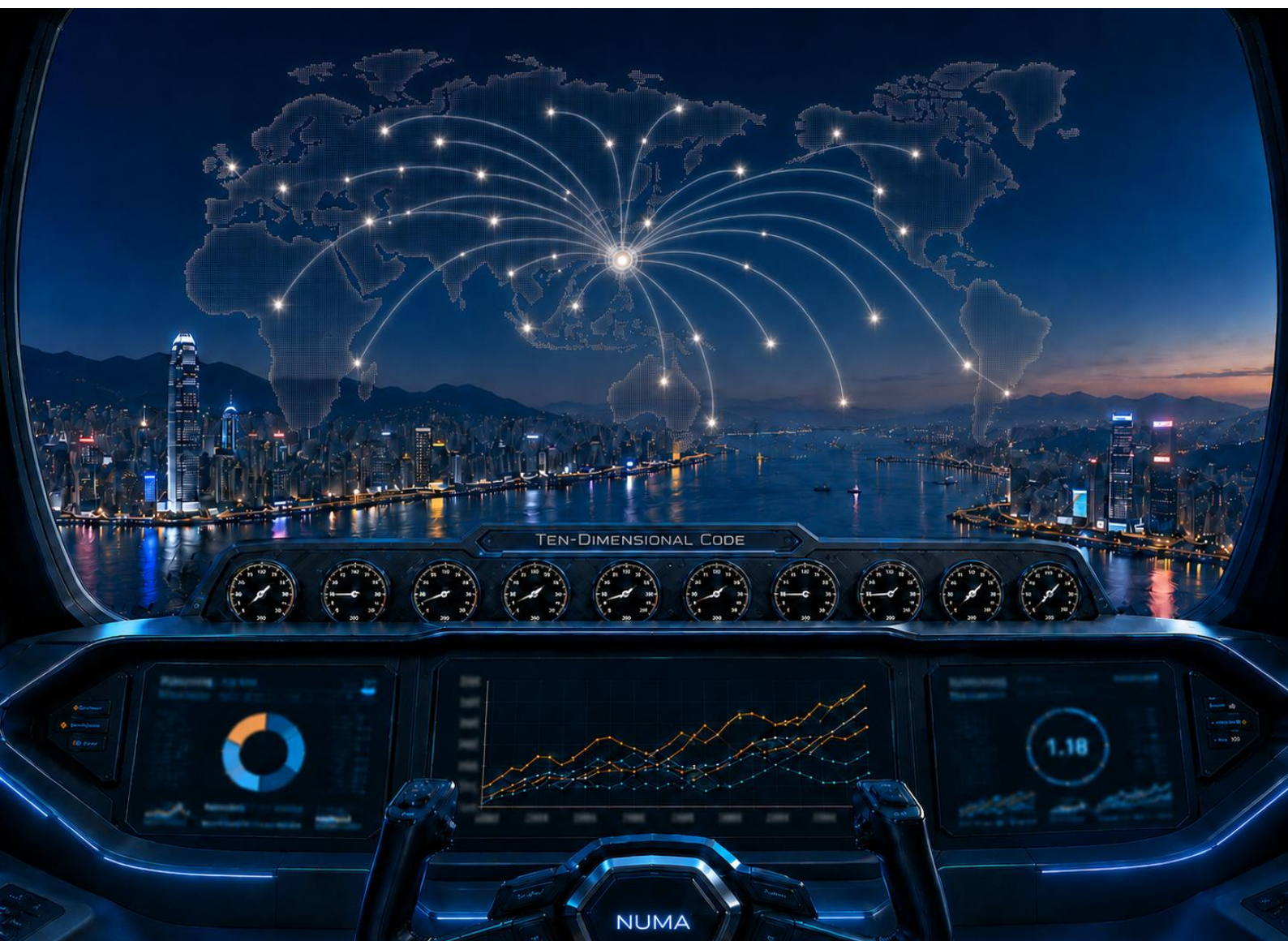


White Paper on NUMA Protocol

White Paper on Micro Connect New Markets Contract-Based Financing (CBF) Protocol



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Discover New Worlds | Contracts Without Borders | Markets Without Walls

Executive Summary

I. What NUMA Is — A New Market That Makes Contracts Investable

1. An investable market. NUMA is dedicated to serving contractual cashflows that have yet to be broadly covered by traditional finance. At the last miles of the global economy, hundreds of millions of commercial contracts are performed every day. They generate cashflow just as real as that of listed companies, yet they have never been systematically served by any financial market. Two hundred years ago, Wall Street used securitisation to make the future earnings of large enterprises investable. Today, NUMA is the first mover seeking to do the same thing again at the more granular level of the individual contract, enabled by two technological revolutions: digitalisation and artificial intelligence.

2. Building a third asset class. NUMA is dedicated to building a third asset class alongside equity and debt. Equity makes a company's future profits investable. Debt makes credit relationships with fixed interest investable. These two pillars have supported the overwhelming majority of capital formation since the industrial age, but they share a common premise: they serve only the relatively small number of entities at the top of the pyramid. NUMA is directed at the vast contractual cashflows that have never been systematically covered over the past two hundred years — an almost entirely unexplored investment universe.

3. A new world for equity and debt investors. Equity investors can carry over the equity mindset — deep research, careful selection and the pursuit of upside — by selecting uncapped, equity-like contracts in the contract market. Debt investors can carry over the fixed-income mindset — stable returns and control of the downside — by selecting capped, fixed-income-like contracts. But for both equity and debt investors, almost all investment in the contract world is done through highly diversified portfolios. For example, a contract driven by a single event, such as a North American concert revenue-sharing contract, may carry higher single-contract risk but also greater return potential. An equity investor can therefore follow equity-investment logic: hold a large, diversified basket of such high-elasticity contracts, cap each position, and use portfolio diversity to obtain equity-style opportunities suited to that investor's Sharpe-ratio target. Conversely, a debt investor can select capped contracts and, at the Transaction Contract level, choose a lower ITV, combining diversification with an extra safety cushion to assemble fixed-income-like opportunities at different Sharpe-ratio levels.

4. A dual mission. For issuers, NUMA allows the small and micro economies long forgotten by traditional finance, and the ordinary people who earned contract interests through their labour, to monetise future cashflow interests for the first time. For investors, it offers an entirely new asset class whose correlation with traditional equity and debt is extremely low in normal times, turning diversification from a slogan into a mathematical reality. Neglected contracts reach capital, and investors gain a new source of diversification. This is why NUMA exists.

II. What NUMA Does — Draw the Map, Set the Coordinates, Provide the Cockpit

NUMA follows the Sharpe principle in the contract world and is organised around the Residual Value Impairment Rate (RVIR). It builds three pieces of core infrastructure for the contract world: it draws the map, sets the coordinates and provides the cockpit. The NUMA Sharpe Map is the spatial framework of the market. NUMA Coordinates are the positioning ranges of each Transaction Contract within that risk-return space. The NUMA Sharpe Cockpit is the operating interface through which investors build portfolios. All three are driven by two algorithmic engines: the Coordinate Positioning Engine, which converts each contract's Ten-Dimensional Code profile into a coordinate range on the map, and the Portfolio Optimization Engine, which computes the marginal change in risk and return in real time as the investor builds a portfolio. From map to coordinates to cockpit, and from description to positioning to operation, the three together form the skeleton of the market.

Drawing the Map

1. Following Sharpe theory. The first principle of financial markets is Sharpe theory: risk-adjusted return. In 1966, Professor William F. Sharpe put the investor's most basic instinct into a formula — how much return is obtained for how much risk. The Sharpe ratio is to financial markets what Newton's laws are to physics: the underlying gravity of all financial behaviour. NUMA is not trying to invent a new first principle. It follows the same line.

2. A tailored NUMA Sharpe Map. The denominator a market uses depends on the kind of data it can observe and the analytical habits it has formed. In the equity world, the main proxy is often price volatility (σ). In the debt world, the focus is more often on credit spread, expected loss, probability of default, loss given default and credit rating. The contract world faces millions of contracts, each different from the next, with cashflow returning month by month or week by week. But the contract world need not settle for a rough substitute. Each stream of cashflow has a highly distinctive character, and its movement is driven by highly specific factors: who operates it, how much the cashflow covers, how frequent the payments are and how strong the control is. Identifying and tracking those factors continuously stays closer to the first-principles nature of cashflow than a generic σ , because σ mixes in market sentiment and trading behaviour, while structured-factor tracking focuses on what directly drives the cashflow itself. The NUMA Sharpe Ratio retains the philosophy of Sharpe theory but uses the continuous, structured profiling of the Ten-Dimensional Code in place of σ as the denominator, on the assumption that such a profile can effectively represent the relevant risk in the contract world. The root is the same, but each market needs its own most fitting branch.

3. Building a risk-return coordinate system. The map follows geographical coordinates. Longitude marks return: the further east, the better the expected return. Latitude marks risk: the further north, the greater the risk. The ratio of the two is the NUMA Sharpe Ratio, the measuring scale on the map. Every Transaction Contract and every portfolio has its own position on this map. The map is the spatial basis of the entire infrastructure. Without the map, the coordinates have nowhere to land and navigation has nowhere to begin.

Setting the Coordinates

1. Anchored to a three-layer contract structure. The NUMA Coordinates system is designed for contract investment. What can be invested in relies on a three-layer contract structure. The first layer is the Real World Contract (RWC), the original contract in the real world signed between the party that delivers value first, who later becomes the issuer, and the party that provides the return later. The second layer is the Protocol Contract (PC), signed between the issuer and the NUMA operator, under which the issuer brings the relevant interest into the market arrangement and bears the first layer of risk. The third layer is the Transaction Contract (TC), which defines the investor's holding rights, repayment path and risk allocation in relation to each PCC.

2. Describing the Ten-Dimensional Code. The NUMA Coordinates system is jointly formed by ten contract dimensions. The first six describe the Real World Contract: entity, business, boundary, operating density, cashflow, and digitalisation. The latter four describe the Protocol Contract and its issuer: entity, business, control, and momentum. Overlaid on these are five layers of contract-registration information: the Real World Contract, the Protocol Contract, actual and projected cashflow, the issuance terms of the Transaction Contract, and the offer conditions. Data is updated daily, creating a continuous profile rather than a one-off rating.

3. Presenting a coordinate range rather than a coordinate point. NUMA Coordinates are not a precise point on the map but a range — a region with shape, direction and probability. A future position cannot be determined by static characteristics. It can only be implied. As actual cashflow data accumulates, the range gradually converges, but it never settles into a single point, because the future itself is not a single point. Presenting that uncertainty honestly is precisely what makes the market more trustworthy.

Providing the Cockpit

1. Seeing every contract clearly. The first step is the Coordinate Positioning Engine, which allows investors to see every Transaction Contract clearly. What appears on the map is the Transaction Contract, because only the Transaction Contract has a price, an Investment-to-Value ratio (ITV) and a face value, and only the Transaction Contract is the thing the investor can actually choose and buy. However small, fragmented or non-standard a contract may be, the Coordinate Positioning Engine reads out its core behavioural features through the continuous profiling of the Ten-Dimensional Code and presents them to the investor in structured form. Based on their own understanding and judgment of every parameter in the Ten-Dimensional Code, investors decide for themselves where a contract should ultimately sit within a coordinate range. With millions of contracts and every one of them different, a traditional manual system cannot process them one by one. Only AI can do that. AI does not predict the future. It describes the past and the present.

2. Judging the direction of coordinate movement. The second step is a judgment tool. It does not merely present a profile. It also offers the dimensions, factors, trajectories and confidence interval for assessing where that profile may move next. Investors can see the likely region of a Transaction Contract on the map: where it may sit under normal conditions and where it may move under stress. That allows the investor to define preferences on a fully informed basis.

3. Exploring the best-suited portfolio. The third step is the ultimate purpose of navigation. Each Transaction Contract occupies its own coordinate region on the map. The Portfolio Optimization Engine takes the correlations among Transaction Contracts into account and produces a new portfolio-level position. Because Transaction Contracts often have low correlation with one another in normal times, the overall position of the portfolio can be superior to the position of any single Transaction Contract: risk comes down and risk-adjusted return improves, which means the NUMA Sharpe Ratio rises. The collective position can be better than the simple sum of the individual positions. That is the meaning of navigation. We do not promise to find the best portfolio. We help each investor discover the portfolio best suited to that investor's own risk-return preferences and judgment.

4. Residual Value Impairment Rate — the objective. It is what the latitude axis of the map measures, what the coordinate range converges toward, and what each of the ten instruments in the cockpit points to in its own way. The Residual Value Impairment Rate measures the possibility that, over the remaining term and with respect to the remaining value, an unexpected impairment will occur. Professor Sharpe's first principle remains unchanged. What the contract world needs is a more suitable denominator for the NUMA Sharpe Ratio.

III. What This White Paper Sets Out — Publisher, Infrastructure and Structure

1. The initial designer of the new market standard. Micro Connect publishes this White Paper as the initial designer of the NUMA new market standard, and as the initial drafter and proposer of the market's master protocol framework. The White Paper puts forward NUMA's preliminary framework: market structure, product architecture, coordinate system, navigation mechanism and legal foundation. NUMA is not itself an investor, nor does it participate in regulated financial activities that face investors, such as securities dealing, licensed-institution trading or asset-management operations.

2. A provider of operating infrastructure. Micro Connect designs the standard and drafts the protocol, and at the same time provides the infrastructure that makes the standard work in practice: the platform, the tool system and the AI algorithms. At the core are the Coordinate Positioning Engine and the Portfolio Optimization Engine, which allow millions of fragmented, micro, scattered and non-standard contracts to be systematically read, profiled, positioned and combined into portfolios. NUMA publishes the standard and also provides the infrastructure that allows the standard to function. But providing infrastructure does not mean operating the market. To the extent possible, NUMA does not touch funds or trading. It outsources fund custody, trade execution and investment decisions to licensed intermediaries so as to minimise the platform's own control over client funds and trades, while continuing to explore further separation of the related risks.

3. The structure of the White Paper. This White Paper comprises three main Parts and a Call to Actions section. Part One, Market Overview, answers why a market like this is needed. Part Two, Market Philosophy, explains the three major tasks of the market — drawing the map, setting the coordinates and providing the cockpit — the single shared objective they serve, namely the Residual Value Impairment Rate, and the AI Algorithm Layer that makes the whole system possible. It also devotes two further chapters to how the spirit of debt investment and of equity investment each extends into the contract world. Part Three, Market Governance, addresses the legal foundation, the fee arrangement and the governance mechanism. The Call to Actions section extends an invitation to participate to the issuer side, the investment side, intermediaries and the wider ecosystem, and sets out the principled arrangement for early co-building capital.

***Special Notice:**

This White Paper publishes the initial institutional framework and information standards for NUMA's contract-cashflow financing market. Its purpose is to introduce the design logic of the protocol and the plan for co-building and validation. It does not constitute any transaction offer, product sale or investment solicitation. The market structure, coordinate system, navigation mechanism and legal foundation described in this White Paper are all initial designs. The related legal documentation, model validation and transaction mechanisms remain under progressive construction and will continue to be updated in later versions.*

This White Paper is intended solely for offshore Professional Investors (PIs) who meet the requirements of their own jurisdictions and who may participate only through licensed intermediaries. NUMA is not open to retail investors. The issuer side of NUMA is global-facing while the investment side is limited to qualified offshore Professional Investors. NUMA does not conduct any fundraising activity within mainland China and does not accept any funds from within mainland China for investment participation.

This document is an English translation of the Chinese whitepaper. If any ambiguity, inconsistency or contradiction arises from this translation, please refer to the Chinese version.

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Part One — Market Overview

Connecting the Contract World and Capital for the First Time

Why This Market Is Needed · Who We Are

Chapter 1 — Welcome to the New World of Contracts: Why Finance Has Yet to Reach the Last Miles of the Economy

NUMA (Micro Connect New Markets) is a market infrastructure built on Real World Contracts (RWCs) — lawfully formed, genuinely existing and legally valid contracts of the real world. What it creates is a new financing paradigm: Contract-Based Financing (CBF), which allows the commercial cashflows that exist in the real world in the form of contracts to be discovered, understood and invested in.

The capital markets of the past were organised mainly around two kinds of standardised financial interest: equity and debt. Securities law connects investors and supports the trading of ownership and debt relationships of enterprises, while contract law has long carried the commercial relationships of economic activity. Yet in the real world, much economic activity does not exist in the form of equity shares or debt, but as contracts — revenue shares, service contracts, lease arrangements, subscription obligations and the like.

What NUMA does is allow the two bodies of law to work where each fits best: on the issuer side, using contract law to organise contract cashflows that exist in scattered form; and on the investment side, connecting investors through financial infrastructure that operates within the securities-regulatory framework. Contract-Based Financing (CBF) is the new way of connecting these two bodies of law.

In this world, a real commercial contract is no longer excluded from the reach of investors simply because it is too small, too remote, or incomprehensible by the traditional financial system. What we do, in a nutshell, is presenting the world's real contracts, in a comprehensible way, to the world's real investors, which then allows the two to discover, judge and connect.

NUMA is a Protocol. It builds a unified descriptive language and shared analytical framework for contracts, so that every contract can be understood, compared and discovered by suitable investors through the NUMA Sharpe Map. This is also an invitation: NUMA is an open market that needs the issuer side, the investment side, and intermediaries and the broader ecosystem to participate and build it together. In this White Paper, we present the order, language and rules already designed, and leave what remains open to everyone willing to build this market with us.

1.1 The Current Boundaries of the Two Financing Paradigms

Modern finance has mainly invented two paradigms for funding economic activity. The first is equity financing: investors put in capital in exchange for an ownership share of an enterprise, sharing its risks and its growth. The second is debt financing: the provider of capital supplies funds at an agreed interest rate and term, recovering principal and interest at maturity. These two paradigms have supported the overwhelming majority of capital formation since the industrial age, and each has evolved into its own mature markets, institutions and rules.

But the effective operation of both rests on a common premise: those they serve must be entities capable of issuing shares or bearing standardised debt. Debt weighs safety over growth, and equity weighs growth over safety; each has taken its preference to the extreme, and each has fully served the capital and economic entities that match it. Yet the most numerous economic activities in the world — the commercial contracts that generate genuine cashflow every day — fits neither for equity nor debt, and so have long remained outside the view of the mainstream capital markets.

1.2 The Contract World Is Complementary to Debt and Equity

As scattered, small and mid-sized economic activity continues to expand and new business models keep emerging, real commercial contracts cannot be effectively covered by the existing frameworks grows exponentially: a lease of a restaurant in Bangkok, a subscription agreement of a SaaS company in North

America, a contract of a logistics operator in Mexico, a membership-fee revenue-share of a gym in Berlin. These contracts generate real, measurable cashflow, yet because of differences in size, form or business model, they have long been unable to enter the mainstream financial view. What has formed as a result is a vacuum sitting between equity and debt, out of reach of either existing system.

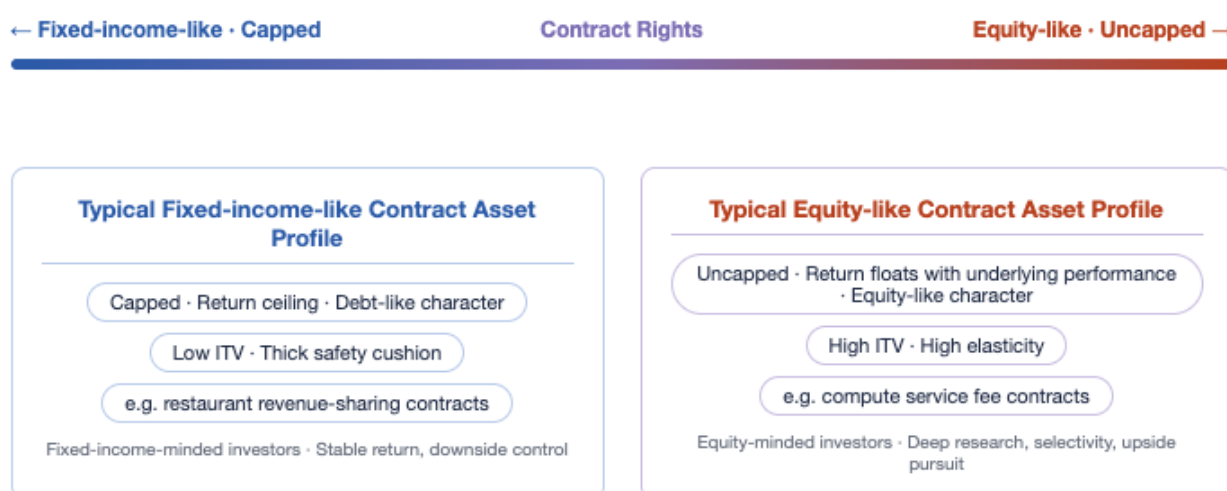
It needs to be made clear that the contract world and the debt-and-equity world are complementary. The debt and equity markets provide mature financing paths for subjects suited to be expressed as equity or as debt; the contract world lets those real, valid commercial contracts that do not fit either the equity or debt frame obtain financing on their own terms. NUMA does not repeat the work of the debt and equity markets, does not try to replace them, and does not claim that any one system is superior to another. NUMA does one thing that neither existing market has done: it establishes a unified, clear and readable analytical language for the world's contracts and investors, so that contracts can be described and located, and issuers and investors can find each other on their own terms.

Beyond equity and debt, NUMA proposes and puts into practice a third financing paradigm: Contract-Based Financing (CBF). CBF takes as its object of financing the cashflow interest generated by a lawfully formed Real World Contract. It does not change the ownership structure of the contract, and it does not manufacture a new lending relationship; it lets the real, verifiable cashflow generated by the contract itself become something investors can understand and take part in. The contract stays as it is; NUMA simply lets its cashflow be seen.

NUMA calls such form of right in this space the contract right. The contract right is an extension of debt and equity, and can be described in a similar analytical language. It resembles debt in that its return is capped, it weighs safety over growth, it depends only lightly on the secondary market, and it uses a ratio to express its safety cushion. It resembles equity in that the return comes from the actual future cashflow, and the investor must make a judgment about that future. What is distinctive is its pricing anchor and its expression: the contract right is anchored to the contract cashflow that the Protocol Contract Issuer (PCI) has agreed under the contract, and its ratio is expressed as the Investment-to-Value (ITV).

For this reason, the contract right covers the whole spectrum from debt to equity. Contract rights that are closer to debt correspond to a lower investment ratio, a thicker safety cushion and steadier cashflows, allowing debt-style service to reach the last miles of the economy; contract rights that are closer to equity correspond to a higher investment ratio, greater reliance on professional judgment and greater upside elasticity, allowing equity-style service to reach the last miles of the economy. Two examples illustrate how the two ends of this spectrum work in practice.

Figure 1-2: The Financing-Paradigm Spectrum



For equity investors, some Real World Contracts — for example, a concert revenue-share contract — are driven by a single event, so a single contract naturally carries higher risk, but with correspondingly greater

return potential. Even when an equity investor enters NUMA carrying over stock-picking logic, capital should not be concentrated on a small number of high-elasticity contracts; a highly diversified portfolio should be built instead: a large number of such contracts are held, a position cap is set on each, and single-contract exposure is kept at a modest ratio. Once the portfolio is sufficiently diverse and each single exposure is controlled, the event-specific risk of any one contract is diversified at the portfolio level, and the whole may become an equity-style opportunity suited to the investor's Sharpe-ratio target.

For debt investors, the path is exactly the reverse. A debt investor first selects contracts that are capped in returns and with cashflow character closer to fixed income instruments, while, at the Transaction Contract level, bids at a lower ITV. A low ITV means the investor participates at a lower proportion of the contract's value, rendering a thicker cushion and fuller downside protection. When many such contracts are combined, the thick-cushion protection is further enhanced by diversification, enabling the assembly of high-quality, fixed-income-style opportunities at various Sharpe-ratio levels being pursued.

One moves toward high risk-return elasticity and high diversification; the other toward a thick cushion and low ITV — the two kinds of investors, on the same map, find their own positions with their own methodologies and preferences.

1.3 Why Now

The obstacle for the actual built of the third paradigm has not been the lack of legal framework. Contract law has two thousand years of history, but just long lacked the means to act and the infrastructure it can be applied for CBF. What was truly missing, therefore, was the infrastructure to support the operation of this market. The digitalisation revolution supplied the verifiable raw material for such market. The digitalisation of payment systems opened up the entire economy's recording network — every receipt at a restaurant, every subscription charge at a SaaS company, every kilowatt-hour billed by a charging-post operator can now leave a traceable, verifiable digital trace. For the first time, the cashflow of Real World Contracts became capable of being continuously recorded, read and analysed. The artificial intelligence revolution supplied the capacity for continuous processing. Contracts are vast, fragmented and non-standardised; analysing, coding and matching them one by one with human labour is prohibitively costly. Artificial intelligence makes it possible to continuously scan vast numbers of non-standardised contracts, code their characteristics in a structured way, dynamically update contract profiles and support portfolio optimisation. For the first time, the processing cost per contract may fall to a level in line with the contract's value.

