

OTC Derivatives Market Reforms
2019 Progress Report on Implementation

15 October 2019

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Glossary¹

BCBS	Basel Committee on Banking Supervision
CCP	Central counterparty
CFTC	US Commodity Futures Trading Commission
comprehensive	See footnote 6
CPMI	Committee on Payments and Market Infrastructures
EC	European Commission
ECB	European Central Bank
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
FCA	UK Financial Conduct Authority
FSB	Financial Stability Board
FX	foreign exchange
GLEIF	Global LEI Foundation
HKMA	Hong Kong Monetary Authority
in force	See footnote 5
IOSCO	International Organization of Securities Commissions
IRS	interest rate swap
Jurisdiction	See footnote 3
LEI ROC	Legal Entity Identifier Regulatory Oversight Committee
MAS	Monetary Authority of Singapore
NCCD	non-centrally cleared derivative
ODRF	OTC Derivatives Regulators' Forum
OIS	overnight indexed swap
OSFI	Canadian Office of the Superintendent of Financial Institutions
OTC	over-the-counter
Reporting period	See footnote 7
PFMI	CPMI-IOSCO <i>Principles for Financial Market Infrastructures</i>
SAMA	Saudi Arabia Monetary Authority
SEC	US Securities and Exchange Commission
SFC	Hong Kong Securities and Futures Commission
TR	Trade repository; for “TR-like entity” see footnote 23.
UTI	Unique Transaction Identifier
WGMR	BCBS–IOSCO Working Group on Margin Requirements

¹ Currency codes according to the ISO 4217 standard and country codes according to ISO 3166 are not separately listed.

1. Executive summary

Overall, limited progress took place in implementation² of OTC derivatives reforms across FSB member jurisdictions³ since the 13th progress report published at end-November 2018.⁴ Some progress, focused mainly on the scope of the requirements, took place in jurisdictions where requirements were already in force.⁵

In **trade reporting**, 23 out of 24 member jurisdictions have comprehensive⁶ requirements in force, an increase of one during the reporting period.⁷ Jurisdictions report efforts to reduce reporting barriers and masking relief (as recommended by the FSB's 2018 follow-up report on trade reporting legal barriers),⁸ wider use of the legal entity identifier (LEI) in trade reporting, and streamlining reporting processes and trade repository (TR) operations. Authorities are increasingly aggregating data from multiple TRs, supported by ad hoc infrastructures for automated data processing. Work continues at international and national levels to address key challenges in reporting data to and accessing data from TRs, including international work on data harmonisation and efforts to improve the interpretation of the reporting rules.

Eighteen jurisdictions have in force comprehensive standards/criteria for determining when standardised OTC derivatives should be **centrally cleared**, an unchanged number since November 2018. In a few of these 18 jurisdictions a wider range of products is now subject to mandatory clearing. Central counterparties (CCPs) have been active, with some CCPs filing for authorisation to clear transactions involving new asset classes in a number of jurisdictions, and other CCPs withdrawing from certain market segments. Work is ongoing in international workstreams on enhancing CCP resilience and on certain aspects of CCP resolution.

Sixteen jurisdictions have comprehensive **margin requirements for non-centrally cleared derivatives (NCCDs)** in force at end-September 2019, which represents an increase of one during the reporting period. Estimates of collateralisation rates are available in 10 of these 16 jurisdictions and continue to increase, particularly in credit and equity derivatives. The need to amend certain tax policies prior to implementation and an increased rate of disputes on collateral and position valuations were reported as implementation challenges. Ongoing

² Unless otherwise stated, information about implementation progress in this report (which is the 14th progress report) is given as at end-September 2019 and other information such as about availability of financial market infrastructures or market data is given as at end-June 2019. Unless otherwise stated, all data is sourced from FSB member jurisdictions.

³ In this report, unless otherwise stated, "jurisdictions" refers to the countries under whose law national FSB member authorities are established. In some contexts, where indicated, the term refers to the EU and not the six individual FSB member jurisdictions that are member states of the EU. For most tables and charts, unless differently stated, the EU as a whole is counted as six jurisdictions.

⁴ Figure 1 and Table A provide details of implementation progress, including jurisdictions where implementation is advanced.

⁵ Throughout this report, the term "in force" means a final statute/regulation/rule/policy statement/standard/etc. is operative and has effect as at the indicated date; in contrast, where a final statute/regulation/etc. has been enacted or published but it is not yet operative and does not have effect, for the purposes of this report this is treated as not yet in force.

⁶ In this report, "comprehensive" when applied to standards, criteria or requirements in force in a jurisdiction means that the standards, criteria or requirements apply to over 90% of OTC derivatives transactions as estimated by that jurisdiction, with the exception of with respect to margin requirements, where "comprehensive" standards, criteria or requirements in force in a jurisdiction would have to apply to over 90% of transactions covered consistent with the respective BCBS-IOSCO Working Group on Margin Requirements (WGMR) phase in periods.

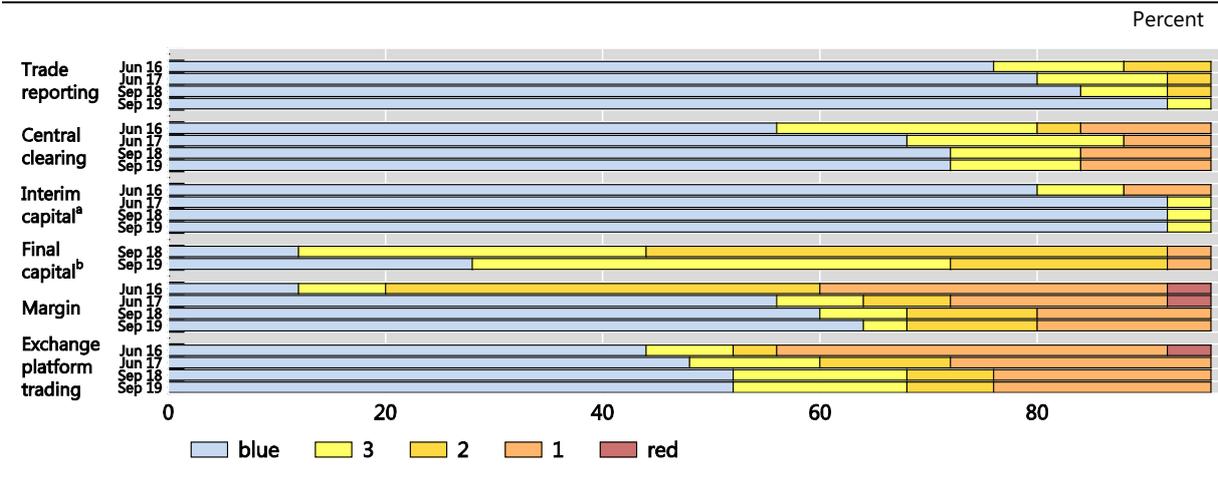
⁷ Unless otherwise stated, the "reporting period" is a reference to the period from end-November 2018 until end-September 2019.

⁸ FSB (2018), *Trade reporting legal barriers: Follow-up of 2015 peer review recommendations*.

progress in other risk mitigation measures (including dispute resolution) helps to address these challenges. Separately, the clarifications released by the BCBS and IOSCO in March 2019⁹ addressed some jurisdictions’ implementation challenges regarding historical transactions and onboarding of clients. Also the one-year extension of the final implementation phase announced by the BCBS and IOSCO in July 2019 will support smooth and orderly implementation of the margin requirements that are consistent and harmonised across their member jurisdictions, albeit delaying the final implementation of this element of the OTC derivatives market reforms.

Figure 1

Recent regulatory reform progress across FSB member jurisdictions



Position as at end-September 2019. In broad terms, blue coloured cells refer to comprehensive standards/requirements being in place in the relevant jurisdiction for the reform indicated, red refers to a lack of legal authority to implement, and yellow refers to various stages of implementation. For full details, please see the legend in Appendix A. (a) Adoption of interim Basel III standards for NCCDs. (b) Adoption of final Basel III standards for NCCDs.

Source: FSB member jurisdictions/authorities.

Interim **higher capital requirements for NCCDs** are in force in 23 of the 24 FSB member jurisdictions, a number which has remained unchanged for the last two progress reports. Only seven jurisdictions (albeit four more than at end-November 2018) have implemented the final standardised approach for counterparty credit risk (SA-CCR) and capital requirements for bank exposures to CCPs, both due to have been implemented by January 2017. Challenges are linked to the operational and IT complexity of implementation, and to inconsistency and uncertainty in the timing of implementation across different jurisdictions.

Comprehensive **platform trading requirements** are in force in 13 jurisdictions, a number which has remained unchanged during the reporting period. In these jurisdictions, some limited progress occurred during the reporting period in the scope of products subject to a trading obligation and in the scope of requirements for trading venues.

As for **cross-border coordination** and issues, one jurisdiction started exercising deference during the reporting period with regard to foreign jurisdictions’ regimes. Several other jurisdictions that already exercised deference in the past, extended such exercise to further

⁹ BCBS-IOSCO statement on the final implementation phases of the *Margin requirements for non-centrally cleared derivatives*, available at <https://www.iosco.org/news/pdf/IOSCONEW526.pdf> and <https://www.bis.org/press/p190305a.htm>.

jurisdictions. New international work that has been launched during the reporting period may help with further progress in this area.

Table A¹⁰
Reforms to jurisdictional frameworks, as at end-September 2019

		Trade Reporting	Central Clearing	Interim Capital	Final Capital	Margin	Platform Trading
Argentina	AR	Blue (+)	1	Blue	Blue	1	3
Australia	AU	Blue	Blue	Blue	Blue (+)	Blue	Blue
Brazil	BR	Blue	Blue	Blue	Blue (+)	Blue (+)	1
Canada	CA	Blue	Blue	Blue	Blue (+)	Blue	2
China	CN	Blue	Blue	Blue	3 ^(a)	1	3
European Union ^(b)	EU	Blue	Blue	Blue	3	Blue	Blue
Hong Kong SAR	HK	Blue	Blue	Blue	2	Blue	Blue
India	IN	Blue	3	Blue	3	2	3
Indonesia	ID	Blue	3	Blue	Blue	1	3
Japan	JP	Blue	Blue	Blue	3	Blue	Blue
Republic of Korea	KR	Blue	Blue	Blue	Blue (+)	Blue	1
Mexico	MX	Blue	Blue	Blue	1	2	Blue
Russia	RU	Blue	3	Blue	2	3	2
Saudi Arabia	SA	Blue	1	Blue	Blue	Blue	1
Singapore	SG	Blue	Blue	Blue	3	Blue	Blue
South Africa	ZA	3	Blue	Blue	2	2	1
Switzerland	CH	Blue	Blue	Blue	3	Blue	Blue
Turkey	TR	Blue	1	Blue	2	1	1
United States ^(c)	US	Blue	Blue	3	2	Blue	Blue
Totals							
Red		0	0	0	0	0	0
1		0	3	0	1	4	5
2		0	0	0	5	3	2
3		1	3	1	11	1	4
Blue		23	18	23	7	16	13
(+)		1	0	0	4	1	0
(-)		0	0	0	0	0	0

(+) indicates positive change and (-) indicates negative change in reported implementation status from end-November 2018 as per information included in the Appendix. (a) In China the final standard on measuring counterparty credit risk exposures (SA-CCR) is in force and adoption has not started for the capital requirements for bank exposures to CCPs. (b) The EU includes six FSB member jurisdictions (France, Germany, Italy, Netherlands, Spain and United Kingdom), which are counted individually in the totals. (c) Information regarding the US in the colour-coded tables in this report (including appendices) reflects the overall progress of US regulatory reforms undertaken by multiple regulatory authorities. Note that the Commodity Futures Trading Commission (CFTC) has rules in force with respect to trade reporting, central clearing and platform trading; the estimate of over 90% regulatory coverage is based on the completion of rules by the CFTC, which regulates over 90% of the notional volumes transacted in the US swaps market.

¹⁰ In broad terms, blue coloured cells refer to comprehensive standards/requirements being in place in the relevant jurisdiction for the reform indicated, red refers to a lack of legal authority to implement, and yellow refers to various stages of implementation. For full details, please see the legend in Appendix A.

