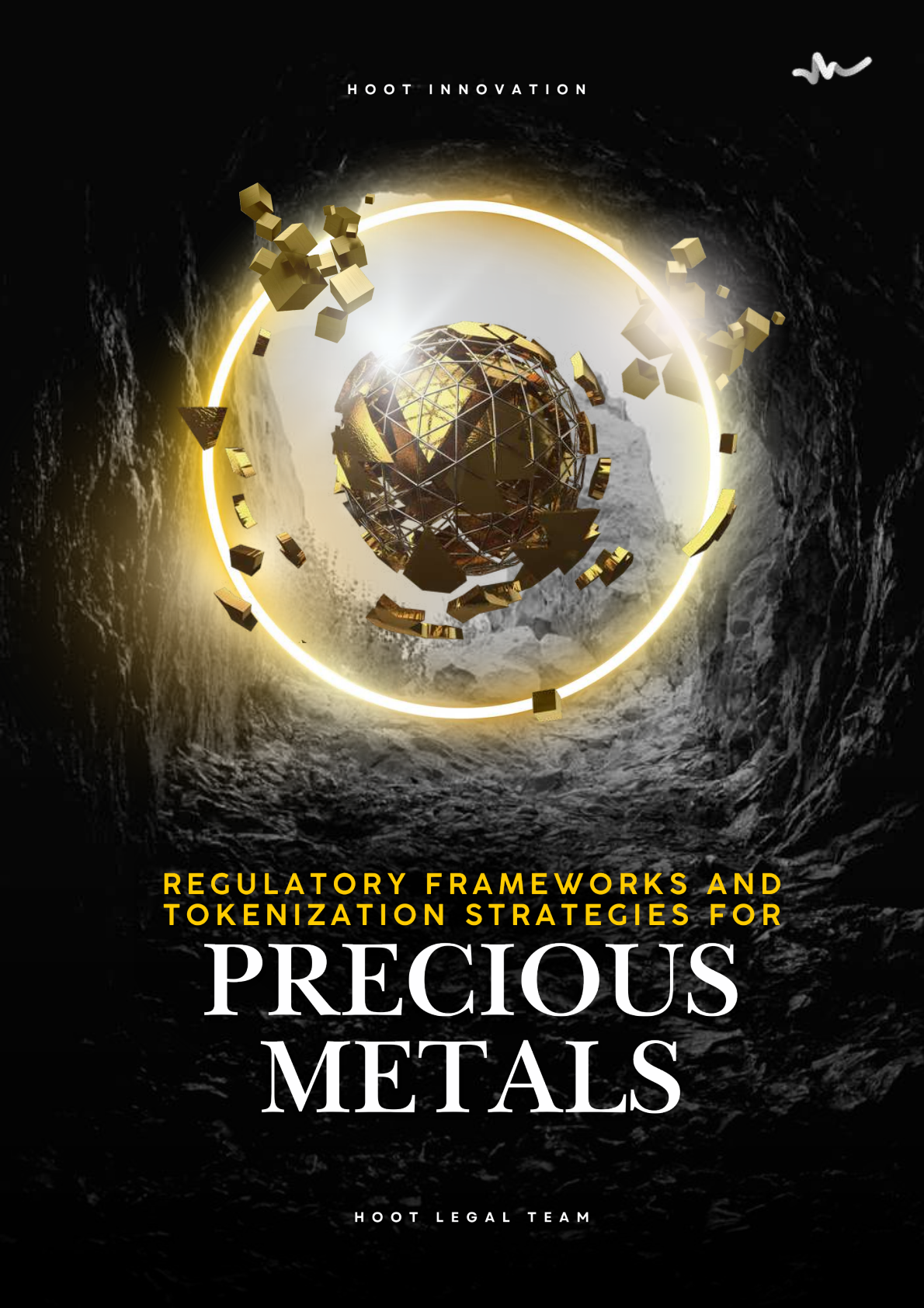
HOOT INNOVATION



REGULATORY FRAMEWORKS AND TOKENIZATION STRATEGIES FOR

PRECIOUS METALS

HOOT LEGAL TEAM

Regulatory Frameworks and Tokenization Strategies for Precious Metals.

By: Hoot Legal Team

Introduction:

Tokenized precious metals – digital tokens backed by physical gold, silver, or other metals – are emerging at the intersection of traditional commodities and blockchain technology. This module provides an in-depth Q&A-style analysis of how six key jurisdictions (the UAE, US, EU, Singapore, Switzerland, and Australia) are approaching the regulation and implementation of gold and silver tokenization. We examine the global regulatory frameworks, technical requirements, and institutional strategies enabling these innovations, and we contrast institutional use cases (e.g. treasury hedging, fund products, gold-backed investment instruments) with retail use cases (e.g. peer-to-peer trading, informal hedging, savings tools). Comparative tables detail licensing regimes, custody and reserve standards, AML/KYC obligations, and token issuance requirements across jurisdictions. We also analyze major case studies – from successful gold-backed tokens like Tether Gold (XAUT), PAX Gold (PAXG), and the Perth Mint Gold Token (PMGT) – to learn from their achievements and pitfalls. Finally, we explore the economic and legal implications of tokenized metals in each region, highlighting recent regulatory developments and persistent legal gray areas. The goal is to equip institutional investors, regulators, legal professionals, crypto-native firms, and informed retail participants with a comprehensive understanding of the evolving landscape for tokenized precious metals.

Regulatory Landscape for Tokenized Gold & Silver by Jurisdiction

Tokenizing physical gold or silver raises complex regulatory considerations. Each jurisdiction has developed its own framework defining how such asset-backed tokens are classified (commodity, security, payment token, etc.) and what rules apply. Below, we detail the regulatory regime in each of the six focus jurisdictions, including any licensing requirements for issuers or platforms, technical or custody mandates, and notable policy statements.

United Arab Emirates (UAE)

The UAE is positioning itself as a global hub for both precious metals trading and digital asset innovation. Across its regulatory landscape – which spans federal regulators and financial free zones – the UAE has introduced frameworks to integrate tokenized commodities like gold into its markets:

- **Regulatory Authorities and Scope:** In the mainland UAE, the Securities and Commodities Authority (SCA) is the chief regulator for crypto-assets, while the Central Bank oversees certain aspects (e.g. stored value and payments). In the Dubai emirate (outside the financial free zones), the new Virtual Asset Regulatory Authority (VARA) created by Dubai Law No. 4 of 2022 now regulates virtual asset activities. The UAE's two financial free zones have

their own regulators: the Abu Dhabi Global Market (ADGM) is overseen by the Financial Services Regulatory Authority (FSRA), and the Dubai International Financial Centre (DIFC) is overseen by the Dubai Financial Services Authority (DFSA). Each of these bodies has defined crypto-assets in their regulations and asserted jurisdiction over token offerings and trading within their domains.

- **Crypto-Asset Classification:** The SCA's crypto asset regulation (SCA Chairman Decision No. 23/RM/2020, as amended by No.11/2021) broadly defines a **"crypto asset"** as an electronic record representing value, rights, or ownership that can be transferred electronically. In early 2025, the SCA went further by issuing draft regulations specifically addressing security tokens and commodity tokens. **Commodity tokens** are defined as digital assets whose value is based on underlying physical commodities like gold or oil, enabling the trading of those commodities on digital platforms with lower costs and risks than traditional methods. **Security tokens** are defined to include tokens representing financial rights or tangible assets (e.g. tokenized equity or bonds). The SCA's move to explicitly recognize "commodity tokens" marks a pivotal step in bridging commodities markets with distributed ledger technology in the UAE.
- **Licensing and Authorizations:** Any entity offering or facilitating trading of tokenized gold in the UAE must navigate a licensing regime that varies by jurisdiction. On the **federal mainland**, SCA regulations mandate that businesses dealing in crypto-assets obtain a license from SCA (or a no-objection if operating under a free zone's authority). The SCA's draft rules for commodity tokens propose that offerings of such tokens be registered or approved by SCA, with the regulator monitoring issuers and trading platforms to ensure compliance and penalize violations. In **Dubai (non-DIFC)**, VARA requires any Virtual Asset Service Provider (VASP) dealing in virtual assets (which includes commodity-backed tokens) to be licensed. VARA's regulations (under Dubai Law 4/2022 and subsequent rulebooks) impose licensing fees and compliance standards for activities such as issuance, exchange, custody, and advisory services involving crypto-assets. For example, an issuer launching a gold-backed token from Dubai must obtain VARA approval and adhere to VARA's rulebooks on issuance and marketing. Within **DIFC**, the DFSA in 2022 introduced a "Crypto Token" regulatory regime. Initially, DFSA allows Investment Tokens (security tokens and derivative tokens) under a regulatory framework, and has proposed expanding to broader crypto tokens. A tokenized gold offering in DIFC might be treated as a commodity token or investment token depending on its features; regardless, the issuer or platform would need DFSA authorization (DFSA has a costly and rigorous licensing process for financial services in the center). In **ADGM**, the FSRA has been a regional pioneer with its comprehensive crypto-asset framework since 2018. Under FSRA's **"Spot Crypto Asset Framework"**, operating a crypto asset business (which includes issuing or trading tokens that are not securities) requires a Financial Services Permission (FSP). ADGM generally views fully asset-backed tokens (with direct redemption rights to the asset) as "crypto assets" (or potentially "Accepted Virtual Assets" if FSRA pre-approves the specific token for use) rather than securities, so long as they do not confer profits or dividends beyond the commodity's inherent value. Thus, a firm in ADGM dealing in a gold token would need an FSP for providing crypto asset services (e.g. operating a crypto exchange or custody), but might avoid the prospectus requirements if the token is not deemed a security. In practice, ADGM entities are indeed engaging in tokenized commodity ventures: for instance, Abu Dhabi-based startups have launched gold-backed tokens under ADGM oversight as "spot" crypto products, benefitting from the clear rules and fintech-friendly approach.
- **Custody and Technical Requirements:** The UAE regulators emphasize robust custody arrangements and technological standards for tokenized assets. The SCA's draft regulations

outline specific technological criteria for using DLT in token issuance and trading, including cybersecurity controls, data protection, and encryption standards. They require ensuring the security and integrity of the distributed ledger and its consensus mechanism, reflecting a regulatory expectation that any platform trading gold tokens must be highly secure and resilient. On the custody front, UAE regulations are developing to ensure tokenized commodities are adequately backed and stored. While the SCA draft rules are not yet law, they signal that issuers of commodity tokens will need to guarantee that the physical gold or silver underlying a token is properly stored and insured, and that token holders have legally enforceable rights to that asset. In practical terms, existing UAE-based gold tokens have voluntarily adopted strong custody practices: for example, the Dubai Multi Commodities Centre (DMCC) – a major commodity trade zone – now facilitates gold tokenization by linking tokens to physical gold bars stored in DMCC-approved vaults, each bar documented by a DMCC Tradeflow warrant (a warehouse receipt) to provide legal title and auditability. Every token represents one gram of a specific 1kg gold bar of 999.9 purity, with unique bar serial numbers and certificates recorded. This model (used by the Comtech Gold token in Dubai) is **Shariah-compliant** and ensures that token holders have a direct allocated interest in identifiable bars, combining blockchain efficiency with traditional vault controls. UAE regulators are supportive of such models – DMCC's executive chairman has lauded tokenization initiatives that turn Dubai from the "City of Gold" into the "City of E-Gold," stressing that trust and transparency (via measures like Tradeflow warrants and Shariah certification) are vital to investor confidence. We can expect forthcoming UAE rules to formalize requirements that gold-backed tokens maintain full 1:1 asset backing in recognized vaults and perhaps even require the use of UAE-based vaulting for locally issued tokens to maintain oversight.

