Financial Conduct Authority

Research Note

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EMIR data and derivatives market policies

How EMIR data help regulators better understand the impact of policies

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1 Introduction

Aim of the paper

We assess the impact of two of the requirements introduced by the European Market Infrastructure Regulation (EMIR) by making use of a sample of the data reported to Trade Repositories and made available to us under EMIR. This underlines the importance for regulatory authorities of using market and regulatory data for both making new policies and evaluating existing ones.

In Part 1 of this paper we focus on options for the re-calibration of the scope of the clearing obligation for financial firms as part of the current EMIR Review. In Part 2 we focus on the impact of the phased-in implementation of the EMIR initial margin requirements.

Summary of conclusions

Based on a sample of UK derivatives data and subject to the data limitations set out below, we find that:

- A clearing exemption calibrated to minimise the number of counterparties that will be subject to the clearing obligation while maximising the amount of activity that is captured could significantly reduce burdens on those counterparties without compromising EMIR's overall objectives.
- The phase-ins implementing the initial margin requirements do not result in the intended gradual increase in the number of counterparties subject to the requirements. Rather there is a sharp increase (by about ten times) in the very last phase-in.

A full set of data on the derivatives market did not exist when the initial EMIR requirements and calibrations were implemented. Such data are now available, through EMIR and other G20 reporting regimes, to EU and global regulators. So, authorities can make better-informed policy decisions on how to set new thresholds and review the appropriateness of existing ones.

The analysis presented in this paper is based on data available to us as one of the relevant UK competent authorities. We think that the EMIR review presents a valuable opportunity for similar analysis to be carried out on the wider EU data set. This will help to ensure that new and existing policies achieve their intended objectives in the most efficient and proportionate manner for all our markets.

Background

In 2012, the European Union (EU) implemented the post-financial crisis G20 agreements on derivatives markets by adopting EMIR, amongst other pieces of legislation. EMIR introduced new requirements on market participants with the aim of improving transparency and reducing counterparty credit risk and operational risk in the derivatives market.

In addition to new reporting obligations, EMIR also introduced mandatory central clearing requirements for standardised over-the-counter (OTC) derivative contracts, as well as margin requirements for OTC derivatives that are not centrally cleared.

Both the clearing and margin requirements have come into effect in phases (with the largest market participants first, followed by an increasing number of smaller market participants). This is intended to allow a gradual and orderly implementation of both obligations and to prevent any market disruption or access issues.

Data

Although the amount of data available to regulators has significantly increased, it is often subject to a number of analytical challenges which we set out below. Despite these challenges and limitations, we are confident that the improving quality of the data means that our analysis provides a useful insight into overall UK market trends.

Sample

Our analysis is based on a sample of UK financial reporting counterparties' outstanding OTC derivative trades on 10 April 2018 as reported under EMIR. Part 1 uses data for both cleared and uncleared OTC derivative trades. Part 2 uses data for uncleared OTC derivative trades only, as the analysis relates to the initial margin requirement which applies to uncleared OTC derivatives.

Legal Entity Identifiers (LEIs) and groups

Thresholds in EMIR apply at group level rather than at entity level. We have used trade repository data to identify reporting counterparties by their legal entity identifiers (LEIs) and have at this stage not been able to aggregate these at a group level.[1] Consequently, the number of firms above a relevant threshold will have been underestimated in our sample. In addition, the regulatory data to which we have access are limited to trades involving UK counterparties. This means that trades between non-UK subsidiaries of a UK group are not captured in our data.

Measures of derivatives activity

Throughout this paper, when referring to counterparties' derivatives activity, we refer to the amount of outstanding notional positions in OTC derivatives for such counterparties.

When referring to market activity, we refer to the aggregated amount of outstanding notional positions in OTC derivatives for all counterparties in our sample. Note that other thresholds and exemptions may apply in both the clearing and margin requirements.

[1] We expect that the Global LEI System should make this feasible shortly.

