XRP QUANTITATIVE VALUATION FRAMEWORK

Modeling the Role of XRP in Global Financial Settlement Infrastructure

A Dual-Model Approach Integrating Asset Tokenization and Settlement Flow Dynamics.

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*Hi, I'm **Buzz Light {12}**,*
I'm not an economist — just curious about how global finance could connect with XRP. Let's explore it together in simple terms!

Notation used in this report:

Monetary units:

Q = Quadrillion (10^{15} USD)
T = Trillion (10^{12} USD)
B = Billion (10^{9} USD)

Model variables:

A = value of tokenized assets
V = transaction volume
Turnover = asset turnover rate
Velocity = settlement asset velocity
Supply = circulating supply of the asset
Price = USD per XRP

Key Takeaways

Global financial infrastructure processes transactions measured in trillions of dollars annually.

Blockchain-based settlement systems could potentially capture a portion of this activity as financial markets adopt tokenization.

The valuation of a settlement asset depends on three primary variables: economic transaction volume, token velocity, and circulating supply.

Under the assumptions used in this framework, increasing settlement volume can significantly impact the theoretical valuation of the asset.

Even a relatively small share of global financial activity could correspond to trillions of dollars in annual settlement volume.

SUMMARY

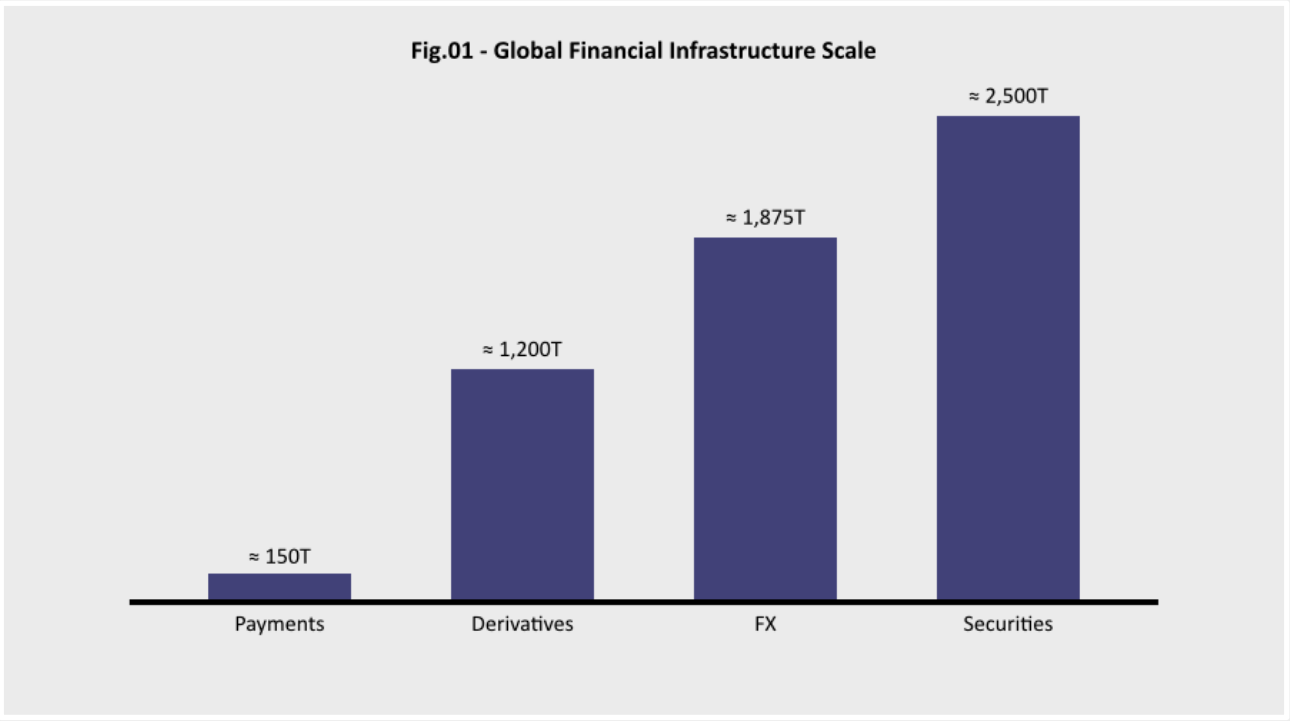


Figure 01 - Global Financial Infrastructure Scale

Estimated annual transaction volumes across major financial systems including cross-border payments, foreign exchange markets, securities settlement and derivatives trading.

Price = market price of the settlement asset
Economic Volume = total annual financial activity processed through the network
Velocity = number of times a token circulates per year
Supply = circulating token supply available to support transactions

*This equation is the core idea of this report. It connects **financial activity**, **token circulation** and **supply** to explore how a settlement asset like XRP could scale.*

1. EXECUTIVE SUMMARY

The objective of this report is to develop a quantitative framework to analyze the potential valuation dynamics of XRP as a digital settlement asset within global financial infrastructure. The approach used in this report combines two complementary analytical models. The first model evaluates the potential scale of asset tokenization across global financial markets. The second model evaluates the transaction flows generated by these assets once they are actively traded, transferred, or used as collateral within blockchain-based financial systems.

By combining these two perspectives, it becomes possible to estimate the economic activity that a blockchain settlement network may process, and to explore how this activity could translate into the valuation of a settlement asset such as XRP.

The global financial system processes extremely large volumes of economic activity each year. These flows include cross-border payments, foreign exchange settlement, securities clearing, derivatives trading and capital market transactions. As financial infrastructure continues to evolve, blockchain-based settlement systems are increasingly being explored as an alternative mechanism for reducing settlement times, improving capital efficiency and enabling programmable financial assets.

One of the major structural transformations currently discussed within financial markets is the tokenization of real-world assets. Tokenization refers to the representation of traditional financial assets as digital tokens recorded on blockchain infrastructure. These assets can include real estate, government bonds, corporate debt, equities, investment funds and commodities.

Once tokenized, these assets do not remain static. They generate continuous economic activity through trading, transfers, collateralization and financial contracts. As a result, the annual financial flows generated by tokenized assets can significantly exceed the underlying asset value.

The valuation of a settlement asset can be modeled by linking the economic activity processed by the network with the number of tokens available to support this activity. This relationship can be expressed using a monetary circulation framework.

| Figure 01 - Global Financial Infrastructure Scale |

$$Price = \frac{Volume}{Velocity \times Supply}$$

This equation represents the core valuation model used throughout this report. It shows that the value of a settlement asset depends primarily on three variables: the economic activity supported by the network, the speed at which tokens circulate, and the total number of tokens available.

Financial infrastructure is built on many layers: messaging, clearing and settlement systems all work together to move value.

Tokenized Assets = total value of assets represented on blockchain infrastructure
Turnover = average annual transaction frequency of tokenized assets
Velocity = number of settlement cycles per year
Supply = circulating supply of the settlement asset

Figure 02 — Asset Tokenization Flow Model

Figure 02 - Asset Tokenization Flow Model

Diagram illustrating how traditional financial assets can be represented as digital tokens and integrated into blockchain-based financial infrastructure.

In addition to this settlement-based valuation framework, this report also integrates a tokenization-driven model. This model evaluates the potential value of assets that could migrate onto blockchain infrastructure in the coming decades. By combining the potential scale of tokenized assets with expected transaction turnover rates, it becomes possible to estimate the financial flows that may emerge within blockchain settlement networks.

The integration of these two models leads to a unified analytical framework connecting asset tokenization, financial transaction flows and settlement asset valuation.

$$Price = \frac{Tokenized\ Assets \times Turnover}{Velocity \times Supply}$$

Figure 02 - Asset Tokenization Flow Model

The objective of this report is not to predict a specific future price for XRP. Instead, the goal is to develop a transparent analytical framework allowing different adoption scenarios to be explored. By connecting global financial infrastructure, asset tokenization and settlement economics, the framework provides a structured method to evaluate how blockchain-based financial systems could evolve over time.

The following chapters examine the structure of global financial markets, the architecture of blockchain settlement networks, and the economic mechanisms that could influence the long-term valuation of digital settlement assets.

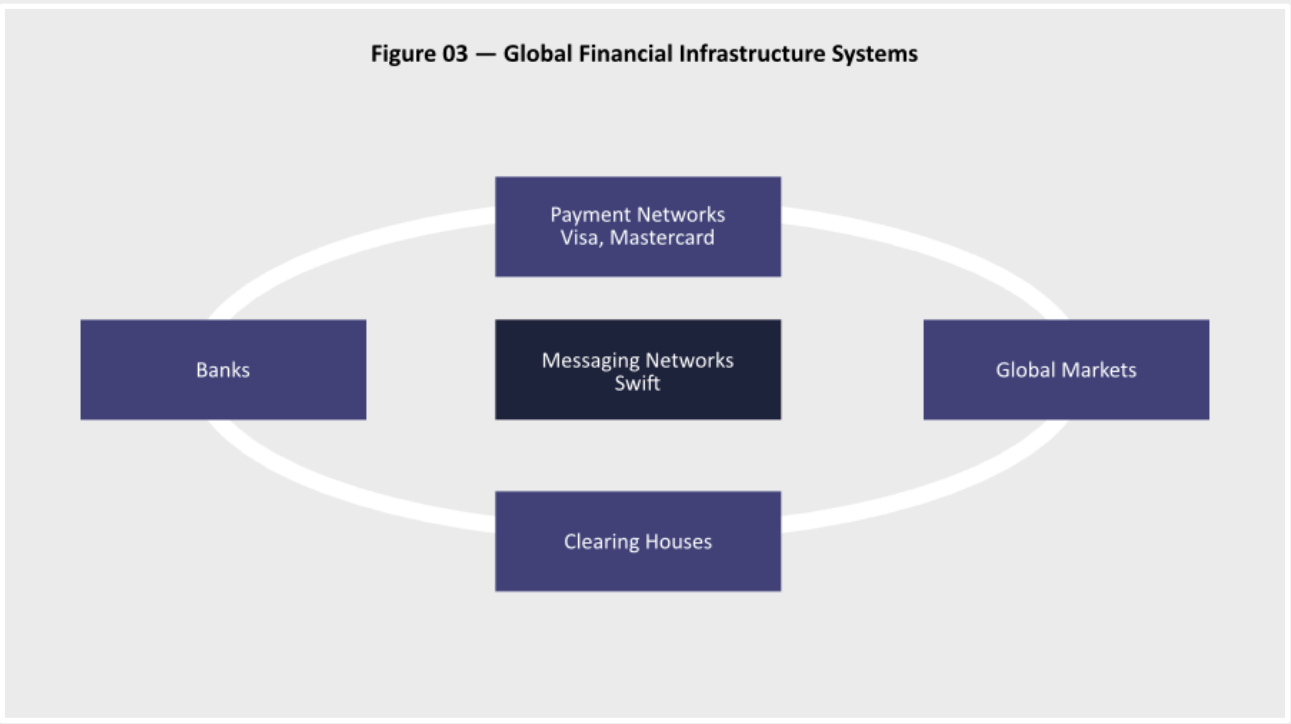


Figure 03 - Global Financial Infrastructure Systems

Overview of major global financial infrastructures including cross-border payments, foreign exchange markets, securities settlement and derivatives trading.

Modern finance is a network of interconnected systems constantly exchanging value and information.

2. GLOBAL FINANCIAL INFRASTRUCTURE CONTEXT

The modern global financial system processes extremely large volumes of economic activity every year. These flows include cross-border payments, foreign exchange transactions, securities settlement, derivatives trading and capital market transfers.

Understanding the scale of these financial infrastructures is essential when evaluating the potential role of blockchain-based settlement systems. While digital assets are often discussed primarily within the context of cryptocurrency markets, their long-term relevance may depend more on their integration into global financial infrastructure.

The traditional financial system relies on multiple layers of intermediaries including correspondent banks, clearing houses, central securities depositories and payment messaging networks. These infrastructures coordinate the transfer of value between financial institutions operating across different jurisdictions and currencies.

Despite the technological sophistication of these systems, many components of the global financial infrastructure still rely on processes that were designed decades ago. Settlement delays, fragmented liquidity and capital inefficiencies remain structural challenges within the current financial architecture.

Figure 03 - Global Financial Infrastructure Systems

Several core financial infrastructures illustrate the magnitude of global financial activity.

Cross-border payments represent one of the largest segments of international financial flows. These payments facilitate trade, remittances and corporate treasury operations between countries.

Foreign exchange markets represent an even larger layer of global liquidity. Currency trading occurs continuously across global markets and is essential for international trade, capital flows and monetary policy operations.

Securities settlement systems manage the transfer of ownership for financial assets such as equities, bonds and derivatives. These systems are responsible for clearing and settling transactions executed on capital markets.

The approximate scale of these systems can be summarized as follows, based on publicly available industry reports (BIS, SWIFT, DTCC) :

Financial System	Estimated Annual Volume
Cross-border payments	≈ 150T USD
Foreign Exchange Settlement	≈ 1,900T USD
Securities Settlement	≈ 2,500T USD
Global Derivatives Markets	≈ 1Q USD

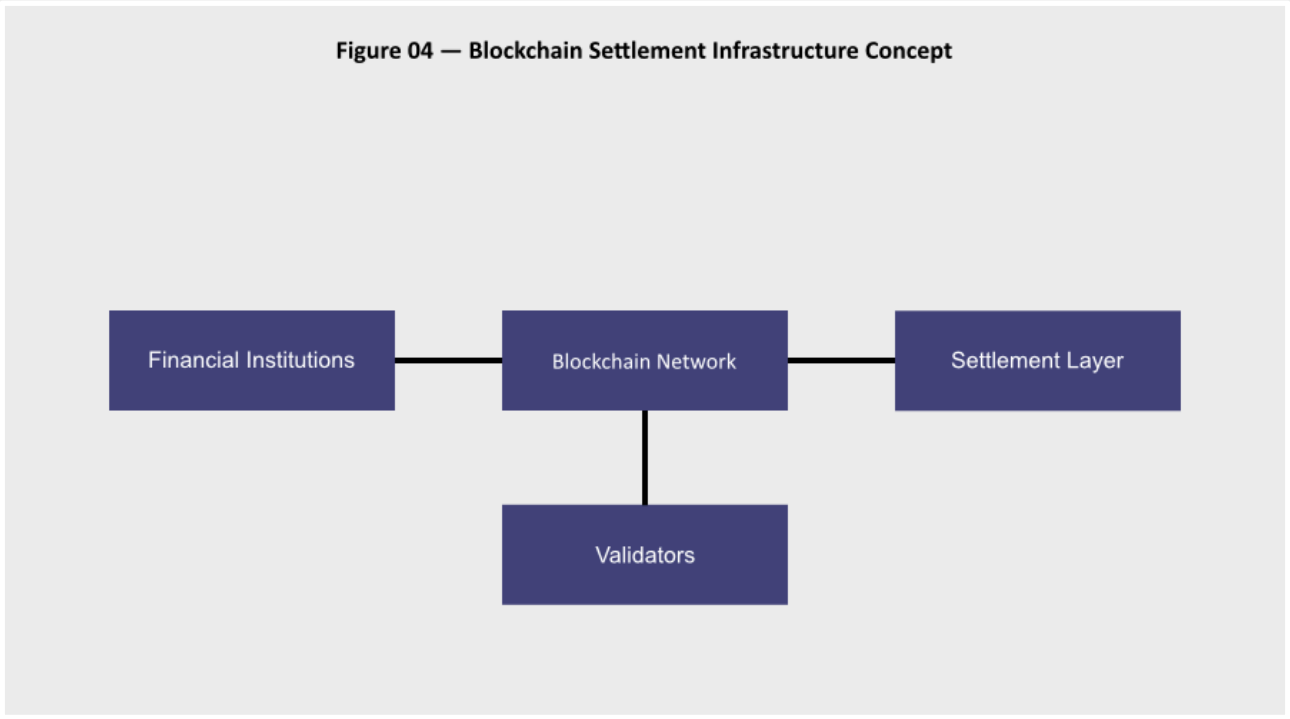


Figure 04 - Blockchain Settlement Infrastructure Concept

Conceptual overview illustrating how blockchain settlement systems may integrate with traditional financial infrastructure.

Volume network = financial activity processed by the network
f = fraction of the global market captured by the network
V = total financial market volume

Blockchain introduces a different model where settlement can occur directly on a shared ledger.

These values illustrate the enormous scale of global financial infrastructure. Even small improvements in settlement efficiency can generate significant economic impact.

Financial infrastructure markets are significantly larger than the entire cryptocurrency market today. This difference in scale highlights the long-term opportunity for blockchain-based settlement systems if they are able to integrate into existing financial flows.

Blockchain technology offers three key capabilities for financial infrastructure.

First, blockchain networks can reduce settlement times by enabling near real-time transaction finality. Traditional financial settlement processes may take several hours or even multiple days depending on the asset class and jurisdiction involved.

Second, blockchain infrastructure can improve capital efficiency by reducing the need for prefunded liquidity across multiple correspondent banking accounts. In traditional cross-border payment systems, financial institutions often maintain large pools of idle capital to guarantee settlement.

Third, blockchain networks enable programmable financial assets. Tokenized assets can incorporate automated rules, compliance mechanisms and settlement conditions directly within the asset itself.

| Figure 04 - Blockchain Settlement Infrastructure Concept |

These capabilities have contributed to growing institutional interest in blockchain settlement infrastructure. Financial institutions, central banks and technology providers are increasingly exploring tokenization, distributed ledger systems and digital settlement networks.

One of the most significant structural developments in this area is the tokenization of real-world assets. Tokenization enables traditional financial instruments to be represented as digital tokens that can be transferred and settled directly on blockchain infrastructure.

$$Volume_{network} = f \times V$$

This equation illustrates a key principle of this framework: because global financial markets operate at enormous scale, even a small share can represent very large economic volumes.

For example, capturing a small share of global cross-border payments could represent trillions in annual settlement activity.

Combined with tokenized assets and digital financial infrastructure, these flows could support a new generation of global settlement networks.

