CHAPTER 21

Addressing Cross-Border Aspects of Securities Clearing and Settlement Systems in the European Union

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This chapter focuses on the effectiveness of the regulatory, supervisory, and oversight frameworks for central counterparties (CCPs) and central securities depositories (CSDs) in the European Union (EU). CCPs and CSDs are essential in promoting and maintaining financial stability.\(^1\) CCPs and CSDs can vastly improve the efficiency, transparency, and safety of financial systems but also concentrate systemic risk. If not properly managed, they can be sources of financial shocks, such as liquidity dislocations and credit losses, or a major channel through which shocks are transmitted across domestic and international financial markets. The systemic importance of CCPs will increase with the implementation of the Group of Twenty (G20) reforms comprising the mandatory clearing of all standardized over-the-counter (OTC) derivatives. Therefore, the appropriate regulation, supervision, and oversight of CCPs and CSDs are essential to reducing systemic risk.

Cooperation between authorities within and outside the EU is a critical component of the regulatory, supervisory, and oversight framework because it may reduce risks related to the cross-border nature of clearing and settlement within the EU. CCPs and CSDs are regulated, supervised, and overseen by their national authorities. Given the increased interconnectedness between countries, a lack of efficient and effective communication and consultation may result in various risks and inefficiencies, such as regulatory arbitrage and competition on risk management. Protection of national markets may result in an unlevel playing field between CCPs in various member states and between CSDs in various member states. This is risky and inefficient and impedes the creation of a single market for securities and derivatives clearing and settlement.

\(^1\)The analysis is based on the concepts described in the relevant international standards, which are the Committee on Payment and Settlement Systems–International Organization of Securities Commissions’ *Principles for Financial Market Infrastructures* (PFMI), published in April 2012 (http://www.bis.org/publ/cpss101a.pdf).
Addressing Cross-Border Aspects of Securities Clearing and Settlement Systems in the EU

Crisis management arrangements between EU authorities are critically important so that authorities can adequately fulfill their various responsibilities in relation to CCPs and CSDs in crisis situations. Therefore, this chapter also analyzes the existing crisis management frameworks, taking into account the lessons learned during the recent defaults of, for example, Lehman Brothers and MF Global.

DESCRIPTION OF CCPS AND CSDS IN THE EU

Overview of Securities and Derivatives Clearing and Settlement

There are currently more than 20 CCPs in Europe, clearing a wide range of markets and products. Appendix 21A contains a description of the main CCPs. CCPs in the EU clear one or more asset classes, varying from financial and commodity derivatives to cash equities and bonds or repos. The instruments cleared can be traded on organized trading platforms as well as over the counter. In many cases, such as in France, Germany, and the United Kingdom, CCPs for securities have been developed from established CCPs for derivatives. Some CCPs are exchange owned, for example, in Germany and Italy, whereas others are independent (e.g., LCH.Clearnet Group) or combined with CSDs, as until recently in Eastern Europe. Some CCPs only service their domestic market, whereas other CCPs provide clearing services for a range of EU markets.

The EU hosts various OTC derivative CCPs. The largest global CCP for interest rate swaps is the London-based SwapClear. SwapClear was launched by LCH.Clearnet Limited in September 1999 and started clearing interest rate swaps in four major currencies. ICE Clear Europe, also based in London, has a global leading position in clearing credit default swaps. Following the agreement reached at the G20 Pittsburgh Summit stating that all standard OTC derivative contracts should be centrally cleared, other CCPs have developed or extended their OTC derivatives offering, for example, in France, Germany, and Sweden.

There are more than 30 CSDs in the EU. Appendix 21A contains a description of the main CSDs. Historically, CSDs have been separately developed for equity markets and for government bond markets. For the past 20 years, many central banks in the EU have shifted their CSD activity for government securities to the private sector, creating one CSD per country that handles all types of securities. Currently, some CSDs are exchange owned as in Germany, Italy, Poland, and Spain. Some CSDs are owned by the private sector, whereas some are owned by the public sector, as in Hungary. Some are listed companies or belong to listed companies, whereas others are user owned. Some CSDs service their domestic markets; others are cooperating across borders, either by the merger of national CSDs (Euroclear) or by optimizing link arrangements (Link Up Markets).

