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Convergence of Banking Law and Commodity Futures Law in the Practice of Bullion Banking

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Abstract

This research examines the evolving legal convergence between banking law and commodity futures law in the governance of bullion banking activities. Bullion banking represents a hybrid financial practice in which gold functions simultaneously as a physical commodity, a financial asset, and an underlying instrument in derivatives markets. Through various mechanisms such as unallocated gold accounts, gold lending and leasing, swaps, and over-the-counter derivatives transactions, bullion banks perform activities that both resemble and combine the functions of deposit-taking institutions and commodity market intermediaries. This dual characteristic challenges traditional regulatory classifications and creates tensions between prudential supervision in the banking sector and market conduct regulation in the derivatives sector. Using a normative juridical approach supported by comparative analysis of several jurisdictions, this research evaluates how existing legal frameworks regulate capital adequacy, asset segregation, insolvency mechanisms, transparency, and systemic risk in gold-related transactions. The analysis reveals the presence of regulatory fragmentation, potential overlap of supervisory authorities, and legal uncertainty regarding the proprietary status of gold claims, particularly within unallocated gold account structures. Such conditions may create opportunities for regulatory arbitrage while simultaneously increasing risks to financial system stability. The findings of this research indicate that a functional and activity-based regulatory model offers a more coherent approach to addressing the hybrid nature of bullion banking. Therefore, clearer legal classification of bullion-related products, harmonization of prudential and derivatives standards, and stronger cross-sector coordination among supervisory authorities are required in order to establish a more integrated legal framework, safeguard market integrity, and accommodate financial innovation in precious metals markets.

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Abstrak

Penelitian ini mengkaji perkembangan konvergensi hukum antara hukum perbankan dan hukum perdagangan berjangka komoditas dalam pengaturan aktivitas bullion banking. Bullion banking merupakan praktik keuangan hibrida di mana emas berfungsi secara simultan sebagai komoditas fisik, aset keuangan, serta instrumen dasar dalam pasar derivatif. Melalui berbagai mekanisme seperti unallocated gold accounts, gold lending dan leasing, swap, serta transaksi derivatif over-the-counter, lembaga bullion bank menjalankan aktivitas yang menyerupai sekaligus menggabungkan fungsi lembaga penghimpun dana dengan perantara pasar komoditas. Karakteristik ganda tersebut menimbulkan tantangan bagi klasifikasi regulasi tradisional serta memunculkan ketegangan antara pengawasan prudensial sektor perbankan dan regulasi perilaku pasar dalam sektor derivatif. Dengan menggunakan pendekatan yuridis normatif yang didukung analisis perbandingan terhadap beberapa yurisdiksi, penelitian ini mengevaluasi bagaimana kerangka hukum yang ada mengatur aspek kecukupan modal, pemisahan aset, mekanisme kepailitan, transparansi, serta risiko sistemik dalam transaksi terkait emas. Hasil analisis menunjukkan adanya fragmentasi regulasi, potensi tumpang tindih kewenangan pengawasan, serta ketidakpastian hukum mengenai status kepemilikan klaim emas, khususnya dalam struktur akun emas tidak teralokasi. Kondisi tersebut berpotensi membuka ruang bagi praktik arbitrase regulasi sekaligus meningkatkan risiko terhadap stabilitas sistem keuangan. Hasil penelitian ini menunjukkan bahwa model regulasi berbasis fungsi dan aktivitas dapat menjadi pendekatan yang lebih koheren dalam merespons karakter hibrida bullion banking. Oleh karena itu, diperlukan klasifikasi hukum yang lebih jelas terhadap produk bullion, harmonisasi standar prudensial dan derivatif, serta penguatan koordinasi lintas sektor antarotoritas pengawas guna menciptakan kerangka hukum yang lebih terpadu, menjaga integritas pasar, dan tetap mengakomodasi inovasi keuangan dalam pasar logam mulia.

INTRODUCTION

In recent decades, gold has undergone a notable transformation in the way it functions within the global economic system. Historically, gold was widely recognized as a tangible store of value an asset preserved in physical form by individuals, institutions, and sovereign authorities to safeguard wealth against inflation, currency instability, or financial crises¹. However, developments in the global financial system have gradually reshaped the role of gold beyond its traditional economic function. Rather than remaining confined to physical ownership and direct exchange, gold has increasingly become integrated into modern

¹ Suliman Alshahmy, "Islamic Dinar Cryptocurrency: Bridging Tradition and Technology," in *The Cryptocurrency Market: Investigating Trust, Technology, and Regulations* (Springer, 2025), 127–55.

financial markets through a process of financialization. As a result, gold is no longer viewed solely as a commodity or a reserve asset but has evolved into a financial instrument that participates actively within global capital markets².

This transformation is closely linked to the expansion of sophisticated financial services surrounding precious metals, particularly within the institutional framework commonly referred to as bullion banking. Bullion banking represents a specialized segment of the financial sector in which banks and financial institutions provide a range of services connected to the trading, storage, financing, and risk management of gold and other precious metals³. While traditional bullion services once focused primarily on the safekeeping of physical gold, the modern bullion banking system has expanded far beyond custodial activities. Financial institutions now facilitate various forms of financial transactions linked to gold that do not necessarily involve the transfer of physical bullion.

Among the services commonly offered within the bullion banking system are unallocated gold accounts, gold lending and leasing arrangements, swap transactions, and derivative-based financial products⁴. Unallocated gold accounts, for example, allow clients to hold claims on gold without possessing specifically segregated physical bullion. Instead, the client's ownership is represented as a general claim against the institution's gold holdings, which enables greater liquidity and flexibility in trading. In addition, gold lending and leasing arrangements enable financial institutions to use gold as a financing asset, allowing market participants to borrow gold for trading or hedging purposes while compensating lenders through interest-like arrangements. These mechanisms significantly expand the financial uses of gold beyond its traditional physical function⁵.

The growth of derivative transactions further illustrates how deeply gold has become embedded in modern financial markets. Instruments such as forwards, futures, swaps, and options linked to gold prices enable investors and institutions to hedge risks, speculate on

² Lorrita Ogu et al., "Comparative Analysis of the Legal and Policy Framework for Financial Technology in Nigeria and Selected Jurisdictions," *NIU Journal of Legal Studies* 11, no. 1 (2025): 115–28.