With the two revolutions combined, the third paradigm has gone from conception to something that can actually be built: contract law, at the last miles of the economy, moves from law without means to law with means, while securities law finds new vitality in a newly investable space.

1.4 The Essence of the Problem: A Lack of Market Infrastructure

The reason finance has long failed to reach the last miles of the economy is not a shortage of funds, insufficient market willingness, or a lack of value in those previously unfunded economic activities. It is the absence of a market infrastructure that allows contracts to be seen, understood and invested in by mainstream capital. Without a common language, contracts cannot be accurately described; without a common index, they cannot be effectively retrieved; without a continuous updating mechanism, they cannot be reliably understood. What NUMA sets out to supply is precisely this long-missing infrastructure.

Chapter 2 — Who We Are, and What Our Mission Is

The mission of NUMA (Micro Connect New Markets) is to let contracts and investors discover one another. To fulfil this mission, NUMA does only three things — draw the map, set the coordinates, provide the cockpit: describing contracts in a unified language, enabling comparison between different contracts, and allowing investors to discover the opportunities suited to them and exercise their own investment judgment.

Beneath this mission lies a more fundamental question: who we are, what role we play in this market, and where our boundaries lie in relation to the traditional financial markets, licensed intermediaries and other market participants. The answer determines NUMA's institutional positioning, and determines the operating principles and compliance foundation the market has followed from its inception.

2.1 Initial Designer and Drafter of the New Market Standard and the Master Protocol

Micro Connect publishes this White Paper in its capacity as the initial designer of the NUMA new market standard, and as the initial drafter and proposer of the master protocol framework. We designed this standard and put forward NUMA's preliminary framework — including the market structure, the protocol system, the product architecture, the coordinate system, the cockpit mechanism and the relevant legal foundation. These are not the final scheme of a closed system, but an initial design oriented toward open market-building — a base framework for market participants to discuss together, refine continuously and evolve in the open.

Micro Connect's position within NUMA is that of designer and builder of market infrastructure. We connect the issuer side and the investment side: designing the standard, drafting the protocol, drawing the map, defining the coordinates, providing the cockpit.

We design a standard so that the issuer side and the investment side of the contract world can understand and connect with one another in the same language. We draft a master protocol that sets out the rights and obligations, data requirements and operating rules among participants. We draw a map so that every contract has its own position within a unified system. We define a set of coordinates so that different contracts can be understood, compared and analysed. We provide a cockpit so that investors can seek out the direction suited to them on the basis of their own preferences. What NUMA builds is an infrastructure that allows the contract world to be understood, connected and discovered.

2.2 A Provider of Market Infrastructure: Platform, Tools and AI Capability

NUMA not only proposes a market standard; it also provides the infrastructure that supports the operation of that standard. The contract world is highly fragmented, non-standardised and dynamically changing. In the past, for lack of low-cost, high-efficiency processing capability, a large number of existing contracts could not be systematically described, compared and connected. The development of artificial intelligence has, for the first time, made it possible to solve this problem at scale in a cost-efficient manner. Through its platform, tool system and AI capability, NUMA turns the reading, structuring, analysis, profiling and continuous updating of contract information into an executable process.

Within this, the Coordinate Positioning Engine and the Portfolio Optimization Engine are important components of the infrastructure. The goal of the Coordinate Positioning Engine is to give a contract, however small or fragmented it may be, and wherever it is, an understandable positioning range on the NUMA Sharpe Map. The goal of the Portfolio Optimization Engine is to aggregate scattered contract assets efficiently into portfolios optimised to match the investor's objectives. Together the two engines put fragmented contracts onto the map and optimise them into portfolios that better meet investors' needs.

However, providing infrastructure does not automatically mean becoming a trading participant in the market. What NUMA provides are labels, a map, coordinates and a cockpit, not trading, fund management or

investment decisions. NUMA connects participants at two ends: on the issuer side, entities in real economic activity that hold the cashflow interests of Real World Contracts; on the investment side, the licensed financial institutions that act for institutional and professional investors meeting the requirements of the applicable law. NUMA provides the infrastructure in the middle, so that the two sides can understand and discover one another under a unified standard.

2.3 What We Are Not

The previous two sections answered “what we are.” Equally important is to answer “what we are not.” Clear boundaries are the foundation of market trust.

NUMA is not an exchange. We do not perform an exchange’s traditional function of organising trading. We do not maintain an order book. We are not responsible for matching trades, and we do not perform clearing and settlement.

NUMA is not a broker or dealer. We do not place orders for clients. We do not match buyers and sellers. We do not engage in proprietary trading, and we do not hold contract positions.

NUMA is not a seller or an investment adviser. We do not package contracts for contract owners seeking funding or provide value endorsement for them. We do not recommend specific contracts to investors, provide individual investment advice, or make final investment judgments for investors.

NUMA, wherever possible, does not participate in the movement of funds. Custody of funds, execution of trades and related financial services are undertaken by licensed institutions that meet regulatory requirements.

In summary, we design the standard, draft the protocol, draw the map, define the coordinates, provide the cockpit. Trading, fund management and investment decisions are completed by market participants and licensed institutions under the applicable rules. We connect the market but do not replace it; we provide cognitive tools but do not replace participants’ judgment.

2.4 Why Us: Our Position as Early Practitioner and Initial Sponsor

A natural question is: why should Micro Connect be the one initiating the building of NUMA? Instead of holding any special status, the reason lies in Micro Connect having the long accumulated experience practicing the proposed paradigm — experience that, though it began in a single market, has been set to service global market from the very beginning.

Past practice has brought Micro Connect face to face with a large number of Real World Contracts and their cashflows, giving us a deep understanding of the most central problems in building this market: how to describe highly heterogeneous contracts in a unified language; how to establish a trustworthy cognitive framework in a non-standardised environment; how to use technological capability to lower the cost of processing at scale; and how to establish clear boundaries in an open market. This practical experience forms an important foundation for NUMA’s institutional design.

But practical experience is only a starting point. Building an open market requires the joint participation of issuers, investors, intermediaries, the broader ecosystem, and many other market participants. Micro Connect’s role within NUMA is therefore that of initial sponsor and builder. To sponsor means to take on the responsibility of the first step of building, and to provide the initial framework and practical experience; but the market’s true vitality will only come from the joint participation and continuous refinements of all participants.

What NUMA seeks to build belongs to no single institution: it is an open infrastructure that the market can all use and one that evolves continuously.

Chapter 3 — NUMA's Positioning and Structure

3.1 NUMA's Positioning as a Protocol

NUMA (Micro Connect New Markets) is the overall name of the market infrastructure described in this protocol, encompassing the complete market architecture — the coordinate system, the ledger, the algorithmic engines and the governance mechanism. It is a market arrangement with the protocol at its core, order as its guide and discovery as its function. Its basic purpose is to build, for the cashflow interests carried by Real World Contracts (RWCs), a unified language of expression, rules of registration, methods of identification and pathways of participation — so that contract-based opportunities, originally scattered across the real economy, can enter a shared framework in which they can be registered, classified, located and discovered.

The philosophy — “achieving connection through a translating-mechanism in the middle without altering the original systems of the two ends” — is in line with the Hong Kong Exchange's Connect programmes. Shanghai-Hong Kong Stock Connect, Shenzhen-Hong Kong Stock Connect and Bond Connect all let two different markets serve one another through a clearing-and-settlement mechanism, without changing either market's own rules. This kind of interconnection is not limited to two different legal worlds; it also applies across jurisdictions, and NUMA's design has been multi-jurisdictional from the outset. NUMA does the same thing: the issuer side continues to use contract law, the investment side continues to use securities law, and through mechanisms such as the Protocol Contract Certificate (PCC) and the NUMA Sharpe Map, NUMA enables two different legal worlds to connect without changing the rules of either.

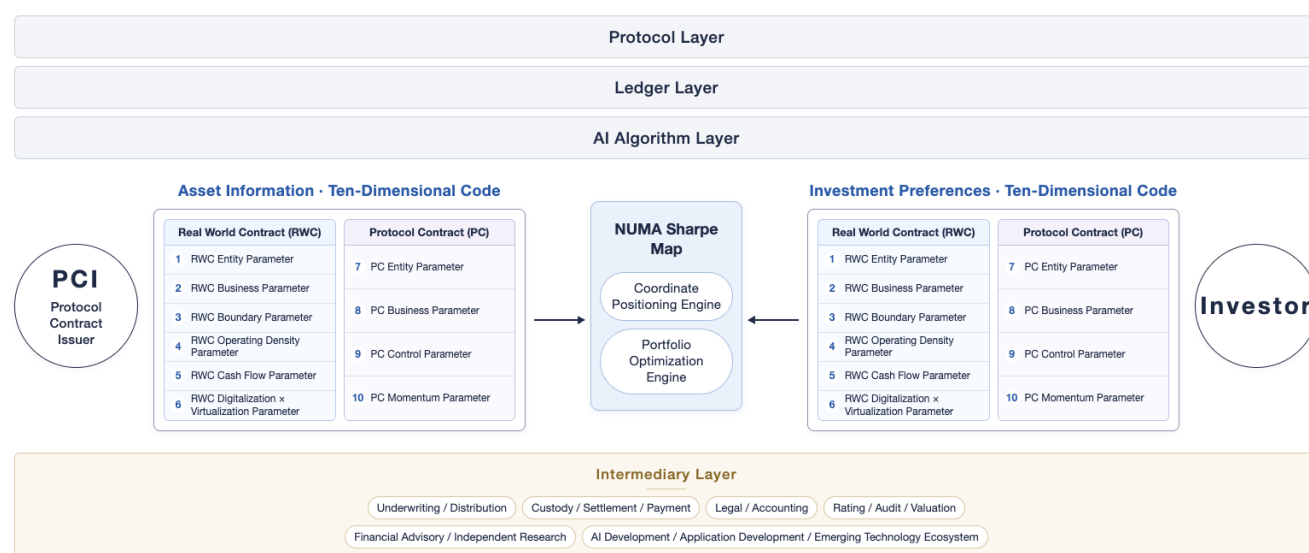
NUMA provides a shared market order, maintains a unified language, and brings about the mutual discovery of contracts and capital under conditions that are clear, readable and searchable.

In this White Paper, “NUMA operator” refer to the proposed role of the market-infrastructure provider under the NUMA protocol framework. The entity holding that role and the boundaries of its responsibilities will be identified and disclosed in the formal protocol documents.

3.2 NUMA's Market Structure: The Internal Working Layers and the External Participation Layer

The starting baseline of NUMA's market structure is the smallest certificate the investor ultimately holds — the Protocol Contract Certificate. It comprises two parts: the internal working layers that carry the market's core functions, and the external participation layer that provides financial execution and services.

Figure 3-2: NUMA's Market Structure



The internal working layers comprise three layers, each with its own role: the Protocol Layer defines what the rules are, the Ledger Layer records what actually happened, and the AI Algorithm Layer helps determining who should meet whom.

The first layer is the Protocol Layer. It carries the basic norms on which the market operates, and the vehicle of contractual relationships. It covers the three-tier relationship between the Real World Contract, the Protocol Contract (PC) and the Transaction Contract, forming the unified basis for the entire market's rules and the expression of contractual rights. Without the Protocol Layer, the market has no common language; without a common language, none of the subsequent registration, bookkeeping, screening and participation is possible.

The second layer is the Ledger Layer. It carries participants' registration, bookkeeping and payment functions, making an objective record of the market's various activities and cashflows. The daily recording of Projected Cash Flow (PCF) and Actual Cash Flow (ACF), the locking of the Investment-to-Value ratio (ITV) and Yield, the calculation of contract-level caps, and the bookkeeping of the portfolio repayment rhythm — all number-related calculation and recording is completed at this layer. The Ledger Layer has five sub-layers beneath it, each with its own role.

The first is the Contract-Registration Sub-Layer. It carries the five layers of registration information a contract brings when it enters the market: Real World Contract information (RWC), Protocol Contract information (PC / PCI), Actual and Projected Cash Flow (ACF / PCF), PCC Offering Terms, and offer dimensions (ITV + Yield). From the moment a Protocol Contract is registered, its base data is booked at this sub-layer as the raw input for all subsequent calculation and updating.

The second is the Ten-Code Updating Sub-Layer. Taking the Contract-Registration Sub-Layer's data as input, it continuously computes and updates the ten contract-dimension coordinates of the Ten-Dimensional Code. As ACF data arrives daily, the Momentum Parameter (growth trend, cashflow volatility) refreshes automatically, and the coordinate range converges accordingly. Material changes reported by the issuer also trigger a recalculation of coordinates at this sub-layer. This is the engine that moves a contract's profile from static registration to dynamic updating.

The third is the Portfolio-Registration Sub-Layer. It records the state of the portfolio an investor builds on the basis of the Ten-Dimensional Code coordinates, including the registered holder of each Protocol Contract Certificate, the weight distribution of the contracts within the portfolio, the portfolio-level total ITV and the repayment-rhythm arrangement. Registration of a single contract answers what this contract is; portfolio registration answers what this investor holds.

The fourth is the Repayment-Progress Tracking Sub-Layer. It tracks, on a daily basis, the actual repayment progress of each Protocol Contract, records the dynamic change between recovered value and remaining value, computes Performance Progress and compares it against Projected Cash Flow to generate deviation signals. Repayment progress is both the data source for the Momentum Parameter and the basis for the bookkeeping of the portfolio repayment rhythm.

The fifth is the Delivery-Instruction Sub-Layer. Based on the Performance Progress tracked in the fourth sub-layer, and on the ITV, Yield and related rules locked in at matching, when the portfolio reaches a repayment milestone — when a payment is due, when maturity is reached, or when the return has been achieved under the rules — this sub-layer generates and issues the settlement instruction. The instruction triggers licensed custody and settlement institutions to execute the corresponding fund transfer and ledger update. Once issued, a delivery instruction cannot be altered; its execution result flows back to the Contract-Registration Sub-Layer and the Portfolio-Registration Sub-Layer, completing a closed loop.

The five sub-layers are connected from the bottom up: the Contract-Registration Sub-Layer books the raw data, the Ten-Code Updating Sub-Layer converts it into the language of coordinates, the Portfolio-Registration Sub-Layer records the investor's portfolio-building, the Repayment-Progress Tracking Sub-Layer continuously tracks actual performance and issues a signal at each repayment milestone, and the Delivery-Instruction Sub-

Layer issues the settlement instruction at the portfolio-level repayment or maturity milestone to complete the settlement bookkeeping. Additionally, the central ledger has plans to store trade records on-chain, so that transactions and state changes that have already occurred can be publicly traced and independently reviewed.

The third layer is the AI Algorithm Layer. It carries the collection, maintenance, updating, indexing and screening of asset information. Its role is to standardise, structure and make searchable the information scattered across Real World Contracts, turning a vast number of contracts that cannot be directly read into structured information across ten dimensions, enabling investors to browse, compare and understand them. At this layer, AI is an assisting capability within the system; AI does not predict the future, it only describes the past and the present by reading and compiling a large amount of data. It performs the functions of organising, translating, prompting and screening, but does not take on the investment conclusion itself.

Beyond the three internal working layers, NUMA also contains an Intermediary and Ecosystem Layer. It is composed principally of six kinds of ecosystem service provider:

Global licensed brokers and dealers, responsible for investor market access and trade execution.

Global custodian banks and clearing institutions, carrying the basic functions of fund custody, clearing and payment.

Global law firms and accounting firms, providing legal-compliance and financial-attestation support.

Rating, audit and appraisal institutions, providing independent evaluation of assets and projects.

Financial Advisors and independent analysts, providing professional advice at the investment-decision level.

AI developers, application developers and the emerging-technology ecosystem, supporting the technical evolution of the platform and innovative applications.

The external participation layer is the network of basic services on which NUMA's market operation depends.

3.3 NUMA's Contract Structure: Real World Contract, Protocol Contract, Transaction Contract

An asset that can be invested in on NUMA must have a three-layer base contract structure — the Real World Contract, the Protocol Contract and the Transaction Contract, collectively called the NUMA Contract. The three layers are clearly ordered and independent of one another. The Protocol Contract Certificate (PCC) is the smallest booking and holding unit of the Transaction Contract. One PCC corresponds to one Transaction Contract, and it is the atom of the whole system.

Real World Contract (RWC). The Real World Contract is a contract that already exists in the real world and is being performed in the ordinary course of business — a lease, a service contract, a revenue-share agreement, an operating contract — with a counterparty, a term, an amount and a payment frequency, generating real cashflow every day. The parties to the Real World Contract are the Protocol Contract Issuer (PCI) and the underlying asset party (for example, a shopping mall, a chain headquarters, a franchise headquarters or an equipment operator). The Real World Contract records the original rights and obligations between the two in relation to the underlying asset. The core principle here is that a contract is not required to change itself in order to enter the financial world; it stays as it was, which minimises the entry barrier and thus is accessible to an almost unrestricted universe of contracts. A Real World Contract has two return types: Fixed-income-like (a ceiling on return; debt-like in character) and Equity-like (return floats with the underlying performance without ceiling; equity-like in character). The party opposite to the contract-right holder is called the Real World Contract Counterparty (RWCC).

Protocol Contract (PC). The Protocol Contract is the crucial link that brings the cashflow interest carried by a Real World Contract into the market. A Real World Contract cannot enter the market directly; the party that holds the relevant interest entitlement and has a financing need — the Protocol Contract Issuer (PCI) — must

first sign a Protocol Contract with the NUMA operator. Under the Protocol Contract, the issuer agrees to bring the cashflow interest it enjoys or controls under a Real World Contract into the NUMA rules system, and to accept the rules on listing, information disclosure, data updating, cashflow pass-through, bookkeeping, contract-level caps, default handling and dispute resolution. There is no consideration between the issuer and the NUMA operator at signing, and the NUMA operator does not owe the issuer any current payment obligation; only when an investor signs a Transaction Contract and actually commits funds does the commercial flow of funds and obligations become active. One Protocol Contract can correspond to one or more Real World Contracts. Depending on market appetite, the issuer can choose to list contracts one by one or in an aggregated package; the choice is the issuer's, but in either case, when presented to investors, the atomic unit is always the PCC. As the party closest to the Real World Contract, the issuer has already borne the underlying commercial risk and is the first to absorb the relevant risk and to bear the first layer of loss. It brings the financeable interest to market under the Protocol Contract, and may retain a certain portion for itself and not sell it, so that its interests stay aligned with those of investors.

Transaction Contract (TC). The Protocol Contract Certificate (PCC) is the specific form of the Transaction Contract, and also its minimum booking and holding unit, with a fixed face value of one thousand. Once an investor selects a specific PCC, each PCC corresponds and map to one Transaction Contract. The Transaction Contract, based on the relevant Protocol Contract and the NUMA rules system, sets the investor's PCC, ITV, Yield, Completion Terms, contract-level cap, repayment bookkeeping and exit arrangements. Under the Transaction Contract and the NUMA rules it incorporates, the investor obtains the right to the pass-through of cashflow and other holder rights, and bears the corresponding investment risk and contractual obligations.

The PCC is used only to record the investor's holding under the relevant Transaction Contract; it does not, of itself, constitute a depositary receipt or a publicly offered security. Its treatment as a security under a specific jurisdiction is a matter for licensed intermediaries to assess and handle under the applicable regulatory framework. The subscription, holding, transfer, splitting, repayment, contract-level cap treatment and exit for a PCC are all booked and executed in accordance with the Transaction Contract, the Completion Terms and the protocol rules. An investor can hold multiple PCCs and, in accordance with the applicable rules, form a PCC Portfolio (PCCP).

The example of a shopping mall and a restaurant shows how each party's role changes across the three-contract structure.

At the first layer, the Real World Contract, the mall first provides the venue and is therefore the value-providing party (Party A). The restaurant repays with future rent and revenue share and is therefore the cashflow-delivering party (Party B). At this layer, the distinction between Party A and Party B lies in who provided value first.

At the second layer, the Protocol Contract, a Real World Contract cannot enter the market by itself; the mall, which was Party A under the Real World Contract, can act as the issuer (PCI) and sign a Protocol Contract with the NUMA operator. The mall has already provided the venue, borne the cost and taken on risk first. At this layer it moves from being Party A under the Real World Contract to being the party under the Protocol Contract that owes the financing obligation, brings its accumulated cashflow interests into the financing arrangement set out in the Protocol Contract, and bears the first layer of loss accordingly. It should be reemphasised that only a party that has provided value first and borne risk first under the Real World Contract is qualified to enter a Protocol Contract as the issuer.

At the third layer, the Transaction Contract, when an investor takes part in the contract interest tied to a given Protocol Contract, they select the mall as PCI and take a single PCC (or several PCCs, forming a PCCP) and sign the corresponding Transaction Contract. The Transaction Contract records the investor's minimum holding share in the form of PCCs. The PCC is not a separate layer of contract stacked on top of the Transaction

Contract; it is the unitised form, the minimum bookkeeping unit and the holding unit of the Transaction Contract.

The three-layer architecture is deliberately decoupled: the Real World Contract retains its original contract form in the real economy; the Protocol Contract defines the issuer's listing and its acceptance of the rules; the Transaction Contract and the PCC define the investor's holding rights in respect of a specific PCC, the repayment path and the risk borne.

Part Two — Market Philosophy

Applying First Principle of Risk-Adjusted Return to The World of Contract

Three Tasks, One Objective, One Means

Chapter 1 — Drawing the Map: The NUMA Sharpe Map

1.1 NUMA Follows the Philosophy of Sharpe Theory

For a financial market to operate effectively, it first needs a common language of risk and return. The analytical methods for different assets may differ, but every market must in the end answer the same question: what is the relationship between the expected return of an asset and the risk it bears.

In 1966, Professor William F. Sharpe put the investor's most basic instinct into a single formula:

Sharpe Ratio = (Portfolio Return – Risk-Free Rate) ÷ Return Volatility.

Here, portfolio return reflects the gain achieved by an asset or portfolio over a given period. The risk-free rate represents the baseline return obtainable without bearing risk. Return volatility, usually measured by the standard deviation of returns, expresses the degree to which investment outcomes fluctuate around their average. The significance of this formula is that it places return and risk within the same comparative framework. Different assets, different strategies and different portfolios become comparable only on a risk-adjusted basis. Asset pricing, portfolio management, index investing and risk budgeting all bear the trace of the Sharpe spirit.

But over the past sixty years, the Sharpe spirit has mostly been applied to the equity-and-debt soil, which has public prices, continuous trading and observable volatility. Beyond that soil lies the contract world — occupying a greater share of the real economy, made up of fragmented, micro, non-standardised commercial contracts performed every day at the last miles of the economy without observable public price. The Sharpe spirit has not previously reached the contract world. It is not that these contracts do not matter, but that technology could yet to enable it and market structure could yet to connect. The contract world had been waiting for a new soil.

The Sharpe principle need not share the same risk indicator across different markets or asset classes. The equity market has high-frequency prices and long time series, so volatility (σ) has become its most commonly used risk proxy. The everyday language of the debt market is credit spread, expected loss, probability of default, loss given default and credit rating. These metrics care more about whether and how much a cashflow will occur and be recovered, than about how the secondary market price movements.

What Professor Sharpe left behind is not a strict adherence to any single metric, but a more basic principle: return must be understood with risk. The contract world has to answer the same question; it simply needs a denominator in the Sharpe ratio that better fits the data it can obtain, the risks it can observe and the analytical habits of its investors.

This is exactly the principle NUMA adopts. Millions of Real World Contracts in many different forms — food-and-beverage outlets, supply-chain payment terms, SaaS subscriptions, charging-post operations and other commercial-contract arrangements — are small in amount, scattered, vast in number and highly heterogeneous, and are hard to bring directly into the analytical frameworks familiar to the traditional financial markets. NUMA carries over the first principle of Sharpe theory: Contract-Based Financing (CBF), though it introduces a new asset form, still has to answer the same question — what exactly is the relationship between the return of a contract and the risk behind it. The NUMA Sharpe Ratio takes up the core idea of Sharpe theory on this very question and applies it to the world of contract cashflow.

The role of the NUMA Sharpe Map is to place contracts that were originally hard to compare into a common map, so that they can be located, compared and further combined within the same risk-return system. What NUMA sets out to do is to prepare the soil of the contract market and let the Sharpe spirit be great once again here.

1.2 Risk in the Contract World Is Hard to Measure by Volatility

The risk measurement of the traditional Sharpe ratio relies on continuous market prices and return volatility (σ). Assets such as stocks, bonds and funds usually have observable price or net-asset-value series, so volatility can be measured by the standard deviation of returns. Volatility has been used in the stock market for decades; it is the measure that grew from that soil.

