

February 28, 2014

Secretariat to the Financial Stability Board Bank for International Settlements Centralbahnplatz 2 CH-4002 Basel Switzerland fsb@bis.org

Re: AFSG: Feasibility Study on Approaches to Aggregate OTC Derivatives Data

Dear Sir / Madam:

Better Markets, Inc.¹ appreciates the opportunity to comment on the above-captioned Feasibility Study (the "Feasibility Study", "Study") published by the Financial Stability Board ("FSB", "Board") on February 4- 2014, the purpose of which is to investigate approaches to an aggregation regime for over the counter ("OTC") derivative data, as requested by and pursuant to an agreement by G20 Leaders as part of their commitments regarding OTC derivatives reforms ("the G20").

In the effort to design a global financial regulatory system free of the vast inadequacies that led to the disastrous 2008 financial meltdown, much progress has been made in bringing transparency and oversight to the derivatives market over the past 5 years. The financial crisis' most notorious culprits, OTC derivatives, have appropriately been a focus of attention, regulation and initiatives, including streamlining financial data. Chief among these initiatives is the requirement that all trades are reported to Trade Repositories ("TRs"), but there remains much work to be done before the global marketplace serves the interests of regulatory authorities, markets, market participants, and the public.

For example, fragmented and compartmentalized data regimes that have emerged out of uncoordinated regulatory initiatives from around the world, which have limited the capacity of regulatory authorities to mitigate, analyze, or even measure the bulk of the risk posed by these products. A comprehensive, thoughtful, and robust system to aggregate and distribute this financial data is one of the most important remaining steps toward market transparency and global financial stability.

Better Markets, Inc. is a nonprofit organization that promotes the public interest in the capital and commodity markets, including in particular the rulemaking process associated with the Dodd-Frank Act.

INTRODUCTION

Just as modern transportation has facilitated the rapid spread of contagions around the world, the interconnection of market infrastructures through derivatives has created significant financial risks alongside the benefit of flexible and customizable risk management. Even after the disastrous realizations of these risks experienced in 2008-2010, the still inadequately coordinated regulatory regimes governing derivative products ensures that the true stability of the financial system is uncertain. Unfortunately, basic processes that make traveling today safer and more transparent, such as using one phraseology globally for air traffic control, are not being translated into the new international derivatives market framework. A common easy-to-use and concise "language" can help avoid crashes, both in the air and in today's derivatives markets.

The emergence of TRs as local hubs for trade data has been an important step toward bringing transparency to global derivatives markets. However, their inability to communicate effectively with each other has resulted in compartmentalized data that are largely unusable in many of their intended functions as determined by the G20. In fact, nearly 6 years after the financial crisis, market observers still lack a comprehensive understanding of the financial exposures and risks of any global financial institution or jurisdiction. It's easy to imagine how much chaos would exist if this kind of system existed in international air traffic control.

In recognition of the challenges presented by this provincial and ineffective communication framework, the FSB has initiated a feasibility study to evaluate potential methodologies for aggregation of the data currently confined in individual TR's around the world, to begin building an integrated picture of global financial activity.

To date, most regulatory efforts with respect to TRs have focused on methodologies for collection, storage, and retrieval of trade data. As articulated in the study, the obstacles to achieve these functionalities should not be underestimated. However, the financial markets cannot be made secure unless the scope of information is broadened and the aggregation of data for meaningful analysis is established.

Specifically, the study presents the aggregation options in the context of the three broad functions to be performed by global trading data in aggregate:

- (i) improve transparency in derivatives markets;
- (ii) mitigate systemic risk; and
- (iii) protect against market abuse².

While capturing trade data at the point of execution is an obvious and long-overdue step toward transparency, if the data are electronically balkanized by asset-class and/or jurisdiction, their usefulness is severely restricted. The capture of basic trade data cannot serve any of these three objectives unless the data is aggregated into a common framework.

Below, we will discuss the aggregation options and suggest important factors that must be included in any meaningful aggregation regime. But it is important to first

² See FSB Report, page 3.

highlight two important points acknowledged in the study regarding the potential for any aggregation regime to be useful.