³ J Nicholas Ziegler, Konrad Posch, and Thomas Nath, "The Limits of Interest: Moral Economy and Public Engagement in the Regulation of Derivatives in the United States," *Regulation & Governance* 18, no. 4 (2024): 1309–31.

⁴ Pierre de Gioia Carabellese and Camilla Della Giustina, *Banking Law and Financial Regulation in the UK and EU: Technology, Human Rights and Crises* (Routledge, 2024).

⁵ Sofyan Sauri, Handar Subhandi Bakhtiar, and Atik Winanti, "Bullion Bank Regulation in Indonesia in an Effort to Protect Customers," *Lead Journal of Economy and Administration* 3, no. 4 (2025): 171–77.

price movements, and manage exposure to commodity fluctuations⁶. Through these mechanisms, gold operates as an integral component of the broader financial architecture that facilitates credit intermediation, liquidity provision, and risk transfer across markets. Consequently, gold increasingly functions not merely as a tangible commodity but as a complex financial asset circulating within a highly interconnected financial ecosystem⁷.

This financialization of gold also reflects broader structural changes within global capital markets. As financial innovation expands and markets become increasingly interconnected, commodities such as gold are progressively incorporated into sophisticated financial instruments that resemble traditional banking products. In practice, many bullion banking activities exhibit characteristics that closely resemble deposit-taking and credit creation. For instance, when financial institutions accept deposits in the form of unallocated gold accounts, the gold effectively becomes part of the institution's balance sheet and may be used to support further transactions, including lending or derivative trading activities. In this sense, bullion banking can perform a role similar to that of conventional banking institutions that intermediate between depositors and borrowers.

The hybrid nature of bullion banking, however, introduces significant regulatory complexity. Activities associated with bullion banking often fall at the intersection of multiple regulatory domains, particularly banking regulation and commodity market regulation. From the perspective of banking law, activities such as accepting deposits in the form of gold accounts or engaging in lending transactions resemble traditional banking functions that typically fall within the scope of prudential regulation. Banking authorities generally impose strict requirements regarding capital adequacy, liquidity management, risk control, and depositor protection to ensure the stability of financial institutions engaged in deposit-taking activities⁸.

At the same time, a substantial portion of bullion-related transactions occurs within commodity derivatives markets. Financial instruments such as gold futures, forwards, and swaps are commonly regulated under commodity futures legislation, which focuses on

⁶ Anindya Primadigantari and Nyoman Bagiastra, "Legality of Using Forex Trading Robot Applications in Commodity Futures Trading," *Journal of World Science* 1, no. 7 (2022): 551–60.

⁷ Frank Tenkorang and Greg Nies, "Manipulation in the Agricultural Commodities Futures Market: Application of Benford's Law," *Mountain Plains Journal of Business and Technology* 24, no. 1 (2023): 87.

⁸ I Gede Agus Kurniawan, Lourenco de Deus Mau Lulo, and Fradhana Putra Disantara, "IUS Constituendum of Expert Advisor in Commodity Futures Trading: A Legal Certainty," *Jurnal IUS Kajian Hukum Dan Keadilan* 11, no. 1 (2023): 31–45.

maintaining transparent and fair-trading environments. Regulatory frameworks governing commodity markets typically emphasize market conduct rules, reporting requirements, and mechanisms designed to prevent price manipulation or excessive speculation. Therefore, bullion banking activities frequently operate within a regulatory environment shaped by both prudential banking rules and market-based commodity regulations⁹.

The coexistence of these two regulatory frameworks creates a structural challenge for policymakers and regulators. Because bullion banking involves elements of both banking and commodity trading, it is not always clear which regulatory regime should take precedence in overseeing specific transactions or financial products¹⁰. In many jurisdictions, responsibilities for supervising bullion-related activities are divided between multiple regulatory authorities, including banking regulators, commodity futures commissions, and financial market supervisors. Such fragmentation can result in overlapping mandates and inconsistent regulatory treatment across similar financial activities¹¹.

This fragmentation has important implications for legal certainty and financial stability. When the classification of bullion-related products remains ambiguous, financial institutions may face uncertainty regarding the applicable regulatory standards. For example, different regulatory regimes may impose distinct requirements concerning capital treatment, asset segregation, disclosure obligations, and risk management practices. If bullion-related products are classified inconsistently across regulatory frameworks, institutions may encounter conflicting obligations that complicate compliance and oversight. Moreover, fragmented supervision may weaken the effectiveness of regulatory monitoring, particularly when activities move across institutional or jurisdictional boundaries.

Another significant concern relates to investor and customer protection. In the context of bullion banking, clients may hold claims against financial institutions in the form of gold accounts or derivative contracts rather than direct ownership of physical bullion. The legal status of these claims especially in cases involving institutional insolvency may vary depending on how the underlying financial product is classified within the regulatory

⁹ Tegar Wahyudi et al., “Penguatan Hukum Ekonomi Syariah Pada Lembaga Keuangan Berdasarkan UU Nomor 21 Tahun 2011 Tentang Otoritas Jasa Keuangan,” *Al-Ahkam: Jurnal Ilmu Syari’ah Dan Hukum* 7, no. 2 (2022): 189–202.

¹⁰ Henri B Meier et al., “The Swiss Banking System,” in *Swiss Finance: Banking, Finance, and Digitalization* (Springer, 2023), 63–157.

¹¹ Wardah Yuspian et al., “Personal Data Protection Law in Digital Banking Governance in Indonesia,” *Studia Iuridica Lublinensia* 32, no. 1 (2023): 99–130.

framework. Without clear legal categorization, questions may arise regarding asset segregation, priority of claims, and the extent to which customers are protected under banking or securities laws. Such uncertainties highlight the need for a coherent regulatory approach capable of addressing the unique characteristics of bullion-based financial services¹².