But Real World Contracts (RWCs) cannot enter this language naturally, for four measurement difficulties that are hard to overcome.

Return is hard to observe. The returns on stocks and bonds have continuous market prices as a basis for observation; investors can read price movements and dividends or interest at any time. The returns of a NUMA Contract come from the cashflow generated in the course of the actual performance of a Real World Contract. Whether that cashflow occurs, when it occurs and how much it is depend on the day-to-day operation of the underlying business, with no real-time quote to rely on. The return is embedded in the contract and can only be observed when the cashflow arrives.

Risk is hard to quantify. Traditional finance often measures risk with price volatility, because prices move continuously and can be measured statistically. The risk of a NUMA Contract comes mainly from whether the underlying cashflow will occur, whether it is stable, whether it can be read, whether it can be passed through, and whether it is concentratedly affected by the same class of risk factor. This is a structural risk that a traditional volatility measure struggles to capture.

Objects are hard to compare. Stocks can be grouped by industry, market capitalisation and valuation multiple; bonds by rating, duration and issuer. But Real World Contracts in the millions are each different: different industries, different sizes, different cashflow frequencies, different degrees of digitalisation, different underlying credit, different issuer control capability, different pass-through pathways. Without a common language, they cannot be compared, retrieved or combined, and can hardly form a market in any true sense.

Information is hard to sustain. A contract's state moves over time. The underlying business may evolve, the issuer's control capability may change, cashflow may deviate from projection, and credit conditions adjust over time. A one-off assessment is not enough to reflect a contract's continuous state, yet keeping a continuous, verifiable flow of information on small contracts in the millions is itself a difficult thing.

These four difficulties together mean that NUMA cannot simply borrow the traditional financial risk-return framework, but has to build a new map for contract cashflow.

1.3 The Contract World Needs a New Map — the NUMA Sharpe Map

What the NUMA Sharpe Map provides is a method for understanding the risk-return relationship of contract cashflow: roughly which risk-return region a contract, or a portfolio, sits in. As Actual Cash Flow data continuously arrives, the relevant region can gradually converge, move or expose new risks. Only once this map is built can the next step follow: placing every NUMA Contract onto the map and forming a continuously updatable coordinate range.

This map carries over Sharpe theory's basic logic of risk-adjusted return, translating dimensions such as contract structure, cashflow coverage, credit constraints, control capability, pass-through reliability, portfolio correlation and data confidence into risk coordinates, and expressing the return coordinate through factors such as Projected Cash Flow (PCF), Actual Cash Flow (ACF), Investment-to-Value (ITV) and Yield. With this map, different contracts gain the basis to be compared, located and combined.

The NUMA Sharpe Map uses a return-risk coordinate system. Borrowing the language of geographical coordinates, return can be understood as east longitude: the further east, the higher the expected return. Risk can be understood as north latitude: the further north, the greater the risk. The ratio of the two is the NUMA Sharpe Ratio, the measuring scale on this map.

The unit used to measure risk on the north-latitude axis, the Residual Value Impairment Rate (RVIR) — is one of the core metrics proposed in this White Paper. It is not traditional volatility, but the new denominator NUMA is exploring for the Sharpe ratio in the new soil of the contract world. Its full definition and verification method are set out in Chapter 4 of this Part and will be continuously refined in subsequent versions.

1.4 How the Debt and Equity Side Each Approach RVIR

The Residual Value Impairment Rate (RVIR) is the same measure shared by debt investors and equity investors when it comes to risk for contract-based financing, but they approach it by different routes.

For the debt investor, this is a familiar language. They are already used to asking three questions: can the cashflow be recovered, how much of the remaining value might be lost over the remaining term, and how much can be recovered once a loss occurs? All RVIR does is take that framework, previously applied at the level of the issuer's overall credit condition, down to the level of a single contract's cashflow. In other words, the debt investor does not need a new language. They simply apply a familiar one at a finer granularity.

For the equity investor, the shift is greater. The equity world is used to measuring risk with σ (volatility), but σ captures swings in the market's pricing of future expectations about an asset, rather than the potential erosion of the cashflow behind it. One operates at the level of price, the other at the level of operations. RVIR asks the equity investor to shift attention from price fluctuations back to what is actually happening in the business itself.

Whether debt or equity, once the investor enters the NUMA Contract world, they face the same denominator for the Sharpe ratio: RVIR. The debt investor moves from the issuer's credit summary to the contract cashflow itself. The equity investor moves from market price to the economic activity itself. Different routes but arriving on the same map.

Chapter 2 — Setting the Coordinates: The Ten-Dimensional Code and the Coordinate Range

The reason Real World Contracts are previously hard to bring into the traditional capital markets is that they are all different: different industries, sizes, cashflow frequencies, degrees of digitalisation, underlying credit, issuer control capability and pass-through pathways. Without a common language, they cannot be compared, retrieved or combined. Through the Ten-Dimensional Code, NUMA forms a coordinate range, a description of the contract's nature and risk-return profile, for every Protocol Contract (PC) and builds a continuously updatable contract-profiling system. This is also one of the most fundamental differences between NUMA and a traditional rating agency: a rating agency gives a letter, while NUMA gives a range.

2.1 What Exactly the Investor Is Buying: The PCC Portfolio (PCCP)

What the map attributes coordinates to is the Transaction Contract — only the Transaction Contract carries a price, an Investment-to-Value ratio (ITV) and a face value (Value), and it is what investors can actually choose and subscribe for. The standardized expression unit of the NUMA Coordinates is the Protocol Contract Certificate (PCC).

On NUMA, RWC issuers bring real world contract interests into the market through Real World Contracts (RWCs). The platform then places those interests into a Protocol Contract (PC) and fractionalises them into PCCs. Investors identify, compare and combine contract interests through PCCs, and sign Transaction Contracts. The PCC therefore becomes the smallest market unit shared by the issuers and investors.

Behind every Transaction Contract or PCC sits one Protocol Contract, and behind every Protocol Contract sit one or more Real World Contracts. The RWC supplies information such as the underlying commercial activity, the source of cashflow, the cashflow parameters, coverage capacity and underlying credit. The PC supplies information such as the issuing entity, control capability, pass-through capability and momentum change. Together they form the underlying information structure of the Transaction Contract.

On this basis, the two offer dimensions — ITV and Yield — further shape the Transaction Contract's position on the NUMA Sharpe Map. The RWC and PC provide structured information about the Real World Contract entity and the Protocol Contract entity; ITV and Yield provide the market conditions between issuer and investor. The two kinds of information together form the NUMA Coordinate range of a PCC.

The NUMA Coordinate is therefore formed around the PCC. The PCC is the standardised expression unit for the issuer's contract interest once it has entered the market, and the basic unit through which investors understand and combine contract interests. Behind its coordinate range, one can trace downward to all the related information of the PC and the RWC.

2.2 How a Contract Is Positioned on the Map: The Ten-Dimensional Code and Contract Registration

Placing a NUMA Contract (the collective term for the three contract layers) on the NUMA Sharpe Map requires a common input. Such input NUMA uses is the Ten-Dimensional Code together with contract registration. The ten contract dimensions answer what kind of contract it is. Contract registration answers who stands behind the Real World Contract, who stands behind the Protocol Contract, and on what terms it circulates on the market. Together, one more quantitative and the other more qualitative, they jointly form the coordinate range of a Protocol Contract on the NUMA Sharpe Map.

2.2.1 The Ten Contract Dimensions: A Continuous Profiling Instead of a One-Off Rating

The ten contract dimensions (the Ten-Dimensional Code) form NUMA's standardised descriptive framework for a set of NUMA Contracts, so that the market can continuously read a contract: what business it comes from, how its cashflow is generated, where the underlying risk lies, whether the issuer can keep the Real World Contract performing, whether the cashflow can be transmitted smoothly, and whether historical performance supports the current judgment.

Dimension 1 · RWC Entity Parameter.

This dimension describes the basic attributes of the entity behind the RWC (the RWCC), composed jointly of Entity Scale and Credit History, each rated 1–9 from low to high. Entity Scale answers “how large is this entity”; Credit History answers “what is this entity's past performance record.” The Entity Parameter does not directly equal safety — a large scale does not mean nothing will go wrong, and a small scale does not mean an entity is unreliable — but it provides a foundation for understanding an entity's external constraints, resource scale and credit background.

For example: a corner grocery store is small in scale, but the owner has been running the store on this street for twenty years and has never delayed payment to anyone. The coordinate might land around (1, 9) — low Entity Scale, high Credit History. This example is only to illustrate what the parameters mean, and does not imply that small-scale-plus-high-credit is necessarily better than any other combination.

Without this dimension, the market would not even know who stands behind a contract — and the identity of the entity is the premise for all subsequent analysis.

Dimension 2 · RWC Business Parameter.

This dimension describes the scale coefficient and Leverage Multiple of the RWC, each rated 1–9 from low to high. The former is calculated from Business Scale / Contract Scale and answers “how large the business is overall and how large the contract brought for listing is”; the latter, Leverage Multiple, answers how many other layers of financing this entity is carrying at the same time. A large business with very high external leverage and a small business with very low leverage have completely different risk structures.

For example: a chain group with annual revenue of billions raises capital through bank loans, bond issuance and equity financing at the same time, but this time only lists the contract of one of its stores. The coordinate might land around (9, 9) — large Business Scale / Contract Scale and also high Leverage Multiple. This example is only to illustrate that the two sub-parameters can both take high values at the same time, and does not imply that such a combination is necessarily better or worse.

Without this dimension, the market would know who the entity is, but not how large the business is or how much other capital responsibility the entity is carrying — and the leverage structure directly affects the priority and shock-absorbing capacity of the cashflow.

Dimension 3 · RWC Boundary Parameter.

This dimension measures the RWC cashflow's capacity to cover the Protocol Contract's return obligation, and the degree of continuous match between them. It is composed jointly of Income Coverage and Time Coverage, each rated 1–9 from low to high. Income Coverage looks at whether the underlying cashflow scale can support the return obligation under the Protocol Contract; Time Coverage looks at whether the duration of the underlying cashflow covers the investor's recovery cycle. It answers: is the underlying cashflow enough, and is there a mismatch of duration.

For example: a factory generates cashflow in the tens of millions per year, but only brings the contract of one production line up for financing — the underlying cashflow far exceeds the listed return obligation, and the contract term is much longer than the performance requirement. The coordinate might land around (9, 9) —

extremely high Income Coverage and extremely high Time Coverage. This example is only to illustrate that both coverage ratios can be adequate at the same time, and does not point to the adequacy or otherwise of any specific contract.

Without this dimension, the market can see the cashflow numbers but cannot judge whether those numbers are adequate relative to the listed return obligation — and coverage capability is the first buffer for the Residual Value Impairment Rate.

Dimension 4 · RWC Operating Density Parameter.

This dimension measures the traffic intensity and capital density of the commercial activity underlying the RWC, composed jointly of Traffic Intensity (TI) and Capital Density (CD), each rated 1–9 from low to high. Traffic Intensity measures the traffic scale and stability of the underlying commercial activity — the denser and more stable the traffic, the more stable the underlying revenue; Capital Density measures the intensity of upfront investment in the underlying commercial activity — the heavier the upfront investment, the faster fixed costs eat into cashflow once traffic falls. Together they determine how fragile the cashflow is amid economic fluctuation.

For example: a breakfast cart parked at the exit of a tier-one-city subway station sees a torrent of foot traffic every day, but all its equipment is one cart and a few burners. The coordinate might land around (9, 1) — extremely high Traffic Intensity, extremely low Capital Density. This example is only to illustrate that the two sub-parameters can be high on one side and low on the other, and does not imply that asset-light is necessarily better than asset-heavy.

Without this dimension, the market can identify the industry and scale of a contract, but not whether the business's traffic is reliable, whether upfront investment is heavy, or where the break-even point sits — and these are exactly what determine how fragile cashflow is amid economic fluctuation.

Dimension 5 · RWC Cash Flow Parameter.

This dimension describes the time structure of the RWC cashflow, composed jointly of Projected Duration (PD) and Projected Frequency (PF), each rated 1–9 from low to high. Projected Duration answers “how long this stream of cashflow is expected to last”; Projected Frequency answers “how often a cashflow event occurs.” A daily-frequency, short-cycle contract and a low-frequency, long-term, event-driven contract have entirely different characters on the map.

For example: a pop-up shop open for only one week generates cashflow every day — comes fast, goes fast. The coordinate might land around (1, 1) — short Projected Duration, high Projected Frequency. This example is only to illustrate that a rhythm can be both fast and short, and does not imply that a short cycle is necessarily worse than a long one.

Without this dimension, the market would know how large a cashflow is, but not how often it arrives or how long it lasts — and the time structure is exactly what determines the exposure-distribution shape of the Residual Value Impairment Rate.

Dimension 6 · RWC Digitalization × Virtualization Parameter.

This dimension measures the degree of digitalization, machine-readability and verifiability of the underlying RWC cashflow, composed jointly of Digitalization Level (DL) and Virtualization Level (VL), each rated 1–9 from low to high. Digitalization Level answers whether the operations, transactions and cashflow can be stably recorded, tracked and read; Virtualization Level answers whether the business or asset already exhibits the characteristics of being online, having a digital mapping, or virtual operation. It determines whether this contract can be continuously read by AI, rather than being understood only through one-off manual due diligence.

For example: a community convenience store that fully uses QR-code payment, e-invoices and cloud bookkeeping — every transaction has a digital record, but the business itself still takes place offline. The coordinate might land around (9, 1) — extremely high Digitalization Level, very low Virtualization Level. This example is only to illustrate that digitalisation and virtualisation are two independent things, and does not imply that “online” is necessarily better than “offline.”

Without this dimension, the market cannot distinguish which contracts have cashflow that can be continuously tracked and which can only be captured by a one-off manual due-diligence snapshot — and continuous tracking and a one-off snapshot have completely different capabilities for the dynamic calibration of the Residual Value Impairment Rate.

Dimension 7 · PC Entity Parameter.

This dimension describes the identity information of the Protocol Contract Issuer (PCI), composed jointly of Entity Scale and Credit History, each rated 1–9 from low to high. Entity Scale answers “how large is this issuer”; Credit History answers “what is this issuer’s credit record.” The Entity Parameter does not directly equal safety — a large scale does not mean issuance is necessarily reliable, and no prior platform history does not necessarily indicate a problem — but it provides a foundation for understanding the issuer’s external constraints, resource scale and platform-performance background.

For example: a company with sales in the tens of billions lists on NUMA for the first time — enormous in size, but with a large number of adverse credit records and no performance record on the platform yet. The coordinate might land around (9, 1) — extremely high Entity Scale, very low Credit History. This example is only to illustrate that a large entity in a new market still has to build credit from zero, and does not imply that new entrants are necessarily unreliable.

Without this dimension, the market would know what the Real World Contract looks like, but not who brought it into the market — and the identity of the issuer is the starting point for understanding a contract’s external constraints and information verifiability.

Dimension 8 · PC Business Parameter.

This dimension describes the overall business scale and financing leverage structure of the Protocol Contract Issuer (PCI), composed jointly of a scale coefficient and Leverage Multiple, each rated 1–9 from low to high. The former answers the ratio between this issuer’s business scale and its contract scale — how large the overall business is and how large the contract listed on NUMA is; Leverage Multiple answers how high this issuer’s total leverage is across the multiple markets it is financing in at the same time. An issuer of enormous size but with very high leverage, and an issuer of moderate size with very low leverage, provide completely different sources of stability for their listed contracts.

For example: a large group is financing in multiple markets at the same time, has a very large business, but also carries very high overall leverage — this particular listing is only a small slice. The coordinate might land around (9, 9) — large Business Scale and high Leverage Multiple. This example is only to illustrate that large business and high leverage can coexist, and does not point to the reliability of any specific issuer.

Without this dimension, the market would know who the issuer is, but not how large the overall business is or how much other external financing the issuer is carrying — and the leverage structure directly affects where the listed contract sits within the issuer’s overall repayment priority.

Dimension 9 · PC Control Parameter.

This dimension measures the PCI’s actual control capability over the business related to the RWC, composed jointly of Business Control and Control Effectiveness, each rated 1–9 from low to high. The former looks at how deep the relationship between the PCI and the underlying business is; the latter looks at whether the PCI has actual capability for data access, cash aggregation, anomaly intervention and continuous management. It answers: can the PCI keep the underlying business in check.

For example: a brand owner holds full control over its franchisees, from supply chain and pricing to opening hours, and can directly suspend operations of any franchisee that breaches the rules. The coordinate might land around (9, 9) — extremely strong Business Control and extremely high Control Effectiveness. This example is only to illustrate that control can be both deep and effective, and does not imply that strong control is equivalent to low risk.

Without this dimension, the market would know who the PCI is, but not whether the PCI's control over the underlying business is nominal or substantive — and control capability directly determines whether an anomaly in the underlying cashflow can be detected and intervened in time.

Dimension 10 · PC Momentum Parameter.

This dimension describes the changes and stability of the RWC's Actual Cash Flow (ACF), composed jointly of Growth Trend and Volatility, each rated 1–9 from low to high. It does not predict the future; it observes, on the basis of cashflow performance that has already occurred, whether the contract is improving, deteriorating or remaining stable. Growth Trend answers “which direction the Actual Cash Flow is moving”; Volatility answers “how bumpy the process is.” It answers: whether the actual cashflow state of this contract is getting better, getting worse or staying steady.

For example: an internet-famous restaurant's cashflow hits a new high every month, but the gap between its good days and bad days is also getting wider — rises hard, shakes hard. The coordinate might land around (9, 9) — extremely strong Growth Trend, extremely high Volatility. This example is only to illustrate that high growth and high volatility can occur together, and does not imply that high volatility is necessarily bad or high growth necessarily good.

Without this dimension, the market can see static cashflow numbers, but cannot sense which direction they are moving in or how bumpy that movement is — and trend and volatility are important reference signals when investors calibrate the Residual Value Impairment Rate.

Taken together, the ten dimensions form the continuous profiling of a Protocol Contract. They allow the market to read what the contract is, what state it is in, how it has performed historically, and what still needs watching. The two sub-parameters of each dimension form a 9×9 coordinate matrix. Investors can see where the contract sits on each dimension in the cockpit and can also adjust the contribution weights for each dimension. As ACF data inflow continues, the profile keeps updating. As the profile updates, the NUMA Coordinate range gradually converges or moves. The Ten-Dimensional Code is therefore the basic language NUMA uses to understand, update, compare and discover contracts.

2.2.2 The Five Layers of Information in Contract Registration

The ten contract dimensions describe the multi-dimensional analytical reading of the contract itself. In addition, NUMA requires a set of registration information a contract brings when it enters the market — this set of information is the original input for calculating and updating the Ten-Dimensional Code, and is also the data foundation for the market's continuous cognition of a Protocol Contract.

A contract entering NUMA from the real world goes through five layers of registration. Each layer corresponds to an independent information domain in the contract's lifecycle; layer by layer, they together form the complete registration record of a Protocol Contract on NUMA.

Layer 1: Real World Contract Information (RWC Information).

This layer registers the basic information of the Real World Contract (RWC), including the commercial entity to which the contract relates, the type of business and other original terms. It is the first step a contract takes into the market — the market first needs to know: what business this contract comes from, who signed it, and how the cashflow is generated.

Layer 2: Protocol Contract Information (PC Information).

This layer registers information about the Protocol Contract (PC) and its issuer (Protocol Contract Issuer, PCI), including the PCI's identity, the structural arrangement of the Protocol Contract, the control relationship and the pass-through arrangement. This layer answers: who brought this Real World Contract to NUMA, under what structure it is listed, and what relationship the issuer has with the underlying business.

Layer 3: Actual and Projected Cash Flow Information (ACF / PCF).

This layer registers the Protocol Contract's Actual Cash Flow (ACF) and Projected Cash Flow (PCF) data. ACF is the record of cashflow that has already occurred, which continues to be recorded as the contract is performed; PCF is the cashflow projection reported at listing based on the underlying business model, being an evidence-based extrapolation from the contract terms and historical data.

Layer 4: Transaction Contract Offering Terms (PCC Offering Terms).

This layer registers the terms information of the Transaction Contract (TC), including the number of PCCs outstanding, the number sold and the number to be sold. This layer answers: how many PCCs this Protocol Contract has been divided into, and what interest each corresponds to. The information at this layer defines the form of the object the investor ultimately holds.

Layer 5: Offer Dimensions (ITV + Yield).

This layer registers the two parameters submitted by issuers and investors when they quote: the Investment-to-Value (ITV) ratio and the Yield. These two parameters are the core matching variables through which participants on NUMA discover each other.

Investment-to-Value (ITV): On the issuer side, the issuer (that is, the Protocol Contract Issuer, PCI) uses ITV to express the range of financing ratios it can accept. On the investment side, the investor uses ITV to express the ratio of funds they are willing to contribute and the corresponding level of safety cushion. A lower ITV usually means the investor pays at a lower ratio relative to the contract's value with a thicker safety cushion. A higher ITV means the investor is willing to participate at a higher ratio and bear the corresponding uncertainty in pursuit of upside elasticity.

Yield: Issuers care about the cost of funds they can bear; investors care about the return they require. Yield is the return parameter reported by the Protocol Contract Issuer and the investor in the offer dimensions. It is used only for matching, and does not constitute a return commitment, a fixed return, a minimum return or a principal guarantee.

The two offer dimensions may look like just two numbers, but they express the preferences of both issuers and investors. When a issuer places an order, it draws a preference curve: the maximum Yield it can accept at each ITV. This curve marks its upper limit on financing cost. When the investor quotes, they draw their own curve: the minimum Yield they will require to take up the offer at each ITV. That is their return floor. The two curves meet in the coordinate space and are matched under set rules. ITV and Yield are therefore not merely matching parameters; they are also communication tools through which issuers and investors express their respective risk-return preferences in a unified language.

2.3 A Coordinate Is a Range

A common misunderstanding is that once the ten dimensions are fed into a formula, the system can compute a precise coordinate point. This idea does not hold: the future position cannot be precisely determined by past and present characteristics. How a contract will behave in the future, whether the underlying business is stable, whether cashflow arrives as scheduled, whether the issuer continues to perform, and whether market conditions change — all these carry uncertainty. Therefore, the NUMA Coordinate is not a point but a range. It is more like the rainfall region in a weather forecast: with more data and better models, the region gradually converges; but it will never become an absolutely precise point, because the future itself is not a point. This range has size, shape, direction and confidence. The clearer the contract, the more complete the data, and the

more continuous the Actual Cash Flow, the more converged the range may become; the more heterogeneous the contract, the less information available and the shorter the history, the wider the range will be. This is a honest expression to convey that the platform continuously updates its understanding of a contract's position based on the information it already has.

2.4 The Data-Calibration Pathway and Coordinate Convergence

The generation of the Ten-Dimensional Code is assisted by AI, but with a clear boundary. AI's work is to read what has happened and is happening, and turn information scattered across Real World Contracts, Protocol Contracts and ledger records into a readable, searchable and comparable structured profile. AI generates continuously updated observations. Dimension definition, admission rules, anomaly handling, dispute adjudication and key boundaries remain the responsibility of humans. AI is the enabler; humans are the decision-makers. The NUMA Coordinate is one that AI continuously helps the market to organise past and present, so that the coordinate range gradually converges as data accumulates.

Investors should be able to see: whether a contract is currently at the initial-assessment stage, or whether it has already been verified by a period of Actual Cash Flow. The data-calibration pathway can be divided into three layers:

The first layer is the initial-assessment layer. When a Protocol Contract completes registration, the platform forms an initial profile based on contract documentation, issuer information and existing data.

The second layer is the data-verification layer. As the underlying cashflow starts to be continuously recorded, the platform verifies Actual Cash Flow through payment, ledger or data interfaces independent of the issuer.

The third layer is the dynamic-convergence layer. As ACF data accumulates, the coordinate range is gradually adjusted, converged, or exposed to new risks.

In the early stage of the market's operation, most contracts' coordinates will sit between initial assessment and data verification, and confidence will generally be low; this is a stage a new market must go through. NUMA's attitude to this is: honest labelling, continuous calibration and gradual convergence — letting coordinates improve as data improves, and letting confidence rise as time passes. The data flywheel is a capability that has to be gradually built through market operation; only when it truly starts to turn will coordinates move from a preliminary profile to a reliable reference, and from the starting point given by the platform to a conclusion verified by the market itself.

2.5 Contract Mapping and the Transparent Aggregation

The NUMA Coordinate cannot only serve large contracts. If a small contract cannot enter the market simply because it is too small in scale, then “serving the last miles of the economy” will remain a slogan. The basic relationship NUMA adopts is therefore that multiple Real World Contracts can be aggregated into one Protocol Contract.

