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DIGITAL ASSETS

**Gold as a Tokenised
Real-World Asset**

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30 September 2026

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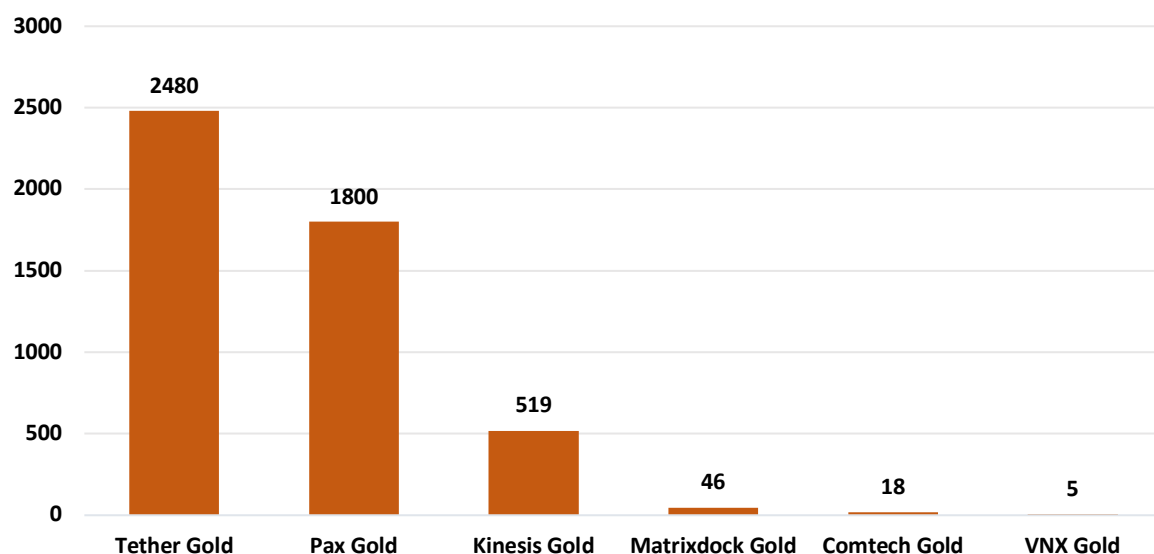
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Executive Summary

- ✦ Tokenisation represents an evolution in asset ownership and has already gained considerable momentum across global financial markets. Applied to gold, it brings one of the world's oldest and most trusted stores of value into the digital age.
- ✦ Tokenised gold is the latest stage in the evolution of gold investment, following gold bars and coins and gold-backed exchange-traded funds. Each token represents a specified quantity of bullion held in a secure vault, combining exposure to physical gold with the speed and flexibility of blockchain transactions. Its credibility rests on established safeguards, including secure custody, independent audits and reliable redemption rights.
- ✦ Gold has traditionally served as a store of value, an investment, a hedge against inflation and crises, and a portfolio diversifier. Tokenisation broadens its utility by enabling it to function as collateral, a means of payment and a financing instrument.
- ✦ Because ownership can change without the bullion leaving its vault tokenisation can reduce transaction and settlement costs. It supports round-the-clock cross-border trading, widens access through fractional investment and digital wallets, and improves transparency and traceability of gold transactions.
- ✦ As of mid-2026, the tokenised gold market was valued at approximately \$4.9 billion and remained highly concentrated, with Tether Gold and PAX Gold accounting for around 90% of its value. Their dominance reflects the issuers' strong brand recognition, extensive distribution networks and broad market access.
- ✦ Wider adoption of gold tokens will depend on clear regulation across jurisdictions, greater interoperability between blockchain networks, stronger links with the traditional financial system and better investor understanding.
- ✦ Growing participation by traditional financial institutions is also expected to accelerate the expansion of the tokenised gold market.
- ✦ By combining gold's enduring appeal with the efficiency of blockchain technology, tokenised gold could become an important building block of digital finance.

Key Picture: Market Capitalisation of the Largest Gold Tokens (Millions of USD)



Source: Author's graphics, [Cryptocurrency Prices, Charts And Market Capitalizations | CoinMarketCap](https://www.coinmarketcap.com/).