In addition, regulatory fragmentation may inadvertently create opportunities for regulatory arbitrage. When market participants can structure transactions in ways that place them under the jurisdiction of less stringent regulatory regimes, the effectiveness of financial oversight may be undermined. This risk becomes particularly relevant in globally interconnected markets where financial institutions operate across multiple jurisdictions with varying regulatory standards. Given the growing integration of gold markets with international financial systems, inconsistencies in regulatory treatment could potentially amplify systemic vulnerabilities during periods of market stress¹³.

Against this background, the present article seeks to examine the legal and regulatory challenges associated with bullion banking in a systematic manner. Specifically, the study addresses four central research questions. First, how should bullion banking activities be legally characterized within the framework of banking law? Second, how are such activities regulated within commodity futures and derivatives markets? Third, where do normative overlaps, regulatory inconsistencies, or potential gaps emerge between these two regulatory regimes? Fourth, what form of legal convergence or regulatory integration may be justified in order to ensure a coherent and stable regulatory framework?

To explore these questions, this research adopts a normative juridical methodology that emphasizes the analysis of legal norms and regulatory structures. The study relies primarily on statutory interpretation of relevant financial regulations governing banking activities, commodity derivatives markets, and precious metal transactions. In addition, the research incorporates a comparative analysis of selected jurisdictions that have developed distinct regulatory approaches to bullion banking and precious metal trading. Comparative analysis is particularly valuable in identifying regulatory practices that have proven effective in managing the hybrid nature of bullion-related financial services.

¹² Laura Grumann, Mara Madaleno, and Elisabete Vieira, "Early Adaptation to Sustainable Finance Regulation: How MiFID II Sustainability Preferences Affect the Range of Eligible Financial Instruments," *SN Business & Economics* 5, no. 10 (2025): 142.

¹³ Nils Herger, "Switzerland and Its Banks," *Frontiers in Economic History*, 2023.

By examining these legal frameworks, the study aims to clarify the hybrid legal character of bullion banking as an activity situated between banking intermediation and commodity market trading. Recognizing this dual nature is essential for developing regulatory strategies capable of addressing both prudential financial risks and market integrity concerns. Rather than treating bullion banking exclusively under one regulatory regime, the analysis considers the possibility of regulatory convergence that reflects the functional characteristics of the activities involved.

Ultimately, the findings of this study are intended to contribute to the development of a more integrated and coherent regulatory framework for bullion banking. Such a framework would help strengthen legal certainty for financial institutions and market participants while ensuring appropriate safeguards for investors and customers. At the same time, improved regulatory coordination may enhance the resilience of financial systems by reducing the potential risks associated with fragmented supervision and regulatory ambiguity. In an era where gold markets are increasingly intertwined with global financial structures, establishing a clear and balanced regulatory approach becomes essential for maintaining both market integrity and systemic stability.

RESULTS AND DISCUSSION

Conceptual Framework: Bullion Banking as a Hybrid Financial Activity

Bullion banking must be understood as a composite financial activity situated at the intersection of property law, banking intermediation, and commodity derivatives trading. Its hybrid character derives from both its operational structure and the dual legal nature of gold itself. Unlike conventional banking products that are purely monetary, bullion banking transactions involve a commodity that retains physical existence while simultaneously functioning as a financial asset. This structural duality complicates legal classification and regulatory allocation.

From an operational perspective, bullion banking typically distinguishes between allocated and unallocated gold accounts. Allocated accounts are characterized by specific identification of gold bars or coins held in custody on behalf of the customer. In this arrangement, the client retains proprietary rights over designated assets, and the bank acts primarily as custodian or bailee. By contrast, unallocated accounts represent a claim to a quantity of gold without earmarking specific physical units. Here, the legal relationship more

closely resembles that of debtor and creditor, with the bank permitted to use pooled gold for lending, trading, or hedging purposes. This distinction has significant implications for insolvency treatment, asset segregation, and risk exposure¹⁴.

Beyond account structures, bullion banks engage in gold lending and leasing transactions, whereby physical gold is temporarily transferred in exchange for interest or lease rates. Such arrangements facilitate liquidity in precious metals markets but also replicate core features of credit extension. Similarly, gold swaps and forward contracts enable counterparties to exchange gold and currency positions at predetermined terms, integrating bullion markets with foreign exchange and derivatives trading systems. Clearing and settlement mechanisms, often involving netting and centralized counterparties, further embed bullion banking within global financial infrastructure¹⁵.

The hybrid nature of bullion banking is inseparable from the multifaceted legal character of gold. Gold remains tangible movable property capable of physical possession and ownership. At the same time, in modern financial practice, it functions as an investment asset recorded through book entries and electronic accounts. Moreover, gold frequently serves as the underlying commodity in futures, options, and over-the-counter derivatives contracts, thereby acquiring the attributes of a standardized financial instrument.

This duality generates tension between proprietary rights and purely contractual claims. In allocated structures, customers assert property-based entitlements. In unallocated arrangements, customers typically hold contractual claims against the institution's balance sheet. The conceptual framework of bullion banking therefore requires recognition of its blended legal identity, which challenges traditional doctrinal boundaries and necessitates coherent regulatory treatment across banking and commodity law regimes¹⁶.

Bullion Banking under Banking Law

Bullion banking, insofar as it involves deposit-like arrangements, maturity transformation, and credit intermediation, inevitably falls within the analytical domain of

¹⁴ Viacheslav M Shavshukov and Natalia A Zhuravleva, "National and International Financial Market Regulation and Supervision Systems: Challenges and Solutions," *Journal of Risk and Financial Management* 16, no. 6 (2023): 289.

¹⁵ Hoanh Le and Joseph M Santos, "To Dodd-Frank and Back: Regulatory Burden and the Economic Growth, Regulatory Relief, and Consumer Protection Act," *The American Economist* 68, no. 2 (2023): 189–215.

¹⁶ Michael K Adjemian et al., "Factors Affecting Recent Food Price Inflation in the United States," *Applied Economic Perspectives and Policy* 46, no. 2 (2024): 648–76.

banking law. Although gold is a commodity, bullion banking institutions frequently perform functions analogous to those of conventional banks: they accept client funds or gold balances, deploy those balances in lending or trading activities, and manage liquidity and counterparty risk. Consequently, prudential regulation becomes central to assessing the legal treatment of bullion-related activities¹⁷.