Two international central securities depositories (ICSDs) are located in the EU offering global settlement, custody, and collateral services. The ICSDs (Euroclear Bank and Clearstream Banking Luxembourg) were created in the 1970s to settle Eurobonds. Over the years, ICSDs have extended their scope
to all types of internationally traded financial instruments, including equities and investment funds. Under their respective banking licenses, the ICSDs provide cash accounts and credit lines to their participants to facilitate settlement. The ICSDs compete with each other as well as with global custodians. Several global custodians are currently considering applying for CSD licenses to increase their services to include securities settlement in addition to their asset services. Bank of New York Mellon was the first to apply in early 2013.

The EU’s focus on financial stability and the reduction of risk has increased since the global financial crisis, whereas more emphasis was placed on efficiency before the crisis. Beginning in 2006, changes in the EU legal and regulatory framework, such as the Markets in Financial Instruments Directive and the Code of Conduct for Clearing and Settlement, led to increased competition between cash-trading platforms and clearing and settlement institutions. The Markets in Financial Instruments Directive abolished concentration rules and encouraged the proliferation of alternative execution venues, primarily multilateral trading facilities. To serve the multilateral trading facilities, new CCPs entered the market, such as the European Multilateral Clearing Facility and EuroCCP.

Competition in the cash market led to significant cuts in trading and clearing fees and ultimately to an interoperability arrangement between four CCPs for the clearing of securities transactions at various trading platforms. Interoperability between the CCPs European Multilateral Clearing Facility, EuroCCP, LCH.Clearnet Limited, and SIX x-clear allows access to various trading platforms via one CCP. Positions are netted across trading platforms and clearing members no longer need to deposit collateral at more than one institution.

A recent trend is the reverticalization of infrastructure, where exchanges hold the CCP as a subsidiary rather than conduct business with a CCP as a separate company. In the United Kingdom, the derivatives exchange New York Stock Exchange–London International Financial Futures and Options Exchange (NYSE-Liffe) is developing its own CCP to provide the services that had been delivered by LCH.Clearnet. Similar decisions were made earlier by Intercontinental Exchange (ICE) Clear and the London Metal Exchange. The London Stock Exchange awaits the decision of the U.K. Office of Fair Trading to buy a majority stake in LCH.Clearnet.

Overview of the Regulatory, Supervisory, and Oversight Framework

The objectives of the EU are to ensure the smooth functioning of the internal market for CCP and CSD services by increasing safety, ensuring a high level of investor protection, creating a level playing field, and improving the efficiency of clearing and settlement in general.2 In line with these objectives, the European Commission (EC) has drafted regulations covering CCPs and CSDs.

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2 As described in the introductory parts of the European Market Infrastructure Regulation and the draft CSD Regulation of March 2012.
The European Market Infrastructure Regulation (EMIR) provides for the regulatory and supervisory framework for CCPs. EMIR’s text came into force on August 16, 2012. In September 2012, the European Securities and Markets Authority (ESMA) delivered its draft technical standards to the EC for endorsement. The technical standards came into force on March 15, 2013. EMIR is also the relevant EU legislation for trade repositories and OTC derivative markets because it provides the framework for implementing the G20’s mandatory clearing agreement. EMIR includes (1) common rules for CCPs; (2) the introduction of a passport for CCP services; (3) a clearing obligation for eligible OTC derivatives with measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives; (4) a reporting obligation for derivatives to trade repositories; and (5) rules on the establishment of interoperability between CCPs clearing cash markets. EMIR allows third countries to provide clearing and trade repository services in the EU, provided the legal and supervisory regime in the third country provides for an effective equivalent system for the recognition of CCPs under foreign legal regimes.

It is the EC’s intention that the draft CSD Regulation will provide the regulatory and supervisory framework for CSDs. In March 2012, a draft proposal for CSD regulation was passed to the European Parliament and the Council of the European Union for negotiation and adoption under the co-decision procedure. The proposal introduces common standards across the EU for securities settlement and CSDs as well as a passport regime. The regulation also aims to harmonize the differences between settlement practices in the EU and increase settlement efficiency.

Under the new EU regulations, the national authorities remain the competent authorities for CCPs and CSDs, with new roles for ESMA and the European System of Central Banks (ESCB). Table 21.1 outlines the responsibilities as envisaged under the new regulations. Each member state is to designate a competent authority that is responsible for the authorization and supervision of a CCP or CSD established in its territory. ESMA’s responsibilities increase under EMIR and the draft CSD Regulation. ESMA’s new competences include the development of binding technical standards and a coordinating role among competent authorities and across CCP colleges. The increased role for the ESCB includes participation in the CCP colleges as overseer and central bank of issue. The ESCB is also involved in the drafting of technical standards, guidelines, and recommendations, with ESMA having the final responsibility.