2 Analysis

Part 1 – Calibrating the small financial clearing thresholds

The clearing obligation under EMIR

Currently, EMIR imposes a clearing mandate on certain types of interest rate derivative[2] as well as certain types of index credit derivative contracts.[3]

Under EMIR, all financial counterparties are subject to the clearing obligation, regardless of the size of their derivatives activity. The clearing obligation also applies to certain non-financial counterparties (NFCs), but only if their derivatives activity is above any of the asset class specific clearing thresholds.[4]

To ensure a gradual and orderly implementation of the clearing obligation, EMIR splits financial firms into three categories. These are based on the size of their derivatives activity and whether they are already a clearing member of a Central Counterparty (CCP).[5] The clearing obligation applies in phases to the first, then the second and finally the third category of financial firms. Non-financial firms are in a fourth category. To date, only the first two categories of financials firms are subject to the clearing obligation.

Concentration in the derivatives market

As the implementation of the clearing obligation progressed for the larger categories of firms, smaller market participants raised concerns with regulators over their difficulties in accessing central clearing. In response, the European Commission (the Commission) adopted rules proposed by the European Securities and Markets Authority (ESMA) to postpone the implementation of the clearing obligation on the third category of firms to June 2019. The Commission has also more recently proposed, in the context of the EMIR Review, to exempt smaller financial counterparties from clearing.

These decisions by ESMA and the Commission were taken in the context of EU-level data published by ESMA for interest rate and credit derivatives contracts which showed the high degree of concentration in the derivatives market.

We updated that analysis for the UK market based on our sample, with the use of more recent data and focusing on all asset classes. Based on our sample, the UK OTC derivatives market remains characterised by a high level of concentration, with a small number of large financial counterparties accounting for the vast majority of market activity. Conversely, a relatively modest contribution is made to overall activity by a large number of smaller financial counterparties.

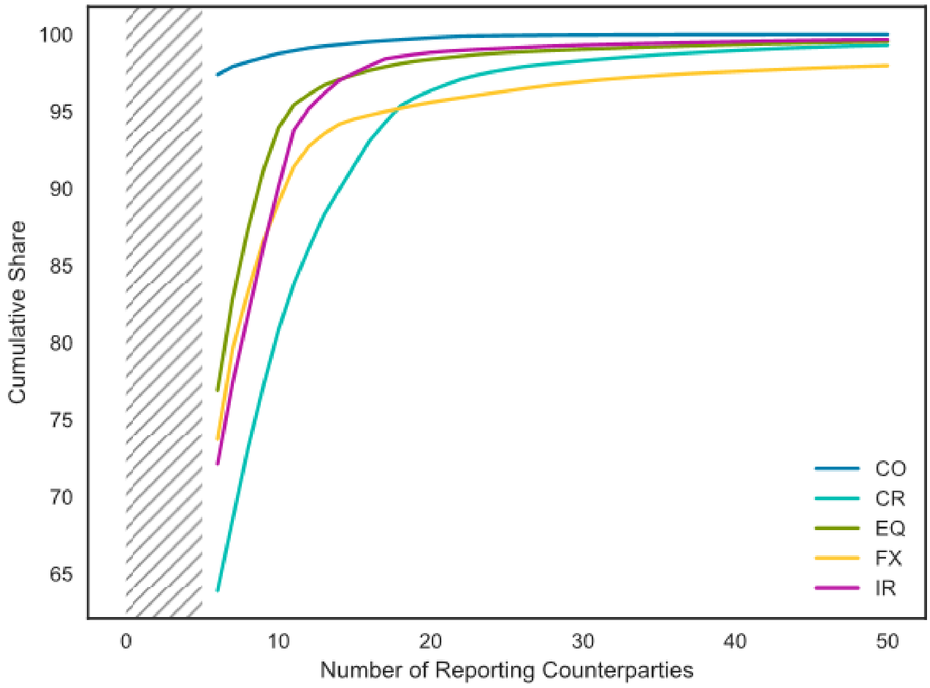
[2] RTS for Basis, Fixed-to-float, FRA and IOS in EUR, GBP, JPY, USD; RTS for FRA and fixed-to-float swaps in NOK, PLN, SEK

[3] RTS for Index Credit Default Swaps

[4] € 1bn in gross notional for credit and equity derivatives, and € 3bn for interest rate, foreign exchange and commodity derivatives.