First, any aggregation regime that has the potential to be implemented in a sophisticated manner that provides comprehensive analysis goes beyond simple reporting.³ There is a wide range of additional functionality that could be performed during aggregation – above and beyond simple accumulation and data-cleansing. The Board should endeavor to design a regime that analyzes and reports data in the manner that provides maximum transparency to regulators and/or the public, and allows for the easiest comparison of market data.

Second, the study acknowledges that changes to the TR source data itself may be mandated to the extent that such changes would serve a comprehensive aggregation regime.⁴ This should be held as a foundational point in designing an aggregation regime for many reasons. The data currently provided is fragmented, inconsistent, and non-standardized across TRs and jurisdictions. **The issue of data standardization must be tackled before any steps are made toward aggregation**, since even the most cleverly designed aggregation regime is only as useful as the quality of the data underlying it. The Board must require any and all changes that will facilitate aggregation, and resist any efforts to impede standardization by individual jurisdictions or TRs.

SUMMARY OF COMMENTS

The Board has requested comment on two possible new aggregation regimes. ⁵ This comment letter will address the issue of which option is most appropriate for satisfying global financial regulatory goals, and will provide substantive discussion of the specific form that data aggregation should take to provide the most value to regulatory authorities, the global marketplace, and the public – each of which has a significant interest in a comprehensive structure.

This comment letter seeks to advance the discussion of aggregation and analysis of trade data by proposing specific concepts. Specifically, it will point out common industry practices for recording and valuing what are often referred to as or thought of as illiquid swaps, options, and complex transactions which are often actually multiple listed

[&]quot;Either Option 1 or Option 2 could be implemented with varying degrees of sophistication or service levels, ranging from basic delivery of data in response to each request to - at its most sophisticated – providing additional services beyond basic delivery of data, such as performing quality checks/removing duplications, masking/anonymizing data according to the mandate/authorization of the requester, and aggregating data." Study at p. 6

[&]quot;The study does not set out to propose changes to the data reported to TRs or the data held by TRs unless those changes are necessary or desirable to achieve aggregation. However, where needed, the study highlights any regulatory or other actions that might be needed in order to enable an option to be implemented or to improve its effectiveness. It notes where relevant improvements in market practices or infrastructure (e.g. introduction of a global Unique Product Identifier (UPI) or Unique Transaction Identifier (UTI)) that would assist the aggregation process, and it recognises where relevant that the aggregation option chosen may have impacts on TRs, market participants, related data providers, authorities and other stakeholders." Study at p.9

The study actually offers three alternatives, but one of these options (Option 3) amounts to the current process, which is insufficient to meet the goals laid out by the G20 – as evidenced by the need for such a feasibility study - and therefore is not a viable option.

derivatives packaged together (often referred to as "bespoke"). Too often, these contracts are seen as requiring special treatment when in fact, there are tried and true methodologies already in use by many swap dealers which normalize these transactions into a common framework.

In particular, the comments below will address three key points:

- A central non-profit aggregator will allow for the most comprehensive and productive aggregation regime. With multiple TRs organized according to products and jurisdictions, the most efficient way forward is a central, non-profit aggregator which serves the needs of multiple regulatory authorities on a shared cost basis and which can also provide important market analytics for transparency.
- Any aggregation regime should exist to serve global market participants
 and the public in addition to regulatory authorities. While a comprehensive
 data aggregation regime is essential for global regulators, it can and should
 provide a transformative level of transparency and market information to
 investors and the public as a whole. Comparatively speaking, global derivatives
 markets are in their infancy and regulators have a unique opportunity to guide
 their development in a way that protects the public interest, promotes
 competition, lowers costs, and protects against predatory conduct by agents.
- Seemingly complex transactions should be disaggregated and reaggregated and valued on a hedge equivalent basis. Many bi-lateral derivatives transactions are actually composites of much easier to understand derivatives risk, each of which is independently easier to assess in terms of risk and easier to monitor in terms of results. An optimally useful aggregation regime must require that transactions be documented and priced separately, into their simplest forms. TRs must be required to provide the public with the hedge equivalent alternatives. Developing a common language of derivatives transaction reporting in this manner allows for the OTC derivatives market to have common language. This is a vital step towards having a transparent OTC derivatives market across jurisdictions.

A central aggregator is the most appropriate option.