1. Introduction: Tokenised Gold in the Digital Asset Ecosystem

Tokenisation represents an evolution in asset ownership and has already gained considerable momentum across global financial markets. To understand where tokenised gold fits within the broader digital asset ecosystem, it is useful to distinguish between its main asset categories.

In general, digital assets can be divided into three groups:

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- Tokenised real-world assets
 - Financial assets – bonds, equities, private credit, other financial instruments
 - Physical assets – gold, commodities, real estate, other
 - Intangible assets – intellectual property, patents, other
- Tokenised money¹
 - Stablecoins
 - Tokenised bank deposits
 - Tokenised e-money
 - CBDC
- Native crypto-assets
 - Cryptocurrencies – Bitcoin, Ethereum, other
 - Utility tokens – gaming tokens, file storage tokens, other
 - Governance tokens – participation in protocol governance tokens, other

Real-world assets (RWAs) are financial, physical or intangible assets whose ownership rights are digitally represented on a blockchain. The complexity of tokenisation varies across these asset classes; in general, the assets that are more difficult to tokenise also offer greater incremental benefits.

Financial assets are comparatively straightforward to tokenise because they already exist in digital form, with well-established processes and legal frameworks requiring limited manual intervention². Consequently, tokenisation primarily improves operational efficiency through lower settlement costs, enhanced collateral management, faster settlement and 24/7 access to the market.

Tokenising physical assets is more complex because the digital token must remain reliably linked to an underlying physical asset that requires storage, auditing and maintenance. Token design, redemption mechanisms, and regulatory uncertainty can add further complexity. Tokenisation of intangible assets is even more challenging due to complex ownership rights and valuation difficulties.

At the same time, these challenges highlight where tokenisation can create the greatest value. Beyond delivering significant operational efficiencies, tokenising physical assets can broaden their range of uses and support market development.

Gold is particularly well suited to tokenisation. While gold's physical nature requires secure custody, auditing and robust redemption mechanisms - making it more complex to tokenise than financial assets - its homogeneity, divisibility, transparent pricing and relative ease of redemption make it simpler to tokenise than many other physical assets.

2. Gold Tokens as a New Form of Gold Investment

Gold tokens can take several forms. They may be fully backed by physical gold on a one-to-one basis, represent a gold-related financial instrument, or track the price of gold without direct physical backing. Tokenisation can also be applied to claims on unmined gold reserves or future gold production. This paper focuses on tokens fully backed by physical gold on a one-to-one basis. These tokens represent direct ownership of physical gold and are digital representations of a specific quantity of physical gold. Each token provides verifiable information on the

gold backing the token, including its form, purity, storage location, ownership, redemption rights and transaction history.

Gold tokens offer a new form of investing in gold. For thousands of years, people have held and exchanged physical gold, principally in the form of bars and coins. Gold has remained valuable because it is scarce but not too rare, it does not rust or corrode, and is easy to divide and store. The earliest known gold coins, Croeseids, were minted in the ancient Kingdom of Lydia under King Croesus in the sixth century BC (**Figure 1**).