[5] Category 1: Firms that are already clearing members. Category 2: Non-Category 1 firms whose group's aggregate month-end average of outstanding notional amount of OTC derivatives is above € 8bn. Category 3: firms not belonging to any of the previous categories whose group's aggregate month-end average of outstanding notional amount of OTC derivatives is below € 8bn.

Fig 1: Cumulative contribution to total activity



Source: FCA analysis using a sample of UK reporting financial counterparties. CO = Commodities, CR = Credit, EQ = Equities, FX = Foreign Exchange Rates, IR = Interest Rates.

Figure 1 shows the cumulative contribution of UK financial counterparties to end-of-day outstanding activity in OTC derivatives for different asset classes. Although the number of firms active in each asset class varies, the overall market structure remains the same. All asset classes are characterised by a high degree of concentration with a relatively small number of counterparties being responsible for the great majority of the market activity.

The Commission's proposal: using non-financial counterparties' asset class-specific thresholds

Against this background, in May 2017 the Commission published a proposal for a targeted review of EMIR to simplify the rules and make them more proportionate, without compromising the objectives of the legislation.

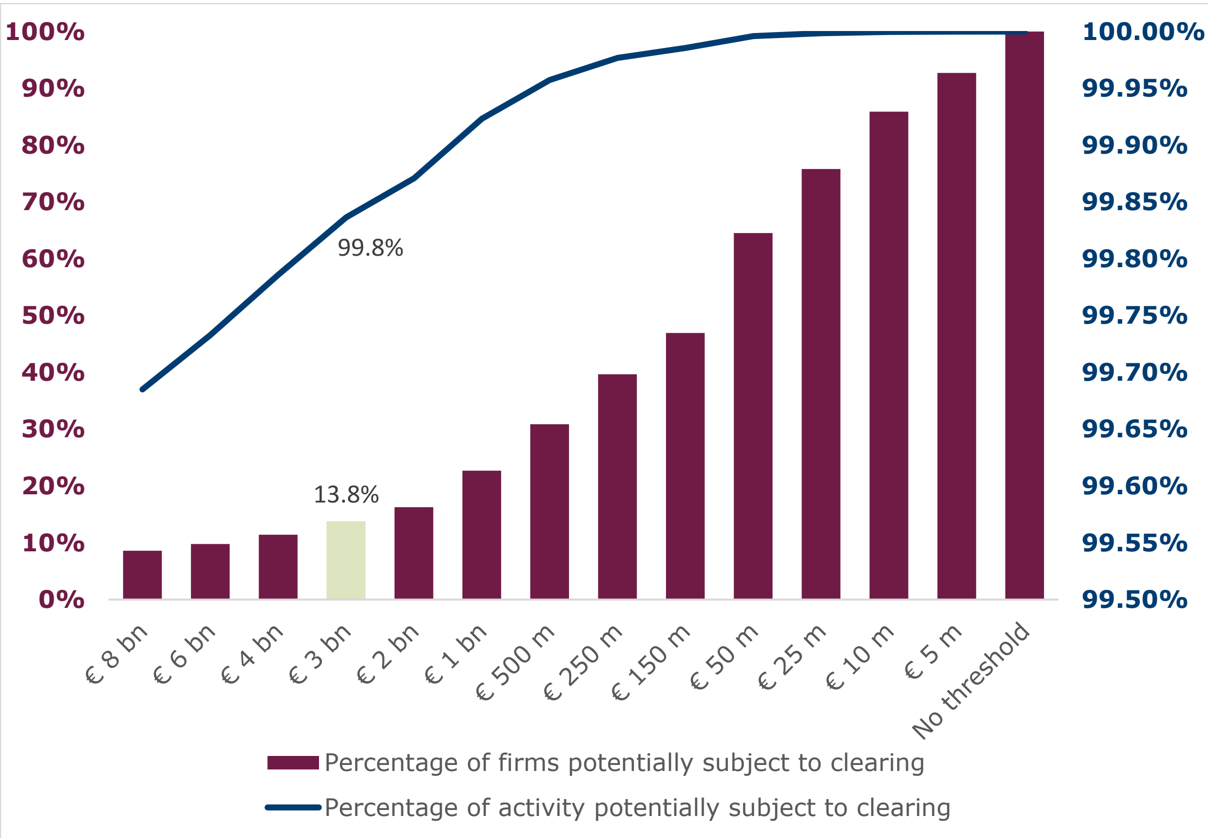
Amongst other things, this proposal introduces an exemption from clearing for small financial counterparties (FCs), where 'small' means that a financial counterparty's derivatives activity is below each of the asset class specific clearing thresholds currently applicable to non-financials under EMIR. The relevant thresholds are € 1bn in gross notional for credit and equity derivatives, and € 3bn for interest rate, foreign exchange and commodity derivatives. Conversely, if a financial counterparty were to be above any one of the asset class specific thresholds, it would not benefit from the exemption and all its derivatives would have to be cleared.

