

The background of the entire page is a close-up, artistic photograph of molten gold. The liquid is captured in a dynamic, swirling motion, creating intricate, organic patterns of light and shadow. The color is a rich, warm gold, with highlights that catch the light and darker areas that show the depth of the liquid. The overall effect is one of fluidity and preciousness.

# A New Golden Age:

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## Imagining The Future of Digital Gold

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# Foreword and Introduction









# Foreword

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*By David Tait,  
Chief Executive Officer,  
World Gold Council*

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The rapid advancement of technology to meet the changing needs of our global society and economies has the disruptive potential to change the world as we know it. For the global gold industry that potential is vast, offering the opportunity to drive change not just in the sector itself but the opportunity to improve accessibility and transparency, enriching lives and societies around the world.

While change is inevitable, predicting the future is less certain. Yet, it is important that we take stock of known innovations in our field and explore what may be possible for a future with digital gold at its heart.

In partnering with The Future Laboratory, we have sought not to predict that future or to be limited by what we know today but instead to explore what could be possible. Alongside their unique perspective on the trends shaping the future, it incorporates the perspectives of business and academic leaders at the cutting edge of innovation and change. Together we ask ‘what if...?’ as we explore future innovations and scenarios to imagine the potential of digital gold.

The World Gold Council does not approach this question from a standing start. We know digitalisation of the gold industry is critical to ensuring that gold continues to be a timeless and trusted asset now and in the future. Our pioneering Gold247 programme aims to harness digital innovation to increase the trust, transparency and utility of gold and ultimately unlock demand for the asset.

The foundation of Gold247 is our Gold Bar Integrity (GBI) programme, an international database of gold bar custody and provenance to provide increased

confidence that gold bars have been responsibly mined, refined and traded. The programme is critical in helping investors know that their gold has been produced and refined within a ‘trusted eco-system’.

Wholesale Digital Gold is the next major step, creating a legally robust and technologically neutral framework for gold ownership and settlement that could enhance how gold is owned, traded, and utilised. This could unlock opportunities for fractional ownership and new use cases for gold payment and collateralisation.

The Standard Gold Unit (SGU)<sup>TM</sup> concept is our latest initiative. It is a global standard of digital gold that uses digital technology to separate the monetary value of gold from the physical asset. It allows gold to be mobilised and used more flexibly in financial and retail markets for a wide range of investments.

We consider these steps to be substantive progress towards the digital transformation of gold and, yet, we know we stand only at the threshold of change and innovation that digitalisation will make possible. My hope is that this report inspires the industry, investors and the innovators beyond it to rethink their perception of gold. It is an established, strategic asset today, but could be recreated into a digital asset for tomorrow.

# Introduction

During a turbulent 2025, the stock of gold has risen both figuratively and literally. The World Gold Council's Mid-Year Outlook for 2025 captures its record-breaking trajectory; gold has risen by 26% in US dollar terms between January and June, while reaching double-digit returns across all major currencies.





AI Imagery by The Future Laboratory

The value of gold as an asset has never been clearer, yet the gold industry finds itself at a fascinating crossroads. The advent of new technologies, including blockchain, decentralised finance (DeFi) and cryptocurrency is having a transformational effect on the financial markets that gold operates in. A new age of easily accessible, yield-bearing digital assets puts traditional assets under the spotlight, potentially disrupting their financial status. But at the same time, these innovations create previously unimaginable opportunities for gold to thrive as the ultimate physical and digital asset. The results could be game-changing for the gold industry, increasing trust in gold markets, and recreating the metal as a fungible and highly liquid digital asset capable of powering the financial markets of the future. 'For the gold industry, simply digitalising current practices isn't enough,' believes Simone Ferriani, Professor of Entrepreneurship and Innovation at Bayes Business School. 'The real breakthrough will come from redefining the boundaries of innovation.'

This gold paper creates a vision of how digitalisation could re-orientate the gold industry in the years ahead. With insight from a dozen leaders and innovators from within the gold industry and across the fields of finance, blockchain and real-world asset (RWA) tokenisation, alongside our experts at The Future Laboratory, we explore the potential future use cases for digital gold.

The report outlines three broad territories that we believe hold exciting potential, each of which includes four 'what if...' scenarios that show what could be possible in future.

## Territory One: Pervasive Digital Gold

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How digitalisation could supercharge the opportunities for institutional and retail investors to benefit from gold's traditional strengths. This includes:

- : **Frictionless Gold:** How increased fungibility and mobility could open the door to instant collateralisation, atomic settlement and seamless interoperability between gold and all other assets and currencies.
- : **Gold-backed Independence:** Looking at how digitalisation could enhance gold's status as a hedge against the volatility of the financial markets during a time of increasing geopolitical separation.
- : **Gold-based Monetary Systems:** Exploring the potential of monetary systems that are backed by gold rather than fiat currency.
- : **Philanthropic Gold:** How the traceability of blockchain-based digital gold ecosystems could make it easier to invest in gold assets proven to be linked to positive environmental and social impact.

## Territory Two: DeFi Gold Rush

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How the advent of tokenised gold in DeFi ecosystems could create digital gold products that promise regular yields, albeit with additional risks added to the investment. This includes:

- : **Tokenised Gold in DeFi:** How tokenisation could create the ability for institutional and retail investors to use tokenised gold for staking, borrowing, or liquidity provision in DeFi.
- : **Regulated On-chain TradFi:** Exploring how regulatory and legislative changes could open the door for traditional finance companies that are already using private blockchains to become more comfortable participating in DeFi protocols, potentially involving tokenised gold.
- : **Tokenised Gold Funds:** Looking at how tokenised gold funds could democratise access to gold investment and open up new opportunities to raise capital from holding physical gold.
- : **Mature DeFi Gold:** Considering a more mature, future DeFi space, where conservative yield-bearing gold options might allow investors to enjoy small yields on their gold assets that come with a lower level of risk.

## Territory Three: The Next Gold Frontier

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How physical, digital and virtual innovations could help embed gold investment, education and media into the heart of future lifestyles and culture. This includes:

- : **Untethered Gold:** Exploring new investment opportunities that could untether the digital value of gold from physical gold items.
- : **The Digital Gold Index:** Considering how digitalisation could be leveraged to increase the demand of gold jewellery and designer objects as sought-after investment pieces.
- : **Phygital Gold NFTs:** Looking at the potential of phygital gold products that offer utility and loyalty benefits in the physical and virtual worlds.
- : **Cultured Gold:** How gold digitalisation could broaden the user base and demand for gold investment via distribution products fronted by popular brands.