- **AML/KYC and Shariah Considerations:** The UAE has made it clear that Anti-Money Laundering (AML) and Counter-Terrorist Financing rules fully apply to virtual assets, including gold and silver tokens. Since 2021, the UAE has included "Virtual Asset Service Providers" in its AML legislation in line with FATF standards. Any licensed crypto asset business must conduct customer due diligence (KYC) and transaction monitoring. In practice, this means an individual buying tokenized gold through a UAE platform (whether an exchange or issuer's portal) will have to provide identification just as they would for a bank or brokerage account. For example, investors using the **GoldPass** app (Perth Mint's digital gold platform available in UAE and elsewhere) or local gold token exchanges must submit official ID and satisfy KYC checks before acquiring tokens. Additionally, because the Middle East investor base often seeks Shariah-compliant products, many UAE gold token projects obtain Islamic finance certification. Shariah scholars generally approve gold-backed tokens so long as they represent ownership of physical gold (a Ribawi asset) on a fully reserved basis and are free of interest or speculation. The Comtech Gold token and others in the UAE proudly carry Shariah certification, which broadens their acceptance among Islamic investors. From a regulatory perspective, Shariah compliance is not a legal requirement in the UAE secular financial law; however, alignment with Islamic principles can influence market demand and even some regulatory support (as UAE authorities encourage Shariah-compliant fintech innovation).
- **Notable UAE Developments and Initiatives:** The UAE's positive stance has attracted both local startups and international firms to launch gold-backed tokens in the country. For instance, Abu Dhabi-based MidChains exchange and Dubai-based Blockchain Commodities are examples of platforms that have explored listing gold tokens. The DMCC signed partnerships in 2022–2023 with international digital gold platforms (like SafeGold from India) to develop a regional ecosystem for gold-backed certificates and tokens, using Dubai as the base. We also see innovation in the convergence of traditional gold businesses with tokenization: a

UAE company building a new gold refinery announced it will offer tokenized gold and even a gold-backed digital exchange as part of its operations. These efforts align with the UAE's drive to remain a top global gold trading center (an estimated 20–40% of the $11T global gold market passes through Dubai each year) while also embracing blockchain to add transparency and efficiency. The regulatory framework is catching up to these market developments – the SCA's 2025 draft rules on commodity tokens are expected to be finalized soon, cementing legal certainty for gold token issuers and investors. Overall, the UAE's approach can be characterized as **innovation-friendly but increasingly structured**: early projects operated in a relatively permissive environment (with implicit approval and basic AML compliance), whereas new projects will launch under explicit SCA/VARA rulebooks that codify licensing, custody, and disclosure standards.

Q&A on UAE Tokenized Metals – How do UAE regulations address retail vs institutional uses of gold tokens? A: UAE regulators recognize both use cases but implicitly tailor certain rules to each. Institutional uses (like a gold-backed fund or trading platform) are encouraged in free zones like ADGM or DIFC under strict regulatory supervision, whereas broader retail distribution (e.g. a gold token app marketed to the public) will be subject to SCA/VARA rules ensuring consumer protection (e.g. marketing must be factual, tokens must be fully backed). The SCA's draft, for example, requires that token holders have rights analogous to those in traditional markets – meaning even a retail buyer of one gram of gold token should have clear legal ownership and recourse, much as a retail customer of a gold vault would. Simultaneously, Dubai's VARA has issued guidelines on advertising virtual assets to retail users to prevent misleading claims, which would apply to promotions of gold tokens. In summary, the UAE is moving toward a regime where institutions can integrate tokenized gold into their strategies (with proper licensing), and retail customers can confidently buy and trade gold tokens under a protective regulatory umbrella.

United States (US)

In the United States, tokenized precious metals must navigate a complex mosaic of federal and state regulations. Unlike some jurisdictions that have created bespoke regimes for crypto assets, the US tends to apply existing securities, commodities, and financial services laws to tokenized assets on a case-by-case basis. The regulatory treatment of gold and silver tokens in the US hinges on whether they are deemed **commodities, securities, or another instrument**, and which activities (issuance, trading, custody) are being performed.

- **Commodity Classification and CFTC Jurisdiction:** Physical commodities like gold and silver are not, in themselves, regulated by the U.S. Securities and Exchange Commission (SEC); instead, they fall under the commodity category. The **Commodity Futures Trading Commission (CFTC)** has authority over derivatives on commodities (futures, options, swaps), but **spot transactions** in commodities (including spot sales of gold or gold tokens) generally do not require CFTC approval. Therefore, a token that represents ownership of physical gold, deliverable to the holder on demand, can be viewed as a digital analog to a physical gold ownership certificate or warehouse receipt. Such a token would likely be treated as a **commodity** in the same sense that gold bullion is a commodity. Indeed, U.S. courts have found that even purely digital assets like cryptocurrencies can be commodities under the Commodity Exchange Act, which implies gold-backed tokens also fit that broad commodity definition. The practical implication is that the act of issuing or selling a gold-backed token in a fully backed, deliverable format is not a regulated issuance in the way a stock or bond issuance is. However, anti-fraud and anti-manipulation provisions of the commodity laws *do*

apply. The CFTC has enforcement authority if, for example, a gold token issuer commits fraud or if there is market manipulation – similar to how it can prosecute fraud in the cash gold or foreign exchange markets. An illustrative case was the CFTC's action against a digital asset scheme "My Big Coin" in 2018, which had falsely claimed to be gold-backed; a federal court concurred that the token was a "commodity," allowing the CFTC to pursue fraud charges. Thus, while no specific CFTC license is required to sell a tokenized ounce of gold, issuers must ensure honest practices and may want to implement controls to avoid creating a manipulated market.

- **When Could a Gold/Silver Token Be a Security?** The SEC's concern would arise if a tokenized precious metal offering were structured in a way that constitutes an "**investment contract**" or note, thereby falling under U.S. securities laws (the Securities Act of 1933 and Securities Exchange Act of 1934). A straightforward gold token, where a buyer simply purchases a token redeemable for 1 oz of gold stored in a vault, with the price fluctuating purely on gold's market value, does not inherently promise any profit from the efforts of others (beyond gold's own price movement). It closely resembles a warehouse receipt or a prepaid commodity purchase, which are not typically securities. The SEC has not publicly taken action against any gold-backed tokens to date, suggesting that major gold tokens have structured themselves to avoid securities characterization. For example, **Paxos Trust Company's PAX Gold (PAXG)** was carefully designed to give holders direct ownership rights to allocated physical gold and explicitly *not* to represent any share in Paxos's profits or a pooled investment – this helps it avoid the "**Howey Test**" for an investment contract (which requires an expectation of profits derived from others' efforts). Similarly, **Tether Gold (XAUT)** entitles holders to an ounce of gold in a vault and no further economic rights. The SEC has, however, indicated that some asset-backed tokens could be securities if they are structured as notes or investment schemes. For instance, if an issuer pooled investor funds to buy a stockpile of gold and token holders had a share in the pool (rather than a specific allocated amount) and relied on the issuer's efforts for profit (perhaps via gold lending or hedging strategies), the SEC might view that as a collective investment (akin to an Exchange Traded Fund or a managed investment scheme) requiring registration. **Key takeaway:** Most reputable U.S. gold token issuers err on the side of treating their token as a commodity and a claim on physical gold, avoiding any profit/dividend features, to stay outside securities law. Nonetheless, they often seek regulatory blessings elsewhere (e.g. at the state level) to bolster credibility and compliance.
- **State Regulation – The New York Example:** Because the U.S. lacks a federal licensing regime for spot commodity token issuers, state-level regulation steps in, particularly for companies dealing with custody of assets or offering services to retail customers. The prime example is New York State. New York's **Department of Financial Services (NYDFS)** has been very active in overseeing crypto assets through its **BitLicense** regime and trust company charters. In September 2019, NYDFS made headlines by approving Paxos Trust Company's application to offer a gold-backed virtual currency (PAX Gold), the first of its kind regulated in NY. Paxos is a NYDFS-chartered limited purpose trust company, which means it is a regulated financial institution with fiduciary responsibilities. The NYDFS authorization of PAXG came with "required conditions to ensure that potential risks associated with the issuance and offering of PAX Gold…have been adequately addressed," including high standards for **anti-money laundering, anti-fraud, consumer protection, and cybersecurity**. In practice, Paxos must maintain 100% physical gold backing for all PAXG tokens, provide monthly third-party attestation of the gold holdings, implement robust cybersecurity for its token platform, and conduct full KYC/AML on PAXG customers. It also means token holders

have strong legal rights: Paxos holds the gold in custody on a **bankruptcy-remote** basis for the benefit of token holders, and even insures the gold in the vault against loss. These measures give PAXG holders confidence that their investment is protected under law. While only a handful of states (like NY) have such specific regimes, any gold token issuer engaging with U.S. customers must consider **money transmitter laws** in each state. The act of taking money (whether fiat or crypto) from a customer and giving them a token redeemable for gold could be viewed as money transmission or as issuing a form of stored value. Most states require money transmitters to be licensed and to implement AML programs. Paxos, by being a trust company, is exempt from separate money transmitter licenses. Tether Gold, by contrast, is issued by TG Commodities Limited, which chose to incorporate outside the U.S. (in the British Virgin Islands) and thus avoids directly engaging with U.S. regulation (they do not market to U.S. investors). This highlights a divergence: compliant U.S. offerings like PAXG operate under regulatory supervision (New York's in this case), whereas other offerings choose an offshore base to transact in a regulatory grey zone from the U.S. perspective. U.S. institutional investors typically prefer regulated products, so PAXG has seen adoption by U.S.-based crypto platforms and funds, whereas unregulated tokens like XAUT might face restrictions (many U.S. exchanges do not list Tether Gold to avoid legal uncertainty).

- **Custody and Ownership Structure:** A crucial legal aspect in the U.S. is ensuring that token holders are the legal owners of the underlying metal, not unsecured creditors. Projects have taken different approaches. Paxos PAXGuses a trust structure: every token represents an ownership interest in a specific London Good Delivery gold bar held in custody by Paxos's custodian (Brink's vaults in London). Token holders can even look up the serial number, purity, and weight of their allocated gold via Paxos's website by inputting their wallet address. This allocated custody means that even if Paxos were to go bankrupt, the gold is segregated and should return to token holders, not Paxos's estate. Paxos's status as a NYDFS-regulated trust solidifies this arrangement legally. In addition, Paxos insures the gold in transit and in storage, and offers redemption of tokens for physical bars (above a certain minimum, e.g. a full bar of ~400 oz) or for cash equivalent via approved dealers. **Tether Gold (XAUT)** by TG Commodities also claims allocated gold backing (1 XAUT = 1 troy ounce of physical gold). The gold is reportedly stored in vaults in Switzerland under the custody of a reputable vaulting company. However, TG Commodities is not a regulated financial entity, and holders of XAUT rely purely on the contractual terms of service with the issuer for their claims. In fact, an independent assessment noted that "XAUT's issuer, TG Commodities, is not a regulated entity. Holders of XAUT must solely rely on contractual protections, the enforcement of which can only be done through the courts of the British Virgin Islands." This underscores a legal risk: if something were to go wrong (e.g. the gold is misallocated or the issuer defaults), token holders might face challenges enforcing their rights internationally. U.S. regulators prefer structures like Paxos's that clearly define custody and ownership under U.S. law. For any future U.S. offerings of metal tokens, we expect regulators to insist on independent custody, regular audits of reserves, and transparent redemption processes.
- **AML/KYC Compliance:** The U.S. Bank Secrecy Act (BSA) and related regulations, administered by FinCEN, apply to crypto asset activities. FinCEN has classified administrators and exchangers of "convertible virtual currency" as money services businesses (MSBs) since 2013. A gold-backed token that is transferable and can be exchanged for value falls under "convertible virtual currency" in FinCEN's view. Thus, an issuer or exchange dealing in such tokens must register as an MSB with FinCEN and implement AML programs, including KYC verification, recordkeeping, and reporting of suspicious activities. The major U.S.-facing gold tokens all require KYC at the point of purchase or redemption. For example, to directly

purchase or redeem PAXG through Paxos, one must go through Paxos's onboarding (providing photo ID, proof of address, etc.). However, once issued, these tokens can circulate on public blockchains (PAXG and XAUT are ERC-20 tokens on Ethereum). This means they could be transferred peer-to-peer between anonymous wallets. This presents a typical crypto AML conundrum: how to handle downstream transfers. In practice, issuers mitigate this by only allowing redemption (the conversion of token back to gold or cash) for known customers – if a person acquired a token on the secondary market and wants to redeem, they will have to register and complete KYC with the issuer or an authorized dealer at that stage. This discourages bad actors from using the tokens, since holding the token is only useful if you trust someone will accept it or redeem it. U.S. authorities also use financial surveillance tools to monitor for large movements of gold tokens that might indicate sanctions evasion or other crimes, just as they do for cryptocurrencies. Recent enforcement trends (e.g., the Treasury Department sanctioning certain crypto mixing services) signal that even commodity-backed tokens must be attentive to sanctions compliance; tokens cannot be a loophole to move assets for sanctioned parties. Indeed, Tether Gold's smart contract has a built-in blacklist function, and the issuer has blacklisted certain addresses (similar to how Tether handles USDT), indicating that they monitor for illicit activity and will freeze tokens if required by law.

