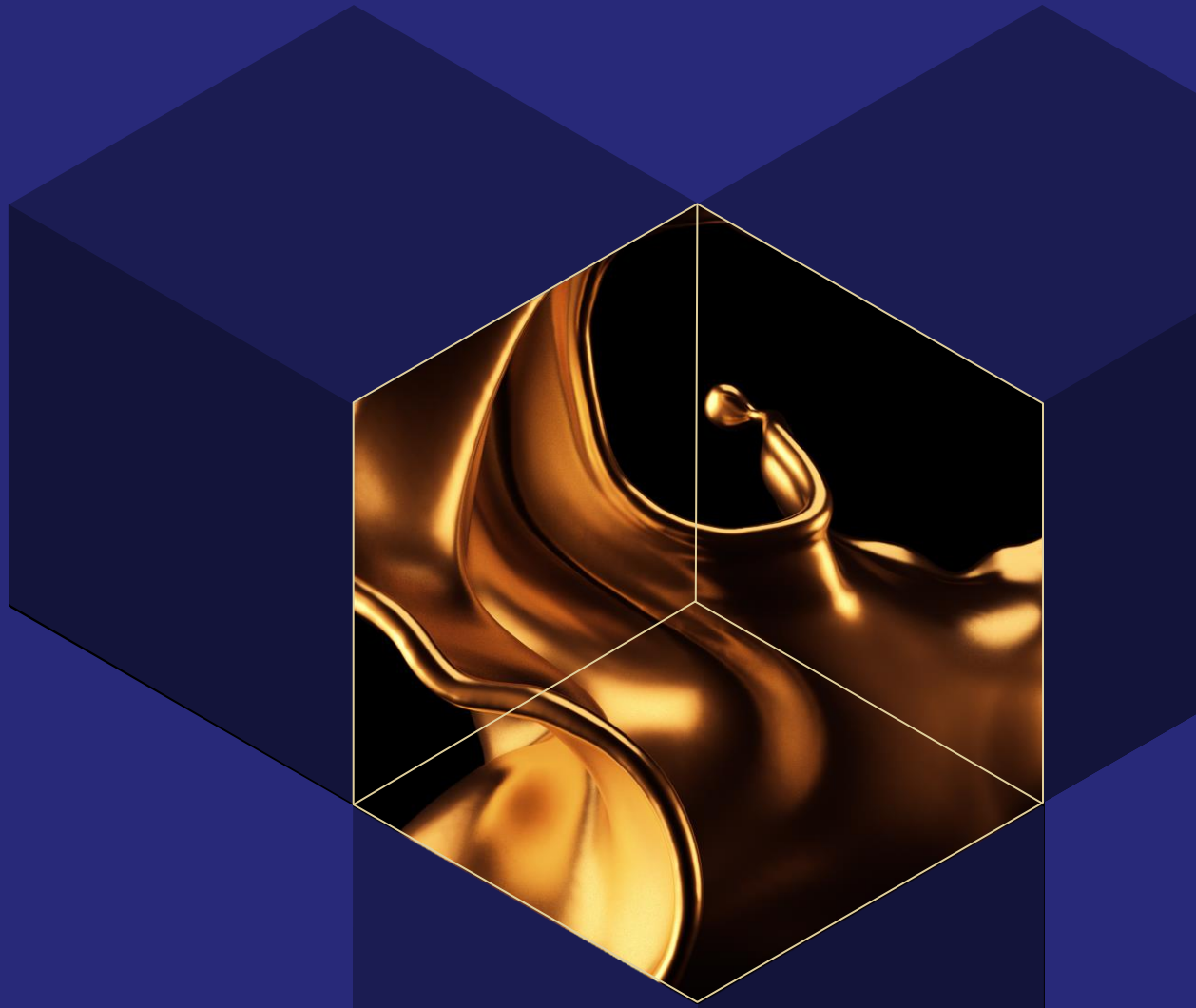
FMSB
FINANCIAL MARKETS STANDARDS BOARD

Compendium

Precious Metals Market Evolution

September 2023



About us

Financial Markets Standards Board

Financial Markets Standards Board Limited (FMSB) is a private sector, market-led organisation created in light of the recommendations in the Fair and Effective Markets Review (FEMR) Final Report in 2015.

One of the central recommendations of FEMR was that participants in the wholesale markets should take more responsibility for raising standards of behaviour and improving the quality, clarity and market- wide understanding of trading practices. Producing guidelines, practical case studies and other materials that promote the delivery of transparent, fair and effective trading practices will help increase trust in wholesale markets.

FMSB brings together people at senior levels from a broad cross-section of global and domestic market participants and end-users.

In committees and working groups, industry experts debate issues and develop FMSB Standards and Statements of Good Practice and undertake Spotlight Reviews - like this one - that are made available to the global community of financial market participants and regulatory authorities.

Spotlight Reviews

Spotlight Reviews encompass a broad range of publications used by FMSB to illuminate important emerging issues in financial markets. Drawing on the insight of Members and industry experts, they provide a way for FMSB to surface challenges market participants face and may inform topics for future work. Spotlight Reviews will often include references to existing law, regulation and business practices. However, they are not intended to set or define any new precedents or standards of business practice applicable to market participants.

Find out more about the Financial Markets Standards Board at **fmsb.com**

Contents

Introduction

In 2019, Financial Markets Standards Board established a Precious Metals Working Group (PMWG), chaired by David Tait of the World Gold Council, and composed of experts drawn from its membership, with the aim of:

- identifying vulnerabilities or inefficiencies in global metals markets; and
- where appropriate, developing standards or other guidance to address or mitigate such risks.

This document consolidates insights from three distinct Spotlight Reviews considering the potential evolution of precious metals markets. It outlines opportunities for enhancement and offers suggestions for heightening market transparency and efficiency.

Precious Metals Market Structure
Existing structure of the precious metals market and how this could evolve to promote greater transparency, efficiency and participation.

November 2021

Precious Metals Post-Trade
The post-trade landscape and possible efficiencies that could be derived from adopting new technologies and processes.

June 2022

Data and Transparency in the Precious Metals Markets
How data and transparency can drive greater trust and confidence in the precious metals market, and the steps that the gold market could take to increase the likelihood of gold being considered a high-quality liquid asset (HQLA).

July 2023

This compendium consolidates these publications into a single document with the purpose of:

- **providing an overview** of FMSB's examination of the precious metals market;
- **raising awareness** about current challenges and identifying opportunities for evolution within the precious metals market; and
- **offering suggestions** that might drive improvements in efficiency, transparency, and market practices.

Whilst the three Spotlight Reviews are included in this compendium, the individual documents remain available on the FMSB website in their original form. The content of each Spotlight Review in this compendium is substantively the same as the original version.

Foreword

David Tait, CEO of World Gold Council

The precious metals market has always played a significant role in the global financial system. During times of economic or political uncertainty, investors consistently turn to precious metals, especially gold, as a hedge against inflation and market volatility. This trend was particularly evident during the global financial crisis of 2008-9, the COVID-19 pandemic, and the current geopolitical and economic uncertainty marked by high inflation levels.

As CEO of the World Gold Council, I recognise that maintaining transparency and robustness in trading activity in precious metals markets is vital to upholding confidence in its integrity. I am therefore delighted to have chaired the Precious Metals Working Group at the FMSB which strives to support this objective and I anticipate that the work carried out by the FMSB across three Spotlight Reviews will bring tangible benefits to market participants. The observations outlined in the Reviews can help to drive improvements in efficiency, transparency, and market practices within the precious metals market.

I commend the FMSB for their efforts in producing this important work, which holds significant value for the future progress of the precious metals market. My sincere thanks go to the dedicated working group members and the FMSB Secretariat for their commitment to this endeavour.

Foreword

Myles McGuinness, CEO of FMSB

In 2019, the FMSB established the Precious Metals Working Group with the aim of promoting fairness and effectiveness in the precious metals market. The Working Group's objective was to conduct an in-depth analysis of specific aspects of the market, leveraging insights from market participants to identify weaknesses in current market practices, and suggest opportunities for improvement.

This publication combines three Spotlight Reviews addressing the structure, post-trade landscape, and data and transparency within the precious metals market. The intention is to offer valuable insights that may support the enhancement of current practices and continued development of the wider market.

I am pleased to see that observations noted in the individual Spotlight Reviews have already generated interest within the industry, I hope this compendium will continue to raise awareness about the potential for improvement within the precious metals market.

I would like to express my gratitude to the London Bullion Market Association (LBMA) and the World Gold Council (WGC) for their collaboration, as well as to the FMSB Members and their representatives for their valuable contributions throughout the development of these publications. Your support has been essential in delivering this work, which we believe can drive positive change in the precious metals industry.

Foreword

Ruth Crowell, CEO of LBMA

LBMA is focused on advancing industry standards and exploring new solutions for the precious metals market. The FMSB's examination of this market and the introduction of a conduct standard for participants in LBMA auctions demonstrates FMSB's role in addressing conduct issues.