Source: Getty Images

Throughout these sections we will highlight the benefits of these potential innovations and scenarios, as well as the challenges that would need to be overcome to make them a reality. In this way we hope this report can provide vision and conversation starters for the stakeholders whose cooperation and influence will be central to the future success of digital gold.

This report is not setting out how the gold market will evolve, but is intended to challenge readers to consider **‘what if...’**.



*Part two*

# Landscape Overview



## Part 2.1: Landscape Overview

The gold market is large, global and thriving. The World Gold Council estimates that physical gold holdings by investors and central banks are worth around \$5.1 trillion, while gold's trading volumes averaged a record \$329bn per day during H1 2025 (source: WGC Goldhub). In this sense, the gold market is more liquid than several major financial markets, including the Dow Jones Industrial Average, while trading volumes are on par with 10-year US Treasuries and exceed the most traded US equities (source: World Gold Council 1 and 2).

Gold has a proven track record of being a high-performing, long-term financial asset. During the past 50 years, the price of gold in US dollars has increased by 8% on an annualised basis – a performance comparable with equities and higher than bonds. During the current period of economic instability, gold has also reinforced its credentials as a safe-haven asset and a great diversifier in mixed portfolios, with 49% of financial advisers agreeing this is a strength (source: State Street). In June 2025 the European Central Bank revealed that gold has now overtaken the euro to become the second-largest global reserve asset after the US dollar (source: The Times).

Gold plays a crucial part in technology and healthcare products, while levels of recycling of gold make it one

of the most circular assets in the world. 'In general, just about every ounce of gold that has ever been mined is still being used. 'It's as close to 100% recycling as you can get,' reveals Randy Smallwood, Chief Executive Officer of Wheaton Precious Metals. 'I think that's something to be proud of as an industry.'

Yet, despite all of this, there are challenges facing the gold industry. The fact that gold is not considered to be a high-quality liquid asset or a financial instrument in many jurisdictions means it doesn't receive the same level of regulatory scrutiny as other investment products.

Managing physical gold custody can also be complex because gold comes in a range of different sizes and purities and a perception prevails among some institutional investors and treasury departments that other assets are simply easier to manage.

And, unlike asset classes such as bonds and property, gold doesn't provide a regular income. This is cited by the majority (54%) of financial advisers, who say the fact that gold doesn't pay coupons or dividends hinders its investment potential (source: State Street and World Gold Council 2023 Gold Perceptions Survey).

Digitalisation of the gold industry creates an opportunity to confront these challenges while reinforcing the traditional strength of gold, potentially transforming it into a fungible, highly liquid modern digital asset.



‘In general, just about every ounce of gold that has ever been mined is still being used. It’s as close to 100% recycling as you can get, I think that’s something to be proud of as an industry.’

*Randy Smallwood, Chief Executive Officer of Wheaton Precious Metals*



## Part 2.2: The Standard Gold Unit

The World Gold Council continues its programme of boundary-pushing digital gold innovation with the patent-pending Standard Gold Unit (SGU) concept, which it views as a potentially game-changing and necessary element of the future rails of the gold industry.

The SGU proposes the creation of a universal unit of exchange for all digital gold that is agnostic of the weight, purity and location of the physical asset. It is designed to create greater interoperability for gold investors, allowing them to buy, sell and redeem their gold in all partnering applications, ecosystems and markets globally, rather than being restricted by the need to operate in closed-loop 'digital island' systems.

A key element of the SGU is the decoupling of the underlying physical gold asset from its monetary value as a digital asset. When physical gold is tokenised in the SGU ecosystem two different digital tokens are created. The first is the attributes record of the purity, weight and location of the physical gold. The second is the value token that denotes the monetary value of the gold in SGUs, where one SGU is the equivalent of, for example, 1g of pure gold. This SGU value token would enable all physical gold of trusted integrity to be tokenised and leveraged for investment purposes, irrespective of its physical attributes and location of the gold. In this way, the World Gold Council believes that the SGU ecosystem will de-couple gold's value from the physical gold for the first time, unlocking a wide range of use cases and opportunities built around the promise of highly fungible and mobile SGU tokens.

The SGU concept gains power and influence as the ecosystem, and the participants within it, grow. If implemented with clearing houses and the right regulatory framework, SGU tokens could be unlocked as pristine financial collateral, accepted across all partnering financial markets, creating global networks of seamless and fungible gold exchange. The SGU ecosystem could also open up the possibility of instant location swaps; the ability to redeem the SGU value of your physical gold in any partnering location in any country and any jurisdiction globally.