Other relevant directives in relation to CCPs and CSDs in the EU are the Settlement Finality Directive (SFD) and the Financial Collateral Arrangements Directive. The SFD contains provisions to reduce the risk linked to the insolvency of a participant in financial market infrastructures (FMIs). The SFD has been adapted to include lessons from the 2008 financial crisis, including provisions to

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3 The members of the ESCB and other national or public bodies are exempted from the authorization and supervision requirements. Central banks are to immediately inform ESMA of any CSD that they operate.
TABLE 21.1

European Union: Supervision and Oversight under EMIR and the Draft CSD Regulation

<table>
<thead>
<tr>
<th>Authorization, Supervision, and Regulation</th>
<th>Oversight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCPs</strong></td>
<td>A CCP is authorized by the competent authority of the member state in which the CCP is established, having obtained the opinion from the college for that CCP. Supervision is conducted by the competent authority of the member state in which the CCP is established, in cooperation with the college for that CCP, which includes ESMA in a nonvoting capacity. ESMA has authority to develop binding technical standards under EMIR, which have to be adopted by the EC.</td>
</tr>
<tr>
<td><strong>CSDs/SSS</strong> (proposed CSD Regulation of July 3, 2012)</td>
<td>A CSD is authorized and supervised by the competent authority of the member state where it is established, in close cooperation with other relevant authorities, including relevant members of the ESCB. Before granting authorization, the competent authority has to consult with competent authorities of other member states if the CSD is a subsidiary of or belongs to the same group as a CSD authorized in another member state. ESMA has the authority to draft, in consultation with the members of the ESCB, binding technical standards under the CSD regulations, which have to be adopted by the EC.</td>
</tr>
<tr>
<td><strong>Typically the national central bank in which the CCP is established, either as competent authority of the CCP or as member of the college. The central banks of issue of the most relevant EU currencies of the financial instruments cleared will also be members of the college.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Typically the national central bank of the state in which the CSD is established, either as competent authority of the CSD or as one of the relevant authorities that have to be consulted.</strong></td>
<td></td>
</tr>
</tbody>
</table>

Sources: EMIR; draft CSD Regulation; and Eurosystem Oversight Annual Report 2011.

Note: CCP = central counterparty; CSD = central securities depository; EC = European Commission; EMIR = European Market Infrastructure Regulation; ESCB = European System of Central Banks; ESMA = European Securities and Markets Authority; EU = European Union; SSS = Securities Settlement System.

ensure consistency with regard to the moment of entry of a transfer order into a system and irrevocability for interconnected systems. The Financial Collateral Arrangements Directive contains provisions related to the enforceability of collateral arrangements to limit contagion effects in the event of default by a participant in the FMI.

**Recent Reforms and Reforms Scheduled for the Near Future**

TARGET2-Securities (T2S) is a project of the Eurosystem aiming to centralize settlement operations for central bank funds on a single pan-European platform, thereby further integrating the posttrade market in the EU. The T2S project was initiated in 2006 and is currently under development. Based on the latest announcements, it is scheduled to go live in 2015. T2S will be a single information technology (IT) platform for securities settlement in Europe, accommodating both the market participant’s securities accounts, held at either one CSD or at multiple CSDs, and its central bank cash accounts in the TARGET2 payment...
system. The main objective is to reduce cross-border settlement fees, which are, on average, higher than domestic fees, through a single IT platform and standard-
ized communication protocols. The IT platform will be built, owned, and operated by the ECB and the 17 national central banks in the euro area (Eurosystem). So far, 24 national CSDs have signed up to join T2S; however, the central banks in the Czech Republic, Sweden, and the United Kingdom have announced they will not participate.

Foreseen legislative initiatives of the EC related to CCPs and CSDs are the following:

- Securities Law Legislation, which aims to ensure that investors have full control over their securities and gives lenders confidence in their claims to securities collateral. This legislation will focus on addressing the question of “who owns what” to address threats that have been identified to financial stability and investor protection. It looks at the legal, operational, and economic challenges involved in holding, buying, selling, and lending securities. The initiative will also consider how to improve the exercise of rights flowing from securities for investors.

- Consultation on a possible recovery and resolution framework for financial institutions other than banks, which was issued by the EC in October 2012 and includes recovery and resolution issues for CCPs and CSDs.

