



FMSB
FICC MARKETS STANDARDS BOARD

Spotlight Review

Precious Metals Market Structure

November 2021



The FICC Markets Standards Board

FICC Markets Standards Board Limited (FMSB) is a private sector, market-led organisation created as a result 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 fixed income, currencies and commodities (FICC) markets should take more responsibility for raising standards of behaviour and improving the quality, clarity and market-wide understanding of FICC 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 FICC markets.

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

In specialist committees, sub-committees and working groups, industry experts debate issues and develop FMSB Standards and Statements of Good Practice and undertake Spotlight Reviews that are made available to the global community of FICC market participants and regulatory authorities. As part of its analysis on the root causes of market misconduct, FMSB is focusing on the challenges of new market structures.

Spotlight Reviews

Spotlight Reviews encompass a broad range of publications used by FMSB to illuminate important emerging issues in FICC 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.

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Introduction

FMSB has established a Precious Metals Working Group ('PMWG') with the aim of:

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

This publication, which is the first in a series of reviews, 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 instruments¹. 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.

The PMWG is also conducting a deep-dive into specific pre-trade, execution and post-trade topics and will publish its observations into these areas in due course. These topics are shown in the diagram below:



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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 volumes².

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 formation³. 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 weekly⁴, 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') process⁵, 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.

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 market⁶). 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 process⁸ 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.

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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.

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 Treasury¹¹; 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.

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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.

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Benefits and hurdles associated with implementing structural changes

Benefits	Hurdles
<p data-bbox="275 403 622 459">Increased trust leading to greater participation in the market</p> <ul style="list-style-type: none"> <li data-bbox="275 491 1043 579">● Transparent markets in which liquidity is easier to source and quantify help promote the trust of investors and drive increased participation and trading volumes. <li data-bbox="275 619 904 643">● The OECD¹⁵ determines three forms which trust may take: <ul style="list-style-type: none"> <li data-bbox="297 683 1003 738">i predictability of behaviours from markets that are efficient, open, stable and sound, and result in returns commensurate with risks; <li data-bbox="297 778 1055 834">ii confidence that the rules and oversight of market interactions support the soundness, fairness and integrity of markets; and <li data-bbox="297 874 999 930">iii that market participants' behaviours will be ethical in serving the interests of customers. 	<p data-bbox="1149 403 1312 427">Increased cost</p> <ul style="list-style-type: none"> <li data-bbox="1149 491 1899 611">● 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. <li data-bbox="1149 651 1921 770">● 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).

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Benefits and hurdles associated with implementing structural changes continued

Benefits	Hurdles
<p data-bbox="277 400 808 459">Increased transparency leading to improved access to information and enhanced price formation</p> <ul data-bbox="277 491 1066 708" style="list-style-type: none"> • 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. 	<p data-bbox="1155 400 1368 427">Insufficient adoption</p> <ul data-bbox="1155 491 1957 999" style="list-style-type: none"> • 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: <ul data-bbox="1182 751 1951 999" style="list-style-type: none"> ○ 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.
<p data-bbox="277 1023 656 1082">Market surveillance efficiencies and protection against market abuse</p>	
<ul data-bbox="277 1114 1003 1303" style="list-style-type: none"> • 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 abuse¹⁶. 	

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

Benefits	Hurdles
<p data-bbox="275 400 745 459">Act as a focal point for liquidity in the market making liquidity easier to source and quantify</p> <ul data-bbox="275 491 1077 807" style="list-style-type: none"> • 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 liquidity¹⁷. 	<p data-bbox="1155 400 1346 427">Risk Warehousing</p> <p data-bbox="1155 491 1939 550">Increased transparency associated with markets where trading activity is concentrated on a CLOB can give rise to certain unintended consequences:</p> <ul data-bbox="1155 587 1939 938" style="list-style-type: none"> • 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. <p data-bbox="1155 975 1951 1126">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.</p>

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

Benefits

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.

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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
<p>Ease of market access for participants</p> <ul style="list-style-type: none">• 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 reduction¹⁸. 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 exposures¹⁹.	<p>Inflexible operating model</p> <ul style="list-style-type: none">• 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.
<p>Reduction in operational burden for participants</p> <ul style="list-style-type: none">• Post-trade activity can be centralised through the processes put in place by a CCP. This standardisation may reduce the operational burden for participants.	
<p>Lower capital and initial margin requirements</p> <ul style="list-style-type: none">• 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.	

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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
<p>Ease of adoption</p> <ul style="list-style-type: none"> • 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. 	<p>Operational cost of implementation</p> <ul style="list-style-type: none"> • 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.
<p>Lower capital and initial margin requirements</p> <ul style="list-style-type: none"> • 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. 	
<p>Operational efficiencies</p> <ul style="list-style-type: none"> • 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. 	

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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 process²¹.

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.

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.

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End notes

1. Commodity derivatives including those with precious metal underlyers are regulated under the UK and EU regimes set out in FSMA and MiFID II respectively.
2. [GoldHub Trading Volumes](#), last viewed 8 November 2021.
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.
5. A private agreement between two parties to exchange futures for the physical underlying commodity.
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](#)).
10. [Characteristics of HQLA, LCR 30, para 30.2, BIS12](#)
11. [The impact of the NSFR on the precious metals markets, LBMA response to Prudential Regulation Authority's consultation paper on the implementation of Basel Standards, May 2021, p 14](#)
12. NSFR is a liquidity standard which aims to 'promote resilience over a longer time horizon by creating incentives for banks to fund their activities with more stable sources of funding on an ongoing basis' (see [NSFR – Executive Summary](#)).
13. [Policy Statement PS17/21: Implementation of Basel standards](#), PRA, July 2021, p 65.
14. [ibid.](#)
15. [OECD Business and Finance Outlook 2019: Strengthening Trust in Business](#), September 2019.
16. See [G20 Leaders Statement: The Pittsburgh Summit, 24-25 September 2009](#)
17. [Centralized trading, transparency and interest rate swap market liquidity: evidence from the implementation of the Dodd-Frank Act](#), Bank of England Staff Working Paper No. 580, May 2018.
18. [LME Insight: The Role of Clearing Houses](#), LME, June 2018
19. [Implementation and Effects of the G20 Financial Regulatory Reforms Annual Report](#), FSB, 3 July 2017
20. [Risk Mitigation Standards for Non-centrally Cleared OTC Derivatives](#), IOSCO, 28 January 2015
21. The PMWG expects to publish further observations on settlement efficiency in precious metals markets in due course.