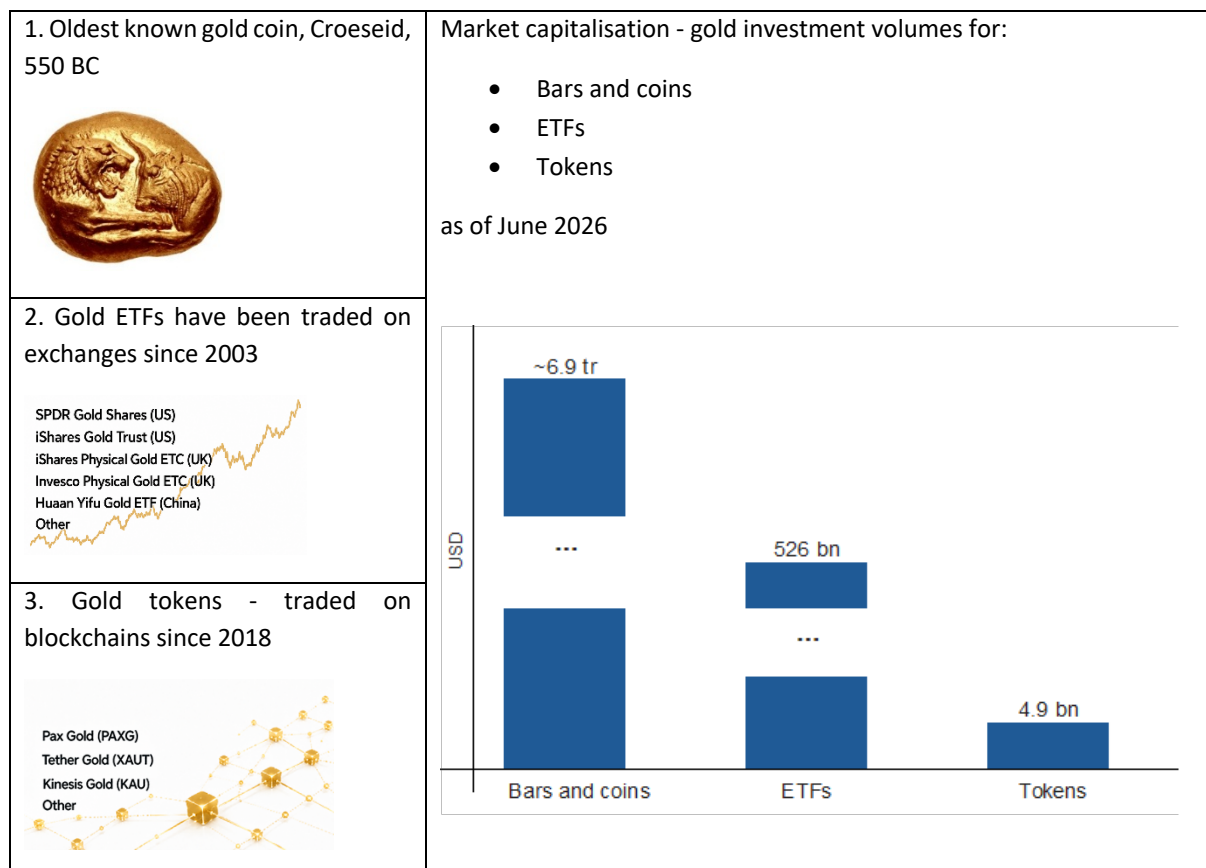
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In the early 2000s, physically backed gold exchange-traded funds ETFs - regulated securities that hold gold in physical form³ - introduced a new way to invest in gold. While the gold market can also be accessed through other products such as derivatives, OTC or gold stocks, it's the gold ETF's that have flourished, attracting both institutional retail investors, and becoming a crucial gold product. Instead of buying physical bullion, investors can buy a security backed by physical gold and traded on a stock exchange. Today, numerous gold ETFs are available, with SPDR Gold Shares (GLD) and iShares Gold Trust among the largest (**Figure 1**).

Tokens 1:1 backed by physical gold are the next step in the evolution of gold investing. Instead of holding a gold coin, a bar, or shares in an ETF, investors hold digital tokens, each representing a specific quantity of physical gold stored in a secure vault. The largest gold-backed tokens today are Tether Gold (XAUT) and Pax Gold (PAXG) (**Figure 1**).

The market capitalisation of gold-backed tokens is currently around USD 4.5 billion⁴, making it a small market as compared to coins and bars and ETFs (**Figure 1**). However, growing interest from major financial institutions suggests that tokenised gold is likely to expand significantly in the coming years.

Figure 1 Selected Gold ETFs And Selected Gold Tokens



Source: Author's graphics, www.gold.org, [Cryptocurrency Prices, Charts And Market Capitalizations | CoinMarketCap](https://www.coinmarketcap.com/);

Notes: Market capitalisation of investment bullion, gold ETFs, and gold tokens. Gold-backed tokens are the newest form of gold investment, next to bullion and ETF and are expected to grow rapidly despite their currently small market.

3. Benefits of Tokenising Gold

3.1. Expanded Functionality of Gold

The tokenisation of gold offers a range of benefits, one of which is the extension of gold's functionality beyond its conventional uses.

Physical gold and gold ETFs are generally used for four main purposes:

- a store of wealth
- an investment
- a hedge against inflation and crises
- a portfolio diversifier

Gold has historically preserved purchasing power, outperformed major currencies and generated competitive long-term returns. Its dual role as both an investment and a consumer good support demand across economic cycles, and its negative correlation with equities, particularly during market stress, reduces volatility and helps optimise portfolio management.