2. Trade reporting

2.1. Implementation progress and challenges

Implementation of trade reporting obligations for OTC derivatives continued to advance across FSB member jurisdictions since publication of the 13th progress report and 23 out of 24 FSB member jurisdictions now have comprehensive trade reporting requirements in force¹¹ (with an increase of one over the reporting period, see Table D in Appendix B).¹² As of 1 January 2019 Argentina's trade reporting obligations are in force for new derivatives transactions negotiated on a bilateral basis outside authorised markets.¹³

In several jurisdictions where comprehensive trade reporting requirements were already in force at end-November 2018, the scope of obligations has expanded over the reporting period. Mexico has required credit derivative transactions to be reported since January 2019 and is preparing for the reporting of margins for non-centrally cleared derivatives. In Turkey, where trade reporting obligations have been in force for financial institutions since shortly before the start of the reporting period (i.e. since 30 November 2018), requirements entered into force also for non-financial institutions (on 1 January 2019). Australia began requiring the reporting of transactions each time a lifecycle event modifies some of the trade's characteristics.¹⁴ The UK published its derivatives regime, which broadly transcribes EU requirements (including trade reporting obligations to TRs) into UK law as part of its preparations for EU withdrawal. Estimates (where available) suggest that the percent of all new transactions required to be reported is above 80% (Table F in Appendix B).

Several initiatives are focused on improving the quality of the collected information:

- A number of jurisdictions have taken steps to **remove legal barriers to trade reporting**, in light of the recommendations in the FSB's 2018 follow-up report on trade reporting legal barriers.¹⁵ In Singapore, as of January 2019, masking relief is only allowed for countries that have legal barriers to trade reporting. Two more jurisdictions (Australia and Hong Kong)¹⁶ have or are working towards streamlining the list of countries with legal barriers.

¹¹ This assessment is based on authorities approximating whether they were above or below the 90% threshold with respect to regulatory coverage. The purpose of including this approximation is to better gauge the extent to which a substantial share of transactions are covered by regulation across jurisdictions. This 90% threshold has been incorporated in the tables that follow.

¹² South Africa finalised a regulatory framework for trade reporting and trade repositories in October 2018, but the date from which trade reporting requirements will take effect has not yet been determined yet.

¹³ May 2018 Law 27,440 amending the Capital Markets Law. Data is registered by Registration Entities of Derivatives Transaction or, in their absence by trading venues and central counterparties (CCPs).

¹⁴ This requirement is in force as of 1 July 2019 for contracts for difference, margin FX, and equity derivatives.

¹⁵ FSB (2018), *Trade reporting legal barriers: Follow-up of 2015 peer review recommendations*.

¹⁶ In Australia, masking relief for transactions blocked by foreign privacy restrictions expired on 31 March 2019 and the relief was subsequently removed for 17 out of 19 jurisdictions: this reduced transactions affected by masking from 1.7% (as of end-June 2018) to less than 0.001%. Hong Kong launched in April 2019 a consultation to streamline the list of jurisdictions designated to receive masking relief, with the goal of publishing a shorter list in H2 2019.

- Jurisdictions have also taken steps to **facilitate access to TR data**. For example, the EU has streamlined the process through which third-country authorities can be granted direct access to relevant EU TR data.¹⁷
- There has also been progress in the use of **legal entity identifiers (LEI) in OTC derivatives trade reporting**. In Hong Kong, after authorities introduced the mandatory use of LEI for trade reporting in April 2019, 94% of total outstanding transactions have been reported with LEIs as identifier of the reporting entity's side of a transaction.¹⁸ Moreover, Australia and Argentina publicly recognised the LEI as one of the ways to identify a counterparty in OTC derivatives trade reporting, although not the only one.¹⁹
- Canada published in June 2019 a notice regarding **compliance reviews** of some of the most active counterparties in the Ontario and Québec OTC derivatives markets, aimed at assessing compliance with reporting requirements, identifying obstacles and improving data quality.²⁰

A number of jurisdictions launched initiatives to streamline trade reporting. In the EU, the European Commission, on the basis of a draft of the European Securities and Markets Authority (ESMA), has been mandated to adopt further harmonised operational standards to aggregate and compare data across different TRs in the EU. The EU also reduced the reporting burden for some non-systemically important market participants.²¹ In the US, the Commodity Futures Trading Commission (CFTC) issued a proposed rule to streamline TR operations and require quality checks from TRs and reporting counterparties.²²

The **availability of TRs and TR-like entities**²³ in FSB member jurisdictions remains stable (Table E in Appendix B). Two TRs established in the EU have been newly authorised and are ready to start operations after the UK withdrawal from the EU; one of these as well as a further TR were also newly authorised in Switzerland. In China one TR-like entity, authorised last year, started collecting commodity and equity derivatives transactions. At the same time, two other TRs, one in the EU and one in the US, withdrew their registration. Saudi Arabia recently authorised a TR that will replace the current TR-like entity.

¹⁷ With the adoption of EMIR Refit (EU Regulation 2019/834, 20 May 2019, in force since 17 June 2019), (“EMIR Refit”), the EU no longer requires the conclusion of an international law treaty to grant direct access of EU TR data to third-country authorities.

¹⁸ The vast majority of the remaining 6% of total outstanding trades were reported prior to the requirement commencement date in April 2019 and thus were not reported with LEIs. Reporting entities could retrospectively report the LEIs for these remaining 6% outstanding transactions whenever they report the transaction again as amended by a subsequent life-cycle event.

¹⁹ Beginning on 1 April 2019, counterparties in Australia need to report a standard identifier (the LEI, the BIC code or the AVID code) for any counterparty (except for individuals), with relief until 30 September 2019 for non-reporting counterparties incorporated or located in Australia and until 31 March 2020 for foreign non-reporting counterparties. In Argentina rules in force since 1 January 2019 allow but not require the use of LEI to identify counterparties when reporting bilateral OTC derivative transactions. Moreover, in Saudi Arabia all financial institutions under the supervision of SAMA are required since August 2018 to obtain LEI from an approved local provider, although SAMA has not yet required that this be used for OTC derivatives trade reporting purposes.

²⁰ https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20190606_91-306_reporting-counterparties.htm and <https://lautorite.qc.ca/fileadmin/lautorite/reglementation/instruments-derives/avis-acvm/2019/2019juin06-91-306-avis-acvm-fr.pdf>

²¹ EMIR Refit.

²² CFTC, 17 CFR Parts 23, 43, 45, and 49, Certain Swap Data Repository and Data Reporting Requirements (May 13, 2019).

²³ The term “TR-like entity” as used in this report means an entity, facility, service, utility, government authority, etc. that is not an authorised TR but that is used by market participants to report OTC derivatives trade data, or provides TR-like services.

FSB member jurisdictions faced a number of **implementation challenges** with respect to trade reporting during the reporting period:

- Canada’s compliance reviews revealed common causes of trade reporting issues across examined market participants including: insufficient internal controls, insufficient oversight of third-party providers, insufficient trade reporting reconciliation processes and inaccurate interpretations of reporting rules.
- A few jurisdictions from the Asia-Pacific region have noted some challenges to the implementation of the CPMI-IOSCO Unique Transaction Identifier (UTI) Technical Guidance.
- In South Africa, reporting cannot commence because there is no licensed TR.

2.2. Use and aggregation of TR data by authorities

Jurisdictions reported an increased use of TR data during the reporting period. A few jurisdictions that previously did not access data started preliminary data quality work or progressed from working on data quality analysis to making manual ad-hoc queries for a number of use cases.²⁴ A shift from manual to automated analysis occurred mostly for systemic risk assessment (Hong Kong and Italy) and supervision of market participants (Mexico). Finally, one jurisdiction (Switzerland) started doing manual data analysis to support monetary policy implementation and to exercise the function of lender of last resort.

Authorities in some jurisdictions reported new efforts since end-November 2018 to **aggregate data among TRs**. For example, Hong Kong is conducting dialogues with foreign authorities to gain access to a number of foreign TR data.²⁵

Several jurisdictions have built new infrastructures to facilitate TR data aggregation and analysis. In the EU, building on ESMA’s service which provides a single point of access to standardised TR reports (TRACE), the ECB and ESRB have built an internal dedicated, high-performance IT infrastructure to facilitate the automated collection, processing and aggregation of data from multiple TRs. With a similar goal, the UK FCA has finalised a system to receive and aggregate data from multiple TRs located within the UK.²⁶ The Hong Kong TR has developed a protocol to facilitate sharing data with domestic and foreign authorities via a dedicated web portal for real-time inquiries and via other methods (including offline data file transfers).

²⁴ Argentina reported to have accessed and started preliminary data quality work for the following use cases: a) supervising market participants; b) regulating, supervising or overseeing trading venues and financial market infrastructure; c) planning and conducting resolution activities; d) implementing monetary policy and lender of last resort function; e) conducting research supporting other functions; f) analysis of non-bank activity (formerly known as shadow banking analysis). Hong Kong moved either from preliminary data quality work to manual analysis or from manual to automated inquiries for the following uses: a) assessing systemic risk; b) market surveillance and enforcement; c) supervising market participants; d) regulating, supervising or overseeing trading venues and financial market infrastructure. Turkey, where no relevant data was reported to the TR, has started doing preliminary data quality work to support systemic risk assessment, market surveillance and supervision of market participants.

²⁵ Hong Kong SFC and the HKMA are conducting dialogues with the EC and the CFTC for direct access to TR data.

²⁶ The Trade Repositories Derivatives Data Store (TRDDS) has been designed to be the FCA’s strategic solution for the ingestion of EMIR data, regardless of EU withdrawal scenarios or timelines. In the event of withdrawal on 31 October 2019, the FCA will accept the first reports from TRs under the UK regime in November 2019. In any other circumstance, the FCA will aim to accept reports through TRDDS as soon as possible, following discussions with TRs.

2.3. International workstreams related to trade reporting implementation issues

Although implementation has progressed in recent years, challenges to the effectiveness of trade reporting remain, including a lack of globally harmonised data reported to TRs and other data quality issues. A number of international workstreams are underway that aim to address implementation issues impacting the effectiveness of trade reporting.

2.3.1. Work on data harmonisation

Harmonisation of important data elements reported to TRs is one of the preparatory steps to enable aggregation of data reported to TRs and help authorities obtain a more comprehensive view of the OTC derivatives market. Important data elements reported to TRs include the Unique Transaction Identifier (UTI),²⁷ the Unique Product Identifier (UPI)²⁸ and critical data elements other than the UTI and UPI (CDE).

OTC derivatives data elements need maintenance and governance in order to ensure that they remain up to date, evolve to reflect market practices and continue to support regulatory needs. As part of the governance arrangements for the UPI, the FSB designated in May 2019 the Derivatives Service Bureau as the sole service provider for the future UPI system, responsible for the timely issuance of UPI codes.²⁹ The FSB published in October 2019 its conclusions and the implementation plan on the governance arrangements for the UPI and next steps in the identification of the International Governance Body for the UPI and UTI.³⁰ In addition, the CPMI and IOSCO published conclusions and the implementation plan on the governance arrangements for CDE in October 2019.³¹

2.3.2. Legal entity identifier

The FSB published in May 2019 its thematic review on implementation of the LEI.³² The review found that since its endorsement by the G20 in 2012, the Global LEI System (GLEIS) has been successfully brought into operation, with over 1.4 million entities uniquely identified by an LEI in more than 200 countries.

With respect to the use of the LEI for OTC derivatives reporting, the review mentions that all FSB member jurisdictions have rules in place, except Brazil, China,³³ Indonesia and Saudi

²⁷ The primary purpose of a UTI is to uniquely identify individual OTC derivatives transactions on reports to TRs. The UTI will help to ensure the consistent aggregation of OTC derivatives transactions by minimising the likelihood that the same transaction will be counted more than once.

²⁸ The primary purpose of a UPI is to identify the product that is the subject of a particular OTC derivatives transaction. A UPI would be assigned to each product type, and regulators would be able to aggregate OTC derivatives transactions by product (using the UPI Code) or by individual reference data elements that comprise the product (such as the underlying). In particular, a UPI should help facilitate aggregation of OTC derivatives transactions reported to TRs, helping regulators to assess systemic risk and perform other market oversight functions.

²⁹ FSB (2019) *Press release FSB designates DSB as Unique Product Identifier (UPI) Service Provider*.

³⁰ FSB (2019) *Governance arrangements for the UPI: Conclusions, implementation plan and next steps to establish the International Governance Body*

³¹ CPMI and IOSCO (2019) *Governance arrangements for critical OTC derivatives data elements (other than UTI and UPI)*

³² FSB (2019) *Thematic Review on Implementation of the Legal Entity Identifier*.

³³ In China, the TR-like entity China Futures Market Monitoring Center (CFMMC) facilitates since 2019 direct access by the authorities. CFMMC has granted direct access to the China Futures Association.

Arabia.³⁴ South Africa has published draft rules.³⁵ LEIs identify reporting entities for close to 100% of the gross notional outstanding for over-the-counter (OTC) derivative trades in most FSB member jurisdictions. However, percentages of LEI coverage can be significantly lower for identifying the counterparty of the reporting entity.