- **Institutional and Retail Use in the US Context:** U.S. institutional investors (hedge funds, family offices, etc.) have shown interest in gold tokens primarily as a means of obtaining gold exposure within the digital asset ecosystem. For example, a fund that already trades cryptocurrencies might prefer to hold a tokenized gold position (like PAXG) on the same crypto exchanges or custodial platforms they use, rather than separate dealing in COMEX futures or physical bullion. The presence of regulated products like PAXG makes this easier. In 2022–2023, PAXG was listed on several U.S.-regulated crypto exchanges and was even integrated into decentralized finance (DeFi) protocols (e.g. as collateral on lending platforms), highlighting that it had gained enough trust to be treated akin to a stablecoin (though pegged to gold). Retail usage in the U.S. remains a niche – retail investors typically access gold via well-known avenues such as gold ETFs (e.g. GLD) or coins and bullion. But crypto-savvy retail users have used gold tokens as a way to diversify their crypto portfolio with a gold element, or to move between gold and crypto quickly. For instance, one could trade Bitcoin for PAX Gold on a crypto exchange in seconds, effectively rotating from a volatile asset to a stable gold position without exiting to fiat. In 2023's market volatility, some crypto holders did exactly that, using PAXG as a safe haven within crypto markets. Regulators like the NYDFS have noted this innovative use but also caution that consumer protections for token holders should mirror those for traditional gold investments. It's worth noting that gold tokens in the U.S. currently occupy a **legal gray zone** in certain respects: they are not explicitly mentioned in statutes or SEC rules. However, by adhering to the spirit of existing laws (full reserve backing, truthful disclosure, KYC/AML, etc.), issuers have managed to operate these products without regulatory conflict. Future legislation or regulatory guidance might formalize their status. For example, Congress has considered bills for stablecoins – one could envision a similar framework for "asset-referenced tokens" (akin to the EU's approach under MiCA) that would cover tokens like those backed by gold.

Q&A on U.S. Compliance – What licenses would an entity need to launch a gold-backed token in the U.S.? A: There's no one-size-fits-all license federally. A prudent path is to obtain a **state trust company charter** or **money transmitter licenses** in relevant states. For instance, one could become a Trust Company in a crypto-friendly state (like Wyoming or New York)

which provides authority to custody assets and issue tokens backed by those assets. Alternatively, registering as an MSB and obtaining money transmitter licenses in e.g. 30+ states would be needed to lawfully take customer money and convert it into tokens (similar to what a stablecoin issuer might do). Additionally, compliance with **commodities laws** (ensuring no manipulation and possibly registering with the CFTC as a commodity pool operator if pooling assets, though a fully allocated token likely avoids that). So while no specific "token issuer" license exists, effectively a combination of **money services and commodity laws** cover the activity. Engaging experienced counsel and even seeking a no-action letter or regulatory approval (as Paxos did with NYDFS) would be wise to preempt any classification issues. As a final layer, any platform **trading** the token might need to be registered – for example, if a U.S. company set up an exchange for gold tokens and other commodities, it might need to register as a broker-dealer or an Alternative Trading System (ATS) if the tokens were deemed securities, or as a futures commission merchant (FCM) if they offered leveraged trading. In summary, the regulatory strategy in the U.S. is about mapping the token's characteristics to existing law and ensuring all the boxes (AML, consumer protection, financial licensing) are checked.

European Union (EU)

The European Union is in the process of implementing a comprehensive regulatory framework for crypto-assets through the **Markets in Crypto-Assets Regulation (MiCA)**, which was finalized in 2023. MiCA, once fully effective (by 2024–2025), will directly regulate the issuance and trading of crypto-assets, including asset-backed tokens like those referencing precious metals, across all EU member states. This marks a shift from the previous patchwork approach where individual countries applied their own securities and commodities laws to tokenized assets.

- **Pre-MiCA Landscape:** Historically, EU countries varied in their treatment of gold tokens. In some jurisdictions like **Germany**, the financial regulator (BaFin) has tended to classify crypto tokens as either units of account or financial instruments, which could trigger licensing requirements for trading platforms. Germany did not treat a fully backed gold token as e-money (since it's not denominated in fiat) nor necessarily as a security if it solely represents ownership of gold. However, any custodial service or exchange dealing with such a token would likely require licensing under the German Banking Act or Investment Act. **Estonia** and **Luxembourg** were known for being more accommodative early on, often allowing token offerings with simple registration under their general financial laws as long as AML requirements were met. Most EU states subjected crypto businesses to AML directives (AMLD5 required crypto exchanges and wallet providers to register/license for AML purposes). So an issuer of a gold token in (say) **France** or **Italy** would at minimum register as a virtual asset service provider (VASP) for AML supervision, even if the token itself was not regulated as a security. Some countries, like **Malta** with its Virtual Financial Assets framework, explicitly brought certain asset-backed tokens under regulation, requiring whitepapers and approvals.
- **MiCA's Classifications – Asset-Referenced Tokens (ARTs):** MiCA introduces a category called "**asset-referenced tokens**" (ART) which is highly relevant for gold and silver tokens. By definition, an ART is a type of crypto-asset that purports to maintain a stable value by referencing one or several assets (excluding a single fiat currency). This includes tokens referencing commodities. Even though gold's price can fluctuate, a token like PAXG or Tether Gold would be considered an ART because its value is tied to the price of gold (a physical asset) rather than determined independently. Under MiCA (Regulation (EU) 2023/1114), issuers of ARTs have to seek **authorization** from a competent authority in

the EU and publish a detailed **crypto-asset white paper** approved by regulators before offering the token to the public in the EU. They must also meet ongoing obligations such as maintaining **reserves** of the referenced assets in a prudently managed custodial arrangement, and they owe a **right of redemption** to token holders. For example, an issuer of a gold token under MiCA must ensure token holders can redeem their tokens for the equivalent value in gold or cash at least under certain conditions, and redemption requests from holders must be honored to uphold the token's value linkage. ART issuers will be subject to capital requirements, governance standards, and interoperability requirements as well. Notably, MiCA has carve-outs: if an ART is only offered to qualified investors or the total issuance is under €5 million, some obligations (like authorization) can be waived. This is akin to a private placement exemption. But any significant retail-oriented gold token in the EU will fall under full regulation.

- **Licensing Under MiCA:** A company wishing to issue a gold-backed token in the EU will need to be **established in an EU member state** and obtain authorization as an ART issuer from that state's regulator (which will coordinate with the new EU framework). The issuer must have its registered office in the EU; in other words, non-EU issuers (like Tether's BVI entity) will not be able to actively market their gold tokens in the EU without either partnering with an authorized EU entity or possibly falling afoul of MiCA once it's in force. This could mean that Tether Gold and similar tokens will face barriers in the EU unless they comply or restrict EU users. On the other hand, firms like **Euronext or European mints** could decide to launch their own regulated gold tokens under MiCA, bringing competition and perhaps greater acceptance by EU banks and funds. Until MiCA is fully applicable, EU countries may still apply existing laws. For example, France's AMF has allowed certain asset tokens to be issued within its sandbox (with registration and disclosure), and Italy has clarified that mere possession of a crypto-asset by an investor doesn't make it a security. But MiCA will override national regimes for crypto-assets not already covered by existing financial regulations.
- **Custody and Reserve Requirements:** MiCA will require issuers of asset-referenced tokens to safeguard reserve assets (the physical gold in this case) with **robust custody**. While final regulatory technical standards are still being developed by the European Banking Authority (EBA) and European Securities and Markets Authority (ESMA), the regulation itself mandates that reserve assets must be **ring-fenced** and insulated from the issuer's insolvency (similar to how e-money or bank deposits are protected). This implies using independent custodians or trustees to hold the gold backing tokens. An ART issuer might need to have a custody agreement with an LBMA-accredited gold vault in, say, Zurich or London (even though London is outside EU, the custody could be abroad provided it meets standards), and provide audited reports on the gold holdings. We can draw a parallel to how UCITS funds or ETFs in Europe have depositories – similarly, a token issuer likely must have a **reserve management policy** approved by regulators. MiCA also requires issuers to **publish information about the reserve** – e.g. number of tokens in circulation, quantity and nature of underlying assets, location of custody, etc., perhaps on a quarterly or even monthly basis to ensure transparency.
- **Trading Platforms (CASPs):** MiCA introduces the concept of **Crypto-Asset Service Providers (CASPs)**. Exchanges or trading platforms dealing in gold tokens will need to be authorized as CASPs in the EU, with compliance to conduct of business rules, custody rules, and AML. For instance, a European crypto exchange listing a gold token will have to ensure it adheres to market integrity rules under MiCA, such as preventing insider trading or manipulation. Given gold tokens' prices are tied to gold's market, manipulation might be less of an issue (since the token price follows global gold price), but regulators will want to

ensure no exploit in the token mechanism could affect price (for example, sudden delink if reserves were questioned). CASPs will also have to implement **Travel Rule** compliance for crypto transfers (the EU is aligning with FATF guidance requiring sender/receiver information on crypto transactions over certain thresholds). This means even for gold tokens, when a user transfers above €1000, the exchanges/wallet providers involved must exchange KYC information – a notable operational consideration for institutional players transacting large amounts of tokenized gold.

- **Case Study – Europe's First Securitized Gold Token:** Even before MiCA, Europe saw innovative approaches. In April 2024, SDAX (a regulated digital exchange in Singapore) partnered with an Oman-based company to issue the **MPMT Gold Token** exclusively to SDAX users, but interestingly did so in a **securitized format** via an independent trust in Singapore. While this was outside the EU, it reflects a model EU entities might follow: using traditional securitization law to issue tokens as securities representing gold ownership. In the EU, one could envisage an issuer launching a tokenized gold note under existing prospectus regimes (e.g. a prospectus for a bond redeemable in gold or cash, then tokenizing that bond). In fact, the European Investment Bank (EIB) has experimented with tokenized bonds on Ethereum – applying that to commodities, one could have a **"Gold ETP (exchange-traded product) token"** that is regulated as a security (like an ETF share). The drawback is heavier regulatory burden, but the benefit is immediate acceptance by traditional investors. MiCA may reduce the need for this workaround by providing a tailor-made regime for commodity tokens as ARTs, which might be more cost-effective than a full securities prospectus.
- **Economic Implications in the EU:** The EU's harmonized approach via MiCA is expected to spur greater institutional participation in tokenized commodities. With clear rules, European banks or fintech firms could offer gold tokens to customers as an alternative to physically-backed gold ETFs. This could enhance liquidity for gold trading, as tokens can trade 24/7 and settle instantly, potentially complementing traditional gold markets. The World Gold Council itself participated in a pilot in 2022 with Euroclear (a major European settlement house) to demonstrate how tokenized gold could be used to expedite collateral transfers – the results showed improved liquidity and efficiency, e.g. meeting margin calls in minutes by moving tokenized gold collateral, something noted by the WGC as overcoming the "perceived restrictions on moving and storing physical metal". Legally, the MiCA regime will provide **certainty of ownership** for token holders – national law will likely specify that holding the token is prima facie evidence of owning the underlying asset (or having a claim to it). One grey area that MiCA does not fully eliminate is interaction with existing **consumer protection and tax laws**. For example, in the EU, physical investment gold is often VAT-exempt; it will need clarification if tokenized gold enjoys the same VAT exemption (most likely yes, if structured appropriately, but member states may need to update VAT guidelines). Similarly, under MiFID II (traditional finance rules), certain structured products referencing commodities are regulated – MiCA carves crypto-assets out of MiFID, but if a gold token has some complex derivative element, it might trigger MiFID anyway.