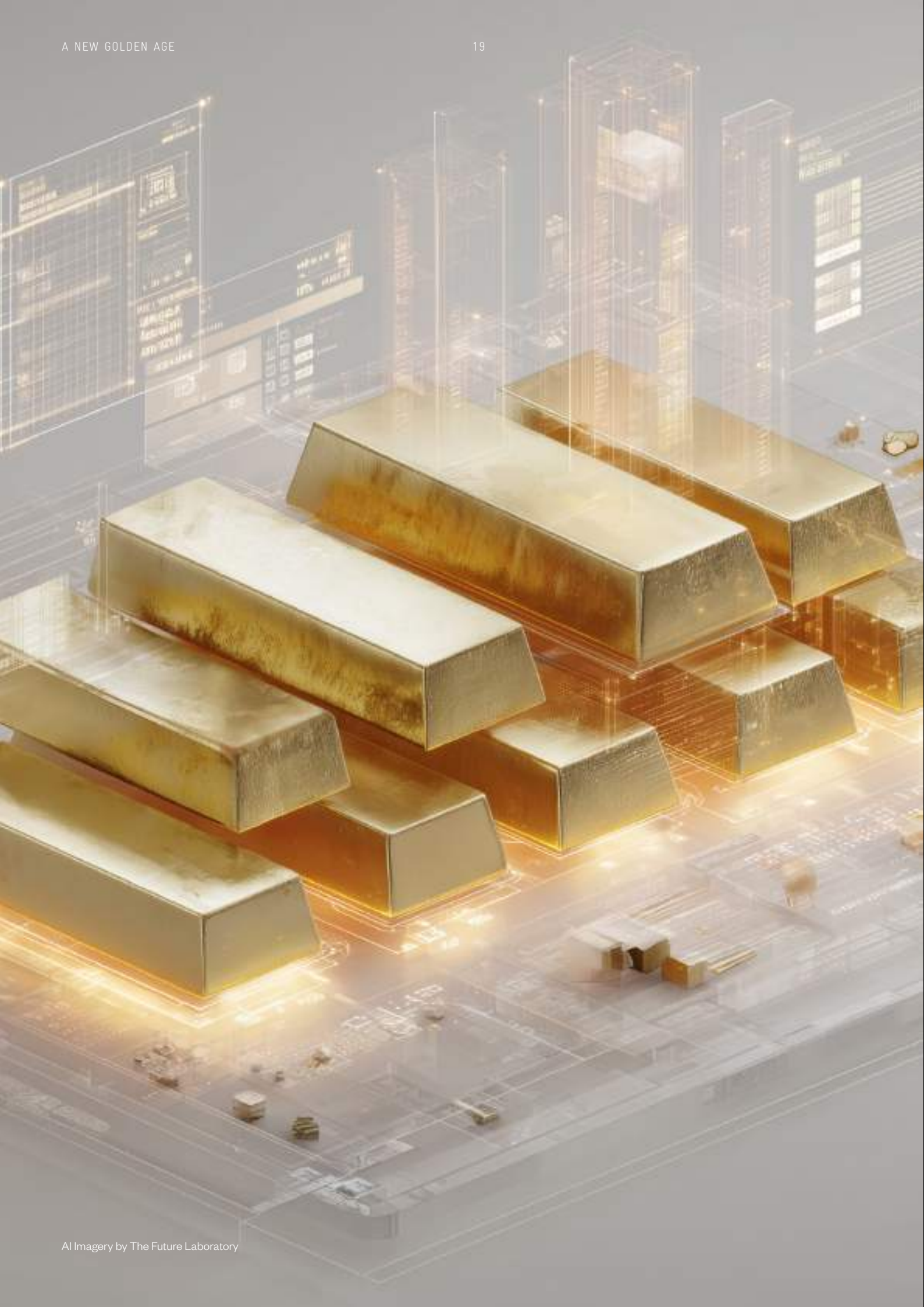
This is why the World Gold Council believes the SGU could represent another essential step in the development of a truly digitalised gold industry.



## *Part three*

# Future Insights

The digitalisation of the gold industry could unlock new and rewarding opportunities for institutional and retail investors. In this section we outline a series of ‘**what if...**’ scenarios and innovations to illustrate what could potentially be possible. A range of regulatory, legislative and technological advances would be needed to lay the framework for these innovations.



## New Legal and Regulatory Frameworks

**Crypto legislation:** A huge wave of regulation and legislation across the world is bringing compliance, structure, rules and long-term clarity to the crypto world. The Markets in Crypto Assets regulation (MiCA) in the EU, the UK Treasury's draft crypto assets legislation and the Monetary Authority of Singapore's (MAS) proposed regulatory framework for Digital Token Service Providers (DSTPs) speak to this. Hong Kong's Legislative Council passed the Stablecoins Bill in May 2025, followed soon after by the landmark GENIUS Act Stablecoin framework in the US, which represents a changing-of-the-guard moment for traditional finance and digital assets. 'The stablecoin bill is going to be very impactful,' says Katherine Kirkpatrick Bos, General Counsel of StarkWare. 'The rise of stablecoins is a little bit of a gateway drug that enables institutions to diversify safely into crypto.'

**New status for gold:** If gold were to be defined as a high-quality liquid asset and recognised as a financial instrument in all jurisdictions around the world, the increased regulatory scrutiny would significantly enhance its standing as an asset.

**Wholesale Digital Gold:** A crucial step in the development of digital gold would be the creation of a robust legal framework for gold ownership and settlement. This is addressed by the World Gold Council and Linklaters' Wholesale Digital Gold concept, which establishes the legal structure for a liquid and efficient digital gold ecosystem that offers direct fractional ownership of specific, identifiable physical gold bars with no credit risk. This could enhance how gold is owned, traded and utilised by unlocking opportunities for fractional ownership and concepts such as gold payment and collateralisation.

## Ecosystem Advances

**Common digital gold infrastructure:** A globally recognised and common infrastructure that manages the physical and digital requirements of gold could be the foundation on which future digital gold products and innovations are built. The World Gold Council's SGU could be a key component of this infrastructure, which innovators could plug into to create new distribution and investment opportunities.

**On-and-off chain transparency:** Advances in off-chain verification techniques could create 'no-gap documentation' between the physical and digital assets. Cryptographic proof of physical custody – essentially a permanent ledger showing any changes in vault inventory – could be matched with the record on the blockchain to offer real-time proof of custody 24/7.



‘The stablecoin bill is going to be very impactful. The rise of stablecoins is a little bit of a gateway drug that enables institutions to diversify safely into crypto.’

*Katherine Kirkpatrick Bos, General Counsel of StarkWare*

# Territory One

## *Pervasive Digital Gold*

Gold's credentials as a safe-haven asset are well established, with 40% of financial advisers telling State Street they recommend gold because they see it as a safe-haven asset (source: State Street). Gold's long-term investment value is also proven. World Gold Council analysis shows that the price of gold in US dollars has increased by 8% on an annualised basis since 1971. While digitalisation may create exciting new use cases for gold that expand beyond these purposes, it will also supercharge the opportunities for institutional and retail investors to benefit from these traditional strengths of physical gold.

Imagine the potential 'what if...' scenario of a modern digital gold ecosystem that brings trust, transparency, accessibility and liquidity to gold ownership and settlement. Asset managers could instantly collateralise their digital gold to secure an investment, while commodities traders could simplify their deals by unlocking atomic settlement or instant location swaps between parties. Family offices could buy gold direct from vault, with the ability to redeem their physical gold and the interoperability to convert it into other tokenised assets, fiat or cryptocurrency at any time.

In parallel, the provenance and traceability of the blockchain-powered ecosystem would give investors greater transparency in trading and the ability to see that their gold was mined responsibly, traded legitimately and is a positive contributor to the global economy.

## Microtrend 1: Frictionless Gold

Significantly increased fungibility and mobility could help market participants unlock heightened levels of accessibility and utility from gold as an asset in the frictionless digital future. Advanced technology systems will remove complexity from the process of managing the underlying physical asset, allowing the decoupled and trusted digital gold to move quickly and seamlessly along modern payment rails.