The Study offers two novel alternatives for an aggregation process. One option is a central entity to collect and store all trade data from TRs, serving all markets, jurisdictions, and asset-classes as a global financial utility⁷. Alternatively, the aggregator could exist as a federated or decentralized model, under which jurisdictions govern the actual data collection and storage of the data while allowing it to be virtually catalogued by the aggregator. However, in the latter case, a common hedge equivalent language would be crucial in allowing for successful translation of derivatives data across jurisdictions.

This is directly related to the need for reported swap data to include hedge equivalent pricing for post trade analysis by regulators and the public.

The Consolidated Tape Association (CTA) system currently in place for U.S. equity markets demonstrates that the system proposed is feasible. Under the CTA system, individual exchanges send transaction data directly to a central aggregator that consolidates and then distributes the data to market participants. There is no obvious reason why a similar regime could not succeed for all products.

These two approaches offer functionally similar but technically divergent approaches to aggregation. Among the two options, the first approach is preferable: it establishes a disinterested, reliable aggregator, tasked by multiple regulatory authorities to harmonize multiple data streams and maintain a uniform database, as well as monitoring and analytical protocols. Via this framework and inclusive of hedge equivalent reporting, various regulatory authorities would have a common view of interconnected markets and also have the ability to do equivalence monitoring and ad hoc analysis. This is completely consistent with common sense structural consistency, and serves all of the G20's goals.

Additionally, a central and global aggregator can provide a function vastly more valuable to the public at large if properly designed. In particular, an aggregation regime that takes the raw trade data provided by TRs, disaggregates compound trades into their component risks, re-aggregates these risks in a simplified manner, and publicly reports the aggregated data with the attendant valuation analytics, would provide regulatory authorities, market participants, and the public with unprecedented transparency in OTC financial markets. We will discuss this point in greater detail below.

Importantly, a central entity is better equipped to consistently perform this role in the public's interest broadly, as opposed to on a jurisdictional basis. It must be recognized that derivatives markets will change, the standard identification systems must evolve, and the various jurisdictions will react to such changes in a staggered and inconsistent manner. A central body with all historical data within its domain can ensure that changes to best practices are applied in a consistent manner across jurisdictions, product classes, and time-horizons.

Governance of such an entity is, of course, a critical concern. Optimally, the aggregator should be a not-for-profit entity whose costs are shared by the regulatory authorities of multiple jurisdictions. Use of an aggregator is completely responsive to the realities of OTC derivatives markets, which are fundamentally interconnected in terms of product and operate outside of jurisdictional boundaries. In terms of costs, efficiency, and reliable and comparable analysis, this alternative is the most sensible.

One tangential consideration is that a central aggregator would be a natural entity to additionally establish common trade and product identifiers, and could publish an API ("application program interface," or code which provides the syntax of a data system to which multiple information providers can write conforming code), requiring market participants and TRs either to write to the API or to conform their system syntax to international standards. This is the simplest and most comprehensive solution to many of the challenges facing the Board and other regulatory agencies as they attempt to bring order to a disorganized landscape that grows in complexity every day.

PUBLIC/MARKET BENEFIT OF DISSEMINATION

While the feasibility study focuses on the broader legal and organization issues surrounding aggregation, we applaud the Board for including a request for comment regarding the public benefit of aggregated trade data:

"5. The report discusses aggregation options from the point of view of the uses authorities have for aggregated TR data. Are there also uses that the market or wider public would have for data from such an aggregation mechanism that should be taken into account?"8

The ultimate goal of TRs should not be to simply capture the data or even to make it literally available to the authorities, but rather to ensure that the body of global trade data is meaningful and useful. Effective aggregation is an important factor in reaching the G20 goals of monitoring systemic risk through derivatives market transparency. The feasibility study itself underscores the tremendous opportunity in the current market environment to establish a robust system in which **derivatives markets are truly transparent to both Regulatory Authorities and the public**. Moreover, to accomplish these goals, a hedge equivalent reporting framework is necessary.

Clearly, the Board must adopt a much more proactive approach to the all-important challenges surrounding the dissemination of transaction data. The Board must pursue these and any other steps that are necessary to give the public, as well as regulators, access to complete, usable, real-time transaction data on an equal basis. ⁹

There are, of course, a variety of obvious benefits to a truly transparent and informed marketplace, not least of which is the reduction of the burden on regulatory authorities as market participants can more easily and accurately conduct due diligence and evaluate risk. With respect to OTC markets in particular, however, the enhanced ability of market participants to determine and monitor the suitability of complex derivatives transactions is perhaps the most important benefit of the increased transparency provided by a central aggregator.