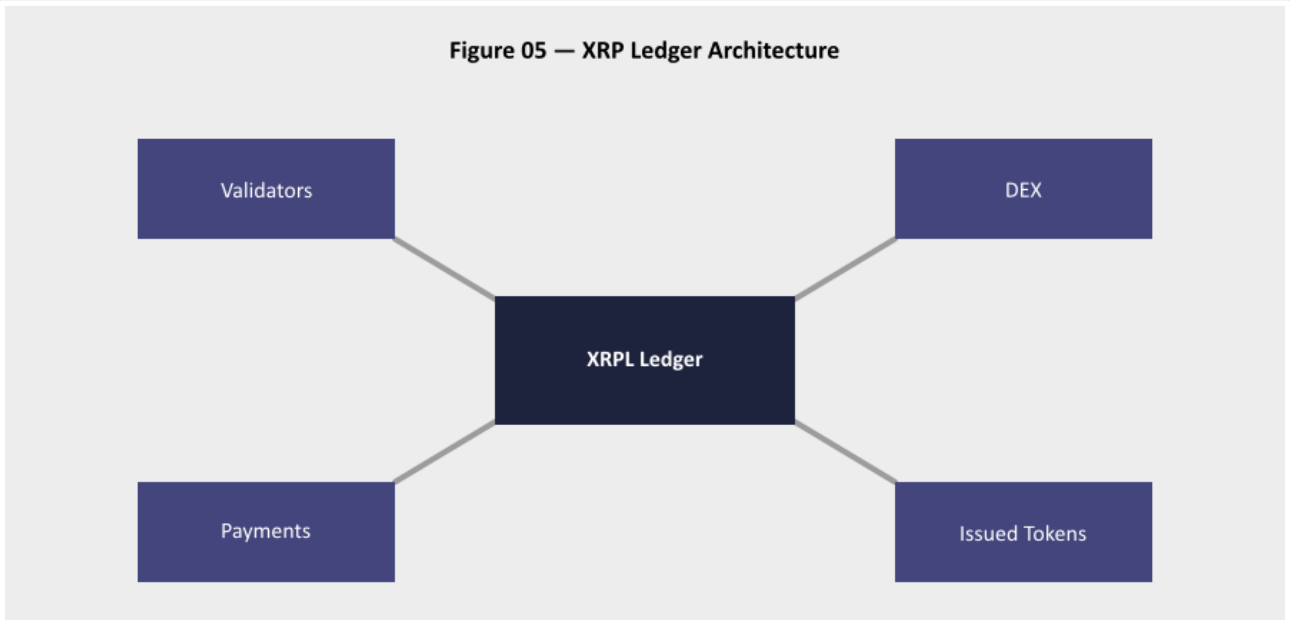


Figure 05 - XRP Ledger Architecture

Structural overview of the XRP Ledger including validators, consensus protocol and transaction processing.

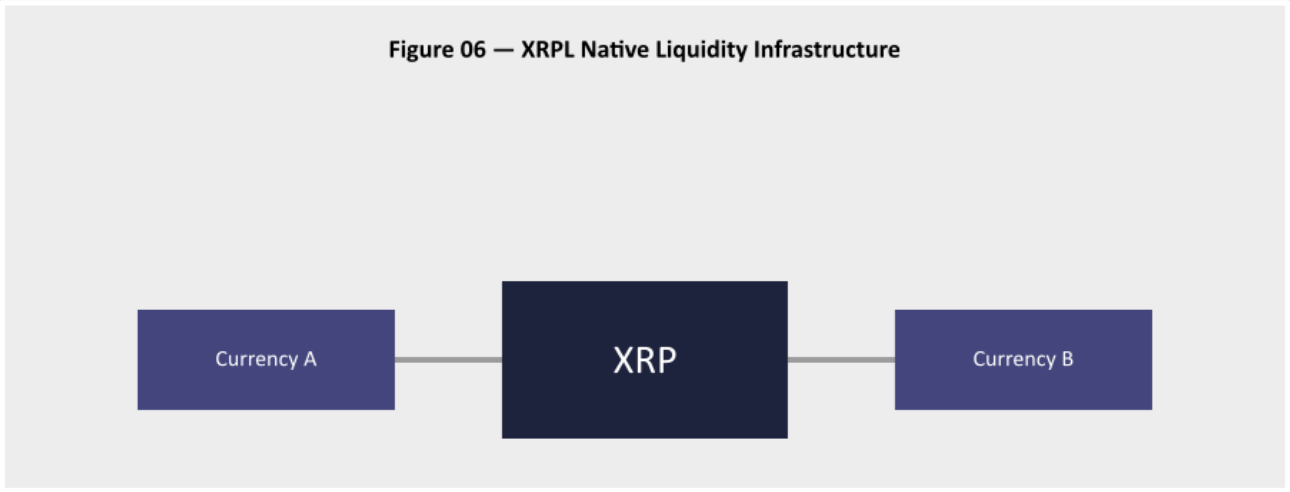


Figure 06 - XRPL Native Liquidity Infrastructure

Illustration of the decentralized exchange and liquidity mechanisms operating within the XRP Ledger.

Volume network = financial activity processed by the network
f = fraction of the global market captured by the network
V = total financial market volume

The XRP Ledger is designed as a fast settlement network capable of moving value within seconds.

3. XRP LEDGER ARCHITECTURE

The XRP Ledger is a blockchain network designed specifically for the settlement of financial transactions. Unlike many blockchains originally developed for computation or smart contracts, XRPL was designed from the start as financial infrastructure built around three core characteristics: speed, low cost and deterministic settlement finality.

The XRP Ledger uses a consensus protocol rather than proof-of-work mining, enabling validators to confirm transactions within seconds without energy-intensive computation.

| Figure 05 - XRP Ledger Architecture |

The XRPL architecture also includes several native components relevant for financial infrastructure. One of these components is the built-in decentralized exchange. The XRPL decentralized exchange allows assets issued on the network to be traded directly within the ledger, enabling automated liquidity discovery between different asset pairs.

Another key component is the ledger's native settlement asset, XRP, which can function as a bridge asset facilitating liquidity between currencies or tokenized assets. This bridge function becomes particularly relevant when financial institutions require rapid conversion between currencies without maintaining large prefunded accounts across multiple jurisdictions.

Because XRP exists natively within the ledger, it can be transferred without counterparty risk. This characteristic distinguishes XRP from issued tokens or wrapped assets that rely on third-party custodial mechanisms.

| Figure 06 - XRPL Native Liquidity Infrastructure |

Each transaction on the XRP Ledger requires a very small amount of XRP as a fee, primarily functioning as an anti-spam mechanism protecting the network from excessive transaction loads. Although the amount of XRP destroyed per transaction is extremely small, higher transaction volume gradually removes XRP from circulation. This mechanism links network activity directly to circulating supply.

$$Fee_{burned} = N_{transactions} \times Fee_{per\ transaction}$$

The XRP Ledger therefore combines rapid settlement, low costs, integrated liquidity and a predictable supply schedule. These properties enable the XRP Ledger to support payments, tokenized assets and cross-currency liquidity networks.

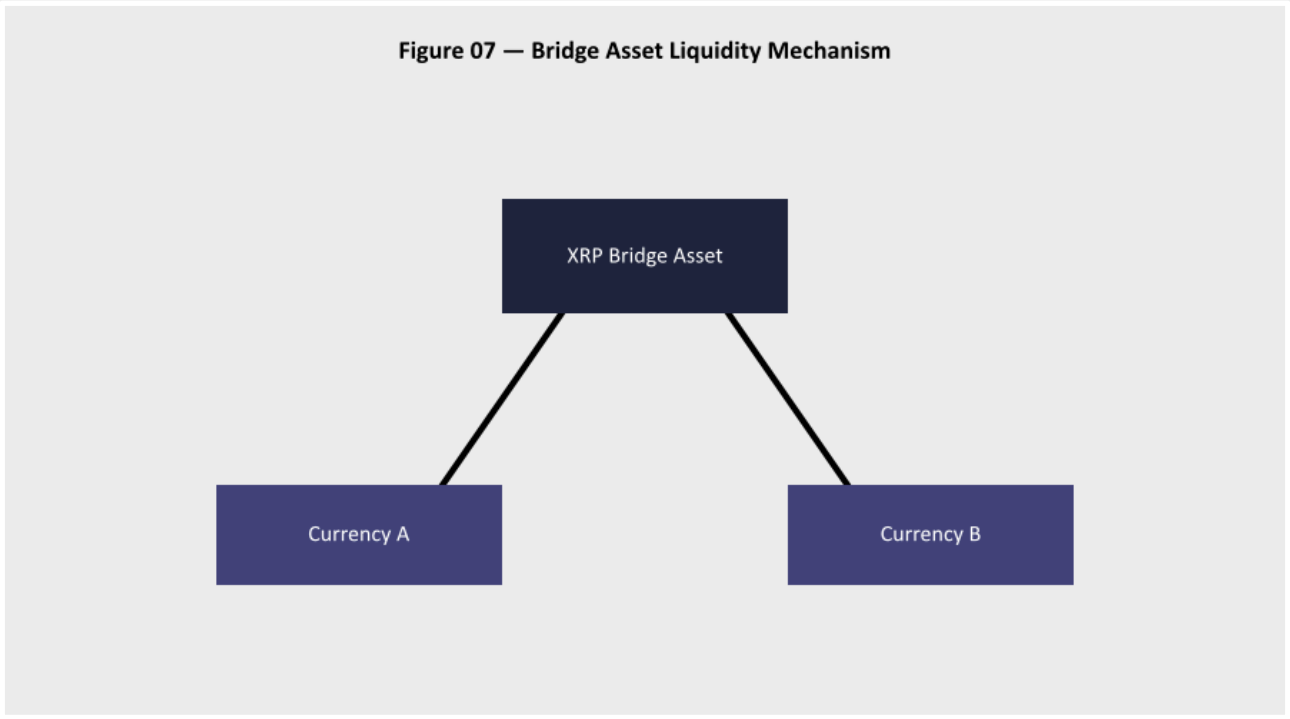


Figure 07 - Bridge Asset Liquidity Mechanism

Conceptual model showing how a bridge asset facilitates cross-currency settlement between fiat currencies.

Fiat A = originating currency
XRP = bridge asset used during settlement
Fiat B = destination currency

Traditional payment systems lock money across many countries. A bridge asset lets value move through a single liquid intermediary instead.

4. BRIDGE ASSET MECHANISM

One of the central concepts underlying the use of XRP within financial infrastructure is the bridge asset mechanism. In global financial markets, transactions frequently require the conversion of one currency into another. Traditional systems often rely on correspondent banking relationships where financial institutions maintain prefunded accounts in multiple jurisdictions to facilitate these conversions.

This system introduces significant capital inefficiencies. Banks and payment providers must hold liquidity across several currencies in order to guarantee that payments can be settled when required. These prefunded accounts effectively immobilize capital that could otherwise be deployed in productive financial activity.

The bridge asset model proposes an alternative mechanism for cross-currency settlement. Instead of maintaining liquidity in every destination currency, financial institutions can temporarily convert value into a neutral intermediary asset that acts as a bridge between currencies.

| Figure 07 - Bridge Asset Liquidity Mechanism |

In a bridge asset system, a payment between two currencies can occur through a two-step conversion process. The originating currency is first converted into the bridge asset. The bridge asset is then converted into the destination currency. This process allows liquidity to be sourced dynamically rather than being permanently locked in correspondent banking accounts.

$$Fiat_A \rightarrow XRP \rightarrow Fiat_B$$

Because the bridge asset exists as a liquid instrument within the settlement network, this mechanism can reduce the need for prefunded accounts across multiple jurisdictions. Liquidity providers and market makers facilitate the conversion between currencies and the bridge asset, enabling value to move across different markets with minimal delay.

This concept becomes particularly relevant in cross-border payment corridors where liquidity between certain currency pairs may be limited. In traditional systems, these corridors require complex correspondent banking arrangements. With a bridge asset model, the settlement network can rely on the liquidity of the bridge asset rather than requiring direct liquidity between every currency pair.

Without a bridge asset, every currency pair requires its own liquidity. A bridge reduces this complexity dramatically.

Connections traditional = number of direct liquidity relationships required
n = number of currencies within the payment network

Connections bridge = number of liquidity relationships required with a bridge asset
n = number of currencies

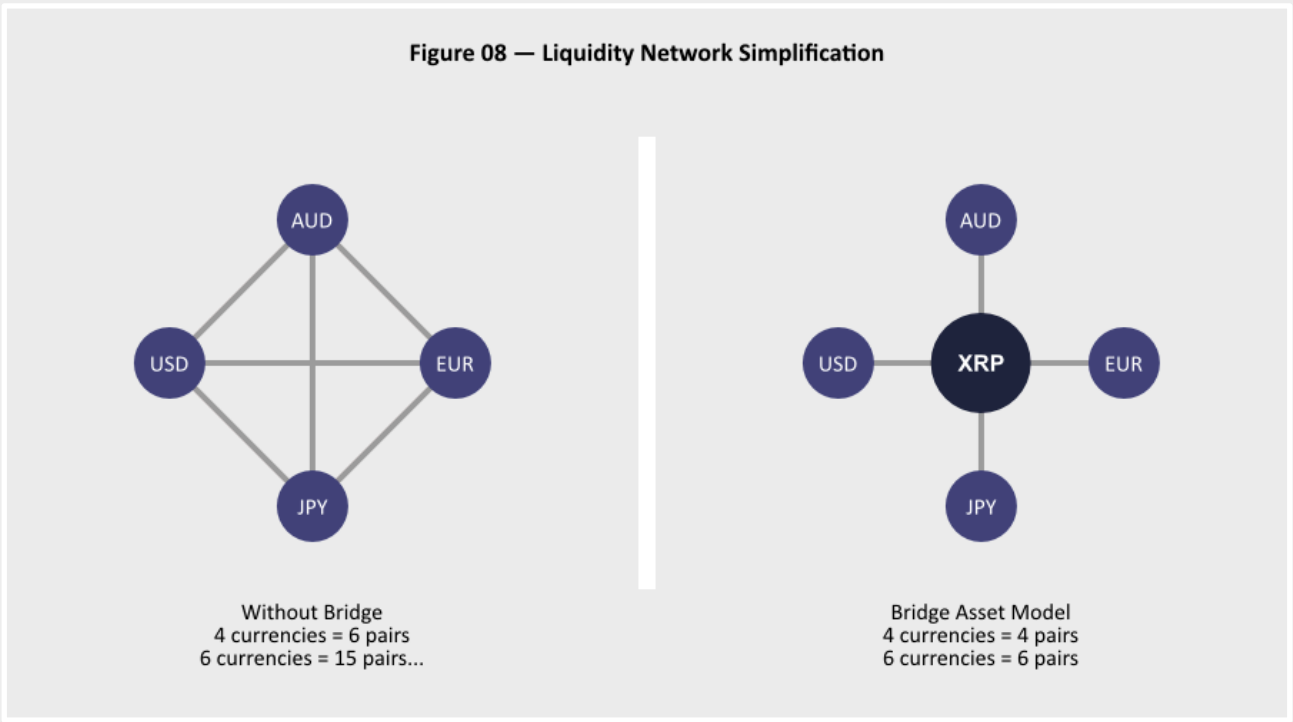


Figure 08 - Liquidity Network Simplification Through Bridge Assets

Comparison between traditional currency pair liquidity networks and bridge asset-based settlement structures.

Figure 08 - Liquidity Network Simplification Through Bridge Assets

From a financial infrastructure perspective, the bridge asset mechanism can reduce the number of liquidity relationships required to support global payments. In a traditional system with multiple currencies, direct liquidity must exist between each currency pair. The number of required liquidity connections increases rapidly as the number of currencies increases.

$$Connections_{traditional} = \frac{n(n-1)}{2}$$

In contrast, when a bridge asset is used, each currency only requires a liquidity relationship with the bridge asset itself.

$$Connections_{bridge} = n$$

This reduction in liquidity relationships can significantly simplify the structure of cross-currency settlement networks. Instead of maintaining direct liquidity between every currency pair, financial institutions only need liquidity between their local currency and the bridge asset.

Within the XRP Ledger ecosystem, this concept is implemented through liquidity mechanisms such as On-Demand Liquidity, where XRP temporarily acts as the bridge asset facilitating cross-border value transfer.

The bridge asset mechanism therefore represents an important architectural component within blockchain-based settlement networks. By enabling dynamic liquidity sourcing and reducing the need for prefunded capital, bridge assets can improve the efficiency of global payment infrastructure while supporting faster settlement between financial institutions.

The following chapter examines how these mechanisms are implemented within cross-border payment systems through liquidity corridors and on-demand settlement infrastructure.

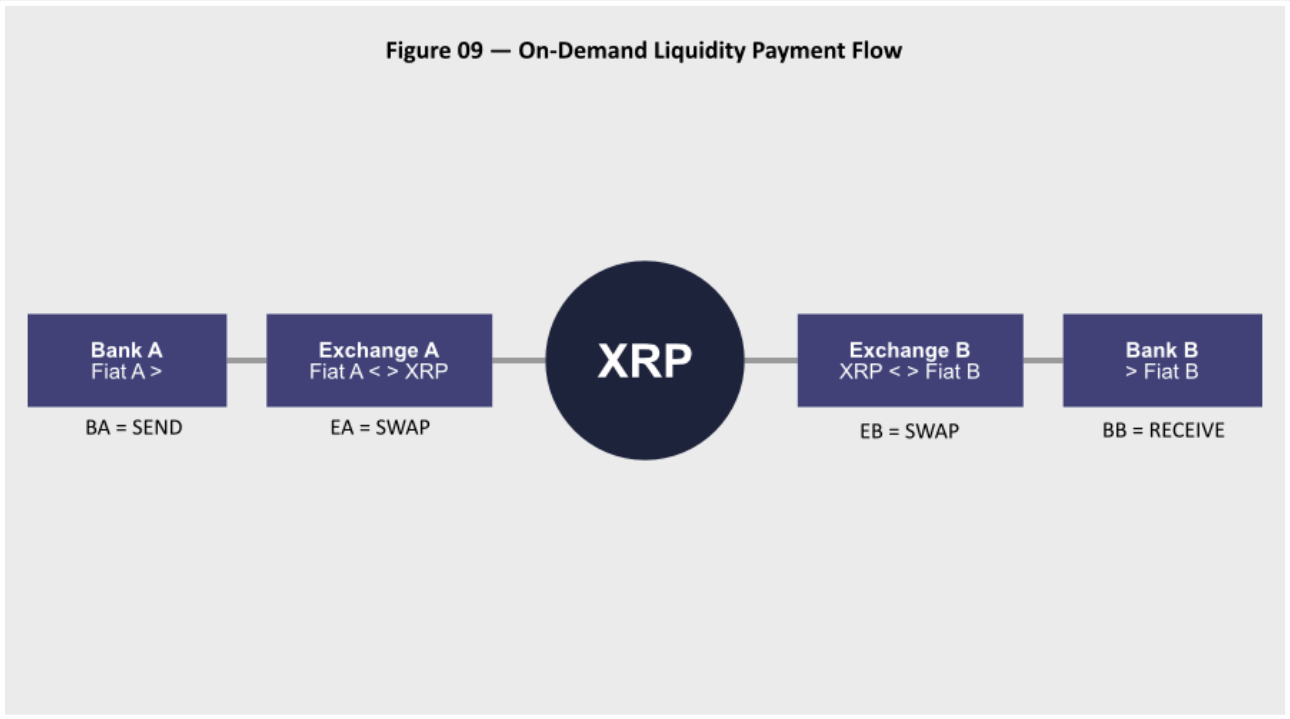


Figure 09 - On-Demand Liquidity Payment Flow

Illustration of the cross-border payment flow using XRP as a temporary bridge asset.

Payment flow = cross-border settlement process
Fiat origin = currency used by the sending institution
XRP = bridge asset used during settlement
Fiat destination = currency received by the beneficiary

Banks normally pre-fund accounts abroad before sending money. On-Demand Liquidity sources that liquidity instantly using XRP.