This trilogy of Spotlight Reviews identifies key areas where the precious metals market's integrity could be enhanced. We are working closely with LBMA Members to address these observations, aiming to drive proactive development and ensure confidence in the market.

We appreciate the FMSB's efforts to improve fairness and effectiveness in financial markets, including the precious metals sector.

Spotlight Review

Precious Metals Market Structure

November 2021

1

Introduction

This publication examines the existing structure of the precious metals market and makes a number of overarching observations as to how the market structure could evolve in order to promote fairness and effectiveness. In relation to each of these observations, the Spotlight Review considers the benefits that such changes could bring as well as the hurdles to their implementation.

FICC markets have evolved significantly in the period following the global financial crisis. The G20 reform agenda to address some of the structural vulnerabilities exposed by the crisis has driven, notably in derivative instruments, greater contract standardisation, increased central clearing and corresponding reduction of counterparty risk, greater pre- and post-trade transparency and more exchange or electronic platform trading. However, not all FICC instruments and asset classes have been subject to the reform agenda to the same extent. Commodities, including precious metals, straddle the regulatory perimeter, with over-the-counter ('OTC') spot and certain precious metals forwards markets typically not being subject to the same regulatory regime as other commodity instruments[1]. As a result of this differential regulatory treatment, as well as the unique characteristics of precious metals markets, there are notable differences in the degree of price transparency, execution methods and post- trade effectiveness in precious metal spot and forwards compared with other instruments and asset classes. This Spotlight Review examines practices adopted in other asset classes and considers how certain features of the spot and forwards precious metals markets could be adapted in order to promote greater transparency, efficiency and participation in these markets.

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Key features of precious metal markets

Participants

There are a broad range of participants in the precious metals markets including:

i. physical users of the metals such as miners, refiners, fabricators and manufacturers;

ii. market intermediaries - including banks and non-bank liquidity providers;

iii. infrastructure providers such as exchanges and clearing houses; and

iv. investors such as central banks, asset managers and institutional investors.

Precious metals asset class

Gold accounts for the majority of precious metals traded volumes[2]. Silver, platinum and palladium are the other relevant metals but account for a significantly smaller proportion of volumes. Each market has a number of instruments including spot, forwards, futures, loans/leases, swaps and options.

Location

The UK hosts some of the largest commodity and commodity derivatives markets in the world, with such markets playing a key role in global price formation[3]. In precious metals, the London market accounts for the majority of OTC volumes in gold and silver spot, forwards, options and loans, leases and deposits (estimated at circa $322bn weekly[4], excluding volumes executed by non-LBMA members). New York is the predominant centre for exchange traded precious metals.

Execution

Precious metals markets typically offer execution via an:

i. on-exchange futures market where metals are predominantly traded on a financial basis with standardised contracts (albeit that the products are often technically physically settled futures); and

ii. OTC spot and forwards markets where contracts are typically customisable, privately negotiated, traded on a physical basis and bilaterally cleared.

Transparency

The predominance of bilateral OTC trading in spot and forwards markets can inhibit transparency as to the prevailing market price of precious metals compared with asset classes where there is a greater concentration of trading on central limit order books ('CLOB'). Difficulties in ascertaining the prevailing market price may be accentuated outside of London trading hours where the spot price is dependent on the exchange market and the Exchange for Physical ('EFP') process[5], through which participants source market risk on a futures exchange and swap that for an OTC contract. This can make OTC liquidity harder to quantify, especially in circumstances where there is less EFP liquidity and greater EFP volatility.

2

Key features of precious metal markets

Liquidity

On average, 8bn ounces of gold and silver are traded per month in the OTC Loco London market (this refers to the gold and silver bullion that is physically held in London vaults to underpin the trading activity in this market[6]). Unallocated Loco London metal is the most liquid market and, in London Precious Metals Clearing Limited ('LPMCL')[7], has an established settlement and bilateral clearing process[8] which allows participants to access the physical precious metal market. Allocated metal (which is physically attributed to the account holder) and other locations can be priced and traded on a differential basis to unallocated Loco London.

Role of benchmarks and swap rates

Spot

London silver and gold benchmarks play a key role in the precious metals spot market as they provide transparent reference rates that allow participants to value and manage market risk.

Forwards

The Gold Forward Offered Rate ('GOFO rate'), which shows gold swap rates, was initially published in 1989 in order to increase transparency in gold forward markets. However, it was discontinued in 2015 following the withdrawal of market makers in response to the introduction of the EU Benchmark Regulation. The discontinuation of GOFO rates has impacted the transparency of the OTC forwards market. Market structural changes discussed in Section 3 that would drive sufficient focal points of liquidity in the OTC forwards market could support the reintroduction of GOFO rates and the corresponding transparency benefits this may entail.

Clearing

Clearing in OTC precious metals markets is dependent on a small number of bilateral clearing providers through LPMCL. The clearing mechanism allows financial and physical interests to trade against each other.

Settlement

Settlement of precious metals transactions is typically achieved through three ownership transfer mechanisms:

i. transfers in allocated accounts in vaults;

ii. unallocated account transfers; and

iii. nostro account fund transfers.

Allocated accounts are held in a client's name with the client having full title to the metal and the clearer's role being limited to that of custodian.

Unallocated accounts are backed by the general stock of the clearer and transactions may be settled by book entries instead of physical movement of assets. Unallocated account holders are unsecured creditors of the clearer.

2

Key features of precious metal markets

Liquidity classifications

Currently no precious metals are considered to constitute high-quality liquid assets ('HQLA') for the purposes of liquidity requirements under the Basel Framework including the calculation of the Liquidity Coverage Ratio ('LCR')[9]. For assets to be considered HQLA they must be 'easily and immediately converted into cash at little or no loss of value'[10]. The qualification of assets as HQLA or otherwise influences the capital that banks are required to hold, in particular whether such assets form part of certain liquidity buffers. The bilateral nature of precious metals markets as well as the limited focal points of liquidity and pre-trade data are potential impediments to these assets meeting HQLA criteria.

There are also specific challenges to the recognition of gold as a HQLA, in particular the:

i. ineligibility of gold as collateral within central bank open market operations. This is despite the fact that central banks trade gold in a similar way to a currency, by using FX style swaps, and prescribe the use of gold collateral in their capacity as prudential regulators within the acceptable collateral lists of central counterparties ('CCPs');

ii. absence of liquidity measures for gold due to lack of available statistics pre-2018. However, according to analysis conducted between February and April 2020, gold spot and futures performed better in certain liquidity metrics (e.g. spreads) than 30-year US Treasury[11]; and

iii. absence of a gold interest rate. However, loans, deposit data and use of gold by central banks, evidence that there is an implied interest rate.

In the UK, the Prudential Regulation Authority ('PRA') published a Policy Statement concerning the implementation of the Basel standards – including the liquidity requirements applicable to commodities. The paper considers the PRA's overall approach to commodities in the Net Stable Funding Ratio ('NSFR')[12] which it determines to be 'generally appropriate'[13]. However, the PRA has introduced an 'interdependent precious metals permission for which firms may apply in respect of their own unencumbered physical precious metal stock and customer precious metal deposit accounts'[14]. Where such permission is granted, a 0% required stable funding factor applies to unencumbered physical stocks of precious metals under the NSFR. This permission should allow the LPMCL bilateral clearing and settlement process to continue to operate without overly burdensome capital requirements. However, it does not address the fact that, as capital rules evolve, there is likely to be an increase in the cost for market participants in holding precious metal risk.

3

Evolving market structure

Observations

The challenges associated with the current liquidity characterisation of precious metals outlined above are informing considerations regarding the future structure of such markets. In particular, the PMWG has observed that:

1. London OTC precious metals markets are sufficiently liquid to support developments in market structure; and
2. OTC precious metal markets would benefit from greater choice in how trades are executed and how credit, capital and settlement are managed post-trade.

Under (2), the PMWG identified three potential ways in which the precious metals market structure could be enhanced:

- Increasing execution on CLOBs to augment transparency and make liquidity easier to source and quantify;
- Using CCPs for clearing and settlement to reduce bilateral credit and settlement risks and potentially drive greater market participation; and
- Increasing use of optimisation and compression solutions to reduce capital and margin costs of precious metals trading activity.

The benefits of each of these changes to market structure, as well as hurdles to their adoption, are considered below.

3

Evolving market structure

Benefits and hurdles associated with implementing structural changes

Benefits	Hurdles
Increased trust leading to greater participation in the market	Increased cost
• Transparent markets in which liquidity is easier to source and quantify help promote the trust of investors and drive increased participation and trading volumes. • The OECD[15] determines three forms which trust may take: i predictability of behaviours from markets that are efficient, open, stable and sound, and result in returns commensurate with risks; ii confidence that the rules and oversight of market interactions support the soundness, fairness and integrity of markets; and iii that market participants' behaviours will be ethical in serving the interests of customers.	• Executing via a CLOB or using a CCP increases the number of actors involved in a transaction. This gives rise to associated infrastructure, operational and technical costs and may result in increased costs for market participants on a per transaction basis. • Such costs could be offset if the centralised infrastructure reduces the capital and margin costs for participants, as well as the costs associated with price discovery and sourcing liquidity (as has occurred following the introduction of CLOBs and CCPs in other FICC asset classes).