Tokenisation enables new use cases for gold, including its use as:

- collateral
- a means of payment or settlement
- an investment financing instrument.

Tokenised gold can be used as collateral, borrowed, or lent, unlocking liquidity without selling holdings and increasing the productive use of gold. Over time, it could also facilitate the mobilisation of central bank gold reserves for crisis liquidity management and international lending.

As more financial assets move on-chain, the range of assets used for payments and settlement may expand. Gold served as money for centuries and underpinned the international monetary system until the collapse of the Bretton Woods system in the early 1970s. While gold will not become a primary means of payment given the scale of today's global economy, tokenisation could enable gold-backed digital payments.

Tokenising claims on unmined gold or future production could also expand financing options for mining projects by lowering investment barriers and attracting a broader pool of private capital, including retail investors.

3.2. Market Development: Efficiency, Accessibility, Transparency, Liquidity

Tokenisation not only expands gold's functionality but also supports market development by improving its efficiency, accessibility, transparency and liquidity.

Efficiency

Compared with physical gold transactions, which may involve transportation, verification and updates to custody records, tokenisation can reduce operational costs and accelerate the transfer and settlement of ownership. Tokens representing physical gold can change hands without moving the underlying metal, avoiding transport costs. Tokenisation may also reduce reconciliation between buyers, sellers, brokers, payment providers and custodians by providing a shared transaction record and automating parts of the settlement process. However, the digital records must still remain reconciled with the physical gold in the vault.

Unlike physical gold and gold ETFs, which are generally traded through dealers or exchanges during specified operating hours, tokenised gold can be traded continuously on digital platforms, providing 24-hour access to investors across different time zones.

Finally, tokenisation also simplifies cross-border transactions with gold. Transfers of physical gold requires transportation, time, and changes to custody arrangements. Gold ETFs are listed on particular exchanges and depend on local brokers, trading hours, currencies and settlement systems. By contrast, tokenised gold allows the transfer of ownership digitally across borders, reducing transaction times, intermediary involvement and costs.

Accessibility and Participation

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Tokenised gold can broaden investor access by enabling investment in small denominations without the relatively high manufacturing, packaging, distribution and storage costs associated with small bars and coins. Although gold ETFs also provide fractional exposure, they generally require access to a brokerage account and traditional financial infrastructure. Tokenised gold may therefore offer an additional route to gold investment through digital wallets, particularly for individuals underserved by conventional financial institutions. This has a positive impact on financial inclusion.

Furthermore, tokenised assets are likely to appeal to younger, digitally native investors, who are generally more familiar with digital financial products and may prefer accessing and managing investments through digital platforms.

Transparency and Liquidity

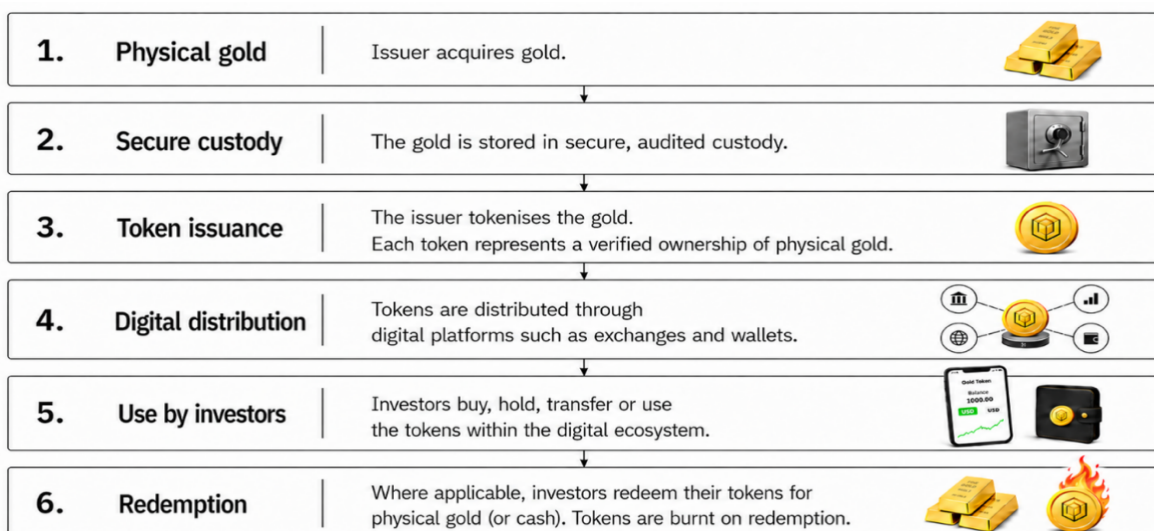
Compared with physical gold and gold ETFs, whose transfer or use as collateral may involve verification, custody arrangements and traditional market infrastructure, tokenised gold can be mobilised more quickly, improving liquidity management by enabling more efficient collateral deployment.