5. ON-DEMAND LIQUIDITY MODEL

The bridge asset mechanism described in the previous chapter becomes operational in real-world payment systems through liquidity infrastructure that connects financial institutions, exchanges and market makers. Within the XRP ecosystem, this mechanism is implemented through a model commonly referred to as On-Demand Liquidity.

On-Demand Liquidity is designed to facilitate cross-border payments by using XRP as a temporary bridge asset during settlement. Instead of requiring financial institutions to maintain prefunded accounts in multiple jurisdictions, liquidity can be sourced dynamically through digital asset exchanges and liquidity providers.

In a traditional cross-border payment system, a bank sending funds to another country typically relies on correspondent banking relationships. This requires the originating institution to maintain reserves in the destination currency, often held in accounts with foreign banks. These reserves must be maintained continuously in order to guarantee payment settlement.

The On-Demand Liquidity model replaces this prefunded liquidity structure with a transaction flow that temporarily uses XRP as an intermediary asset.

| Figure 09 - On-Demand Liquidity Payment Flow |

In this model, the sending institution converts the originating currency into XRP through a local liquidity provider or exchange. The XRP is then transferred across the settlement network within seconds. Upon arrival, the XRP is converted into the destination currency through another liquidity provider in the receiving market.

$$\text{Payment flow} = \text{Fiat}_{origin} \rightarrow XRP \rightarrow \text{Fiat}_{destination}$$

Because the bridge asset transfer occurs within seconds on the XRP Ledger, the brief exposure window. Liquidity providers manage the order books that enable rapid conversion between the fiat currencies and XRP.

This architecture allows financial institutions to access liquidity dynamically rather than maintaining permanent reserves in foreign currencies. As a result, capital that would normally remain locked in correspondent banking accounts can be redeployed into other financial activities.

XRP does not replace currencies. It temporarily connects them during settlement.

VODL = annual payment volume processed through On-Demand Liquidity
Nc = number of active payment corridors
Vc = average annual transaction volume per corridor

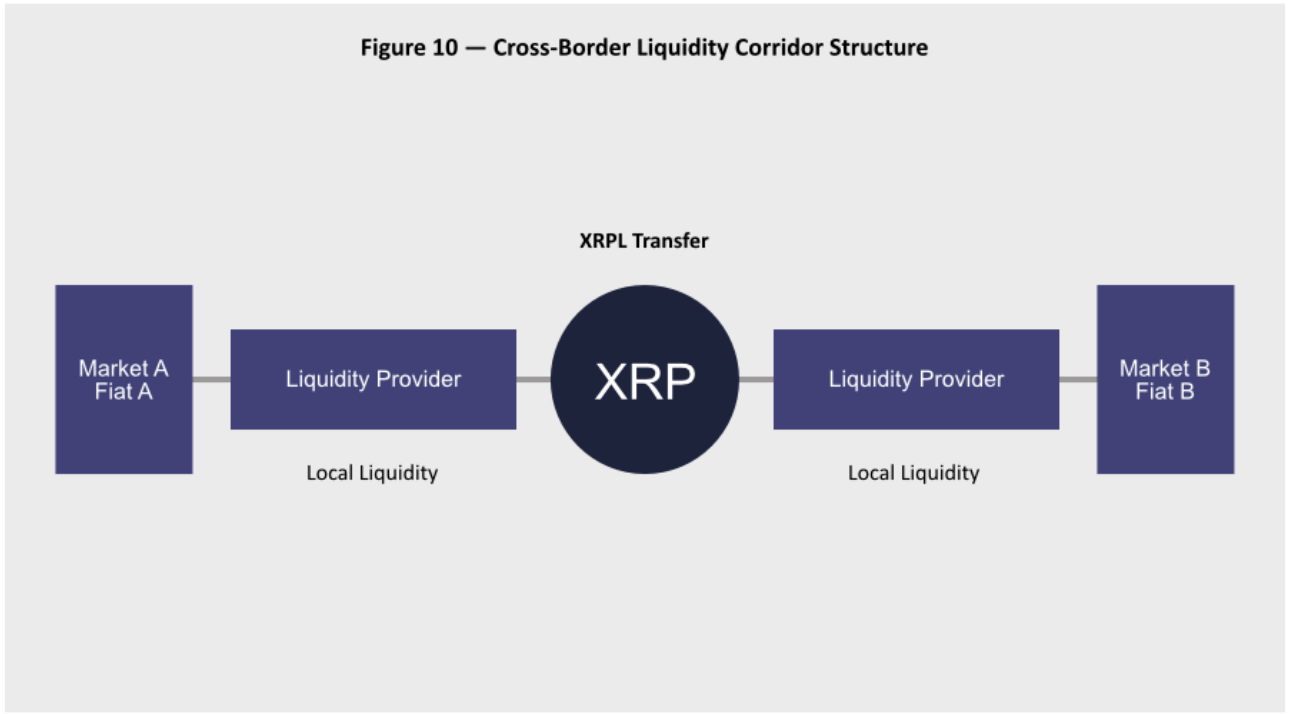


Figure 10 - Cross-Border Liquidity Corridor Structure
Diagram illustrating how payment corridors connect currency markets through exchanges and liquidity providers.

Another important feature of the On-Demand Liquidity model is its corridor-based structure. Cross-border payments typically occur within specific geographic payment corridors linking two currency markets. Examples include corridors such as USD to JPY, EUR to AUD, or BRL to GBP...

Each corridor requires sufficient liquidity on both sides of the transaction. Exchanges, liquidity providers and market makers facilitate this liquidity by maintaining order books where fiat currencies can be converted into XRP and back into the destination currency.

Figure 10 - Cross-Border Liquidity Corridor Structure

The total payment capacity of the network therefore depends on the number of active corridors and the liquidity available within each corridor.

$$V_{ODL} = N_c \times V_c$$

This equation illustrates how network payment capacity scales as liquidity infrastructure expands. As more corridors become active and liquidity increases within each corridor, the total volume of payments processed through the network can grow proportionally.

From a valuation perspective, the importance of this model lies in the relationship between payment volume and settlement asset demand. As transaction volume increases across payment corridors, the bridge asset facilitating those transactions becomes increasingly integrated into global financial flows.

The following chapter examines another structural transformation within financial infrastructure that could significantly increase transaction volumes on blockchain networks: the tokenization of real-world assets.

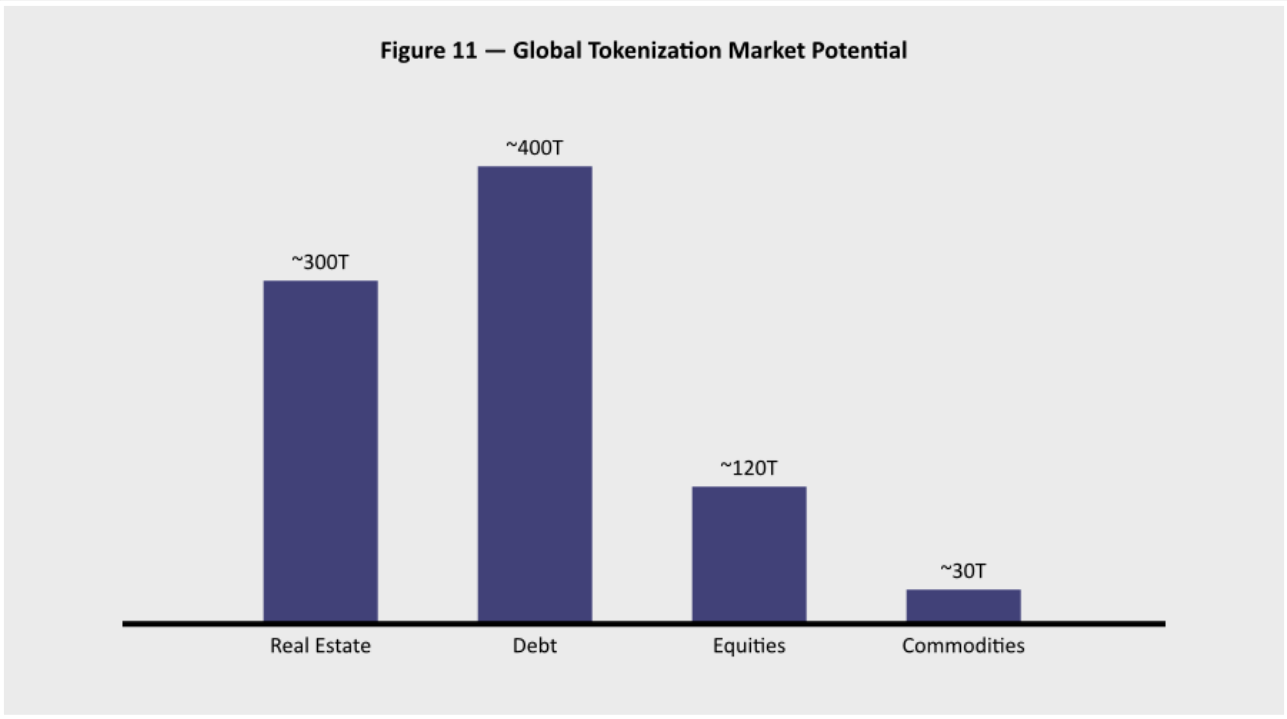


Figure 11 - Global Tokenization Market Potential

Overview of the estimated value of asset classes that may potentially be tokenized on blockchain infrastructure.

Tokenization becomes powerful because the underlying asset markets are enormous.

6. TOKENIZATION OF RWA (REAL WORLD ASSETS)

One of the most significant structural transformations currently emerging in global financial markets is the tokenization of real-world assets. Tokenization refers to the process of representing traditional financial assets as digital tokens recorded on blockchain infrastructure.

These tokens can represent ownership rights, financial claims or other economic interests associated with real assets. Once represented as blockchain tokens, these assets can be transferred, traded and settled directly on distributed ledger networks.

The potential impact of tokenization is significant because the total value of traditional financial assets is extremely large. Global markets include trillions of dollars in real estate, sovereign debt, corporate bonds, equities, commodities and investment funds.

If even a portion of these assets were to migrate to blockchain infrastructure, the resulting financial activity could create substantial transaction flows within blockchain settlement networks.

| Figure 11 - Global Tokenization Market Potential |

Several categories of assets are commonly discussed in the context of tokenization. Real estate represents one of the largest global asset classes and has been frequently cited as a candidate for fractional ownership through tokenized structures. Government bonds and corporate debt instruments may also benefit from blockchain settlement systems that enable faster clearing and automated compliance.

Equity markets represent another area where tokenization may introduce new forms of liquidity and accessibility. Tokenized shares could allow ownership transfers to occur directly on distributed ledgers, potentially reducing settlement delays associated with traditional securities clearing systems.

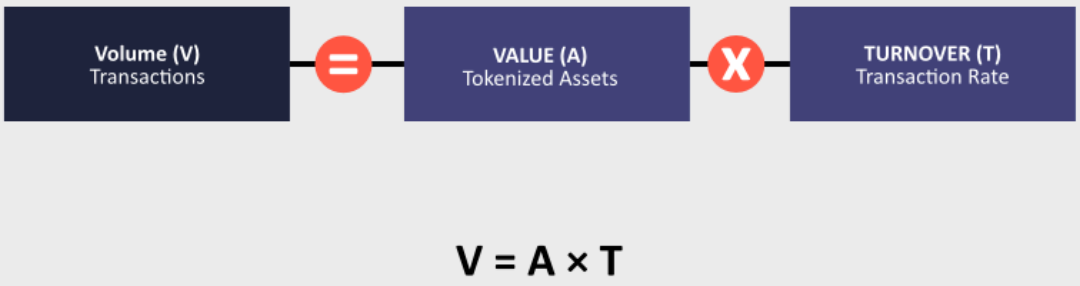
The global scale of these asset classes illustrates the potential magnitude of tokenization, estimates compiled from global market studies (McKinsey, BCG, World Economic Forum).

Asset Class	Estimated Global Value
Global Real Estate	≈ 380T USD
Global Debt Markets	≈ 130T USD
Global Equities	≈ 100T USD
Investment Funds & ETFs	≈ 120T USD
Precious Metals	≈ 15T USD

Assets generate transaction volume when they move through markets — often many times their underlying value.

V = annual transaction volume generated by tokenized assets
A = total value of tokenized assets
T = annual turnover rate of those assets

Figure 12 — Tokenized Asset Transaction Flow Model



$$V = A \times T$$

Figure 12 - Tokenized Asset Transaction Flow Model
Relationship between tokenized asset value and generated transaction volume.

These values represent approximate estimates of global asset markets and illustrate the scale of financial value that could theoretically be represented in tokenized form. However, the value of tokenized assets alone does not determine the level of activity within a financial network. Assets generate economic activity when they are traded, transferred or used as collateral within financial systems.

To model this activity, it is useful to consider the relationship between the stock of tokenized assets and the transaction turnover generated by these assets.

$$V = A \times T$$

Assumptions	Result
A = 200T USD	V = 1000T USD
T = 5	

This equation reflects a fundamental principle of financial markets. The total transaction volume generated by an asset class is often several times larger than the underlying value of the assets themselves. Financial assets are traded repeatedly, transferred between institutions and frequently used as collateral in various financial operations.

Figure 12 - Tokenized Asset Transaction Flow Model

This simplified illustration highlights the importance of tokenization when analyzing blockchain settlement infrastructure. While the cryptocurrency market itself represents a relatively small portion of global financial markets, tokenization could dramatically expand the volume of financial activity occurring on blockchain networks. As these tokenized assets move between institutions, exchanges and financial platforms, settlement networks capable of processing these transactions efficiently may become increasingly important.

Within such systems, settlement assets that facilitate liquidity and value transfer could become structurally integrated into the movement of tokenized financial markets.

The following chapter integrates the tokenization framework with the settlement valuation model introduced earlier in the report, allowing the relationship between asset tokenization, transaction volume and settlement asset valuation to be examined quantitatively.

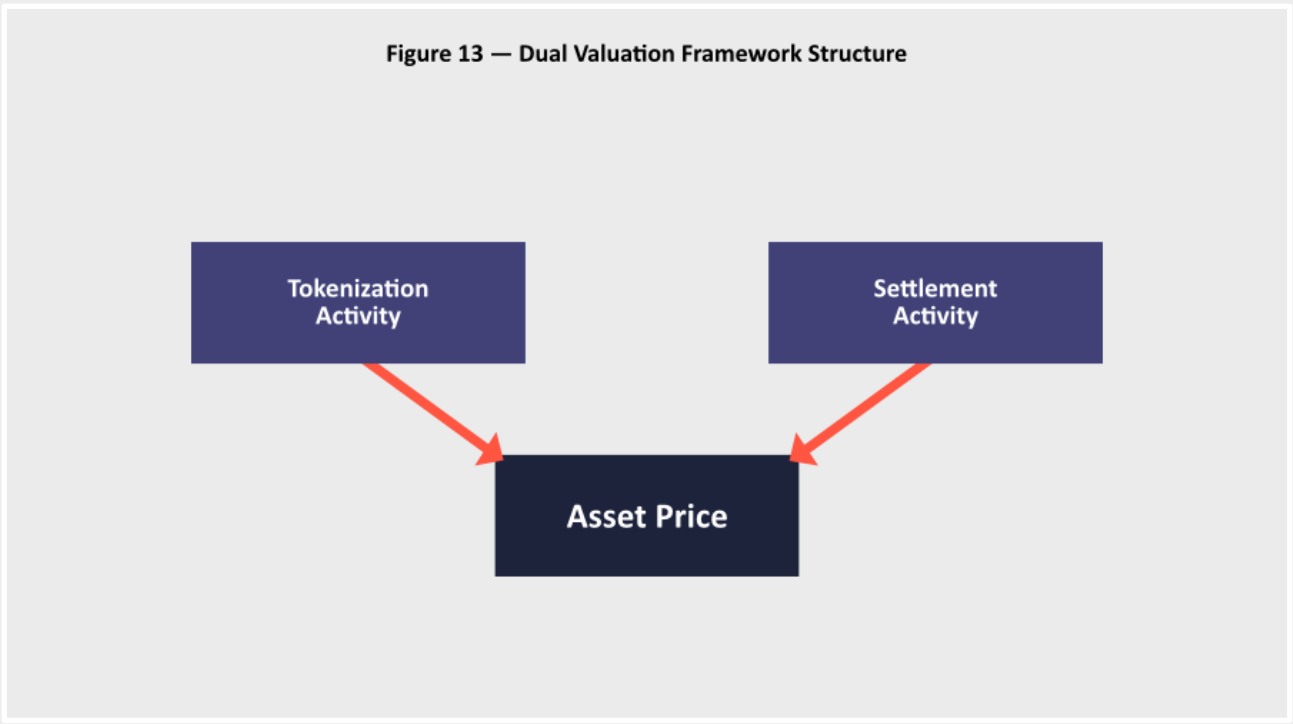


Figure 13 - Dual Valuation Framework Structure

Integrated model linking tokenized asset markets and settlement asset valuation.

V = annual transaction volume generated by tokenized assets
A = total value of tokenized assets
T = annual turnover rate of those assets

Tokenized assets create financial activity. Settlement assets provide the liquidity that allows this activity to move.

7. DUAL VALUATION FRAMEWORK

The previous chapters introduced two complementary perspectives for analyzing the potential role of blockchain settlement networks in global financial infrastructure. The first perspective examined the scale of traditional financial markets and the potential impact of tokenizing real-world assets. The second perspective examined how settlement assets facilitate the transfer of value within payment networks through bridge asset mechanisms and liquidity corridors.

In practice, settlement assets do not necessarily process the entire transaction value directly. Instead, they provide the liquidity layer required to facilitate value transfer across markets. The valuation framework therefore estimates the settlement liquidity required to support economic activity within the network.

By combining these perspectives, it becomes possible to construct a unified framework that links asset tokenization, transaction flows and settlement asset valuation.

| Figure 13 - Dual Valuation Framework Structure |

The tokenization model described in the previous chapter evaluates the potential value of traditional assets that could be represented on blockchain infrastructure. These assets form the economic base from which financial activity emerges.

However, financial markets are not static stores of value. Assets are continuously transferred between institutions, traded on markets, pledged as collateral and incorporated into financial contracts. Each of these actions generates transaction flows within the financial system.

The relationship between tokenized assets and the financial flows they generate can be expressed as shown in Equation.

$$V = A \times T$$

This relationship illustrates how even a relatively modest level of tokenization can generate large transaction volumes once assets begin circulating through financial markets.

Price = market price of the settlement asset
Economic Volume = total annual financial activity processed through the network
Velocity = number of times a token circulates per year
Supply = circulating supply of the settlement asset

A = total value of tokenized assets
T = turnover rate of tokenized assets
Velocity = reuse frequency of the settlement asset
Supply = circulating supply of the settlement asset

The value of a settlement asset depends on three variables: economic volume, velocity and supply.