3

Evolving market structure

Benefits and hurdles associated with implementing structural changes continued

Benefits	Hurdles
Increased transparency leading to improved access to information and enhanced price formation	**Insufficient adoption**
• Market structures that increase transparency help promote better access to information for investors regarding trading opportunities, facilitate price formation and can help firms satisfy relevant best execution obligations. • Improved access to information lowers search costs for participants which may increase trading volumes and promote better outcomes for firms and their clients.	• There is a risk that any new centralised trading or clearing infrastructure will not be sufficiently adopted by precious metal market participants due to the associated costs. There are previous examples of launches of new market infrastructure in precious metals (and other asset classes) that have not gained the necessary traction to be successful. • Approaches to reduce the risk of a lack of adoption could include: – Close partnership with market participants – market infrastructure that is developed in close partnership with participants and seeks to mitigate the hurdles to adoption through the design of the systems and processes involved. – Shared ownership or reward model – a shared ownership or reward model where the participants who adopt the new infrastructure share in the benefit of the resulting service.
Market surveillance efficiencies and protection against market abuse	
• CLOBs and CCPs provide a centralised data source for executed transactions which can facilitate market surveillance compared with monitoring dispersed bilateral channels. • Increased transparency combined with surveillance efficiencies can help protect against market abuse[16].	

3

Evolving market structure

Benefits and hurdles associated with increasing CLOB activity in precious metal markets

Benefits	Hurdles
Act as a focal point for liquidity in the market making liquidity easier to source and quantify	Risk Warehousing
• CLOBs allow participants to see multiple orders and pricing for products on an anonymous basis. In a bilaterally executed market, each participant who needs liquidity for an OTC contract must find another participant who has liquidity to offer. In a CLOB structure, available liquidity can be advertised making it easier to source and quantify. • This could further efforts to achieve greater transparency and efficiency to match buy and sell orders. For example, the Bank of England found that an increase in multilateral electronic trading in interest rate markets reduced customers' costs of searching for liquidity[17].	Increased transparency associated with markets where trading activity is concentrated on a CLOB can give rise to certain unintended consequences: • Increased visibility as to when a market-maker is looking to hedge risk in the market could lead to other market participants anticipating any associated price changes and/or reducing the liquidity they provide in response. • Reduction in the latency between a market-maker showing a price to the market and any resulting execution. This reduction in latency can create arbitrage and other opportunities for market participants who have the requisite technological capabilities. This could lead to market participants that do not have equivalent technological capabilities reducing the liquidity they provide. These unintended consequences have been observed in other markets, which have seen a significant increase in trading on CLOBs. Experience in those markets has shown that these consequences can be mitigated through appropriate rules around market data dissemination and order placement and cancellation.

3

Evolving market structure

Benefits and hurdles associated with increasing CLOB activity in precious metal markets
continued

Benefits	Hurdles
Increase transparency and improve price discovery across the market	
• CLOBs allow more participants to view and understand the liquidity available within the market. Users of a CLOB can cross the bid/ask spread to facilitate low-cost execution. A CLOB is live and open for most of the day, meaning that there is full transparency on prices in the order book and orders entered can be filled instantly where there is a match. This makes it easier for participants to see available pricing and observe changes in the prevailing market price for a particular contract, which may assist participants in achieving the best execution price relative to the market order price.	
Greater understanding of activity in the market for both market participants and regulators	
• As CLOBs act as a central point through which executed trades are recorded, they can offer additional transparency to market participants and regulators. • CLOBs give market participants access to market-wide information on market activity and transaction prices.	

3

Evolving market structure

Benefits and hurdles associated with increasing use of CCPs in precious metal markets

CCPs reduce and mutualise credit risk between parties to a transaction and provide clearing and settlement services for trades in securities, options, and derivative contracts. The multilateral netting of transactions between market participants simplifies outstanding exposures when compared to bilateral trades. Where trades are cleared and settled via a CCP, participants do not require bilateral credit and settlement relationships with all counterparties, which allows each participant to access liquidity offered by a broader range of participants.

Benefits	Hurdles
Ease of market access for participants	Inflexible operating model
• In a bilaterally cleared and settled market, each participant needs to establish a relationship with every potential counterparty. Where a CCP is used, participants may be able to access the market by establishing a single relationship with the CCP. • Broad access to centralised clearing unlocks the wider benefits of the CCPs themselves, such as systemic-risk reduction[18]. The FSB reports that greater adoption of CCPs in other FICC asset classes is simplifying much of the previously complex and opaque web of derivatives exposures[19].	• A CCP needs to ensure that the settlement and credit terms are the same for all transactions. As a result, such terms cannot reflect the requirements of specific clients and are standardised for all participants. • The potential negative impact of inflexibility may be mitigated through CCPs co-existing with bilateral credit and settlement terms in a hybrid model through a pre-agreed approach.
Reduction in operational burden for participants	
• Post-trade activity can be centralised through the processes put in place by a CCP. This standardisation may reduce the operational burden for participants.	
Lower capital and initial margin requirements	
• Holding positions against a CCP rather than multiple bilateral counterparties allows for the automatic offsetting of trades executed with different market participants which should lower capital and initial margin requirements associated with CCP use.	

3

Evolving market structure

Benefits and hurdles associated with compression and optimisation in precious metals markets

Optimisation and compression solutions allow market participants to preserve their market risk exposure while managing their open bilateral risk positions against other market participants and exchanges or CCPs. Many precious metal market participants manage a large open book of trading activity across a combination of exchange and OTC products against a number of other market participants. While the interconnected network structure of the precious metals market plays an important role in liquidity provision in the market, it can create open offsetting bilateral risk with different counterparties, which in turn increases capital and margin costs associated with the activity. Based on the experiences of other asset classes, optimisation and compression may offer an effective way of managing these exposures and reducing the capital and margin costs associated with the activity.

Benefits	Hurdles
Ease of adoption	Operational cost of implementation
• Compression and optimisation solutions are typically easier to adopt for market participants compared with the use of a CLOB or CCP on the basis that they do not necessitate a change in the method of execution or the onboarding of a new counterparty.	• Compression and optimisation carry an upfront cost. For larger market participants, such upfront costs may be mitigated by the capital and risk savings delivered by compression or optimisation. Market participants with smaller or more directional portfolios, may not experience the same benefits from compression and optimisation.
Lower capital and initial margin requirements	
• Compression and optimisation help reduce counterparty risk, transactional inefficiency and outstanding bilateral notional, while allowing participants to continue to maintain their market risk position. The reductions in counterparty risk and outstanding notional lowers initial margin and capital requirements. Lower initial margin and capital requirements can facilitate increased participation in the market.	
Operational efficiencies	
• Compression reduces operational risk as there are less trades to maintain, process and settle. • Compression can also lead to a more 'accurate expression of overall market size and composition'[20].	

4

Transitional steps and Conclusion

The PMWG recognises that sudden changes to market structure and the immediate adoption of new market infrastructure may not be possible or desirable. A number of transitional steps could be considered to deliver some of the benefits of the broader infrastructure changes highlighted in Section 3 above without the corresponding hurdles to adoption.

Pre-agreed bilateral credit and settlement terms

As an alternative to central clearing, participants may agree credit and settlement terms bilaterally allowing them to execute with each other via a CLOB. In such circumstances, the participant pairs and the amount of credit available is managed by the CLOB operator, and each participant can only view orders placed on the CLOB by participants with whom they have a credit arrangement.

This pre-agreed bilateral credit and settlement terms model can operate in conjunction with a CCP, creating a hybrid approach whereby some transactions are centrally cleared post-trade while others remain bilateral through the pre- agreed bilateral credit and settlement terms. Such a hybrid model may offer a balance between availability of liquidity and cost.

CCPs accepting trades from multiple sources

An open access model, where a CCP is not tied to a particular CLOB, allows participants to utilise a CCP without making further changes to their trade execution process. Hybrid solutions which integrate CLOB and CCP solutions with existing market infrastructure enable dealers to retain their role as liquidity providers to customers and inter-dealer trades can be switched at a reasonable cost.

Reducing settlement risk by using delivery versus payment

Notwithstanding the unique challenges associated with the settlement and delivery of precious metals, a potential means of reducing settlement risk in precious metal markets is through greater use of delivery versus payment either as part of a CCP solution or through efficiencies in the LPMCL settlement process[21].

Compression and optimisation across bilateral and cleared trades

Based on experiences in other FICC asset classes, compression and optimisation solutions can include market risk that arises from bilateral trades between different counterparties and trades involving a CCP. Compression and optimisation solutions can further the use of CCPs by identifying risk that participants can switch to a CCP.

4

Transitional steps and Conclusion

The PMWG recognises that sudden changes to market structure and the immediate adoption of new market infrastructure may not be possible or desirable. A number of transitional steps could be considered to deliver some of the benefits of the broader infrastructure changes highlighted in Section 3 above without the corresponding hurdles to adoption.