In summary, the EU is moving towards a **uniform, comprehensive regulatory framework** that will treat gold and silver-backed tokens as a recognized category of regulated instrument (ARTs), with strong requirements on issuers for licensing, capital, transparency, and investor rights. This should foster a safer environment for both institutional and retail use, albeit with higher compliance costs for issuers (which could concentrate the market among well-capitalized players such as large fintechs or consortiums of banks/commodity firms).

Q&A on EU MiCA Implementation – When MiCA is in force, what happens to existing

gold tokens like Tether Gold or PAXG in the EU? A: They will need to become compliant to be offered or continue to be traded in the EU. If the issuers want to serve EU customers, they would likely need to incorporate an entity in an EU country and seek authorization as an ART issuer, including publishing a MiCA-compliant whitepaper. They would also have to offer redemption to EU token holders (for example, ensuring EU users can redeem XAUT for gold or cash, which currently might not be directly available). Some foreign issuers may decide not to pursue EU authorization and instead geofence EU users (i.e. not allow EU IP addresses or residents to transact on their platforms). Meanwhile, EU-domiciled issuers (perhaps new ones backed by European institutions) may launch MiCA-compliant gold tokens and fill that market. Custodial and trading services in the EU would likely favor the regulated tokens. Therefore, we may see a shake-up: by 2025, a "EURgold" token from a European mint or a "SocGen Coin OR" (just hypothetical names) might be competing with or replacing the likes of PAXG for European investors. EU holders of existing tokens may still trade them peer-to-peer, but regulated exchanges under MiCA might have to delist non-compliant tokens. Transitional provisions in MiCA might give a grace period, but the direction is clear – regulatory compliance will be mandatory for market access. This harmonization could actually be beneficial for the market's credibility, even if it poses short-term adaptation challenges for some projects.

Singapore

Singapore has been an early adopter in crafting regulatory frameworks that accommodate fintech innovations, including tokenized assets, while maintaining oversight. The Monetary Authority of Singapore (MAS) – Singapore's central bank and integrated financial regulator – has issued clear guidelines on when digital tokens are considered capital markets products (securities/derivatives) and when they are not. Singapore's regulatory approach can be summarized as **principle-based and technology-neutral**: the substance of a token (i.e. the rights it confers) determines regulation, not the fact that it's on a blockchain per se.

- **Classification:** MAS's seminal 2017 "Guide to Digital Token Offerings" laid out that if a token represents an ownership or investment interest (equity, debt, etc.), it will be regulated under the Securities and Futures Act (SFA) as a security. If it functions as a utility token (for a service) or as a pure medium of exchange/payment, other laws like the Payment Services Act (PSA) may apply instead. Importantly, MAS recognized that **asset-backed tokens** which directly represent a commodity could be considered neither a security nor e-money, but rather a form of stored value or commodity contract. In practice, MAS has considered gold-backed tokens as **digital commodities**. One of the earliest gold token projects, **DigixGlobal (DGX)**, was based in Singapore. Digix engaged closely with MAS and publicly shared that MAS did not classify their gold token as a security – rather, gold was seen as a commodity and the token simply a digital representation of allocated bullion. This meant Digix could proceed without a securities prospectus. However, MAS still required (or strongly expected) Digix to implement robust KYC/AML controls, even if not explicitly covered at the time. Singapore's commodity-backed tokens thus operated under a light-touch regime initially, focusing on **self-regulation and transparency**.
- **Regulatory Frameworks:** Two major laws cover tokenized metals in Singapore: the **Securities and Futures Act (SFA)** and the **Payment Services Act (PSA)**. A gold or silver token would trigger the SFA only if it is structured as a collective investment or a derivative. For example, if a gold token promised a return higher than the gold price (say, profit-sharing from leasing the gold) or if it wasn't fully backed and essentially token holders

were creditors, MAS could deem it a debenture or unit in a collective investment scheme, requiring a license or exemption. Plain fully-backed tokens avoided this. The PSA (2019) regulates payment services, including digital payment token dealing. A "**digital payment token**" (DPT) is defined as any digital representation of value that is not a fiat currency and is accepted as a means of exchange or for payment. Arguably, a gold token could fall under this if it's used for payment – indeed some merchants or P2P markets might accept a gold token in exchange for goods, similar to Bitcoin. If so, any business facilitating the exchange of the gold token (buying, selling, or transferring it for customers) would need a DPT service license from MAS. In effect, exchanges listing gold tokens or brokers dealing in them in Singapore must be licensed under the PSA's DPT regime. (MAS has granted a number of in-principle approvals and licenses to crypto companies, and it's likely those cover commodity tokens as well if they handle them.)

- **Institutional Offerings and Sandboxes:** Singapore has seen both the startup approach (Digix) and the institutional approach to gold tokens. On one hand, Digix's DGX (1 token = 1 gram of gold in a Singapore vault) was a grassroots project that gained MAS's tacit approval and operated for several years, primarily among crypto enthusiasts. On the other hand, in 2023, Singapore-based market operators have introduced more traditional structures. **SDAX**, a licensed private securities exchange in Singapore, launched what it called the world's first **securitized gold token** in partnership with a Middle Eastern refinery. This token (MPMT) was essentially units in a trust that held physical gold, thus constituting a capital markets product (a tokenized note). By issuing it through a trust and restricting it to accredited investors on their platform, SDAX complied with SFA requirements (exempting it from a full prospectus due to the restricted offer, but still providing an offering memorandum under trust law). MAS appears supportive of such innovation as long as investor eligibility and disclosures are properly managed. Additionally, MAS operates a **sandbox** (the FinTech Regulatory Sandbox) where novel products can be tested. A hypothetical example: if a company wanted to issue a token representing a basket of precious metals (gold, silver, etc.) with some algorithmic features, MAS might route them to the sandbox to experiment under conditions before full licensing.
- **Custody and Legal Ownership:** Singapore's legal system allows for straightforward ownership of physical gold by individuals, and this extends to token holders by contractual arrangements. For tokens like Digix's DGX, each token was backed by specific gold bars held in a vault in Singapore (secured by Malca-Amit vault, with independent auditors verifying the holdings regularly). Token holders could accumulate tokens and redeem for LBMA gold bars (with a minimum threshold, e.g., 100 DGX for 100g bar). Those who didn't redeem still had the comfort that the gold was there. Digix's terms made token holders beneficial owners of the gold in storage (held via a custodial custodian on behalf of them). Singapore law would view that as a bailment or trust – which means if Digix went under, the vaulted gold would not be available to Digix's creditors, it belongs to token holders. More recently, **Silver Bullion**, a Singapore bullion dealer, has explored tokenization via its subsidiary. We also have **InvestaX** (a MAS-licensed platform) partnering with fintech firms like Matrixdock to launch tokenized gold for trading on a regulated exchange. Such platforms ensure that custody of the underlying metal is with regulated vault providers and that legal title can pass to token holders. One nuance: Singapore's law on Warehouse Receipts and Bills of Lading (documents of title) hasn't yet been explicitly tested for digital tokens. However, Singapore passed an Electronic Transactions Act amendment to recognize electronic transferable records, which could conceptually include electronic warehouse receipts for commodities. Token issuers might seek legal opinions to confirm that a token will be treated as representing title to the

gold – giving additional assurance in case of disputes.

- **AML/KYC and Tax:** Singapore adheres to FATF standards and has stringent AML for all financial services. Under the PSA, all DPT service providers must implement AML/KYC. MAS in late 2022 and 2023 issued additional guidelines limiting certain activities (like lending or staking) for retail customers in crypto, to reduce risk. While those were aimed more at volatile unbacked tokens, a gold-backed token would also be subject to the Travel Rule and user appropriateness assessments if offered to the public. **Tax-wise**, Singapore does not have a capital gains tax, so trading gold tokens doesn't incur CGT. It does have a Goods and Services Tax (GST). Investment-grade gold (99.5% purity or higher in bar/coin form) is exempt from GST in Singapore. DGX tokens were structured such that redemption would yield a GST-exempt bar (and purchasing tokens with crypto was not clearly a GST event). The MAS and tax authority likely treat tokenized gold similarly to physical for GST (i.e. no GST on the gold value exchange). Recent implementation of GST on imported services could classify some token services as e-services, but it's unlikely to affect typical trading.
- **Notable Outcomes:** Digix's DGX token, despite regulatory green light, struggled to achieve scale. By 2023, Digix ceased operations and handed over redemption of remaining gold to a partner in Dubai. The reasons were more business-related than regulatory: low demand, competition, and possibly the high storage fees making it less attractive than alternatives. This suggests that even with a favorable regulatory environment, success requires market adoption. On the other hand, Singapore remains a favored base for new ventures – e.g., **Trovio**, the fintech running the Perth Mint's PMGT token, relocated to Singapore, possibly to benefit from the clear regulatory climate and proximity to gold trading hubs. Singapore's role as a bullion trading hub (alongside London and Zurich) means it has the ecosystem to support tokenized metals (vaults, assay offices, brokers, etc.). We also see integration of tokenized gold into Singapore's DeFi and CeFi mix: for instance, MAS's Project Ubin and subsequent Project Guardian are exploring tokenization of various assets in wholesale finance – it wouldn't be surprising if tokenized gold is used in some pilot for trade finance or repo in Singapore. Indeed, the World Economic Forum noted that "Euroclear and the World Gold Council recently tokenized gold…for collateral management" and that such initiatives demonstrate moving beyond theory to practice; Singaporean institutions likely have taken note of these global trends to apply domestically.

Q&A on Singapore's Strategy – How does Singapore balance innovation and regulation for gold tokens? A: Singapore tries to **facilitate innovation** by providing regulatory clarity upfront and encouraging industry self-regulation, then **intervenes as needed** to tighten rules once a sector matures. For gold tokens, MAS allowed early projects to operate with minimal friction (as long as they weren't outright securities and did their AML duty). This gave Singapore a chance to be a testbed. Now, with more players and larger value at stake, MAS is incrementally raising standards – e.g., requiring all exchanges to be licensed and discouraging risky activities for retail. But MAS hasn't felt the need to write a specific "commodity token regulation"; instead it uses existing laws (PSA, SFA) in a flexible way. The tone of MAS officials has been generally positive about asset tokenization. They often cite that tokenization of real assets can bring efficiency and better access to markets, aligning with Singapore's ambition to remain a financial hub. So the balance is in clear guidelines (through explanatory guides, consultations) and robust enforcement of fraud or AML breaches, while not micromanaging technical details – MAS didn't, for example, prescribe how a token's smart contract must work; it cares more about the outcomes (investor is protected, asset is there, risks are disclosed). This balanced approach is why both crypto-native firms and traditional institutions in Singapore are comfortable exploring tokenized commodities.

Switzerland

Switzerland has established itself as a crypto-friendly jurisdiction with a high degree of legal certainty for tokenized assets. The Swiss Financial Market Supervisory Authority (FINMA) issued pioneering guidance in 2018 classifying tokens into **payment tokens, utility tokens, and asset tokens**. Tokenized precious metals typically fall under **asset tokens** in FINMA's taxonomy – representing an asset or a right to an asset. Swiss law and regulation focuses on the underlying purpose and rights of the token, similar to Singapore's approach, but Switzerland has even amended its legislation (the **DLT Law of 2021**) to explicitly accommodate ledger-based securities.