The second component of the framework concerns the valuation of settlement assets used within these transaction networks. As introduced in the Executive Summary, the value of a settlement asset can be modeled using a monetary circulation framework that links transaction volume, token velocity and circulating supply.

$$Price = \frac{Economic\ Volume}{Velocity \times Supply}$$

Assumptions	Result
Economic Volume = 1000T USD	P = $1000T / (20 x 61.22B) **Price = 816 USD / XRP**
Velocity = 20	
Supply = 61.22B XRP	

This equation reflects a fundamental principle of monetary systems: the value required within a settlement network depends on the amount of economic activity that must be supported by the available units of the settlement asset.

When the two models are combined, the economic volume generated by tokenized assets can be substituted into the settlement valuation framework. This produces a unified model linking asset tokenization directly to settlement asset valuation.

In this framework, the economic volume processed by the settlement network may originate from multiple sources such as payment flows or tokenized asset transactions. In the tokenization model presented here, economic volume is represented by the turnover of tokenized assets (A × T).

$$Price = \frac{A \times T}{Velocity \times Supply}$$

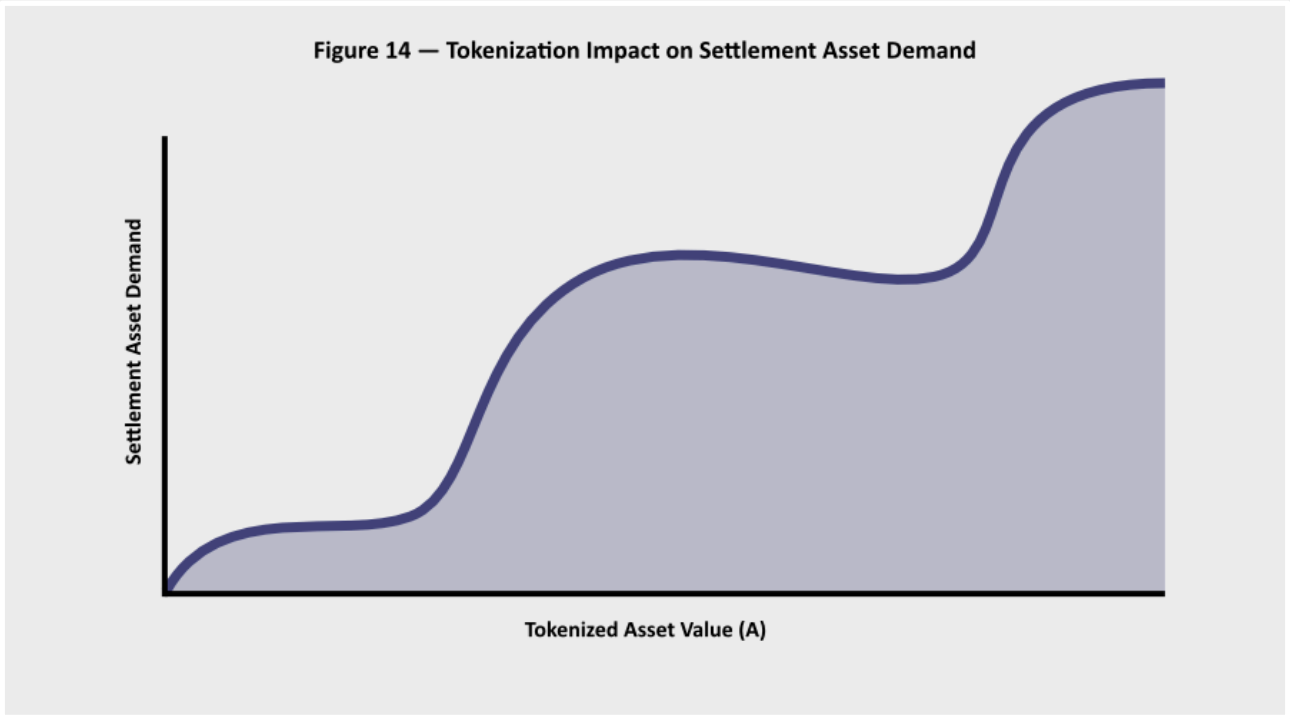


Figure 14 - Tokenization Impact on Settlement Asset Demand

Illustration showing how increasing tokenized asset markets may influence settlement asset demand.

This table applies the valuation equation across time as network activity increases.

Year	A (T USD)	T	Velocity	Supply	XRP Price
2026	5	5	6	64	$65.10
2030	21	6	10	72	$175.00
2035	95	7	15	82	$540.65
2040	315	8	20	92	$1,369.57
2045	500	9	25	100 (max)	$1,800.00

Token velocity may evolve over time as settlement infrastructure becomes more efficient and liquidity networks deepen. Higher velocity allows the same settlement asset supply to support larger volumes of financial activity, reducing the valuation required per unit of the asset.

Figure 14 - Tokenization Impact on Settlement Asset Demand

This integrated framework illustrates how the scale of tokenized financial markets may influence the valuation dynamics of settlement assets used within blockchain infrastructure.

If tokenized markets expand and generate large transaction volumes, the settlement assets facilitating those transactions must support that economic activity. The required value stored within the settlement asset network therefore increases as transaction volume increases.

It is important to emphasize that this framework does not attempt to predict a specific future price for XRP or any other digital asset. Instead, it provides a structured analytical method for evaluating how different levels of financial activity could translate into valuation requirements for settlement assets operating within blockchain-based financial infrastructure.

The following chapter examines how these theoretical relationships can be translated into practical adoption models by analyzing the expansion of liquidity corridors and payment infrastructure within global financial networks.

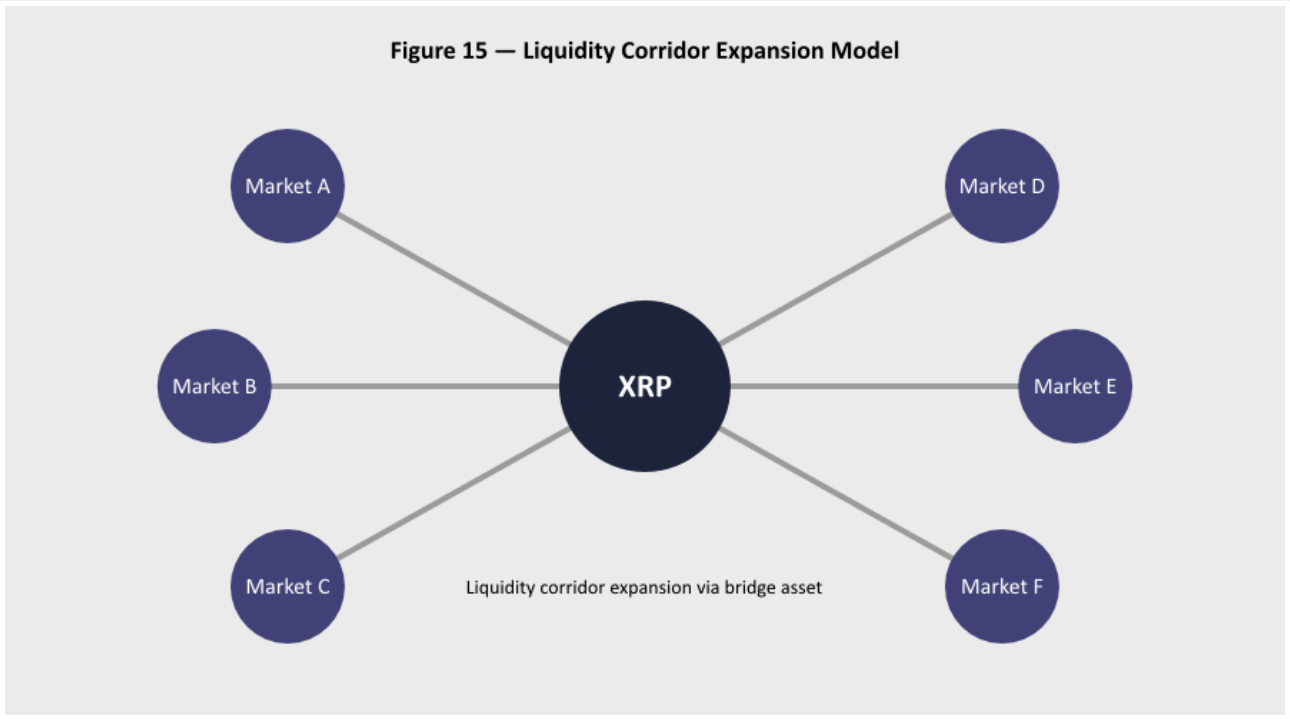


Figure 15 - Liquidity Corridor Expansion Model

Diagram illustrating how payment corridor expansion increases network transaction capacity.

VODL = total annual payment volume processed through liquidity corridors
Nc = number of active payment corridors
Vc = average annual transaction volume per corridor

Each new corridor expands the network's ability to move value between markets.

8. LIQUIDITY CORRIDOR EXPANSION MODEL

The settlement mechanisms described in the previous chapters rely on the existence of sufficient liquidity within payment corridors connecting different currency markets. In cross-border payment systems, financial flows do not occur uniformly across all regions. Instead, transactions typically concentrate within specific currency corridors that link two financial markets.

Examples of such corridors include flows between the United States and Mexico, the Eurozone and Southeast Asia, or Singapore and India. Each corridor represents a pathway through which value moves between two currency environments.

In traditional financial infrastructure, these corridors are supported by correspondent banking relationships and prefunded liquidity accounts maintained across multiple jurisdictions. The On-Demand Liquidity model described earlier introduces a different structure in which liquidity providers, exchanges and market makers facilitate currency conversion through a bridge asset.

| Figure 15 - Liquidity Corridor Expansion Model |

Within this framework, each payment corridor requires sufficient liquidity to support transaction flows between the two participating currencies. The number of corridors and the liquidity available within each corridor therefore play a central role in determining the total payment capacity of the network.

The relationship between corridor expansion and transaction volume can be expressed mathematically by considering the number of active corridors and the average transaction volume processed within each corridor.

$$V_{ODL} = N_c \times V_c$$

This equation illustrates how the network's payment capacity scales as liquidity infrastructure expands. When additional corridors are established, the network gains access to new regions and currency markets, increasing the potential flow of payments processed through the system.

However, corridor expansion alone does not guarantee transaction volume. Each corridor must also develop sufficient liquidity to support real financial flows. Liquidity providers and market makers play an important role in maintaining order books that enable rapid conversion between local currencies and the bridge asset used for settlement.

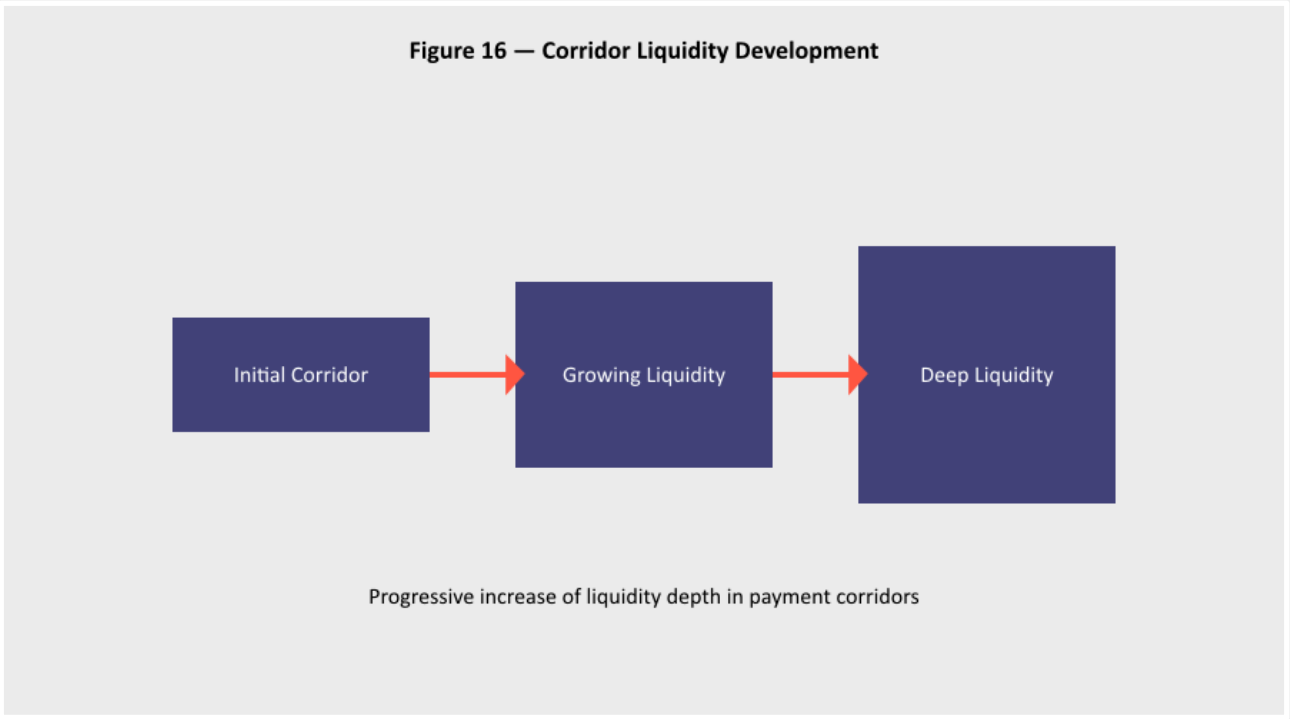


Figure 16 - Corridor Liquidity Development

Representation of how exchanges and liquidity providers support corridor liquidity.

Liquidity infrastructure usually develops gradually as exchanges and market makers enter new corridors.

| **Figure 16 - Corridor Liquidity Development** |

In practice, the development of liquidity corridors tends to follow an incremental process.

Payment providers and financial institutions typically begin by establishing corridors in markets where cross-border payment demand already exists. As liquidity improves and transaction costs decrease, additional corridors may be introduced, gradually expanding the network's global reach.

This incremental expansion reflects the way financial infrastructure evolves in real markets. Rather than expanding uniformly across all jurisdictions, payment networks grow corridor by corridor as liquidity conditions improve and regulatory frameworks become compatible with the technology.

From a valuation perspective, the expansion of liquidity corridors increases the economic activity processed by the settlement network. As transaction volume increases across these corridors, the settlement asset facilitating those transactions becomes more integrated into global payment infrastructure.

The corridor expansion model therefore provides a practical bridge between theoretical valuation frameworks and real-world adoption patterns. By analyzing how payment corridors develop over time, it becomes possible to estimate how transaction volume might grow within blockchain-based settlement networks.

The following chapter examines how these liquidity corridors connect with broader financial infrastructure by exploring how blockchain settlement systems could capture portions of global payment, foreign exchange and asset settlement markets.

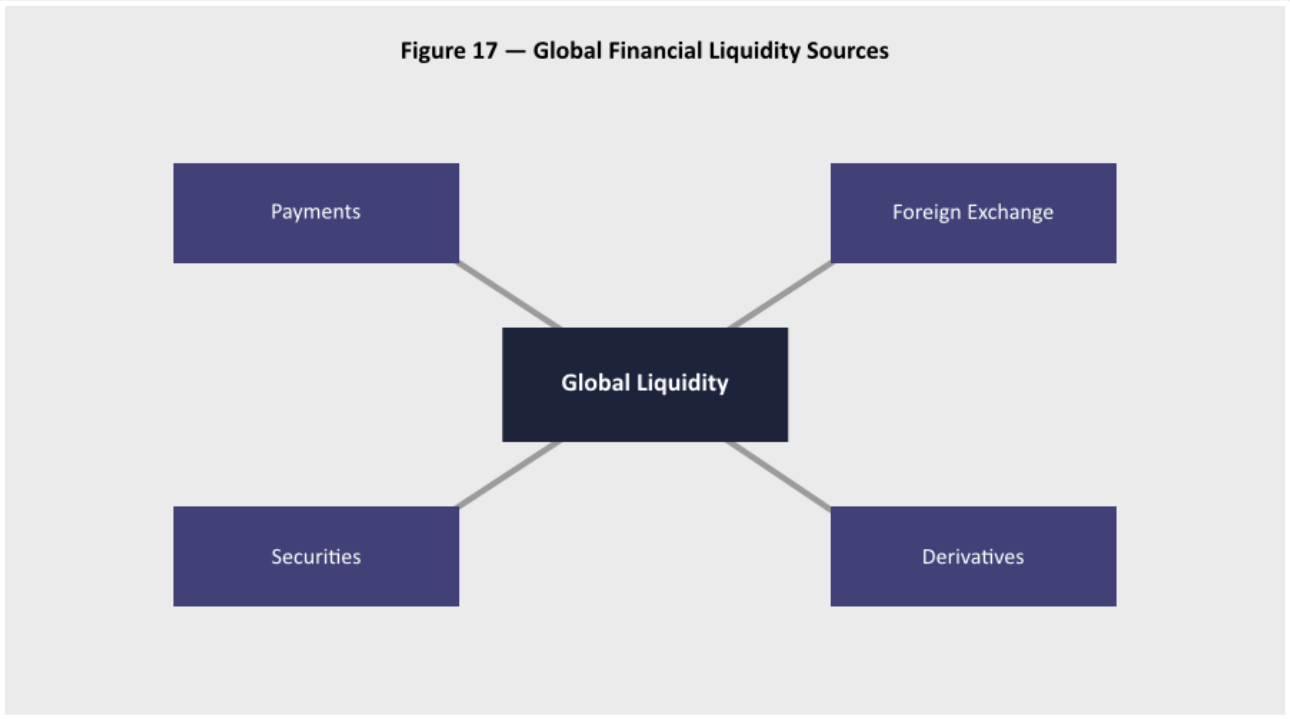


Figure 17 - Global Financial Liquidity Sources

Overview of the financial markets that contribute liquidity to settlement networks.

Global financial markets move enormous amounts of liquidity every year.

V network = transaction volume processed by the settlement network
s = share of the market captured by the network
V market = total volume of the financial market considered

9. GLOBAL LIQUIDITY CAPTURE MODEL

The expansion of liquidity corridors provides a practical mechanism through which blockchain settlement networks may gradually integrate into global financial infrastructure. However, in order to understand the long-term valuation dynamics of a settlement asset, it is necessary to examine how much of the global financial system such networks could realistically process.

The concept of liquidity capture refers to the proportion of global financial activity that a settlement network is able to facilitate. Rather than assuming that a blockchain network replaces existing financial infrastructure entirely, it is more realistic to consider scenarios in which the network processes a fraction of existing financial flows.

| Figure 17 - Global Financial Liquidity Sources |

Several major financial markets contribute to global transaction flows. These include cross-border payments, foreign exchange markets, securities settlement systems and derivatives trading. Each of these markets operates at extremely large scales and collectively forms the backbone of global financial infrastructure.

The approximate magnitude of these markets can be summarized as follows.

Financial Market	Estimated Annual Volume
Cross-border payments	≈ 150T USD
Foreign exchange settlement	≈ 1,900T USD
Securities settlement	≈ 2,500T USD
Derivatives markets	≈ 1Q USD

Even a very small fraction of these markets could represent significant transaction volume for a blockchain settlement network.

To model this relationship, it is useful to consider the share of financial activity captured by the network relative to the total market volume.

$$V_{network} = s \times V_{market}$$

This equation illustrates an important feature of global financial infrastructure. Because the total size of financial markets is extremely large, even small adoption percentages can translate into very large transaction volumes.