Conclusion

The PMWG aims to promote developments in precious metals markets for the benefit of all market stakeholders. This Spotlight Review has identified three specific structural developments that could support increasingly fair, transparent and effective spot and forward precious metals markets, namely:

i. increasing the volume of activity on CLOBs;

ii. increasing the use of CCPs; and

iii. more extensive use of compression and optimisation solutions.

It is acknowledged that there are a number of hurdles which could act as inhibitors to the widespread adoption of these mechanisms. However, there are notable long term benefits to the fairness and effectiveness of precious metals markets supporting their adoption. Furthermore, these structural developments could further augment investor trust in precious metals markets and thereby help drive increased market participation.

Spotlight Review

Precious Metals Market Post-Trade

June 2022

1

Introduction

Gold has been traded for millennia across the globe. Its inherent value in industry and as decoration, as well as for investment, means that the market is broad, and many transactions, including between members of the public, will take place Over the Counter (OTC). The role of an effective wholesale market in helping with price discovery is therefore vital to setting a reference price, thus bringing transparency to industrial and retail transactions.

With approximately 70% of global notional trading volume[22], the London OTC market has been and remains the centre of the gold trade. Despite remaining OTC, the London market is highly organised and centralised. Gold, together with silver, platinum, and palladium are the most commonly traded "precious metals" which are capable of being traded on an allocated and unallocated basis. This allows market participants to trade the physical metals without the costs of physical transportation.

There are two main locations for facilitating unallocated precious metals trading. Contracts that are settled in London, and underpinned by bullion that is physically held in London vaults, are referred to as "Loco London". The equivalent structure for Swiss-settled contracts is referred to as "Loco Zurich".

The post-trade structure for commodities differs to that of financially-settled contracts; they are physical assets and delivery takes place in the real world, not on a ledger. Precious metals are further unique as a commodity due to their qualities as a store of value, and the difficulty in re-confirming their quality. As such, there is a sizeable custody market, which provides guarantees of standards, the safe storage of the physical metals, and proof of chains of ownership for previously tested bars.

It is recognised that the precious metals market structure has lagged behind other fixed income, currencies and commodities ("FICC") markets in adopting automation and other efficiency gains[23]. Notwithstanding the differences in the structure of the markets, certain solutions from other asset classes may be read across to precious metals, and emerging technologies may provide further benefits.

This Spotlight Review examines the existing post-trade landscape for precious metals, identifies prevailing structural and technical opportunities for improvement, and considers emerging technologies which could be applied. Whilst much of this paper refers to the precious metals markets in their entirety, some observations will relate only to the unallocated Loco London and Loco Zurich market. Derivatives of precious metals, whilst an important part of the market ecosystem, are traded and cleared like other asset classes and are out of scope of this review.

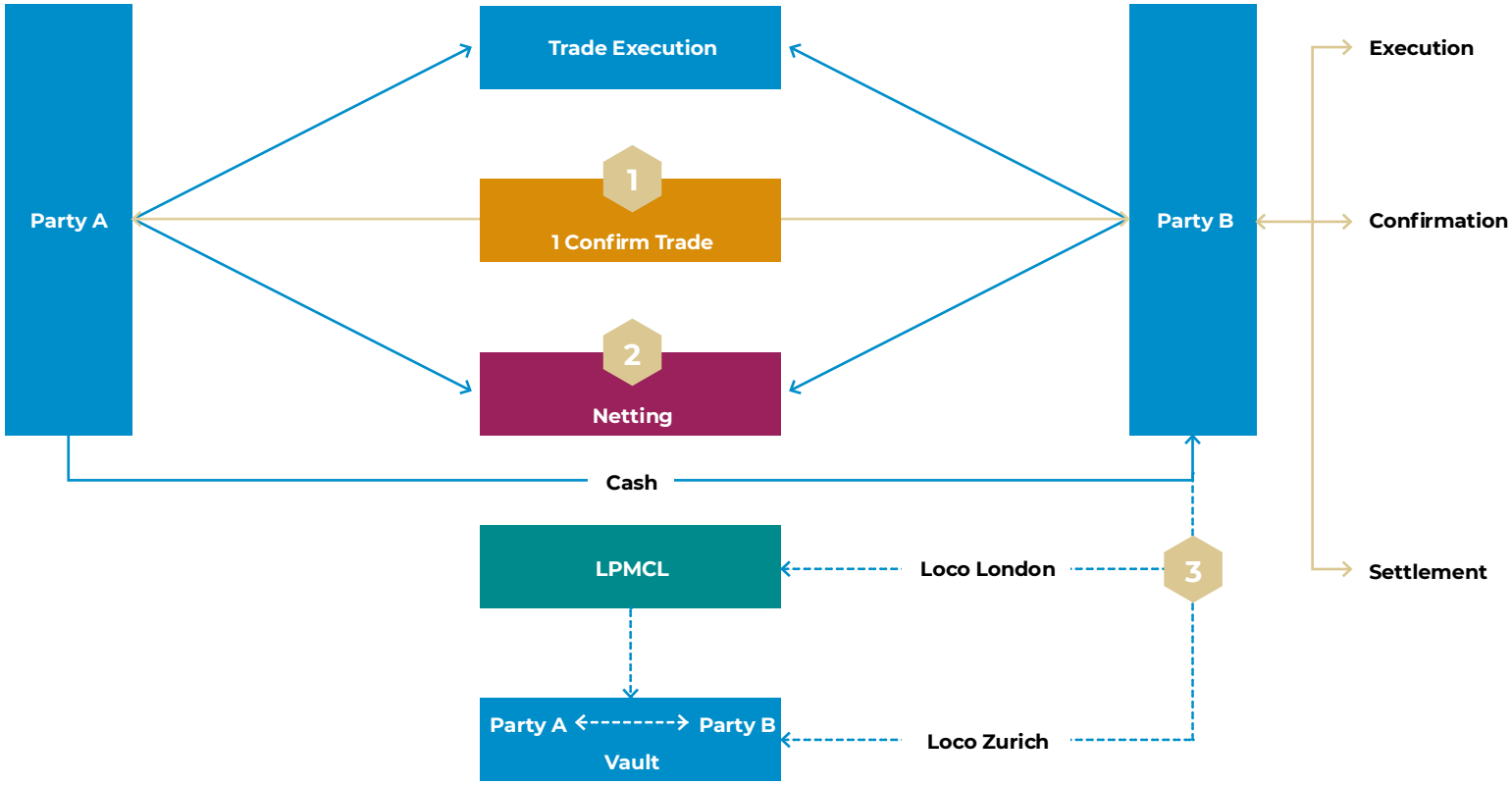
2

Existing structure of post-trade processes

The first three stages of the precious metals trade lifecycle (execution, confirmation, and clearing) are broadly similar to other asset classes. However, the presence of vaults in the (non-cash) settlement stage differentiates precious metals from other asset classes.

This section describes the current status of the European wholesale market post- trade landscape.

Figure 2: Post-trade process



Existing structure of post-trade processes continued

1 Trade confirmation

Trade confirmations are used by the parties to a transaction to specify the commercial terms of such a transaction, including pricing terms. The trade confirmation process dates back to the Securities Exchange Act of 1934.

There has been a sustained effort to shift trade confirmations to more automated methods to increase speed and reduce errors. Historically, trade confirmations used Telex, where confirmations were sent through Morse code. This was replaced following the introduction of SWIFT in 1973[24].

In the present-day, trade confirmation consists predominantly of SWIFT messages being sent between SWIFT users. As of 2020, more than 11,000 SWIFT members sent over 35 million transactions per day through the network across all asset classes[24]. There are also vendor platforms that allow non-financial institutions to interact with financial institutions via SWIFT, and dealer platforms allowing clients to confirm trades with dealers. However, some market participants are still using paper confirmations being sent through PDF and email or fax.

2 Netting

Netting is the method of reducing credit, settlement and other risks of financial contracts by aggregating (combining) two or more obligations to achieve a reduced net obligation.

Benefits of netting include:

- Reduction of credit risk;
- Reduction of settlement risk;
- Reduction of liquidity risk; and
- Reduction of systemic risk.

Netting agreements, where counterparties agree to net offsetting obligations prior to settlement, promote efficiency by reducing the number and size of settlement obligations.

Some participants in the precious metals markets transact through prime brokerage arrangements, whereby a client accesses liquidity from a dealer via a prime broker who intermediates the transaction by entering into offsetting trades with both the client and the dealer. Under prime brokerage arrangements, netting will take place between both the prime broker and dealer and the prime broker and client, where obligations can be offset.

Obligations can be offset, and therefore netting can occur in both unallocated Loco London and unallocated Loco Zurich metal. However, due to the different delivery options, it is not possible to net across markets or contract types. For example, an allocated contract cannot be net against an unallocated contract.

Therefore, while netting in unallocated precious metal is possible, there has historically been less netting in the precious metals market compared with other asset classes on both a multi and bilateral basis outside of prime brokerage agreements.