- **FINMA's ICO Guidelines (2018) and Stablecoin Guidance (2019):** FINMA clarified that **asset tokens** are those that represent assets like a debt or equity claim on the issuer, or a claim on physical underlying assets, or economic rights such as portion of revenues. These are treated as **securities** if they represent an uncertificated security or derivative under Swiss law. For example, a token giving a share of a company or a right to a dividend is clearly a security. But what about a token that purely represents ownership of a bar of gold? FINMA addressed this in its 2019 Stablecoin guidance: a token linked to a commodity would **not** be treated as a security if it simply confers ownership of the commodity with no further rights (since it's analogous to a warehouse receipt). It might, however, be subject to civil law requirements for valid transfer of ownership of the commodity. If the token is structured in a way that it's freely transferable and not just a contract between two parties, FINMA indicated it could be considered a **derivative** if it involves an obligation of a party (like a promise to deliver gold in the future rather than immediate ownership). Most gold tokens in Switzerland avoid that by making the token itself the proof of ownership of specific gold already held. So FINMA likely views those as asset tokens **that are not securities** (similar to a claim in rem). This is supported by industry: Swiss tokenization firms have asserted that their gold tokens are viewed as **payment tokens** legally, akin to holding gold directly, and not as securities. For instance, a Swiss project called **DGLD** (a consortium including a Swiss entity, Gold Token SA) positioned its token such that each token = ownership of 0.1 oz of physical gold in a vault; they obtained a legal opinion that holding DGLD is the same as owning allocated gold, hence not a claim on an issuer (no issuer default risk) and not a security. FINMA did not object to this model. In fact, Gold Token SA is a member of a self-regulatory organization and operates as a Virtual Asset Service Provider under FINMA supervision, advertising that it adheres to FINMA's ICO guidance. The DGLD token is considered a **payment token** under FINMA's scheme in that context (because it can be transferred and used as a means of payment representing gold), but economically it's an asset token representing gold. This nuanced treatment shows Swiss flexibility: the classification is about what laws apply – DGLD isn't regulated as a security, but as a **financial intermediary** for AML.
- **Licensing and Supervision:** In Switzerland, if a tokenized gold project is set up such that it holds customer assets (the gold) and issues tokens, it may need to either have a **banking license**, a **securities firm license**, or operate under a **FinTech license** or SRO supervision depending on the exact setup. If the project is fully collateralized and does not re-use the gold, it likely avoids being considered taking deposits (which would require a banking license). Instead, it can operate as an ordinary company but must comply with AML rules by joining a FINMA-recognized **Self-Regulatory Organization (SRO)** or becoming directly supervised by FINMA for AML as a financial intermediary. Many Swiss crypto companies (custodians, exchanges) do exactly that: they are not banks, but they are members of SROs like VQF. A gold token issuer would register the activity of "issuing means of payment" or "value transfer"

under AMLA. They would then perform KYC on customers and report any suspicious activity. If the token were deemed a security, then issuing it to the public would require a prospectus under the Swiss Financial Services Act (FinSA) unless an exemption applies (like only qualified investors, or below a certain amount). So far, most have structured to avoid security status (e.g. each token legally is an allocated metal claim, so no "issuer" in the securities sense – the issuer is just an intermediary storing your metal).

- **DLT Law and Trading Venues:** Switzerland's DLT (Distributed Ledger Technology) Act, which came into effect in 2021, provides for a new type of uncertificated security that can be tokenized (called *Registerwertrechte*, or ledger-based securities). A company can now create tokens that are directly recognized as securities under civil law, meaning transfer of the token equals legal transfer of the underlying right. If one wanted to issue a token that explicitly represented a claim to gold, they could theoretically structure it as a ledger-based security representing a claim for delivery of gold on demand. That would make it a security (likely a kind of structured product or derivative) – which isn't necessary if the simpler route of direct ownership is used. However, the law also enabled licensed blockchain trading facilities. **SIX Digital Exchange (SDX)** in Zurich obtained regulatory approval to operate a DLT-based exchange and CSD. It's conceivable that in the future, SDX or other Swiss venues might list tokenized commodities; those could attract institutional trading interest under clear rules. As of now, Swiss companies often list their tokens on international crypto exchanges or facilitate OTC trades. One example, **SEBA Bank** (a regulated crypto bank in Switzerland) issued its own **SEBA Gold Token (SGT)** in 2022. This token is fully backed by physical gold held in a Swiss refiner's vault (Argor-Heraeus), and SEBA's clients (restricted to professional/institutional) can buy and trade SGT through their bank accounts. Notably, SEBA highlighted that the product is "approved and bank–regulated by FINMA" with 1:1 backing at all times. Because SEBA is a bank, it could integrate the token issuance into its existing license. Clients holding SGT legally have co-ownership of the pool of gold (each token = 1g and the gold is stored in allocated form). SGT is a prime example of how Switzerland leverages its credibility: a regulated bank issues the token, giving both regulatory assurance and auditability (Big-4 audited, per SEBA's fact sheet). It effectively competes with gold ETFs but in token form.
- **AML/KYC:** Swiss AML laws require KYC for issuance and redemption of asset tokens. Switzerland has implemented the "**Travel Rule**" as well, albeit with some flexibility for transactions between personal wallets. A Swiss gold token issuer would have to take customer info for anyone converting fiat to tokens or vice versa, and for anyone redeeming tokens for physical gold. But trading between private wallets might not involve an obliged financial intermediary, thus could occur pseudonymously. FINMA has issued guidance discouraging dealing with unverified wallets for large sums. In practice, projects like DGLD only allow authorized partners to redeem tokens for physical gold, and those partners will ask for identification. In effect, as long as tokens circulate in the wild, they rely on the public blockchain; when they need to touch the traditional system (gold delivery or fiat), controls kick in.
- **Retail and Institutional Adoption:** Swiss private banks and asset managers are increasingly exploring tokenized assets for their clients. For a Swiss wealth manager, being able to buy a token that represents allocated gold held in Switzerland can be attractive: it combines the allure of physical gold (a safe asset) with the convenience of a digital asset (fast transfer, divisibility). Some Swiss providers have even packaged gold tokens in interest-bearing accounts or as collateral for loans (i.e., you can pledge your gold tokens to borrow francs). Retail in Switzerland, which has a tradition of buying physical bullion and gold coins, so far still leans

towards those traditional forms or gold ETFs. But crypto-savvy retail investors might acquire tokenized gold as an alternative to holding Tether or USDC for stability, especially during times of currency uncertainty. The global market cap of gold-backed tokens surpassed $1 billion in 2022, and Swiss projects like Tether Gold (which reportedly stores gold in Switzerland) and DGLD contributed to that growth. In fact, Switzerland's reputation likely bolsters Tether Gold's credibility, since they emphasize the gold is in Swiss vaults (even though Swiss authorities don't regulate Tether, the jurisdiction offers security of vaulting).

Q&A on Swiss Legal Certainty – What happens if a Swiss gold token issuer goes bankrupt or is hacked? A: Thanks to the legal structures used, token holders should still have claim to the underlying gold. If the issuer is a member of a self-regulatory body (not a bank), typically they hold the gold via a custodian, segregated for token holders. Swiss law on insolvency would respect that segregation if it's set up as a trust or custody agreement – the gold wouldn't be part of the bankruptcy estate of the issuer. If the issuer is a bank (like SEBA), then even more so, the gold is a custodial asset and not on the bank's balance sheet. The token holders would coordinate with the custodian or a trustee to retrieve their gold or have it transferred to another custodian. In case of a hack – say tokens get stolen – the situation is similar to other crypto thefts: the blockchain shows new holders. If the thief can't redeem without going through KYC, the gold stays in the vault; effectively the tokens alone might be moving but useless unless converted. A court could potentially order the freezing of certain addresses (if the issuer has control or if exchanges cooperate). In fact, being fully reserved means the gold is always there, which is different from, say, a stablecoin hack where reserves could be misappropriated. In short, Swiss frameworks aim to ensure **token = title to asset**, and robust contractual and technical measures protect that equivalence. Of course, investors are still cautioned to deal with reputable providers who undergo audits and publish attestation – FINMA encourages transparency. One example: Tether publishes gold reserve attestations through an accounting firm (BDO) quarterly, which, while not a guarantee against problems, at least provides some ongoing verification of the one-to-one backing.

Australia

Australia is a major gold-producing country and has a well-developed bullion market (centered around the Perth Mint and private refiners), but its regulatory stance on tokenized commodities has been cautious. Crypto-assets in Australia fall under a combination of existing financial law (primarily the Corporations Act for securities/financial products) and specific guidance from regulators like the Australian Securities and Investments Commission (ASIC) and AUSTRAC (the financial intelligence unit for AML). Tokenized gold could be considered a **non-cash payment facility, a managed investment, a derivative, or simply a bullion product** depending on structure, which determines the needed licenses.

- **Perth Mint Gold Token (PMGT) Experience:** The most prominent case study in Australia was the **Perth Mint Gold Token (PMGT)**, launched in 2019 by a fintech company InfiniGold (later Trovio) in collaboration with the Perth Mint (which is owned by the Government of Western Australia). PMGT was unique in that it was directly backed by physical gold stored at the Perth Mint and every token corresponded to a specific Perth Mint GoldPass certificate (the Mint's own digital gold certificate system). The Perth Mint's gold is government-guaranteed and audited, which provided a high level of trust. PMGT was offered as a token without fees (the Mint charged storage via GoldPass, but no management fee for the token). Legally, how was it treated? The PMGT was essentially a digital representation of an already existing product (GoldPass certificate). The GoldPass itself was not a regulated

financial product – it was effectively a certificate of ownership of gold, and because the Mint is government-owned, it had certain exemptions. ASIC likely viewed PMGT as a facility for **trading bullion** rather than a security or managed investment scheme, given each token holder had outright title to GoldPass ounces. Thus, no prospectus or financial services license was required specifically for PMGT's issuance; however, InfiniGold would have needed to register with AUSTRAC as a **digital currency exchange provider**, which they presumably did, to handle token creation and redemption (Australia since 2018 requires exchanges swapping fiat and crypto to register and do KYC). As it turned out, PMGT did not gain large market traction (market cap remained around A$2–3 million). And in 2023, the project was discontinued amid controversies at the Perth Mint. Reports cited that Trovio withdrew support for PMGT due to "alleged regulation breaches with AUSTRAC and US State Regulation" by the Mint. This refers to investigations into the Mint for AML deficiencies and possibly selling some gold to sanctioned entities or breaking US model commodity code rules. The lesson here is that even a token with strong backing can fail if the institution behind it faces compliance issues. Australian regulators were likely concerned that a government mint's crypto token might expose it to new AML risks, especially if global traders could anonymously acquire PMGT and then redeem for gold from the Mint (which might circumvent customary bullion trade checks). The fallout from PMGT has likely made ASIC and AUSTRAC more conservative. Indeed, in March 2023, as PMGT wound down, questions lingered about the future of GoldPass and similar offerings.

- **Regulatory Framework:** In Australia, ASIC has clarified through information sheets that many crypto-assets can be financial products under the Corporations Act (such as interests in managed investment schemes, derivatives, or securities). If a gold token gave investors a pooled exposure or someone else's effort was required to generate value (beyond gold's price), it could be a managed investment scheme – requiring registration and an Australian Financial Services License (AFSL) for the issuer/operator. If it's structured as a forward contract (delivery later) or option, it's a derivative requiring an AFSL (with a derivatives authority) and compliance with ASIC's markets rules. However, a fully allocated, freely redeemable gold token looks more like a **voucher or warehouse receipt**. ASIC did not categorize PMGT as a financial product, indicating it likely saw it as a **deposit-like or bullion product**. Normally, accepting money and giving a stored value (like gift cards, travel cards) is a "non-cash payment facility" which is a financial product, but there's an exemption when the value is bullion: indeed, transactions in physical commodities are generally outside the financial product scope. So long as the token is just a means to buy/sell gold, not a promise of profit, it can be unregulated (except for consumer law). But note: if a private (non-government) company did exactly the same, ASIC might scrutinize it more. The Perth Mint had a unique status. A private issuer might need to either rely on an exemption (like issuing to wholesale clients only, or under a small-scale offer) or get an AFSL. **No-action relief**: Sometimes ASIC issues no-action letters for novel products; we don't know if InfiniGold sought one. Separately, **AUSTRAC** requires digital currency exchange providers to register – this covers anyone in Australia exchanging between fiat and "digital currency" (which includes crypto tokens) for customers. PMGT was listed on some exchanges, but not sure if directly convertible to fiat except through GoldPass (which required KYC). AUSTRAC's main concern is AML, and the Perth Mint being caught with poor AML controls triggered AUSTRAC's probe.
- **Current Developments:** The Australian government in 2022 initiated a **token mapping** exercise to clarify how various crypto assets should be categorized (report was released in 2023). The consultation papers hinted that asset-backed tokens might be treated differently than unbacked crypto. The likely outcome is that something like a gold-backed stablecoin would not

be considered a "financial product" unless it has features making it so, but it would remain under AML regulation. Meanwhile, ASIC has been actively warning consumers about risks of crypto and has taken enforcement actions against some misleading crypto schemes. To date, they haven't targeted gold tokens specifically. Australia's **retail gold market** is well-served by traditional means (physical dealers, gold ETFs like PMGOLD, etc.), so tokenized gold appeals mainly to crypto investors or for arbitrage. One interesting use case in Australia: some crypto lending platforms (now mostly shut down) allowed users to borrow stablecoins using gold tokens as collateral. This merges with DeFi – e.g., an Aussie user could wrap PMGT or PAXG into a DeFi platform to earn yield or take a loan. Regulators have not explicitly addressed that scenario, but they are aware of DeFi use of asset-backed tokens.