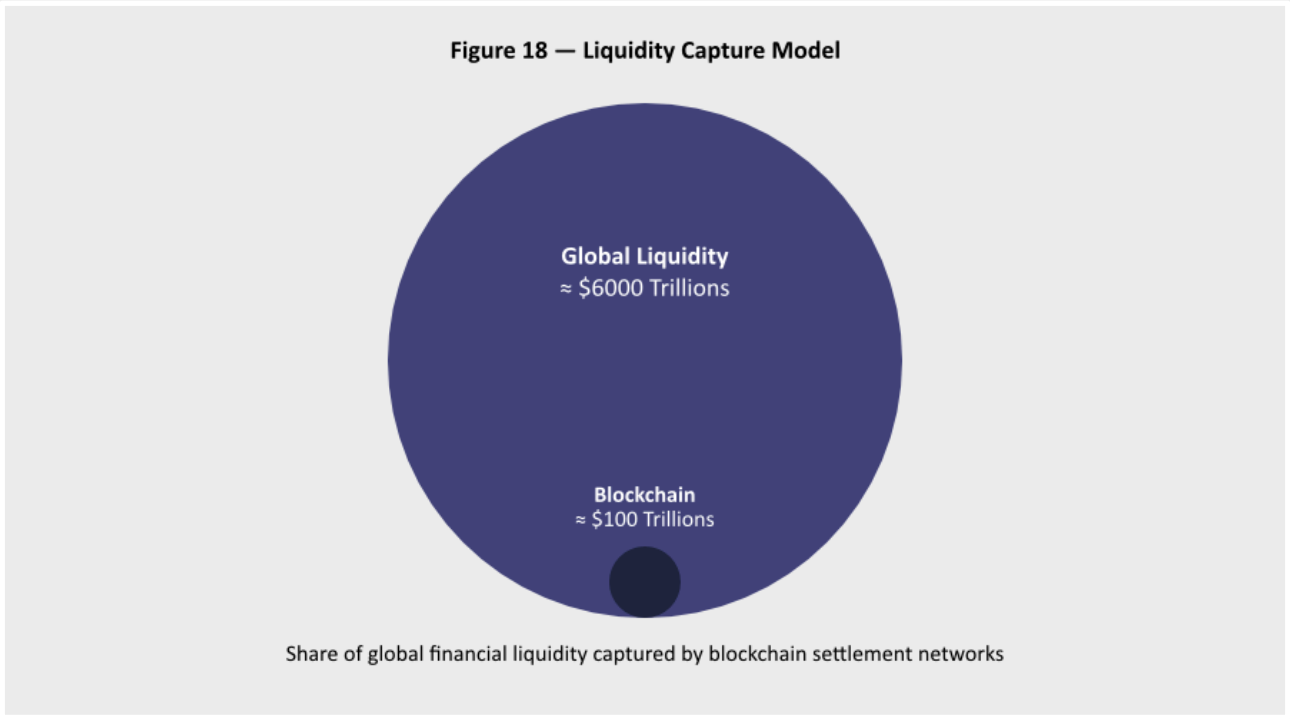


Figure 18 - Liquidity Capture Model

Illustration showing how blockchain settlement networks may capture portions of global financial activity.

V total = total annual transaction volume processed by the settlement network
V payments = cross-border payment flows using the network
V tokenized assets = transaction flows generated by tokenized financial assets
V financial markets = financial market settlement activity processed by the network

The key question is not whether blockchain replaces finance — but how much liquidity it can capture.

| **Figure 18 - Liquidity Capture Model** |

The key question is not whether blockchain replaces traditional finance, but how quickly settlement infrastructure adoption allows it to capture a share of global financial liquidity.

For example, if a settlement network were to process only one percent of global cross-border payment flows, the resulting transaction volume could reach approximately 1.5 trillions USD annually. Higher levels of adoption across multiple financial markets could increase this volume significantly.

In practice, blockchain settlement networks may capture liquidity from several different sources simultaneously. Payment networks, tokenized asset markets and decentralized financial systems could all contribute transaction flows to the same settlement infrastructure.

When these different sources of liquidity are combined, the total volume processed by the network becomes the sum of several financial activity streams.

$$V_{total} = V_{payments} + V_{tokenized\ assets} + V_{financial\ markets}$$

This framework illustrates how blockchain settlement infrastructure could gradually integrate multiple layers of financial activity. Instead of relying on a single market segment, the network may accumulate transaction volume from several sources as adoption expands.

From a valuation perspective, the total transaction volume supported by the network becomes the key variable influencing the economic demand for the settlement asset. As more financial flows are processed through the infrastructure, the settlement asset facilitating those flows must support the increasing level of economic activity.

The following chapter examines how these transaction volumes can be translated into specific valuation scenarios by analyzing the economic conditions required for different settlement asset price levels.

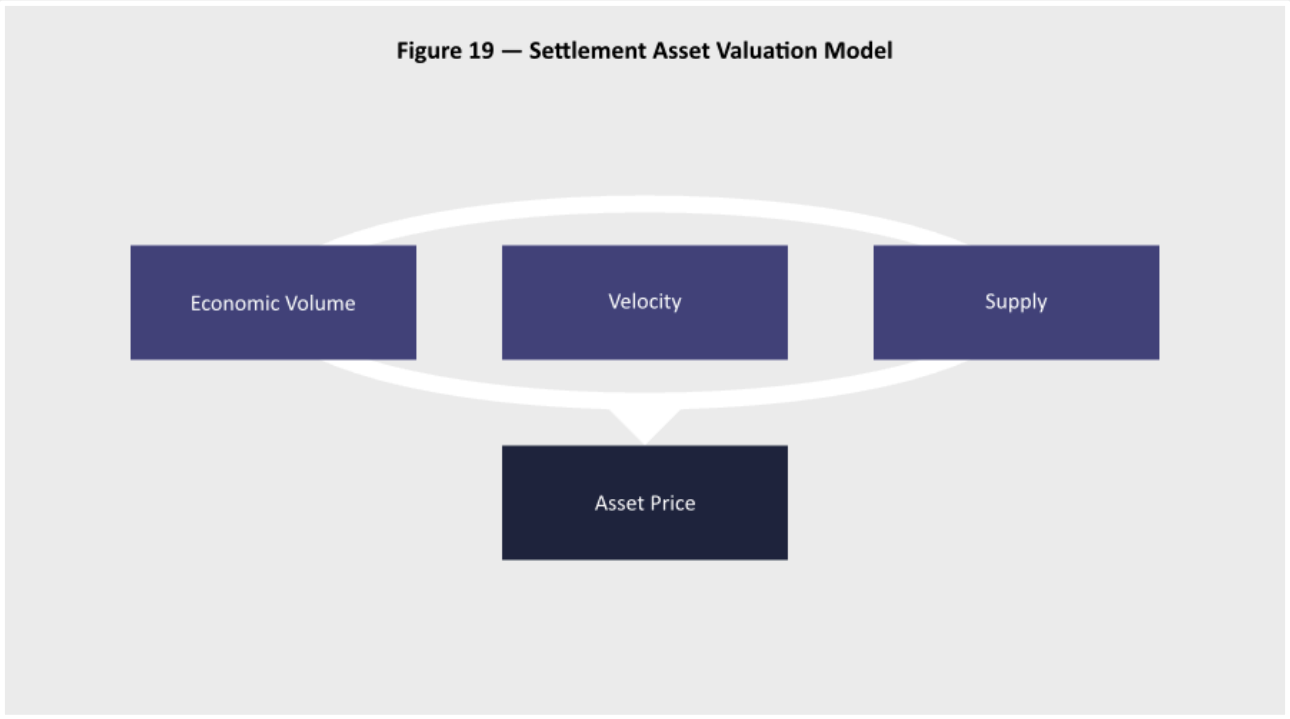


Figure 19 - Settlement Asset Valuation Model

Graphical representation of the relationship between transaction volume, token velocity and settlement asset price.

Price = market price of the settlement asset
Economic Volume = annual financial activity processed through the settlement network
Velocity = number of times a token circulates per year
Supply = circulating supply of the settlement asset

Settlement asset value emerges from the interaction between economic activity, velocity and supply.

10. PRICE SCENARIO MODELING

The previous chapters established a framework linking transaction volume, token velocity and circulating supply to the valuation dynamics of settlement assets operating within blockchain infrastructure. This chapter applies that framework in order to explore the economic conditions required for different settlement asset valuation levels.

Rather than attempting to predict a specific future price, the objective is to evaluate how different levels of financial activity could translate into the price range of a settlement asset facilitating those transactions.

| Figure 19 - Settlement Asset Valuation Model |

This diagram introduces the conceptual relationship between transaction volume, token velocity and settlement asset price.

As introduced earlier in the report, the value required within a settlement network can be expressed using the monetary circulation relationship shown in Equation (18).

$$Price = \frac{Economic\ Volume}{Velocity \times Supply}$$

Assumptions	Result
Economic Volume = 10T USD	10T / (20 x 61.22B) **Price = 8.17 USD / XRP**
Velocity = 20	
Supply = 61.22B XRP	

This equation can be rearranged in order to determine the level of economic activity required to support a specific asset price. By solving the equation for Economic Volume, we obtain Equation (19).

Economic Volume = annual financial activity supported by the settlement asset network
Price = market price of the settlement asset
Velocity = token circulation frequency
Supply = circulating supply of the settlement asset

This table applies the valuation model to different price targets. It shows the transaction volume a settlement network would need to support each level.

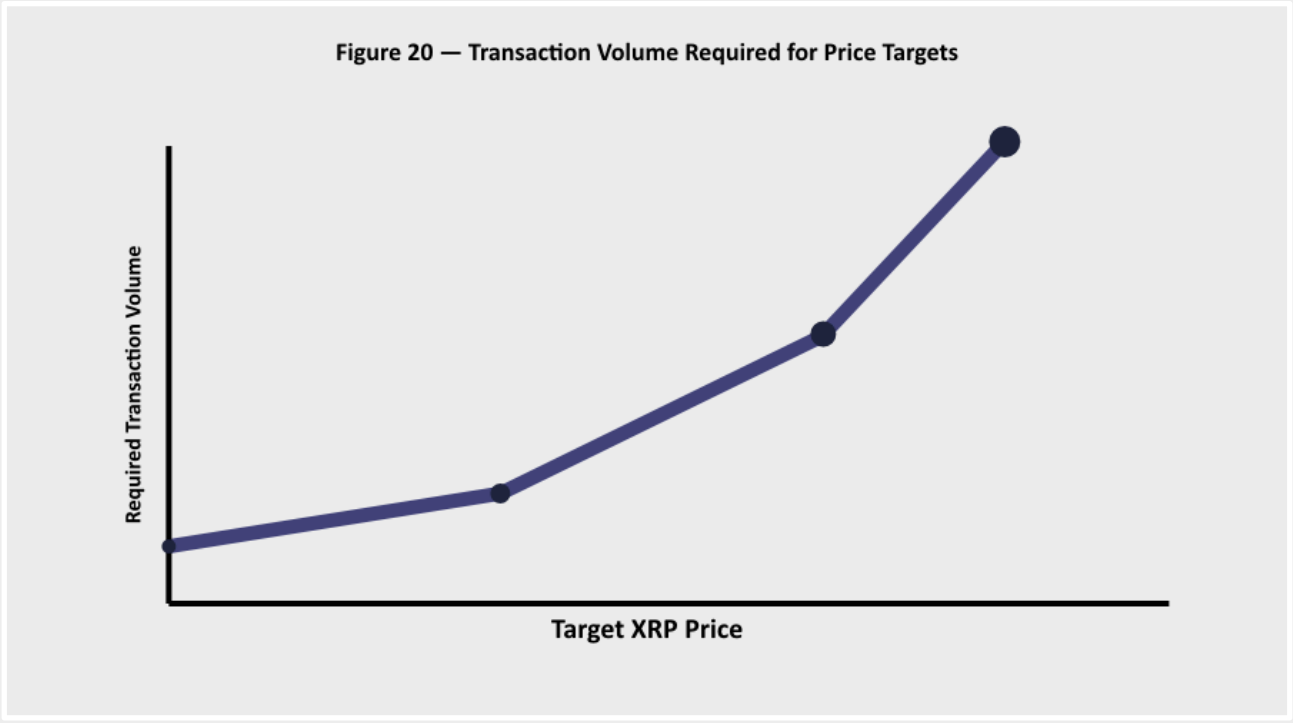


Figure 20 - Transaction Volume Required for Price Targets
Visualization of the settlement volume required to support different XRP price levels.

$$Economic\ Volume = Price \times Velocity \times Supply$$

Assumptions	Result
Target Price = $10	10 x 20 x 61.22B **Volume = 12.24T USD**
Velocity = 20	
Circulating Supply = 61.22B XRP	

This relationship allows transaction volume requirements to be estimated for different price scenarios.

| Figure 20 - Transaction Volume Required for Price Targets |

To illustrate this framework, consider the current circulating supply of XRP, which is approximately 61.22 billion tokens. If token velocity is assumed to be twenty transactions per year, the required transaction volume for various price levels can be estimated.

XRP Price Level	Required Annual Volume
$5	≈ 6.1T USD
$10	≈ 12.2T USD
$20	≈ 24.4T USD*
$50	≈ 61T USD

**14% of SWIFT cross-border payment volume ≈ 26.6T USD*

These values illustrate the scale of financial activity that would need to be processed by the settlement network in order to support different price levels under the assumed velocity conditions.

It is important to emphasize that token velocity plays a critical role in these calculations. If tokens circulate more frequently within the network, the same level of financial activity can be supported with a lower total market value. Conversely, if tokens circulate less frequently, a larger market capitalization may be required to support the same transaction volume.

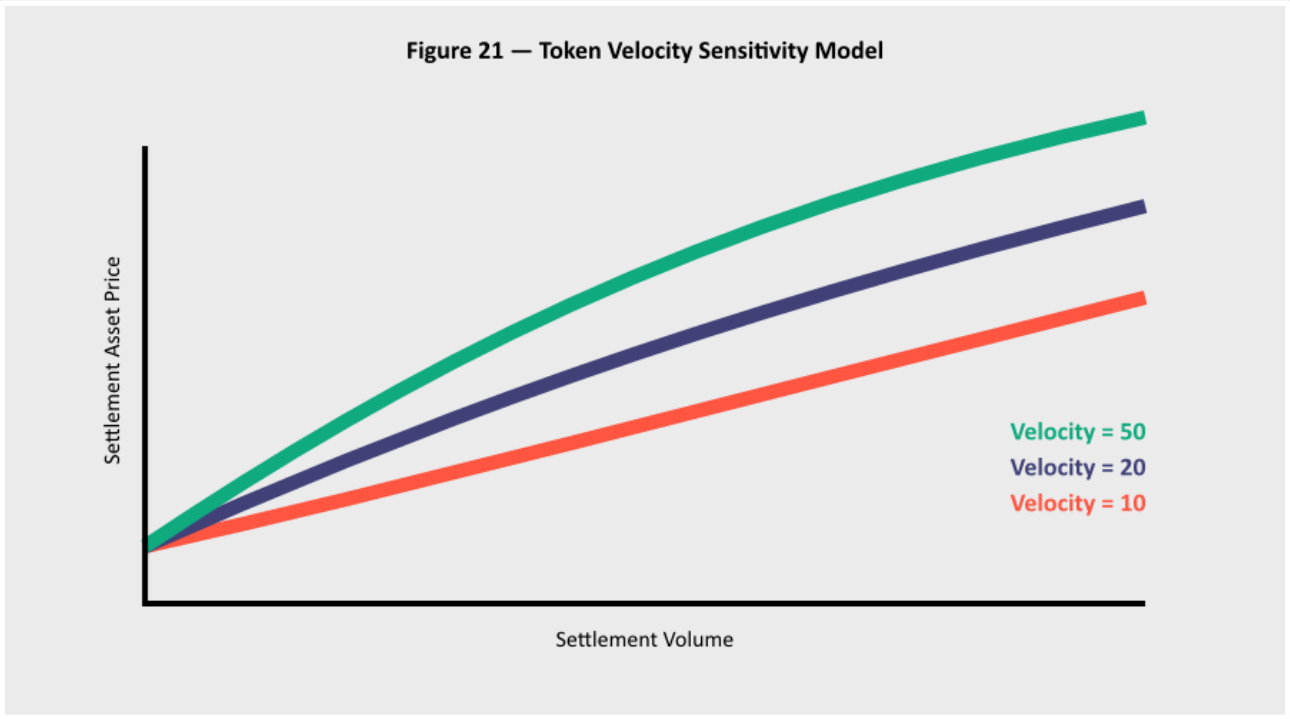


Figure 21 - Token Velocity Sensitivity Model

Illustration showing how token velocity assumptions influence settlement asset valuation.

This chart reverses the question: instead of asking "what price?", it asks "how much economic activity would be needed?"

| **Figure 21 - Token Velocity Sensitivity Model** |

This sensitivity highlights the importance of liquidity structure and market behavior within settlement networks. Institutional usage patterns, liquidity provider activity and financial product design can all influence how frequently settlement assets circulate within the system.

Another important factor is the interaction between different sources of financial activity. Payment networks, tokenized asset markets and financial trading infrastructure may all contribute transaction volume to the same settlement network. As these sources combine, the aggregate economic volume processed by the network increases.

In practice, the valuation dynamics of settlement assets will depend on a combination of network adoption, liquidity infrastructure development and broader financial market integration. The price scenarios presented in this chapter therefore represent analytical reference points rather than deterministic forecasts.

TOKEN VELOCITY ASSUMPTIONS

Token velocity represents the frequency with which a unit of the settlement asset is reused within the network to process transactions. In the valuation framework presented in this report, token velocity reflects how efficiently liquidity circulates through the settlement infrastructure.

Higher velocity means that the same units of the asset can facilitate a larger amount of economic activity, reducing the amount of capital required to support transaction volume. Conversely, lower velocity implies that more units of the settlement asset must remain available within the system to support the same level of economic activity.

For illustrative purposes, this report assumes a velocity of 20. This value represents a moderate scenario in which each unit of the settlement asset is reused approximately twenty times per year to facilitate settlement transactions.

The purpose of this assumption is not to predict the exact operational velocity of the asset, but to provide a reasonable baseline for modeling how economic transaction volume may influence settlement asset valuation. Sensitivity analysis presented later in the report illustrates how different velocity assumptions can influence the resulting valuation outcomes.

EXTREME ADOPTION SCENARIOS

The following scenarios illustrate how different levels of global financial infrastructure adoption could influence the theoretical price range of XRP. These scenarios are not predictions but mathematical illustrations derived from the valuation framework presented in this report.