Existing structure of post-trade processes continued

3 Clearing and Settlement

Clearing and settlement complete a securities transaction where it is concluded with the discharging of the obligations of the parties to that transaction through the transfer of cash or securities, or both (see Article 2(6), Central Securities Depositories Regulation). The processes include reconciling trade data, recording the transaction, and ultimately delivering the cash and/or securities to the end recipients or their agents.

Precious Metals transactions can be settled on a cash-only or physical basis. Currently, the spot settlement period for precious metals is 2 days (T+2)[25]. When trading Loco London metals, the metal must be settled by 3pm UK time while the currency leg (assuming US dollars) can be settled until 10pm UK time as the currency leg is settled in the US. In addition, there are currently two messages sent for the settlement of precious metal trades. Operationally, it is difficult to combine these two messages as they are sent through different systems.

London Precious Metals Clearing Limited (LPMCL), a market utility, supports the Loco London precious metals market as it oversees and manages the daily clearing system. LPMCL has just four members who provide clearing services for the rest of the market.

The members of the LPMCL follow a code of practice on clearing[26], meaning that they may settle trades amongst themselves, because of the guarantees of metals kept in their vaults. This interconnectivity between clearing providers increases efficiency of the post-trade process.

LPMCL provides an electronic matching system for trades. The clearing members also provide vaulting services for clients who require custodial services, which may be on an allocated basis (where specific assets are assigned to the client, similar to a safety deposit box) or unallocated basis (where the client maintains a claim to a fixed amount of assets meeting 'good delivery' standards, similar to a bank account).

Loco Zurich also allows market participants to trade, clear, and settle on an allocated and unallocated basis but less flexibly than London. Zurich is a significantly smaller market and is largely dependent on two clearing banks.

The structure of the London and Zurich markets is also different. Notably:

I. The Zurich market is more focused on the trading of physical metal and is used as a transit point between western and eastern markets; and

II. Whilst London is dominated by gold and silver, the Zurich market has higher volumes of other traded precious metals including platinum and palladium.

A minority of precious metals trades are settled Delivery versus Payment (DvP) or on a pre- funded basis where one or both of the counterparties are uncomfortable with the intra-day settlement risk. However, the majority of precious metals market trades are not settled DvP due to the operational challenges associated with the metals leg and currency leg of each trade being settled at different times.

It is understood that the current clearing process works effectively; however, as with other asset classes, there remain potential areas for efficiency gains.

3

Opportunities in the existing post-trade process

This section explores some of the opportunities to improve the efficiency of the existing post-trade process for precious metals.

Some, such as the adoption of automation, are acknowledged as positive for the overall market but the cost-benefit analysis may differ for individual market participants. Others are trade-offs, such as between faster settlement timelines versus the liquidity benefits of margin trading and netting. It will be up to the industry to decide if, and when, new standards and conventions are required.

The opportunity to increase adoption of automation for trade confirmations, leading to greater post-trade efficiencies

There is continued use of paper confirmations (PDF via email or fax) for trades settled with non-financial institutions. This becomes problematic as market participants will be using various platforms to confirm trades with different counterparties causing slower trade confirmations. Issues particular to the precious metals market include:

- Presence of non-financial market participants: Physical trading is common with non-financial institutions, such as miners and refiners, who do not have access to SWIFT and may not be able to adopt SWIFT.
- Format of messaging is limiting for bespoke contracts: SWIFT is not flexible, unlike XML formats, to accommodate the need to add additional fields. Physical transactions for precious metals are bespoke, and different parties engaged in a trade may expect different information due to internal processes. SWIFT leads to the inability of parties to insert information beyond the pre-set fields, which may be key terms of transactions.
- Lack of standardisation for required fields: There are no fully adopted standards for inserting additional information into the pre-set fields in SWIFT messages that need to be completed, potentially leading to settlement failures where the information included in the SWIFT message by each counterparty to the trade is not electronically matched.

Electronic platforms offer potential solutions to the current inefficiencies that exist with the precious metals trade confirmations.

A number of existing electronic platforms are able to sync with SWIFT messaging or offer alternative communication systems to confirm trades. SWIFT alternatives which use JSON or XML formatting would allow for more flexibility in the messaging process, facilitating the inclusion of additional information when necessary.

Adopting an alternative system would streamline the precious metals trade confirmations and reduce the use of paper, pdf or fax communication between trade parties.

Despite the benefits of alternative confirmation systems, challenges in implementing these solutions are apparent as adoption cannot be fragmented. All market participants would need to agree on a single solution and/or platforms and transition from existing systems.

There is insufficient adoption of netting for non-prime brokerage transactions

To net offsetting obligations in unallocated metal, a bilateral agreement must be signed between the counterparties. While this is a standard part of a prime brokerage agreement, a specific bilateral netting agreement is less common in precious metals, compared with other financial assets.

Achieving greater netting for precious metals would increase the liquidity of the market by reducing the outstanding settlement obligations that need to be considered against a counterparty default.

For comparison, in the equities market an average of $1.7 trillion transactions is recorded every day. The multilateral netting process reduces that number by 98% and the total value of settled trades equates to $38 billion[27].

A greater focus on implementing these netting agreements would therefore increase adoption of netting for non-prime brokerage transactions.

Opportunities in the existing post-trade process continued

The clearing and settlement of Loco London precious metals trades is concentrated in a limited number of LPMCL members

There is limited membership of LPMCL, and there is potential for a disruptive effect if one of the four existing members were unable to continue offering clearing or settlement services either on a temporary or permanent basis.

LPMCL is open to new member firms who are looking to offer clearing services to other market participants in the precious metals market. However, there are pre-requisites for becoming a member including, for example: (i) maintaining confidential secure vaulting facilities within central London locations, using either their own premises, or those of a secure storage agent; and (ii) becoming a signatory to a code of practice on clearing under which members undertake to operate unallocated precious metal accounts between themselves.

Loco Zurich could benefit from implementing a similar infrastructure to LPMCL, and extending the LPMCL model to the Zurich market could enhance the efficiency of the European precious metals market, reducing concentration risks associated with precious metals clearing, and leveraging the benefits of standardising and scaling technologies.

The settlement period for precious metals could be shortened, in line with efforts for other asset classes

Longer settlement periods increase exposure to the risk of default[28] and broker-to-broker counterparty risk[29]. This requires more margin to be posted, impacting market liquidity.

The precious metals market may see similar benefits to the equities market when the settlement period was shortened from T+3 to T+2 in 2014[30], which are likely to increase when the industry-led push for T+1 settlement is implemented, all of which benefit the end- investors. In particular, a shorter settlement period:

- increases liquidity;
- reduces the time-horizon for risk exposure; and
- promotes better use of capital by reducing margin requirements.

Unlike equities markets which are largely on exchange, the unallocated precious metals markets in London and Zurich operate on an OTC basis. This means that in theory, the counterparties to each bilateral trade can determine the settlement date themselves, and this can be the same day as the transaction if there is time remaining in the day to process both the currency and metal settlement obligations. However, to aid price transparency and standardisation, the market trades off a standard settlement date, the price for which is commonly referred to as the "spot price". In the precious metals market, the spot price is for a settlement period of T+2.

Shortening the settlement period on spot contracts will impact other parts of the precious metals market ecosystem (for example, margin investing systems would require re-engineering), meaning that consensus is required from a wider audience.

Further, the benefits of shortening the spot settlement period must be balanced against the risks:

- The current spot settlement period is a function of the time required to clear and settle trades, using the prevailing technology and customs at the time the conventions were established. However, many trades do not go through sophisticated trade processing systems. This could mean that a reduction in the spot settlement period, which leaves less time to match trades, would potentially increase trade failures.
- Due to the time differences in settling the metals and currency leg, there is increasing difficulty in agreeing and matching trades as the trading day progresses and the shortening of the timeframe where both markets remain open.

There is a risk that a reduced settlement period impairs the resilience of market clearing and settlement, as a shortened settlement period does not allow for an appropriate recovery time should system interruptions take place. High market volatility could cause difficulties for shorter settlement.

Opportunities in the existing post-trade process continued

If all market participants can collectively achieve a shortened settlement period, then the post-trade process is likely to become more efficient. A reduction in settlement risk may be dependent on whether participants have access to increasingly advanced technology, which is able to withstand the extra demands of a shortened settlement window.

Delivery vs Payment (DvP) will be challenging to achieve without significant changes to how the precious metals markets operate

Where different legs of a trade are transacted together but settled separately, there is a risk of settlement failure if the metal is settled but the corresponding currency payment is never made. Having DvP would reduce the risk of settlement failure as both assets in the trade would be exchanged simultaneously.

The use of DvP is limited across the precious metals market. DvP would require the ability to process a single synchronized message process across the currency and metal leg. In the current market, there are operational challenges in combining commodity leg and currency leg messages as they are sent through different systems. The settlement infrastructure for metals and the currency leg are also entirely separate. To change this in isolation, the market would either change the time that metals or the currency leg are settled.

There are challenges to implementing DvP separate to the fundamental changes to infrastructure that may derive from digital solution as discussed in Section 5.