- **Institutional Perspective:** Australian institutions have been relatively slow to adopt crypto, but some did test tokenization. The Commonwealth Bank (CBA) experimented with an app offering crypto trading, which could have eventually included tokens like PAXG, but that project was paused due to regulatory pushback on consumer protections. However, **Perth Mint's experience shows institutional interest** – a government mint tried it, signaling that if compliance issues can be resolved, they see tokenization as a valid distribution method. We might see private gold refiners or vaults in Australia try again with a similar token, perhaps under better compliance. For instance, an entity could use a vault in Australia to back a token issued in a more crypto-friendly jurisdiction (like a Singapore or Swiss issuer holding Australian gold). This cross-jurisdiction approach is common (since gold is fungible globally, the choice of legal domicile for the issuer can differ from the vault location).
- **Custody and Assurance:** Australian investors would expect that any gold token is fully backed by physically audited gold. The Perth Mint had the strongest assurance (government guarantee on the gold purity and weight). Without that, a private issuer must rely on independent audits and insurance. The token's credibility would hinge on regular public reports of gold holdings (much like an ETF publishes bar lists). If a token were marketed in Australia without such transparency, it would likely fail to gain trust. Also, legal enforceability: Australian law recognizes ownership of allocated bullion – so if a token gives you allocated ownership, you have legal title to metal. If it's unallocated (just a debt for gold), then you're an unsecured creditor of the issuer, which would definitely be a managed investment or at least need disclosure of that risk. The ideal structure is allocated ownership via an independent custodian with the issuer acting as an agent. That way, even if issuer fails, investors can claim their gold from the custodian. This is how the Perth Mint did it (they were both issuer and custodian effectively, but with government backing) and how any future offerings should be to win regulatory comfort.
- **Taxation:** Australia imposes 10% Goods and Services Tax (GST) on most goods and services, but bullion (gold of at least 99.5% purity, used for investment) is GST-free. Trading a gold token that is fully backed by physical likely would be considered a financial supply (or at least a form of gold trading) and may be GST exempt as well – but if not carefully handled, there could be GST on token trades if tax law doesn't classify it as precious metal trading. Also, profits from selling the token for more than cost could be subject to capital gains tax (CGT) for individuals (collectibles tax rules might apply if not considered currency). This is a complex area – but since a token is essentially just holding gold, it should mirror the tax treatment of gold. The Perth Mint likely ensured PMGT was not causing any GST events (transferring GoldPass was GST-free since it represented physical gold).

Q&A on Australia's Outlook – In the wake of PMGT's failure, will Australia see another gold token? A: It's likely, but future projects will be more careful. The concept of a

tokenized gold certificate is still sound. We may see a private sector consortium or an international player re-introduce it, possibly after regulatory reforms. The Perth Mint itself might revive a similar service if it satisfies AUSTRAC and restructures compliance (they have not ruled out digital offerings long-term, but short-term they are fixing governance issues). Australia's government is actively developing a comprehensive crypto regulatory framework; once that is in place (perhaps by 2024–25), it could explicitly accommodate asset-backed tokens. For instance, they might create a new license for stablecoin issuers which could cover gold-backed coins as well. If that happens, it could attract new entrants to launch gold or even silver tokens from Australia, leveraging its reputation and gold industry. In terms of usage, given Australia's strong investor protection ethos, any retail-facing token will need to be straightforward, low-risk, and likely integrated with existing trusted institutions (maybe a bank or a large exchange). **Institutional use** might come via integration: e.g., the ASX (Australian Securities Exchange) has explored DLT for settlement (the CHESS replacement project, though delayed). In theory, ASX or another venue could list a digital gold product. So, while PMGT's collapse is a setback and cautionary tale, it provides regulators and industry valuable lessons: ensure impeccable compliance, clear legal structure, and build sufficient market liquidity.

Comparative Regulatory Requirements by Jurisdiction

To crystallize the differences and similarities in regulatory approaches, we provide a series of comparative tables. These tables cover four critical aspects of tokenized precious metals regulation: (1) Licensing & Regulatory Classification, (2) Custody & Reserve Requirements, (3) AML/KYC Obligations, and (4) Issuance & Disclosure Standards. The tables focus on gold tokens as the reference, but generally apply to silver and other precious metals too (noting that some jurisdictions may explicitly mention gold in regulations due to its monetary role, but treat other metals similarly).

Table 1: Licensing and Regulatory Classification (by jurisdiction)

Jurisdiction	Regulatory Classification of Gold/Silver Tokens	Licenses/Authorizations Required	Regulatory Bodies
UAE (mainland & VA)	Treated as **Commodity Tokens** under draft SCA regulations. Not deemed securities if solely represent metal value.	SCA license required for crypto asset activities (mainland). Dubai VARA VASP license required for issuance, custody or exchange in Dubai. Free zones (ADGM/DIFC) require financial services permission from FSRA or DFSA respectively for crypto asset business.	Securities and Commodities Authority (SCA); Dubai's Virtual Asset Regulatory Authority (VARA); ADGM's FSRA; DIFC's DFSA.

Jurisdiction	Regulatory Classification of Gold/Silver Tokens	Licenses/Authorizations Required	Regulatory Bodies
United States	Generally classified as **Commodities** (spot asset) – not securities if fully backed and redeemable (no investment contract). Could be deemed a security in an abnormal structure, but main tokens (PAXG, XAUT) are treated as commodities.	No federal license for spot commodity issuance. State-level: e.g. NYDFS Trust Charter or BitLicense for custody/issuance. Money Transmitter Licenses (MSLs) likely required in multiple states for handling customer funds/transfers.	State regulators (e.g., NYDFS), FinCEN (for AML via MSB registration), CFTC (anti-fraud/manipulation oversight), SEC (if deemed a security).
European Union	Treated as **Asset-Referenced Tokens (ARTs)** under MiCA – a subtype of stablecoin referencing commodities. Until MiCA is in force, potentially viewed as unregulated commodities or as financial instruments depending on member state (MiFID could apply if structured oddly).	Under MiCA, issuer must be established in EU and authorized by an EU national regulator as an ART issuer. Trading platforms require CASP authorization.	National Competent Authorities (NCAs) in member states, coordinated by European Banking Authority (EBA) and European Securities and Markets Authority (ESMA).
Singapore	Regarded as **Commodity** or **Digital Payment Token (DPT)**, not a capital markets product (security) if it simply represents allocated gold. If used as means of payment, it's a DPT.	DPT service license under Payment Services Act (PSA) required for exchanges/brokers dealing in the token. Issuer may not need specific license if structured purely as commodity ownership.	Monetary Authority of Singapore (MAS).
Switzerland	Typically classified as **Asset Token**, often treated like Payment Token if direct ownership. Not security unless structured with issuer obligation. Could be a security/derivative if structured differently.	AML compliance (SRO membership or FINMA supervision). Possible Banking/Securities Firm/FinTech license depending on activities. No specific issuance license if not security.	Swiss Financial Market Supervisory Authority (FINMA); Self-Regulatory Organizations (SROs) for AML.
Australia	Generally treated as **Bullion Product** (commodity) if fully allocated/straightforward. Not financial product unless structured as MIS/derivative. (ASIC has indicated asset-backed tokens can be non-financial products).	No specific AFSL needed if bullion product. AUSTRAC registration for Digital Currency Exchanges (DCEs).	Australian Securities and Investments Commission (ASIC); AUSTRAC.

Table 2: Custody and Reserve Standards

Jurisdiction	Custody of Physical Metal	Reserve Audit/Attestation Requirements	Investor Legal Rights to Metal
UAE	Must use approved vaults, likely UAE-based. Expected 100% reserve.	Practice: Audit certificates/Shariah audits. Future SCA rules may mandate audits/reporting. VARA/FSRA require custody assurance.	Clear legal claim expected via custodial agreements/warrants (e.g. DMCC Tradeflow). Enforcement via UAE law.
United States	Established vaults (major centers). Regulated tokens: trust/custody (bankruptcy-remote). 100% reserve.	Regulated: Monthly independent attestations + NYDFS exams. Unregulated: Quarterly attestations common. Market expects quarterly. Insurance common.	Strong via regulated trust (Paxos). Weaker for unregulated (relies on contract/BVI law like Tether).
European Union	MiCA requires robust, ring-fenced custody (can be outside EU if meets standards).	MiCA mandates annual audits (or more), reserve info publication, approved reserve policy.	MiCA grants redemption rights. Claim against issuer/reserves under EU/national law. Ring-fencing aids recovery.
Singapore	Professional vaults (often Singapore). Segregated for holders via agreement.	No statutory mandate, but MAS expects controls. Voluntary audits common. New stablecoin rules may influence.	Contractual beneficial ownership. Segregation protects in insolvency. Trust structures (SDAX) provide direct legal route.
Switzerland	Swiss vaults or global custodians. Fully allocated via custody/trust.	Honesty required. Industry practice: bar audits + blockchain proof. SRO AML audits. Bank audits include reserves. Quarterly attestations common.	Strong via structure (custody for beneficiaries or direct digital title like DGLD).
Australia	Perth Mint had sovereign guarantee. Private issuers need audits/insurance. Allocated ownership preferred for legal clarity.	No mandate if unlicensed. Market expects transparency. AFSL holders have reporting duties.	Allocated bullion ownership recognized. Unallocated = unsecured creditor. Structure crucial.

Table 3: AML/KYC and Compliance Requirements

Jurisdiction	AML/KYC Regime	KYC for Purchase/Redemption	Monitoring & Reporting
UAE	Full AML/CFT applies to VASPs. SCA/VARA mandate KYC, record-keeping, STRs.	Required at onboarding/redemption via licensed entities.	Transaction monitoring, STRs to FIU. Potential gold trade reporting overlap. Travel Rule committed.
United States	BSA/FinCEN rules (MSB registration, AML program, KYC, CTR/SAR). OFAC compliance mandatory.	Yes for regulated platforms. Redemption only for verified users.	Transaction monitoring, SARs. Travel Rule guidance exists. OFAC screening.
European Union	AMLD5/6 requires VASP registration/KYC. Future EU AML Reg/Authority to harmonize. MiCA CASPs have AML duties.	Required at fiat ramps/licensed VASPs. Redemption likely requires KYC.	Transaction monitoring. Travel Rule (>€1000) mandatory between CASPs. SARs to national FIUs. EU sanctions apply.
Singapore	PSA requires licensed DPT providers to implement AML/CFT. Adheres to FATF.	Needed when dealing with licensed DPT providers.	Transaction monitoring, STRs to STRO. Travel Rule applies.
Switzerland	AML Act via financial intermediaries (SRO/FINMA supervised). Travel Rule (>1000 CHF) adopted.	Required via Swiss intermediaries. Physical redemption requires KYC.	SARs to MROS. Travel Rule solutions used. Blacklisting possible. Low KYC threshold.
Australia	DCEs must register with AUSTRAC, implement AML/CTF program.	Yes via registered DCEs. Redemption from issuer also required KYC.	Threshold reports (>AUD 10k) and SARs to AUSTRAC. Record keeping mandatory.