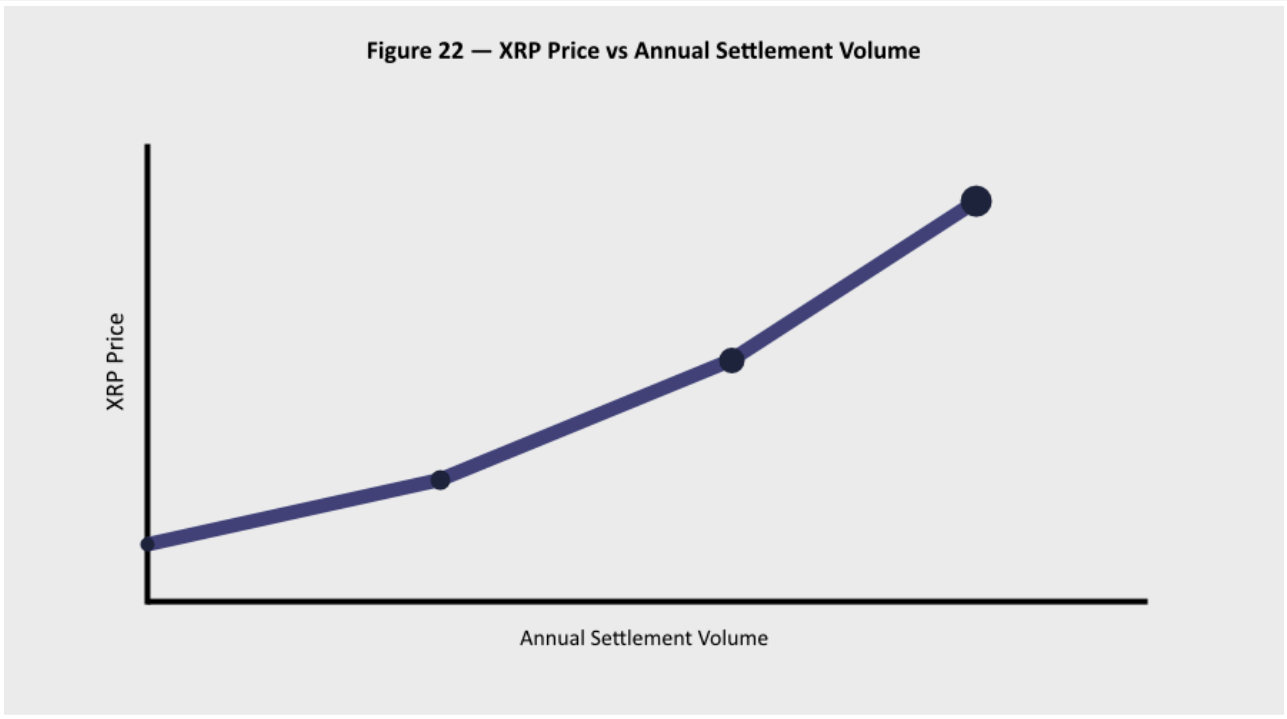


Figure 22 - XRP Price vs Annual Settlement Volume

Graph showing the theoretical relationship between annual financial activity processed by the network and XRP price.

Here we explore how different adoption levels of tokenized assets could translate into settlement demand.

Assumptions	XRP Price
Circulation Supply = 61.22B XRP	Velocity = 10 - 20
Scenario A - Moderate Integration Economic Volume = 10T USD	$8 - $16
Scenario B - Global Payment Adoption Economic Volume = 100T USD	$82 - $164
Scenario C - High Global Integration Economic Volume = 720T USD	**$589** - $1,177
Scenario D - Extreme Tokenization Economic Volume = 1000T USD	$817 - $1,634

These scenarios illustrate how the valuation of a settlement asset may scale as the economic activity processed by the network increases. Because global financial markets operate at extremely large scales, even modest levels of infrastructure adoption could correspond to significant transaction volumes.

| Figure 22 - XRP Price vs Annual Settlement Volume |

The following chapter examines how variations in token velocity and supply dynamics can influence these valuation outcomes through sensitivity analysis.

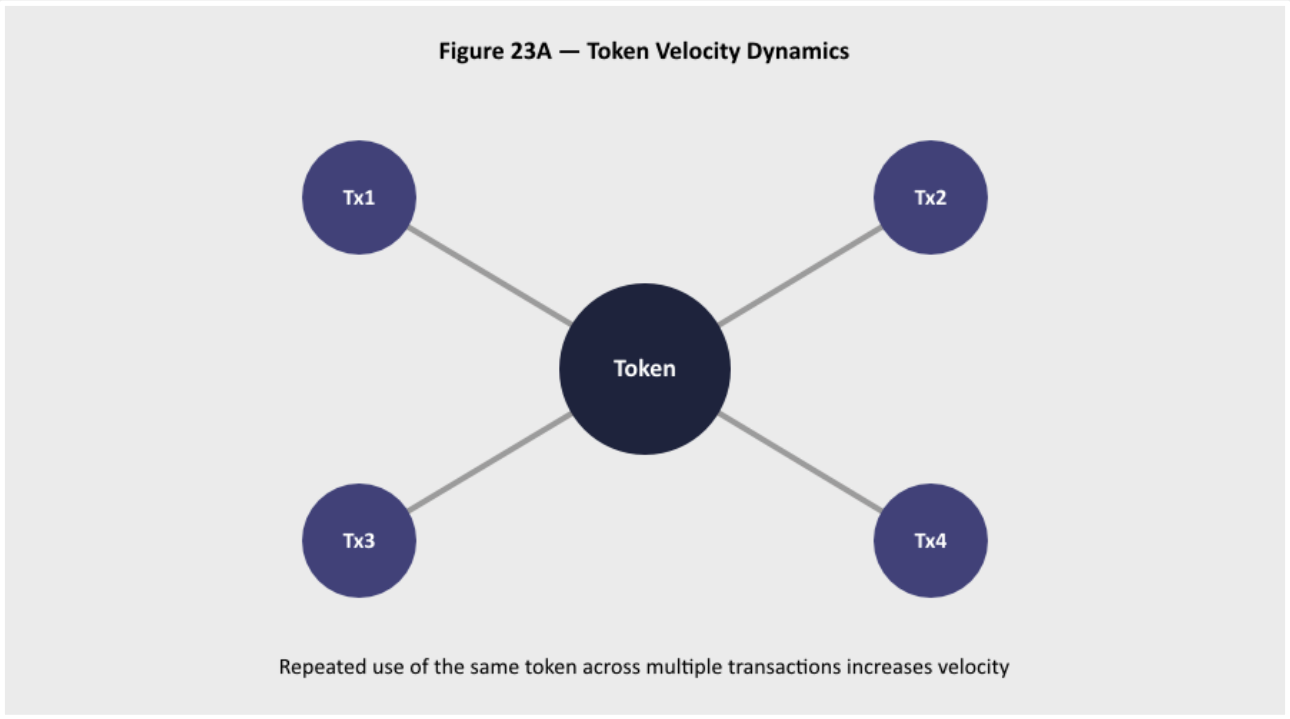


Figure 23A - Token Velocity Dynamics

Conceptual representation of how token circulation frequency affects settlement network capacity.

Velocity = frequency at which the settlement asset circulates
Economic Volume = annual financial activity processed by the network
MarketCap = total market value of the settlement asset

Velocity matters. The faster a settlement asset circulates, the less value needs to be stored in each unit.

11. SENSITIVITY ANALYSIS: VELOCITY & SUPPLY

The price scenarios presented in the previous chapter depend on several key variables, most notably token velocity and circulating supply. These variables play an important role in determining how much economic activity a settlement asset must support in order to sustain a given market value.

Because these variables may change over time as financial infrastructure evolves, it is useful to examine how variations in velocity and supply influence the valuation framework.

In real financial infrastructures, token velocity reflects several underlying mechanisms such as liquidity recycling, market maker activity, settlement netting and intraday liquidity usage. As a result, velocity acts as an aggregate parameter summarizing the efficiency of the settlement system.

| Figure 23A - Token Velocity Dynamics |

Token velocity represents one of the most influential parameters in settlement asset valuation models, as higher velocity allows the same units of the asset to support larger transaction volumes.

The velocity refers to the frequency with which a settlement asset is reused within the network to facilitate transactions. In a high-velocity environment, the same units of the asset can support multiple transactions over a short period of time. In contrast, if tokens circulate less frequently, a larger quantity of the asset must exist within the system to support the same transaction volume.

The relationship between velocity and economic activity can be expressed as shown in Equation.

$$Velocity = \frac{Economic\ Volume}{MarketCap}$$

This relationship illustrates how token velocity acts as a multiplier within the valuation framework. Higher velocity allows the same quantity of the asset to support larger transaction volumes.

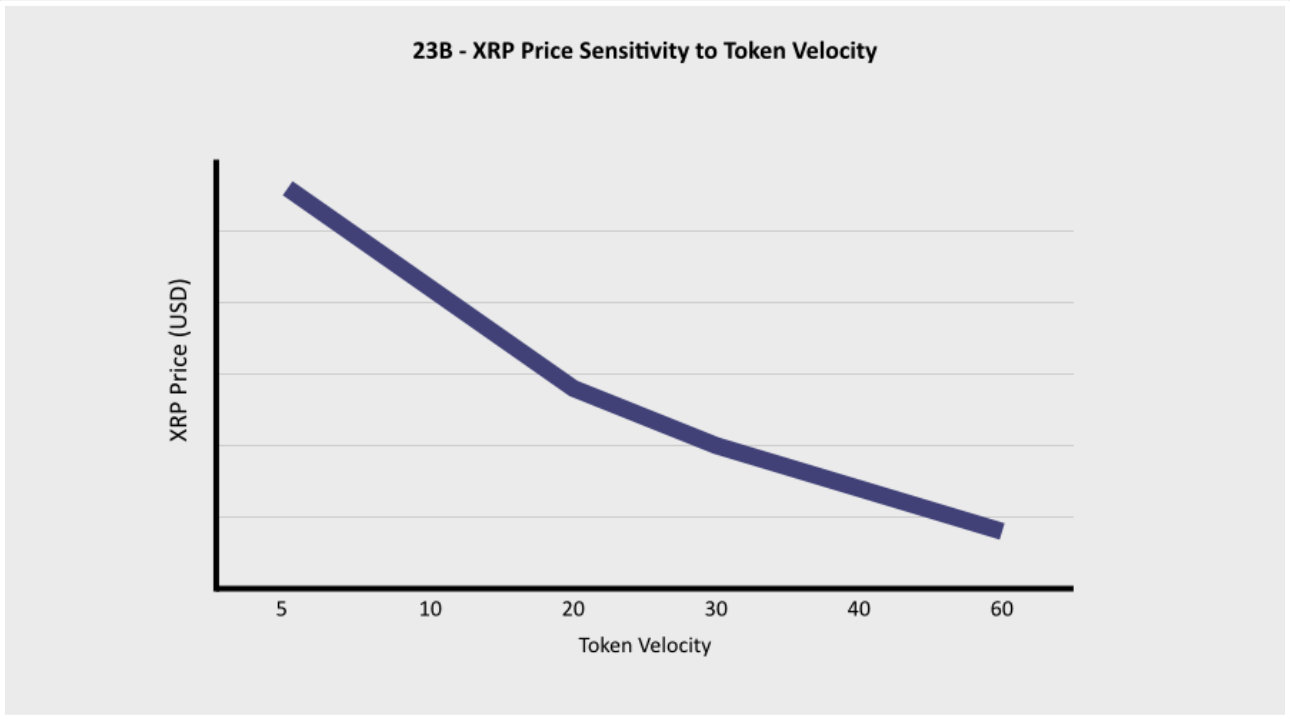


Figure 23B – XRP Price Sensitivity to Token Velocity

This figure illustrates how the required settlement asset valuation changes as token velocity increases. Higher velocity allows the same settlement asset supply to support larger transaction volumes, reducing the price required per unit of the asset.

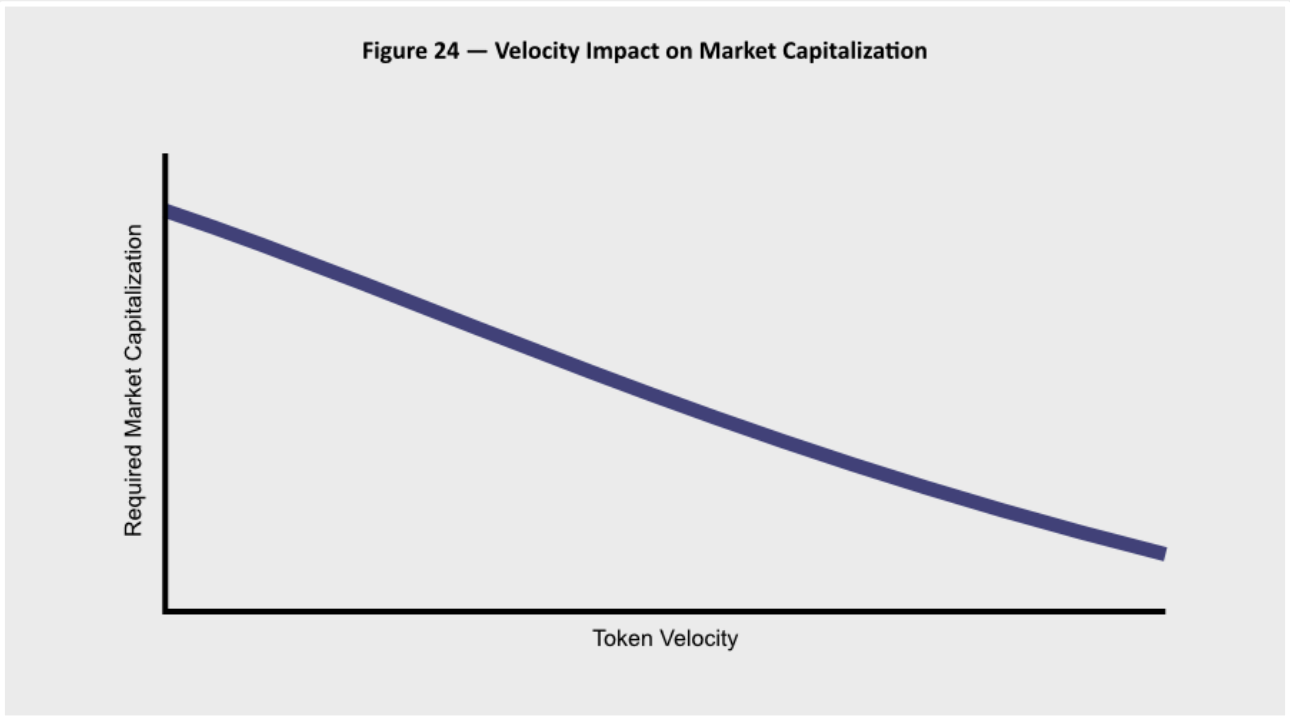


Figure 24 - Velocity Impact on Market Capitalization

Graph showing how token velocity influences required market capitalization.

| Figure 23B – XRP Price Sensitivity to Token Velocity |

Year	A (T USD)	Velocity	Supply (B XRP)	XRP Price
2026	5	6	64	$13.02
2030	21	10	72	$29.17
2035	95	15	82	$77.24
2040	315	20	92	$171.20
2045	500	25	100	$200.00

Conversely, if tokens circulate more slowly, a larger market capitalization may be required to support the same level of economic activity.

| Figure 24 - Velocity Impact on Market Capitalization |

Another factor influencing the valuation framework is the circulating supply of the settlement asset. The circulating supply determines how many units of the asset are available to support economic activity within the network.

In many blockchain systems, circulating supply changes over time due to emission schedules, token unlocks or transaction-based burn mechanisms. These supply dynamics can influence the long-term relationship between transaction volume and asset price.

For example, the XRP Ledger includes a small transaction cost that is permanently removed from circulation when transactions are processed. Although the amount burned per transaction is extremely small, this mechanism introduces a long-term deflationary component within the network.

$$Supply_{future} = Supply_{current} - Burn_{transactions}$$

Supply future = future circulating supply of the settlement asset
Supply current = current circulating supply
Burn transactions = cumulative tokens removed through transaction costs

Higher velocity means the same asset can support more transactions — which lowers the required price per unit.

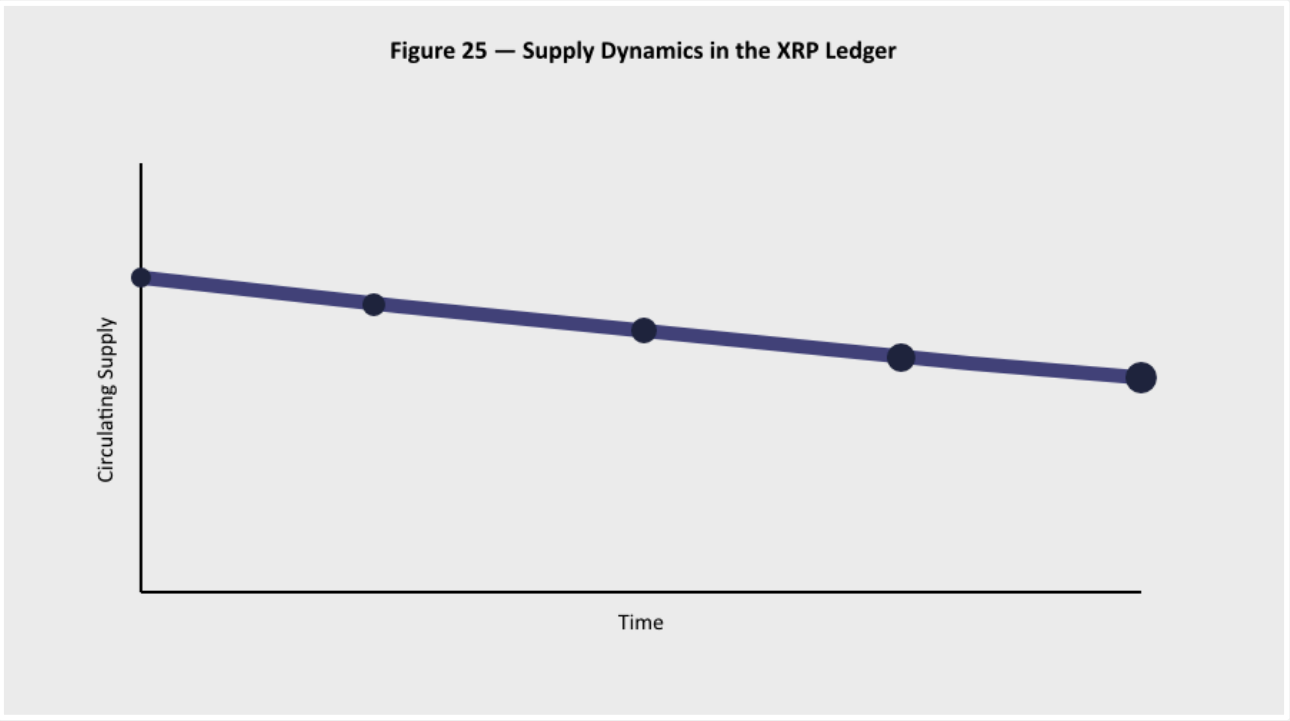


Figure 25 - Supply Dynamics in the XRP Ledger

Illustration of how XRP burn mechanisms influence circulating supply over time.