The FSB thematic review illustrates the benefits of the use of LEIs for regulators and market participants in the area of OTC derivatives, including an analysis of interconnectedness and more efficient transaction processing. At the same time, since the coverage of LEI for the reporting entities is not 100% in all FSB member jurisdictions and the percentage can be much lower than 100% for counterparties of reporting entities, the review notes that LEI coverage remains too low to encourage new industry or regulatory uses: some regulators have yet to mandate the LEI for the identification of all legal entities in the data reported to trade repositories. Therefore, the report recommends that FSB member jurisdictions follow up on the April 2018 CPMI-IOSCO Technical Guidance for the Harmonisation of critical OTC derivatives data elements (other than UTI and UPI)³⁶ that strongly encourages authorities to require the use of LEIs for the identification of legal entities in the data reported to trade repositories for OTC derivatives.

2.3.3. Other international workstreams

CPMI-IOSCO's ongoing implementation monitoring programme of the *Principles for Financial Market Infrastructures* (PFMI) covers TRs and CCPs, along with other types of financial market infrastructures.³⁷ CPMI-IOSCO published a Level 2 peer review of Switzerland in January 2019³⁸ and expect to publish reviews of Brazil and Turkey in Q2 2020. To help track progress in implementing the PFMI, the CPMI and IOSCO launched a Level 1 online tracker³⁹ in March 2019 and a Level 2 PFMI Implementation Database⁴⁰ in May 2019.

The IOSCO Board mandated its Committee 7 on Derivatives (Committee 7) to better understand the interaction of OTC derivatives reforms and whether they work together in the most efficient way to achieve financial system resiliency. As part of this review, Committee 7 is assessing the impact of the implementation of OTC derivatives reforms on market structure.

³⁴ In Saudi Arabia all financial institutions under the supervision of SAMA are required since August 2018 to obtain LEI from an approved local provider. SAMA has not yet required that this be used for OTC derivatives trade reporting purposes. In Argentina rules in force since January 2019 allow but not require the use of LEI to identify counterparties when reporting bilateral OTC derivative transactions.

³⁵ In South Africa the requirements to report LEIs for OTC derivatives transaction reporting were published but are not effective yet.

³⁶ <https://www.bis.org/cpmi/publ/d175.pdf> and <https://www.iosco.org/news/pdf/IOSCONEWS493.pdf>.

³⁷ CPMI-IOSCO (2012), *Principles for Financial Market Infrastructures*, April; available at: <http://www.bis.org/cpmi/publ/d101a.pdf> and <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD377-PFMI.pdf>. Additional information on the PFMI implementation monitoring programme, including links to all reports published to date, is available at http://www.bis.org/cpmi/info_mios.htm and https://www.iosco.org/about/?subsection=cpmi_iosco.

³⁸ CPMI-IOSCO (2019), *Implementation monitoring of PFMI: Assessment report for Switzerland*, available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD620.pdf> and <https://www.bis.org/cpmi/publ/d183.htm>. CPMI-IOSCO level 2 implementation monitoring are peer reviews assessing the extent to which the content of the jurisdiction's implementation measures is complete and consistent with the PFMI.

³⁹ CPMI-IOSCO level 1 implementation monitoring are self-assessments on whether a jurisdiction has completed the process of adopting the legislation and other policies that will enable it to implement the PFMI. The online tracker is available at https://www.bis.org/cpmi/level1_status_report.htm and <https://www.iosco.org/about/pdf/Level%201%20online%20tracker.pdf>.

⁴⁰ The database is available at <https://www.bis.org/pfmi/index.htm> and https://www.iosco.org/about/?subsection=cpmi_iosco.

The committee is also examining practical effects of different trade reporting schemes, including associated costs, and considering whether they capture reliable and useful data. Committee 7 expects to submit a non-public, internal report to the IOSCO Board by end-2019.⁴¹

The OTC Derivatives Regulators' Forum (ODRF)⁴² and its technical working group complement the above workstreams by focusing on TR data quality issues and practical solutions developed by individual authorities to efficiently access data from the TRs. In 2019, the ODRF has focused on the use of TR data to measure systemic risk and for stress testing.

3. Central clearing

3.1. Implementation progress and challenges

Since the last progress report there has been no change in the number of jurisdictions (18) that had comprehensive standards in force for determining when products should be centrally cleared and only limited progress has taken place in jurisdictions where requirements were already in force (Table G in Appendix C).⁴³ The UK published its derivatives regime, which broadly transcribes EU requirements (including clearing obligations) into UK law as part of the preparations for EU-withdrawal.

A wider range of products is subject to mandatory clearing than as at the end-November 2018: in Switzerland clearing obligations of certain other products came into force⁴⁴ and Singapore has updated the list of products that will be subject to the clearing obligation with effect from April 2020.⁴⁵ At the same time Australia further postponed the clearing obligation of certain forward rate agreements to April 2020 on the basis of considerations such as low transaction volumes, accessibility to clearing services and the availability of a cleared substitute. Also the scope of entities subject to mandatory clearing varied since the last progress report. It expanded in the EU because the clearing requirements continued to be phased in. The EU also introduced a new clearing exemption for small financial counterparties and, along with Switzerland, extended a similar exemption for pension funds.⁴⁶ Hong Kong updated in January 2019 the list of major international dealers that are not necessarily regulated in Hong Kong, whose transactions with locally regulated entities may be subject to clearing obligations.

Jurisdictions report various obstacles to the introduction of mandatory clearing requirements. In Turkey, the CCP has finalised its software for OTC derivatives to be centrally cleared, but

⁴¹ Committee 7 organised roundtables in Singapore in November 2018 with Asian industry participants, in Paris in February 2019 with European industry participants, and in June 2019 in Chicago with North American industry participants.

⁴² The ODRF is not a standard setting body, and was formed to provide authorities a means to cooperate, exchange views, and share information related to trade repository data quality issues and practical solutions (<http://www.otcdrf.org/>)

⁴³ For an overview of all the central clearing determinations made as at end-September 2019, please see Table H in Appendix C.

⁴⁴ Transitional periods relative to the clearing obligation for certain standardised interest rate and credit derivatives have expired in Switzerland on 1 March and on 1 September 2019, respectively.

⁴⁵ In March 2019, MAS announced that clearing obligations for certain EUR and GBP fixed-floating interest rate swaps will take effect in April 2020.

⁴⁶ The EU clearing obligations for financial counterparties with gross notional amount of non-centrally cleared derivatives below EUR 8 billion was initially set for 21 June 2017. It was postponed to 31 June 2019 and now further to 30 October 2019. The EU and Switzerland exemption for occupational pension schemes and investment foundations was extended beyond August 2019 (to mid-2021 in case of the EU). Non-financial counterparties have become subject to the clearing obligation in interest rate and credit derivatives. The EU clearing obligation for non-financial counterparties came into force in December 2018 for interest rate derivatives and in May 2019 for credit derivatives.

the secondary regulation still needs to be published before a clearing obligation can be introduced. A CCP is expected to be operating in Saudi Arabia by end-2019.

Other challenges mentioned by one jurisdiction (Indonesia) are a legal and regulatory framework that does not fully support certain central clearing features (such as novation and close-out netting) and limited market liquidity.

3.2. Availability of central counterparties

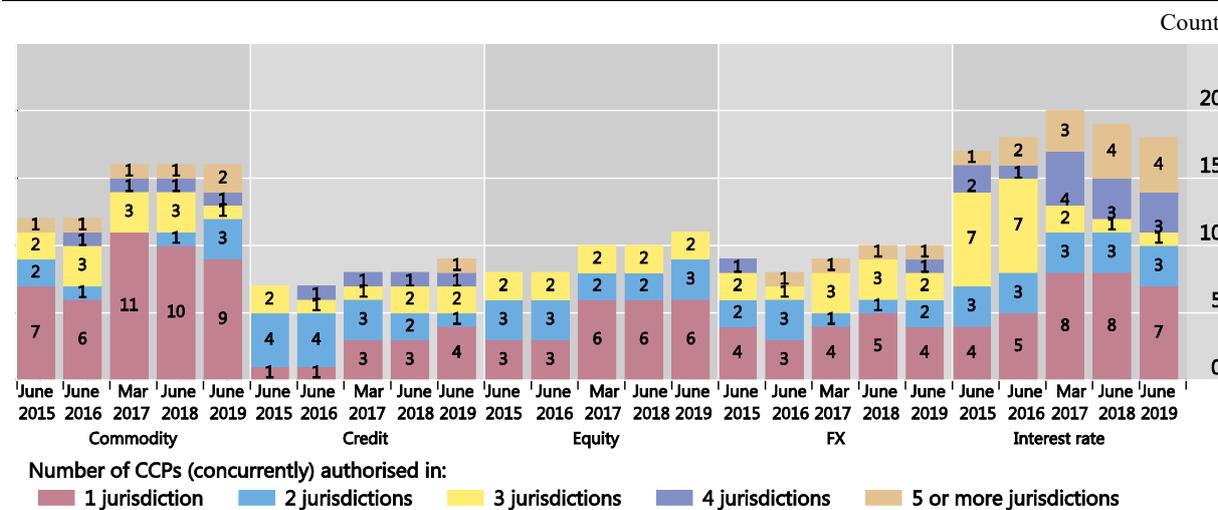
The overall availability of CCPs for OTC derivatives is almost unchanged since end-November 2018 (Figure 2 and Table I in Appendix C).⁴⁷ Some CCPs entered new markets and some existing CCPs focused their services on certain asset classes while discontinuing others.

In Singapore, Eurex Clearing AG and ICE Clear Credit LLC were recognised in 2018 to provide interest rate and credit derivatives clearing respectively; in April 2019, SGX Derivatives Clearing discontinued clearing interest rate and FX derivatives.

Moreover, four additional foreign CCPs (CME Group, ICE Clear Credit LLC, ICE Clear Europe Ltd and SGX Derivatives Clearing Limited) were recognised to provide OTC derivatives clearing services in Switzerland.⁴⁸

Figure 2

Number of CCPs concurrently authorised in one or more jurisdictions



Each bar indicates the number of CCPs authorised (i.e. licensed, registered, recognised, or operating pursuant to an exemption) and operating to centrally clear at least some OTC derivatives sub-products in one or more FSB member jurisdictions in the indicated asset class. The colours indicate the numbers of CCPs authorised in the respective numbers of FSB member jurisdictions. No CCP is currently available in more than nine FSB member jurisdictions in a given asset class. Source: FSB member jurisdictions. See also Table I in Appendix C. For the purpose of this figure, the EU is counted as a single jurisdiction.

⁴⁷ It is worth noting that in May 2019 LCH.Clearnet LLC became dormant pursuant to CFTC regulations as the clearinghouse had not cleared a trade within the prior twelve calendar months, and that Canadian authorities withdrew the authorisation to LCH.Clearnet LLC. A dormant CCP in the US needs to apply for a reinstatement of registration as a derivatives clearing organisation before it can offer clearing services again.

⁴⁸ CME Group, ICE Clear Europe Ltd and SGX Derivatives Clearing Limited offer clearing of all asset classes that are cleared by the CCP, ICE Clear Credit offering of credit derivatives.

3.3. Central clearing rates

Overall, the estimated rates of central clearing for FSB member jurisdictions (Table J in Appendix C) seem to suggest that central clearing has plateaued since end-November 2018. In two jurisdictions, estimated central clearing rates of new transactions that can be centrally cleared have decreased in some asset classes (in Brazil for commodity and equity and in India for FX). In another jurisdiction estimated clearing rates have increased in two asset classes (in Singapore for credit and FX). The overview of clearing rates this year enriched because some jurisdictions were able to provide data for the first time (Japan for FX, Singapore for commodity and equity, Switzerland for interest rates).

3.4. International work related to CCPs

The international regulatory community continued its implementation monitoring and policy work to foster more resilient CCPs, thereby promoting effective systemic risk mitigation in the global financial system.

In addition to the monitoring of PFMI implementation by CCPs discussed in section 2.3.3, CPMI-IOSCO are continuing to work on CCP resilience and recovery and in June 2019 they also published for comment a discussion paper on CCPs' default management auctions.⁴⁹ Moreover, CPMI-IOSCO have started analysing the impact of client clearing concentration on access and portability.

On CCP resolution, the FSB continues to work, in close coordination with CPMI-IOSCO, on the adequacy of financial resources to support resolution, and the treatment of CCP equity in resolution. Consultation responses to the November 2018 discussion paper⁵⁰ will be considered together with feedback from resolution authorities and crisis management groups focused on CCPs that are systemically important in more than one jurisdiction. These different inputs will help guide the scope, coverage and level of detail of any draft guidance, to be developed for further public consultation in H1 2020.

In June 2019, the BCBS finalised a statement clarifying the revised treatment of client cleared derivatives for purposes of the leverage ratio capital requirement.⁵¹ The revised treatment of client cleared derivatives is generally aligned with the measurement as determined per the standardised approach to counterparty credit risk exposures (SA-CCR) as used for risk based capital requirements. This has the effect of permitting both cash and non-cash forms of initial margin and variation margin received from the client to offset replacement cost and potential future exposure for client-cleared derivatives only. To be eligible for offset, initial margin received from a client should be subject to appropriate segregation by the bank as defined in the relevant jurisdiction. The revised treatment will be applicable to the version of the leverage ratio standard that comes into effect on 1 January 2022.