Using our data sample, we looked at how the number of FCs subject to the clearing obligation would vary in the context of the Commission's proposal. We first took the two asset classes which are currently subject to the clearing mandate - interest rate and credit - and then the overall market activity that would be captured assuming that all asset classes were subject to mandatory clearing.

Figures 2 and 3 below show, for each possible interest rate or credit clearing threshold, the percentage of counterparties that would remain subject to the clearing obligation (shown on the charts using the left-hand side scale). This is based on their individual (ie at an LEI level) notional positions being above the relevant threshold in that particular asset class. They also show the amount of market activity for which they are responsible in that specific asset class (shown on the charts using the right-hand side scale) and therefore that would be subject to central clearing. This is based on the assumption that all products in that asset class were subject to mandatory clearing as opposed to the current framework where only a subset of interest rate and credit products are subject to mandatory clearing. Thresholds marked in green are those currently applicable to Non-Financial Counterparties (NFCs) and that the Commission is proposing to apply to also FCs.

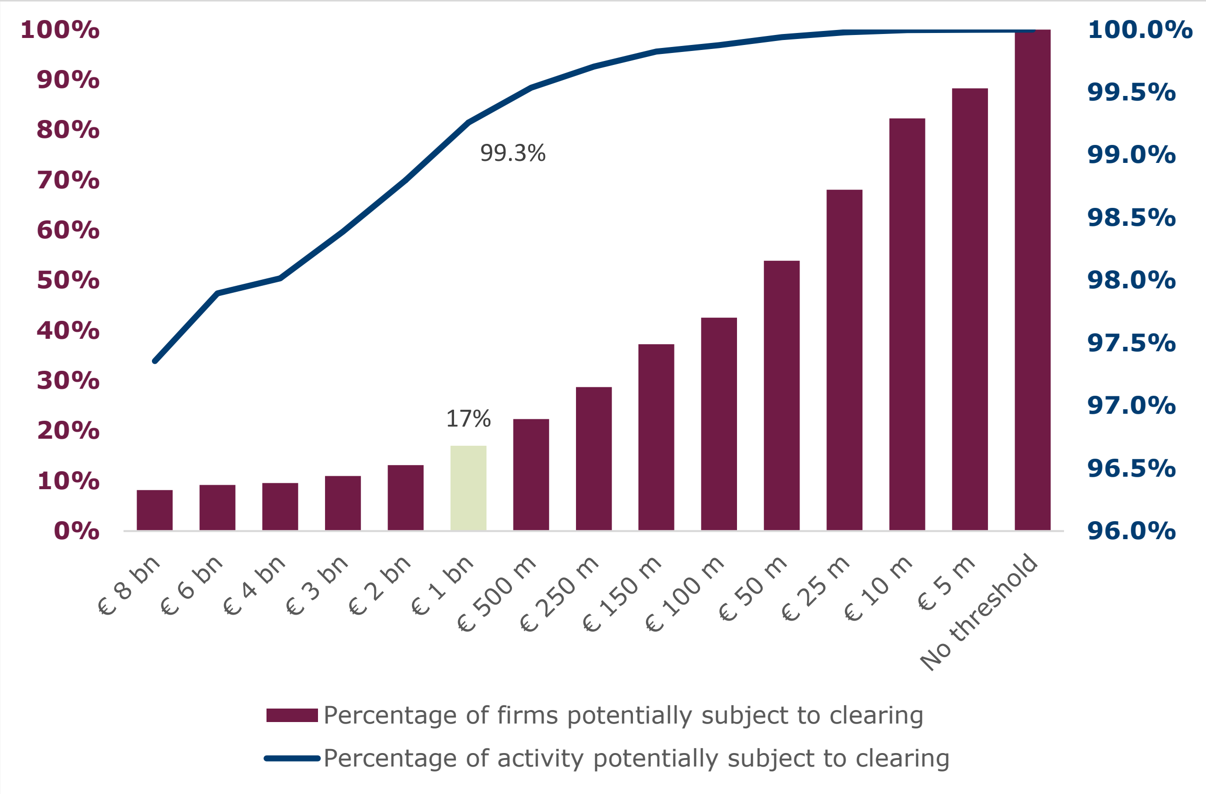
To estimate the aggregate market activity, we included trades between 'small FCs' and 'large FCs' (although only trades between any two large counterparties would actually be subject to the clearing obligation). This results in an over-estimation of the aggregate activity subject to clearing to the extent that some 'small FCs' in the sample may have traded with 'large FCs' in that sample. However, the data show that this effect is negligible as 'small FCs' only account for a very small proportion of the overall activity.