This could give institutional investors almost instant access to collateralise and lend their gold, while democratising access to collateralisation for retail investors. 'If this can be managed through technology, where I can, at the press of a button, liquidate the whole gold holdings, this is a big game-changer,' says Navin Dsouza, Chief Operating Officer of Digital Assets and Gold at Equiti Group. 'And this would also increase the appetite of people investing in gold because now gold becomes a truly liquid asset. I can invest in gold, pledge it to a bank and take out a loan against it.'

Atomic or near-instantaneous settlements between parties, globally, 24 hours a day, could also revolutionise commodities trading by overcoming the delays associated with traditional financial rails. In the era of frictionless gold, the interoperability between different ecosystems and digital ledgers will also mean digital gold assets could almost instantly be converted into any other fiat or cryptocurrency, and the advent of instant location swaps would mean the underlying physical gold could be redeemed in any jurisdiction globally at any time. 'For sophisticated financial investors, the increased efficiencies that digitalisation could bring, the ease of settlement, the elimination of the need to move physical on occasion to satisfy contracts, the enhanced ability to provide fungibility for collateral and for other asset-to-asset moves, those will be very important,' says Peter Grosskopf, Chairman of Argo Digital Gold. More than a third of US (36%) and UK (38%) retail investors also agree that the ability for '24/7 trading with low fees' would be one the most attractive and valuable potential features of investing in gold tokens, while 34% in the US also believe tokens being fully redeemable for physical gold bars or cash will be crucial to building trust (source: World Gold Council Gold Token Research in the US and UK).

# 34%

of retail investors in the US, believe tokens being fully redeemable for physical gold bars or cash will be crucial to building trust.

*Source: World Gold Council Gold Token Research in the US and UK*





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## Microtrend 2: Gold-backed Independence

Gold's role as a great diversifier and a hedge against the volatility and inflationary dynamics of the financial market could be significantly enhanced by digital innovations that amplify the independence and apolitical nature of gold. 'There's provable data to say that in this new world of geopolitical separation, there needs to be assets that are outside of influence,' says Philipp Pieper, Chief Executive Officer and Co-founder of Swarm Markets. 'Bitcoin is one manifestation of that; obviously gold is a different one.'

Custody innovations could give family offices and other institutional investors the levels of trust and accessibility needed to buy gold direct from vault to diversify their mixed portfolios. In this sense it will allow institutional investors to hold truly independent, allocated gold reserves as a hedge against currency

fluctuations and the volatility of the financial markets. Grosskopf asks: 'Why not just go direct to vault? Especially if it's cheaper, easier, 24/7 and you can pick up your gold for delivery.' This highly liquid, accessible and trusted gold pool could create additional utility for gold as a stabiliser in volatile investment scenarios.

'Gold has a big possibility for asset managers who want to balance the high-risk portfolios,' says Dsouza. 'If I'm running a high-risk product, how do I add balance to it? I can bring an element of gold to it to stabilise the whole portfolio. There is a huge, huge market in that. This is why everybody's trying to get into the space now.'

Gold stablecoins that are not only pegged to the price of gold, but also backed by transparently allocated gold holdings, could also allow investors to benefit from digital gold's enhanced standing as a global reserve currency. 'No other asset can make itself gold. So that's obviously an automatic advantage,' reveals Kirkpatrick Bos.

### Microtrend 3: Gold-based Monetary Systems

Gold-backed monetary systems that reward investors for their participation without leveraging any debt could become powerful foundational elements for future innovations in the lending and mortgage markets, and beyond.

With one in five retail investors in the US (23%) and UK (20%) agreeing that it would be attractive for gold tokens to be usable for payments (source: World Gold Council Gold Token Research in the US and UK), innovators like Kinesis Money show how this could work. It offers monthly yield to gold investors by incentivising them to hold and trade their gold and make gold payments. A percentage of the transaction fees charged for each purchase go into a fee pool that is proportionately redistributed to members based on the amount of gold they hold. In June 2025, the Kinesis holder's yield was paying at an annual rate of 14.77%.

Kinesis Chief Commercial Officer Jai Bifulco sees this as a proof of concept for 'a yield-bearing, blockchain-based system that doesn't leverage any debt, that is self-sustaining'. The stable asset and the yield component of a gold-backed monetary system like this could create a powerful mechanism for innovative new financial products to tap into. Opportunities like this could invite outsider innovators into the gold industry. 'Outsiders often show a greater willingness to experiment with emerging technologies,' reveals Ferriani. 'One of the key insights from my research is that outsider-driven innovation tends to flourish at inflection points – those rare, high-stakes moments when the status quo is disrupted and organisations become more open to new ideas, new actors and new ways of thinking.'

One in five retail investors in the US agree that it would be attractive for gold tokens to be usable for payments.

*Source: World Gold Council Gold Token Research in the US and UK*

## Microtrend 4: Philanthropic Gold

The transparency and traceability of the blockchain-based digital gold ecosystem will make it easier for funds to invest in gold assets that are directly linked to sustainable and ethical practices and social and economic development. ‘The provenance of gold becomes incredibly important,’ says Robin Lee, former Chief Executive Officer and Co-founder of HelloGold. ‘To be able to trace ‘is this gold good gold or bad gold?’ I think becomes very powerful.’

The attributes record linked to each gold token would become immutable proof of the social impact of each piece of gold, helping investors to meet the expectations of their customers and the sustainability targets of their funds.

‘You can trace the value of gold production all the way back to the percentage that contributed to local taxes, infrastructure and essential services, including construction of new hospitals and schools as well as access to clean water and reliable power in these communities,’ reveals Smallwood. ‘It’s a clear demonstration of how responsible mining delivers measurable returns to communities and governments alike.’



AI Imagery by The Future Laboratory



# Golden Insights:

## From what if to when

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*Key building blocks for the future of Pervasive Digital Gold will include:*

- : The creation of a blockchain-based modern payment rails system for gold that injects transparency, trust and seamlessness into gold trading.
- : A universally trusted mechanism to manage the custody and redemption of the underlying physical gold asset.
- : A universally accepted value of exchange for gold, such as the SGU.
- : A regulatory framework for digital gold settlement that includes setting the legal precedent for a gold token holder owning a physical gold bar.
- : Partnership and cooperation between different distributed ledger and blockchain ecosystems to enable interoperability between gold tokens and other fiat and crypto currencies.

# Territory Two

## *DeFi Gold Rush*

While gold has a long-term proven track record of increasing in value, and thus producing returns over time, one of the drawbacks cited by institutional and retail investors is that it doesn't, traditionally, produce a regular income. Indeed, more than half (54%) of financial advisers told the World Gold Council that the fact that gold does not pay coupons or dividends is a barrier to investment.