⁴⁹ CPMI-IOSCO (2019), *A discussion paper on central counterparty default management auctions* available at <https://www.bis.org/cpmi/publ/d185.htm> and <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD631.pdf>. This discussion paper follows the publication in July 2017 of a report on CCP resilience (which provides further guidance to the PFMI regarding financial risk management for CCPs) and of the revised report on Recovery of financial market infrastructures.

⁵⁰ Available at www.fsb.org/2019/02/public-responses-to-consultation-on-financial-resources-to-support-ccp-resolution-and-the-treatment-of-ccp-equity-in-resolution/.

⁵¹ BCBS (2019), *Leverage ratio treatment of client cleared derivatives*.

4. Margin requirements for non-centrally cleared derivatives

The BCBS and IOSCO set out standards for the exchange of variation and initial margin for NCCDs in 2015 (the BCBS-IOSCO framework).⁵² Under the international implementation schedule for these reforms, variation margin requirements were due to be fully phased in by 1 March 2017, and initial margin requirements were due to begin on a phased-in basis, commencing 1 September 2016, with new phases each year until the final implementation phase-in starting in September 2020. In July 2019, the IOSCO Board and BCBS agreed to a one-year extension of the final implementation phase, so that there will be an additional and final implementation phase-in starting on 1 September 2021.⁵³ The extension was agreed in the interest of supporting the smooth and orderly implementation of the margin requirements that are consistent and harmonised across their member jurisdictions and hopefully will help to avoid market fragmentation that could otherwise ensue. However, the extension will also delay the final implementation of the OTC derivatives market reforms.

4.1. Implementation progress

At end-September 2019, 16 jurisdictions have comprehensive margin requirements in force, with an increase of one over the reporting period (Table K in Appendix D).⁵⁴ In Brazil margin requirements are effective since 1 September 2019.⁵⁵ Moreover, in the EU, powers were delegated⁵⁶ to the European Banking Authority (EBA), in cooperation with ESMA and the European Insurance and Occupational Pensions Authority (EIOPA), to develop technical standards for the harmonisation of supervisory procedures to ensure (initial and ongoing) validation of risk management for segregated collateral exchanges. In June 2019, the SEC adopted margin requirements for nonbank security-based swap dealers and major security-based swap participants with respect to non-centrally cleared security-based swaps.⁵⁷

Some jurisdictions also enhanced risk mitigation measures for non-centrally cleared derivatives other than margin requirements (Table M in Appendix D). Saudi Arabia and Singapore introduced rules on trade confirmation, portfolio reconciliation, compression and valuation, and dispute resolution. Moreover, in the US rules regarding portfolio valuation are in place under the jurisdiction of the CFTC, whereas the SEC proposed in December 2018 certain risk mitigation techniques for portfolios of non-centrally cleared security-based swaps.

⁵² BCBS-IOSCO (2015), *Margin requirements for non-centrally cleared derivatives*, available at <https://www.bis.org/bcbs/publ/d317.htm> and <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD480.pdf>.

⁵³ <https://www.bis.org/press/p190723.htm> and <https://www.iosco.org/news/pdf/IOSCONEWS540.pdf> and <https://www.iosco.org/news/pdf/IOSCONEWS540.pdf>. The revised standard is available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD635.pdf> and <https://www.bis.org/bcbs/publ/d475.pdf>.

⁵⁴ For an overview of all developments in margin requirements for NCCDs since end-November 2018 please see Table L in Appendix D.

⁵⁵ In Brazil, margin requirements that are effective since 1 September 2019 consider the average of counterparties' notional amounts registered during the months of March, April and May 2019. As for the remaining jurisdictions, South Africa has published on 8 April 2019 standards on the margin requirements for a final round of public consultation. Moreover Mexico has closed on 28 June 2019 a consultation on requiring margins for non-centrally cleared derivatives and plans to publish final rules in Q4 2019.

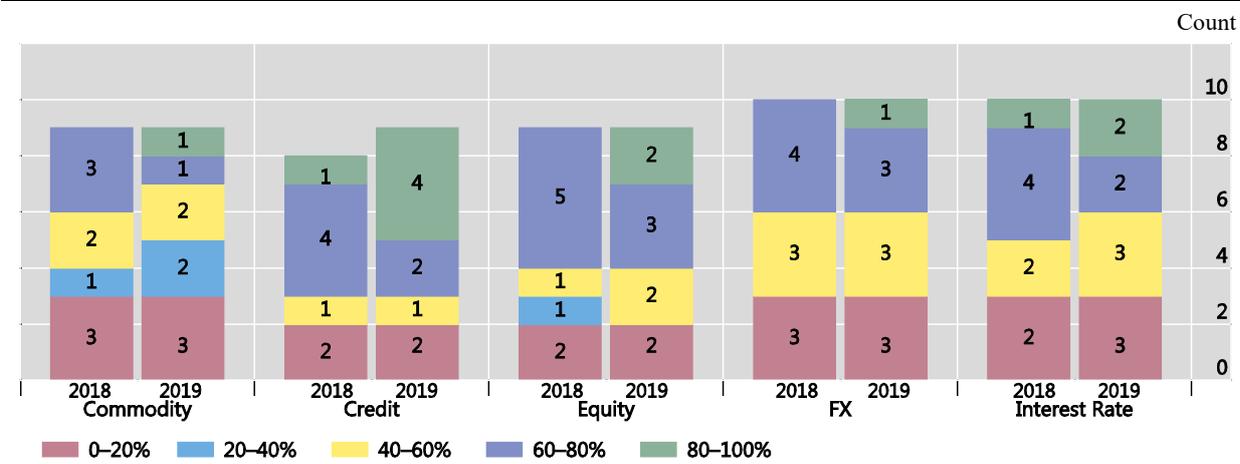
⁵⁶ "EMIR Refit".

⁵⁷ SEC, <https://www.sec.gov/rules/final/2019/34-86175.pdf>.

4.2. Collateralisation rates

The trend towards higher collateralisation rates that was observed in the last reporting period continues in this one. When compared with answers given as at end-June 2018, estimates for end-June 2019 show an increase of instances where collateralisation rates for OTC derivatives are between 80-100% (Figure 3). This increase is particularly prominent in credit and equity derivatives, where Canada and Korea’s estimates increased during this reporting period to 80-100%.⁵⁸ Moreover, this year, Mexico was able to estimate collateralisation rates for credit derivatives for the first time, because of reporting obligations for credit derivatives in force since January 2019: these rates are also in the range of 80-100%.

Figure 3
Estimates of rates of collateralisation, end-June 2018 and end-June 2019



Each bar indicates the number of jurisdictions providing estimates of the respective collateralisation rates indicated for new OTC derivatives transactions in each asset class, as at end-June 2018 and end-June 2019. Answers from two national EU jurisdictions are included, whereas EU-wide authorities’ consolidated answers are not available. Australia excluded contracts for differences from its estimates in FX, commodity, equity derivatives, which would have pushed collateralisation rates to 80%-100% for all these asset classes. Mexico provided end-June 2019 estimates of collateralisation rates for credit derivatives, because reporting requirements of transactions in such asset class entered into force in January 2019. Moreover, end-June 2019 estimates of all asset classes include collateralisation rates also from multipurpose financial companies, whereas the end-June 2018 ones included rates only from banks and brokerage firms.

4.3. BCBS-IOSCO monitoring group

The BCBS–IOSCO Working Group on Margin Requirements continues to assess implementation and market developments and report to its parent committees as appropriate.

In its early 2019 monitoring report to the BCBS and the IOSCO Board, the monitoring group noted that significant progress has been made by most jurisdictions toward implementing the BCBS-IOSCO framework. Although the report acknowledged that market participants have faced significant challenges implementing the framework’s requirements, market disruptions have largely been avoided. However, the monitoring group noted that some differences remain in local implementation of the framework with regard to: (1) the treatment and segregation of initial margin; (2) the scope of products subject to margin requirements; (3) the scope of entities

⁵⁸ In Korea collateralisation rates improved in all asset classes to 80%-100%.

subject to margin requirements; and (4) substituted compliance and equivalence assessments. On the basis of the monitoring report, in March 2019 IOSCO and BCBS issued a joint statement to clarify aspects of the BCBS-IOSCO framework in order to support timely and smooth implementation of its requirements.⁵⁹

4.4. Implementation challenges

The clarifications provided by the BCBS and IOSCO in March 2019 (see section 4.3) addressed some of the challenges experienced by FSB member jurisdictions in implementing margin requirements. This refers to the uncertainty on whether certain events would trigger margin requirements on historical transactions and concerns with regard to operational challenges related to the onboarding of clients.

The joint statement clarified that amendments to legacy derivatives contracts pursued solely for the purpose of addressing interest rate benchmark reforms do not require the application of the margin requirements for the purposes of the BCBS-IOSCO framework (although the position may be different under relevant implementing laws). The joint statement also noted that the framework does not specify documentation, custodian or operational requirements if the bilateral margin amount with a covered entity⁶⁰ does not exceed the framework's 50 million EUR initial margin threshold, although covered entities are expected to act diligently when their exposures approach the threshold to ensure that the necessary arrangements are in place if the threshold is exceeded.

Some jurisdictions reported the following further implementation challenges and issues:

- In Argentina, a tax exemption is necessary ahead of the implementation of margin requirements to avoid parties being taxed on margin calls (similar to other money transfers).
- Since the introduction of margin requirements, Spanish authorities observed an increase in the number of disputes associated with the positions' valuation and the collateral amount due.

5. Higher capital requirements for non-centrally cleared derivatives

The goals for higher capital requirements for NCCDs were developed by the BCBS as interim and final standards. The interim standard for bank exposures to CCPs was published in July 2012,⁶¹ and was due to be implemented by 1 January 2013. The final standards – comprising the final standard on measuring counterparty credit risk exposures (SA-CCR) and the final standard for capital requirements for bank exposures to CCPs – were due to be implemented by 1 January 2017.⁶²

⁵⁹ BCBS-IOSCO statement on the final implementation phases of the *Margin requirements for non-centrally cleared derivatives*, available at <https://www.iosco.org/news/pdf/IOSCONEWS526.pdf> and <https://www.bis.org/press/p190305a.htm>. It is worth recalling that in July 2019 the IOSCO Board and BCBS announced a one-year extension of the final implementation phase to September 2021.

⁶⁰ Covered entities refer to financial firms and systemically important non-financial entities (as defined in the BCBS-IOSCO standards for margin requirements for NCCDs).

⁶¹ BCBS (2012), *Capital requirements for bank exposures to central counterparties*

⁶² In March 2014, the BCBS published the final standard on SA-CCR, with an associated recommended implementation deadline of 1 January 2017 (BCBS, *The standardised approach for measuring counterparty credit risk exposures*). SA-

The BCBS reported that, as at end-March 2019, 26 BCBS member jurisdictions have issued draft or final rules for the SA-CCR and 24 BCBS member jurisdictions have issued draft or final rules for the capital requirements for bank exposures to CCPs.⁶³ However, the BCBS also reported that the majority of these jurisdictions had yet to publish final rules or have final rules in force (i.e. final rules published and implemented by banks).

5.1. Implementation progress and issues

Consistent with the findings of the March 2019 BCBS review (see section 5), at end-September 2019 the final standardised approach for measuring counterparty credit risk exposures (SA-CCR) and the final standard for capital requirements for bank exposures to CCPs are in force in seven of the 24 FSB member jurisdictions (Table O in Appendix E).⁶⁴ Since end-November 2018, standards entered into force in four jurisdictions (Australia, Brazil, Canada and Korea).⁶⁵ In June 2019, the SEC adopted capital requirements for major security-based swap participants and also for nonbank security-based swap dealers.⁶⁶

Moreover, progress took place in the EU where legislation implementing the standardised approach to counterparty credit risk and the final standards for bank exposures to central counterparties was adopted on 7 June 2019 and will enter in force in June 2021. In Switzerland, the transition period for banks to implement SA-CCRs and the final standard for exposure to CCPs will lapse on 1 January 2020.

Jurisdictions reported the same implementation issues as last year with respect to higher capital requirements for NCCDs, one noting the information technology and other operational challenges derived from the complexity of the requirements, and two jurisdictions reporting concerns expressed by banks in their jurisdiction regarding global inconsistency and uncertainty in the timing of implementation of SA-CCR across different jurisdictions.