Fig 2: Impact of possible calibrations for an interest rate threshold



Source: FCA analysis using a sample of UK reporting financial counterparties.

Fig 3: Impact of possible calibrations for a credit threshold



Source: FCA analysis using a sample of UK reporting financial counterparties.

Based on our UK data sample, the Commission's proposal would result in:

- 13.8% of FCs active in the interest rate asset class being subject to the clearing obligation, and just above 99.8% of the aggregate interest rate activity entered into by FCs active in the interest rate asset class being potentially subject to clearing if all interest rate derivatives were subject to the clearing obligation
- 17% of FCs active in the credit asset class being subject to the clearing obligation, and 99.3% of the aggregate credit activity entered into by FCs active in the credit asset class being potentially subject to clearing if all credit derivatives were subject to the clearing obligation

We then looked at the possible impact of each asset class specific threshold (eg if financial counterparties exceeded any of the thresholds in any of the asset classes) across the aggregate activity of our UK sample in all asset classes. We found that the Commission's proposal would result in approximately 9.5% of FCs being subject to the clearing requirements covering approximately 99.6% of the aggregate market activity. This is based on the assumption that the clearing obligation were to apply across all asset classes.

The UK data sample we have analysed clearly shows that there is a case for exempting smaller FCs from clearing without compromising the objectives of EMIR, as the Commission has proposed.

However, only analysis of the entire EU-level dataset would enable a comprehensive understanding of the impact of the proposed thresholds on the number of FCs that would be subject to clearing and the corresponding market activity that would be subject to the clearing mandate. Further analysis using a wider EU dataset could also assess the degree of similarity between FCs and NFCs in order to inform on the possible impacts of using a common set of thresholds for FCs and NFCs, as proposed by the Commission.

A possible alternative: using an aggregated clearing threshold across all asset classes