2.5.1 Bundling Multiple Real World Contracts into One Protocol Contract

Multiple RWCs = One PC

The case where one PC corresponds to one RWC is the simple case of the above relationship. This relationship is adopted so that a large number of small contracts can be expressed by the market. If every small contract had to form its own PC individually, many contracts at the bottom of the pyramid would be too small in scale to bear the cost of entering the market. That would be inconsistent with NUMA's objective of serving the small contracts at the last miles of the economy.

2.5.2 Three Rules of Transparency: Diversity Disclosure, Range Shape, and Cockpit Screening

But bundling multiple RWCs into one PC also brings a new requirement: it must be transparent. A bundled PC must therefore disclose its diversity, including the distribution across industry, region, business type, operator and cashflow source. The shape of the coordinate range must also reflect the heterogeneity of the contracts within it. The more heterogeneous the bundle, the larger and more elongated the range may be; the more homogeneous the bundle, the more concentrated the range may be. At the same time, the NUMA Sharpe Cockpit must support screening by diversity. Investors can express what kind of contract combination they wish to focus on; the platform discloses diversity through the Ten-Dimensional Code, expresses heterogeneity through the coordinate range, and lets investors screen by their own preferences through the NUMA Sharpe Cockpit.

2.6 The See-Through of Re-Bundled Portfolios

When the PCCP that an investor holds is repackaged and used as a new underlying, what the market needs to prevent is that it becomes a black box in a chain of nested combinations. NUMA's principle is: re-bundling must not disable see-through. Every layer must be traceable to the next, and finally to the underlying Real World Contract at the bottom. In other words, if a new Protocol Contract uses an existing PCCP as underlying, it should still preserve the readable information of every bottom-layer RWC in the original portfolio. The Ten-Dimensional Code, the NUMA Coordinate and the ledger record must not be distorted or lost merely because one more wrapper is added. This is the premise under which portfolio re-bundling can stand: the structure may become more complex, but the information must not become more opaque.

2.7 The Issuer's Interface and Market Entry

The Ten-Dimensional Code describes the Transaction Contract itself and encloses information about the Real World Contract and the Protocol Contract, so that a contract can be seen, understood, classified and continuously updated. Contract registration includes five layers of information in total: Real World Contract information (RWC), Protocol Contract information (PC / PCI), Actual and Projected Cash Flow (ACF / PCF), Transaction Contract terms (PCC Offering Terms), and offer dimensions (ITV + Yield). The Ten-Dimensional Code answers "what this contract is"; contract registration answers "what data has been registered for this contract." They connect and together form the basic expression an issuer uses to enter the discoverable scope of NUMA.

Any Protocol Contract that wishes to enter the discoverable scope of NUMA must form a complete, readable Ten-Dimensional Code. A complete Ten-Dimensional Code gives a contract the basis for unified expression, systematic retrieval and market comparison, and enables the contract interest brought by the issuer to be understood and compared by the market in a single language.

After entering the market, continuous readability matters more than one-off submission. The Protocol Contract Issuer must continuously maintain the base fields of the five layers of registration information: when base information does not change, no repeat submission is required; but where a material change affects the contract's readability — for example, a change in the underlying commercial entity, an adjustment in the cashflow arrangement, a change in the PCI's control relationship, or a significant deviation between ACF and PCF — an update should be made in a timely manner. Failure to update in a timely manner does not alter existing historical records, but it will affect the contract's subsequent discoverability status and profile quality. As ACF data continues to arrive, the Momentum Parameters (Growth Trend, Volatility) update automatically, and the coordinate range converges accordingly. This process does not require any action by the issuer, but the quality with which the issuer maintains the first three layers of information directly determines the speed and precision of coordinate convergence.

Coordinates answer the question "where it is." Once a contract completes the five layers of registration, forms a full Ten-Dimensional Code and enters the discoverable scope, the next question turns to the investment side:

what an investor should do on the map once they have these coordinates. The next chapter answers that question.

Chapter 3 — Providing the Cockpit: The NUMA Sharpe Cockpit and Portfolio Optimization

Facing the world of contract cashflow — with millions of fragmented, micro, scattered and non-standardised Real World Contracts — the strong heterogeneity of each contract makes it impossible to select contracts one by one. Traditional active stock-picking or one-by-one bond selection is neither realistic nor necessary here. No rating agency can cover millions of fragmented, micro and scattered contracts. Such assets naturally require a portfolio-based, systematic mode of participation, rather than one-by-one manual screening.

The NUMA Sharpe Cockpit takes on the crucial step after drawing the map and setting the coordinates: turning scattered contract coordinates into an action basis that investors can read, compare and combine. NUMA draws a map, sets a set of coordinates, and provides a cockpit — and then the decision is passed to the Professional Investor. The investor sits in it, reads the dials, turns the knobs and decides how to build the portfolio. Portfolio building is the most natural and most important form of investment. What the NUMA Sharpe Cockpit is designed to solve is exactly how an investor acts on the map: first see the contract clearly, then understand how the coordinate is moving, and finally build a portfolio that matches their own risk-return preference.

3.1 The Coordinate Positioning Engine: Seeing Every Contract Clearly

For an investor to act on the map, the first step is to understand roughly where each contract sits. The Coordinate Positioning Engine is responsible for turning the ten dimensions, the coordinate range and the confidence interval information into readable contract positions for the investor. It is the source of the data for the ten dials in the cockpit; it helps the investor understand roughly which region of the NUMA Sharpe Map a Protocol Contract sits in, and what the relationship is between the related Real World Contracts and the Transaction Contract.

Seeing every contract clearly is not the same as making a judgment on every contract for the investor. What the Coordinate Positioning Engine does is turn scattered, heterogeneous and hard-to-compare information into readable positions on the same map, so that the investor can begin to compare them in a single language.

3.2 The Tool System and Confidence Interval: Judging the Direction of Coordinate Movement

The cockpit contains ten dials, corresponding to the ten dimensions of the Ten-Dimensional Code. Each dial tells the investor where a contract currently sits on that dimension and how much risk that dimension contributes.

What the investor sees is a range with a confidence attached. Contract cashflow is a set of dynamic data. Actual Cash Flow (ACF) continues to occur as the contract is performed, and the issuer's control performance, pass-through performance and the stability of the underlying cashflow are also updated over time.

Confidence interval is an expression of such judgement state. It helps investors distinguish whether the current position is only an initial assessment or has already been verified over time by cashflow, and whether the current range is gradually converging or still carries a high degree of uncertainty. Confidence interval is necessary information for investors to understand the direction of coordinate movement.

The cockpit therefore has to handle not only where a contract sits today, but also whether that position is changing. This is the value of time-series data: it lets investors observe whether a coordinate range is converging, expanding, improving or exposing new risks. A contract's initial profile may come from structured information, but as ACF continues to arrive, the market can gradually see whether actual performance supports the original judgment.

An important fact should be stated plainly. All ten dials read the present and the past: when data arrives, how much has arrived, what the operating indicators look like, and whether repayments come in on schedule. None of the dials reads the future. The future is a judgment formed by the investor after interpreting the past and present states shown in the cockpit. AI describes the present. The investor decides the future. That is NUMA's position on the boundaries of AI.

3.3 The Portfolio Optimization Engine: Exploring the Best-Suited Portfolio Region

Once the position of a single contract has been seen clearly, and the direction of coordinate movement has an initial judgment, the investor enters the real portfolio problem. The Portfolio Optimization Engine helps investors observe the risk-return position formed after combining different contracts. It uses the Ten-Dimensional Code, ITV, Yield, correlation, cashflow performance and other structured information to combine the multiple contract interests the investor selects into an observable PCCP.

The meaning of a portfolio is not simply putting several contracts together. A single contract can only stay within its own coordinate range, but multiple low-correlation contracts from different sources, once combined, may reach a position no single contract can. When the sources of cashflow of different contracts are not entirely the same, the overall uncertainty of the portfolio has the opportunity to be lower than the simple sum of the risks of the individual contracts. In the early stage of the market's operation, what the cockpit provides is a structured evaluation based on the Ten-Dimensional Code. As Actual Cash Flow data accumulates, the evaluation moves from an initial structural judgment to data verification. This is a process in which the platform continuously reads the past and present, so that the portfolio position becomes clearer over time. The Portfolio Optimization Engine's objective is to help investors discover the portfolio region that better matches their own risk-return preference.

What the investor is really deciding is not just what NUMA Sharpe Ratio a single contract carries, but whether adding it elevates or make-worse the portfolio. Traditional investors do this intuitively. NUMA turns it into a real-time cockpit function: marginal impact testing. A new Transaction Contract is placed in the candidate pool. With one click to add it, the system immediately computes its marginal contribution to the NUMA Sharpe Ratio, including the correlation offset it brings to the denominator's impairment rate, the incremental return on the numerator, and the direction and distance of the portfolio's overall movement on the map. This is the core action of this market. NUMA does not promise to find the best portfolio for any investor. It helps each investor discover the portfolio best suited to them.

3.4 ITV: The Risk Dial of the Cockpit

The Investment-to-Value ratio (ITV) is the parameter with which investors adjust risk exposure at the portfolio level.

A lower ITV means the investor participates at a lower ratio with a thicker safety cushion; a higher ITV means the investor participates at a higher ratio and bears the corresponding uncertainty in pursuit of upside elasticity. ITV helps the investor express their own judgment about risk.

It must be made clear that ITV does not exist within the terms of the underlying Real World Contract (RWC) or Protocol Contract (PC). It is recorded as a related parameter of the Transaction Contract and expresses risk preference at the investor's portfolio level. In traditional equity investment, investors express judgment around earnings through the PE multiple. In contract-based financing, investors express the risk position they are willing to bear around the face value of the PCC and the contract-cashflow profile through ITV. Both start from a known anchor, but they point in different directions.

3.5 The Four Positions of a Portfolio: Baseline, Diversified, ITV-Optimised and Stress Scenario

The cockpit can present a portfolio's position on the NUMA Sharpe Map from four perspectives. The point of doing so is to help investors understand that a portfolio exhibits different risk-return states under different assumptions, different adjustments and different stress conditions.

First is the baseline position. It represents the weighted-average position of the contracts within the portfolio without further optimisation, and shows the initial state of the portfolio.

Second is the diversified position. It reflects the risk-diversification effect brought by low correlation among contracts. If the sources, industries, regions and cashflow drivers of the contracts within the portfolio are diverse enough, the overall risk of the portfolio may be lower than the simple sum of the risks of the individual contracts.

Third is the ITV-optimised position. It reflects the portfolio position formed under normal market conditions after the investor has adjusted risk exposure through ITV. ITV is the investor's choice at the portfolio level about the relationship between risk and return.

Fourth is the stress-scenario position. It presents the region the portfolio may move to under macro shocks, rising correlation among contracts of the same type, cashflow declines or other stress conditions. This position helps investors understand: a portfolio that looks reasonable under normal conditions does not necessarily hold up in the same shape under stress.

The four positions displayed side by side help investors understand that a portfolio may perform differently under different assumptions and stresses. In the early stage of market operation, all four positions should carry a confidence attached. The investor should know which judgments come from structured initial assessment and which have been further calibrated by ACF data.

3.6 The Portfolio Repayment Scheduling Mechanism: Two Accounting Modes

The Portfolio Repayment Scheduling Mechanism is a contractual arrangement at the PCC-portfolio level. It solves a different problem: the cashflows of the underlying Real World Contracts arrive at different speeds, so how should the portfolio be booked, when should exit be triggered, and how should different investors accept different repayment rhythms.

Under this mechanism, the Contract-Level Cap constrains the cumulative recorded repayment ceiling for a single PCC, and the Portfolio Cap constrains the cumulative recorded repayment ceiling for the PCCP as a whole. When the corresponding cap is reached, the booking status of the relevant PCC or PCCP changes accordingly, triggering the exit mechanism at that layer. Some investors care more about repayment rhythm; others are more willing to bear a longer-duration exposure. Which specific rhythm applies is to be clarified by the protocol rules and the Completion Terms.

3.7 NUMA Liquidity: A Different Kind of Liquidity

Traditional markets usually understand liquidity as continuous quoting, instant execution and secondary market price discovery. What NUMA faces is a different asset form. Its value comes primarily from the cashflow of Real World Contracts. NUMA therefore needs a liquidity language that fits its own structure. This is NUMA Liquidity. NUMA Liquidity does not rely purely on traditional secondary market trading; it is a liquidity mechanism from a different market, made up mainly of four paths:

First, continuous recovery of Real World Contract cashflow. Contract cashflow occurs, is recorded and is verified on a daily or periodic basis, and value grows out of the underlying business over time;

Second, transfer of a single PCC under the applicable rules. Investors may, within the scope permitted by the rules, transfer the PCCs they hold;

Third, portfolio-level re-bundling of a PCC portfolio under the applicable rules. Re-bundling does not affect the see-through of Real World Contract information; investors can trace all the way down to the underlying Real World Contract information;

Fourth, whole-portfolio transfer of a portfolio with a clear performance profile under the applicable rules.

These arrangements are all subject to applicable law, licensed-intermediary arrangements and platform rules. Together they form a new liquidity framework built around contract cashflow and interest transfer.

3.8 The Alert Lines of the Cockpit: The Market's Safety Valve

When an investor turns the dials in the cockpit, they systematically drift towards optimism — not because the investor is at fault, but because the human brain is wired that way.

The traditional financial response is to take sovereignty away by substituting an immutable rating for the investor's judgment. NUMA does not do that. NUMA's approach is different. When an investor turns any dial in an optimistic direction, the cockpit simultaneously shows a comparison: where the dial has been turned to, and where the portfolio would move if that turn proves wrong and reality falls into the more conservative range.

NUMA does not decide for the investor; the transparency lets the investor see the boundary of their own judgment.

Under this governance principle, the introduction of NUMA Sharpe alert lines is a risk-prompt mechanism within the NUMA Sharpe Cockpit. When the NUMA Sharpe Ratio range of a particular portfolio, or of the market as a whole, drops below a given standard, the platform may trigger a special risk prompt, a cooling arrangement or other restrictive mechanism. The purpose is to let investors continue to make judgments in a fully informed state.

If an investor's portfolio is over-concentrated in the same underlying source, the same business chain, the same industry, the same region or the same issuer, the platform may also trigger a concentration prompt, warning the investor that the diversification of the portfolio may be insufficient and correlation risk may be high. The specific thresholds of the NUMA Sharpe alert lines will be continuously calibrated as market data, contract performance and participant feedback accumulate. This alert-line prompt mechanism is for investor reference only. That a portfolio has not triggered a NUMA Sharpe alert line does not mean the portfolio is free from various potential risks.

3.9 The Investor's Interface and Market Entry

In the cockpit, investors observe, compare and build portfolios themselves on the basis of the Ten-Dimensional Code — filtering the profiles of Real World Contracts and Protocol Contracts based on their own preferences, risk boundaries and investment conditions, including but not limited to characteristics such as industry, contract type, cashflow frequency and issuer type, and submitting the corresponding ITV, Yield and other offer conditions. The platform converts these preferences into searchable, comparable conditions, so that investors can observe, on the NUMA Sharpe Map, single contracts and contract portfolios that meet those conditions.

When an investor confirms participation, the Completion Terms (CT) record the matching result, including the relevant PCC or PCCP, the ITV, the Yield and other parameters. The CT is a recording snapshot; it does not constitute a return commitment, a fixed return or a principal guarantee. The investor's interface is the cockpit interface through which the investor calls upon NUMA's language and forms independent judgment.

This is the meaning of the NUMA Sharpe Cockpit: it does not choose the direction for the investor, but it lets the investor know where they sit on the map. The cockpit is built by NUMA. The person sitting in it is a Professional Investor. The direction of travel is chosen by that investor.

Chapter 4 — Residual Value Impairment Rate: The Shared Objective of the Three Tasks

NUMA performs three tasks: it draws the map, sets the coordinates and provides the cockpit. All three point to a common objective: within the framework of Sharpe theory, and on the new soil of contracts, to define the denominator of the Sharpe ratio, namely the Residual Value Impairment Rate (RVIR). It is not traditional volatility, but the risk-measurement unit NUMA proposes when carrying the core idea of Sharpe theory into contract-cashflow financing. The north-latitude axis of the map measures risk through it. The coordinate range converges towards it. Each of the ten dials in the cockpit points to one dimension of its contribution. This chapter answers two direct questions: why traditional volatility cannot apply to the contract world, and how the Residual Value Impairment Rate becomes the new denominator of the NUMA Sharpe Ratio.

4.1 Volatility: The Risk Measure of Traditional Finance

Volatility is the most commonly used indicator of risk in traditional financial markets. Its meaning is: how severely the price of an asset has moved up and down over a past period. Using the price series formed by daily secondary market trading, computing the standard deviation of returns over a given period and annualising it, gives the volatility of that asset.

Volatility has been used in the stock market for decades; it is the measure that grew from the equity-and-debt soil. Its premise is that the stock is traded every day, the price ticks every day, and a continuous price series is sufficient. The status of volatility in traditional financial markets is in the same lineage as the Sharpe ratio: the Sharpe ratio uses volatility as its denominator, placing return and risk in the same comparative framework.

4.2 Why Volatility Cannot Be Applied to the Contract World

Traditional markets measure the denominator through time series: it takes several years of price history to compute mathematically reliable volatility. The contract world has no continuous prices, so at first sight it seems to lack the raw material a denominator needs. But it has something traditional markets do not: the cross-section of dozens or even hundreds of contracts of the same broad class at the same point in time. NUMA's denominator therefore comes not from depth in time, but from breadth in the cross-section. The distribution formed at a single point in time by the Residual Value Impairment Rates of thousands of contracts is itself a complete risk sample.

This path does not work in the traditional stock market — stocks already carry a fairly high correlation in normal times, so the cross-sectional distribution is collapsed; it works naturally in the contract world — the low correlation among contracts across industries, regions, issuers and business types makes the cross-section an effective sample.

This is not a stopgap. The contract world's denominator can genuinely take the cross-sectional route. Professor Sharpe's analytical principle remains the same: the denominator still portrays risk per unit. It is just that the unit is no longer read from depth in time, but from breadth in the cross-section.

A contract is not a stock. Once a contract is listed on NUMA, its cashflow returns transaction by transaction month by month and week by week, rather than being matched into a new price at an exchange every day. Without a continuous price series, volatility in the traditional sense cannot be computed.

More fundamentally, volatility in traditional finance in fact measures two things at once: the up-and-down movement of the price, and the risk that the asset may default. In the stock market these two things are naturally mingled — if a company is in trouble, its share price falls first and its volatility rises first, so one number can hold both. In traditional finance, every investor has in mind a series of different factors to help them decide, and price volatility is only the composite response of all those factors. The investor uses the up-

and-down movement of price as their sole adjustment tool. But in the contract world these two things are naturally separated — the factors can be seen independently.

A contract with a capped return — for example, a restaurant that revenue-shares with a brand until an internal rate of return (IRR) of 16% is reached — has a repayment curve fixed at signing; it will not suddenly rise or suddenly grow. Its only downside risk is that the cashflow “does not come back.” The price-volatility has near-zero contribution here, and risk exists almost entirely in the form of “whether the cashflow can be continuously recovered.”

A contract with an uncapped return — for example, a concert revenue-share contract with an open ceiling — has no price volatility, because there is no price to begin with. Its risk equally exists in the form of “whether this stream of cashflow can be generated, and once generated, whether it can continue.”

The risk of the contract world, therefore, is not price volatility but the continuity of cashflow. Volatility is not that it cannot be computed in the contract world — it is that, once computed, it cannot capture the real risk. NUMA needs a new denominator.

4.3 The New Denominator of the NUMA Sharpe Ratio: Residual Value Impairment Rate

NUMA proposes a formal name for this new denominator, the Residual Value Impairment Rate (RVIR).

What it measures is the proportion and probability of unexpected impairment of residual value over the remaining term.

Read literally, the four words tell the story:

Residual — only concerned with the portion that has not yet been recovered; already-recovered value is not counted.

Value — not confined to principal; covers all future value that should be recovered.

Impairment — from partial diminution to full write-down; a continuous quantity, not a binary switch.

Rate — a probability, not a fact that has already occurred.

4.4 The Five Characteristics of the Residual Value Impairment Rate

Characteristic 1 · Looks only at the future

Each day, the Residual Value Impairment Rate speaks only to the portion that has not yet been recovered from tomorrow onward. Every day is a new starting point — value already recovered is already in hand and is no longer counted as risk exposure. This is NUMA’s position on measuring risk: what has already happened has already happened; what needs to be judged today is only tomorrow.

Characteristic 2 · Exposure shrinks over time; per-unit risk changes with operations

This one needs to be said carefully; it cannot be generalised as “the longer you hold, the safer it gets.”

Exposure — the value that has not yet been recovered — shrinks over time; this is a mathematical fact: as long as the asset continues to perform normally, the remaining exposure in the investor’s hand goes down every day. This is a natural feature of the contract market, and is different from both equity (at risk for the whole period) and a lump-sum-maturity bond (with risk fully exposed at maturity).

But the impairment rate per unit of residual value can go up, down or stay the same as operations change. When a contract’s business is improving, per-unit impairment moves down; when the business is deteriorating, per-unit impairment moves up. A good contract gets safer the longer it is held; a bad contract gets more dangerous the longer it is held — that is the honest expression. What NUMA commits to is: show the investor what the current state looks like every day.

Characteristic 3 · Continuous, from 0% to 100%

The Residual Value Impairment Rate is continuous, from 0% to 100%. Stopping after recovering 80%, stopping after recovering 30%, stopping on day one, or paying out in full — the same measure covers all forms. 100% is complete write-down.

Characteristic 4 · Decomposable, not a black box

The Residual Value Impairment Rate is the joint probability of the contribution values of each dimension of the Ten-Dimensional Code. How much the industry dimension contributes, how much the digitalisation dimension contributes, how much the control-capability dimension contributes, how much the financial-health dimension contributes — each dimension can be viewed, attributed and intervened in separately.

Characteristic 5 · Investor-adjustable

The contribution value on each dimension to RVIR can be adjusted by the Professional Investor themselves in the cockpit. What NUMA provides is a default, not a conclusion — only when the sovereignty over risk judgment is genuinely handed back to the investor do the first four characteristics have meaning.

4.5 Boundaries: Honesty in Extreme Times

At this point we must state a fact directly — NUMA is no exemption in extreme times.

Financial history keeps reminding markets of one thing: at the extreme moments of a systemic shock, the correlations across almost every asset class converge towards 1 at the same time — diversification is discounted precisely when it is most needed. NUMA is no exception, and does not pretend to be an exception.

What NUMA commits to is: in normal times, to offer Professional Investors a third asset class with extremely low correlation to equity and debt in normal times; in extreme times, like all financial assets, to accept the baptism of correlation convergence. What NUMA can and does commit to is: at the first moment of an extreme event, to tell investors truthfully what is happening, so that the market can see tail risk unfolding earlier and more clearly than it can in traditional assets.

Chapter 5 — The AI Algorithm Layer: The Means That Makes Everything Possible

NUMA (Micro Connect New Markets, NUMA) is a piece of market infrastructure that rests fundamentally on AI-native capability, but it is not a market that hands judgment over to machines. The role of the AI Algorithm Layer is the collection, maintenance, updating, indexing, screening and readable presentation of information for Real World Contracts — turning contract information that is vast in volume, varied in form and continuously changing into a contract profile that can be continuously read, compared and searched in a single language.

5.1 Contract-Based Financing: Why Has No One Done It Before?

What NUMA faces is not a small number of highly standardised financial assets, but Real World Contracts that are large in scale, heterogeneous and continuously changing. To bring such contracts into a market-readable state, the key difficulty is not whether the contract itself exists, but whether it can be continuously read, classified, coded, indexed and updated at low enough cost, high enough frequency and under stable enough rules. In the past, this work depended mainly on manual effort, and the cost of item-by-item verification and organisation was too high, so a vast number of fine-grained-level contracts, even though they were real and generating real cashflow, could not be brought into the discoverable scope.

Today, this constraint is changing — first, because payment, performance and operational records are becoming more and more digitalised, so the cashflow corresponding to contracts can be recorded, tracked and verified at higher frequency; second, because artificial intelligence has matured in text understanding, structural extraction, pattern recognition and rule execution, so the system can process massive numbers of contracts under a unified standard and continuously produce coordinates on each dimension. It is precisely under conditions where digital raw material and AI processing capability have matured at the same time that contracts previously excluded from financial readability by verification cost can, for the first time, enter an engineering system at scale in which they can be identified, indexed and discovered.