Tokenisation enhances transparency through an immutable and auditable record of ownership and transactions. It can improve traceability and provenance, helping combat illicit activity, promote ESG compliance, and strengthen investor confidence. Greater transparency and the continuous recording of transactions can also enhance price discovery by allowing market prices to reflect new information more rapidly.

4. Gold Token Lifecycle

For the benefits of gold tokenisation to be realised, the token lifecycle must ensure that physical gold remains securely in custody while ownership is transferred digitally and token minting and burning maintain a 1:1 backing.

Figure 2 Gold Token Lifecycle



Source: Author's graphics⁵

Figure 2 illustrates the lifecycle of a gold-backed token, from the acquisition of physical gold to the redemption of the digital asset. Physical gold is placed in secure custody and tokenised into blockchain-based ownership tokens. These tokens can be bought, held and transferred digitally, and are burnt upon redemption to maintain a one-to-one backing with the underlying gold.

5. Market Landscape

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The tokenised gold market is highly concentrated, with two tokens accounting for the vast majority of the market: Tether Gold (XAUT) and PAX Gold (PAXG). Together, they represent around 90% of the total market capitalisation of tokenised gold (Key Picture).

The features of gold-backed tokens vary across issuers. **Figure 3** compares the key characteristics of some of the largest gold-backed tokens.

Figure 3 Selected Gold Token Characteristics

	Tether Gold (XAUT)	PAX Gold (PAXG)	Kinesis Gold (KAU)	Matrixdock Gold (XAUM)	VNX Gold (VNXAU)	Comtech Gold (CGO)
Issuer	Tether	Paxos Trust Company	Kinesis Money	Matrixdock	VNX Commodities	Comtech Gold
Launch year	2020	2019	2018	2024	2022	2022
Gold represented	1 troy ounce	1 troy ounce	1 gram	1 troy ounce	1 gram	1 gram
Major trading venues	Binance, OKX, Bybit, Kraken, Bitfinex, and many other	Binance, Kraken, Coinbase, KuCoin, Gate, and many other	mainly Kinesis; Bitcoin, Emirex	KuCoin, Uniswap, Bluefin, Ryadium, other	XT.COM, Raydium, Orca	Bittrue, LBank
Main Blockchain	Ethereum, BNB	Ethereum, Solana	Stellar-based Kinesis chain	Ethereum, BNB, Sui, other	Ethereum; Solana, Stellar, other	XDC
Vault location	Switzerland	UK	Kinesis global vaulting network	Singapore, Hong Kong	Liechtenstein	UAE
Minimum redemption	1 bar	1 bar	100 g	1 kg	1 kg	1 kg

Source: Gold token White Papers, respective tokens websites, coingeco.com

The dominance of Tether Gold (XAUT) and PAX Gold (PAXG) reflects a combination of several factors, including the issuer recognition and broad market access.

Paxos and Tether entered the tokenized-gold market early and with established positions in the broader stablecoin sector. This enabled them to leverage their existing user bases and widely recognised brand.

Both Tether Gold and Pax Gold are traded across a significant number exchanges, both centralised and decentralised including the largest ones such as Binance, OKX or Kraken, and are available on widely used blockchains which means that these networks have already broad support from exchanges, as well as wallets

and custodians. Furthermore, according to CoinMarketCap, Tether Gold was listed across 223 trading pairs and PAX Gold across 169 as of mid-2026, compared with six for Kinesis Gold, four for VNX Gold and three for ComTech Gold⁶. This broader distribution can strengthen investor confidence, reinforce network effects and raise barriers to entry for smaller or newer issuers.