With grossly distorted compensation incentives, it is not surprising that derivatives dealers structure increasingly complex derivative products ostensibly customized to meet client needs, many of which are designed **not** to be understandable by anyone other than a derivatives expert. As a result, the history of the derivatives markets is littered with disasters and scandals arising from complex products sold by dealers to customers who never knew or understood the ramifications of the instruments they were sold.

⁸ Study at p. 4.

In U.S. derivatives markets, the CFTC has done an admirable job of requiring that over-the-counter swap transactions are appropriately documented. In particular, required clarity regarding issues such as rehypothecation and segregation of margin assets, swap valuation methodologies, and documentation of qualification of a swap for the end-user exception provide needed certainty in the OTC marketplace. Coupled with the reporting requirements of the Dodd-Frank Act, and, in particular, reporting based on hedge equivalent contracts, available information on the marketplace will be complete, useful, and, because of the documentation requirements, reliable.

In the United States alone, the losses to governmental entities like Orange County, California, Jefferson County, Alabama, the State of Wisconsin Investment Board, the State of West Virginia, and the Denver school district have directly cost municipal U.S. taxpayers tens of billions of dollars.

International regulatory transparency initiatives have emerged in large part to protect the public from such predatory and preventable behaviors. Making meaningful aggregated trade and position data available to the public will greatly reduce the potential that customers will enter into arrangements without the full appreciation of the extraordinary risks associated with derivatives.

Listed hedge equivalents must be provided to customers.

As discussed in greater detail below, one of the most important potential services of aggregated financial data is the transparency it can provide to customers of global derivatives dealers in assessing the risks, costs, and suitability of their portfolios.

Any derivative transaction or trading strategy involving derivatives recommended to a counterparty should be based on reasonable due diligence to determine whether the recommendation is indeed suitable. This should not be a controversial proposition. Confirmation that suitability is being appropriately sought, however, can be illusive to both customers and authorities.

Dealers often recommend complex derivatives with multiple embedded risks, marketing them as "customized" or "built-to suit" the needs of counterparties. However, the same result can generally be achieved by simply disaggregating the risks into separate swaps, many of which might be available in listed markets. In a disaggregated form, they are more easily understood and tracked by risk monitoring systems used by counterparties.

Derivatives with separable risks can and should be documented and valued separately so that the customer can see and readily compare alternative trading sources and comprehend similar risks. Otherwise, disclosure is woefully incomplete. Indeed, without such disaggregated disclosure, it is difficult to see how anyone could determine if such a swap is suitable. Put another way, **unless swaps are disclosed in understandable**, **disaggregated forms**, **they cannot be suitable**.¹⁰

Many esoteric derivatives and derivatives based on infrequently traded price points are entered into often because of the precision with which they can match the risk profile of the counterparty. This serves the interest of the dealer because the counterparty can be charged more for a seemingly rarer instrument and there are few, if any, comparable prices available to the customer. Additionally, when those contracts are unwound with a dealer at a point in the future, the dealer knows precisely the counterparty positioning. This often

Similarly, disaggregation will greatly aid the transparency and usefulness of post trade data which is to be disseminated to the regulators and the public. In fact, without disaggregation, valid trade data comparison is likely to be impossible.

means higher costs for counterparty customers, and in times of market stress (when such unwinding often takes place) these costs can be much greater.

Thus the value of this precision is often not worth its costs. The created illiquidity of the complex swap presents new, potentially significant risks that are difficult to measure and nearly impossible to mitigate. Appropriate disclosure **cannot** be satisfied unless the counterparty has sufficient information to make an informed decision on the relative risk/reward of each part of a derivatives position, and then can comparatively price those pieces to more transparent venues.

In short, the market data available to the public and authorities must be at least as useful and decipherable as the data available to dealers as they measure and monitor their own positions, as they do every day for economic, compliance, business, and legal reasons. Some of this information may need to be specifically provided by dealers upon booking each transaction, but as discussed below, much of the disaggregation and re-aggregation could be performed by the central aggregator in a consistent, programmatic, and common manner and then presented to the public in a way that can facilitate comparisons across products, entities, and jurisdictions.