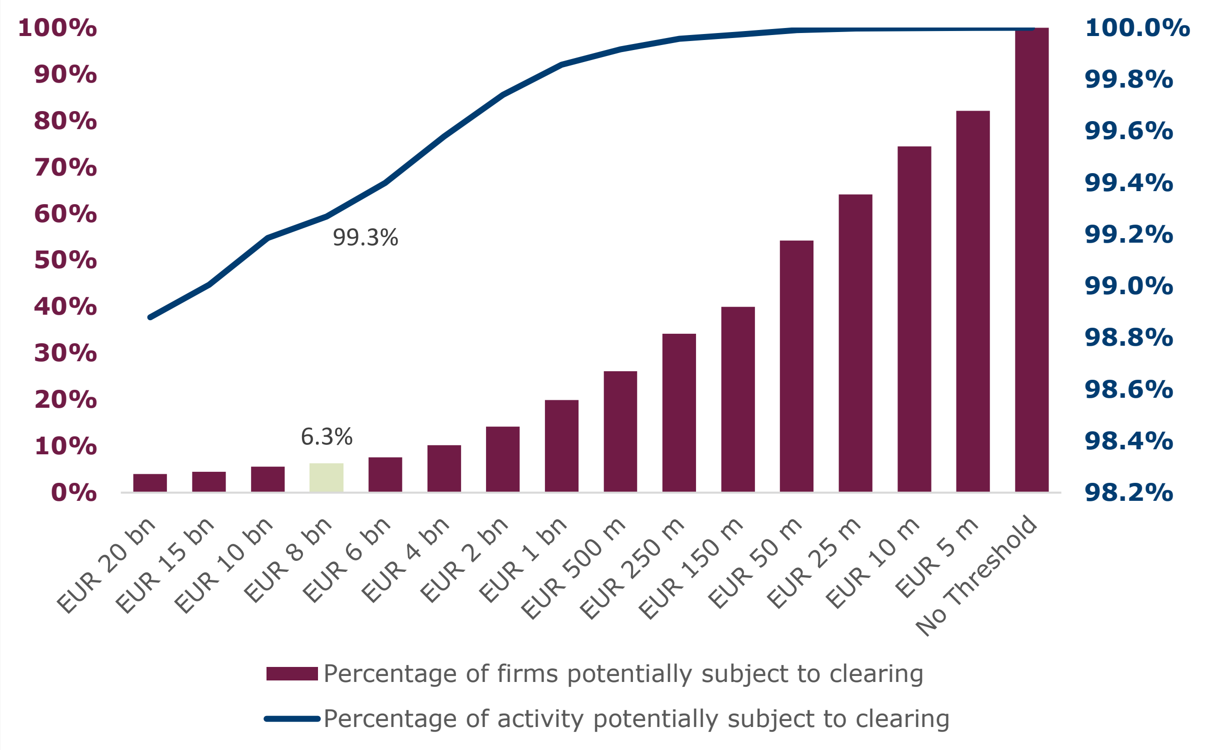
Other thresholds under EMIR[6] are based on an aggregated calculation of counterparties' entire OTC derivatives portfolio (an aggregate threshold across all asset classes as opposed to an asset class specific threshold as is the case for the clearing mandate). So, we have also analysed the sample UK data to understand what the impact of such a threshold would be.

The analysis below looks at the proportion of firms and market activity that would be captured based on an 'aggregated' small financials clearing threshold across all asset classes.

Figure 4 shows, for each possible aggregate clearing threshold, the resulting percentage of FCs that would be subject to the clearing obligation. This is based on their individual (ie at an LEI level) notional positions being above such a threshold, and the resulting amount of overall market activity for which they are responsible and therefore that would be subject to clearing. Here the underlying assumption is that all asset classes were subject to mandatory clearing as opposed to the current framework where only certain products in the IR and credit asset classes are subject to clearing.

[6] For example the thresholds used to determine which clearing phase-in category firms fall within, but also the thresholds to determine which initial margin phase-in a firm falls within. Both thresholds are based on firms' gross notional amount of non-centrally cleared derivatives at group level.

Fig 4: Impact of possible calibrations of an aggregate clearing threshold across all asset classes



Source: FCA analysis using a sample of UK reporting financial counterparties.

Based on our data sample, and taking the € 8bn threshold commonly used under EMIR for the initial margin and clearing categorisation purposes, only approximately 6.3% of FCs would be subject to clearing, representing 99.3% of the overall market activity.

Figure 4 also shows that when moving from one threshold to the other in our examples, the change in the proportion of counterparties that would be subject to clearing is much more significant than the corresponding overall market activity that would be subject to clearing.