Digitalisation and the advent of tokenised gold in DeFi ecosystems could create opportunities to flip this paradigm and create digital gold products that promise regular yields. Indeed, two in five UK (41%) and US (40%) retail investors agreed that the ability to earn interest on a gold token would make the investment more attractive or valuable (source: World Gold Council Gold Token Research in the US and UK). But, of course, as Melissa Song, Chief Executive Officer of Bity, points out: 'Very importantly, investors need to understand when it comes to yield generating, there's no free money. When you have a yield, you'll have a certain risk. So, it's about managing the risk.'

If the potential 'what if...' scenario posed by the DeFi Gold Rush is realised, investors could be able to hold yield-bearing gold that matches their personal risk profile as part of their mixed portfolios. Financial advisors and asset managers may also be able to recommend and benefit from transparent gold-backed products that pay a regular coupon, while traditional financial (TradFi) institutions could have the opportunity to create yield via crypto protocols like staking and liquidity provision. The potential to invest in fractionalised gold tokens in DeFi gold funds could also unlock greater accessibility to gold for retail investors around the world.



Source: Getty Images

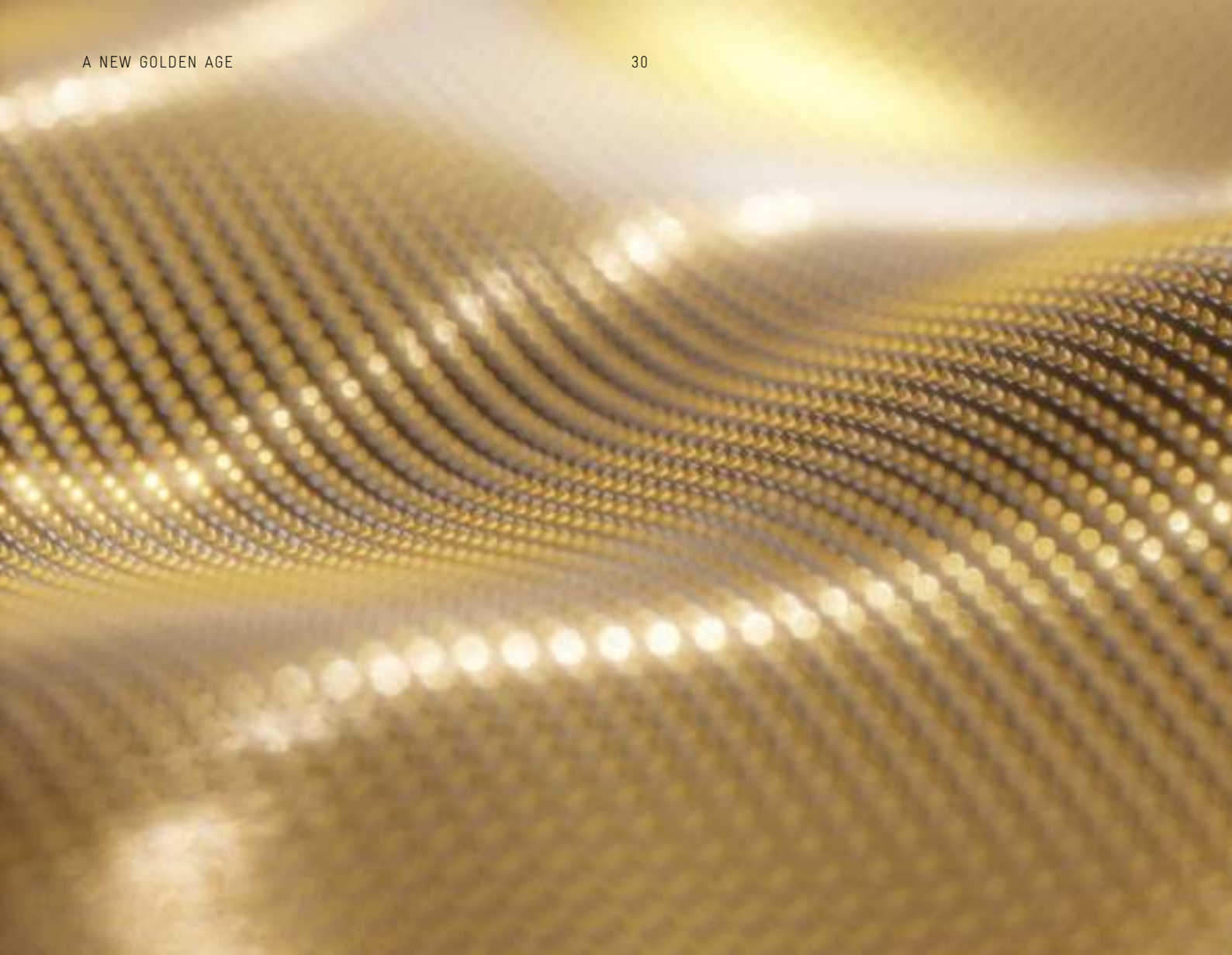
## Microtrend 1: Tokenised Gold in DeFi

Tokenised gold opens up a wealth of gold-based opportunities within DeFi that cuts out the traditional middleman. These are powered by smart contracts, which offer full transparency of the conditions of the product and the risk/reward, as well as full automation of processes. ‘You can put your gold-backed non-fungible token (NFT) into the smart contract and it will help you get a fractional token,’ says Pieper. ‘So, it’s sort of like a smart contract-based Fort Knox, that if you desire to actually do something more in DeFi, you can go there and put your NFT into the smart contract.’

One opportunity is in staking, where the token holder earns a yield for keeping their tokens in a network, thus helping it to run smoothly. Gold token holders could also become liquidity providers by locking their tokens into DeFi lending pools. These are again powered by smart contracts, which transparently lay out the terms of the lending protocol. ‘You pair your tokens with other tokens, so you are a liquidity provider and you earn a transaction fee. This is how a lot of people are using DeFi,’ says Song. People and institutions could also borrow against their tokenised gold in DeFi, using it as collateral to re-invest elsewhere or to hedge against the change in value of the asset.

‘People can already play around with DeFi and are doing staking, lending and borrowing,’ adds Song. ‘The big market is how we can not only have the crypto people buying gold tokens, but also convince the traditional investors to bring their gold onto the blockchain and then start to generate the yield.’