Prudential Regulation

Prudential oversight is primarily concerned with institutional resilience and systemic stability. Internationally, the principal reference point is the framework developed by the Basel Committee on Banking Supervision, operating under the auspices of the Bank for International Settlements. The Basel standards establish minimum capital requirements, leverage ratios, and liquidity metrics intended to absorb losses and mitigate contagion risk. Where bullion banking activities are conducted by licensed credit institutions, such activities are incorporated into the bank's risk-weighted asset calculations and capital adequacy assessments.

Capital adequacy requirements compel banks to maintain a prescribed ratio between regulatory capital and risk-weighted exposures. The treatment of precious metals within this framework depends on their classification whether as commodities, trading book positions, or exposures to counterparties. Gold held for trading purposes may attract market risk capital charges, while gold-related receivables or derivatives exposures generate counterparty credit risk requirements. The regulatory characterization of gold thus directly affects capital intensity and business incentives¹⁸.

Liquidity and reserve requirements further constrain bullion banking operations. Under liquidity coverage and net stable funding standards, institutions must hold sufficient high-quality liquid assets to withstand short-term stress scenarios. Questions arise as to whether physical gold or gold claims qualify as liquid assets for prudential purposes. Although gold is widely perceived as a store of value, regulatory liquidity classifications are more restrictive, focusing on instruments that can be readily monetized under stressed market conditions. Accordingly, bullion-related assets may be subject to haircuts or limited recognition in liquidity calculations.

¹⁷ Anton Badev et al., "Basel Committee on Banking Supervision," 2025.

¹⁸ Daniel Seabra Lopes, "Financial Regulation," *A Handbook of Economic Anthropology*, 2022, 473–86.

Systemic risk considerations are equally salient. Large-scale unallocated gold accounts and gold leasing transactions can generate maturity mismatches and interconnected exposures across financial markets. If bullion banks operate on a fractional reserve basis maintaining only a portion of physical gold against outstanding claims liquidity shocks could trigger rapid demands for delivery, with broader implications for financial stability. Prudential regulation therefore seeks to monitor concentration risk, leverage, and off-balance-sheet exposures linked to bullion activities¹⁹.

Deposit Classification and Custody Issues

Beyond prudential metrics, banking law must determine the legal characterization of bullion accounts. A central issue concerns unallocated gold accounts, which typically confer on customers a right to a specified quantity of gold without allocating identifiable bars. In many jurisdictions, such arrangements are construed as creating a debtor–creditor relationship rather than a custodial trust. The bank is permitted to use pooled gold or equivalent positions for its own purposes, subject to an obligation to redeliver gold upon demand.

This characterization carries significant legal consequences. If the relationship is custodial, customers retain proprietary rights over specific assets, which should be segregated from the institution’s estate in the event of insolvency. Conversely, if the relationship is one of debt, customers rank as unsecured creditors, exposed to the general insolvency regime. The absence of clear statutory classification may generate uncertainty, particularly where contractual documentation attempts to combine custodial language with operational practices resembling deposit-taking.

Insolvency implications are therefore critical. The enforceability of set-off rights, the recognition of client asset segregation, and the treatment of commingled gold holdings all depend on domestic insolvency law and regulatory guidance. Ambiguities in legal status may undermine market confidence, especially in periods of financial stress.

Consumer protection considerations also arise. Retail clients may not fully appreciate the distinction between allocated and unallocated accounts or the attendant risk profile. Banking law, through disclosure obligations and conduct-of-business rules, seeks to ensure transparency regarding the nature of the legal claim, the extent of asset segregation, and the

¹⁹ Giuliano G Castellano, “Don’t Call It a Failure: Systemic Risk Governance for Complex Financial Systems,” *Law & Social Inquiry* 49, no. 4 (2024): 2245–86.

absence or availability of deposit insurance coverage. Where bullion accounts fall outside conventional deposit guarantee schemes, regulators must consider whether additional safeguards are warranted²⁰.

Comparative Banking Regulation

Comparative analysis demonstrates variation in supervisory allocation and emphasis. In the United Kingdom, prudential and conduct oversight are institutionally separated between the Prudential Regulation Authority and the Financial Conduct Authority. Bullion banking activities conducted by authorized banks are subject to prudential standards, while client-facing aspects, including disclosure and market integrity, fall within conduct supervision. The United Kingdom's prominent bullion market amplifies the importance of coordinated oversight.

In the United States, banking institutions engaging in gold-related activities are supervised by federal banking regulators, including the Federal Reserve for bank holding companies and certain state member banks. Prudential standards incorporate Basel-derived capital and liquidity requirements, while additional constraints may arise from commodities and derivatives regulation. The dual regulatory environment increases the need for inter-agency coordination.

Switzerland, as a major center for precious metals trading and refining, regulates banks under the Swiss Federal Act on Banks and Savings Banks. Swiss supervisory practice integrates bullion activities into general prudential frameworks, with particular attention to risk management and capital adequacy for commodity exposures.

In Indonesia, banking supervision is centralized under the Otoritas Jasa Keuangan. Any domestic expansion of bullion banking services would therefore be assessed within the broader architecture of banking regulation, including capital requirements, risk management standards, and consumer protection obligations. Given the coexistence of commodity futures regulation in Indonesia, institutional coordination becomes essential to prevent regulatory fragmentation, bullion banking under banking law raises complex issues of prudential resilience, legal classification, and depositor protection. Its hybrid structure requires careful

²⁰ Duarte Saldanha Vieira et al., "Gold's Hedging and Safe Haven Properties for European Stock and Bond Markets," *Resources Policy* 85 (2023): 103817.

calibration of capital, liquidity, and supervisory standards to ensure that innovation in precious metals markets does not compromise systemic stability or legal certainty²¹.

Bullion Banking under Commodity Futures Law

While bullion banking is frequently examined through the lens of prudential banking supervision, a substantial portion of its activities falls within the normative sphere of commodity futures regulation. This is particularly evident where gold functions not merely as a physical asset held in custody, but as an underlying reference asset in standardized derivatives contracts and over-the-counter trading arrangements. Commodity futures law therefore becomes central in addressing transparency, market integrity, counterparty risk, and systemic interconnectedness arising from bullion-related transactions²².