Market capitalization reflects how much value the network must hold to support global financial flows.

| Figure 25 - Supply Dynamics in the XRP Ledger |

In practice, supply changes are typically gradual relative to the scale of financial markets. Nevertheless, supply dynamics can influence long-term valuation outcomes if transaction volumes grow significantly over time.

By analyzing both velocity and supply variations, it becomes possible to explore how different network conditions influence the valuation requirements of a settlement asset. These sensitivity analyses help illustrate the range of possible outcomes under different adoption and liquidity scenarios.

The following chapter concludes the analytical framework by examining how blockchain settlement networks may evolve as financial infrastructure continues to integrate distributed ledger technologies.

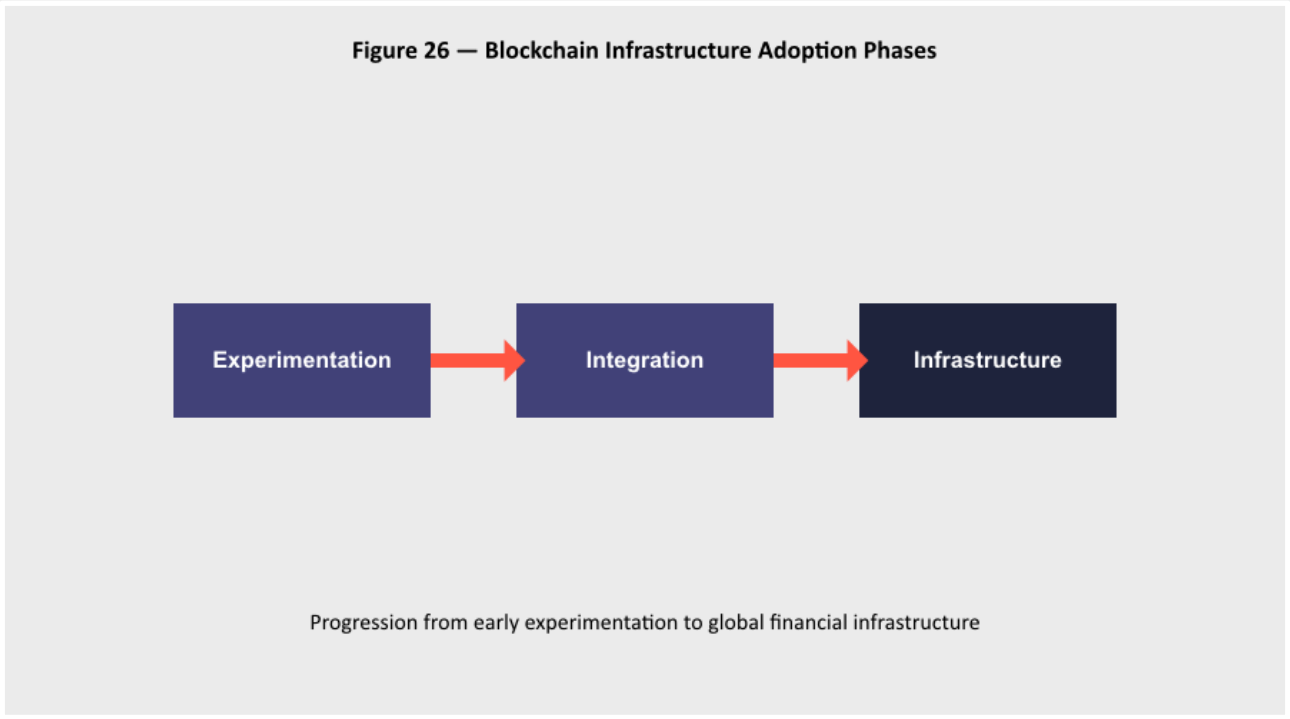


Figure 26 - Blockchain Infrastructure Adoption Phases

Model illustrating the progressive adoption of blockchain infrastructure in financial systems.

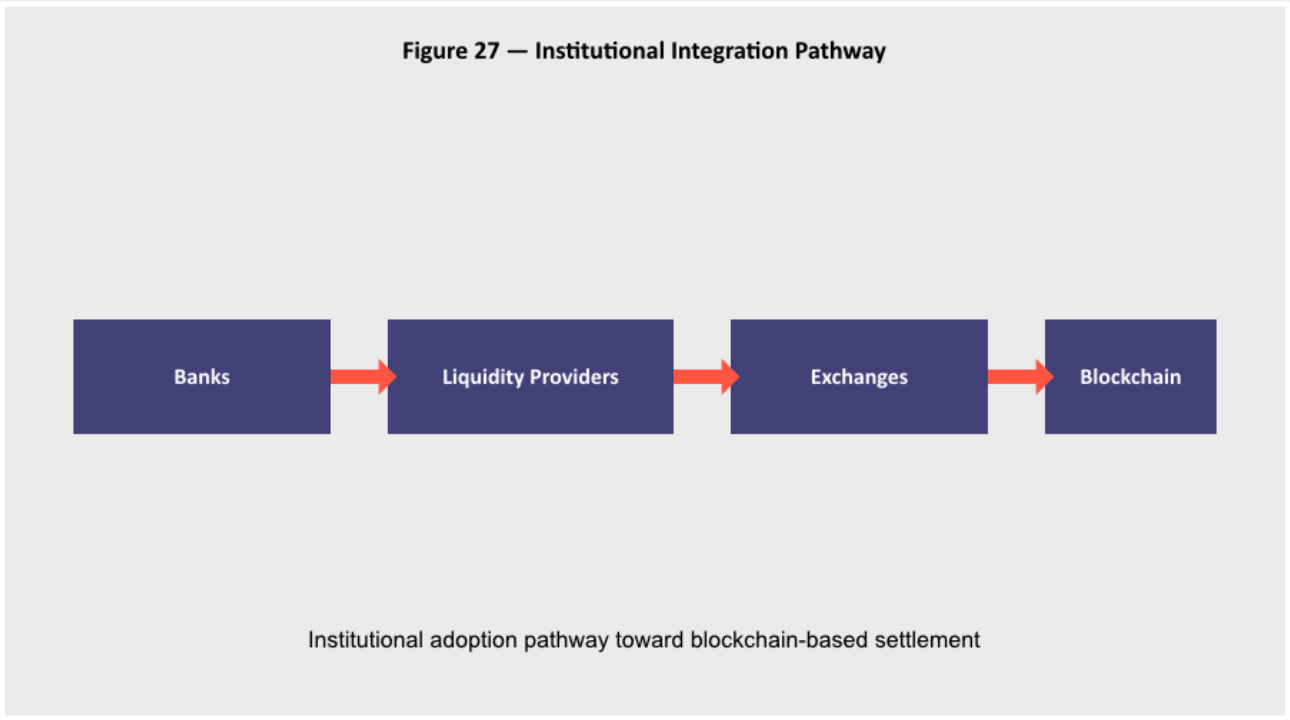


Figure 27 - Institutional Integration Pathway

Illustration showing how financial institutions progressively integrate blockchain settlement systems.

12. EVOLUTION OF BLOCKCHAIN SETTLEMENT INFRASTRUCTURE

The analytical models presented throughout this report illustrate how transaction volume, token velocity and circulating supply interact to influence the valuation dynamics of settlement assets operating within blockchain infrastructure. However, the practical realization of these models depends on the evolution of financial infrastructure itself.

Financial systems rarely transform overnight. Instead, infrastructure typically evolves through gradual phases of technological adoption, regulatory alignment and market integration. Blockchain settlement networks are likely to follow a similar trajectory as they interact with existing financial institutions and payment systems.

| Figure 26 - Blockchain Infrastructure Adoption Phases |

The first phase of infrastructure development generally involves experimentation and early adoption. During this stage, financial institutions and technology providers test distributed ledger systems in controlled environments. Pilot programs, limited payment corridors and small-scale tokenization initiatives often characterize this phase.

The second phase involves integration with existing financial infrastructure. At this stage, blockchain systems begin interacting with traditional financial networks such as banking institutions, exchanges and payment processors. Liquidity providers and market makers gradually develop the infrastructure required to support larger transaction volumes.

| Figure 27 - Institutional Integration Pathway |

The third phase represents infrastructure scale. Once technological reliability, regulatory clarity and liquidity infrastructure reach sufficient maturity, settlement networks may begin processing substantial portions of global financial activity. This phase is typically characterized by institutional participation, high liquidity and integration with major financial markets.

The transition between these phases depends on several factors. Regulatory frameworks must evolve to accommodate digital asset infrastructure. Financial institutions must develop internal systems capable of interacting with blockchain networks. Liquidity providers must establish markets that allow assets to be exchanged efficiently.

$$Adoption_{network} = f(Infrastructure, Regulation, Liquidity)$$

Adoption network = level of adoption of the settlement network
Infrastructure = technological capability of the network
Regulation = regulatory environment governing digital assets
Liquidity = availability of market liquidity supporting transactions

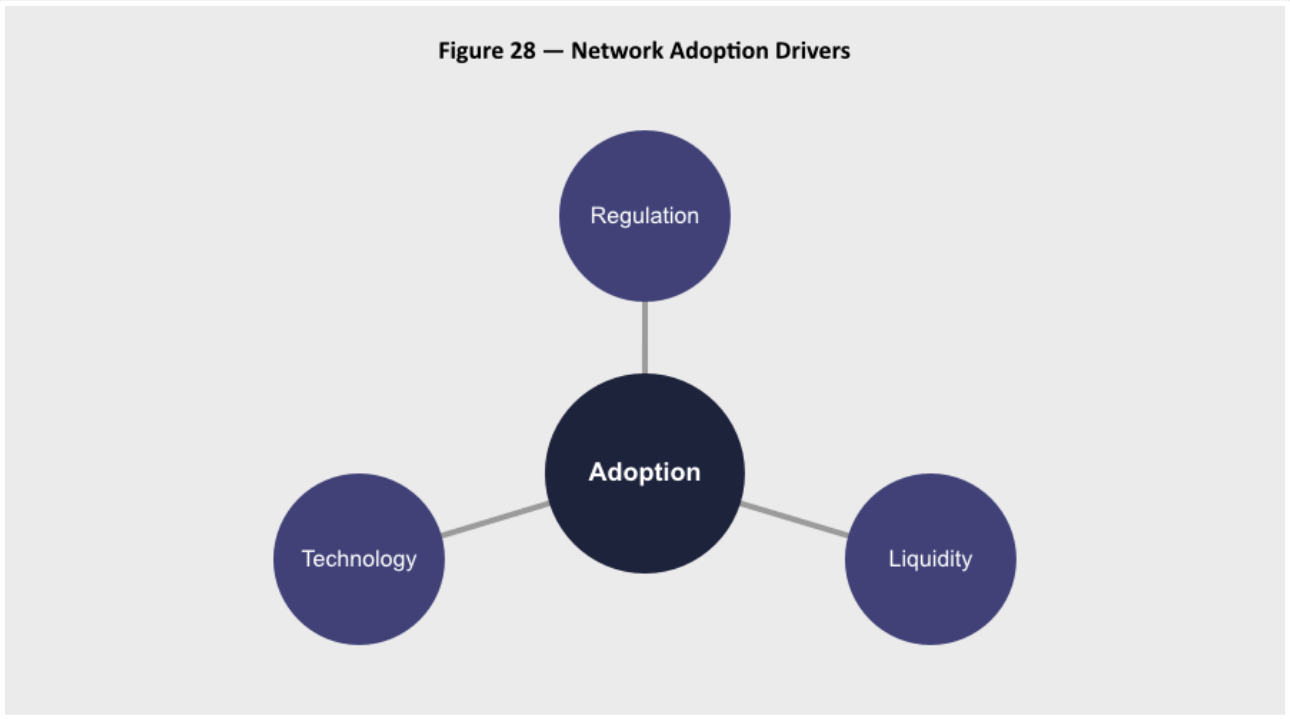


Figure 28 - Network Adoption Drivers

Diagram showing how infrastructure capability, regulation and liquidity interact to influence network adoption.

Blockchain adoption depends on technology readiness, regulation and available liquidity.

This conceptual relationship highlights the multidimensional nature of financial infrastructure adoption. Technological capability alone is rarely sufficient to drive large-scale adoption. Institutional confidence, regulatory clarity and liquidity development all play important roles in determining how quickly a new infrastructure can scale.

Figure 28 - Network Adoption Drivers

Within this broader context, blockchain settlement networks such as the XRP Ledger may gradually integrate with existing financial systems rather than replacing them entirely. Payment networks, tokenized asset platforms and financial market infrastructure could all contribute transaction flows to distributed ledger systems over time.

As these networks evolve, the economic activity processed through blockchain settlement infrastructure may increase incrementally as new corridors, financial products and asset classes become integrated into the ecosystem.

The analytical framework presented in this report provides a method for examining how such increases in economic activity could influence the valuation dynamics of settlement assets operating within these networks.

The following section summarizes the key findings of this report and presents the final valuation framework linking global financial activity, asset tokenization and settlement asset demand.

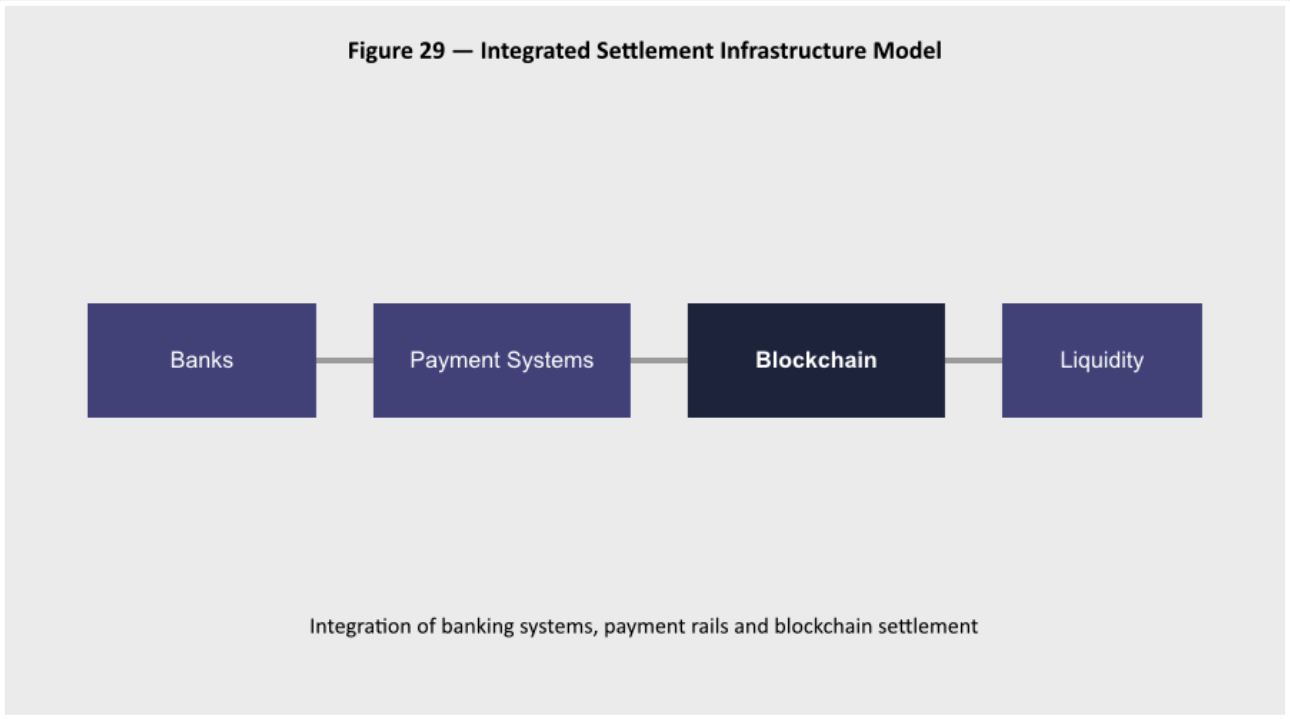


Figure 29 - Integrated Settlement Infrastructure Model

Overview of how payment networks, tokenized assets and financial systems interact within blockchain settlement infrastructure.

V = annual transaction volume generated by tokenized assets
A = total value of tokenized assets
T = turnover rate of those assets within financial markets

As tokenized markets grow, settlement infrastructure must scale with them. The settlement asset becomes the liquidity layer supporting this financial activity.

13. FINAL VALUATION FRAMEWORK

The purpose of this report has been to develop a structured analytical framework linking global financial activity, asset tokenization and settlement asset valuation. By examining the interaction between financial infrastructure, transaction volume and token circulation dynamics, it becomes possible to better understand the economic forces that may influence the valuation of settlement assets operating within blockchain networks.

| Figure 29 - Integrated Settlement Infrastructure Model |

Throughout the report, several complementary analytical models have been introduced. Each model addresses a different dimension of financial infrastructure and settlement economics.

The first model examined the scale of global financial markets and the potential expansion of blockchain settlement networks within those markets. Cross-border payments, foreign exchange settlement, securities markets and derivatives trading collectively represent an enormous volume of economic activity.

The second model explored the tokenization of real-world assets. If traditional financial assets such as real estate, bonds, equities and investment funds are represented on blockchain infrastructure, they may generate substantial transaction flows as they circulate within financial markets.

The relationship between tokenized assets and the financial activity they generate can be expressed as shown in Equation.

$$V = A \times T$$

The third model examined the role of settlement assets within financial networks. Settlement assets facilitate the transfer of value across markets and therefore must support the economic activity processed by the network.

Price = market price of the settlement asset
Economic Volume = annual financial activity processed through the network
Velocity = frequency with which tokens circulate
Supply = circulating supply of the settlement asset

A = total value of tokenized assets represented on the network
T = turnover rate of those assets
Velocity = reuse frequency of the settlement asset
Supply = circulating supply of the settlement asset

Here the framework connects asset tokenization, transaction volume and settlement demand into a single economic model.