4

Learning lessons from other asset classes

FICC markets have adopted holistic technological solutions which are reflected in the case studies on this page. Incorporating new technology and innovations to the post-trade processes in precious metals markets, if properly designed and implemented, will make the post-trade process more efficient and both market participants and clients will see the benefits. They will require significant investment initially but may well see the benefits outweigh the costs in the longer term.

Adoption of new technology has been tested across different markets. For example, 'Case Study: Project Jura' highlights a market example where tokenised solutions were adopted for a market experiment.

Case Study

Project Jura

Project Jura, an experiment conducted by Banque de France (BdF), the Bank of International Settlements Innovation Hub (BISIH), and the Swiss National Bank (SNB), included the use of wholesale Central Bank Digital Currency (wCBDC) for cross border payments and settlements, together with a private sector consortium.

Project Jura involved the issuance of intraday wCBDCs and tokenised Commercial Paper settled between France and Switzerland on a Distributed Leger Technology platform. wCBDCs were issued when funds were transferred to central banks in the respective Real Time Gross Settlement (RTGS) systems either directly, or through correspondents.

Project Jura demonstrates cross-border instantaneous settlement and DvP on a single user platform. Whilst the technology involved remains at an experimental stage, a similar solution could be beneficial for the precious metals market.

Case Study

CLS in FX case study

CLS Group offers a settlement platform for FX. This involves both participants to a trade instructing CLS of such a trade, which is then matched. At the start and end of each day, a settlement member's multicurrency account has a zero balance. Multilateral net positions are funded and paid out using a daily organised schedule. Members pay and receive funds through CLS's central bank account in each currency via their own accounts or nostro bank accounts.

CLS offers their settlement members a liquidity management service for in-and-out- swaps. This service, combined with multilateral netting, results in an average funding requirement of less than 1% of the total value of all trades for participating settlement members. This tool mitigates risk and reduces account funding requirements by an average of 96%. Although FX and precious metals are different asset classes, the market and trading structure share similarities. Alternative solutions which offer more effective confirmation and settlement may be applicable to the precious metals market.

5

Leveraging technology: the future for precious metals settlement?

Examples from other asset classes, including the case studies above, show that holistic solutions can sometimes solve multiple problems. This section explores potential options for the future which might deliver one or more of the efficiencies identified in Section 3.

For solutions to be successful, there needs to be a high degree of standardisation across the precious metals market.

Integrated vendor solutions?

Potential vendor solutions could work in cooperation with LPMCL to make the precious metals market more efficient. As reflected by CLS in the FX market, a vendor working on top of LPMCL could provide DvP and netting solutions for the precious metals market. When trading multiple physical assets, a market participant will have numerous contracts where netting can be used.

This could require a significant change to bank processes and operating models as it is technically challenging to capture both the currency leg and metal movement information and use it to create a contract.

The vendor solutions applied would need to be consistent across the market and link in with a variety of existing in-house systems.

An expanded and more integrated unallocated precious metals market?

In addition to Zurich developing more advanced clearing and settlement systems, a single infrastructure solution between London and Zurich could drive additional advantages. Loco London and Loco Zurich dealers already reached an agreement in 1979 to standardise 'good delivery' for precious metals.

Building on the attributes of the LPMCL model across both markets could be effective when trading on an unallocated basis. The interbank network in the Zurich market is lighter than the existing London network and the liquidity in the Zurich market varies from being more liquid than the London market to less liquid, so could form a good complement.

The existing concentration of the metal vaulting network can make trading across regions difficult in terms of the need for transportation. Theoretically, it may be beneficial to expand the existing vaulting network as trading between regions and countries would be simplified with less need for transport.

However, even creating a vaulting network across just Loco London and Loco Zurich metal faces considerable barriers. Most notably, it would result in differential freight costs for participants requiring physical delivery, depending on the location of the metal. Also, across the precious metals market, there is a difference between the physical assets that are traded. For example, in the gold market, there are two main type of physical bars that are traded – the large bar and the kilo bar.

Tokenising precious metals?

A digital solution whereby physical assets are tokenised may offer the market lower margin requirements, reduce settlement risk and allow for shortened settlement which could be instantaneous and/or allow atomic settlement, where one leg of a trade is settled if, and only if, the other is also settled. T+0 settlement under today's infrastructure has drawbacks due to the understandable difficulties in trusting that an anonymous market participant can deliver on their side of the trade. Tokenisation, however, would mean that each physical asset has a digital twin, thus allowing an improved infrastructure of less fraudulent activity. This is because all bars traded on the market are registered and traceable on an immutable basis as pledged collateral.

In precious metals, the London Bullion Market Association (LBMA) and the World Gold Council (WGC) are collaborating to develop and implement an international system of gold bar integrity that will create an immutable record of a gold bar's place of origin and chain of custody[31]. This blockchain-backed ledger will register and track bars, capturing the provenance and full transaction history. While the initial focus of this work is not on confirmation and settlement in the unallocated precious metals market, it may provide a pathway to the significant investment that would be required by all market participants to achieve a tokenized digital market.

Furthermore, the UK government have acknowledged the significant efficiency gains which may arise from the introduction of tokenisation in markets[32]. However, it is also understood that future regulatory change might be necessary to facilitate a large-scale adoption of this technology whilst preserving market integrity.

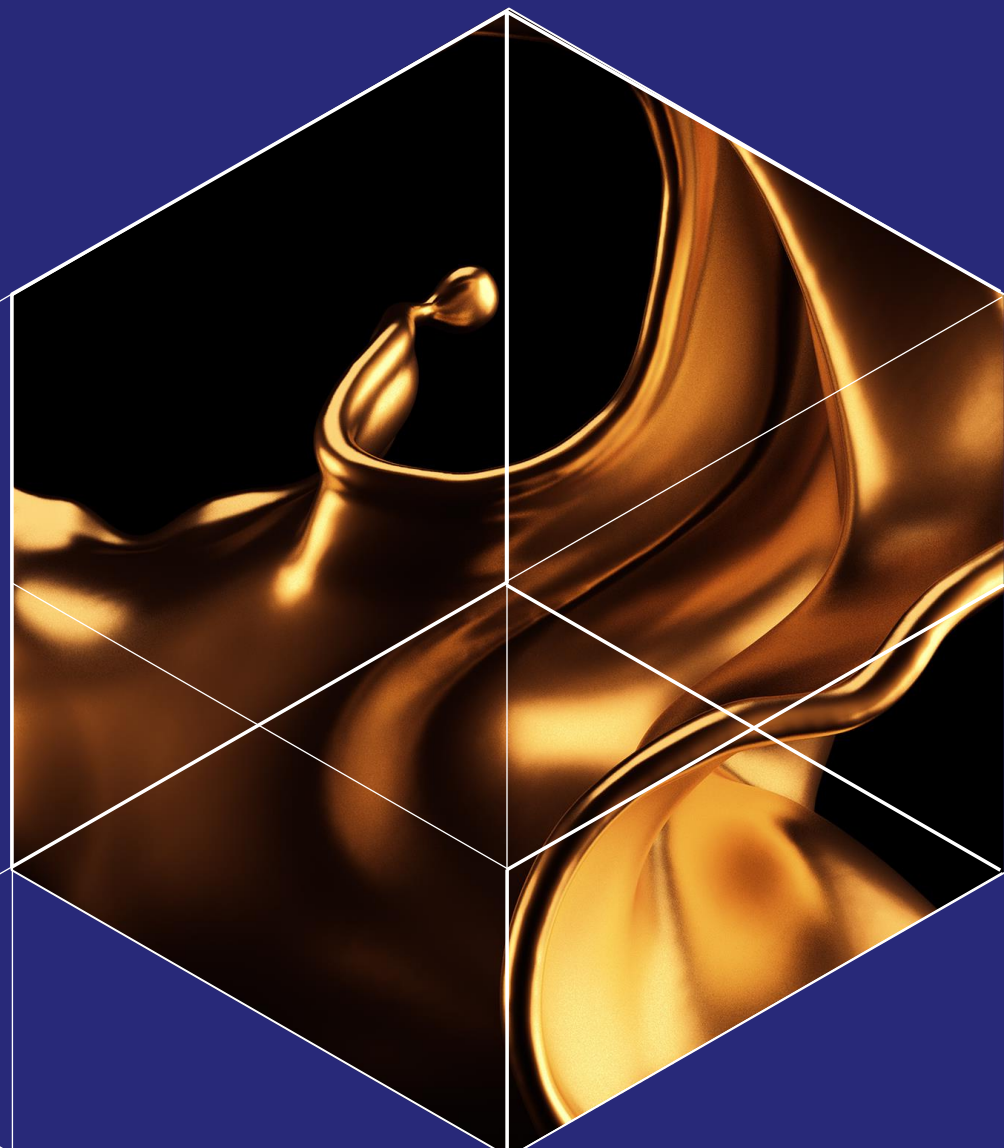
Final remarks

The adoption of automation and other efficiency gains in precious metals market structure has lagged behind other FICC markets. However, there is now an opportunity for the market to make material improvements to the efficiency of its post-trade processes. These improvements could be driven by incremental enhancements informed by the earlier evolution of other FICC asset classes or a more radical change through the tokenisation of the post-trade ecosystem.