It is not that NUMA invented contract-based financing — it has been there for two hundred years. It is that AI, for the first time, allows contract-based financing to be handled at scale and systematically, and to be seen clearly by investors through the language of the NUMA Sharpe Ratio. The functions and capabilities of the AI Algorithm Layer described in this White Paper are architectural targets and design direction. AI's actual capabilities in processing contract information — including processing scale, accuracy, update frequency and safety testing — will continue to be validated and refined through market operation.

5.2 What AI Does and Does Not Do

NUMA draws the most important boundary around AI: AI describes only past and present states; it does not predict future direction. Each of the ten dials in the cockpit reads out the current and past state.

This boundary defines the nature of every asset coordinate. A coordinate is generated by AI on the basis of verifiable information — what it describes is “what has actually happened to this contract and what state it is in now.” A coordinate is therefore a “label” and an “index,” like a genetic code or a postcode. Within the financial parameters of the Ten-Dimensional Code (Dimension 10), Actual Cash Flow (ACF) records “how much has actually been recovered in the past”; Projected Cash Flow (PCF), though called a “projection,” is only an evidence-based extrapolation from the contract terms and historical data.

An apparent contradiction needs to be resolved: how can it be true both that the Residual Value Impairment Rate is forward-looking and that AI does not predict the future? The answer is that it is not AI that looks forward, but the investor. AI provides only a reflection of the current state. Forming a forward judgment,

deciding whether to subscribe, and deciding whether to add a contract to a portfolio are all tasks for the Professional Investor in the cockpit. AI describes the present. The investor decides the future.

The insistence on not predicting the future is both honest and prudent risk management. AI is responsible only for organising and presenting past and present facts clearly, while forward-looking judgment remains with the investor. In this way, any directional judgment that affects the investment conclusion is made by the party that bears the consequences, not by an algorithm that does not.

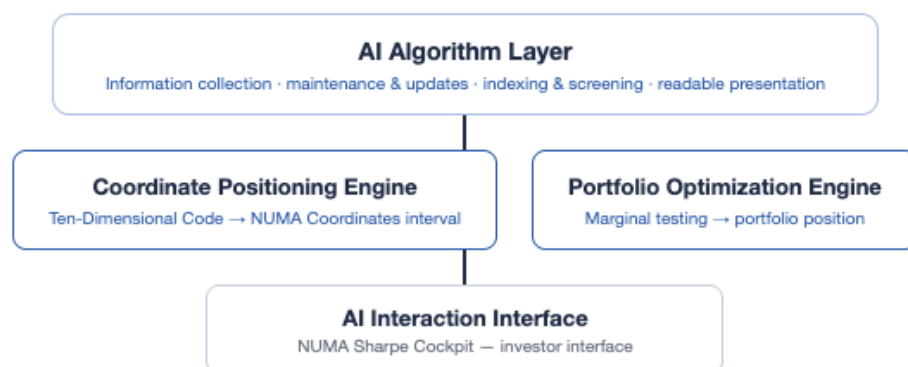
5.3 Two Engines and One Interaction Interface

The Coordinate Positioning Engine: continuously reads out the ten-dimensional profile of millions of contracts, structures it, updates it, and places every contract's coordinate range onto the map. This is the source of the data for the ten dials in the cockpit. On the issuer side, the AI Algorithm Layer assists in reading the readable portion of a Protocol Contract and the Real World Contracts it maps to; on the investment side, it assists in organising the parameters and records related to Transaction Contracts, turning scattered information into a unified expression the market can recognise. The role it takes here is to convert contracts from an original narrative into a standardised, readable Ten-Dimensional Code — not to package projects on behalf of issuers, and certainly not to subjectively endorse contract value.

The Portfolio Optimization Engine: performs real-time marginal testing of portfolios in the cockpit. With one turn of a dial, one addition of a contract, the engine immediately computes the direction in which the portfolio's overall position moves on the map, the correlation offset on the impairment rate, and the marginal lift in the NUMA Sharpe Ratio. On the investment side, the AI Algorithm Layer does not form the investor's risk preference on their behalf; it assists the investor in translating concerns originally expressed in natural language into screening conditions the protocol system can process. As the investor keeps browsing, comparing and eliminating candidates, the boundary of their preference gradually becomes clearer with the system's assistance; but this clarification still originates from the investor's own feedback, and not from the platform substituting for the investor's intent.

Above these, the AI general interaction interface drives the Coordinate Positioning Engine and the Portfolio Optimization Engine: the former, based on the readable profiles of Real World Contracts and Protocol Contracts, sets the coordinate range for every contract on the NUMA Sharpe Map; the latter, based on the investor's progressively clarified preferences, helps the investor build portfolios within the same space. Through this interface, the market becomes visible, readable and participable for every Professional Investor.

Figure 5-3: The Two Engines and the AI General Interaction Interface



5.4 Governance Principle: Humans Remain in the Decision Loop at All Times

No matter how AI capability improves, NUMA keeps its definition of AI's role restrained and clear. On any matter that involves market order — including rule setting, boundary adjustment, anomaly identification, dispute handling, result review and final decisions — there must be a human step that gate-keeps and takes

responsibility. AI is the enabler; humans are the decision-makers. No key action affecting market order is left to AI alone.

For extreme scenarios such as large-scale system failure, NUMA has contingency plans and multiple data backup mechanisms in place. Handling of extreme scenarios such as model failure, data anomaly and service disruption is included in the unified AI governance policy, which specifies the degradation path, the trigger conditions for human intervention, and the guarantee of data recoverability, so that the market can continue to operate in an orderly manner in extreme circumstances and the ledger remains traceable. AI can increase processing capacity, but cannot take over responsibility capacity; anything involving rules, disputes and the consequences of decisions must ultimately be gated and held by humans.

Chapter 6 — Extending the Debt-Investment Mindset into the Contract World

Earlier chapters have set out NUMA's core infrastructure — the NUMA Sharpe Map, the NUMA Coordinate, the NUMA Sharpe Cockpit, the Residual Value Impairment Rate and the AI Algorithm Layer. This infrastructure itself is a general base facing all kinds of investors in the contract world. What this chapter discusses is how, on top of this base, an investor whose starting point is the debt-investment mindset understands, participates in, and finds a place in NUMA that aligns with their own analytical habits.

Over the long term, NUMA believes that almost every investor whose default frame of mind is fixed income can find their rightful place in this new world of contracts. Cashflows in the contract world are transmitted by agreement, impaired by structure and aggregated by diversification — each of these mechanisms has a clear counterpart in the traditional syntax of debt investment. In the early stage, the debt investors most likely to first form meaningful allocations are those whose analytical origin is cashflow itself rather than issuer rating, whose risk-control backbone is structural design rather than legal enforcement, and whose performance definition is stable portfolio-level return rather than the pursuit of a single-security coupon.

6.1 The Analytical Origin: From the Balance Sheet to Contract Cashflow

The analytical origin of the traditional debt market is the issuer's balance sheet. Rating agencies form grades around it, and investors form choices around it. This path has supported the overwhelming majority of global debt-market trading over the past decades, but has left an uncovered territory: those contract-world assets that rely on real operating cashflow but have never formed a rateable entity.

NUMA's analytical origin is not the balance sheet; it is the stream of real cashflow to which a contract itself points. This stream of cashflow is defined by the Real World Contract — one party first contributes (Party A), the other party later pays back (Party B), performance follows the cycle, and amounts follow the agreement. It is itself the ultimate source of the investor's return.

Around this stream of cashflow, NUMA builds a two-layer structured profile: the first layer, the first six dimensions of the Ten-Dimensional Code, portrays the Party B of the Real World Contract and the contract itself, of which Dimension 1 is grounded in the granular-level due diligence Party A has already completed at signing by having contributed real money, venue, goods or time — Party A and Party B are in a commercial relationship of continuous performance; the second layer, the last four dimensions of the Ten-Dimensional Code portray the Protocol Contract Issuer, of which Dimension 7 measures the issuer's own credit condition and pass-through reliability.

What the investor obtains is a contract profile jointly portrayed by ten observable dimensions — a rating is a letter, a profile is a ten-dimensional picture. For an investor whose analytical origin is cashflow, this is a direct downshift in analytical level: from the company-level credit summary down to the contract-level cashflow itself.

6.2 The Chain of Investor Protection in the Event of Default

The traditional debt market has debt law as its skeleton: hard repayment, recourse to the issuer's balance sheet, and priority of repayment in bankruptcy. That whole set of legal-enforcement mechanisms is the investor's last line of defence. NUMA is not built on debt law; it is built on contract law. What the investor holds is a Transaction Contract, a pass-through covenant with agreed performance conditions. The issuer commits, in accordance with the agreement, to pass through the cash received from the underlying Real World Contract to the investor. This commitment is a contractual performance obligation that is actionable in the contractual sense, but it does not constitute structural mandatory execution at the fund-flow level. The investor does not assert direct legal rights over the underlying Real World Contract itself.

Under this boundary, NUMA uses five layers of structural design to replace traditional legal enforcement:

A natural safety cushion at the pricing layer (the Investment-to-Value ratio is below face value, and the loss cushion is already secured at the moment of trade)

Order of repayment at the structural layer (the Portfolio Repayment Scheduling Mechanism forms a priority arrangement)

Statistical diversification at the portfolio layer (thousand-unit granularity dilutes single-asset risk)

The contract-recovery path at the legal layer — when default occurs, the investor asserts rights under the Transaction Contract, the NUMA market rules and its dispute-resolution arrangements, and through the contract and arbitration route

Reputational constraint at the market-mechanism layer (default immediately suspends further financing capacity)

The five layers together form a protection structure that the investor can understand, measure and stress-test layer by layer. The first three layers are structural mitigation before and during the event. The fourth is legal recovery after default. The fifth is the market's continuing disincentive. For investors whose backbone is structural design and contractual recovery, and whose performance definition is stable portfolio-level return, every layer of this arrangement sits within their analytical toolkit. These are familiar elements, previously scattered across different product structures and now brought together in a single market protocol written in the syntax of the contract world. These five layers of protection are presented simultaneously in the NUMA Sharpe Cockpit built in Chapter 3 of Part Two. Investors can see the baseline position, the diversified position, the ITV-optimised position and the stress-scenario position, and each position corresponds to how the different layers of protection perform under different conditions.

6.3 The Portfolio Repayment Scheduling Mechanism

The Portfolio Repayment Scheduling Mechanism has already been fully explained in Section 3.6 of Part Two; this section only adds a note from the debt investor's perspective.

When the same issuer lists multiple contracts and multiple batches of investors enter over time, what debt investors care about most is how repayment is allocated fairly, transparently and predictably. The Portfolio Repayment Scheduling Mechanism brings the multiple Protocol Contracts listed by the same issuer into a unified repayment-order framework at the protocol level, transmitted under the principles of Contract-Level Cap, Portfolio Cap and time priority. In structural essence, this mechanism corresponds to the cashflow-waterfall arrangement in traditional structured products — earlier arrivals sit in a relatively senior position; later arrivals sit in a relatively subordinated position. The difference is that a traditional waterfall depends on the legal independence of a special-purpose vehicle and the true sale of assets, while the corresponding mechanism here depends on the public constraint of the protocol itself and the real-time recording of the central ledger. Debt investors can, according to their own risk preferences, choose the time and priority of entry across the same issuer's multiple listed contracts — a capability that in the traditional debt market usually requires dedicated structured products to achieve.

6.4 Granularity and True Diversification

The traditional debt investor's main tool for dealing with single-issuer risk is diversification — holding debt of multiple issuers in the same portfolio to lower single-point shock. This idea holds equally in the contract world, and is pushed to a granularity previously hard to achieve.

In the traditional debt market, a single subscription usually runs from tens of thousands to hundreds of thousands. A million-dollar-level investor can typically construct a diversified portfolio that covers only a limited number of different issuers; beyond that, the marginal diversification benefit is eaten up by per-security

allocation costs. On NUMA, an investor of the same size can hold one thousand different PCCs — across hundreds of different issuers, dozens of different business types and multiple regions. The marginal impact of a single-issuer default on the portfolio is close to statistical zero. Diversification is, for the first time, not pseudo-diversification, but true diversification across issuers, industries, regions and business types.

This diversification capability directly hedges willingness-to-perform risk. At the portfolio level, the subjective variable of whether any single issuer keeps its word is taken over by the law of large numbers. The investor no longer bears the full risk of any one issuer's behaviour. What matters instead is the overall default-rate distribution at portfolio level: a distribution portrayed ex ante by the Ten-Dimensional Code, monitored in flight by the NUMA Sharpe Cockpit, and verified ex post by the central ledger. For investors whose performance definition is stable portfolio-level return, this mechanism is not unfamiliar. It is a direct extension of the diversification principle at a finer granularity, applied in a place traditional markets could not reach because of transaction costs and minimum-subscription limits.

6.5 Beyond Legal Recovery, How Market Mechanisms Continuously Disincentivise Issuer Default

The hedging effect of diversification on willingness-to-perform risk holds at the portfolio level; but the market still needs to place structural constraints on willingness itself at the single-issuer level. The mechanism NUMA introduces here is an incrementally accumulated reputational constraint.

Every Protocol Contract an issuer lists on NUMA enters the market in small, incremental batches. Investor portfolios build up gradually, not all at once. This means the issuer's financeable scale in the market expands linearly with time and with the accumulation of performance reputation. At any moment, the outstanding unreleased quota the issuer holds is constrained by the length of its prior performance record. Any default event triggers immediate consequences: the central ledger records the default in real time, the identity of the defaulting issuer becomes visible across the market, subsequent issuance capacity is immediately suspended, and a structural mark is permanently attached to the issuer's market file. All performance reputation the issuer had previously accumulated is reset to zero.

This mechanism can therefore raise the reputational cost of default and the barrier to subsequent financing, and shorten the time it takes the market to detect and reflect the fact of default; but it does not constitute a defence against wilful fraud. Such risk must still be addressed jointly through issuer admission, verification of the underlying contract and cashflow, continuous monitoring and other risk-control mechanisms.

6.6 The Return Characteristics at the Portfolio Level

What debt investors ultimately care about is the outcome: what the return characteristics of such a portfolio of contract interests are.

The portfolio an investor obtains on NUMA has the following four layers of return characteristics.

First, coupon-like continuous repayment. Real World Contracts are performed on a periodic basis, and Party A of the Transaction Contract collects and passes through the corresponding cashflow by share; this repayment curve is structurally similar to the coupon-cashflow curve of a bond.

Second, natural amortisation over a short duration. The natural term of the majority of Real World Contracts falls between several months and several years; the cashflow of a Transaction Contract exhibits fast-amortising characteristics, and after building the portfolio, the investor typically begins to receive principal repayment relatively quickly.

Third, cross-business-type low-correlation distribution. The sources of cashflow risk across different industries, regions and issuers are naturally scattered, so the overall volatility of the portfolio is mathematically significantly lower than the volatility of any single contract.

Fourth, risk-adjusted yield. This return is measured by the NUMA Sharpe Ratio — the numerator being the excess cashflow return received by the investor, and the denominator being the structured risk portrayed by the Residual Value Impairment Rate. Carrying forward the Sharpe-theorem analytical principle of “risk-adjusted return,” it shares the same root as the traditional debt market’s framework of a credit spread on top of the risk-free rate together with a credit-risk measure.

For investors whose performance definition is stable portfolio-level return, the assets NUMA provides are not unfamiliar in their return characteristics — structurally, they are closer to a continuously amortising, cross-issuer diversified fixed-income portfolio; the underlying is simply not the bonds of rateable companies, but the contract interests of real commercial activity.

6.7 Cross-Jurisdictional Enforceability

The previous six sections discussed mechanisms internal to the market. This section addresses a question from outside the market: when investors, issuers and the parties to Real World Contracts sit in different jurisdictions, how is the enforceability of contract interests safeguarded?

NUMA follows two principles on this question.

First, the market-protocol body is drafted and construed under a clearly specified single jurisdiction. NUMA’s Protocol Contracts, Transaction Contracts and protocol framework are all signed under a clearly specified market-protocol jurisdiction, and are construed and applied under the law of that jurisdiction.

Second, cross-border enforcement uses the international commercial-arbitration system. NUMA’s arrangement is that the market-protocol body is drafted and construed under a single jurisdiction, cross-border enforcement proceeds primarily through international commercial arbitration, and awards are enforceable in jurisdictions party to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (fully explained in Section 1.7 of Part Three, Chapter 1).

For institutions familiar with cross-border fixed-income investment, this whole set of arrangements sits within their day-to-day compliance toolkit — NUMA does not create a new cross-border legal instrument here; it applies the international arbitration and enforcement paths long matured in the market directly to the contract world.

Chapter 7 — Extending the Equity-Investment Mindset into the Contract World

The previous chapter discussed how an investor whose starting point is the debt-investment mindset finds a place in NUMA that dovetails with their own analytical habits. This chapter discusses the same question from the perspective of equity investors.

NUMA believes that investors whose default frame of mind is equity investment can equally find their own place in this new world of contracts. Every Real World Contract in the contract world is, in essence, a stream of cashflow interest generated by real economic activity. This is inherently consistent with the core focus of the equity investor over the long term — exposure to interests in real commercial activity — only that its expression is at a finer granularity, with clearer boundaries and a more definite vehicle.

Based on this logic, this chapter is organised around several core questions long focused on by equity investors: what value exposure the investor is actually obtaining; where the source of return comes from; what the relationship is with the underlying economic activity; and where contract-based financing sits within the spectrum of equity assets.

7.1 Object of Analysis: From the Company as a Whole to the Commercial Activity Itself

The object of traditional equity investment is the whole value of a company — including the company's strategy, management, capital structure, diversified businesses and long-term value assumptions. The investor has to identify, within this whole structure, the core factors that truly drive enterprise-value formation.

However, company value is usually influenced by multiple layers of factors at the same time, including the cashflow generated by actual operations, operating leverage, capital-allocation decisions, management's execution capability, and the market's judgment about future value. What the investor ultimately obtains is the composite result of all these factors combined. One of the questions equity investment has long focused on is therefore how to look through the whole structure of the company and identify the commercial activity that actually creates value, and the corresponding economic interest.

NUMA provides a way to observe real commercial activity from the contract layer. Every Real World Contract is itself an economic-activity interest clearly defined by contract terms.

What the investor selects is no longer only the company as a whole, but a specific commercial activity itself. A concert revenue-share contract corresponds to the revenue interest generated by that event; a subscription-service contract corresponds to the cashflow interest continuously generated by that service; a charging-station revenue-share contract corresponds to the revenue interest generated by that infrastructure operation.

The contract layer does not replace company-layer analysis; it provides a finer-grained way of expressing interests. Based on the Ten-Dimensional Code and NUMA-Coordinate system established earlier, every contract forms a comparable, structured profile and takes its corresponding position on the NUMA Sharpe Map.

For equity investors whose analytical origin is real commercial activity, this is not a simple substitution of the analytical object; it is a further refinement of the analytical level — from the company as a whole down to the specific economic activity that constitutes commercial value.

7.2 Source of Return: From Valuation Multiple Expansion to Cashflow Accumulation

Part of the return in the traditional equity market comes from the secondary market's re-pricing of future value. Market sentiment, liquidity, fund flows and the macro environment all affect price performance; a small number

of names achieve large-scale value growth over particular cycles, forming part of the tail return of equity investment.

NUMA's return structure does not depend primarily on this kind of valuation multiple expansion. Every contract in this market has a return boundary determined mainly by the scale of cashflow generated by the underlying real commercial activity. A concert revenue-share contract corresponds to the revenue interest generated by that event; a subscription-service contract corresponds to the cashflow interest continuously generated by that service. Market return comes primarily from the actual occurrence of real commercial activity, rather than from re-pricing driven by changes in future expectations.

This return structure principally has three layers:

First, the cashflow return of each contract itself. Real World Contracts are performed on the agreed cycle, and Party A of the Transaction Contract passes through the corresponding cashflow to the investor. The return of a single contract comes from real economic activity and has a clear time schedule and amount boundary.

Second, long-term accumulation at the portfolio level. A contract-based financing portfolio is composed of a large number of different contracts; the uncertainty of any single contract is diversified at the portfolio level. Portfolio return comes from systematic participation in a large number of real commercial activities, and not from reliance on a few names to deliver extreme performance.

Third, risk-adjusted portfolio performance. NUMA measures the relationship between portfolio return and the Residual Value Impairment Rate through the NUMA Sharpe Ratio. This indicator carries forward the core principle of the Sharpe theory on risk-adjusted return, and adapts the expression of risk and return to the characteristics of the contract world.

For equity investors whose objective is long-term accumulation of portfolio return, this logic is not unfamiliar. It corresponds to a long-standing method within the equity-investment spectrum: systematic participation in a large number of real commercial activities, with return growth achieved through portfolio diversification and long-term accumulation. What NUMA does is provide the basis for this investment path to be realised at scale, at the granularity of the contract world.

7.3 Shareholder Interest: From Governance Participation to Economic Interest

One important feature of traditional equity investment is the governance relationship between the investor and the underlying company — including the shareholders' meeting, board seats, voting rights, monitoring rights and, where necessary, shareholder action. This mechanism is an important way for some equity investors to participate in enterprise development.

NUMA's arrangement at the governance level is clear: what the investor holds is the economic interest under the Transaction Contract, not shareholder rights in the issuer or in the Party B of the Real World Contract. The investor does not obtain company-level voting rights, control rights or governance rights.

For equity investors whose core investment tool is governance participation, this arrangement differs from traditional equity investment; for investors who focus more on economic exposure and rely on professional division of labour for investment decisions, contract-based financing offers a different way of expressing interests.

Contract-based financing separates economic interest from governance responsibility. The investor focuses on the economic outcome corresponding to the contract's cashflow; the tasks of operational monitoring, performance management and commercial coordination are borne by the party closest to the underlying commercial activity. Party A, party who first provides the value of the Real World Contract — namely, the Protocol Contract Issuer — usually keeps a continuing commercial relationship with Party B, the party who later pays, of the Real World Contract, has more direct information, more suitable management tools and stronger performance-coordination capability.

This arrangement does not deny the value of governance in equity investment; it lets different participants bear responsibilities matched to their positions. What NUMA serves are equity investors whose core belief is economic exposure and professional division of labour, rather than investors whose primary investment tool is governance participation.

7.4 Liquidity Arrangement: From Secondary Market Trading to Structured Liquidity

Another important feature of traditional equity investment is the trading liquidity provided by the secondary market. The investor can, based on price movements in the market, choose to buy or exit at different times.

NUMA's liquidity logic is different. The main source of liquidity in this market is not the price liquidity formed by continuous trading, but the structured liquidity jointly formed by the recovery of underlying cashflow and the transfer arrangements under the protocol framework.

Specifically, NUMA provides investors with multi-layered liquidity arrangements:

First, cashflow repayment. The Real World Contract is performed under the agreement, and cashflow is passed through to the investor via the Transaction Contract. This is the most basic source of contract-interest liquidity, and the most consistent with the way the contract world operates.

Second, single-unit transfer. Investors can, on terms consistent with market rules, transfer the individual PCC they hold to another qualified investor, adjusting liquidity at the single-contract level.

Third, portfolio re-expression. Investors can re-combine the multiple Transaction Contracts they hold to form a new portfolio structure, subject to the rules, to arrange liquidity at the portfolio level.

Fourth, whole-portfolio transfer. Subject to the applicable rules, investors can transfer a complete portfolio as a whole.

Together, these arrangements form NUMA's liquidity framework. This market does not provide the continuous, daily price liquidity of a public stock market; it provides a structured liquidity arrangement that fits the characteristics of contract cashflow more closely.

For investors who rely on instant secondary market trading, this arrangement differs from traditional equity investment; for investors who accept long-term holding and focus on underlying value exposure and portfolio management, this logic bears similarities to certain alternative equity assets.

7.5 The Position of Contract-Based Financing in the Equity Spectrum

The preceding sections have separately answered questions about the investment object, source of return, interest relationship and liquidity arrangement. This section further answers: where contract-based financing sits within the equity-asset spectrum.

Contract-based financing has the following core features:

First, direct interest exposure to real commercial activity. Every contract in the portfolio corresponds to a cashflow interest generated by an identifiable piece of real commercial activity. What the investor obtains is not indirect exposure to the whole value of a single enterprise, but portfolio participation in a large number of real economic activities.

Second, cross-business-type, cross-region and cross-issuer low-correlation distribution. Different contracts correspond to different commercial activities, and their sources of revenue, operating environments and risk drivers differ. Portfolios cover different business types, regions and issuers, lowering the concentration risk from any single commercial activity.

Third, short duration and cashflow-recovery characteristics. Most Real World Contracts have a clear term, and cashflow is gradually recovered over the performance cycle. Compared with traditional equity investment,

which relies on long-term growth and eventual exit to realise value, contract-based financing has a clearer cashflow-recovery path.

Fourth, risk-adjusted long-term accumulation. A contract-based financing portfolio is portrayed by the NUMA Sharpe Ratio; investors understand portfolio position through the NUMA Sharpe Cockpit, manage portfolios and make investment decisions within a unified risk-return framework.