6. Platform trading and transparency of OTC derivatives transactions

6.1. Implementation progress and issues

Limited progress occurred during the reporting period in implementing the platform trading mandate. As at November 2018, 13 FSB member jurisdictions had standards in force for determining products for mandatory trading, a number which has remained unchanged during the reporting period (Table Q in Appendix F).⁶⁷ In the US, the CFTC proposed in November

CCR replaces both the Current Exposure Method (CEM) and the Standardised Method (SM) in the risk-based capital framework, while the IMM (Internal Model Method) shortcut method has also been eliminated from the framework. The final standard for bank exposures to CCPs was published in April 2014, with a recommended implementation date of 1 January 2017 (BCBS, *Capital requirements for bank exposures to central counterparties*).

⁶³ BCBS (2019), *Sixteenth progress report on adoption of the Basel regulatory framework*, May, page 6.

⁶⁴ For the status of implementation of the interim higher capital requirements for NCCDs see Table N in Appendix E. For an overview of all developments in higher capital requirements for NCCDs since end-November 2018 please see Table P in Appendix E.

⁶⁵ In Australia, the final rules for the SA-CCR counterparty credit risk are in force since July 2019. In Brazil, the standardised approach for measuring counterparty credit risk exposures (Circular 3,904 published in June 2018) has been in force since June 2019 and applies to internationally active banks. In Canada, OSFI implemented the standardised approach for measuring counterparty credit risk and final rules for capitalising exposures to CCPs in Q1 2019.

⁶⁶ SEC, <https://www.sec.gov/rules/final/2019/34-86175.pdf>.

⁶⁷ For an overview of all trade execution determination in force as at end-September 2019 please see Table R in Appendix F.

2018 broadening the scope of trade execution requirements for swap execution facilities and extending the registration requirement to additional entities.⁶⁸ In March 2019, trading obligations came into force in Singapore for certain interest rate swaps.⁶⁹ Singapore also entered into mutual recognitions with the US in March 2019 and EU in April 2019 to designate certain trading venues to be eligible to meet trading obligation requirements. The Italian Companies and Stock Exchange Commission (CONSOB) developed technical infrastructure to facilitate reporting and compliance of position limits⁷⁰ for certain commodity derivatives.⁷¹

Canada, where criteria for determining when products should be platform traded are currently not in force, consulted in March 2019 on the appropriate regulatory framework for platforms for crypto-assets that are tokenised forms of derivatives (i.e. whose value depends on an underlying interest) or derivatives with crypto-assets as underliers.⁷² The goal is to determine a set of tailored regulatory requirements to address the novel features and risks of such platforms.

6.2. Transparency of information about OTC derivatives transactions

Post-trade transparency on OTC derivatives transactions increased in one FSB member jurisdiction since the 13th progress report, both in terms of frequency and granularity of published data. In Singapore, in addition to MAS publishing monthly aggregated trade data on a quarterly basis, the trading venues are expected to publish information on close to real-time basis (Table B), including the price or spread of individual trades (Table C), to facilitate a fair, orderly and transparent market.⁷³

⁶⁸ CFTC, <https://www.cftc.gov/sites/default/files/2019-02/2019-01667a.pdf>.

⁶⁹ Exempted are banks with aggregate gross notional amounts of outstanding OTC derivatives lower than SGD20 billion.

⁷⁰ MiFID II (EU directive 2014/65/EU) introduced in the EU mandatory restrictions on the size of commercial trading.

⁷¹ The infrastructure is focused on OTC commodity derivatives contracts that are economically equivalent to those traded on trading venues.

⁷² Joint Canadian Securities Administrators/Investment Industry Regulatory Organization of Canada (2019), *Proposed Framework for Crypto-Asset Trading Platforms*, Consultation Paper 21-402.

⁷³ For illiquid products or block trades, the publication may be done on an aggregated and delayed basis.

Table B

Post-trade transparency requirements: aggregates or trade-by-trade information

Highest granularity and frequency of the information required to be published in FSB member jurisdictions about OTC derivatives transactions, either by TRs, trading platforms, CCPs or authorities

Information required to be published	Answer as at end-June 2019	Answer as at end-June 2018
No information	2	2
Aggregate information on a monthly basis (or less than weekly)	4	5
Aggregate information on a weekly basis (or less than daily)	4	4
Aggregate information on a daily basis	3	3
Aggregate information on an intra-day basis	1	1
Trade-by-trade information on a daily basis	0	0
Trade-by-trade information on a (close to) real time basis ^(a)	8	7
Other ^(b)	2	2

The table considers jurisdictions where trade reporting and publication requirements are in force at end-June 2019. (a) Generally, derivatives trading platforms regulated by MAS publish trade-by-trade information on a (close to) real time basis, other than for illiquid products and block trades which may be published on a delayed basis. (b) Korean authorities informed that data is published on a periodic basis but did not specify how frequently. In Indonesia aggregate information is not public but available only to certain third parties allowed to have access to data.

Table C

Post-trade transparency requirements: prices or spreads

Highest granularity of information about prices or spreads about OTC derivatives transactions required to be published in FSB member jurisdictions, either by TRs, trading platforms, CCPs or authorities

Details about prices or spreads	Answer as at end-June 2019	Answer as at end-June 2018
No price or spread information is required to be published ^(a)	11	12
Average prices or spreads of new transactions per asset class	1	1
Pricing or spread information of individual trades ^(b)	11	10
Other ^(c)	1	1

The table considers jurisdictions where trade reporting and publication requirements are in force at end-June 2019. (a) Indonesia does not publish price information on OTC derivatives (for FX and IR it publishes only aggregated information on notional and outstanding value on a monthly basis). Trading venues publish price information for exchange-traded equity derivatives. (b) Singapore allows pricing of illiquid products to be published on an aggregate basis. (c) China publishes indicative prices and spreads.

7. Cross-border coordination and issues

Under the agreement reached by G20 Leaders at the St. Petersburg Summit in 2013, jurisdictions and regulators should be able to defer to each other when it is justified by the quality of their respective regulatory and enforcement regimes, in a non-discriminatory way, while still paying due respect to home country regulation regimes.

Since the 13th progress report at end-November 2018, the FSB published a report on Market Fragmentation⁷⁴ which looks at the reporting of data, trading and clearing of OTC derivatives across borders as examples of financial activities where supervisory practices and regulatory policies may give rise to market fragmentation. The report identifies several areas for further work to address market fragmentation including by further exploring ways to enhance the clarity of deference and recognition processes.

In addition, the IOSCO Board mandated work related to market fragmentation, in securities and derivatives markets, which arises as an unintended consequence of financial regulation.⁷⁵ The June 2019 IOSCO Report on Market Fragmentation and Cross-Border Regulation⁷⁶ noted that deference⁷⁷ between regulators has increased significantly, and that some regulators have developed novel processes to work multilaterally to the benefit of the markets they oversee. However, the report also concluded that challenges remain and that strengthening cooperation between authorities could further assist in addressing effects on the financial system stemming from market fragmentation. The report proposed several potential measures that could be further explored, including (i) fostering mutual understanding by making greater use of IOSCO's Regional Committees as a forum for members to discuss cross-border regulatory issues, (ii) exploring, taking into account any existing work undertaken by other standard setting and supervisory bodies, whether and how existing supervisory colleges achieve their objectives and, if appropriate, identify ways to increase their use in securities and derivatives markets and (iii) considering whether there are any good or sound practices that can be identified regarding deference tools (e.g. passporting, recognition, substituted compliance) without changing the existing legislative requirements or frameworks that authorities have in place. The IOSCO Board will discuss these proposals at its Q4 2019 meeting.

During the reporting period, only Singapore started exercising deference with regard to foreign jurisdictions' regimes (Table S in Appendix G). At the same time, several jurisdictions that already exercised deference in the past extended such exercise to further jurisdictions (Table T in Appendix G).⁷⁸ Legal powers to exercise deference were extended more often in the context of the regulatory regime for market participants' margin requirements. In April 2019, Japan and the EU agreed on mutual equivalence, and the US CFTC introduced and amended comparability determinations for Australia (April 2019) and Japan (March 2019), which extended substituted compliance to these countries' margin requirements for non-centrally cleared derivatives.⁷⁹ In June 2019, the US SEC adopted a mechanism to seek substituted compliance with respect to capital and margin requirements for foreign nonbank security-based swap dealers and major security-based swap participants.⁸⁰ The US CFTC and the MAS announced the mutual recognition of certain derivatives trading venues in the United States and Singapore in March

⁷⁴ FSB (2019), *FSB Report on Market Fragmentation*.

⁷⁵ The Follow-Up Group to the 2015 Cross-Border Regulation Task Force (i) conducted a short survey of Board members to understand where market harmful fragmentation may have taken place within securities and OTC derivatives markets and (ii) also co-lead a workshop, in association with the FSB, on market fragmentation issues.

⁷⁶ IOSCO (2019), *Market Fragmentation & Cross-border Regulation*.

⁷⁷ IOSCO defines deference as an overarching concept that refers to the reliance authorities place on one another when carrying out regulation or supervision of participants operating cross-border.

⁷⁸ In March 2019, MAS recognised certain US Swap Execution Facilities as recognised venues to meet the mandatory trading requirements, and in April 2019 recognised certain Multilateral Trading Facilities and Organised Trading Facilities regulated in the EU.

⁷⁹ In March 2019, certain derivatives platforms in Singapore were exempted from registration as SEFs and became eligible to satisfy the CFTC's trade execution requirements.

⁸⁰ SEC, <https://www.sec.gov/rules/final/2019/34-86175.pdf>.

2019. The MAS concluded similar mutual recognition arrangements with the European Commission in April 2019. In July 2019, the US CFTC issued an order exempting certain Japanese regulated electronic trading platforms from registration as swap execution facilities. Concurrently, the Japan Financial Services Agency (JFSA) announced that it would facilitate the authorisation process for CFTC-authorized derivative platforms that seek to be authorised electronic OTC derivatives transactions business operators in Japan on the premise that such entities are subject to the regulation and supervision of the US CFTC.

In March 2019, the European Parliament and the Council agreed to adopt an updated approach to the supervision of third-country CCPs providing clearing services to clearing members or trading venues established in the European Union, which is expected to enter into force mid-November 2019. The new approach foresees a reliance on the home country regulation and supervision for non-systemically important CCPs, and establishes carefully considered requirements for systemically important CCPs to ensure that their risk management meets EU regulatory standards. At last resort, if those requirements are insufficient to mitigate the potential risks to financial stability in the EU, a systemically important third-country CCP may not be recognised.

Switzerland provisionally recognised in February 2019 the UK derivatives regulations (including trade reporting obligations to TRs, clearing obligations, and risk mitigation obligations) as equivalent to the relevant Swiss legislation for the case of the UK withdrawal from the EU. The US CFTC and US prudential regulators have extended certain regulatory relief and comparability determinations that were originally granted to EU entities to UK entities to ensure that the transfer of legacy derivatives from a UK entity to an affiliate in the EU or US does not trigger new margin requirements after the UK withdrawal from the EU. Finally, the JFSA and UK authorities have proceeded with an equivalence assessment of the CCPs established in Japan in order to obtain recognition by the UK as a third-country CCP.

Appendix A General

Jurisdictional reform implementation classification scheme

Legend	
Red	No existing authority to implement reform and no steps taken to adopt such authority.
1	<i>All reform areas:</i> Legislative framework or other authority is in force⁸¹ or has been published for consultation or proposed.
2	<p><i>Trade reporting:</i> Legislative framework or other authority is in force and, with respect to at least some transactions, standards / requirements have been published for public consultation or proposal.</p> <p><i>Central clearing and platform trading:</i> Legislative framework or other authority to implement reform is in force and, with respect to at least some transactions, standards / criteria for determining when transactions should be centrally cleared / platform traded have been published for public consultation or proposal.</p> <p><i>Capital and margins for non-centrally cleared derivatives:</i> Legislative framework or other authority is in force and, with respect to at least some transactions, standards / requirements have been published for public consultation or proposal.</p>
3	<p><i>Trade reporting:</i> Legislative framework or other authority is in force and, with respect to at least some transactions, public standards / requirements have been adopted.</p> <p><i>Central clearing and platform trading:</i> Legislative framework or other authority is in force and, with respect to at least some transactions, public standards / criteria for determining when products should be centrally cleared / platform traded have been adopted.</p> <p><i>Capital and margins for non-centrally cleared derivatives:</i> Legislative framework or other authority is in force and, with respect to at least some transactions, public standards / requirements have been adopted.</p>
Blue	<p><i>Trade reporting:</i> Legislative framework or other authority is in force and, with respect to over 90% of transactions, standards / requirements are in force.</p> <p><i>Central clearing and platform trading:</i> Legislative framework or other authority is in force and, with respect to over 90% of transactions, standards / criteria for determining when products should be centrally cleared / platform traded are in force. An appropriate authority regularly assesses transactions against these criteria.</p> <p><i>Capital for non-centrally cleared derivatives:</i> Legislative framework or other authority is in force and, with respect to over 90% of transactions, standards / requirements are in force.</p> <p><i>Margins for non-centrally cleared derivatives:</i> Legislative framework or other authority is in force and, with respect to over 90% of the transactions covered consistent with the respective WGMR phase in periods, standards / requirements are in force.</p>

⁸¹ Throughout this report, the term “in force” means a final statute/regulation/rule/policy statement/standard/etc. is operative and has effect as at the indicated date; in contrast, where a final statute/regulation/etc. has been enacted or published but it is not yet operative and does not have effect, for the purposes of this report this is treated as not yet in force.