This is relevant from a policy perspective in the context of calibrating the appropriate threshold to ensure proportionality without compromising EMIR's objectives.

Part 2 - Policy evaluation: market impact of the margin phase-ins

Initial margin requirements and phase-ins under EMIR

In relation to the EMIR initial margining obligation, all uncleared OTC derivative contracts where at least one of the two counterparties is either a financial counterparty (FC) or a non-financial counterparty above the clearing thresholds (NFC+) are subject to the exchange of initial margin provided that the FC and NFC+ have their derivatives activity above a certain threshold.

Although the steady state of this threshold will be € 8bn by 2020, EMIR followed the implementation phase-ins provided by the BCBS-IOSCO international standards to provide for an orderly implementation on the initial margin requirements.

Under EMIR, initial margin requirements are phased-in as follows:

- from 4 February 2017, where both counterparties have (or belong to groups each of which has) an aggregate average notional amount of non-centrally cleared derivatives greater than € 3,000bn
- from 1 September 2017, where both counterparties have (or belong to groups each of which has) an aggregate average notional amount of non-centrally cleared derivatives greater than € 2,250bn
- from 1 September 2018, where both counterparties have (or belong to groups each of which has) an aggregate average notional amount of non-centrally cleared derivatives greater than € 1,500bn
- from 1 September 2019, where both counterparties have (or belong to groups each of which has) an aggregate average notional amount of non-centrally cleared derivatives greater than € 750bn
- from 1 September 2020, where both counterparties have (or belong to groups each of which has) an aggregate average notional amount of non-centrally cleared derivatives greater than € 8bn

Potential impact of margin requirements

The analysis presented in this section assesses the impact of the above phase-in thresholds on market participants in terms of the number of participants progressively caught by the initial margin requirements. It also shows the link between different thresholds and the corresponding market activity that would be captured by the margin requirements and therefore for which the counterparty risk EMIR is targeting through the margin requirements would be reduced.

Table 1 shows that at the current threshold of € 2,250bn, initial margin requirements apply to 0.6% of the counterparties in our sample, covering almost 91% of overall market activity. The highlighted thresholds are those specified in EMIR and show the progression of the scope of initial margin throughout the five phase-ins.

In addition, we analysed the impact of further possible intermediate thresholds to show the increasing percentage of counterparties and market activity captured between the penultimate and the last threshold.

Table 1: Aggregate Impact of the Margin Requirements for different Thresholds

Threshold (in €bn)	Percentage of firms potentially subject to Initial Margin	Percentage of activity potentially subject to Initial Margin
3,000	0.5%	87.9%
2,250	0.6%	90.7%
1,500	0.6%	90.7%
750	0.6%	90.7%
500	0.6%	91.7%
250	0.8%	93.5%
100	1.4%	95.4%
50	2.4%	97.1%
30	3.1%	97.8%
25	3.2%	97.9%
20	3.7%	98.2%
8	5.9%	98.8%
No threshold	100%	100%

Source: FCA analysis using a sample of UK reporting financial counterparties.

The data in our sample show almost no variation in the proportion of counterparties falling within the initial margin scope during the implementation of the first four phases. However, the number of entities in our sample that would be subject to the initial margin requirements between the penultimate and the final phase-in increases sharply by almost ten times. This shows that the phase-ins have not resulted in a gradual and steady increase of counterparties. Rather there is a long steady state followed by a big spike in the number of counterparties that will be subject to initial margin requirements when the last threshold of € 8bn will be applicable, from 1 September 2020.

3 Conclusion

As with the calibration of thresholds in the context of the EMIR review for the purposes of the small financial clearing exemption, data are helpful in the initial margin context to understand, on an on-going basis, the effect of the various scoping and phase-in thresholds on the markets. This can support a better-informed assessment of the effectiveness of thresholds against the objectives they try to achieve - whether those are to make an obligation as efficient and proportionate as possible compared with the risk the obligation aims to reduce, or to ensure a gradual and orderly implementation to avoid sharp increases in scope potentially leading to market disruption or access issues.

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