Taken together, contract-based financing is based on cashflow interests generated by real commercial activity, participates in a large number of specific economic activities through a portfolio approach, and manages risk and return through a unified analytical framework. In the equity-asset spectrum, it is not an extension of ownership of a single enterprise, but a new form of equity asset in which the contract serves as the unit of interest expression.

Contract-based financing can therefore be understood as “contract-granularity equity assets” — it connects real-commercial-activity interests with a portfolio investment approach, and is the extension of the equity-investment mindset into the contract world.

7.6 Differences from Existing Alternative Equity Assets

Contract-based financing has certain similarities to existing equity assets, but its investment unit, analytical approach and portfolio structure show clear differences.

Compared with public-market stock investment, contract-based financing does not derive its returns mainly from secondary market price changes, but from the contract cashflow generated by real commercial activity. Investors do not rely on shifts in market sentiment to realise returns, and do not use continuous daily price liquidity as their main exit path.

Compared with traditional private-equity investment, contract-based financing does not rely on a small number of investment objects to concentrate value creation. Traditional private equity typically seeks value uplift in a small number of enterprises through deep due diligence, active management and governance participation; contract-based financing, through unified contract profiles, portfolio allocation and participation in a large number of real commercial activities, pursues long-term return accumulation at the portfolio level.

Compared with growth-stage equity investment, contract-based financing does not rely on a small number of enterprises delivering extreme growth to produce tail returns; it forms portfolios from a large number of contract interests, so that the impact of any single contract’s performance on the overall portfolio is lowered, and long-term accumulation is achieved through systematic allocation.

Compared with infrastructure equity and other alternative equity assets, contract-based financing offers a more flexible portfolio-construction method and a more unified analytical basis. The thousand-unit investment unit brings the portfolio-construction threshold down and allows investors to diversify across a wider range of contracts; the Ten-Dimensional Code, the NUMA Coordinate and the NUMA Sharpe Cockpit provide a unified framework for understanding, comparing and combining different contract interests.

Taken together, contract-based financing is not a substitute for traditional equity assets; it is the extension of the equity-investment mindset into the contract world: the contract is the unit of interest expression, the cashflow of real commercial activity is the basis of value, portfolio diversification is the method of risk management, and the unified market protocol is the analytical foundation.

For investors who allocate to equity assets over the long term, contract-based financing is not an entirely unfamiliar category, but a new way of expressing interests in real commercial activity at a new economic scale.

Part Three — Market Governance

Establishing Order In The New Market

Legal Foundation · Fee Arrangement · Governance Mechanism

Chapter 1 — The Legal Foundation of NUMA Contract Rights

This chapter is a summary for readers who wish to understand NUMA's legal foundation without necessarily working through the full legal analysis. The complete legal analysis will be set out in a separate publication, the *Micro Connect New Markets (NUMA) Legal White Paper on Contract Rights*. NUMA's institutional architecture is organised across three ends. On the issuer side, contract law is the underlying language of rights. On the investment side, securities regulation is the institutional foundation. NUMA itself sits in the middle as the interconnection market, using contract law to organise dispersed contract cashflows and using the licensed-intermediary interface of securities regulation to connect investors.

NUMA is a protocol. The functions within its protocol ecosystem are borne by different legal entities. NUMA is responsible for information-layer functions (labelling, indexing, discovery and bookkeeping). Licensed intermediaries are responsible for financial-execution functions (fractionalisation, distribution, custody and settlement). Micro Connect itself holds a Hong Kong Type 4 licence (advising on securities) and a Type 9 licence (asset management), and has plans to apply for a Type 1 licence (dealing in securities). The role of Micro Connect's licensed subsidiaries within the protocol ecosystem is to fill the gap, ensuring the protocol chain runs end-to-end in the early stage of the market, before third-party licensed institutions are sufficiently engaged. Once enough third-party licensed institutions are willing to accept the protocol and take on the corresponding functions, Micro Connect will step back from those functions over time. This is the natural evolution of the protocol ecosystem.

1.1 Contract Law as the Underlying Language of Rights

Every core element of NUMA is a contract. The Real World Contract (RWC) is a contract, the Protocol Contract (PC) is a contract, the Transaction Contract (TC) is a contract, the Portfolio Repayment Scheduling Mechanism is an arrangement under the relevant Transaction Contracts and protocol rules, and arbitration is a clause within the Transaction Contract and other contractual documents. On the issuer side, NUMA operates on contract law, which has a long history, a mature body of rules and is one of the most basic legal instruments of human commercial activity.

This White Paper does not claim that contract law is superior to securities law by virtue of its longer history. That would mistake historical narrative for a conclusion on applicability. Contract law applies to point-to-point contractual obligations. Securities law applies to investor protection in the public capital markets. Each has its own function and its own setting.

Contract law is not the only legal system involved in NUMA's operation. The institutional interface depends on specific configuration variables: the nature of the interest, the way it is fractionalised, the structure of the aggregation, platform functions, distribution channels, categories of investor, applicable jurisdiction and so on. Under some configurations, NUMA may operate entirely within contract law and commercial arbitration. Under others, certain steps may trigger securities law, collective-investment-scheme rules or banking-law requirements. NUMA's legal viability does not depend on a blanket exemption from all regulation. It depends on the specific mapping of each configuration variable to the applicable legal system.

1.2 The Four Should-Not Principles

To avoid market misunderstanding, and to enable participants to understand NUMA under a unified formulation, this protocol insists on several boundaries.

First, NUMA should not be described as a lending relationship. Its core is not the mechanical repayment of a pre-existing debt, and it does not take a fixed discharge obligation as its basic logic.

Second, NUMA should not be described as equity investment. What the investor participates in is neither ownership of the enterprise as a whole nor a residual claim at the company level.

Third, NUMA should not be described as a trust relationship. The related rights and obligations should be identified on the basis of the contracts and rules arrangements, and should not automatically import the status and consequences of trust law.

Fourth, NUMA should not be described as a public offering of securities. External documents, role definitions, service paths and fund arrangements must all remain consistent within this boundary.

These boundaries are NUMA's discipline in legal expression. They require NUMA, in any external text, market communication, participant explanation or service flow, to avoid narratives that conflict with the four types of legal relationship above or that can be easily misunderstood.

1.3 A Different Kind of Safety: The Protection Logic Differs from Traditional Securities Markets

NUMA does not claim to be inherently safer. What it emphasises is that its protection logic differs from that of the traditional securities markets. In the traditional securities markets, securities law and securities regulators are principally concerned with two categories of core problem. The first is macro-financial risk, where the failure of one important institution may cascade and bring down the entire network. The second is concentration risk, where large amounts of capital concentrated in the hands of a small number of entities means the damage is enormous once fraud, manipulation or a bubble occurs. Fraud, insider trading, herd behaviour, secondary market price manipulation and greater-fool style bubbles are the problems on which regulators must spend great effort in a market driven by concentration of funds and price consensus. Regulators care about these problems because those problems really do exist in that market's structure. They are the real challenges that market has to face.

NUMA does not seek to prove it can manage those matters better than regulators. What it emphasises is that its intrinsic market structure makes those matters unlikely to arise in a contract-based financing market. The contract-based financing market has a structural profile of *small, micro, scattered, diverse and multitudinous*.

Small: The unit of booking for each investment is the Protocol Contract Certificate (PCC), not a large holding in the millions.

Micro: The underlying assets are the single contracts of individual small and micro economic entities.

Scattered: Risk is spread across many thousands of independent contracts.

Diverse: Contracts span industries, regions and business types, correlation is extremely low, and the fluctuations of one industry do not transmit to the whole.

Large in Number: An investor's portfolio is composed of a large number of PCCs, and the risk of a single Transaction Contract or its associated contracts usually affects only a small share of the portfolio.

More importantly, money is not concentrated in the hands of any institution or individual. The platform does not hold investor funds. Funds flow through the licensed custody and settlement system. Every cashflow comes from an independent Real World Contract and can be seen daily at microscope granularity.

Small, micro, scattered, diverse and large in number. These five words are the structural foundation of a different kind of safety in the contract-based financing market. On this structural foundation, a different kind of safety is also expressed along three empirically testable technical dimensions.

Information safety: Does the continuous updating of the Ten-Dimensional Code provide more timely, more granular information than the periodic disclosure required by securities law? This is empirically testable.

Execution safety: In the event of default, do contract-level arbitration and reputational collateral provide relief comparable to the combined effect of securities class actions and regulatory enforcement? This can be tested through case studies as the market develops.

System safety: Does a distributed, contract-level risk topology produce lower risk than a concentrated portfolio? This can be tested through network modelling.

A different kind of safety does not mean automatically exempt from regulation. NUMA's way of realising investor protection differs from traditional securities regulation, and these ways have a theoretical basis and are empirically testable. Whether they are sufficient in a particular jurisdiction, however, is a question that depends on the law and regulatory requirements of that jurisdiction.

1.4 The Howey Test: Facing the Uncertainty That Innovation Brings Honestly

In some jurisdictions, and especially in the U.S. context, judging whether an arrangement may be treated as a security often cannot avoid the analytical tool of the Howey Test. The four elements, namely whether there is an investment of money, whether there is a common enterprise, whether there is an expectation of profits, and whether that profit is derived primarily from the efforts of others, typically depend heavily, in legal analysis, on the specific structure and the specific facts. For NUMA, the most prudent approach is to face honestly the uncertainty that innovation brings: there are no mature rules, no precedents, and the boundaries are blurred.

For example, whether the Portfolio Repayment Scheduling Mechanism may, under a particular structure, be understood as a common arrangement, and to what extent the conduct of the Protocol Contract Issuer (PCI) and the platform in screening, maintaining and presenting information may be understood as the efforts of others upon which the investor relies, may all vary with jurisdictional interpretation, functional design and operational detail. NUMA's more reasonable legal attitude is therefore to minimise, in structural design, the likelihood of falling into the high-risk region of such tests, and where necessary to allocate the relevant requirements to licensed intermediaries, service division of labour and documentary boundaries. Faced with the Howey Test, NUMA takes the approach of managing uncertainty structurally.

1.5 The Investment Side Operates Within the Securities-Regulation Framework

NUMA's operating logic does not rest on the single premise that it could never be treated as a security. The more robust approach is to keep the platform's core functions permanently within information, discovery, recording, updating and condition-presentation systems, and to leave investor-facing licensed services, account services, fund transfers and distribution activities to intermediaries with the corresponding qualifications. Investors participate through licensed broker-dealers, funds move through licensed custodian banks, and access is open to Professional Investors (PIs).

The investment side operates within the securities-regulation framework from the outset. The platform's positioning is as an information and discovery system, performing the functions of coordinate generation, profile presentation and condition matching. Investor-facing services are performed through existing licensed broker-dealers. The platform depends on existing custody arrangements and payment systems to move funds. Compliance costs are borne by the licensed intermediaries.

1.6 The Principle of Minimal Platform Discretion

To prevent the platform's role from being misunderstood as an active manager, an investment-advice provider or an intermediary with excessive discretion, NUMA holds to the Principle of Minimal Platform Discretion. Its core is to require that everything the platform does be, so far as possible, rule-based, transparent, explainable, reviewable and reproducible. These are the platform's six governance commitments.

Rules disclosed: All NUMA Engine rules and coding algorithms are disclosed.

Ranking explainable: Where the platform ranks or highlights contracts, the ranking basis is explainable.

Conflicts of interest disclosed: Any economic interest the platform has in a specific contract or issuer must be disclosed.

Human review available: Coding or recommendations generated by AI can be reviewed by humans on request.

Results reproducible: The same input produces the same output.

No hidden change to presentation: The platform must not change the way contracts are presented for its own economic interest.

The significance of these six governance commitments is to hold the platform in the position of a rules system. For NUMA, keeping platform discretion to a minimum is not only a governance requirement but also a legal-risk-management requirement.

1.7 Enforcement, Arbitration and Cross-Border Enforceability

Any market built around contract rights must answer not only how the right is formed, but also, on default, who has the right to act, under what procedure, in what jurisdiction to enforce, and with what cost and timing. NUMA's basic answer is set out below.

Contract-level enforcement: Each investor has the right to bring arbitration directly on the default of a specific contract. Each investor's interest is independent and identifiable, and does not require class-action certification.

Mandatory arbitration: The Transaction Contract contains a mandatory arbitration clause specifying the arbitration institution and expedited procedure. Arbitration is faster, cheaper and more specialised than court litigation.

The gap between platform monitoring and enforcement: AI monitoring flags in real time where Actual Cash Flow deviates from Projected Cash Flow (PCF), but flagging is not enforcement. The Portfolio Repayment Scheduling Mechanism partly addresses this. The platform may, under the relevant Transaction Contracts, protocol rules and applicable procedures, provide notice to affected investors and facilitate collective action.

Reputational collateral: An issuer's default affects its future listings. Market discipline is more direct and less reversible than administrative penalty. A PCI's performance record, built contract by contract, is the foundation of market trust. Reputation is, however, an ex-ante deterrent, not an ex-post remedy. It must be supplemented by contract and arbitration mechanisms.

Cross-border enforcement: Where participants sit in different jurisdictions, enforcement requires cross-border recognition of arbitral awards. This is an honest limitation. NUMA's enforcement architecture works best where participants are located in jurisdictions that recognise and enforce commercial arbitration awards. Industry practice is currently evolving in a more proactive direction. In international arbitration, for example, an applicant may seek interim measures such as pre-award asset freezes from the courts of the seat of arbitration or of the place where the assets are located, thereby reducing the enforcement uncertainty of cross-border repayment.

Dispute-resolution mechanisms should, as far as possible, be written into the contract from the outset. Enforcement paths should be as clear and operable as possible, rather than depending on vague expectations. The platform can significantly reduce the information friction required for enforcement through continuous recording, anomaly flagging, rule prompts and procedural arrangements. But the actual realisation of rights still depends on a clear contract structure, effective dispute-resolution clauses and a legal path that can be recognised and enforced.

1.8 Concentration Reminder

NUMA does not impose mandatory manual position limits, and leaves diversification choices to the investor's own judgment. This does not mean, however, that the platform is silent on concentration risk. Where a single

investor holds excessively concentrated contract interests attributable to a single Protocol Contract Issuer, or where a single issuing entity accounts for an excessively high share of the platform's overall contracts, the platform may issue an information-level reminder to the market of concentration risk. The objective is to let the market, while preserving its own judgment, see earlier the fragility that over-concentration may bring.

Corresponding to the concentration reminder is the principle of progressive listing. For a Protocol Contract Issuer, contracts should not enter the market in a one-off, high-volume burst. They should progress step by step alongside the accumulation of performance record, Actual Cash Flow performance, information-maintenance quality and market validation. The significance of progressive listing is that once the cost of manufacturing risk is stretched over time, the more an issuer wishes to obtain large-scale market access, the more it has to demonstrate its performance capability and information quality continuously over a longer period. In this way, whether failure originates in bad faith or in operational mistake, risk has a better chance of being exposed early. But the platform does not limit how many contracts an issuer lists at once. If a particular issuer is especially popular with investors and every listing is fully taken up, the platform will not, and should not, prevent that.

The concentration reminder and progressive listing are therefore not a constraint on market vitality. They are important mechanisms for the new market to preserve prudent pace, transparent signalling and self-correcting capability during its expansion.

Chapter 2 — Fee Arrangements

2.1 The NUMA Operator's Infrastructure Service Fee

The infrastructure services provided by the NUMA operator, including coordinate positioning, portfolio optimisation and central-ledger recording, are, from the date of publication of the White Paper on 3 August 2026 until 31 December 2026, provided free of any infrastructure service fee. The purpose of this arrangement is to lower the threshold for participation during the early build-up of the market, and to encourage all parties to learn about, become familiar with and take part in co-building. Infrastructure services will be provided as usual during this period. There is no reduction in service capability. The fee arrangement is simply zero.

At an appropriate time in 2027, the NUMA operator will publish a formal fee schedule, fee-setting method and fee items. The fee schedule will fully consider the capacity of market participants to bear costs and the stage of market development, striking a balance between sustainable market operation and participant interest.

2.2 Autonomy of Licensed Intermediaries in Setting Fees

Any fees that licensed financial institutions and intermediaries charge their clients are determined by those institutions themselves on the basis of their own business models, client needs, industry standards and service content. On the investment side, the fees a broker-dealer charges its investor clients, including brokerage commissions, trading service fees, account-management fees and investment-advisory fees, are agreed between the broker-dealer and the investor client. On the issuer side, the fees a Financial Advisor (FA) charges its issuer clients, including one-off financing-success fees, commissions based on financing size and shares of investment returns, are agreed between the Financial Advisor and the issuer client.

The NUMA operator does not intervene in, does not set standards for, and does not participate in the fee arrangements between licensed intermediaries and their clients. These fees are commercial agreements between the licensed intermediary and its client. They do not concern any charge by the NUMA operator.

2.3 Central-Ledger Recording Service

Fee arrangements between participants, such as a Financial Advisor's one-off financing-success fee, a commission based on financing size, or a share of investment return, can, where they need to be recorded in the system, be booked through NUMA's central-ledger recording service.

The central-ledger recording service is part of NUMA's infrastructure services. What the central ledger records is agreements and arrangements between participants. It does not constitute a charge by the NUMA operator itself, nor does it constitute an endorsement or guarantee by the NUMA operator of those arrangements.

2.4 The Principle of Transparency in Fee Arrangements

Every fee arrangement recorded on NUMA's central ledger is presented transparently in the system, with a documentary record and a traceable trail. The ledger-recording function covers every kind of fee arrangement, whether it is a charge by the operator (currently zero), a fee charged by a broker-dealer to its investor client, a fee charged by a Financial Advisor to its issuer client, or any other revenue-sharing agreement between participants. So long as the parties choose to have it recorded on the central ledger, it is presented clearly within a unified system.

NUMA does not take on any recording, verification or trace responsibility for private fee arrangements that are not recorded on the central ledger. The central ledger provides a recording service, not a mandatory tool. Participants may choose to use it or not. But arrangements recorded on the central ledger carry natural transparency and traceability, and this is the value the central ledger provides to market participants.

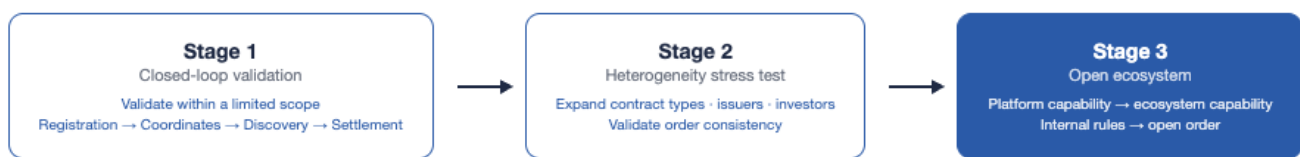
Chapter 3 — The Market's Launch Path and Open Governance Mechanism

The birth of any new market is a process of continuous validation, correction and expansion in real operation. This chapter answers two decisive questions: how a market built around Real World Contracts should launch, and how, once launched, a governance mechanism capable of supporting its long-term operation should take shape.

3.1 A Three-Stage Launch

NUMA does not understand market launch as a one-step arrangement. It takes a three-stage path that progresses step by step.

Figure 3-1: The Three-Stage Launch Path



Stage One is to run the complete closed loop of registration, coordinate setting and discovery within a limited scope. What it validates is not only whether the system can operate technically, but also whether the market's most basic chain of responsibility can close: whether Real World Contracts can be accurately read and turned into Protocol Contracts (PCs), whether NUMA Coordinates can be stably generated and continuously maintained, whether the readable contract profile can be understood consistently, whether the discovery mechanism can run smoothly, and whether the related recording, updating and responsibility allocation can form a reviewable, executable and sustainable process. For a new market, only when the closed loop is established first can any subsequent expansion have real meaning. Stage One operates on a limited scale of real funds within a limited scope, aiming to validate the closed loop rather than pursue scale.

Stage Two is to gradually expand the range of contract types, issuing entities and participating investors on top of the reliable operation of Stage One, so that the market is stress-tested in real complexity. That a market can operate on a small sample is not the same as being able to operate under diverse conditions. Only when contracts of different terms, business types, regions and characters, and investors with different preferences, enter at the same time, will the generality of the information language, the robustness of the rules arrangements and the adaptability of the service processes truly be tested. In other words, what Stage Two validates is whether, once heterogeneity enters, the market can still maintain consistent order, a unified standard and understandable results.

Stage Three is, on the basis of operational experience accumulated in the previous two stages, to gradually transition platform capability into ecosystem capability, to gradually move internal rules into open order, and finally to form an open market jointly built by a broad co-building base that can operate continuously. At this stage, NUMA is no longer just a trial-run arrangement among a small number of participants, but begins to turn into an institutionalised, ecosystem-based public structure. The core principle of the three-stage launch is therefore very clear: the advance of each stage is premised on the reliability of the previous stage having been demonstrated. The market's pace serves the quality of order, not the other way around.

3.2 Parallel Tracks of AI and Human Review

Throughout the launch of the market, NUMA maintains parallel tracks of AI and human review. This arrangement is a basic principle matched to the market's structure. AI's advantage is that it can process massive, repetitive, high-frequency and continuously changing information tasks, providing the market with

scale, speed and continuity. The advantage of human review is that it can understand boundaries, handle exceptions, identify disputes and take responsibility for key consequences. For a new market still in the process of formation, efficiency and responsibility are both indispensable, and neither can be entirely replaced by the other.

No key action that may affect market order, participant interest or institutional consequences should therefore be completed by AI alone. AI can identify, prompt, organise and present information ahead of time, but the final confirmation, review, adjudication and responsibility must remain with humans. Viewed over the longer term, parallel-track operation also has calibration and learning value. Every human review, every anomaly handled and every rule correction during the launch period will, in turn, help the system improve accuracy, stability and consistency. The system is responsible for doing things faster, more steadily and more continuously. Humans are responsible for making sure the market has not, in the pursuit of efficiency, lost its boundaries, ignored exceptions or blurred responsibility.

3.3 An Evolving Joint-Governance Mechanism

NUMA is not an arrangement fixed on the day of its publication. It is a public undertaking that must be continuously polished in practice. Any participant, whether an issuer, an investor, a broker, a dealer, a bank or another professional institution, can, on the basis of actual participation experience, put forward views and suggestions on information-disclosure methods, contract readability, service processes, operational details and cooperation arrangements. The more open the market, the fuller the feedback. The fuller the feedback, the more mature the order.

To this end, we will continue to organise exchanges and discussions with all sectors of the market, including thematic seminars, calls for comment on rules, case reviews and stage-by-stage experience-sharing, encouraging participants to convert scattered experience into common knowledge and to precipitate individual suggestions into reusable practice. We welcome participants from different jurisdictions, different backgrounds and different professional capabilities to raise questions, express concerns and offer solutions. For a new market, what truly matters is whether it has the capability to continuously absorb experience, correct its path and, through open discussion, move towards a more mature structure. The invitation extended in this chapter is also an invitation to all parties to join in its long-term building.

Call to Actions

Helping Every Participant Finding Their Place in the Market

To the Issuer Side · To the Investment Side · To Intermediaries and the Ecosystem

Chapter 1 — To the Issuer Side

In the contract market, as an issuer, you can raise the funds you need in two ways.

Discount financing. Using Investment-to-Value (ITV) and Yield as pricing adjusters, you discount a portion of the contract interest up front, match Fixed-income-like investors, and obtain funding closer in nature to debt financing.

Transfer financing. On the same two parameters, ITV and Yield, you transfer and sell-off a portion of the contract interest, match Equity-like investors, and obtain funding closer in nature to equity financing.

The two paths are not mutually exclusive for the same contract interest. Investors with a deeper understanding of the underlying business may lean towards selling-off, while investors seeking diversified portfolios may lean towards discount financing. Most issuers can cultivate both types of investor over time and gradually build a capital structure that suits them.

As a Protocol Contract Issuer (PCI), you are the contract-right holder who holds Real World Contract (RWC) interests and signs a Protocol Contract in NUMA to raise financing. You are the most fundamental participant on the supply side of the market. Participation in NUMA is a continuous four-stage journey: registration, discoverability, ongoing maintenance, and co-building.

The first stage is registration. A Real World Contract is converted into a Protocol Contract (PC) under the protocol, forms a complete set of NUMA Coordinates under the uniform rules, completes coordinate setting, and enters the readable scope of the market.

The second stage is discoverability. The contract enters a discoverable state and, under set rules, presents a readable profile to eligible Professional Investors. Contracts that were previously hard to identify with professional capital can now be systematically understood and compared.

The third stage is ongoing maintenance. The issuer takes continuing responsibility for maintaining the core fields, and in particular for supplementing and updating information promptly as performance progresses, Actual Cash Flow (ACF) is updated, and other material changes occur. NUMA emphasises continuous readability, not one-off filing.