Gold as a Commodity Futures Instrument

Gold occupies a distinctive position within commodity derivatives markets. Unlike perishable or industrial commodities, gold is widely held for investment and monetary purposes, and its market is deeply integrated with global financial systems. Standardized gold futures and options contracts enable market participants to hedge price risk, speculate on price movements, or manage inventory exposure. Such contracts typically specify quantity, purity, delivery location, and settlement date, thereby facilitating liquidity and price discovery.

For bullion banks, participation in gold futures markets serves multiple functions. It enables hedging of physical inventories, offsetting of unallocated account liabilities, and engagement in proprietary trading strategies. Options on gold futures add further flexibility, permitting structured risk management and leverage. From a legal standpoint, these instruments are subject to commodity futures legislation, which imposes requirements relating to contract standardization, exchange trading, reporting, and anti-manipulation safeguards.

In addition to exchange-traded derivatives, bullion banking frequently involves over-the-counter (OTC) gold derivatives, including forwards, swaps, and bespoke options. OTC contracts provide flexibility in tailoring maturity, volume, and settlement terms to counterparties' needs. However, the bilateral and less transparent nature of OTC markets has

²¹ Chad Fiechter et al., "An Evaluation of Corn Farmers' Use of Over-the-Counter Risk Management Products," 2025.

²² Baah Aye Kusi et al., "Global Financial Crisis, International Capital Requirement and Bank Financial Stability: An International Evidence," *Journal of Financial Regulation and Compliance* 31, no. 2 (2023): 237–58.

historically generated regulatory concern, particularly regarding counterparty credit risk and systemic contagion. Post-financial crisis reforms in several jurisdictions have introduced mandatory clearing, trade reporting, and margin requirements for certain classes of standardized OTC derivatives, thereby extending commodity futures regulation into what was once a largely private contractual domain.

Margin and clearing mechanisms are fundamental to commodity futures law. Initial and variation margin requirements ensure that parties maintain sufficient collateral to cover potential losses arising from price volatility. Central clearing counterparties (CCPs) interpose themselves between buyers and sellers, assuming counterparty risk and mitigating the risk of default cascades. For bullion banks, margin obligations can significantly affect liquidity management, especially during periods of heightened market volatility. Compliance with clearing mandates and collateral standards thus becomes an integral aspect of legal and operational risk management²³.

Market Supervision and Exchange Regulation

Commodity futures regulation is institutionally enforced through specialized supervisory authorities and regulated exchanges. In the United States, the Commodity Futures Trading Commission exercises primary jurisdiction over futures, options, and certain swaps involving commodities, including gold. The CFTC's mandate encompasses registration of intermediaries, oversight of designated contract markets, enforcement against market manipulation, and implementation of clearing and reporting requirements. Bullion banks engaging in derivatives activities may therefore fall within the CFTC's regulatory perimeter, either directly or through affiliated entities.

Futures exchanges, such as the Chicago Mercantile Exchange, operate as self-regulatory organizations subject to CFTC supervision. These exchanges establish contract specifications, position limits, delivery procedures, and disciplinary rules for members. Gold futures traded on such platforms provide standardized mechanisms for price discovery and risk transfer. The integration of bullion banking activities with exchange-traded contracts underscores the need for compliance with exchange rulebooks and federal commodities legislation.

²³ Constantinos Challoumis, "Connecting The Dots-The Money Cycle And Its Relationship With Financial Regulation," *SSRN Electronic Journal*, 2024.

In the United Kingdom, the bullion market has historically operated through a combination of statutory oversight and industry self-regulation. The London Bullion Market Association plays a central role in setting standards for market conduct, refining accreditation, and trading practices in the over-the-counter bullion market. Although not a statutory regulator in the same manner as a governmental authority, its rules and guidance significantly shape market structure and operational norms. Where derivatives and investment services are implicated, statutory frameworks under financial services legislation complement industry standards.

Market supervision also addresses concerns of price manipulation, insider trading, and abusive trading practices. Given gold's role as a global benchmark asset, distortions in derivatives markets can have far-reaching economic consequences. Commodity futures law therefore incorporates anti-manipulation provisions, position limits to curb excessive speculation, and reporting requirements designed to enhance transparency. For bullion banks with substantial market presence, adherence to these norms is essential to avoid enforcement actions and reputational harm.

Indonesian Commodity Futures Framework

In Indonesia, commodity futures activities are supervised by the Badan Pengawas Perdagangan Berjangka Komoditi (Bappebti). The primary legal foundation is the Indonesian Commodity Futures Trading Law, as amended, which regulates futures exchanges, clearing institutions, brokers, and derivative contracts based on commodities, including precious metals. This statute establishes licensing requirements, capital standards for intermediaries, and mechanisms for dispute resolution and market oversight.

Implementing regulations further specify contract standards, margin requirements, reporting obligations, and risk management procedures applicable to gold futures trading. Where bullion-related products are structured as standardized futures contracts or traded on licensed exchanges, they fall squarely within Bappebti's jurisdiction. The regulatory regime aims to ensure orderly trading, protect market participants, and maintain confidence in commodity markets.

However, if bullion banking services in Indonesia were to expand beyond exchange-traded futures into unallocated gold accounts or OTC derivatives linked to banking institutions, questions of jurisdictional overlap could arise between commodity futures

supervision and financial services regulation. The Indonesian framework thus illustrates the broader theme of regulatory convergence: bullion-related activities may straddle distinct legal domains, requiring coordination to prevent gaps or duplicative compliance burdens, under commodity futures law, bullion banking is regulated primarily through derivatives oversight, exchange supervision, margin and clearing requirements, and anti-manipulation safeguards. Gold's status as a standardized futures instrument subjects bullion banks to a distinct yet overlapping set of legal obligations. Effective governance of bullion markets therefore depends not only on prudential banking rules but also on robust commodity futures regulation capable of addressing market integrity and systemic risk in an integrated manner²⁴.

Regulatory Overlaps and Legal Gaps

The legal architecture governing bullion banking is characterized by structural overlap and normative discontinuity. Because bullion-related activities combine elements of deposit-taking, custody, credit intermediation, and derivatives trading, they do not fit neatly within a single regulatory category. This hybridity creates areas of concurrent jurisdiction, as well as spaces in which no authority exercises comprehensive oversight. The result is a regulatory landscape marked by ambiguity, fragmentation, and potential systemic vulnerability.