Appendix B Trade reporting

Table D

Status of trade reporting regulatory implementation⁸²

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	3	3	Blue	Blue	Blue	Blue	Blue	Blue
AU	Blue							
BR	Blue							
CA	Blue							
CN	Blue							
EU	Blue							
HK	Blue							
IN	Blue							
ID	Blue							
JP	Blue							
KR	Blue							
MX	Blue							
RU	Blue							
SA	Blue							
SG	Blue							
ZA	3	3	3	3	3	3	3	3
CH	Blue							
TR	2	Blue						
US	Blue							

Table E

Availability of TRs and TR-like entities

TRs and TR-like entities authorised in FSB member jurisdictions^(a)

TR name	Location	Jurisdictions in which TR is authorised ^(a) to operate	CO	CR	EQ	FX	IR
TRs							
1. B3	Brazil	BR					
2. CCIL	India	IN					
3. Central Registry Agency	Turkey	TR					
4. Chicago Mercantile Exchange Inc.	US	AU, CA, US					
5. CME European Trade Repository	UK	EU					
6. DTCC-DDR	US	AU, CA, US					
7. DTCC Data Repository – Japan	Japan	AU, JP					
8. DTCC-DDRL	UK	AU, EU, CH (new)					
9. DTCC Data Repository - Ireland ^(b) (new)	Ireland	EU, CH					
10. DTCC Data Repository – Singapore	Singapore	AU, SG					

⁸² Implementation status in this report is shown as actual (to Q3 2019) and expected (Q4 2019 and after), as reported by FSB member jurisdictions end-Q3 2019. For legend see Appendix A. The status in each period represents the actual or expected status at end of the quarter or half-year referred to. For jurisdiction codes, see Table A in the Executive Summary.

TR name	Location	Jurisdictions in which TR is authorised ^(a) to operate	CO	CR	EQ	FX	IR
11. HKMA-TR	Hong Kong	AU, HK					
12. ICE Trade Vault	US	CA, US					
13. ICE Trade Vault Europe	UK	EU					
14. KDPW Trade Repository	Poland	EU					
15. Korea Exchange (KRX)	Korea	KR					
16. NEX Abide Trade Repository AB	Sweden	EU					
17. CJSC National Settlement Depository (NSD)	Russia	RU					
18. REGIS-TR	Luxembourg	EU, CH					
19. OJSC “Saint-Petersburg Exchange” (SPBEX)	Russia	RU					
20. UnaVista ^(c)	UK	AU, EU					
21. SIX Trade Repository AG	Switzerland	CH					
Sub-total			18	20	18	20	21
TR-like entities							
22. Argentina Clearing	Argentina	AR					
23. Banco de México	Mexico	MX					
24. Bank Indonesia ^(d)	Indonesia	ID					
25. Bank of Korea	Korea	KR					
26. Bolsas y Mercados Argentinos	Argentina	AR					
27. CFETS	China	CN					
28. China Futures Market Monitoring Center (CFMMC) (new)	China	CN					
29. China Securities Internet System	China	CN					
30. Financial Supervisory Service	Korea	KR					
31. Mercado a Término de Buenos Aires	Argentina	AR					
32. Mercado Abierto Electrónico	Argentina	AR					
33. Mercado Argentino de Valores	Argentina	AR					
34. National Association of Financial Market Institutional Investors (NAFMII)	China	CN					
35. ROFEX	Argentina	AR					
36. SAMA TR ^(e)	Saudi Arabia	SA					
Sub-total			8	7	9	10	8
Total: TRs and TR-like entities			26	27	27	30	29

CO = commodity, CR = credit, EQ = equity, FX = foreign exchange, IR = interest rate. For jurisdiction codes see Table A in the Executive Summary. (a) As at end-September 2019. **(new)** denotes new entry in table since end-September 2018. (b) DTCC established a TR in Ireland (registered by ESMA) that is ready to support reporting following the UK withdrawal from the EU. DTCC Data Repository Ireland was also approved in Switzerland. (c) LSE established a TR in the Netherlands that was registered by ESMA and is ready to support reporting following the UK withdrawal from the EU. (d) Under Indonesian law, banks are not allowed to enter into derivatives transactions with equity and commodity as underlier. (e) SAMA has recently authorised Saudi Credit Bureau “SIMAH” as a Trade Repository. Once this will be starting its TR operations, the SAMA’s TR-like service will no longer be operational.

Table F

Estimated regulatory coverage of reporting requirements

Percent of all new transactions that are required to be reported, as at end-Q3 2019

	Commodity					Credit					Equity					FX					Interest Rate				
	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100
AR ^(a)	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
AU	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
BR	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
CA	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
CN	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
EU	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
HK	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
IN	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●
ID ^(b)	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●
JP	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
KR	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
MX ^(c)	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
RU	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
SA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●
SG	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
ZA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CH	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
TR ^(d)	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
US ^(e)	-	-	-	-	●	-	-	-	●	●	-	-	-	-	●	-	-	-	-	●	-	-	-	-	●
	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100	0 20	20 40	40 60	60 80	80 100

Estimates based on each jurisdiction's assessment of the regulatory coverage of its reporting requirements, using information available as at end-September 2018. ● indicates a new estimate, and ○ indicates previous estimate (where applicable). Includes reporting to TRs and TR-like entities. ■ = no reporting requirements in force for OTC derivatives transactions in this asset class. ■ = not applicable/no OTC derivatives transactions in this asset class. ■ = reporting requirements are in force but data not able to be provided (for instance, due to data quality, access and/or aggregation challenges). (a) In Argentina reporting obligations entered in force in January 2019, covering all five asset classes. (b) In Indonesia, OTC commodity derivatives are required to be reported to an exchange and registered with a clearing house. Moreover, all equity transactions are exchange traded and are required to be reported to a centralised securities trading platform and to the Indonesia's financial services regulator OJK. (c) In Mexico, reporting of credit derivatives started in January 2019. (d) In Turkey reporting obligations entered in force at the end of November 2018, covering all five asset classes. (e) US data is not available to assess the CFTC's and SEC's respective market share in the OTC derivatives equity market. Accordingly, the US categorisation for the equity asset class reflects only CFTC data.

Appendix C Central clearing

Table G

Status of central clearing regulatory implementation

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	1	1	1	1	1	1	1	1
AU	Blue							
BR	Blue							
CA	Blue							
CN	Blue							
EU	Blue							
HK	Blue							
IN	3	3	3	3	3	3	3	3
ID	3	3	3	3	3	3	3	3
JP	Blue							
KR	Blue							
MX	Blue							
RU	3	3	3	3	3	3	3	Blue
SA	1	1	1	1	1	1	1	1
SG	Blue							
ZA	Blue							
CH	Blue							
TR	1	1	1	1	1	2	3	Blue
US	Blue							

Table H

Central clearing determinations

Determinations made as at end-September 2019^(a)

AU	<i>Interest rate:</i> certain fixed-floating and basis swaps, forward rate agreements (FRAs) and overnight indexed swaps (OIS) denominated in AUD, EUR, GBP, JPY and USD
CA	<i>Interest rate:</i> certain fixed-to-floating swaps denominated in CAD, USD, EUR and GBP; certain basis swaps denominated in USD, EUR and GBP; certain OIS denominated in CAD, USD, EUR and GBP; certain FRAs denominated in USD, EUR, and GBP
CN	<i>Interest rate:</i> fixed-floating swaps denominated in CNY
EU	<i>Credit:</i> selected European (iTraxx) indices <i>Interest rate:</i> certain fixed-floating, and basis swaps, FRAs and OIS denominated in EUR, GBP, JPY and USD <i>Interest rate:</i> certain fixed-floating swaps and FRAs denominated in NOK, PLN and SEK
HK	<i>Interest rate:</i> certain fixed-floating and basis swaps denominated in EUR, GBP, HKD, JPY and USD and OIS denominated in EUR, GBP and USD

IN	<i>FX:</i> INR-USD forwards <i>Interest rate:</i> Overnight indexed swaps (OIS) and Mumbai Interbank Forward Offer Rate (MIFOR)
JP	<i>Credit:</i> selected Japan (iTraxx) indices <i>Interest rate:</i> fixed-floating and basis swaps denominated in JPY
KR	<i>Interest rate:</i> fixed-floating swaps denominated in KRW
MX	<i>Interest rate:</i> certain fixed-floating swaps denominated in MXN
SG	<i>Interest rate:</i> certain fixed-floating swaps denominated in SGD and USD
CH	<i>Credit:</i> selected European indices (iTraxx) <i>Interest rate:</i> certain fixed-floating swaps and basis swaps, in each case denominated in EUR, GBP, JPY, USD; certain FRAs and OIS in each case denominated in EUR, GBP, USD
US (CFTC)	<i>Credit:</i> selected North America (CDX) and European (iTraxx) indices <i>Interest rate:</i> certain fixed-floating, basis swaps, FRAs and OIS denominated in EUR, GBP, JPY (ex-OIS) and USD. Swaps in such currencies other than fixed-floating and basis swaps, FRAs, and OIS denominated in EUR, GBP and USD with terms between 2 and 3 years have been added since June 2016. Also added since June 2016, certain fixed-floating swaps denominated in AUD, CAD, HKD, MXN, NOK, PLN, SGD, SEK, and CHF; certain basis swaps denominated in AUD; FRAs in NOK, PLN, and SEK; and certain OIS denominated in AUD and CAD.

(a) For more details on mandatory clearing requirements currently in force, see *IOSCO information repository*. (new) indicates new central clearing determination since end-November 2018.

Table I
CCPs for OTC derivatives by asset class

CCP name	Location	Jurisdictions in which CCP is authorised to operate ^(a)	CO	CR	EQ	FX	IR
1. Asigna	Mexico	MX					1
2. ASX Clear	Australia	AU; EU			2		
3. ASX Clear (Futures)	Australia	AU; EU; US; CH					4
4. B3	Brazil	BR	1	1	1	1	1
5. BME Clearing	Spain	EU	1				1
6. CDCC	Canada	CA; EU			2		
7. NBCI National Clearing Centre	Russia	RU				1	1
8. Clearing Corporation of India Ltd (CCIL)	India	EU; IN		1		2	2
9. CME Group Inc ^(b)	US	AU; CA; EU; HK; JP; MX; SG; CH (new); US	5	4	2	4	9
10. European Commodity Clearing ^(c)	Germany	EU; CH	2				

CCP name	Location	Jurisdictions in which CCP is authorised to operate ^(a)	CO	CR	EQ	FX	IR
11. Eurex Clearing	Germany	AU; EU; SG (new); CH; US					5
12. ICE Clear Credit LLC	US	CA; EU; SG (new); CH (new); US	1	5		1	1
13. ICE Clear Europe Ltd	UK	EU; CH (new); US	2	3	1	2	2
14. ICE Clear Netherlands	The Netherlands	EU			1		
15. Indonesia Clearing House	Indonesia	ID	1				
16. JSCC	Japan	AU; EU; HK; JP; CH; US		2			6
17. KDPW CCP	Poland	EU					1
18. Kliring Berjangka Indonesia	Indonesia	ID	1				
19. Korea Exchange	Korea	EU; JP; KR; US					4
20. LCH Ltd ^(d)	UK	AU; CA; EU; HK; JP; MX; SG; CH; US;	5	1	3	6	9
21. LCH SA ^(e)	France	EU; CH; US		3			
22. LME Clear Ltd	UK	EU; CA (new); CH	3				
23. Nasdaq OMX Stockholm	Sweden	AU; EU	1		1		2
24. ICE NGX Canada Inc ^(f)	Canada	CA; EU; US	3				
25. OCC	US	CA; EU; US	1		3		
26. OMI Clear	Portugal	EU	1				
27. OTC Clearing Hong Kong Ltd	Hong Kong	AU; EU; HK; US				3	4
28. SGX Derivatives Clearing Ltd ^(g)	Singapore	EU; SG; CH (new); US	4		1	3	3
29. Shanghai Clearing House ^(h)	China	CN	1	1		1	1
30. SIX x-clear AG	Switzerland ⁽ⁱ⁾	EU			1		
Total CCPs currently in operation in asset class			16	9	11	10	18
Number of jurisdictions authorising each CCP in each asset class			32	21	18	24	57

(a) As at end-September 2019. In some cases authorisation in a particular jurisdiction is only for a subset of products, and/or for only direct participation or only client clearing. For Australia, includes CCPs in respect of which a prescription is in place; such CCPs are only authorised to be used to satisfy Australian mandatory central clearing obligations in certain circumstances. The EU is treated as one FSB member jurisdiction for these purposes. (b) CME Group Inc discontinued clearing credit derivatives in the US in March 2018. (c) European Commodity Clearing was authorised in Singapore in 2018, but as of May 2019 it does not offer clearing service for OTC commodity derivatives in Singapore. (d) LCH.Clearnet Ltd had changed its legal name to LCH Ltd. (e) LCH.Clearnet SA had changed its legal name to LCH SA. (f) Natural Gas Exchange was acquired by ICE in December 2017 and has changed its legal name to Ice NGX Canada Inc. (g) SGX-Derivatives Clearing in Singapore only offers clearing for commodity derivatives: it has stopped offering clearing services for interest rate derivatives and FX in 2018, and does not offer equity derivatives' clearing. (h) Shanghai Clearing House clears CDS since February 2018. (i) Although located in Switzerland, SIX x-clear AG does not clear OTC derivatives in any asset class in Switzerland. X indicates number of jurisdictions for which indicated CCP is authorised and operating for that asset class. (new) and a corresponding X indicates change in authorisation status since November 2018. For asset class codes, see Table E in Appendix B.