Table 4: Issuance and Disclosure Standards

Jurisdiction	Issuance Approval & Process	Whitepaper/Disclosure Requirements	Ongoing Obligations
UAE	SCA draft likely requires registration/approval. VARA requires prior approval for public issuance.	SCA draft requires offering doc. ADGM/VARA require clear, non-misleading materials/marketing.	Periodic reporting (SCA/VARA). Disclosure of material events, reserve status.
United States	None federally if not security. State licenses (NYDFS) act as de facto approval.	No mandate if not security, but best practice (T&Cs, website) for consumer protection/anti-fraud.	Market practice of reserve attestations. Licensed entities under supervision. AML reporting.

Jurisdiction	Issuance Approval & Process	Whitepaper/Disclosure Requirements	Ongoing Obligations
European Union	MiCA requires authorization from home state regulator (EU entity needed).	MiCA mandates detailed, regulator-approved Crypto-Asset White Paper for ARTs.	Maintain reserves, governance, redemption. Publish reserve reports. Disclose material events. Ongoing supervision.
Singapore	None formally if not security. Sandbox possible. Securities follow SFA rules/exemptions.	MAS expects clear, non-misleading disclosures. Securities require info memo/prospectus.	PSA licensees have compliance duties. Voluntary reserve updates common. MAS notified of major changes.
Switzerland	None explicitly if not security. AML registration needed. FinSA prospectus for public securities.	FinSA prospectus for securities. Non-securities rely on comprehensive documentation (per Unfair Competition Law).	Minimal mandated reporting if unlicensed. Voluntary updates common. SRO audits. Legal liability primary enforcement.
Australia	None formally if not financial product. MIS/Derivatives require registration/AFSL.	No mandate if not financial product, but expected for transparency/consumer law. PDS for regulated products.	Minimal if unlicensed, beyond consumer law. AFSL holders have reporting duties. AUSTRAC registration renewed.

Economic and Legal Implications Across Regions

Having examined regulatory frameworks and case studies, we now distill the broader economic and legal implications of tokenized precious metals in each region:

United Arab Emirates – Implications:

Economically, the UAE's embrace of tokenized gold aligns with its vision to bolster Dubai as the "City of Gold" in the digital era. By allowing gold to be traded 24/7 via tokens, the UAE could attract new investment flows and increase liquidity in its gold markets. This might strengthen price discovery for gold within UAE (though global gold price is mainly set in London/NY, more local trading can narrow spreads and provide regional benchmarks). For retail UAE investors and expats, gold tokens offer an easy way to save in gold without dealing with physical storage – potentially boosting gold demand among younger, tech-savvy demographics who might otherwise ignore gold. **Islamic finance** implications are significant: gold is a traditional store of value in Islamic communities, and tokenization solves problems of storage and divisibility, making it more practical while adhering to Shariah (since tokens can be fully backed, they satisfy Islamic law for currency as long as they are fully redeemable for the asset). If Zakat (charitable giving) calculations include gold holdings, having traceable tokens could also simplify those religious obligations. On an **institutional level**, tokenization might allow UAE banks and funds to integrate gold into digital banking – e.g., a bank could offer tokenized gold accounts that customers can buy/sell on their app, enhancing their product suite. It also paves the way for using gold tokens as collateral in financing (a company could pledge tokenized gold to quickly raise a loan from a crypto lending platform or

even a traditional bank that accepts it). The UAE's multiple free zones and regulators can create a competitive environment internally, but also a bit of patchwork – if not harmonized, companies might jurisdiction-shop within UAE (e.g., set up in ADGM vs Dubai). Over time, likely we'll see a balancing, possibly with federal SCA rules acting as a baseline for all.

Legally, the UAE is defining new ground. The draft SCA regulations for commodity tokens will clarify how traditional commercial laws (like the Civil Code on property and the Commercial Code on commodities) apply when those commodities are tokenized. One possible grey area is enforcement of claims: if a token holder in Abu Dhabi claims ownership of a gold bar in a Dubai vault via a token, and something goes wrong, which court has jurisdiction – is it where the vault is or where the issuer is? Ideally contracts will specify dispute resolution (likely UAE courts or arbitration). Another legal aspect is **consumer protection**: as tokens appeal to retail, UAE may need to bolster consumer education and anti-fraud measures – e.g., ensuring that only licensed entities market gold tokens, to avoid scams. The SCA draft talks about preventing manipulation and ensuring fair trading, implying that general anti-fraud provisions of securities law will extend to tokens. That could criminalize pump-and-dump schemes or false statements about tokenized metals, which is crucial as more laypeople get involved. There's also an interplay with **trade regulations**: The UAE has import/export rules for gold; if gold is tokenized and sold internationally, do those count as exports of gold? Possibly not in a physical sense, but regulators might still track the flow (the DMCC Tradeflow integration is a way to bridge that – each token creation is tied to a warrant, so UAE knows that gold is under warrant when token leaves UAE hands digitally). **KYC sharing** is another tricky part – if one UAE entity issues a token and it flows to various countries, UAE might lose visibility of holders, which can concern regulators (for sanctions or AML). However, since redemption must be done with the issuer, the issuer will always have a window to re-identify holders if they come back to redeem, mitigating that a bit. One unique legal/cultural angle: inheritance and Wills. Gold tokens would be part of someone's estate; in UAE, Shariah law can apply to inheritance for Muslims (with fixed shares to relatives), and non-Muslims can choose other ways. Holding gold in token form might require making sure heirs know how to access the wallets, or working with platforms that can freeze and distribute per a Will. This is a micro issue but important for adoption in a region concerned with proper wealth succession.

United States – Implications:

Economically, tokenized gold in the US remains a relatively niche but growing area. The US has a very mature gold investment market (ETFs like GLD with tens of billions in assets, futures, bullion dealers). Gold tokens are unlikely to displace those entrenched instruments in the near term. However, they carve out a role in the crypto markets. A major implication is **bridging traditional and crypto liquidity pools** – gold tokens allow crypto traders to access gold without leaving crypto exchanges, which means during times of crypto volatility, capital can flow into gold tokens, affecting crypto prices and perhaps even gold's micro-price movements. We saw in the 2022 crypto bear market that volumes in gold tokens spiked as some sought refuge in gold. If this trend grows, one could imagine a small but noticeable correlation forming: e.g., a crypto crash leading to a bump in gold token buying. Conversely, if many have gold tokens and crypto surges, they might sell gold tokens to reallocate to Bitcoin, which is an interesting dynamic not present in traditional markets.

For US institutions, regulatory uncertainty kept many away from commodity tokens. But if PAXG continues its steady growth and no regulatory issues arise, more funds might allocate a portion of their portfolio to tokenized gold for efficiency. For example, a crypto lending desk might hold PAXG to backstop loans or margin, or a market maker might use PAXG to arbitrage vs COMEX gold

futures. We might also see **merchant use**: Gold-backed stablecoins could be used for cross-border settlement. There have been discussions (in the sanction context) that some sanctioned countries might trade in gold or gold tokens. While US would not want that (and would sanction any token used that way), it is an economic possibility that tokenized gold becomes a medium of exchange outside the banking system (sort of a modern "gold standard" for private transactions). If that happened at scale, the US might react by tightening regulations on those tokens or equating them to currency in law. On a positive note, for American retail investors who mistrust the banking system or dollar inflation, gold tokens provide an easy on-ramp to hold gold in a digital form – possibly increasing overall gold demand from younger demographics who might not buy coins or ETFs.

Legally, the US is still grappling with what frameworks to apply. The SEC's stance will be crucial – so far, SEC has not categorized pure asset tokens as securities in public statements, focusing more on crypto that mimics equities or debt. If this continues, tokenized commodities will be regulated mostly by state laws and CFTC principles. One legal uncertainty: **property and custody law for tokens**. If, say, a US exchange holding PAXG for clients goes bankrupt, do those clients have a direct claim to Paxos's gold or are they general creditors of the exchange? This comes down to how the exchange custody agreement is written and evolving bankruptcy case law for crypto. We saw in recent crypto bankruptcies (Celsius, etc.) that unclear terms led to customer assets being part of bankruptcy estate. For gold tokens, this could be complicated – the tokens themselves are like bearer instruments. To avoid doubt, institutions need to use proper custodial setups (e.g. trust or bailment) for holding tokens on behalf of clients.

Another legal aspect: **taxation**. In the US, physical gold and collectibles have a higher capital gains tax rate (28% if long-term, as they are "collectibles"). The IRS hasn't explicitly said, but likely they treat gold tokens the same as gold bullion for tax – meaning not like currency (which would be normal capital gains) but as collectibles. If so, that's a slight disadvantage for tokens vs. say gold ETF (though actually ETFs physically backed also are taxed as collectibles in the US). Still, clarity on that would help investors. If someone uses a gold token for a purchase, that triggers a taxable event (sale of the gold token), which could be a reporting headache.

Compliance: The US will enforce sanctions and AML vigorously on these tokens. Already Tether froze an address with XAUT linked to crime. We can expect more cooperation between blockchain analytics firms and regulators to watch flows. One legal grey zone: if a gold token is freely traded internationally, could it be used to avoid import/export controls? E.g., moving $1M of gold via a token instead of shipping bars avoids customs. The US could respond by working with international partners to treat redemption of tokens as import of gold – but that's tricky unless tokens are declared. It's an area to watch – if tokens became large, customs authorities might adapt their definitions (like including "digital representations of commodities" in their purview).

European Union – Implications:

Economically, MiCA may create the first truly **harmonized large market** for commodity tokens. Once an issuer is authorized, they can passport their gold token across all 27 EU states. This scale could encourage EU-based financial institutions to launch their own offerings (for example, one could envision the likes of Société Générale or Deutsche Börse issuing a gold token for European investors). That could drastically increase adoption within Europe, leveraging existing customer bases. For retail Europeans, a MiCA-compliant gold token might become as accessible as buying foreign currency or ETF units through their bank. This could increase competition for traditional gold investment products – if fees are lower and liquidity is good, some might prefer tokens to buying

coins (which have high premiums) or some might use tokens instead of gold ETFs if they value 24/7 trading and direct ownership. EU as a block might also use this to bolster the international role of the euro: interestingly, an asset-referenced token basket could include gold and euro; while that's beyond our scope, it shows the EU sees tokenization in strategic terms.

Also, EU industry could integrate tokenized gold into **supply chain finance**. Gold is used in manufacturing (electronics, jewelry). A token could be used to finance inventories or shipments – e.g., a jeweler could borrow against tokenized gold rather than physical in a warehouse. That could reduce cost and friction.

Legally, the EU with MiCA sets a precedent that others might follow. If MiCA's regime for ARTs is successful, other jurisdictions (like the UK or Canada) might adopt similar rules or even allow mutual recognition. This could create a more standardized global framework. One possible legal friction: **MiCA vs existing laws** – there's some overlap where something might be both an ART and another regulated product. For gold tokens, consider that historically, some EU countries might have treated a gold certificate as a derivative or a unit in a collective investment. MiCA should override that by classifying it as an ART, but the implementation period will reveal how clean that override is. Additionally, issuers have to comply with the EU's **consumer protection laws** (which go beyond just financial regulation). For example, unfair contract terms directive – the terms of a token (like redemption conditions) must not be unfair to consumers in EU. If, say, an issuer had a clause "we can delay your redemption for 6 months at our discretion," that might be challenged under EU consumer law if deemed unfair. So MiCA issuers will need to ensure their contracts align with those laws as well (MiCA doesn't exist in a vacuum; general laws still apply).

Another implication in EU is **financial stability**: stablecoins referencing fiat are being carefully limited in scale under MiCA if they become significant. Gold tokens may not reach such "significant" status to worry central bankers, since gold's value is outside central bank control anyway. But if, hypothetically, millions of Europeans started using gold tokens as an alternative store of value, central banks could pay more attention. It somewhat competes with the idea of a CBDC or traditional bank deposits – money going into gold tokens is money not in bank accounts or not in government bonds. It's not yet at a scale to matter, but regulators keep an eye on trends like re-monetization of gold via tech.