Source: Getty Images

## Microtrend 2: Regulated On-chain TradFi

Institutional investors are starting to invest in digital liquidity funds on private blockchains, like BlackRock's tokenised money market fund, BUIDL. This pays participants a yield in BUIDL's native token every month by investing all assets in cash, US T-bills and repurchase agreements. Theoretically, a gold-backed token could be the price of entry to a fund like this, providing a yield for the investment of the gold token, or gold could be one of the underlying assets the fund invests in. Alternatively, a fund of highly liquid and trusted gold could be created with strong collateralisation and lending capabilities for institutional and retail investors.

The creation of globally recognised legislation and regulation of the DeFi and crypto markets could be the tipping point for TradFi institutions delving into DeFi protocols. 'Larger TradFi entities, that's 'traditional' financial services, need to be particularly careful with respect to taking on regulatory risk because it's not just regulatory risk

for the digital business, it's also regulatory risk for all of their business,' reveals Kirkpatrick Bos. 'You have a whole suite of institutional investors, public companies, regulated entities, that have been hesitant to fully engage with this space, given lack of regulatory clarity. Once you have legislation, that will be the last barrier removed.' And there is already demand from retail investors for traditional financial companies operating in this space. Two in five (40%) retail investors in the UK say that if they were investing in gold tokens they would want to do it via a traditional bank (source: World Gold Council Gold Token Research in the US and UK).

## Microtrend 3: Tokenised Gold Funds

The tokenisation of a fund of digital gold could help democratise access to gold investments, building on the growth in demand for RWA tokenisation products.

Pioneering real estate tokenisation projects on regulated blockchains in Tokyo and Dubai demonstrate how this could work. These initiatives



give global investors the opportunity to buy fractional shares in real estate developments in those cities, with investors benefitting from regular yield payments based on their share of rent. The tokenisation also gives developers access to global capital markets.

Gold could be tokenised in the same way in DeFi, opening up opportunities for incremental or fractional investment, while also providing large gold investors a way to raise additional capital. ‘You can make gold affordable by fractionalising it,’ says Lee. ‘I think fractionalisation of gold will happen because there will be fractionalisation of securities. So, instead of buying one share, you can buy a fraction of a share.’

## Microtrend 4: Mature DeFi Gold

Yield-bearing digital assets are one of the promises of the crypto market. The tokenisation of gold opens up the possibility of gold becoming a yield-bearing digital asset in DeFi, via staking or liquidity provision. This could introduce both new utility and new audiences to gold. ‘When you introduce these capabilities, then people who have not been buying gold before are

becoming interested, because they’re actually looking for a higher return,’ says Pieper.

While it is theoretically possible to create yield-bearing DeFi protocols with high returns that involve the staking of tokenised gold, the risks would also be very high, completely changing the risk-adjusted return of gold as an asset. As the DeFi space matures and the user-base expands beyond crypto-natives, more conservative yield-bearing protocols could allow investors to enjoy stable yields on their staked tokenised gold assets, which come with an acceptable level of risk. ‘I would say the most interest, so far, comes from traditional physical gold investors,’ says Song. ‘They all face this challenge: my gold is sitting there doing nothing. Gold investors tell me that if we can give them a very conservative, manageable risk, an understandable risk, and a yearly return around 2–3%, they are already happy.’

‘But, very importantly, investors need to understand when it comes to yield generating, there’s no free money. When you have a yield, you’ll have a certain risk. So, it’s about managing the risk,’ she explains.





# Golden Insights:

## From what if to when

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- : The creation of a globally accepted, modern, blockchain-based payment rails system for gold that interoperably connects with other distributed ledgers would be essential for gold investment in DeFi to become mainstream.
- : The top reason why retail investors haven't invested in gold tokens to date is that they were unaware of the opportunity, selected by 38% in the US and 34% in the UK (source: World Gold Council Gold Token Research in the US and UK). While many use cases for digital gold in DeFi are theoretically possible, and even already being used by early movers in the space, trust and acceptance levels of DeFi infrastructures need to grow before there is mass adoption among institutional and retail investors. Regulation and legislation will be a crucial part of that.
- : The transparency provided by blockchain-backed DeFi systems will be important to generating trust, but the increased visibility raises some interesting questions for institutional investors, who may have competition-orientated privacy concerns. Once these challenges have been worked through, DeFi could provide fertile ground for institutional product innovation.
- : Smart contracts could be used to create a wide range of financial products in DeFi, accessible to gold token holders, with a broad range of risk profiles. These opportunities will be refined as the DeFi space matures and adoption grows.
- : The concept of yield-bearing gold involves a change in the risk-adjusted return of gold as an asset, which would require a step change in thinking for traditional gold investors.



# Territory Three

## *The Next Gold Frontier*

Our final 'what if...' scenario imagines how digitalisation could spark the dawn of The Next Gold Frontier, where digital, physical and even virtual innovations may help to embed gold investment, education and media into the heart of modern lifestyle and culture.

Underpinned by a highly efficient and trusted common digital gold infrastructure, innovative gold distribution products fronted by popular brands could normalise gold investment as an everyday part of consumers' digital lives, making gold trading as easy as booking an Uber.

Gold ownership could also be linked to benefits or features in virtual gaming and metaverse spaces, and the ability to untether the digital value of a gold item from the physical asset could create new opportunities for investors to collateralise or derive income from the physical gold collectables they hold.

As the Great Wealth Transfer promises to change the age profile of the global investor pool, one of the biggest opportunities of the digital gold market could be the ability to create specific gold investment products that are designed and marketed to different cohorts based on their life stage, interests and goals. This could precipitate a broadening of the user base and demand for gold.

## Microtrend 1: Untethered Gold

Blockchain technology could provide new vehicles for institutional and retail investors to unlock value from their gold collectables and jewellery by untethering the physical items from their potential as a digital asset.

Innovations in the art world create a blueprint for how this could work in the gold industry. Online art platform Masterworks operates by purchasing works from well-known artists before dividing them into incremental shares, which it sells to art lovers online. In this way, while Masterworks retains the physical artworks, it gains value from the digital asset. 'Contemporary art has outpaced the S&P for nearly the past 30 years overall, but there has been no way to invest in it,' says Scott Lynn, founder of Masterworks, which was the biggest spender on artworks in the world in 2021 (source: [Axios](#)).