**MAIN ISSUES AND RECOMMENDATIONS**

**Effectiveness of the Supervision and Oversight of CCPs and CSDs**

The EU regulations for the authorization, regulation, and supervision of CCPs and CSDs are expected to significantly improve the safety and efficiency of, as well as level the playing field in, the EU posttrade market because they provide common standards across the EU. Early adoption of the CSD Regulation is recommended. Box 21.1 provides a summary of this and other recommendations on supervision and oversight of CCPs and CSDs. EMIR and the CSD Regulation are expected to mitigate the risks and inefficiencies resulting from the diversity of national rules and supervisory frameworks. Without such common standards, conflicts of law may result in legal risks. Inconsistencies in the financial risk management of cross-border clearing may cause credit and liquidity risks. Differences in operational procedures may threaten cross-border operational reliability, and contagion between cross-border operating systems may entail systemic risk. The regulations also support cooperation between supervisors, which is essential during crises to react swiftly and accurately, as became apparent during the Lehman Brothers collapse and other defaults of participants.

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4 Based on Responsibilities A through D for authorities of FMI in the PFMI (see pp. 126–32 of http://www.bis.org/publ/cpss101a.pdf).
of FMIIs. In the absence of a European passport, CCPs and CSDs based in one member state must comply with the diverse requirements of the different national supervisors in other states, which may paralyze cross-border clearing and settlement and entail significant costs.

The new EU regulations are based on the Committee on Payment and Settlement Systems-International Organization of Securities Commissions (CPSS-IOSCO) Principles for Financial Market Infrastructures (PFMI). The provisions of the new regulations, including the technical standards, follow the existing recommendations developed by CPSS-IOSCO and ESCB-Committee of European Securities Regulators (CESR). While EMIR was drafted in parallel to the PFMI, the draft CSD Regulation benefits from the finalized international standards.

Although EMIR and the draft CSD Regulation improve consistency within the EU, inconsistencies do exist between the legal and regulatory frameworks in the EU, the United States, and elsewhere regarding OTC derivatives clearing, threatening the safety and efficiency of the process. Following the G20 agreement for mandatory clearing of all standardized OTC derivatives, the EU, the United States, and other relevant authorities have developed requirements for clearing in parallel.\(^5\) Despite regular communication and coordination between the United States and EU authorities, relevant differences remain, for example, in relation to the segregation and portability requirements and requirements for the calculation

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\(^5\) As included in EMIR for the EU and the Dodd-Frank Act for the United States.
of margin. Other differences relate to extraterritoriality and recognition of CCPs located outside their own territory. It is critically important that regulators from the EU, the United States, and other relevant countries continue bilateral and multilateral coordination to reduce these inconsistencies, and develop mechanisms based on the mutual recognition of their respective regulations to limit, as much as possible, conflicts, inconsistencies, and duplication of rules.

To further improve the regulatory framework in the EU, the EC is encouraged to develop legislation for the recovery and resolution of CCPs and CSDs because such legislation is expected to further contribute to safe and efficient CCPs and CSDs. Legislation will provide an EU framework for recovery and resolution, enhancing consistency across countries. It is of particular importance that recovery and resolution plans work across borders if there were to be large market disruptions, as described in the recovery and resolution plans of CCPs and CSDs.

Under the new regulations, the competent authorities will receive legal powers to obtain timely information and induce change. The competent authorities are able to apply administrative sanctions and measures to CCPs and CSDs, designated credit institutions, the members of their management bodies, and any other persons who effectively control their business, as well as to anybody who is held responsible for a breach. The competent authorities have the power to impose at least the following administrative sanctions and measures: public statements, withdrawal of the authorizations, dismissal of the members of the management bodies of the institutions responsible for a breach, and administrative pecuniary sanctions.

ESMA will have sufficient legal powers to fulfill its duties. ESMA may, at any time, request information of the competent authority about the compliance of the CCP or CSD with the conditions under which the authorization is granted. ESMA participates in CCP colleges, which enables ESMA to ensure consistency in supervisory practices. ESMA will have no voting rights on the opinions of the college, but in case of disagreement, one competent authority is needed to escalate the issue to ESMA and ESMA's opinion will be binding. ESMA can issue level 3 guidelines addressed to authorities on various matters. ESMA has made a head start by drafting several protocols regarding the functioning of the colleges, a risk assessment framework, and the exchange of information and crisis management procedures. ESMA also has the power to withdraw the recognition of a third-country CCP or CSD.