A central source of complexity lies in the hybrid classification of bullion accounts. Allocated accounts resemble custodial arrangements grounded in property law, while unallocated accounts more closely approximate unsecured deposit liabilities. Yet, in practice, contractual documentation may incorporate elements of both models. Customers may believe they retain ownership of gold, while the institution treats the account as a balance sheet liability capable of being deployed in trading or lending operations. Such conceptual ambiguity complicates regulatory characterization: banking supervisors may focus on prudential soundness, whereas commodity regulators may concentrate on trading conduct and market integrity. Without a uniform statutory definition, bullion accounts may oscillate between legal categories depending on functional interpretation.

This ambiguity often results in double regulatory exposure. Where bullion banking is conducted by licensed credit institutions that also participate in commodity derivatives markets, the same transaction may trigger prudential capital requirements and commodity

²⁴ Hossein Nabilou, "The Law and Macroeconomics of Custody and Asset Segregation Rules: Defining the Perimeters of Crypto-Banking," *Amsterdam Law School Research Paper*, nos. 2022-09 (2022).

margin obligations. For example, a gold swap used to hedge unallocated account liabilities may be subject to banking capital rules as well as derivatives clearing mandates. While dual oversight can enhance resilience, it may also produce inconsistent standards or duplicative compliance burdens. Institutions must navigate overlapping reporting requirements, supervisory examinations, and risk management frameworks that were not designed with hybrid products in mind.

Regulatory arbitrage becomes a foreseeable consequence of such fragmentation. Market participants may structure bullion products to fall within the less stringent of two regimes, or to exploit definitional thresholds. If unallocated gold accounts are characterized as commodity contracts rather than deposits, they may evade deposit insurance schemes and certain prudential safeguards. Conversely, structuring transactions as bespoke OTC agreements may avoid exchange-based position limits or transparency requirements. Arbitrage opportunities distort competition and undermine regulatory objectives by incentivizing formalistic classification over substantive risk assessment.

Insolvency and asset segregation issues further expose legal gaps. The proprietary status of gold held in pooled accounts is often uncertain, particularly where physical holdings are insufficient to match outstanding claims. In the event of institutional failure, courts must determine whether customers possess proprietary rights enforceable against specific assets or merely unsecured contractual claims. Divergent national insolvency laws complicate this analysis in cross-border contexts. Absent clear segregation requirements and transparent accounting, clients may discover that their expectations of ownership are legally unfounded. Such uncertainty can amplify panic during periods of market stress.

Bullion banking also exhibits characteristics commonly associated with shadow banking. When institutions create gold-denominated liabilities without maintaining equivalent physical reserves, they effectively engage in credit intermediation outside the conventional monetary base. These practices may generate leverage and maturity transformation analogous to those found in traditional banking, yet without equivalent prudential safeguards. If bullion liabilities circulate as near-money instruments in certain markets, their instability could have spillover effects on financial systems more broadly. Regulatory frameworks that focus narrowly on formal deposit-taking may fail to capture these functional risks.

Cross-border regulatory coordination presents an additional challenge. Bullion markets are inherently global: gold is traded, cleared, and stored across multiple jurisdictions,

often through complex chains of intermediaries. A single transaction may involve a bank incorporated in one country, a clearing counterparty in another, and physical storage in a third. Divergent regulatory definitions, capital treatments, and insolvency regimes create uncertainty regarding applicable law and supervisory competence. In the absence of harmonized standards or effective cooperation agreements, gaps may arise in oversight, particularly with respect to consolidated risk assessment and crisis management.

The cumulative effect of these overlaps and gaps is a regulatory environment that lacks coherence. While multiple authorities may assert jurisdiction over aspects of bullion banking, none may possess a comprehensive mandate to address its full risk profile. This fragmentation undermines legal certainty for market participants and complicates enforcement efforts. A purely sectoral approach dividing supervision strictly between banking and commodity futures regulators proves insufficient for activities that defy traditional boundaries.

Addressing these challenges requires a functional perspective that evaluates bullion banking according to the economic substance of its activities rather than formal labels. Clear statutory definitions of bullion accounts, harmonized capital and margin standards, explicit asset segregation requirements, and strengthened cross-border supervisory cooperation would reduce opportunities for arbitrage and enhance systemic resilience. Without such reforms, the hybrid nature of bullion banking will continue to generate regulatory ambiguity, exposing both institutions and clients to avoidable legal and financial risk.

Comparative Legal Analysis

The regulation of bullion banking demonstrates significant jurisdictional variation, reflecting differences in institutional design, market structure, and legal tradition. A comparative assessment of selected jurisdictions illustrates how banking law and commodity futures law intersect in distinct ways, and how institutional coordination or fragmentation affects regulatory coherence²⁵.

United Kingdom

²⁵ Daniel Bethlehem et al., *The Oxford Handbook of International Trade Law* (Oxford University Press, 2022).

In the United Kingdom, bullion banking operates within a dual framework that combines statutory financial regulation with robust market-based standards. The principal statutory regime is established under the Financial Services and Markets Act 2000 (FSMA), which provides the foundation for licensing, prudential supervision, and conduct oversight of authorized firms. Under the post-crisis “Twin Peaks” model, prudential oversight is exercised by the Prudential Regulation Authority, while conduct and market integrity supervision fall within the competence of the Financial Conduct Authority.

Bullion banks that are authorized deposit-taking institutions are subject to capital, liquidity, and risk management standards consistent with international Basel principles. At the same time, derivatives and investment activities linked to gold fall within FSMA’s regulated activities framework, requiring compliance with conduct-of-business rules, transparency obligations, and market abuse prohibitions.

Parallel to statutory regulation, the United Kingdom hosts one of the world’s most significant over-the-counter gold markets, organized around the London Bullion Market Association (LBMA). Although the LBMA is not a public authority, its rulebooks and standards particularly regarding market practices, settlement procedures, and good delivery criteria play a quasi-regulatory role. This coexistence of formal statutory oversight and industry self-regulation produces a layered model. While effective in many respects, it can also blur accountability lines, particularly where bullion-specific risks fall between prudential and conduct mandates.