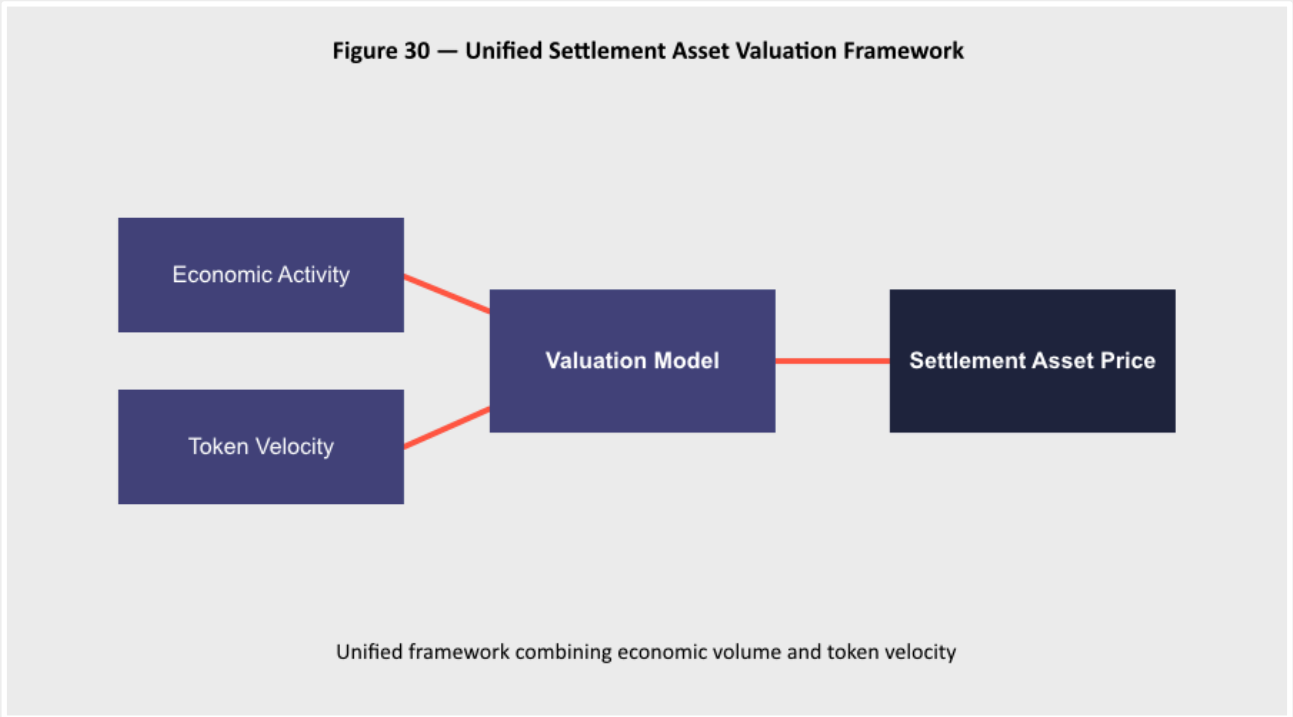


Figure 30 - Unified Settlement Asset Valuation Framework
Combined model linking tokenized asset markets, transaction flows and settlement asset demand.

The relationship between transaction volume, token velocity and circulating supply was expressed earlier as the core valuation equation.

$$Price = \frac{Economic\ Volume}{Velocity \times Supply}$$

By combining these models, a unified analytical framework emerges. Tokenized assets generate transaction flows, and those transaction flows must be supported by settlement assets facilitating value transfer within the network.

$$Price = \frac{A \times T}{Velocity \times Supply}$$

| Figure 30 - Unified Settlement Asset Valuation Framework |

This figure summarizes the integrated framework linking tokenized assets, transaction turnover and settlement asset demand. This equation summarizes the economic logic underlying settlement asset valuation. As tokenized asset markets expand and transaction flows increase, the economic demand for settlement assets may grow accordingly.

However, it is important to emphasize that this framework does not produce deterministic price predictions. Financial infrastructure adoption is influenced by regulatory developments, institutional participation, liquidity availability and broader macroeconomic conditions.

Instead, the purpose of this framework is to provide a structured method for analyzing how different levels of financial activity could translate into settlement asset demand within blockchain-based financial infrastructure. The evolution of blockchain settlement networks will likely occur gradually as financial institutions integrate distributed ledger technology into payment systems, asset markets and liquidity infrastructure. As these systems evolve, the relationship between global financial activity and digital settlement assets may become increasingly relevant in understanding the economic role of blockchain networks within the broader financial system. This report therefore provides a conceptual and quantitative foundation for examining how blockchain settlement infrastructure may interact with global financial markets in the years ahead.

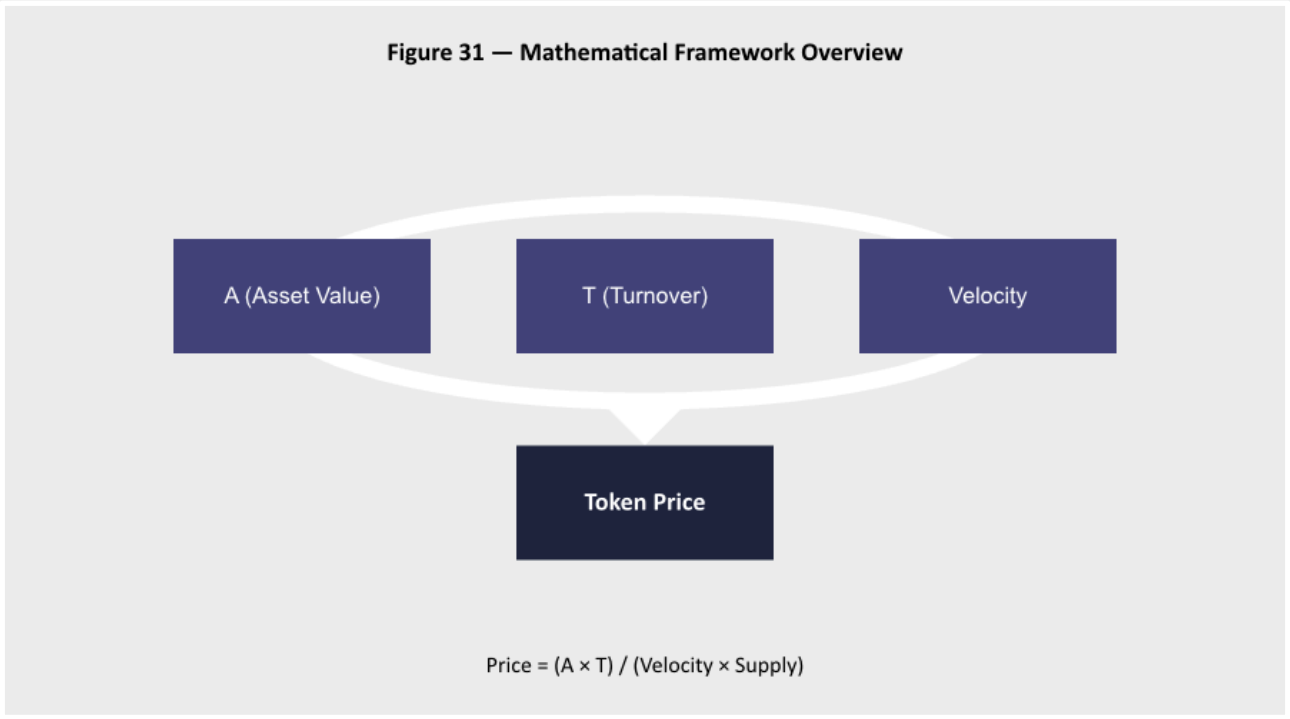


Figure 31 - Mathematical Framework Overview
Visual summary of the equations used throughout the report.

Price = market price of the settlement asset
Economic Volume = annual financial activity processed through the network
Velocity = number of times the settlement asset circulates within the system
Supply = circulating supply of the settlement asset

This figure illustrates how settlement assets operate within a broader financial infrastructure that includes banks, markets and tokenized assets.

14. MATHEMATICAL APPENDIX

This appendix summarizes the key equations used throughout the report. These equations form the analytical foundation linking asset tokenization, transaction volume and settlement asset valuation within blockchain-based financial infrastructure.

The purpose of this appendix is to present the mathematical relationships in a consolidated form, allowing readers to understand how the different components of the framework interact.

| Figure 31 - Mathematical Framework Overview |

This diagram provides a simplified mathematical overview of the relationships developed throughout the report. The first relationship introduced in this report describes how financial activity may emerge from tokenized asset markets. When assets are represented on blockchain infrastructure, they may generate transaction flows as they are traded, transferred or used as collateral.

$$V = A \times T$$

V = annual transaction volume generated by tokenized assets
A = total value of tokenized assets represented on blockchain infrastructure
T = annual turnover rate of those assets within financial markets

This equation reflects a fundamental characteristic of financial systems. The transaction volume generated by an asset class is typically several times larger than the underlying value of the assets themselves.

The second relationship describes the valuation dynamics of settlement assets operating within transaction networks.

$$Price = \frac{Economic\ Volume}{Velocity \times Supply}$$

This relationship reflects a simplified version of the monetary circulation principle commonly used in macroeconomic analysis.

VODL = total annual volume processed through liquidity corridors
Nc = number of active payment corridors
Vc = average transaction volume per corridor

V network = transaction volume processed by the settlement network
s = share of financial market activity captured by the network
V market = total volume of the financial market

A = total value of tokenized assets
T = turnover rate of those assets
Velocity = reuse frequency of the settlement asset
Supply = circulating supply of the settlement asset

These equations summarize the mechanics behind the model — linking tokenized assets, transaction volume and settlement liquidity.

The third equation describes how transaction volume may emerge from the expansion of payment corridors within liquidity networks.

$$V_{ODL} = N_c \times V_c$$

This equation illustrates how payment infrastructure scales as additional liquidity corridors are introduced.

Another relationship used within the report examines how blockchain settlement networks may capture portions of existing financial markets.

$$V_{network} = s \times V_{market}$$

This relationship highlights the significance of global financial market scale. Even small adoption percentages may correspond to very large transaction volumes.

Finally, by combining the tokenization model with the settlement valuation model, a unified valuation framework emerges.

$$Price = \frac{A \times T}{Velocity \times Supply}$$

This final equation summarizes the conceptual framework developed throughout the report.

It links three fundamental components of financial infrastructure: the scale of tokenized assets, the transaction flows generated by those assets and the settlement assets that facilitate value transfer within the network.

Together, these equations provide a structured analytical framework for examining how blockchain-based financial infrastructure may interact with global financial markets.

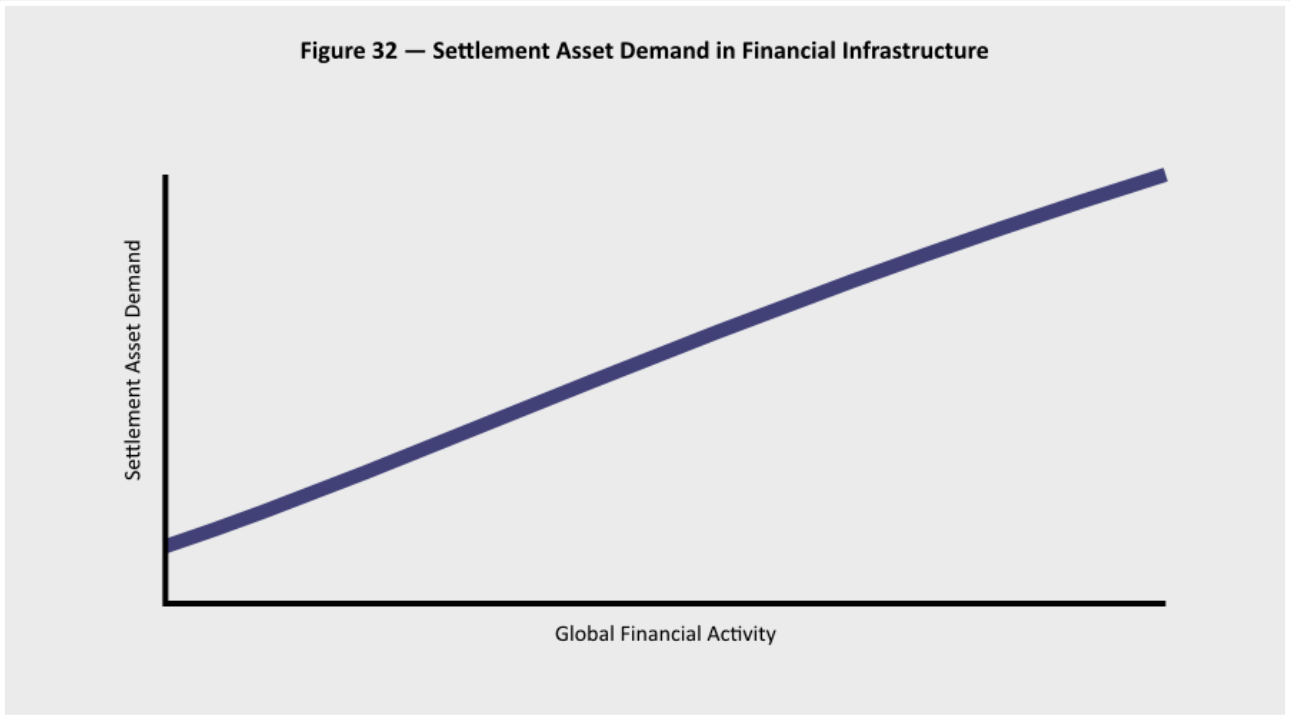


Figure 32 - Settlement Asset Demand in Financial Infrastructure

Conceptual diagram summarizing the relationship between financial activity and settlement asset demand.

This diagram summarizes the report's core idea: financial activity generates transaction flows, and settlement assets provide the liquidity that supports those flows.

15. CONCLUSION

This report develops a framework linking global financial activity, asset tokenization and the valuation of blockchain-based settlement assets. By examining global financial market scale and the mechanisms that generate transaction flows, the framework highlights the economic forces shaping digital settlement assets.

| Figure 32 - Settlement Asset Demand in Financial Infrastructure |

Global financial markets operate at enormous scale, with cross-border payments, FX, securities settlement and derivatives trading processing hundreds of trillions of dollars annually.

Blockchain settlement networks provide an alternative infrastructure offering near real-time settlement, programmable assets and global accessibility.

Tokenization may transform financial infrastructure by bringing real-world assets such as real estate, debt and equities onto blockchain networks, potentially increasing liquidity and transaction efficiency.

As tokenized assets circulate, they generate transaction flows that must be supported by settlement infrastructure. The framework shows how these flows interact with velocity and supply to determine settlement asset demand.

$$Price = \frac{A \times T}{Velocity \times Supply}$$

This equation summarizes the central insight of the report. The value required within a settlement asset network depends on the scale of tokenized assets, the transaction activity generated by those assets and the circulation dynamics of the settlement asset itself.

It is important to emphasize that the framework presented in this report does not attempt to forecast specific price outcomes for any digital asset. Financial infrastructure adoption is influenced by numerous factors including regulation, institutional participation, technological reliability and liquidity development.

The purpose of this framework is to provide a conceptual and quantitative model linking financial activity to settlement asset demand. As financial institutions and markets continue exploring distributed ledger infrastructure, these models offer a foundation for analyzing how blockchain settlement networks may integrate into the broader global financial system.

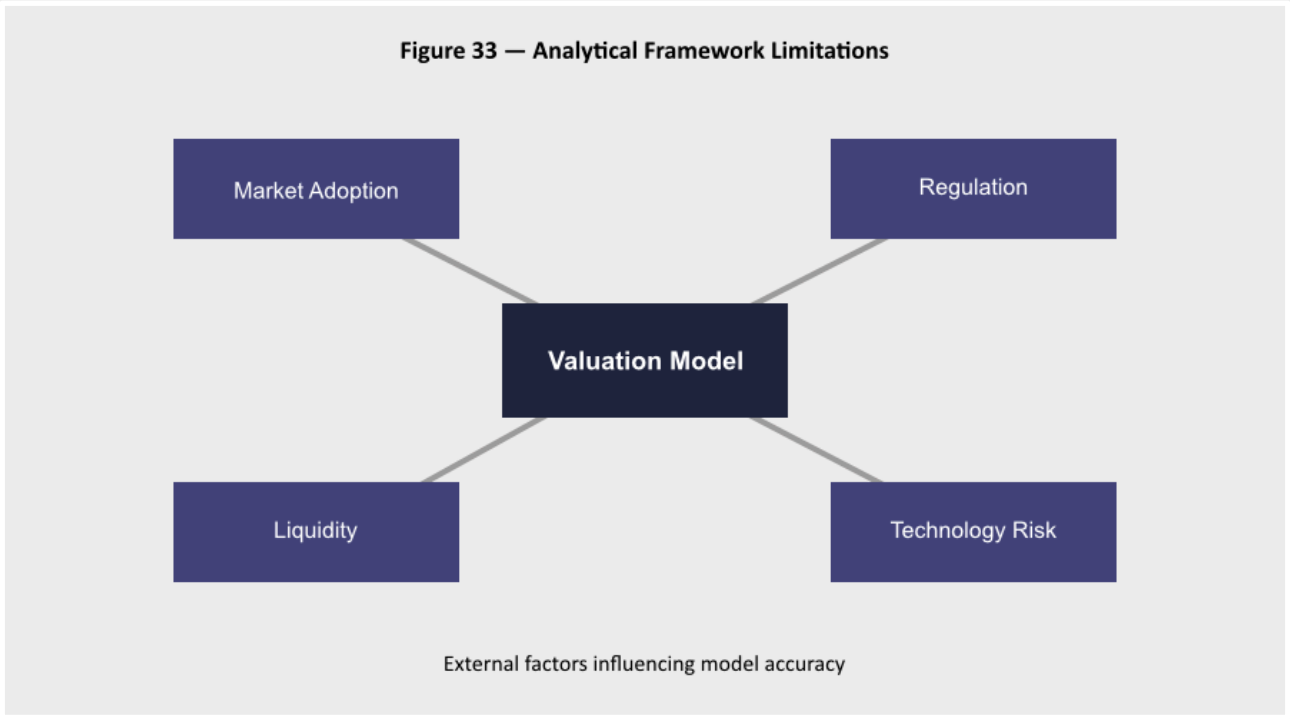


Figure 33 - Analytical Framework Limitations
Illustration of external variables such as regulation, liquidity and adoption influencing valuation outcomes.

Real financial systems are influenced by many external factors — regulation, liquidity, technology and institutional adoption.

16. ACKNOWLEDGEMENTS & DISCLAIMER

This report was prepared as an independent analytical study examining the potential interaction between global financial infrastructure, asset tokenization and blockchain-based settlement systems.

The objective of the study is to present a conceptual and quantitative framework that explores how transaction volume, token velocity and circulating supply may influence the valuation dynamics of settlement assets operating within distributed ledger networks.

The models and scenarios presented throughout the report are intended for analytical and educational purposes only. They are designed to illustrate how different variables within financial infrastructure could interact under various conditions. The equations and frameworks described do not constitute predictions of future market prices.

| Figure 33 - Analytical Framework Limitations |

Financial markets are complex systems influenced by a wide range of factors including macroeconomic conditions, regulatory developments, technological innovation and market participant behavior. As a result, the valuation of digital assets may evolve in ways that differ significantly from simplified analytical models.

The frameworks presented in this report rely on publicly available information and simplified assumptions regarding financial market volumes, tokenization scenarios and liquidity infrastructure development. Actual outcomes may differ depending on how blockchain technology is adopted within financial systems.

Nothing contained in this report should be interpreted as financial advice, investment recommendations or guarantees regarding the future value of any digital asset.

The report is intended solely as a research-oriented exploration of how blockchain settlement infrastructure may interact with global financial markets.

Even a relatively small share of global financial transaction activity could correspond to trillions of dollars in annual settlement volume, implying that the valuation of a digital settlement asset could scale significantly as financial infrastructure adoption increases.

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DTCC - Annual Report (Global Settlement Volumes)
SWIFT - Global Payments report
McKinsey - Tokenization of Financial Assets (2023)
BCG-ADDX - Asset Tokenization Report
WEF - Digital Asset Tokenization

... To infinity and beyond ...

This framework is not a price prediction. It's a way to explore how global financial activity might shape the value of digital settlement assets.

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Independent Research - March 2026