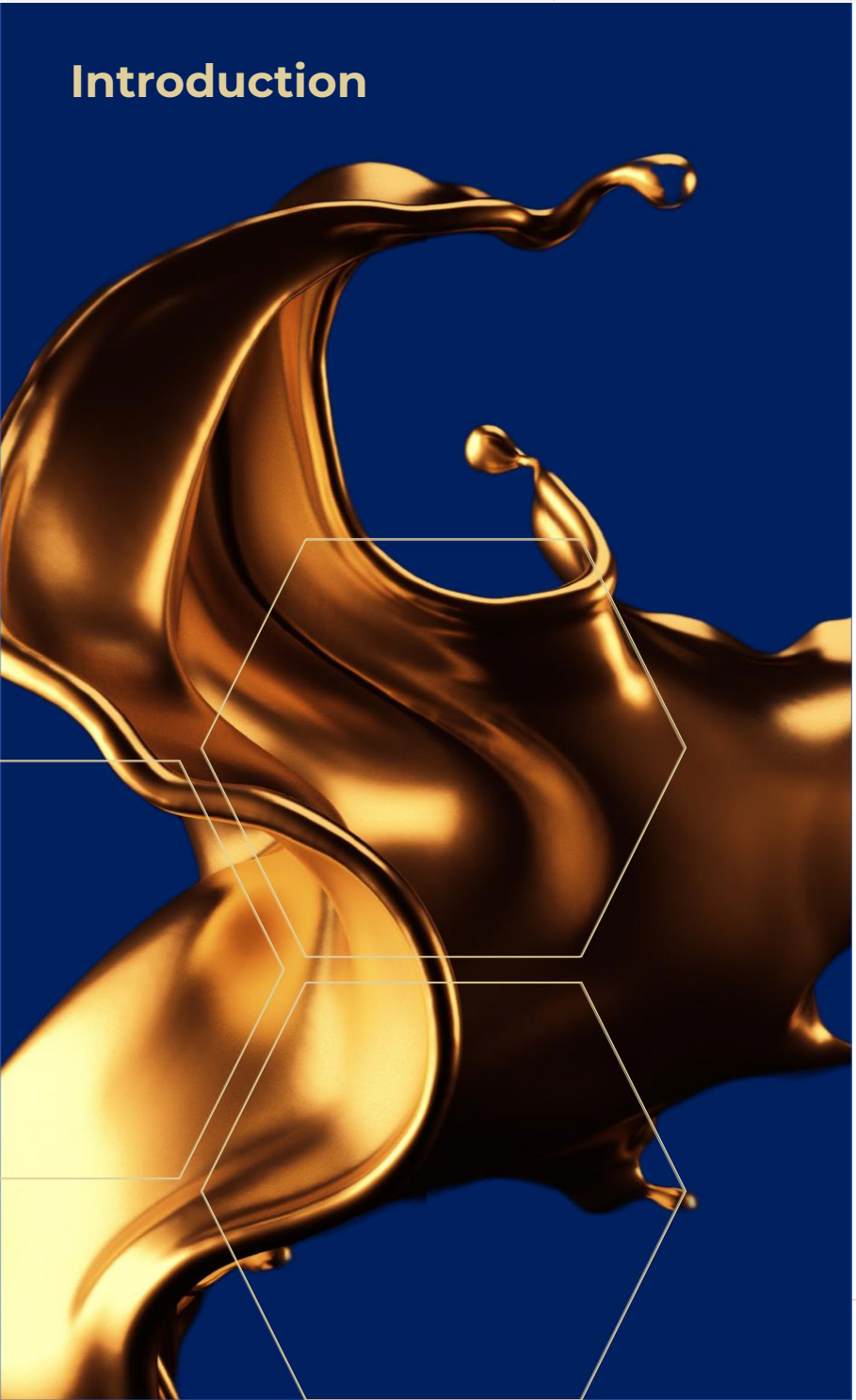
Spotlight Review

Data and Transparency in Precious Metals Markets

July 2023



Introduction



Gold has long been considered a store of value and a "safe haven" asset in times of market volatility. It has a unique market structure, evolved to blend features seen in mature, widely-traded financial products, with which gold shares similar functions, and physical commodities, with which it shares a form.

The second Basel Accords reduced the incremental cost of carry for unallocated gold as larger institutions were able to opt to use model-based approaches to calculate their capital, operational and market risk. No such model-based approach currently exists, however, for the new liquidity requirements laid out in Basel III, which took effect in 2021.

Gold has not been deemed a High-Quality Liquid Asset (HQLA) under the Liquidity Coverage Ratio (LCR), which mandates a buffer designed to be rapidly liquidated to meet a sudden cash outflow. Further, gold's Required Stable Funding (RSF) mandates 85% of its value to be met in longer term Available Stable Funding (ASF) under the longer-term Net Stable Funding Ratio (NSFR).

This paper considers the characteristics of gold as an asset and the wider gold market against the backdrop of the new Basel III liquidity requirements. It assumes a basic understanding of the structure of the wholesale gold markets, an overview of which can be found in FMSB's Spotlight Review on Precious Metals Market Structure.

Section 1 of this paper draws on existing literature to conduct a gap analysis comparing gold against the principles for HQLA and RSF. Sections 2, 3, and 4 consider key opportunities for evolution, which could improve trust and confidence in precious metals markets and provide further evidence of gold's suitability as HQLA. Finally, Section 5 highlights synergistic improvements in market conduct which could be enabled through this wider suite of changes.

1

Basel III and prudential liquidity requirements

Gold's traditional status as a safe haven asset has historically been reflected in its prudential treatment.

The original Basel Accords, which agreed the first international standards for bank capital requirements and risk weighting of assets, treated gold in the same category as both cash and claims on OECD or the reporting bank's home government. This meant that banks could risk weight their gold assets at 0%, therefore requiring no capital to be held against potential deterioration in its value, despite the increased volatility compared to the other assets in this category.

However, this treatment only extended to bullion held in a bank's own vaults, or on an allocated basis.

The ability for larger institutions to opt to use model-based approaches to calculate their capital, operational and market risk since the implementation of the second Basel Accords reduced the incremental cost of carry for unallocated gold. However, in the aftermath of the 2008 Global Financial Crisis, the Bank of International Settlements introduced an overhaul of its framework for international standards for prudential risk management for banks.

Among other measures, Basel III strengthened existing bank capital requirements and introduced new rules for liquidity. While the capital requirements for gold remained unchanged, the liquidity rules have become the limiting factor in the cost of carry for gold.

Basel III implemented a change in rules on the required amounts of liquid assets that must be held by banks to withstand severe financial stress.

Consequently, the LCR is intended to ensure that banks have at least the minimum HQLA to be resilient in times of stress.

Assets are considered HQLA 'if they can be easily and immediately converted into cash at little or no loss of value'[33]. There are seven main characteristics of HQLA[34] which are split into fundamental characteristics (1-4) and market-related characteristics (5-7):

1. **Low risk**
2. **Ease and certainty of valuation**
3. **Low correlation with risky assets**
4. **Listed on a developed and recognised exchange**
5. **Active and sizeable market**
6. **Low volatility**
7. **Flight to quality (market tending to move towards these assets in times of crisis)**

1 Basel III and prudential liquidity requirements continued

The second liquidity measure introduced by Basel III is the NSFR, a reflection of banks' overall funding structure. It encourages the funding of longer-term assets with longer-term funding, thereby reducing roll-over risk. Although not directly connected, the LCR and NSFR are related; assets that can be rapidly liquidated at minimal discount to market clearing price require less longer-term funding.

Of the seven criteria outlined above, insufficiently low volatility is often cited as a barrier to gold being treated as a HQLA. However, gold's volatility is inversely correlated with positive and negative macro-economic shocks, supporting its use as a hedging tool and safe haven asset. Similarly, research published by the World Gold Council and London Bullion Market Association, LBMA[35] looking at gold's performance during the covid asset liquidation event, suggests that intra-day volatility in gold spot markets over the period studied compared favourably with a basket of liquid stocks traded on the NYSE. In addition to volatility levels, limited understanding of the structure of the precious metals market, compared to other physical commodities markets, has also been considered an obstacle to gold's inclusion as a HQLA. Increased transparency, supported by public-private dialogue, will be important to address this concern.

Building confidence and trust in the precious metals market through increased price transparency should support higher trading volumes and overall market size as well as improving the ease and certainty of valuations. In turn, this may increase the likelihood of gold achieving HQLA recognition.

This paper considers three areas that can drive greater trust and confidence in the market:

(i) availability of reference prices;

(ii) pre- and post-trade transparency; and

(iii) robust market surveillance.

Benchmarking: The re-introduction of a gold reference rate, through the proposed creation of a forward benchmark, could improve transparency in the market and would evidence an 'active and sizeable' gold market.