ESMA's current resources are not sufficient to carry out these responsibilities and need to be increased. ESMA's role is important to safeguarding the stability of the financial sector and of high political priority; therefore, the institution should be adequately resourced. In practice, current resources are insufficient to adequately develop and execute all new tasks. The national competent authorities and ESMA should ensure that skilled resources are available to enable the ade-

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6 Reported in the Financial System Stability Assessment (IMF, 2013). At the time of the assessment, ESMA's staff responsible for posttrading issues consisted of five full-time employees.
quate validation of the complex risk models of CCPs, as part of their role in the validation process for these models.\textsuperscript{7} The new and explicit legal basis for the ESCB members’ involvement in the supervision of CSDs is important: central banks have an intrinsic interest in the safe and efficient functioning of securities settlement systems because of their relevance to financial stability. Securities are used to carry out monetary policy through open market operations. Difficulties in securities settlement systems could disrupt the ability of the central bank to implement monetary policy effectively. Securities settlement systems are essential for the timely delivery of collateral for payments and other purposes.

Central banks are in a unique position for developing a macro view of the stability of CCPs and CSDs in the EU, with their ability to take into account monetary policy interests and collateral issues. Information sharing could be improved between central banks, including with the ECB. The development of a macro view by the ESCB adds to the supervisory activities of national competent authorities and ESMA. In doing so, the ESCB could take into account the relevance of CCPs and CSDs for monetary policy operations and related collateral issues. The ESCB is encouraged to implement plans for information sharing between national central banks and the ECB by establishing a dedicated information-sharing group for ESCB representatives that participate in colleges for CCPs and eventually CSDs. This is necessary to complement the current decentralized organization of oversight\textsuperscript{8} with proactive, comprehensive, and consistent analysis. The ESCB’s resources need to be increased to facilitate the new coordination tasks as well as the increased duties to represent the Eurosystem as central bank of issue in supervisory colleges. The ECB Governing Council is encouraged to evaluate the effectiveness of information sharing within the ESCB.

Laws, regulations, and standards for CCPs and CSDs are publicly disclosed, in line with Responsibility C of the PFMI; however, the presentation of information on the ESMA website could be improved. EMIR and the draft technical standards are available on the Internet, as is the draft CSD Regulation. ESMA will be a center for relevant information on EU supervision of CCPs and CSDs. Regulations require ESMA to publish a range of lists and registers on its website, such as lists of competent authorities and authorized and recognized CCPs and CSDs, including services, products, branches, and links. ESMA also must publish its opinions on its website. In practice, ESMA’s website is not very accessible—it assumes the user has a high level of knowledge on clearing and settlement topics, and information is not presented clearly. The Eurosystem discloses its oversight policies on its website. Annual oversight reports provide a description of oversight

\textsuperscript{7} EMIR article 49 specifies that a CCP shall obtain an independent validation of its models and parameters and inform its competent authority and ESMA of the results of the tests performed and shall obtain their validation before adopting any significant change to the models and parameters.

\textsuperscript{8} Oversight on securities and derivatives clearing and settlement systems is typically conducted by national central banks with a limited role for the ECB as standard setter.
activities. The Eurosystem has clarified its oversight role in a policy statement called “Eurosystem Oversight Policy Framework,” which is regularly updated.

**Cooperation among Authorities**

Cooperation among authorities of CCPs will receive legal underpinning in EMIR. Today, several supervisory colleges for CCPs are in place to coordinate cross-border supervision and oversight. The colleges are governed by memoranda of understanding. The current pile of memoranda of understanding between authorities of cross-border-operating CCPs will be replaced by EMIR, which requires the competent authority to establish, manage, and chair a college for the authorization and supervision of CCPs. The college should be involved in risk management model validation and interoperability arrangements with other CCPs and related risk management measures. The establishment and functioning of the college should be based on a written agreement between all of its members. EMIR provides college members with the power to determine the college’s decision-making procedures, including detailed rules on voting procedures. Box 21.2 outlines the EMIR prescriptions for the composition of the CCP colleges. EMIR prescribes that the college should vote in accordance with the general principle

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**Box 21.2 Members of Supervisory College for a CCP**

A college for CCP authorization and supervision should consist of

- ESMA.
- The CCP’s national competent authority.
- The competent authorities responsible for the supervision of the clearing members of the CCP that are established in the three member states with the largest contributions to the default fund of the CCP on an aggregate basis over a one-year period.
- The competent authorities responsible for the supervision of trading venues served by the CCP.
- The competent authorities supervising CCPs with which interoperability arrangements have been established.
- The competent authorities supervising CSDs to which the CCP is linked.
- The relevant members of the ESCB responsible for the oversight of the CCP and the relevant members of the ESCB responsible for the oversight of the CCPs with which interoperability arrangements have been established.
- The central banks of issue of the most relevant European Union currencies of the financial instruments cleared.