The fourth stage is co-building. Once the issuer has developed stable experience in disclosure, maintenance and performance coordination, that experience can be distilled into reusable industry standards, providing input for the ongoing refinement of market rules and processes.

The six sections below address six categories of participant on the issuer side.

1.1 To Global Large Ecosystem Platforms

We invite e-commerce and local-services platforms, content and social platforms, mobility and delivery platforms, fintech platforms, and every large ecosystem operator whose core is a vast network of contractual relationships.

Your ecosystem brings together millions of merchants, creators, service providers and partners, each with real operating cashflow and contractual relationships. You are the natural aggregator of this vast body of real contracts.

What NUMA offers you. The most precious assets in a platform ecosystem are the continuing cashflows embedded in countless merchants and partners. In traditional capital markets, these cashflows are hard to identify, price or finance on a standalone basis. NUMA treats this class of contract interests as an independent asset class, so that every participant on the platform, and the platform itself, can bring these interests into the capital market in a standardised way, whether through discount or through transfer.

Directions and options you may consider:

Aggregate revenue-share, subscription and settlement contracts of high-quality merchants into listable contract packages.

Work with top merchants and participants in your ecosystem to design the structure of the first batch of listed contracts.

Use platform data capabilities to provide a high-quality information base for the Ten-Dimensional Code profile of each contract.

Bring the project cashflows in which the platform itself participates operationally into the market as independent contract interests.

Explore contract-based financing services for platform merchants as complementary financial infrastructure for the ecosystem.

1.2 To Global Industry Leaders and Ecosystem Core Enterprises

We invite franchise headquarters and flagship operators, supply-chain core enterprises, industry-leading operators, and enterprises that sit at the organisational and coordinating centre of their industries.

Your position naturally consolidates the contractual relationships of a large number of upstream and downstream partners, franchisees, suppliers and channel players. Your understanding of the operating conditions, performance capability and industry dynamics of both parties to those contracts far exceeds that of any financial investor in the market.

What NUMA offers you. You hold two kinds of asset: your own contract interests, and deep insight into the contracts inside your ecosystem. NUMA offers a path to monetise both together. You can bring your own mature contracts to market on a standalone basis, and you can also design contract-based financing schemes for partners in your ecosystem so that the whole industry chain benefits together.

Directions and options you may consider:

Carve out contract interests from mature business lines and finance them independently, without affecting the parent holding's capital structure.

Package cashflows from franchise, regional or project operations into listable contracts.

Co-design contract-based financing schemes with partners.

Use contract interests as a supplementary source of funding for cross-border expansion, avoiding the friction of traditional cross-border financing.

Leverage your industry reputation and judgment as a quality endorsement for the first batch of listed contracts.

1.3 To Mature Mid-Sized Enterprises and Brand Operators

We invite food-and-beverage chains and retail brand operators, service-chain operators, education and entertainment operators, regional industry leaders, and mature mid-sized enterprises that have established stable operations in their segments.

Your stage of scale, past the start-up phase, with stable cashflows, yet often above the threshold for equity financing and outside the reach of bank lending, is exactly the segment that traditional capital markets have long struggled to serve.

What NUMA offers you. Your business generates continuing, predictable contract cashflows, but financing typically comes at the price of equity dilution or collateral. NUMA offers a new path: use the contract interest

itself as the financing vehicle, without diluting equity or tying up the parent capital structure, so that the pace of financing genuinely aligns with the pace of operations.

Directions and options you may consider:

Carve the cashflow interests of a single store, project or region into listable contract units.

Package similar contracts into a batch of listed contracts to form a stable contract-interest portfolio for the brand operator.

Use contract-based financing to bridge the mid-stage funding gap for opening new stores or entering new markets.

Transfer the cashflow interests of mature stores to Equity-like investors, letting long-term investors share in your operating results.

Explore a continuing contract-based financing rhythm as a substitute for one-off equity or debt raises.

1.4 To Operators in the Emerging New Economy

We invite charging-station and new-energy operators, computing-power and data-centre operators, energy-storage and battery-asset operators, logistics and warehousing operators, and other emerging operating organisations whose core surrounds infrastructure assets.

Your business profile, asset-heavy, cashflow-stable over the long term, with clearly defined operating boundaries, is exactly the kind of asset that global capital markets are looking for and are still working out how to allocate to.

What NUMA offers you. Your assets are heavy, your cashflows are stable, but your expansion is often constrained by the pace of equity and debt financing. NUMA lets you bring the cashflow of each specific project and each specific facility to market on a standalone basis, obtaining supplementary funding through contract interests.

Directions and options you may consider:

Package the operating cashflow of a single facility or single project into a listable contract on a standalone basis.

Package similar facilities into a batch of listed contracts, forming a portfolio at the asset-class level.

Use contract-based financing to accelerate the deployment of new facilities.

Work with long-term investors to monetise mature facility contracts through transfer.

Explore new contract standards based on usage, mileage or per-second computing settlement.

1.5 To Global SMEs and Innovative Organisations

We invite SMEs whose operations are based on real contracts, professional service firms, innovative technology companies, subscription and SaaS providers, organised operators in the creator economy, and every mid-and-small operating entity with clear contractual relationships and stable cashflows.

The economic activity you represent is the most real, the closest to the last miles of the economy, and the hardest for mainstream capital markets to identify.

What NUMA offers you. The most valuable things in your hands are often the contracts themselves: subscription agreements, service agreements, channel agreements, revenue-share agreements. In the past these contracts were only the basis of operations. In NUMA they can themselves be a financing vehicle.

Directions and options you may consider:

Start with a single important contract, or a group of related contracts, and attempt a first listing.

Bring cashflow interests from subscription revenue, service revenue-share and channel settlements into the market on a standalone basis.

Use contract-based financing to top up working capital, expansion start-up funds and new-product development budgets.

Engage Equity-like investors who understand your business more deeply, letting them participate in your operations through contract interests.

Open your contracts to both discount-type and transfer-type investors, and gradually cultivate a capital base of your own.

1.6 To Individual Equity or Contract-Interest Holders

We invite individual operators, creators and professionals who hold lawful, compliant, transferable contract interests or equity interests, and all individual participants who, within a lawful and compliant scope, hold interests that can be assigned.

What NUMA offers you. So long as the contract interests and equity interests are lawful, compliant and contractually assignable, they can be discounted or transferred in NUMA in contract form. This means that an interest previously held in a highly illiquid form may now enter the capital market in a standardised way and find investors willing to share the time and risk with you.

Directions and options you may consider:

Bring vested, contractually assignable equity interests to market in contract form.

Realise value ahead of time by discounting lawful contract interests you hold with counterparties.

Transfer part of the interest to equity-like investors willing to hold for the long term.

Use contract interests as a tool to balance the rhythm of your personal operations with the rhythm of your family finances.

NUMA's support to the issuer side. For the six categories of participant above, NUMA provides the following support at the market level:

Collaborate in formulating market-readable ways of describing contract interests, so that you can present yourself in language the market can read.

Provision of analytical tools and profiling methods for the Ten-Dimensional Code of a contract, so that you understand your own position in the market.

Co-design pathways and structures for contract-based financing, as internal decision reference.

Introductions to licensed intermediaries, licensed custody and licensed product channels, so that the full process has a clear compliance path.

Provisions of continual opportunities for market education, professional training and industry exchange.

Offering of companionship through the full process, from a first attempt to the formation of a stable contract-based financing rhythm.

The support above is shared openly at the market level and is not tied to any single transaction. The listing, issuance and sale of specific contracts are completed by licensed intermediaries.

Chapter 2 — To the Investment Side

As a Professional Investor outside mainland China, you can find in the contract market three things that were previously hard to obtain together in other markets. First, a class of assets with low correlation to traditional equities and bonds. Second, a class of assets whose return comes from real operating cashflow. Third, a class of assets that can be diversified to an extreme degree. The six sections below address six categories of participant on the investment side.

2.1 To Global Sovereign Wealth Funds and Large Endowment Funds

We invite the world's major sovereign wealth funds, university and foundation endowments, large pension master funds, and long-term institutional investors who think about asset allocation on a multi-decade horizon.

Over the past several decades, you were among the first to bring private equity, private credit and infrastructure into mainstream allocation, and to drive their evolution into today's mature asset classes.

What NUMA offers you. The most valuable part of your portfolio is often not the most liquid part, but the part that has low correlation to traditional equities and bonds and is driven by long-term fundamentals. Contract interests have a naturally low correlation to secondary-market price volatility. Their return comes from the cashflows of real economic activity, not from expansion or contraction of valuation multiples. You are a thought leader in long-cycle allocation.

Directions and options you may consider:

Include contract interests as an independent sub-class within the alternatives allocation framework.

Begin with a small pilot allocation to build internal knowledge and governance experience.

Participate through direct investment, feeder funds or managed accounts.

Combine contract interests with existing real assets, infrastructure and specialty credit positions to form a low-correlation alternatives basket.

2.2 To Global Private Credit, Structured Credit and Special Situation Funds

We invite the world's major private credit funds, structured credit funds, special situation funds and independent managers who continue to innovate in credit and structure. Over the past two decades, you have turned the middle ground left behind by bank retrenchment into a trillion-dollar modern credit market. You are the true leading force in modern credit innovation.

What NUMA offers you. The analytical tools you know well, cashflow analysis, coverage analysis, loan-to-value and loss buffers, waterfalls, diversification and correlation, covenants and structural protections, are almost entirely applicable in the contract-interest world, with only differences in expression. Investment-to-Value (ITV) corresponds to credit enhancement, the Ten-Dimensional Code corresponds to factor decomposition, and the NUMA Sharpe Ratio corresponds to risk-adjusted return as expressed in this new market.

Directions and options you may consider:

Treat contract interests as a natural extension of existing strategies.

Begin with a small pilot allocation to validate return and risk characteristics at portfolio level.

Run existing credit-analysis workbenches in parallel with the NUMA Sharpe Cockpit for comparative analysis.

Take part in the pricing, structuring and documentation design of the earliest listed contracts.

2.3 To Global Insurers, Pension Funds and Long-Duration Liability-Matching Investors

We invite the asset-management teams of the world's major insurers, pension investment departments, and institutional investors whose core objective is long-duration liability matching. Your capital has a long-cycle character, and your requirements for stable cashflow, duration matching and disciplined allocation make you an important stabilising force in the capital markets.

What NUMA offers you. The questions you care about most, liability matching, stable cashflow, predictability, long-cycle return, and correlation with other assets, are exactly the core characteristics of contract interests. The cashflows of a contract interest are essentially instalment repayments and therefore carry a natural duration character. Held as a portfolio, the predictability of cashflow is further improved.

Directions and options you may consider:

Include contract interests as an independent allocation category within alternative fixed income.

Prioritise long-term holding; use portfolios of listed contracts to customise duration and cashflow rhythm, in coordination with existing private debt and infrastructure debt allocations.

Access the market through licensed intermediaries, within an existing compliance and governance framework.

2.4 To Global Asset Managers, Wealth-Management Platforms and Private Banks

We invite global and regional asset managers, mutual-fund and private-fund managers, brokerage wealth-management divisions, independent wealth-management institutions, and the product and advisory teams of private banks.

What NUMA offers you. For a new asset class to enter institutional and high-net-worth portfolios, it needs the productisation capability, client understanding and advisory infrastructure of professional institutions. Your clients are all looking for return sources with low correlation to traditional equities and bonds. Contract interests are naturally suited to being productised into strategies at different risk-return grades, meeting diverse allocation needs on the client side. NUMA provides the underlying assets and tools. Productisation itself is done by you.

Directions and options you may consider:

Design mutual-fund, private-fund, managed-account or separately-managed-account strategies with contract interests as the underlying asset.

Include contract interests as an independent allocation category within multi-asset funds, and design customised solutions for high-net-worth clients.

Bring contract-interest products onto the core shelf of the wealth-management platform.

2.5 To Overseas Family Offices and Multi-Family-Office Platforms

We invite family offices outside mainland China, multi-family-office platforms, and institutions serving high-net-worth families with professional asset-management services.

Your clients maintain a continuing interest in allocation across asset classes. In today's traditional financial markets, alternative investment products that combine moderate entry thresholds, flexible access and low correlation with traditional equities and bonds are still few.

What NUMA offers you. Contract interests are a new asset class that is accessible in small units, portfolio-friendly, and low-correlated with traditional assets. They are well suited as an independent allocation category within family-client portfolios, meeting both the need for diversification and providing a return path distinct from equities and bonds.

Directions and options you may consider:

Include contract interests as an independent allocation category within the portfolios of the families you serve.

Allocate to contract interests in aggregate through a multi-family-office platform.

Work with licensed intermediaries to design contract-interest separately-managed accounts or dedicated funds.

Take part in the first batch of listed contracts as a family-office co-investment.

2.6 To Global Systematic-Strategy and Quantitative Teams

We invite global quantitative institutions, systematic-strategy teams, algorithm-driven asset managers, and investment teams at the frontier of data, modelling and engineering capability.

We invite you because you represent the most advanced methodology in the asset-management industry: building investment decisions on data, models and systems. NUMA has been an AI-native market from day one. You are its natural methodological partner.

What NUMA offers you. Every dimension of the Ten-Dimensional Code is a structured, quantifiable input factor. The Actual Cash Flow of a listed contract is recorded and updated daily, with a data density far higher than the quarterly or annual disclosures of traditional private assets.

Directions and options you may consider:

Develop systematic allocation strategies with contract interests as the target.

Use the Ten-Dimensional Code as an independent factor space to build factor-based strategies.

Design dynamic rebalancing and portfolio-optimisation algorithms.

Include contract interests as an independent sleeve within a multi-asset systematic portfolio.

Develop risk-factor models and stress-testing models for contract interests.

NUMA's support to the investment side. For the six categories of participant above, NUMA provides the following support at the market level:

A complete conceptual framework, terminology and analytical toolkit for contract interests as a new asset class.

Joint discussion with internal research teams on the appropriate positioning of contract interests within overall asset allocation.

Provide sample contracts, sample portfolios and sample stress tests as analytical material.

Joint discussion of participation forms and product structures suited to your governance framework and compliance requirements.

Introductions to licensed intermediaries, licensed custody and licensed brokerage, so that the full process has a clear compliance path.

Continuing market-level data disclosure, portfolio analysis and industry-exchange opportunities.

The support above is shared openly at the market level. It does not replace the sale, matching, clearing and other specific execution steps performed by licensed intermediaries.

Chapter 3 — To Intermediaries and the Ecosystem

NUMA brings a new asset class, a new contract structure, new modes of information disclosure and new service needs. What makes a market a market is not a single participant, but a complete set of professional intermediaries and ecosystem service providers, together forming the skeleton and the nervous system.

The six sections below address six categories of participant on the intermediary and ecosystem side.

3.1 To Global Licensed Brokers and Dealers

We invite global licensed brokers, dealers, institutional sales teams of securities firms, and professional institutions that carry the core functions of matching, execution and distribution in traditional securities markets.

You are the most direct, most professional and most compliance-constrained bridge between this market and its investors. NUMA is deliberately restrained on the sale, matching and execution of specific trades, precisely to preserve the complete role of that bridge for you.

What NUMA offers you. A new asset class, a new pool of eligible-investor demand, and a new product line are opening up. This is not a substitute for your existing business but a new territory alongside it. As a new asset class, contract interests need the full chain of licensed brokerage services, from listing, issuance and underwriting through to brokerage and execution.

Directions and options you may consider:

Take on the issuance and underwriting of listed contracts.

Establish institutional sales channels and eligible-investor onboarding mechanisms for listed contracts.

Provide brokerage and execution services for contract-interest-related products.

Provide professional market-making and secondary-circulation support for listed contracts.

Take part in the joint drafting of industry standards and best practices for the contract-interest market.

3.2 To Global Custodian Banks and Clearing Institutions

We invite global licensed custodian banks, clearing and settlement institutions, cross-border cash-management institutions, and professional institutions that carry the core functions of asset custody and fund clearing.

We invite you because the deepest guarantee of trust in a market is not a promise but the independent custody, clean clearing and reliable settlement of assets and funds. You are the guardians of that trust.

What NUMA offers you. From day one, NUMA's arrangements for asset and fund custody and clearing have been fully independent and fully reliant on licensed custodian banks. That means a whole new field of custody assets, clearing flows and cross-border settlement demand is opening up.

Directions and options you may consider:

Provide independent custody services for listed contracts, transaction contracts and investor holdings.

Provide clearing and settlement services for the receipt and payment of contract-interest cashflows.

Provide multi-currency, multi-jurisdiction clearing arrangements for cross-border contract-interest investment.

Co-design custody and clearing standards for the contract-interest market with NUMA.

Take part in the co-building of critical infrastructure for the contract-interest market.

3.3 To Global Law Firms and Accounting Firms

We invite the world's major law firms, accounting firms and tax service providers, along with professional service firms with deep experience in cross-border transactions, structured finance and complex contracts.

We invite you because a brand-new market needs, more than anything else, the strength of professional law and professional accounting to place every document, every entry and every transaction structure within a clear, credible and traceable framework. You are the professional bedrock of this market.

What NUMA offers you. As a new asset class, contract interests bring a whole new field of professional service demand: legal documentation, cross-border structuring, tax arrangements, accounting treatment, audit standards and dispute resolution. This is not a substitute for your existing business but a new professional territory alongside it.

Directions and options you may consider:

Provide drafting, review and opinion services for the legal documents of listed contracts and transaction contracts.

Provide legal and tax solutions for the structural arrangements of cross-border contract-interest investment.

Provide accounting, audit and tax services for contract-interest issuers and productisation partners.

Provide professional post-event support for dispute resolution in the contract-interest market.

Co-draft legal and accounting standard documents for the contract-interest market with NUMA.

3.4 To Rating, Audit and Appraisal Institutions

We invite the world's major rating agencies, independent audit firms, asset-appraisal firms, and service providers that carry professional credibility in credit rating, independent analysis and asset valuation.

We invite you because a maturing market cannot do without independent, professional and credible third-party evaluation. You are the independent witnesses of market credibility.

What NUMA offers you. As a new asset class, contract interests generate a whole new set of professional needs in credit evaluation, independent analysis and asset valuation. The Ten-Dimensional Code structure of a contract interest has much in common with traditional credit-rating methodology, and also has features of its own. It is precisely where institutions like yours can step in and gradually define the standards.

Directions and options you may consider:

Provide independent credit evaluation for listed contracts and contract portfolios.

Provide third-party valuation and periodic valuation updates for contract interests.

Provide independent industry research, market analysis and risk monitoring for the contract-interest market.

Co-define the methodology and standards for rating contract interests.

Take part in independent oversight and the build-out of the credit system for the contract-interest market.

3.5 To Financial Advisors and Independent Analysts

We invite the world's major financial-advisory firms, independent research houses, professional analyst teams, and service providers that carry professional-advisory and independent-research functions in the capital markets.

We invite you because the healthy growth of a market needs both infrastructure and a plurality of independent voices, professional advisory services and in-depth industry research. You are continuing contributors to the professional depth of the market.

What NUMA offers you. As a new asset class, contract interests bring a whole new field of professional advisory and research needs: issuers need professional financial advisors, investors need professional independent research, and the market structure needs a plurality of analytical perspectives.

Directions and options you may consider:

Provide financial-advisory services to contract-interest issuers, covering structural design, market strategy and investor communication.

Provide independent research, industry analysis and portfolio recommendations to contract-interest investors.

Establish continuing research coverage on the theme of the contract-interest market.

Take part in industry conferences, professional forums and investor education on the contract-interest market.

Co-develop information-disclosure and research standards for the contract-interest market with NUMA.

3.6 To AI Developers, Application Developers and the Emerging-Technology Ecosystem

We invite global AI developers, independent algorithm teams, application developers, data-science teams, and every emerging-technology ecosystem building products and services on the capabilities of the new generation of AI.

We invite you because NUMA has been an AI-native market from the first day of its design. You represent the most vital and creative force of this era, and the most natural technology partner in the NUMA ecosystem.

What NUMA offers you. NUMA provides a complete set of structured, programmable and composable market infrastructure: the Ten-Dimensional Code structure, the NUMA Sharpe Cockpit, on-ledger cashflow trails, and market-level aggregated data. This is a natural application soil for AI developers, application developers and independent algorithm teams.

Directions and options you may consider:

Develop AI analytical and decision-support tools on top of the structured data interfaces of the contract-interest market.

Develop specialised smart assistants and applications for specific issuer-side or investment-side roles.

Build industry-research and visualisation products on market-level aggregated data.

Develop smart recommendation, optimisation and monitoring algorithms for contract-interest portfolios.

Take part in the continuing co-building of the AI-native infrastructure of the contract-interest market.

NUMA's support to intermediaries and the ecosystem. For the six categories of participant above, NUMA provides the following support at the market level:

Joint definition of service standards and best practices in your professional field within the contract-interest market.

A complete technical, legal, accounting and data baseline description of contract interests as a new asset class.

Open access, under clear usage rules and protocol framework, to the structured data interfaces and market-level aggregated data of the contract-interest market.

Joint organisation of industry exchanges, professional forums, standard co-building and supplementary white-paper work.

Introductions to opportunities on the issuer side and the investment side, so that your service capabilities find a clear position in the market.

Companionship through the full process, from a first engagement to the formation of a mature business line.

The support above is shared openly at the market level. It does not replace any specific professional delivery on your side.

Chapter 4 — Early Co-Building Capital

To support the launch of NUMA, the operator intends to commit an early co-building capital pool of approximately HKD 1 billion, dedicated to co-building arrangements during the market's launch phase. Specific arrangements will be released separately in dedicated announcements.

Co-Investment Matching. On a matching basis, the pool will co-invest with the first batch of institutional investors willing to enter the market, sharing the early-stage risk and jointly validating the market mechanism.

Prototyping Allocation Reserve. During the early launch of the market, where a structural gap arises, the reserve will be used for prototyping allocations to demonstrate the construction and running state of typical portfolios. This part of the arrangement will be publicly disclosed at the governance level, with explicit time limits and size caps.

The capital arrangements above are subject to strict discipline under NUMA's own rules on related-party transactions and conflicts of interest, with all information publicly disclosed. Specific rules, participation methods, timing arrangements and governance details will also be released separately in dedicated announcements.

Closing: Rebuilding the Connection of Capital Within Real World Contracts

To this point, the core proposition of NUMA has been laid out clearly. Taking on the Real World Contract (RWC), and using a common language, a common set of rules and a common method of identification, NUMA brings contract-based cashflows, long scattered, hidden and hard to enter mainstream financial view, into a market order that is readable, comparable and discoverable. This closing offers a concise summary.

NUMA is a market infrastructure: it labels contracts, indexes contracts, forms readable profiles of contracts, and lets real contracts and real investors have the chance to find each other in a common language. What we provide is order, language and rules, not conclusions, recommendations or promises.

I. What we deliver to the market is a usable order

The value of NUMA is not in proposing a new concept, but in delivering a usable order that market participants can share. Contracts become identifiable because of a common label, searchable because of a common index, and comparable because of a common profile. Real World Contracts that once lived only in individual operating sites and individual contract texts enter, for the first time, a public, continuing and understandable discovery space.

This order also has clear boundaries. We do not make decisions for investors. We do not package for issuers. We do not endorse or guarantee any party. What we do is make judgment possible, not write the conclusions of that judgment for the market.

II. We respect debt and equity, and we hope to extend their spirit into the contract world

NUMA holds a consistent respect for these two mature financing paradigms. Centuries of institutional accumulation, risk thinking and capital-organising capability in modern finance rest on them. Today, more and more value appears in the form of specific contracts, dispersed settings and continuing cashflows, and does not fit naturally within traditional debt or equity frameworks. What NUMA sets out to do is to extend the discipline and safety boundary emphasised by debt, and the judgment of growth and future expectations emphasised by equity, into Real World Contracts that have not yet been sufficiently covered, so that financial services become more inclusive, more far-reaching and more accommodating.

III. From white paper to market

The publication of this white paper is the starting point of NUMA. At this moment, what we publish is a basic order already formed, with open space preserved for market participants to build together. This is the first time this order is set out in full before the market.

We therefore end this chapter with a formal invitation. This white paper publishes the initial institutional framework of NUMA and an invitation to co-build, to validate and to refine in continuing market operation. We welcome issuers, investors, brokers, dealers, banks, and every professional force in law, accounting, technology, data and research to take part in the ongoing build-out of NUMA.

The new world of contracts is only just beginning. NUMA — building it together with you.

Appendix I — Compliance Statement

This Appendix is the external compliance statement accompanying the main text. It has the same effect as the main text and is intended to make clear the nature and boundaries of the mechanisms described in this White Paper.