Transparency: Improving both point-of-trade transparency through greater adoption of electronic trading, and post-trade price transparency through publicly available historic transaction prices, should demonstrate the 'ease and certainty' of gold's valuation, as well as the presence of an active, liquid market. Having sustained price transparency, where price data is published and accessible, could also demonstrate that gold has a low correlation with risky assets, as it has historically been shown to keep its value in times of market stress or crisis.

Market surveillance: Robust market surveillance supports market integrity thereby increasing participant confidence in such markets.

2

Benchmarking

Benchmarks are ubiquitous in wholesale financial markets. By providing single price points for a basket of quotes, benchmarks reduce information asymmetries, search costs, and improve overall levels of efficiency and transparency in their respective markets.

Since 2015, the spot price for physical gold has been set through the LBMA. Both traditional clients, such as miners, refiners, end users and central banks, and wholesale clients can participate in the gold auction. However, the majority of participants in the gold market do not transact through auctions, but through bilateral trades that utilise the LBMA gold price as a benchmark, which underscores the critical role of the LBMA gold price in maintaining the robustness of the gold market.

In mature markets there is also a need for futures pricing and leasing costs (an effective interest rate) to enable hedging and efficient use of assets through their pledging as collateral. However, since the retirement of the Gold Forward Rate (GOFO) in January 2015, there is no longer a definitive forward reference rate for gold.

While LBMA members currently submit transaction data into the LBMA trade data store, the data collected is only available on an aggregated basis on T+1. Market participants whose trade data is submitted into the LBMA trade data store may also wish to consider whether further pricing information derived from LBMA trade data should be made publicly available to enhance transparency. This pricing data could be used to create a rate to perform a similar role to GOFO, helping to create a larger and more active gold swap market.

A new reference rate

Industry initiatives continue to investigate appropriate benchmark methodologies that would give the most voluminous tenor, with the lowest volatility, while being timely and resistant to manipulation. Although these efforts are far from concluding, two contrasting methodologies that have been discussed are outlined below.

GOSRA

One approach to creating a rate to perform a similar role to GOFO would be a **Gold Swap Rate in Arrears (GOSRA) rate**. The GOSRA rate would be an implied rate calculated in arrears, meaning it is based off previous transaction data. Executed tomorrow-next day ('Tom/Next') swap trades will be used to imply a look-back rate; a rate can then be implied for a given time window e.g., a 1-month forward rate is calculated by compounding in arrears the rates for all the trading dates in the month.

The GOSRA methodology would be a robust way to calculate a forward benchmark rate for gold, as there is a significant volume of data from executed Tom/Next transactions. Using realised transaction data and compounding multiple daily rates to calculate a term rate can also reduce the risk of benchmark manipulation.

However, while moving to a rate in arrears would match the post LIBOR transition approach being taken for the USD and GBP rates markets, there are drawbacks to moving to a rate calculated from historic data. Notably, GOSRA would be an imperfect proxy for future forward rates. In particular, the use of compounding of Tom/Next data could create anomalies due to idiosyncratic market moves that occurred during the reference period which would then be reflected in the forward rate. Adjusting the length of the reference period and/or use of a truncated average to determine the compounded rate could help to mitigate these anomalies. The compounding of a single average rate also implies a constant shape of a forward curve which may not be reflective of an actual market.

2. Benchmarking continued

GOFFR Rate

An alternative approach would be to create a **Gold Forward Financing Rate (GOFFR)** for the tenors with the highest transaction count and transaction volume in LBMA trade data. The required data on executed swap transactions is part of the LBMA trade data that is already collected, although it may be necessary to pair up the two legs of the swap transaction and compute the implied swap rate. It is anticipated that this may be possible for the 1-month and 3-month tenors.

A GOFFR rate has the advantage over a GOSRA rate that the tenor rates published for a particular date would be a forward-looking rate. It will be important to ensure that the volume of data being used to form the GOSRA or GOFFR rate is large enough to imply an accurate representation of the market. The LBMA already captures all swap trade data where at least one of the parties is an LBMA member. However, it is understood that even for 1-month and 3-month tenors, there is a lower transaction count and volume than for the Tom/Next transactions. Additionally, the GOFFR rate may be impacted as the prices of bilateral forward trades submitted into the LBMA trade data store can include XVA and/or credit margins.

The calculation of the GOFFR rate for particular tenors would not benefit from compounding rates from multiple periods of observation. As such, if there is insufficient transaction count and volume for the chosen tenors, a GOFFR rate calculation could be more susceptible to manipulation than a GOSRA rate.

Either approach is likely to have regulatory implications which will need to considered when determining the desirability of the creation of a new benchmark as well as the appropriate methodology.

3. Pre- and post-trade transparency

For all markets, moving to multilateral electronic trading would help to increase transparency through data aggregation, as well as decreased liquidity search costs. This has been recognised internationally, including at the G20 in 2009, which called for all trading and clearing of standardised OTC derivative contracts to be conducted on exchanges, electronic platforms, and central counterparties, respectively.

However, while electronic trading platforms are used in the precious metals market today, some platforms are limited in their number of participants, and a sizeable volume of bilateral and voice trading still occurs in the precious metals market, relative to other markets. In the latter case, pre-trade pricing data is often not recorded or timestamped accurately. The use of multilateral platforms, such as Central Limit Order Books, could be further encouraged. By transmitting live bid and offer prices to the widest possible set of participants on those platforms, transparency and price discovery are improved across the market.

What is a central limit order book?

- A central limit order book (CLOB) is a trade execution model that matches bids and offers by price and priority.
- Outstanding bids and offers are queued and matched with a corresponding order by price and time of entry.
- The highest bid order and the lowest offer order are equivalent to the best available market price.
- Customers can enter limit orders between the bid and ask, as well as see, the market depth.
- A CLOB allows for transparent, real-time, and anonymous execution.

These prices are valuable pre-trade data, particularly in products such as OTC precious metals forwards where there is limited pre-trade transparency outside of electronic trading platforms. Given that the lack of pre-trade data and the corresponding challenges for ease and certainty of valuation are considered a barrier to gold achieving HQLA status, it may be worth considering whether data from electronic trading platforms could be aggregated and shared more broadly.

Pre-trade data is likely to be representative of the current prices that market participants receive, whereas backward looking post-trade data may not be. However, pre-trade data is also likely to become stale more quickly and have credit considerations. Additionally, there is a risk that pre-trade data may be proprietary, or client specific. This would limit its utility as a source of greater transparency, and data providers would have to be able to distinguish between pre-trade data from a competitive market which is relevant to all participants, against pre-trade data only applicable to a single, or small number of participants. This is potentially more difficult because pre-trade data in precious metals markets is driven by quotes not order books. Market evolution in other asset classes suggests that too much pre-trade transparency can make it harder for market-makers to absorb risk and therefore reduce liquidity. One potential solution could be to link the exchange-traded and OTC markets by way of a transparent and tradeable Exchange of Futures for Physical (EFP) rate, increasing the transparency and reducing the arbitrage between different platforms.

4. Surveillance and enforcing market behaviour

Part of building confidence and trust in a financial market is ensuring that market participants are confident that any incidents of market abuse and poor conduct will be detected and rooted out. This is supported by the implementation of high-quality surveillance capabilities trained both at market participants and on trading venues.

Greater data transparency and availability can support robust surveillance mechanisms driving correspondent improvements in market integrity. High-quality surveillance is dependent on the relevant pricing data being accessible and usable, which the move to electronic trading platforms, and increased post-trade data transparency discussed above, could help facilitate.

FMSB has previously conducted work in this area with a focus on the FX market (FMSB Statement of Good Practice on Surveillance in FX Markets). This Statement of Good Practice highlighted the necessity of retaining records of communications and on-going review of surveillance activities to identify trends and abnormal behaviour. Additionally, it highlighted emerging technologies and strategies which could be applied to facilitate surveillance. Such techniques could be extended from FX markets to the precious metals markets.

Natural Language Processing (NLP) could allow for automated identification of sentiment and context, aiding in the identification of conduct risks. Firms could consider a holistic surveillance model, bringing together disparate data sets (such as trade, written and voice communication, among others) into a single view, and applying more sophisticated data analytics engines and algorithms to connect them.

5

Conclusion

If price benchmarking and greater transparency can be implemented in the precious metals market, it will improve the ease and certainty of valuation of instruments and, through enhancing the trust and confidence of market participants, contribute to a more sizeable and active market. Such steps could support gold's recognition as a HQLA.

Market participants, infrastructure providers and industry bodies will be best placed to take the observations in this Spotlight Review forward to improve the fairness and effectiveness of the market.

End notes

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3. UK Wholesale Markets Review Consultation, HM Treasury, July 2021, p 35
4. See LBMA Trade Reporting Weekly Turnover, based on 12 week moving average of trades for the period ending 26 September 2021.
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6. About Loco London, LBMA
7. LPMCL operates a central electronic metal clearing hub (see here).
8. LPMCL Clearing System, LBMA
9. LCR is 'designed to ensure that banks hold a sufficient reserve of (HQLA) to allow them to survive a period of significant liquidity stress lasting 30 calendar days' (see LCR – Executive Summary).
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