Among the information that should be calculated and reported for each transaction by a central aggregating mechanism are the following:

- **Core Underlying Product Equivalent:** For example, the delta equivalent of an option, the CDS or reference bond equivalent of a credit-linked note, the on-therun vanilla swap equivalent for a structured interest-rate product.
- **Greeks for Optionality:** The vega and gamma of any embedded optionality in a product.
- **Cost of Finance:** The cost of financing a complex derivative transaction, and the disaggregated costs of financing each component of the transaction.
- <u>Liquidity Risk:</u> The liquidity risk could be calculated as a function of historical bid/offers of each liquid component to a transaction, under both normal and stress scenarios.
- <u>Volatility Risk:</u> Historical volatility must be included in the disclosed information. And these factors can be used in a value-at-risk analysis as part of the scenario analyses.

TRs will soon collectively hold a cache of price and volume data for the vast majority of executed derivative transactions around the world, for the first time in history. This information will provide the source-data for the most accurate and robust valuation and risk analytics ever to exist. If designed to properly make use of this invaluable trove of information, the central aggregation mechanism could single-handedly ameliorate the lack of price discoverability.

Importantly, a central aggregator aided by this abundant and high-quality pricing information could provide tremendously accurate historical analytics for important pricing factors such as volatility and basis risks. The aggregator would have the potential to provide these important analytics as standard descriptors of OTC derivatives data, similar to the vast technical analytics that are widely available for liquid exchange-traded equity securities today. A trade data aggregation regime that realizes its potential to illuminate

this unnecessarily opaque marketplace would be among the most significant developments in financial reform to date.

Congruence

The derivatives markets are characterized by their fragmented nature. There are multiple asset classes that are unique but also involve various pricing relationships. In this regard, the Commodity Futures Trading Commission's ("CFTC") recognition of hedge equivalent contracts in its analysis of positions and position limits is instructive and illuminating. The system for aggregation and dissemination of market data arising out of the Study should not create artificial separation of data; instead, it must be responsive to the market reality that different asset classes are, in fact, related, as the CFTC recognized.¹¹

A meaningful system of aggregation may first require risk disaggregation and reporting on a component product/risk basis. Trade Identifiers are important because disaggregated risk may need to be re-aggregated for certain types of analysis. However, to value positions, evaluate portfolio risk properly, and create a database that reflects reality, identifiers for component risks – in addition to compound trades – are also required.

As discussed above, it must be emphasized that there is a distinction between transactions and risks. A transaction may consist of a single product/risk component, or it may consist of an almost infinite number of product/risk combinations. From the perspective of portfolio risk analysis, there is no difference between derivatives entered into separately and compound derivatives. This, of course, makes sense: traders could not deal in derivatives risks if the individual risks in a given transaction could not be independently described and measured with a significant degree of understandability, accuracy, and confidence.

To the detriment of customers and benefit of dealers, composite swaps actually obscure the real market price of each of the individual component swap parts. In practice, this situation allows the dealer and the customer to transact the separate individual risks at different prices via the construction of a composite swap structure. A structured or compound derivative may be marketed as a clever solution to a seemingly complicated problem, but self-serving claims of complexity or misleading labels for products purposefully aggregated should be disregarded. Clearly, since counterparties often pay up dearly for a composite swap verses the sum costs of its respective component parts, an opaque swaps market serves to benefit agents like swap dealers at the expense of other market participants, markets and market stability. Thus, disaggregation and hedge equivalent reporting will not only help to level the playing field for principals, but also protect investors and the markets.

Valuation must be driven by the substantive risks embedded in a given transaction. not the form of the transaction.

The Study admirably focuses on the regulatory necessity of calculating net exposures across entities as an important function to be provided by the aggregation

See Notice of Proposed Rulemaking, Commodity Futures Trading Commission, "Position Limits for Derivatives," RIN 3038-AD99 (Nov. 5, 2013).

regime.¹² In particular, the Study demonstrates how such exposure and valuation calculations will serve to satisfy multiple objectives. First, total exposures of a given entity are necessary to evaluate an entity's health and solvency by prudential regulators.¹³ Second, accurate margin and collateral operations can only be performed with meaningful exposure calculations. Importantly, the process of appropriately determining the comprehensive exposures of a derivatives portfolio requires regular valuations of a portfolio on a risk-factor basis.