Appendix D Margin requirements for non-centrally cleared derivatives

Table K

Status of regulatory implementation of margin requirements for NCCDs

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	1	1	1	1	1	1	1	1
AU	Blue							
BR	3	3	3	Blue	Blue	Blue	Blue	Blue
CA	Blue							
CN	1	1	1	1	1	1	1	1
EU	Blue							
HK	Blue							
IN	2	2	2	2	2	2	2	2
ID	1	1	1	1	1	1	1	1
JP	Blue							
KR	Blue							
MX	2	2	2	2	2	3	Blue	Blue
RU	3	3	3	3	3	3	3	Blue
SA	Blue							
SG	Blue							
ZA	2	2	2	2	2	2	2	2
CH	Blue							
TR	1	1	1	1	1	1	3	Blue
US	Blue							

Table L

Margin requirements for NCCDs – developments since end-November 2018⁸³

AU	In August 2019, APRA published a consultation on amending the phase in schedule for Initial Margin and additional clarifications consistent with BCBS/IOSCO clarification and policy changes.
BR	Margin requirements are effective since September 2019. These consider the average of counterparties notional amounts registered during the months of March, April and May 2019.
HK	In March 2019, the HKMA published the BCBS-IOSCO clarifications on the final implementation phases for initial margin requirements. HKMA also published its intention to continue to consider UK as a deemed-comparable jurisdiction in the context of margin requirements for NCCDs independent of its EU membership status.
ID	OJK is planning to publish a consultative paper on margin requirements for NCCDs in the second half of 2019.
KR	Since the guideline on margin requirements for non-centrally cleared derivatives (2018.3) which is an administrative guidance in Korea has ended in February 2019, the FSS extended the guideline for one and a half year in March 2019. The revision of the regulation is expected to be completed before September 2020.

⁸³ Jurisdictions not reporting key developments not listed separately.

MX	Banco de Mexico published for consultation amendments to Circular 4/2012 that introduce margin requirements for NCCDs, aligned to the international standards set by BCBS-IOSCO. The consultation process closed at the end of June 2019.
RU	The start of mandatory margin requirements noted in 13th progress report at end-November 2018 has been postponed to H2 2020 (earlier H2 2019) for trade participants of Category 1 and to H2 2021 (earlier H2 2020) for trade participants of Category 2.
SA	A new threshold for systemically important non-financial institutions set has been introduced.
ZA	In April 2019, the Prudential Authority (PA) and the Financial Sector Conduct Authority (FSCA) published the revised Joint Standard on the margin requirements for non-centrally cleared OTC derivative transactions, for a final round of public consultation.
US	<p>US authorities have:</p> <ul style="list-style-type: none"> • Published a final rule to provide relief for legacy swaps subject to the bilateral margin requirements that are amended solely to comply with the Qualified Financial Contracts Rules applicable for capital and liquidity regulations (October 2018, US prudential regulators).⁸⁴ • Published an interim final rule to ensure that legacy swaps may be transferred from a UK entity to an affiliate in the EU or US, in case of a non-negotiated UK withdrawal from the EU (March 2019, US prudential regulators).⁸⁵ • Undertaken a rulemaking initiative to permit amendments to legacy swap contracts without affecting their legacy status, to conform swap contracts to certain banking law requirements concerning qualified financial contracts, and to allow a dealer to transfer a swap contract to a related entity outside UK, in case of a non-negotiated UK withdrawal from the EU (CFTC, in coordination with other US regulators). • Issued a no-action relief to permit amendments to swap contracts without affecting their legacy status, to allow for immaterial changes to a swap contract, swaption exercises, partial novation or termination of a contract, and multilateral compression (CFTC, in coordination with other US regulators). • Adopted margin requirements for nonbank security-based swap dealers (SBSBs) and major security-based swap participants with respect to non-cleared security-based swaps (SEC, June 2019) The rule will require a nonbank SBSB to collect collateral from a counterparty to cover a variation and/or initial margin requirement. The rule also requires the nonbank SBSB to deliver collateral to the counterparty to cover a variation margin requirement. Variation margin is calculated by marking the position to market. Initial margin must be calculated by applying the standardised haircuts prescribed in SEC capital rules. However, a nonbank SBSB may apply to the SEC for authorisation to use a model (including an industry standard model) to calculate initial margin. The final rule also contains a fixed-dollar USD 50 million initial margin threshold below which initial margin need not be collected by a nonbank SBSB and a minimum transfer amount exception of USD 500,000. The compliance date for the new rules is 18 months after the later of: (1) the effective date of the final rules establishing recordkeeping and reporting requirements for SBSBs and major security-based swap participants; or (2) the effective date of the final rules addressing the cross-border application of certain security-based swap requirements.

⁸⁴ <https://www.fdic.gov/news/news/press/2018/pr18064a.pdf>

⁸⁵ <https://www.fdic.gov/news/news/press/2019/pr19018a.pdf>

Table M
Risk mitigation measures for NCCDs

	Trade confirmation	Portfolio reconciliation	Portfolio compression	Portfolio valuation	Dispute resolution
AR					
AU					
BR					
CA					
CN					
EU					
HK					
IN					
ID					
JP					
KR					
MX					
RU					
SA	(new)	(new)	(new)	(new)	(new)
SG					
ZA					
CH					
TR					
US ^(a)				(new)	

(a) CFTC response for Portfolio Valuation has been changed to green. In December 2018, the SEC proposed rules requiring the application of specific risk mitigation techniques to portfolios of non-centrally cleared security-based swaps, including reconciling with certain counterparties on a periodic basis, certain forms of portfolio compression exercises, and written trading relationship documentation with each of its counterparties prior to, or contemporaneously with, executing a security-based swap transaction (<https://www.govinfo.gov/content/pkg/FR-2019-02-15/pdf/2018-27979.pdf>). ■ indicates that the risk management technique for NCCDs is required to be utilised or considered by firms in a given jurisdiction as of end-September 2019. (new) indicates that the risk management technique for NCCDs has been introduced since end-November 2018. For jurisdiction codes see Table A in the Executive Summary.

Appendix E Higher capital requirements for non-centrally cleared derivatives

Table N

Status of regulatory implementation of interim higher capital requirements for NCCDs

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	Blue							
AU	Blue							
BR	Blue							
CA	Blue							
CN	Blue							
EU	Blue							
HK	Blue							
IN	Blue							
ID	Blue							
JP	Blue							
KR	Blue							
MX	Blue							
RU	Blue							
SA	Blue							
SG	Blue							
ZA	Blue							
CH	Blue							
TR	Blue							
US	3	3	3	3	3	3	3	3

Table O

Status of regulatory implementation of final higher capital requirements for NCCDs

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	Blue							
AU ^(a)	2	2	2	3	Blue	Blue	Blue	Blue
BR	3	3	3	Blue	Blue	Blue	Blue	Blue
CA	3	3	Blue	Blue	Blue	Blue	Blue	Blue
CN ^(b)	3	3	3	3	3	3	3	3
EU	2	2	2	3	3	3	3	3
HK	2	2	2	2	2	2	2	3
IN	3	3	3	3	3	3	3	3
ID ^(c)	Blue							
JP ^(d)	3	3	3	3	3	3	3	3
KR	3	3	Blue	Blue	Blue	Blue	Blue	Blue
MX ^(e)	1	1	1	1	1	1	3	Blue
RU	2	2	2	2	2	2	2	2
SA	Blue							
SG ^(f)	3	3	3	3	3	3	3	3
ZA	2	2	2	2	2	2	2	2
CH ^(g)	3	3	3	3	3	3	Blue	Blue
TR	2	2	2	2	2	2	2	2
US	2	2	2	2	2	2	2	2

(a) In Australia the final rules for SA-CCR and the final capital requirements for exposures to CCPs were published in April 2018 and in force from July 2019. (b) In China the final standard on measuring counterparty credit risk exposures (SA-CCR) is in force and adoption has not started for the capital requirements for bank exposures to CCPs. (c) The status refers to the implementation of SA-CCR. Indonesia has not implemented the final capital requirements for exposures to CCPs because domestic CCPs do not clear any of the derivatives asset classes that banks are legally allowed to enter into (interest rate and FX derivatives). (d) With regard to SA-CCR, final rule was implemented in Japan in March 2018. In order to prevent distortion in cross-border transactions, the Japanese authorities permit the CEM-based calculations for the moment as a transitional measure. Even though the standard is in force the rating is Yellow-3 because adoption rate is below 90%. (e) Mexico expects that the consultation and the final rules will be published in H1 2020. (f) Singapore final standards for higher capital requirements came into effect on January 2017. Even though the standard is in force the rating is Yellow-3 because transitional arrangements are in place to allow more time for

implementation and therefore adoption rate is below 90%. (g) In Switzerland although rules are in force (final rules adopted in December 2016) the rating is Yellow-3 because the transition period to implement will only lapse on 1 January 2020 and therefore adoption rate is currently below 90%.

Table P

Higher capital requirements – key developments since end-November 2018⁸⁶

AU	In Australia the final rules implementing the standardised approach to counterparty credit risk (SA-CCR) and the capital requirements for bank exposures to CCPs entered in force from July 2019.
BR	In Brazil, the Standardised Approach for Measuring Counterparty Credit Risk Exposures (SA-CCR, published in June 2018, through Circular 3,904) entered in force in June 2019 for internationally active banks. Capital requirements for bank exposures to CCPs have been in force since January 2018 and are applicable to all banks (Circular BCB 3,644, published in 2013 and amendments)
CA	In Canada the final rules implementing the standardised approach to counterparty credit risk (SA-CCR) and the capital requirements for bank exposures to CCPs entered in force in Q1 2019.
EU	The legislation implementing the standardised approach to counterparty credit risk and the capital requirements for bank exposures to CCPs has been adopted in June 2019 (Official Journal of the EU). The rules will enter in force in June 2021.
HK	In August 2018, the HKMA issued amendments to the Banking (Capital) Rules for consultation to implement the standardised approach for measuring counterparty credit risk and capital requirements for bank exposures to CCPs. It is expected that these amendments will enter in force within 2020.
JP	With regard to the standardised approach to counterparty credit risk (SA-CCR), final rule was implemented in March 2018. ⁸⁷ In order to prevent “distortion” in cross-border transactions, the Japanese authorities permit the CEM-based calculations for the moment as a transitional measure. It is a kind of cross-border issue in Japan as to how long should we permit the CEM-based calculations.
KR	The final standardised approach to counterparty credit risk (SA-CCR) entered in force in January 2019.
MX	CNBV is currently working on amendments to the capital requirements for banks to implement the standardised approach to counterparty credit risk (SA-CCR) and capital requirements for bank exposures to CCPs. It is expected that final rules will be published and in force by H1 2020.
SG	MAS’ rules implementing the final standards for higher capital requirements for non-centrally cleared derivatives (SA-CCR and capital requirements for bank exposures to CCPs) were published on 17 October 2016. They came into force on 1 January 2017. Transitional arrangements are still in place to allow more time for implementation.
CH	The transition period for banks to implement the standardised approach to counterparty credit risk (SA-CCR) and the final capital requirements for banks exposures to CCPs has been extended to January 2020. Until this date, banks may continue to use the Current Exposure Method (CEM) and the interim standards instead.
TR	For intermediary institutions (brokerage houses), regulatory work related to higher capital requirements for NCCDs has continued since June 2017.

⁸⁶ Jurisdictions not reporting key developments not listed separately.