A framework like this could create a way for gold jewellery owners to derive income from their pieces, while still physically retaining them. And the ability to make incremental investments could be a gateway for attracting younger investors to gold. More than two-thirds (67%) of US Gen Z investors say that the ability to start investing with small amounts was a major factor in their decision to invest (source: [CFA Institute](#)). And, more than a third of UK (38%) and US (34%) retail investors agreed that the ability to hold small or fractional amounts of gold would be an attractive feature of investing in gold tokens (source: World Gold Council Gold Token Research in the US and UK).'



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## Microtrend 2: The Digital Gold Index

While many potential digital gold innovations focus on unlocking the potential of the digital asset by unshackling it from the physical element, it is also important to consider how the rise of physical luxury lifestyle items as investment pieces could impact the demand for desirable gold items.

In 2020, Art Market Research (AMR) launched the Luxury Handbag Index to highlight how designer bags from the likes of Birkin, Chanel and Louis Vuitton were outperforming traditional investment vehicles. This reflects a shift from pure investment in financial products towards tangible and desirable items, such as jewellery, watches and wine.

With 94% of wealthy young Americans saying they are interested in investing in rare collectable items, according to Bank of America, a Gold Index tracking the most desirable and valuable gold jewellery and designer objects could help drive that market. And the potential to untether these rare gold physical items to put them to work in the digital world could prove an additional incentive.

# 94%

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of wealthy young Americans saying they are interested in investing in rare collectable items, according to Bank of America.



### **Microtrend 3: Phygital Gold NFTs**

Another potential gold investment vehicle that plays with the digital and physical properties of a gold asset is limited-edition phygital gold NFT collectables that have functional uses and values in both the physical and virtual worlds. Ownership could include virtual and real-world loyalty benefits, such as access to VIP clubs, events, locations or products only open to NFT holders.

On the other hand, SwissGold Crypto AG's gold-backed NFTs come with a metaverse-compatible 3D representation that holders can use to display their gold in virtual worlds. 'I do see there's a potential here,' says Song. 'We even thought about partnering with top artists to make a gold bar that was blended with cool digital art. It was very interesting, but at the time the demand was not that huge.'

Core reasons why phygital NFTs haven't realised their potential to date include the lack of adoption of digital art and the lack of regulation in NFT marketplaces. But in the longer term, with new regulatory frameworks stabilising crypto



## Microtrend 4: Cultured Gold

A significant opportunity for gold in the digital era could be the use of education and content to make gold more visible, understandable and culturally relevant to the day-to-day lives of younger consumers. 'Gold needs to be modernised in terms of how people access and perceive it. We need to make it more relevant, more accessible to the younger generation,' says Song.

Many of the experts we spoke to for this report suggested that one way to really break through to the masses will be through using recognisable and respected brands or pre-existing super apps as the conduit through which retail investors access digital gold. This could involve building a branded layer on top of a common digital gold infrastructure that could inherently add new levels of trust to gold investment. Dsouza reveals: 'If I'm buying it on Revolut, I trust Revolut. Or if I am buying it on Apple, I trust Apple. You don't have to go and see where Apple is holding the gold.'

This branded layer on top of a common digital infrastructure could inspire a raft of culturally relevant gold product innovation, with each output designed and marketed to different cohorts based on their life stage, interests, saving goals or financial needs. 'It's broadening the user base, it's broadening the demand for gold,' says Grosskopf. 'The younger generation, they just want it on their phone. As soon as they can just buy 24/7, and they can trade it around, they can move money, whatever they want to do, I think it'll be a huge hit.'



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# Golden Insights:

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## From what if to when

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- : A new generation of culturally resonant gold content may be needed to really break through to young investors.
- : The concept of having a branded distribution layer for digital gold will first require the creation of a common digital gold infrastructure that distributors and innovators can plug into.
- : This layered digital gold industry could also unlock the potential of distinct gold products tailored to different demographics featuring different verbal and design language.
- : A globally accepted and seamless underlying framework that manages the untethering of the digital and physical elements of gold will be essential to unlocking the potential of gold in physical, digital and virtual guises.
- : The success of phygital gold NFTs could be reliant on the increased adoption of digital and metaverse art and the creation of robust regulatory frameworks for NFT marketplaces.

## Part four

# Drivers of Change and Nascent Innovations

The building blocks for the potential **‘what if...’** scenarios described in part three are already being put into place. This section highlights the key external forces and nascent gold industry innovations that are happening around the world, which will play a crucial role in shaping the opportunities of the future.





In the US alone, \$105 trillion will pass down to younger generations in the next 20 years.

*Source: Cerulli Associates*



The Handcrafted 1969 Golden Bag by Rabanne and Arthus Bertrand

## Part 4.1: Drivers of change

### *External factors affecting the gold industry*

The digitalisation of the gold industry is not taking place in a vacuum. The opportunities and challenges of the coming years will be shaped by the convergence of a range of significant and varied external macro factors.

These key drivers will influence perceptions of, and the demand for, gold, as well as what is fundamentally possible for gold as a digital asset. They will also inform the evolving and emerging expectations and behaviour of institutional and retail investors. Understanding the trajectory of change and implications of these key drivers will allow us to better anticipate the possibilities of digitalisation and fully grasp the potential for gold in the digital era. These key drivers of change are:

- : **Technological advances:** Bleeding-edge technology innovation looks likely to unlock the levels of speed, trust and security that digital financial infrastructures will require in the future. While the transparency and seamlessness provided by blockchain technology are part of the promise of digital gold, AI-powered verification and quantum-safe technology will play a crucial role in maintaining the integrity of networks. In parallel, the ubiquity of smartphones and adoption of agentic AI investment tools is changing the very nature of how people invest.
- : **Shifting demographics:** The impending Great Wealth Transfer will create a seismic shift in the behaviour and expectations of the global investor pool. In the US alone, \$105 trillion will pass down to younger generations in the next 20 years (source: [Cerulli Associates](#)). These informed, tech-savvy, young investors are overwhelmingly looking for alternative assets (source: [Bank of America](#)), count crypto as the most popular asset class and use investing apps to manage their money (source: [CFA Institute](#)).
- : **Sustainability and responsibility:** The increasing demand for investment products that are sustainable and responsible will create opportunities for assets that can prove their positive social, environmental and economic impact in the age of blockchain-powered full transparency. According to a survey of Barclays Private Bank's ultra-high-net-worth (UHNW) customers, around one-fifth said they allocate 80–100% of their portfolio to sustainable investments, with 37% saying they expect to do this by 2028 (source: [Barclays Private Bank](#)).
- : **On-chain TradFi evolutions:** Increased legislation and regulation, and the maturation of DeFi and crypto are making traditional crypto mechanisms more acceptable and accessible to TradFi institutions. The passage of the GENIUS Act in the US, in particular, is a milestone for cryptocurrencies' mainstream adoption. Another key element of this is RWA tokenisation, which makes traditional assets, including bonds, commodities, real estate and potentially gold, tradeable on-chain. The market for tokenised RWAs is expected to explode from an estimated \$24bn in 2025 to \$18.9 trillion by 2033 (source: [Ripple and BCG](#)).
- : **Political and economic instability:** In an era of political separation and economic instability, there is a demand for assets that are independent from political influence. In this landscape, gold's credentials as a safe-haven asset and a long-term diversifier could become ever more important as an alternative to fiat currency-backed investments.