I. The Four Should-Not Principles

The mechanisms and arrangements described in this protocol and in this document should not be characterised as any of the following legal relationships or acts. First, they do not constitute a lending relationship. Second, they do not constitute equity investment. Third, they do not constitute a trust relationship. Fourth, they do not constitute a public offering of securities. Any statement related to the above characterisations does not appear in NUMA's external texts and does not apply to any arrangement described in this White Paper. NUMA does not accept any claim that characterises the arrangements described here as any of those legal relationships or acts.

II. Accuracy of Information

NUMA has made reasonable efforts to ensure the accuracy of the information provided in this document, but does not guarantee its absolute accuracy or completeness. NUMA takes no responsibility, whether in tort, contract or otherwise, for any loss or damage arising from any inaccuracy or omission in this information, or from any decision, action or inaction taken on the basis of, or in reliance on, the information contained in this document. The relevant information is provided by information providers, and we process the information they provide. For data obtained from third parties by scraping, we take the same approach and do not thereby assume any verification or guarantee responsibility.

III. Risk Warning

The Ten-Dimensional Code presented by NUMA is a readable identification of a contract. It does not constitute, and should not be construed or relied upon as, a recommendation, rating, endorsement or guarantee of any contract. The actual occurrence of cashflow under a contract depends on the real commercial events of the Real World Contract itself and carries uncertainty. Parameters such as Yield and Projected Cash Flow are for screening and descriptive purposes only. They do not constitute a return commitment, capital-protection arrangement or fixed return. Investors should make independent judgments based on their own circumstances and bear the corresponding risks. NUMA is intended for eligible participants who meet the requirements of their applicable jurisdictions.

The economic purpose of an investor participating in contract-based financing is to obtain a potential return supported by actually qualifying cashflow, while bearing the performance risk of the Real World Contract, the risk of delayed or insufficient repayment, the risk of failure of the PCI and service institutions, legal-enforcement risk and exit risk. ITV, Yield, the Ten-Dimensional Code system, the dual-quote mechanism and the portfolio mechanism do not themselves generate returns, and they do not constitute capital protection, ratings or return guarantees. An investor may obtain a positive return, may recover contributions with delay, may fail to reach the target return, or may lose part or all of the contribution.

IV. Promotion and Sale Restrictions

This White Paper does not constitute, and should not be construed as, a promotion, recommendation, offering or sale of any securities, futures, derivatives, funds, equity, limited-partnership interests, loans, trusts, foreign exchange or other financial products to residents or enterprises of mainland China, Hong Kong, Macao or any other jurisdiction. No party receiving this White Paper should regard it as an offer, offer solicitation or recommendation of any of the above categories.

V. Disclaimer and Licensed Communication

NUMA is not a lender, creditor, product issuer or actual provider of funds. It does not make investment decisions for any party and bears no rating responsibility. The disclosure scope of the relevant information is subject to the constraints of contractual agreement, data permissions, the applicable jurisdiction and compliance requirements. The theoretical framework of this White Paper applies globally. The basic logic of contract rights as an object of financing does not vary by jurisdiction. But the current implementation takes Hong Kong as the starting jurisdiction. The licensed intermediaries described in this White Paper are defined by reference to financial institutions licensed under Hong Kong's Securities and Futures Ordinance (SFO), and the relevant regulatory communication is directed principally to the Hong Kong Securities and Futures Commission (SFC). Participants and licensed institutions in other jurisdictions engage in accordance with the laws and regulatory requirements of their own jurisdictions. As business develops and applicable jurisdictions require, we will obtain the corresponding licences where needed and provide data and services to relevant parties in accordance with compliance requirements. Differences between jurisdictions in the criteria for listing, licensing and registration are governed by the separate jurisdictional-comparison standard we maintain.

This document, and the transactions mentioned in it, have not been reviewed, approved or endorsed by any financial, securities or governmental regulatory authority. No regulatory authority takes responsibility for the truthfulness, sufficiency or reasonableness of the information contained in this document. The circulation or distribution of this document does not constitute any implied endorsement by any regulatory authority.

VI. Governance of the Ten-Dimensional Code System

Micro Connect has established a robust governance framework for the Ten-Dimensional Code System it has adopted. The framework specifies internal supervisory authority and responsibility, establishes a formal process for material revisions, and requires internal supervisory bodies to conduct periodic independent evaluations to verify that each benchmark continues to fit its original design purpose. Micro Connect also maintains a complete conflict-of-interest policy to identify, manage and avoid the various risks that may impair the fairness of the Ten-Dimensional Code System. It has also put in place appropriate functional segregation, separating the management of the Ten-Dimensional Code System from trading and other client-facing business.

Appendix II — Consolidated Glossary

Terms in this Appendix are arranged by the first letter of the English full name (A–Z). The Chinese full name, abbreviation and definition correspond one to one.

Full Name	Abbreviation	Description
实际现金流(Actual Cash Flow)	ACF	The cashflow data mapped from a Real World Contract (RWC) that has actually occurred and been recorded / reported under the Protocol Contract (PC) reporting standard.
人工智能算法层(AI Algorithm Layer)	—	One of the three core layers of NUMA's architecture. It carries the information collection, maintenance, updating, indexing and screening of the Ten-Dimensional Code, standardising the information scattered across Real World Contracts (RWCs) and Protocol Contracts (PCs) so that it is searchable and comparable, for participants to browse and judge on their own.
卖方报价维度(Ask-side Offer Dimensions)	Ask	The financing conditions submitted by the Protocol Contract Issuer (PCI), including the Investment-to-Value (ITV) and Yield ranges, used to express the PCI's offer conditions for the contract-cashflow financing arrangement.
买方报价维度(Bid-side Offer Dimensions)	Bid	The investment conditions submitted by the investor, including the Investment-to-Value (ITV) and Yield ranges, used to express the investor's offer conditions.
生意规模 / 合同规模 (Business / Contract Scale)	—	An important sub-dimension under Dimension 2 · RWC Business Parameter and Dimension 8 · PC Business Parameter of the Ten-Dimensional Code. It measures the coefficient relationship between how large the overall business is and how large the contract is.
生意控制力(Business Control)	—	An important sub-dimension under Dimension 9 · PC Control Parameter of the Ten-Dimensional Code. It measures the strength of the Protocol Contract Issuer's (PCI's) control, through its commercial relationships, over the business related to the Real World Contract (RWC), reflecting the depth of the relationship between the PCI and the underlying business.
资本密度(Capital Density)	CD	An important sub-dimension under Dimension 4 · Operating Density Parameter of the Ten-Dimensional Code. It measures the intensity of upfront capital investment in the underlying commercial activity.
完成条款 / 成交条款 (Completion Terms)	CT	The snapshot of a set of transaction parameters automatically generated by the protocol system under pre-set rules upon completion of matching. It defines the relevant conditions of the Transaction Contract corresponding to a single Protocol Contract Certificate (PCC) or PCC Portfolio (PCCP), principally including: ① Investment-to-Value (ITV); ② Yield; ③ the list of subscribed underlying targets (applicable to a PCCP).
合同现金流融资范式 (合同现金流融资) (Contract-Based Financing)	CBF	A new financing paradigm whose object of financing is the cashflow interest of a Real World Contract (RWC).
单张封顶(Contract-Level Cap)	—	The cumulative recorded-repayment ceiling applicable to a single Protocol Contract Certificate (PCC) under the chosen repayment rhythm: the Contract-Level Cap equals the actual amount paid for that PCC, i.e. $1,000 \times \text{ITV}$, multiplied by $(1 + \text{agreed Yield})$. When the cumulative recorded repayment of the PCC reaches the cap, the PCC-level exit mechanism is triggered.
控制手段有效性(Control Effectiveness)	—	An important sub-dimension under Dimension 9 · PC Control Parameter of the Ten-Dimensional Code. It measures the actual effectiveness of the control measures available to the Protocol Contract Issuer (PCI), reflecting the PCI's ability to intervene in and manage the cashflow and operating conduct of the Real World Contract (RWC).
坐标定位引擎 (Coordinate Positioning Engine)	—	The computational engine within NUMA's AI Algorithm Layer responsible for producing a structured description of a Protocol Contract (PC) based on Ten-Dimensional Code information and generating the corresponding NUMA Coordinates.
信用历史(Credit History)	—	An important sub-dimension under Dimension 1 · RWC Entity Parameter and Dimension 7 · PC Entity Parameter of the Ten-Dimensional Code. It

		measures the historical performance record and credit accumulation of the Real World Contract (RWC) entity or the Protocol Contract Issuer (PCI).
数字化程度(Digitalization Level)	DL	An important sub-dimension under Dimension 6 · Digitalization × Virtualization Parameter of the Ten-Dimensional Code. It measures the digitalisation level of the business corresponding to the Real World Contract (RWC) in respect of data collection, recording, management, analysis and interaction, reflecting the data-fication capability of the business's operation.
维度 1 · 原生合同主体参数(Dimension 1 · RWC Entity Parameter)	—	The first dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It describes the basic attributes of the entity corresponding to the Real World Contract, composed of the two sub-dimensions Entity Scale and Credit History.
维度 2 · 原生合同生意参数(Dimension 2 · RWC Business Parameter)	—	The second dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It describes the scale of the commercial activity and the financing-structure features corresponding to the Real World Contract, composed of the two sub-dimensions Business / Contract Scale and Leverage Multiple.
维度 3 · 原生合同边界参数(Dimension 3 · RWC Boundary Parameter)	—	The third dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It measures the Real World Contract cashflow's capacity to cover the Protocol Contract's (PC's) return obligation and the degree of continuous match, composed of the two sub-dimensions Income Coverage and Time Coverage.
维度 4 · 原生合同经营密度参数(Dimension 4 · RWC Operating Density Parameter)	—	The fourth dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It describes the operating-density features of the underlying commercial activity, composed of the two sub-dimensions Traffic Intensity (TI) and Capital Density (CD).
维度 5 · 原生合同现金流参数(Dimension 5 · RWC Cash Flow Parameter)	—	The fifth dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It describes the time features of Real World Contract cashflow, composed of the two sub-dimensions Projected Duration (PD) and Projected Frequency (PF).
维度 6 · 原生合同数字化 × 虚拟化参数(Dimension 6 · RWC Digitalization × Virtualization Parameter)	—	The sixth dimension of the Ten-Dimensional Code, on the Real World Contract (RWC) side. It measures the degree of data-fication, machine-readability and verifiability of Real World Contract cashflow, composed of the two sub-dimensions Digitalization Level (DL) and Virtualization Level (VL).
维度 7 · 挂牌合同主体参数(Dimension 7 · PC Entity Parameter)	—	The seventh dimension of the Ten-Dimensional Code, on the Protocol Contract (PC) side. It describes the entity attributes of the Protocol Contract Issuer (PCI), composed of the two sub-dimensions Entity Scale and Credit History.
维度 8 · 挂牌合同生意参数(Dimension 8 · PC Business Parameter)	—	The eighth dimension of the Ten-Dimensional Code, on the Protocol Contract (PC) side. It describes the scale of the commercial activity and the financing-structure features associated with the Protocol Contract Issuer (PCI), composed of the two sub-dimensions Business / Contract Scale and Leverage Multiple.
维度 9 · 挂牌合同管控参数(Dimension 9 · PC Control Parameter)	—	The ninth dimension of the Ten-Dimensional Code, on the Protocol Contract (PC) side. It measures the Protocol Contract Issuer's (PCI's) actual control capability over the business related to the Real World Contract (RWC), composed of the two sub-dimensions Business Control and Control Effectiveness.
维度 10 · 挂牌合同势能参数(Dimension 10 · PC Momentum Parameter)	—	The tenth dimension of the Ten-Dimensional Code, on the Protocol Contract (PC) side. It describes the change trend and stability characteristics of the Real World Contract's (RWC's) Actual Cash Flow (ACF), and maps them to the Protocol Contract side for investor reference, composed of the two sub-dimensions Growth Trend and Volatility.
主体规模(Entity Scale)	—	An important sub-dimension under Dimension 1 · RWC Entity Parameter and Dimension 7 · PC Entity Parameter of the Ten-Dimensional Code. It measures the operating scale and resource size of the Real World Contract (RWC) entity or the Protocol Contract Issuer (PCI).
类权益 / 不封顶型(Equity-like)	—	A Protocol Contract (PC) type with an open return mechanism; return floats with the underlying performance or cashflow without a fixed ceiling (for example, an equity-return-type contract).
类固收 / 封顶型(Fixed-income-like)	—	A Protocol Contract (PC) type with a locked return mechanism; the contract terms specify the method of return calculation and its ceiling, and investment return does not exceed the agreed range (for example, a restaurant revenue-share contract).

增长趋势(Growth Trend)	—	An important sub-dimension under Dimension 10 · PC Momentum Parameter of the Ten-Dimensional Code. It measures the growth or decline trend of the Real World Contract's (RWC's) Actual Cash Flow (ACF).
收入覆盖率(Income Coverage)	—	An important sub-dimension under Dimension 3 · RWC Boundary Parameter of the Ten-Dimensional Code. It measures the ratio at which the Real World Contract's (RWC's) cashflow covers the Protocol Contract's (PC's) return obligation, reflecting how well the underlying cashflow scale can support the contract's performance requirement.
中介机构层(Intermediary Layer)	—	The financial-execution layer of NUMA outside the three core layers. It is principally composed of two categories of ecosystem service providers: financial intermediaries, and banking solutions serving the investment side and the issuer side. It carries functions such as custody, settlement, payment and distribution.
投入比例(Investment-to-Value)	ITV	The ratio of the investor's contribution to the face value of a Protocol Contract Certificate (PCC). It expresses the investor's funding ratio and the corresponding level of safety cushion, and is one of the offer dimensions.
投资者(Investor)	—	The party that holds the corresponding Protocol Contract Certificate (PCC) or PCC Portfolio (PCCP) under a Transaction Contract.
账本层(Ledger Layer)	—	One of the three core layers of NUMA's architecture. It carries the registration, bookkeeping and payment functions of NUMA participants, responsible for the clear and accurate recording of every transaction, and serves as the core computational and accounting hub.
杠杆倍数(Leverage Multiple)	—	An important sub-dimension under Dimension 2 · RWC Business Parameter and Dimension 8 · PC Business Parameter of the Ten-Dimensional Code. It measures the ratio between the financing scale associated with the relevant commercial activity or contract arrangement and its business scale, reflecting its financing-leverage level.
撮合 / 匹配(Match)	—	The rule of completing matching based on the investor's screening preferences over the Protocol Contract Issuer's (PCI's) Ten-Dimensional Code and on the overlap between the two sides' Investment-to-Value (ITV) and Yield offer ranges.
牛码新市(Micro Connect New Markets)	NUMA	The overall name of the market infrastructure described by this protocol. It encompasses the complete market architecture, including the discovery map, NUMA Coordinates, NUMA Sharpe Cockpit, matching engine, central ledger and governance mechanism.
牛码合同 / 三层合同 (NUMA Contract)	—	Under the NUMA contract system, the three-layer contract structure jointly composed of the Real World Contract (RWC), the Protocol Contract (PC) and the Transaction Contract (TC).
牛码坐标(NUMA Coordinates)	—	The positioning result of a NUMA Contract on the NUMA Sharpe Map. A coordinate range is formed by the Ten-Dimensional Code, used to identify the value range of the contract within the return-risk space.
牛码流动性(NUMA Liquidity)	—	The new liquidity mechanism formed by NUMA on the basis of Real World Contract (RWC) cashflow, jointly composed of four paths: ① daily cashflow repayment; ② listed transfer of a single Protocol Contract Certificate (PCC); ③ re-bundled issuance of a Protocol Contract (PC) portfolio; ④ whole-portfolio transfer of a contract portfolio. It differs from the "continuous quoting + instant execution" liquidity paradigm of traditional securities markets; NUMA Liquidity is formed on the basis of contract cashflow, interest transfer and portfolio structure.
牛码夏普自驾舱(NUMA Sharpe Cockpit)	—	The investment-decision toolset NUMA provides to Professional Investors, used to view the risk-return coordinates of a Protocol Contract (PC), adjust Ten-Dimensional Code parameters, build a PCC Portfolio (PCCP) and analyse changes in the portfolio's risk-return position.
牛码夏普地图(NUMA Sharpe Map)	—	The visualised expression of the risk-return space NUMA provides for Protocol Contracts (PCs). It shows a Protocol Contract's (PC's) relative position and range of change on the risk and return dimensions, assisting investors in understanding the risk-return relationship of different Protocol Contracts.
牛码夏普比率(NUMA Sharpe Ratio)	—	The methodological indicator NUMA uses to measure the risk-adjusted return of a Protocol Contract (PC) and a PCC Portfolio (PCCP). It is an important reference for investors in understanding risk-return relationships on the NUMA Sharpe Map and in performing portfolio optimisation.
报价维度(Offer Dimensions)	—	The offer parameters, other than the Ten-Dimensional Code, used in the matching process of a Protocol Contract (PC), including Investment-to-Value (ITV) and Yield. They express the offer intent of the two sides; upon

		completion of matching, the relevant results are loaded into the Completion Terms (CT) as transaction and bookkeeping parameters.
千元牛码证组合(PCC Portfolio)	PCCP	The basket of Protocol Contract Certificates (PCCs) actually held by an investor. It is used to record and manage the investor's overall holding structure and related portfolio performance across the Transaction Contracts (TCs) signed with the NUMA operator through different Protocol Contract Certificates.
组合总封顶(Portfolio Cap)	—	The total cumulative recorded-repayment ceiling applicable to a PCC Portfolio (PCCP) under the chosen repayment rhythm, equal to the sum of the Contract-Level Caps applicable to each PCC within the portfolio. When the cumulative recorded repayment of the PCCP reaches the Portfolio Cap, the PCCP-level exit mechanism is triggered.
组合优化引擎(Portfolio Optimization Engine)	—	The computational engine within NUMA's AI Algorithm Layer responsible for combining Protocol Contract Certificates (PCCs) on the basis of variables such as amount, price and Investment-to-Value (ITV), helping investors optimise the allocation of risk and return.
组合回款节奏机制 (Portfolio Repayment Scheduling Mechanism)	—	The contractual mechanism, at the PCC Portfolio (PCCP) level, under which the accounting and rhythm of the underlying cashflow repayments are arranged through the contractual agreement between the investor and the Protocol Contract Issuer (PCI) under the protocol. Investors can adjust portfolio composition and ITV based on their preferences to accommodate different repayment rhythms, achieving portfolio-level risk diversification and optimisation of repayment arrangements.
专业投资者(Professional Investor)	PI	A qualified investor meeting the investor-suitability requirements of the applicable jurisdiction. NUMA is open only to PIs, who participate through licensed intermediaries; NUMA is not open to retail investors.
预测现金流(Projected Cash Flow)	PCF	The evidence-based projected future cashflow data mapped from a Real World Contract (RWC).
预计持续期(Projected Duration)	PD	An important sub-dimension under Dimension 5 · Cash Flow Parameter of the Ten-Dimensional Code. It describes the projected duration of cashflow generated by a Real World Contract (RWC), e.g. monthly, quarterly, annually.
预计频率(Projected Frequency)	PF	An important sub-dimension under Dimension 5 · Cash Flow Parameter of the Ten-Dimensional Code. It describes the projected frequency at which cashflow of a Real World Contract (RWC) occurs, e.g. daily, weekly.
协议合同 / 挂牌合同 (Protocol Contract)	PC	The contract re-signed by the Real World Contract (RWC) interest-holder under the protocol, used to bring the relevant interests of the Real World Contract into the NUMA rules system for registration, fractionalisation and management as a contract-based expression of interest.
千元牛码证(Protocol Contract Certificate)	PCC	The smallest holdable and transferable booking unit formed upon registration of a Transaction Contract (TC), used to record the investor's holding share of the corresponding Transaction Contract interest. Each PCC has a fixed face value of 1,000 ("certificate" refers only to the booking unit under the protocol, and does not constitute a securities certificate, depositary receipt or publicly offered security).
挂牌合同发行人 (发行人) (Protocol Contract Issuer)	PCI	The contract right-holder that holds the Real World Contract (RWC) interest and signs the Protocol Contract (PC) on NUMA for financing, that is, the issuing entity under the Protocol Contract. This is a role under the protocol only and does not automatically correspond to a securities issuer under securities law.
协议层(Protocol Layer)	—	One of the three core layers of NUMA's architecture. It carries the basic norms on which the market operates and the vehicle of contractual relationships, covering the two-level relationship between the Real World Contract (RWC) and the NUMA-listed Protocol Contract (PC), and forms the unified basis for the market's rules and its transferable interests.
真实世界合同 / 原生合同 (Real World Contract)	RWC	Within the NUMA framework, any lawfully entered-into, actually existing and legally valid real-world commercial contract; it is the base contract from which the commercial activity and cashflow arise.
真实世界合同对手方 / 原生合同对手方 (Real World Contract Counterparty)	RWCC	The Protocol Contract Issuer's (PCI's) counterparty under the Real World Contract (RWC) — can be a person, a company, an object, an event or any entity.

剩余价值耗损率 (Residual Value Impairment Rate)	RVIR	The new risk-measurement indicator NUMA proposes for measuring risk in the contract world. It describes the possibility of unexpected impairment of the residual value of a contract over its remaining term. The indicator ranges from 0% to 100% and is formed by the risk contributions of each dimension of the Ten-Dimensional Code, proposed to serve as the risk denominator of the NUMA Sharpe Ratio in place of traditional volatility.
退出机制(Settle Trigger)	—	The auto-completion / exit mechanism triggered when the cumulative repayment of a single Protocol Contract Certificate (PCC) or a PCC Portfolio (PCCP) reaches the corresponding cap, or when the agreed final term is reached. At the PCC level, the single PCC stops being booked and any excess is handled under the Portfolio Repayment Scheduling Mechanism; at the PCCP level, the whole portfolio stops being booked and exits.
十维码(Ten-Dimensional Code)	—	The standardised cognitive description of a Protocol Contract (PC) on NUMA. It is composed of ten two-dimensional parameter dimensions divided into two groups: ① RWC dimensions (Dimensions 1–6), which describe the basic features of the Real World Contract (RWC) and its corresponding commercial activity, including the RWC entity, business, boundary, operating density, cashflow, and digitalisation × virtualization parameters; ② PC dimensions (Dimensions 7–10), which describe the features of the Protocol Contract (PC) and the Protocol Contract Issuer (PCI), including the PC entity, business, control and momentum parameters.
时间覆盖率(Time Coverage)	—	An important sub-dimension under Dimension 3 · RWC Boundary Parameter of the Ten-Dimensional Code. It measures the degree of match between the projected duration of the Real World Contract's (RWC's) cashflow and the performance term of the Protocol Contract (PC).
客流强度(Traffic Intensity)	TI	An important sub-dimension under Dimension 4 · Operating Density Parameter of the Ten-Dimensional Code. It measures the traffic scale, activity level and stability of the underlying commercial activity.
交易合同(Transaction Contract)	TC	Once an investor selects a specific Protocol Contract Certificate (PCC), each PCC corresponds to and embodies a Transaction Contract. The Transaction Contract is based on the relevant Protocol Contract and the NUMA rules system, and specifies the PCC the investor participates in, the ITV, the Yield, the Completion Terms, the cap, the repayment bookkeeping and the exit arrangement. Under the Transaction Contract and the NUMA rules system it references, the investor obtains the right to request cashflow pass-through and the related holder rights, and bears the corresponding investment risks and protocol obligations.
虚拟化程度(Virtualization Level)	VL	An important sub-dimension under Dimension 6 · Digitalization × Virtualization Parameter of the Ten-Dimensional Code. It measures the degree to which the business or asset corresponding to the Real World Contract (RWC) has been transformed from a physical form into a virtualised expression, reflecting its online, digital-mapping and virtual-operation capability.
波动性(Volatility)	—	An important sub-dimension under Dimension 10 · Momentum Parameter of the Ten-Dimensional Code. It measures the degree of volatility of the Real World Contract's (RWC's) Actual Cash Flow (ACF) and the ability to sustain stability.
牛码新市白皮书 / 牛码新市总协议 / 滴灌通真实世界合同投融资总协议 (简称: 白皮书、总协议) (White Paper on Micro Connect New Markets Contract-Based Financing (CBF) Protocol)	White Paper on NUMA Protocol	The basic normative protocol that defines NUMA's terminology, structure, operation, participation rules and governance mechanism.
收益率(Yield)	—	The return parameter submitted by the Protocol Contract Issuer (PCI) and the investor within the offer dimensions (used only for matching; it does not constitute a return commitment, fixed return, minimum return or principal guarantee).

SUITES 2105-2108
TWO EXCHANGE SQUARE
8 CONNAUGHT PLACE, CENTRAL, HONG KONG

Group Website: www.microconnect.com
Email: info@microconnect.com