Thus, to perform the basic functions prescribed by the G20, the aggregating mechanism will necessarily be performing the decomposition of complex trades and aggregated valuation of risk factors, and by releasing this risk-factor analysis to the public a central aggregator would also provide unparalleled transparency to market participants.

Hedge Equivalent Pricing

The clear corollary of disaggregation is hedge equivalent pricing. Disaggregation will assure that individual derivatives risks on the books of market participants will be reflected in the data accumulated by TRs. But the practical utility of this data set requires that it be grouped into subsets defined by hedge equivalent prices for accurate and meaningful comparisons to take place.

Such subsets consist of positions whose prices move in relation to the price of a liquid, listed contract. When this condition exists, the liquid contract is based on a reference price and the market is expressing the view that the other prices in the subset are related so that the reference-priced contract can be used as an imperfect, but much more liquid, hedge of the other prices within the set. "Hedge equivalency" is the

[&]quot;The current exposure of a derivative portfolio — defined as the cost of replacing the portfolio in current market conditions net of any collateral backing it — is an important measure of risk that is of interest to authorities. Calculating exposures requires not only position data, but also data on valuations, collateral (e.g., amount and composition of applied collateral) and netting sets. Such information includes external bilateral portfolios between pairs of market participants and portfolios of centrally cleared transactions (particularly important for including collateral information). An ID of collateral pool and netting set would be necessary to connect multiple trades to their common collateral pool and netting sets. This data will not be available in all TRs due to differences in regulatory requirements. Any aggregation solution should, however, take into account the requirements to calculate exposures where possible and to incorporate more complete data in the future. There is also a need for authorities to be able to calculate exposures combining aggregated OTC derivatives data with data on exchange-traded products or cash instruments (bonds, equities, etc.)." Study at p.17.

[&]quot;Calculating exposures. Finally, further expanding this example illustrates the aggregation requirement of calculating exposures. Say the authority was concerned about the solvency of a financial institution in its jurisdiction and, given the centrality of Bank A as a seller of an important type of credit protection, wanted to know if Bank A was exposed to this institution through OTC derivatives. Computation of this exposure first requires data on all outstanding positions across various OTC derivative asset classes between Bank A and the institution of concern (i.e. named data is required). As in the first example, the positions can be calculated, after data harmonisation and removing duplicates, by summing all open transaction between Bank A and the other entity. Then it requires these positions to be valued. Some TRs will collect this valuation information, but others will not. Where it is not collected, derivatives positions may be valued using the prices of their underlying assets, which may be taken from a third-party database. This could be facilitated by the use both by TRs and third-party price providers of standard codes to identify underlying assets. In principle, any collateral posted against the market value of a bilateral derivatives portfolio should then be deducted from that market value to determine the exposure. However, not all TRs will collect this information and third-party sources of collateral data are much less readily available than for price data." Study at p. 19.

mathematical relationship, based on market views of correlation, which can be used to adjust the terms (primarily notional quantity) of the reference priced contract to better reflect the economic results of the less liquid position for purposes of hedging.

Use of hedge equivalency is crucial to understanding the market implication of trade data. Volume and price movement in a reference-priced contract or a less liquid contract in the subset each has implications for the specific contract, but each also has implications for prices in the entire subset.

Hedge equivalency also directly parallels the systems implicitly used by DCOs to allow netting credits for initial margin in differing, but price-related contracts. In this case, the central aggregator, aided by robust global transaction data, would be well-equipped to perform this function in a meaningful way. As markets evolve, it would be up to the regulators to monitor and review these processes to ensure it is being performed in an appropriate manner.

CONCLUSION

The study addresses a set of issues that may well define the most important bulwark against the recurrence of the 2008 global financial crisis. Derivatives are defined by information flows. Jurisdictional rules that guard against unacceptably risky and predatory behavior are important, but the constant mutation of a marketplace that is so fluid and subject to manipulation is a challenge to all regulatory authorities. Without a universal and common reporting framework linked by disaggregation and hedge equivalency, any pro forma reporting system is likely to fail. Thus, regulatory authorities, market participants, and the general public must have a new reporting framework that allows a clear view of the global derivatives market in real time if the goals of the G20 are to be achieved.

We hope that this comment letter aids the Board its effort to study this important matter.

Mellel

Sincerely

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