Singapore – Implications:

Economically, Singapore benefits from tokenization by reinforcing its image as a fintech hub. By allowing Digix and now others, MAS signaled it welcomes asset tokenization, which attracts projects (e.g., SDAX's gold token, Trovio moving to SG post-PMGT). This can increase financial activity – trading, custody, tech development – around asset tokens. Singapore, being a smaller market, won't drastically shift global gold flows, but it can capture niche markets (for instance, Southeast Asian high-net-worth individuals might choose a Singapore gold token for ease and tax reasons rather than storing gold in Switzerland). It could also integrate with Singapore's push into digital banking – imagine local digital banks offering accounts where balances can be toggled between SGD, USD, and gold tokens seamlessly. That would be innovative for wealth management. The presence of tokenized gold also offers alternatives for the large community of foreign workers and expats in Singapore who might remit or save in gold as a stable asset.

Legally, Singapore will likely refine its frameworks as the market evolves. They might introduce specific guidelines for asset-backed tokens if needed, or bring them under a broader anticipated omnibus crypto regulation. The new Financial Services and Markets Act 2022 gave MAS some

extra-territorial reach (e.g., requiring even overseas firms serving Singapore to be licensed, in some cases). If overseas gold token issuers start targeting Singapore clients aggressively, MAS may enforce that provision to make them register or stop. Singapore's common law system also means court decisions can shape things – e.g., if there's a dispute over a tokenized asset contract, a High Court ruling on how to interpret the sale of a token representing a commodity would set precedent. Singapore courts have already handled crypto cases (like Quoine Pte Ltd v B2C2 Ltd regarding a trading error) and are versed in dealing with novel assets. A future case might deal with, say, a claim of misrepresentation in a gold token's marketing, or a vault dispute. Those outcomes will refine legal understanding. Singapore's tax authority (IRAS) might also clarify that trading gold tokens is exempt from GST like physical gold – it likely is, under existing rules, but formal clarification would be good. Additionally, if gold tokens become widespread, regulators might coordinate with jewelry and precious metal regulators – to ensure these digital gold do not inadvertently become a channel for unmonitored commodities trade. For instance, Singapore requires cash transactions above a threshold in precious stones/metals to be reported for AML. If those flows move to tokens, MAS and other agencies might coordinate to track large token transactions similarly.

Switzerland – Implications:

Economically, Switzerland continues to strengthen its position as a leader in blockchain finance. With examples like SEBA's Gold Token, Swiss banks are innovating. This provides Swiss financial institutions new offerings (especially to wealthy clients who often hold gold). A Swiss bank can now offer tokenized gold custody integrated with crypto services, potentially attracting assets that might have gone to offshore competitors or to non-bank crypto platforms. For the gold industry, Swiss refiners and vault providers gain a new business line servicing token issuers. If DGLD or others scaled, it might incrementally increase throughput for refiners (token sponsors buying physical to back tokens) – though global gold demand is huge, tokens are still a tiny slice. One interesting scenario: because Swiss law is friendly, a lot of global projects might route through Switzerland. For instance, a UAE or Russian or Latin American entity might establish a Swiss subsidiary to issue a gold token under Swiss law for credibility. That could bring capital and talent into Switzerland, similar to how the ICO boom brought many projects to Crypto Valley (Zug).

Legally, Switzerland's clear definitions reduce grey areas domestically. A remaining frontier is perhaps **integration with traditional securities law**: now that ledger-based securities are a reality, some issuers might consider tokenizing gold not as a direct claim, but as a structured product (like a bond payable in gold). That would put it under FinSA/FinIA. Swiss law would allow it (as shown by Sygnum's tokenized art fund shares, etc.). If someone did, say, a tokenized gold ETF that's legally a security, it would trade under securities law but in token form – merging the old and new. FINMA would then oversee prospectus and trading aspects. That could be a path for large-scale adoption (institutions might trust a security token more because it fits in their current regulatory frameworks). How Switzerland handles **cross-border token business** is another legal angle: Swiss banks can serve non-Swiss with these tokens, but must mind foreign laws. If a Swiss bank sells its gold token to a US person, could that trigger SEC issues? Possibly (though likely exempt if just commodities). Swiss entities will tread carefully, often limiting some services to approved jurisdictions.

Another implication is **AML balancing with privacy**: Switzerland values financial privacy historically (within limits of law). Asset tokens on chain could be traced by anyone. Projects like DGLD to their credit publicly boast compliance rather than privacy. But if a Swiss company wanted to create a more private gold token (some tech to shield transactions, for instance), they'd clash with

regulators given FATF rules. So Switzerland might be where the tension between crypto privacy ideals and regulatory transparency comes to head, but given the direction (travel rule enforcement, etc.), regulatory demands will likely prevail.

Australia – Implications:

Economically, Australia's experience shows both potential and pitfalls. The potential is that Australia, with its rich gold reserves and trusted institutions like Perth Mint, could have been a leader. PMGT's failure doesn't mean the end; private sector might step up in new ways. If, for example, a well-run startup partners with multiple Australian vaults and maybe gets an AFSL to issue a gold token, they could capture not just Australian investors but also Asia-Pacific investors who trust Australian rule of law but want a digital asset. It could also help the **Australian gold mining industry** – miners might issue forward contracts as tokens to raise capital, or offer tokenized gold streams to investors (sort of like gold-linked bonds). That would be an innovative financing model in mining (some have done streaming deals and gold bonds, tokenization could broaden that market by making it more liquid). For Australian retail, given the robust regulatory environment, a new token product would likely be designed to meet high consumer protection standards, which could set it apart in safety (if not in yield).

Legally, Australia is in a transitional regulatory phase. Their token mapping and eventual framework might categorize gold-backed tokens explicitly. If they call them "stablecoins" or similar, they might impose requirements (like audit, minimum capital for issuers, redemption guarantees). On one hand, that would increase safety; on the other, it might deter small innovators. If the bar is too high (like needing a bank license), only big players (maybe the Perth Mint again or big banks) would do it, possibly stifling diversity. However, after seeing PMGT's issues, regulators might require any public token to have independent oversight, maybe even an external trustee holding the gold (like how SDAX did with a trust structure in SG). Legally, one interesting area is **liability**: The Perth Mint had to contend with legal liability when PMGT was out and the controversies hit. Even though PMGT holders weren't harmed, hypothetically if the Mint lost some gold due to AML negligence and it impacted GoldPass, token holders might have tried legal action. Government ownership complicated things (sovereign immunity to an extent). In future, private issuers may include legal clauses to protect themselves from certain liabilities (like force majeure, extreme market conditions). How ASIC and courts view such clauses (fair or not) will shape what protections investors truly have.

Australia's strict advertising laws for financial products (can't use certain terms, must include appropriate risk warnings) would also influence how gold tokens are marketed. Possibly in future one might see a TV ad: "Invest in digital gold, fully regulated by ASIC, etc." but it will come with disclaimers akin to any investment ad.

In summary, across jurisdictions tokenized precious metals are bringing about:

- **Greater accessibility** to gold and silver as investment assets (small denominations, easy transfer) – which could increase overall demand for these metals slightly, and shift some existing demand into more digital channels.
- A need for **robust legal structures** to ensure these digital assets faithfully represent legal claims on physical assets – we've seen best practices (trusts, audits) and poor practices (opaque issuers).
- **Regulatory innovation** – jurisdictions are updating or clarifying laws (UAE's token regulations, EU's MiCA, etc.) which will serve as legal infrastructure for other tokenized assets

beyond metals too.

- **Integration challenges** – merging old (physical commodity markets) with new (crypto markets) creates some frictions (custody, AML) but also synergies (collateral mobility, 24/7 trading, fractional ownership). Over time, we expect processes to smooth out (e.g., instant audit checks via blockchain, or global vault networks syncing with token ledgers in real-time).

For institutional investors, the implications are that tokenized metals could become a regular part of portfolio strategy – offering the stability of gold with the agility of crypto. For regulators, the challenge is to harness the benefits (efficiency, transparency) while mitigating risks (fraud, evasion). And for retail users, they stand to gain more choice and control, but also carry the responsibility to understand the products (knowing that not all gold tokens are equal – some are government-backed, some are not; some are insured, others rely on code).

As this space evolves, we can expect some convergence: more regulatory clarity (so fewer grey zones), perhaps some consolidation (the strongest projects survive), and broader acceptance in mainstream finance (maybe one day, gold tokens could be listed on major stock exchanges or used by central banks for reserves). The trajectory suggests that tokenization of commodities is here to stay, and precious metals are just the first wave – experiences here will inform tokenization of other commodities (oil, carbon credits, etc.) in these same jurisdictions, each with their own tweaks but grounded in what we learn now from gold and silver tokens.

Conclusion:

Module 2 has explored how the tokenization of gold and silver is navigating the complex interplay of regulatory frameworks, technical feasibility, and market demand across key global jurisdictions. From the UAE's proactive rule-making and ambitious gold token hubs, to the US's reliance on existing laws and reputable firms like Paxos, to the EU's formalization under MiCA, each region contributes to shaping a new asset class – digital precious metals. Institutional use cases, such as treasury hedging via gold tokens or launching gold-backed digital funds, are gradually becoming reality, while retail use cases like peer-to-peer gold saving or using tokenized gold as "digital cash" are emerging wherever regulation permits. Comparative analysis shows a convergence towards certain best practices: full reserve backing, clear legal rights for token holders, strong AML controls, and transparent operations are universally acknowledged as essential, whether enforced by law or by market pressure. The case studies illustrated not only success stories like PAX Gold but also teachable failures like PMGT and Digix, emphasizing that technology must be paired with trust, and trust is earned through compliance, integrity, and sometimes government support.

Overall, tokenized precious metals present an innovative hybrid: marrying the timeless value of physical gold and silver with the efficiency of blockchain. For institutional investors, this opens new arbitrage and diversification opportunities; for regulators, it presents a chance to modernize commodity markets under their oversight; for retail users, it offers empowerment to own and transfer hard assets with unprecedented ease. As legal grey zones gradually get filled in with legislation and precedent, the path is being paved for tokenized commodities to move from the periphery of crypto markets into the mainstream of global finance. In the forthcoming modules of this analysis, we will delve into related topics such as technology infrastructure for tokenization (Module 3) and risk management and auditability (Module 4), building on the regulatory and case study insights covered here in Module 2.

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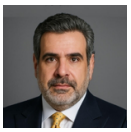
Nicholas Kairis	Senior Partner - Financial Markets and Digital Assets	USA, Greece, Germany, Cyprus, UAE	
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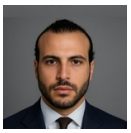
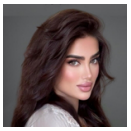
Adil A. Babiker	Senior Partner - Insurance and Islamic Finance (Sovereign/Private)	Sudan, Saudi Arabia, USA, UAE, Qatar, Bahrain	

Name	Designation	Regions of Operation	
Abdullah Metwalli	Co-founder & Managing Legal Associate - Financial Markets & Digital Assets	UAE, United Kingdom, Australia	
Vladyslav Mozharov	Senior Advisor - High Value Real Estate Tokenization	Ukraine, Russia, Turkey, Italy, UAE	
Yuki Yoshizawa	Senior Investment Advisor - M&A and Medical Technology	Japan, UAE	
Luca Rubino	Senior Venture Capital Advisor - AI and Cybersecurity	USA, Italy, France, UAE	
Ibrahim Igbariye	Investment Advisor - Real Estate Tokenization	Israel, UAE	
Salwa Alhawamda	Business Setup and CSP Advisor - Fintech	Canada, UAE	
Farhan Ahmed	Barrister at Law - Arbitration and Disputes Resolution	United Kingdom, Singapore, UAE	

Name	Designation	Regions of Operation	
Kamal Touma	Partner CMO	UAE	
Wajeeha Zia	Legal Associate - Financial Markets and Digital Assets	Pakistan, UAE	
Moamen Mohamed	Legal Associate - Financial markets and Digital Assets	Egypt, UAE	

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