United States

In the United States, bullion-related activities are shaped by a more explicitly divided regulatory structure. Banking institutions are supervised under federal banking statutes, with prudential oversight provided by authorities including the Federal Reserve, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation. Capital adequacy, liquidity requirements, and risk management obligations apply to gold exposures held on balance sheet.

Simultaneously, gold futures, options, and certain swaps are regulated under the Commodity Exchange Act (CEA). The CEA vests authority in the Commodity Futures Trading Commission (CFTC) to supervise derivatives markets, register intermediaries, enforce anti-manipulation rules, and mandate clearing and reporting for standardized

contracts. Gold futures traded on designated contract markets, such as the Chicago Mercantile Exchange, fall squarely within this statutory regime.

This bifurcated system results in concurrent oversight where banking institutions engage in commodity derivatives transactions. Post-financial crisis reforms, particularly under the Dodd–Frank Act, have expanded clearing and margin requirements for swaps, thereby intensifying interaction between prudential regulators and the CFTC. Although inter-agency coordination mechanisms exist, overlapping jurisdiction can create interpretative tensions, especially in determining whether a given gold-related product constitutes a deposit, a security-based swap, or a commodity derivative. Nonetheless, the U.S. model demonstrates relatively clear statutory demarcations, supported by detailed rulemaking and enforcement practice.

Switzerland

Switzerland presents a distinctive approach grounded in its longstanding role as a global hub for precious metals refining and storage. Banks are governed by the Swiss Federal Act on Banks and Savings Banks, which establishes licensing, capital, and supervisory standards. Gold and other precious metals are commonly integrated into banking services, including custody, trading, and account-based holdings.

Swiss law generally treats precious metals held in allocated form as client property subject to segregation. Unallocated accounts, however, are typically structured as claims against the bank. Supervisory practice emphasizes risk management and capital adequacy rather than categorical separation between commodity and banking activities. In this respect, Switzerland tends toward functional integration: bullion-related services offered by banks are absorbed into the broader prudential framework rather than treated as a separate regulatory domain.

While derivatives trading remains subject to financial market legislation and clearing obligations, the Swiss model reflects a relatively cohesive supervisory philosophy. By embedding precious metals activities within general banking oversight, it mitigates some of the fragmentation observed elsewhere. Nevertheless, cross-border exposures and international clearing arrangements still necessitate coordination with foreign regulators.

Indonesia

Indonesia illustrates the challenges of emerging regulatory convergence in a dual-authority structure. Banking activities are regulated under the Law No. 7 of 1992 concerning Banking, as amended, with supervisory authority vested in the Otoritas Jasa Keuangan (OJK). OJK is responsible for licensing banks, enforcing prudential standards, and ensuring consumer protection in the financial services sector.

Commodity derivatives trading, by contrast, is governed by the Law No. 10 of 2011 concerning Commodity Futures Trading, which amended the earlier 1997 statute. Supervisory authority lies with the Badan Pengawas Perdagangan Berjangka Komoditi (Bappebti). This regime regulates futures exchanges, clearing institutions, brokers, and standardized commodity contracts, including those based on gold.

Should bullion banking services develop domestically particularly unallocated gold accounts or structured gold derivatives offered by banks jurisdictional overlap may arise. If a bank provides gold accounts resembling deposits, OJK's prudential mandate is engaged. If the same institution facilitates standardized gold futures or derivative contracts, Bappebti's authority becomes relevant. Without explicit statutory clarification, questions may emerge regarding primary oversight responsibility, capital treatment, and client asset protection.

The Indonesian framework thus presents potential institutional fragmentation. While both OJK and Bappebti operate under clear legislative mandates, coordination mechanisms must be sufficiently robust to prevent regulatory gaps or duplicative compliance burdens. Policy coherence requires alignment in definitions, reporting standards, and enforcement strategies, particularly where hybrid products blur traditional sectoral boundaries.

Evaluation of Institutional Fragmentation and Policy Coherence

Across these jurisdictions, differing models of interaction between banking and commodity futures law reveal varying degrees of coherence. The United Kingdom combines statutory supervision with influential market self-regulation, producing flexibility but also complexity. The United States maintains clearer statutory demarcations, yet faces challenges of inter-agency overlap. Switzerland leans toward integrated prudential oversight, embedding precious metals within general banking law. Indonesia, like many emerging markets, must manage dual supervisory structures with evolving coordination mechanisms.

A comparative perspective underscores that fragmentation is not merely a function of multiple regulators, but of insufficient functional alignment. Where regulatory mandates are

defined by institutional boundaries rather than economic substance, hybrid activities such as bullion banking risk falling between regimes. Conversely, systems that adopt activity-based classification and structured inter-agency cooperation are better positioned to maintain policy coherence. Ultimately, effective regulation of bullion banking requires clarity in legal characterization, harmonized prudential and derivatives standards, and institutional coordination capable of addressing cross-sector and cross-border risks. Comparative analysis demonstrates that while no single model is definitive, greater functional integration and explicit statutory guidance are essential to reducing fragmentation and enhancing systemic stability.

Toward a Convergent Regulatory Model

The hybrid nature of bullion banking necessitates a regulatory response that transcends rigid sectoral classifications. Traditional distinctions between banking law and commodity futures law are increasingly inadequate to address financial activities that simultaneously involve deposit-like liabilities, commodity trading, and derivative exposures. A convergent regulatory model should therefore be grounded in a functional approach, focusing on the economic substance and risk profile of activities rather than their formal designation.

A functional approach to financial regulation evaluates transactions according to the risks they generate credit risk, market risk, liquidity risk, and operational risk irrespective of whether they are labeled as deposits, commodities, or derivatives. Under this perspective, unallocated gold accounts that create balance sheet liabilities comparable to deposits should attract prudential safeguards equivalent to those imposed on conventional banking products. Similarly, gold derivatives that transfer price risk should be subject to robust market conduct and clearing requirements, regardless of whether they are embedded within banking operations. By aligning regulation with function, authorities can reduce opportunities for formalistic structuring and regulatory arbitrage.