More trading pairs can also improve price discovery, reduce bid-ask spreads and support greater liquidity. Greater liquidity attracts more investors, whose participation further deepens the market. This can leave smaller tokens at a continuing disadvantage.

Overall, the market concentration and the dominance of Paxos's and Tether's gold tokens are driven more by brand recognition, market structure and investor behaviour rather than by differences in the quality of the underlying physical backing.

The gold token market is likely to expand rapidly as traditional financial institutions, including banks and asset managers, enter this space.

6. Preconditions for Mass Adoption

The widespread adoption of tokenised assets, including tokenised gold, depends on several interconnected regulatory, technological, financial and educational factors. Addressing these prerequisites is essential to build investor confidence and demand.

Regulatory Framework

A clear and comprehensive regulatory framework is fundamental to the development of tokenised assets. Regulation provides legal certainty for market participants, protects investors and establishes clear obligations for crypto-asset service providers. Because digital markets operate across national borders, harmonised regulatory standards are important to reduce legal fragmentation and facilitate international adoption.

Technological infrastructure

The technological ecosystem supporting tokenised assets must be sufficiently mature and interoperable to enable seamless transactions. Greater interoperability between blockchain networks would enable gold-backed tokens to move efficiently across chains, exchanges, wallets and financial applications and improve liquidity.

Integration with the Financial Ecosystem

The successful adoption of tokenised assets also depends on effective integration between traditional financial infrastructure and blockchain-based systems. Investors should be able to transfer funds seamlessly between bank accounts, exchanges and digital wallets without unnecessary friction. However, many existing financial institutions continue to rely on legacy systems that were not designed to support tokenised assets, making integration costly and technically challenging. Overcoming these limitations is essential for widespread institutional and retail adoption.

Education and Market Awareness

Education is another critical prerequisite for mass adoption. Investors, regulators and financial service providers need a clear understanding of the differences between cryptocurrencies and tokenised real-world assets, as these products exhibit distinct characteristics, risks and regulatory requirements. Improving financial and technological literacy will enable market participants to better assess the risks and benefits of tokenised assets, fostering informed investment decisions and supporting greater confidence in the market.

7. Conclusion

Gold tokenisation represents the next stage in the evolution of gold investment by combining the intrinsic properties of physical gold with the advantages of blockchain technology. Although the market remains small, tokenisation has the potential to improve market efficiency, broaden investor participation, enhance liquidity and transparency, and expand the functionality of gold beyond its traditional roles as a store of value and investment asset. Unlike many other physical assets, gold is particularly well suited to tokenisation because of its homogeneity, established market infrastructure and straightforward custody arrangements. However, the widespread adoption of tokenised gold will depend on the development of clear regulatory frameworks, interoperable technological infrastructure, integration with the traditional financial system and greater market awareness.

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NOTES

¹ For the purposes of this paper, tokenised money is distinguished from tokenised real-world assets (RWAs) by its primary function: tokenised money preserves and transfers value, whereas tokenised RWAs provide exposure to an underlying asset, including its returns and the additional benefits of tokenisation. This is also consistent with regulatory and industry discussions.

² BIS Bulletin 72 [The tokenisation continuum](#)

³ The World Gold Council defines gold ETFs as regulated securities that hold gold in physical form. These include open-ended funds traded on regulated stock exchanges and other regulated products such as closed-end funds and mutual funds. [Gold ETF Commentary and Statistics](#) | [Gold ETF Holdings](#) | [Gold ETF AUM](#) | [Goldhub](#)

⁴ [Cryptocurrency Prices, Charts And Market Capitalizations](#) | [CoinMarketCap](#)

⁵ Image inspired by a LinkedIn post; the creator's name is regrettably not recalled, credit will be added when the creator's name is confirmed.

⁶ These figures represent listed trading pairs (not trading venues/exchanges). Source: Coinmarketcap.com

SOURCES

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[Kinesis Monetary System white paper](#); [Kinesis Gold Minting Programme—version 1.3](#)

[VNX Gold VNXAU whitepapers - whitepaper.io](#)

[ComTech Gold \(CGO\) white paper](#)