⁸⁷ <https://www.fsa.go.jp/en/newsletter/weekly2018/287.html>

US	In December 2018 the Board of Governors of the Federal Reserve System (Federal Reserve Board), Federal Deposit Insurance Corporation (FDIC) and Office of the Comptroller of the Currency (OCC) published a notice of proposed rulemaking ⁸⁸ to implement the standardised approach for counterparty credit risk (SA-CCR) through modifications to the Standardised Approach for Calculating the Exposure Amount of Derivative Contract for calculating the exposure amount of derivative contracts under the agencies' regulatory capital rule. The proposed rule also provides for a modified version of SA-CCR for the determination of exposure amount of derivatives for total leverage exposure under the supplementary leverage ratio. In June 2019, the SEC adopted capital requirements for nonbank security-based swap dealers and major security-based swap participants. ⁸⁹
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⁸⁸ <https://www.govinfo.gov/content/pkg/FR-2018-12-17/pdf/2018-24924.pdf>

⁸⁹ <https://www.sec.gov/rules/final/2019/34-86175.pdf>

Appendix F Exchange and electronic platform trading

Table Q

Status of exchange or electronic platform trading regulatory implementation

	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	H1 2020	H2 2020
AR	3	3	3	3	3	3	3	3
AU	Blue							
BR	1	1	1	1	1	1	2	3
CA	2	2	2	2	2	2	2	2
CN	3	3	3	3	3	3	3	3
EU	Blue							
HK	Blue							
IN	3	3	3	3	3	3	3	3
ID	3	3	3	3	3	3	3	3
JP	Blue							
KR	1	1	1	1	1	1	1	1
MX	Blue							
RU	2	2	2	2	2	2	2	2
SA	1	1	1	1	1	1	1	1
SG	Blue							
ZA	1	1	1	1	1	1	1	1
CH	Blue							
TR	1	1	1	1	1	1	Blue	Blue
US	Blue							

Table R

Trade execution determinations in force as at end-September 2019

	Determination(s)
CN	Bond forward, RMB/FX forward, RMB/FX swap, RMB cross currency swap, RMB/FX option
EU	<i>Credit</i> : Certain Index CDS credit derivatives. The entry into force for other categories is phased in. <i>Interest rate</i> : Certain fixed-to-float single currency interest rate swaps denominated in EUR, USD and GBP
IN	<i>Interest rate</i> : Overnight Index Swap (OIS) referenced to Overnight Mumbai Interbank offer rate (MIBOR) and Mumbai Inter-bank Overnight Index Swap (MIOIS) benchmark
ID	<i>Equity</i> : all derivative products related to capital market (in particularly equity derivatives) are required to be traded on exchange. <i>Commodity</i> : platform trading through exchange and electronic trading system is required for commodity derivative products. Trades must also be registered to a clearing house.
JP	<i>Interest rate</i> : selected fixed-floating swaps denominated in JPY
MX	<i>Interest rate</i> : certain fixed-floating swaps denominated in MXN
SG	<i>Interest rate</i> : certain fixed-floating swaps denominated in USD, EUR and GBP (new)

US CFTC	<i>Credit</i> : selected North America (CDX) and European (iTraxx) indices (CFTC) <i>Interest rate</i> : selected fixed-floating and basis swaps, FRAs and OIS denominated in EUR, GBP, JPY and USD (CFTC)
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(new) denotes new trade execution determination since end-November 2018.

Appendix G Deference

Table S

Legal capacity to apply deference within OTC derivatives regulatory framework

Selected regulatory requirements, FSB member jurisdictions, as at end-September 2019

	Trade reporting		Central clearing and non-centrally cleared transactions			Exchange/platform trading	
	Regulatory regime for TRs	Reporting requirements	Regulatory regime for CCPs	Central clearing requirements	Margin requirements	Regulatory regime for exchanges/platforms	Trading requirements
AR							
AU							
BR							
CA							
CN							
EU							
HK							
IN							
ID							
JP							
KR							
MX							
RU		#		#	#		#
SA							
SG							(new)
ZA						#	#
CH							
TR							
US	SEC	CFTC SEC	CFTC SEC	CFTC SEC#	CFTC SEC (new)	CFTC SEC#	CFTC SEC#

■ indicates legal capacity to apply deference was in force at end-May 2019 # indicates reforms in progress to establish legal capacity to apply deference. (new) indicates new entry since end-November 2018. For jurisdiction codes see Table A in the Executive Summary. Source: FSB member jurisdictions.

Table T

OTC derivatives reforms related deference decisions

FSB member jurisdictions, as at end-September 2019^(a)

Jurisdiction making deference decision	Regulatory requirement category	Jurisdiction receiving deference
AU	Regulatory regime for CCPs	EU, US (CFTC)
	Regulatory regime for market participants	Germany, Hong Kong, Singapore, UK, US (CFTC)
	Margin requirements for non-centrally cleared derivatives	US (CFTC), EU, Japan, HK, Singapore, Canada, Switzerland
CA	Regulatory regime for CCPs	UK, EU, US (CFTC)

Jurisdiction making deference decision	Regulatory requirement category	Jurisdiction receiving deference
	Regulatory regime for market participants	EU, US (CFTC)
EU	Regulatory regime for CCPs	Australia, Brazil, Canada, Hong Kong, India, Japan, Japan (commodities), Korea, Mexico, New Zealand, Singapore, South Africa, Switzerland, US (CFTC)
	Regulatory regime for trading venues	Australia, Japan, Canada, Singapore, US (CFTC)
	Regulatory regime for market participants (margin)	US (CFTC), Japan (JFSA) (new)
HK	Regulatory regime for market participants	Australia, Brazil, Canada, EU, Japan, Singapore, Switzerland, US (CFTC)
	Regulatory regime for market participants (margin)	HKMA: Australia, Canada, EU, Hong Kong (SFC), India, Japan, Republic of Korea, Mexico, Russia, Singapore, Switzerland and the United States ^(a)
JP	Regulatory regime for market participants (margin)	Australia, Canada, Hong Kong, Singapore, US (CFTC), EU (new)
MX	Regulatory regime for CCPs	US (CFTC), UK
SG	Regulatory regime for CCPs	UK, US (CFTC), EU (new)
	Regulatory regime for market participants (margin)	Australia, Canada, EU, Hong Kong, India, Japan, Republic of Korea, Mexico, Russia, Switzerland and the US (CFTC) ^(b)
	Regulatory regime for trading venues (new)	EU, US (CFTC) ^(c)
CH ^(c)	Regulatory regime for CCPs	Australia, EU / UK, Japan, Singapore, US (CFTC)
	Regulatory regime for market participants	EU, UK (new)
US (CFTC)	Regulatory regime for CCPs	Australia, EU, Hong Kong, Japan, Korea
	Regulatory regime for trading venues	EU, Singapore (new) , Japan (new)
	Regulatory regime for market participants	Australia, Canada, EU, Hong Kong, Japan, Switzerland
	Regulatory regime for market participants (margin)	EU, Japan (amended), Australia (new)

(a) From the date of entry into force of the respective margin standards in the jurisdictions listed above and until further notice, the HKMA deems the margin standards of the respective jurisdictions as comparable. (b) FINMA has recognised the relevant EU regulations as provisionally equivalent and will in due course provide information about the decision regarding definitive recognition of the equivalence of the European regulations. Furthermore, FINMA has provisionally recognised the derivatives regulations of the UK regarding the clearing obligation (Art. 14 EMIR transposition act), reporting obligation (Art. 19 EMIR transposition act) and risk mitigation obligation (Art. 21 EMIR transposition act) as equivalent (see *FINMA Guidance 01/2019*, /). **(new)** indicates new deference decisions since end-November 2018. (c) In March 2019, MAS recognised certain foreign trading as recognised venues to meet the mandatory trading requirements. These venues include certain Swaps Execution Facilities regulated in the US and certain Multilateral Trading Facilities and Organised Trading Facilities regulated in the EU. **(amended)** indicates deference decisions that have been modified since end-November 2018. Regulatory regimes for market participants can include transaction-level requirements (such as certain clearing requirements) or entity-level requirements (such as certain supervision/oversight requirements, or general business conduct requirements). Specific requirements, and deference decisions, under each broad category vary across jurisdictions.

Appendix H Selected official papers published since end-November 2018

	FSB (2019), <i>Thematic Review on Implementation of the Legal Entity Identifier</i> , May ⁹⁰
DE	Abbassi, P. and F. Bräuning, (2018), “The Pricing of FX Forward Contracts: Micro Evidence from Banks’ Dollar Hedging”, Federal Reserve Bank Boston WP No 18-6 ⁹¹ Gündüz, Y. (2018), “Mitigating counterparty risk.” Deutsche Bundesbank Discussion Paper 35/2018, August ⁹²
CA	Ontario Securities Commission staff, Autorité des marchés financiers staff (2019), “Compliance Review Findings for Reporting Counterparties”, Multilateral CSA Staff Notice 91-306, June ⁹³
EU	Benatti, N., Napolitano, F. (2018), “An insight into the derivatives trading of firms in the euro area” Ninth Irving Fisher Committee Conference, Switzerland, 30-31 August 2018 ⁹⁴ Pérez-Duarte, S. and G. Skrzypczynski (2018), “Two is company, three’s a crowd: automated pairing and matching of two-sided reporting in EMIR derivatives’ data,” Ninth Irving Fisher Committee Conference, Switzerland, 30-31 August 2018 ⁹⁵ ECB (2018), Fache Rousová, L. and E. Letizia, (2018) “Box 8: Insurance companies and derivatives exposures: evidence from EMIR data”, Financial Stability Review, November ⁹⁶
MX	Banco de México (2019), “Main indicators on OTC IRS traded by domestic brokerage houses, commercial and development banks”, June ⁹⁷ Caccioli, F., Martínez-Jaramillo, S., Poledna, S., Thurner, S., “Quantification of systemic risk from overlapping portfolios in the financial system”, arXiv Cornell University Research Paper ⁹⁸
RU	Bank of Russia (2018), “The phased-in approach to the Russian OTC derivatives market reform” December ⁹⁹
UK	Bardoscia, M., G. Bianconi and G. Ferrara (2018), “Multiplex network analysis of the UK OTC derivatives market”, Bank of England Staff Working Paper, No. 726, May ¹⁰⁰ Benos E., Huang, W., Menkveld, A and Vasios M., (2019), “The cost of clearing fragmentation”, Bank of England Staff Working Paper, No. 800, May ¹⁰¹ Rinaldo, A., Schaffner, P. and Vasios M., (2019) “Regulatory effects on short-term interest rates”, Bank of England Staff Working Paper, No. 801, May ¹⁰² Schroeder, F., Allan, M., Lepone, A., Leung, H., and Satchell, S. (2018) “Flash Crash in an OTC Market”, Financial Conduct Authority Occasional Paper, No. 37 ¹⁰³

⁹⁰ <https://www.fsb.org/wp-content/uploads/P280519-2.pdf>

⁹¹ <https://www.bostonfed.org/-/media/Documents/Workingpapers/PDF/2018/wp1806.pdf>

⁹² <https://www.bundesbank.de/resource/blob/759620/7d9851a0244fcd946877403d96273ffa/mL/2018-09-14-dkp-35-data.pdf>

⁹³ https://www.osc.gov.on.ca/documents/en/Securities-Category9/csa_20190606_91-306_reporting-counterparties.pdf and

<https://lautorite.qc.ca/fileadmin/lautorite/reglementation/instruments-derives/avis-acvm/2019/2019juin06-91-306-avis-acvm-fr.pdf>

⁹⁴ https://www.bis.org/ifc/publ/ifcb49_20.pdf

⁹⁵ https://www.bis.org/ifc/publ/ifcb49_51.pdf

⁹⁶ <https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr201811.en.html#toc22>

⁹⁷ <http://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=19&accion=consultarCuadro&idCuadro=CF792&locale=en>

⁹⁸ <https://arxiv.org/abs/1802.00311>

⁹⁹ http://www.cbr.ru/Content/Document/File/62045/Inf_note_jan_1819.pdf

¹⁰⁰ <https://qmul.ac.uk/xmlui/bitstream/handle/123456789/43965/Bianconi%20Multiplex%20network%20analysis%20of%20the%20UK%20OTC%20derivatives%20market%202018%20Published.pdf?sequence=1&isAllowed=y>

¹⁰¹ https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2019/the_cost_of_clearing_fragmentation.pdf?la=en&hash=03D5A14CC3EDEED84F87A1E90F6A804074584A14

¹⁰² <https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2019/regulatory-effects-on-short-term-interest-rates.pdf?la=en&hash=9092B777F7B4D7CEFA52EEC13A4B917C11E26B25>

¹⁰³ <https://www.fca.org.uk/publication/occasional-papers/occasional-paper-37.pdf>

Appendix I

Members of the OTC Derivatives Working Group

as at date of publication

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Federal Reserve Bank of New York

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