Institutional design must support this functional orientation. An integrated supervisory architecture does not necessarily require the consolidation of all regulators into a single authority; rather, it demands structured coordination, information sharing, and joint oversight mechanisms. Memoranda of understanding, coordinated examinations, and shared reporting systems can mitigate the fragmentation that arises when prudential and commodity regulators operate in isolation. Where bullion banking institutions are subject to both prudential

supervision and derivatives oversight, supervisory colleges or inter-agency task forces may provide an effective mechanism for consolidated risk assessment.

Regulatory convergence also requires harmonized capital and margin treatment. Disparities between prudential capital requirements for on-balance-sheet gold exposures and margin obligations for derivative positions may distort risk management incentives. A coherent framework should ensure that economically equivalent exposures attract comparable regulatory burdens. This does not imply identical rules, but rather calibrated alignment that reflects aggregate risk. Harmonization reduces the likelihood that institutions will shift activities between balance sheet and derivatives markets solely to exploit differential regulatory treatment.

Transparency is another essential pillar of convergence. Unallocated gold accounts, in particular, present heightened opacity regarding asset backing, reserve practices, and insolvency status. Enhanced disclosure obligations should clearly inform clients whether their claims constitute proprietary rights in segregated assets or unsecured contractual claims against the institution. Periodic reporting of aggregate gold liabilities and physical holdings would strengthen market discipline and reduce the risk of destabilizing uncertainty during periods of stress. Transparency requirements should be embedded within both prudential and market conduct frameworks to ensure consistency.

A further element of reform involves explicit statutory classification of bullion banking activities. Legislatures should clarify the legal nature of allocated and unallocated gold accounts, the applicability of deposit insurance schemes, and the treatment of gold-related derivatives conducted by banks. Clear definitions reduce interpretative ambiguity and provide legal certainty for market participants. Statutory guidance should also delineate supervisory competence where activities overlap, thereby minimizing jurisdictional disputes.

In the Indonesian context, regulatory reform could focus on strengthening coordination between the Otoritas Jasa Keuangan and the Badan Pengawas Perdagangan Berjangka Komoditi. Joint regulations or implementing guidelines addressing bullion-related products would enhance clarity. Indonesia may also consider adopting activity-based criteria to determine when gold accounts fall within banking supervision and when derivative components trigger commodity futures oversight. By proactively addressing potential overlaps, Indonesian regulators can foster innovation in precious metals markets while preserving systemic stability and consumer protection, a convergent regulatory model

grounded in functional analysis, institutional coordination, harmonized standards, transparency, and statutory clarity offers a principled pathway to govern bullion banking effectively in an increasingly interconnected financial system.

Several studies have examined the regulatory and legal challenges associated with bullion banking and gold-related financial activities. First, research by Bank for International Settlements highlights that bullion banking activities conducted by financial institutions are closely linked to prudential regulation under the international standards developed by the Basel Committee on Banking Supervision. The study emphasizes that exposures related to precious metals must be incorporated into capital adequacy and liquidity frameworks because bullion transactions can generate market risk, credit risk, and liquidity risk comparable to conventional banking activities. However, the analysis primarily focuses on prudential risk management and does not fully explore the broader legal classification of bullion banking within overlapping regulatory regimes.

Second, another stream of literature examines bullion markets from the perspective of commodity derivatives regulation. Studies of gold derivatives markets show that bullion-related trading activities are frequently governed by commodity futures frameworks, particularly under authorities such as the Commodity Futures Trading Commission. These studies underline the importance of exchange supervision, margin requirements, and clearing mechanisms in maintaining transparency and market integrity in gold derivatives markets. Nevertheless, most of this literature treats bullion trading primarily as a derivatives or commodity market activity and pays limited attention to its relationship with banking intermediation.

Third, comparative research on financial regulation has also highlighted the fragmented nature of supervisory frameworks governing gold-related financial services. Analyses of regulatory models in jurisdictions such as the United Kingdom, the United States, and Switzerland show that bullion banking activities often fall simultaneously under banking supervision and commodity derivatives regulation. While this dual framework can enhance risk oversight, it also creates legal uncertainty regarding the classification of bullion accounts, particularly unallocated gold accounts that resemble deposit-like liabilities. Despite identifying this regulatory overlap, existing studies have not sufficiently developed a coherent

legal framework capable of integrating prudential banking regulation with commodity futures supervision.

Building upon these previous studies, this research seeks to fill the identified gap by examining bullion banking as a hybrid legal activity positioned between banking law and commodity futures regulation. By adopting a functional and comparative legal analysis, the study aims to clarify the legal characterization of bullion banking and explore the possibility of regulatory convergence capable of addressing both prudential financial risks and market integrity concerns.

CONCLUSION

Bullion banking exemplifies a financial activity that resists conventional regulatory categorization. It combines elements of deposit-taking, custody, credit intermediation, and commodity derivatives trading within a single operational framework. As a consequence, it lies at the juncture of prudential banking supervision and commodity futures regulation. Where these regimes function independently without structured coordination, regulatory fragmentation emerges. Such fragmentation generates legal ambiguity regarding the status of bullion accounts, the allocation of supervisory competence, and the applicable standards for capital, margin, and asset protection.

The absence of an expressly convergent framework exposes markets to systemic and institutional vulnerabilities. Unclear classification of unallocated gold accounts may obscure the nature of clients' legal claims, particularly in insolvency scenarios. Divergent prudential and derivatives requirements may incentivize regulatory arbitrage, distorting risk management practices and undermining policy objectives. Moreover, cross-border bullion transactions amplify these concerns, as inconsistencies in national legal regimes complicate enforcement and crisis resolution.

To address these challenges, regulation must shift from a formalistic, sector-based approach toward a functional, activity-oriented model. Legal oversight should correspond to the economic substance and risk profile of bullion-related transactions rather than their nominal designation. Coordinated supervision, harmonized prudential and market conduct standards, and explicit statutory clarification of bullion banking products are essential components of such a model. Through regulatory convergence grounded in functional

analysis, legal systems can enhance consistency, safeguard financial stability, and strengthen investor and consumer protection in evolving precious metals markets.

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