## Part 4.2: Nascent digital gold innovations

### *A brief overview of the current innovation themes in gold digitalisation*

Digital gold innovation is happening in pockets around the world as traditional gold stakeholders and experts in blockchain and crypto focus on building the infrastructure that could power the digital gold industry. The innovations are taking place across three core areas: advances that add security and accessibility to digital ecosystems; innovations in different formats of digital gold assets; and incremental gold savings and payment schemes that explore the future of gold as a form of exchange.

#### Gold-tech Innovation

- : **Gold on the blockchain:** The World Gold Council and LBMA GBI programme highlights the potential of blockchain technology to revolutionise gold trading. A digital twin is made of each gold bar with full transparency of production, including proof of purity and supply chain transparency and responsibility production credentials.
- : **Quantum-enhanced safety:** HSBC is trialling the potential of quantum technology to add more layers of trust and safety into digital gold transactions. It used post-quantum cryptography (PQC) to move its own Hong Kong-based gold tokens onto the Ethereum blockchain and convert them into the native ERC-20 tokens.

#### Gold as a Digital Asset

- : **Gold-pegged stablecoins:** The value of the market for gold-pegged stablecoins, crypto tokens like Tether's XAUT and Paxos' PAXG, has risen with the gold price in recent years. The market capitalisation of gold-backed tokens reached a record \$1.79bn in August 2025 (source: [The Block](#)).

- : **Tokenised gold:** DeFi smart contracts are being created that turn gold or gold NFTs into tokenised gold that can be used in the DeFi space. This opens up a wealth of gold investment opportunities within DeFi, including collateralisation, lending and crypto protocols like staking.
- : **Gold NFTs:** While fungible tokens offer great utility and flexibility in DeFi spaces, NFTs' non-fungible nature makes them a strong solution as a unique one-to-one twin of allocated physical gold.

# \$1.79bn

The market capitalisation of gold-backed tokens reached a record \$1.79bn in August 2025.

Source: *The Block*

#### Incremental Gold Savings and Payments

- : **Incremental gold investment:** Incremental gold investment schemes have become a popular way for people to invest in gold, particularly in India. Paytm, for example, offers Systematic Investment Plans (SIPs), where users commit to investing a small amount every week or month, which helps them to build up their gold reserves in the long term.
- : **Gold payment:** Innovators like US-based Glint and Kinesis Money in Australia are exploring gold's viability as a form of exchange for retail goods that can be spent in-store and online. Both companies allow users to buy physical gold, which they manage the custody of, and invite investors to spend incremental amounts of their allocation using physical credit cards and PayPal-style online payment tools.





*Part five*

# Conclusion

Digitalisation holds great potential for the future of gold as a digital asset, creating transformational opportunities for the use of gold in financial markets and in the lives of retail investors. At the heart of the opportunity are two divergent directions for gold, both of which could be realised simultaneously.

On the one hand, robust and efficient digital gold ecosystems could supercharge the ability of institutional and retail investors to leverage the traditional strengths of gold; its safe-haven status and long-term store of value. Digitalisation could unlock the ability to buy gold direct from a vault, instantly collateralise gold to secure investments and enable atomic settlement or instant location swaps, with the interoperability to seamlessly move between gold and any other digital asset.

In parallel to this, digitalisation could also offer the potential to re-invent gold as a digital asset,

enhancing it with the ability to produce regular yields for holders in exchange for the inherent risk this introduces. Crypto mechanisms in the DeFi space could open up the ability for gold investors to earn a passive income from the gold they hold. While this will change the risk-adjusted return of gold as an asset, as the DeFi space matures, gold investment products could emerge that offer an acceptable level of risk for investors, allowing them to add yield-bearing gold to their mixed portfolios, or to invest in gold-backed products that pay a regular coupon.

The digitalisation of the gold industry could also be the catalyst to broaden the user base and demand for gold. It could enable innovative gold distribution products fronted by popular brands, new investment opportunities that untether the digital value of gold from physical gold items, and phygital gold products that offer utility in the physical and virtual worlds.

While all of these potential **‘what if...’** futures could have a dramatic impact on the gold industry, the starting point for any of these innovations and scenarios will be the establishment of a range of common and globally accepted technology protocols, and the creation of robust legislative and regulatory frameworks that govern the ownership and settlement of gold in physical and digital forms. It is only by working together as an industry to create these essential building blocks that we can start to unlock the game-changing possibilities for gold as a modern digital asset.

# Methodology

The future vision for digital gold was created through interviews with our expert panel of interviewees:

## External expert panel:

**Chief executive officer and co-founder, Swarm Markets** : Philipp Pieper

**Chief executive officer, Bity** : Melissa Song

**General counsel, StarkWare** : Katherine Kirkpatrick Bos

**Professor of entrepreneurship and innovation, Bayes Business School** : Professor Simone Ferriani

**Chief executive officer and co-founder, HelloGold** : Robin Lee

**Chief commercial officer, Kinesis Money** : Jai Bifulco

**Chief operating officer of digital assets and gold, equiti group** : Navin Dsouza

**Chief executive officer, wheaton precious metals** : Randy Smallwood

**Chairman, Argo Digital Gold** : Peter Grosskopf

This was supported by expert input from the World Gold Council including:

**Chief executive officer** : David Tait

**Chief strategy officer** : Terry Heymann

**Global head of market structure and innovation** : Mike Oswin

## World Gold Council

We are a membership organisation that champions the role gold plays as a strategic asset, shaping the future of a responsible and accessible gold supply chain. Our team of experts builds understanding of the use case and possibilities of gold through trusted research, analysis, commentary, and insights. We drive industry progress, shaping policy and setting standards for a perpetual and sustainable gold market.

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