Source: EMIR Article 18.

Note: CCP = central counterparty; CSD = central securities depository; ESCB = European System of Central Banks; ESMA = European Securities and Markets Authority.

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9 Based on Responsibility E for authorities of FMIs in the PFMI (see pp. 133–37 of http://www.bis.org/publ/cpss101a.pdf).

10 Colleges exist for LCH.Clearnet, LCH.Clearnet Group Limited, and the European Multilateral Clearing Facility.
whereby each member has one vote, irrespective of the number of functions the member performs.

Box 21.3 summarizes the recommendations for cooperation among authorities in the EU. The EMIR colleges are expected to represent EU interests effectively, while ESMA is expected to contribute significantly to supervisory consistency and oversight. EMIR sufficiently underpins the role of the colleges and of ESMA to justify the expectation that the colleges will ensure consistent authorization, supervision, and oversight of CCPs within the EU. This will contribute to ensuring that the CCPs comply with the requirements of EMIR and subsequently to financial stability. Whether the combination of the decentralized supervisory structure for CSDs and CCPs and the coordination function of colleges and ESMA results in efficient supervision will have to be assessed in the future. A more centralized structure would be the alternative.

It is recommended that a similar cooperation framework for national supervisors of CSDs be established in the upcoming CSD Regulation, building on the example of CCP colleges. The draft CSD Regulation does not prescribe a supervisory college or other comprehensive cooperation framework among national supervisors of CSDs.\(^{11}\) Colleges or other frameworks would oblige national

\(^{11}\)Although the competent authority is required to cooperate closely with ESMA and various other authorities in certain cases.
supervisors to cooperate on a broader range of topics than currently requested under the draft CSD Regulation. Colleges provide authorities with more ways to influence decision making or refer to ESMA, which is important in the supervision of CSDs that provide cross-border settlement services. With the drafting of the Securities Law Legislation, more CSDs will potentially be of interest to authorities from other member states.

The supervision of the two ICSDs, and any systemically important CSD providing banking services, may benefit from centralized banking supervision under the SSM. The ICSDs should be among the first institutions taken into SSM supervision, because the current regulatory and supervisory structure is insufficient to ensure financial stability. The SSM may contribute to the stability of these CSDs if the relevant national fiscal authorities have insufficient resources to facilitate an eventual bailout. Centralized banking supervision should reduce the chance that competitive pressures will result in competition on risk measures. It may contribute to a level playing field and ensure enhancements to the ICSDs’ credit and liquidity risk management frameworks. Because the ICSDs will be supervised by different authorities for their banking and CSD activities, a cooperation framework should be established to coordinate among these different authorities, that is, among the ECB as banking supervisor, and ESMA, the ESCB, and the national competent authorities responsible for the supervision and oversight of CSD activities.

Cooperation among authorities is also necessary to support the establishment of a backup arrangement for settlement operations in case a CSD with a banking license goes bankrupt. Ring fencing of settlement accounts from any ancillary risk-taking services will be beneficial from a systemic risk point of view and is in line with the PFMI, for example, Principle 3 regarding plans for recovery and orderly winding down of operations. A CSD that holds a banking license is exposed to credit and liquidity risks and may be subject to bankruptcy procedures. In that case, the CSD could have a backup arrangement in place with another provider of cash accounts to allow for swift continuation of settlement operations. Such a backup provider of cash accounts should also have a limited risk profile. The current requirement in the draft CSD Regulation, to place cash accounts in a separate legal entity, could be a solution for securing the protection of settlement operations, but the backup provider of cash accounts should not have a risk profile that increases risks for the securities account holders. The requirement to hold cash accounts in a separate legal entity may discourage a CSD currently without a banking license from requesting one under the new regulation.

Cooperation between authorities is crucial in the event of a default or downgrade of one or more countries in the EU and will help prevent measures in one member state from disrupting markets, CCPs, or CSDs in other member states. The default or downgrade of a country may heavily affect the value of specific government securities held as collateral by CCPs and ICSDs and subsequently

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12 See the detailed assessment reports of Euroclear Bank (IMF, 2013) and Clearstream Banking Luxembourg (IMF, 2011).
Wrong-way risk should be mitigated because clearing participants holding the securities may default and cause losses to the CCP or ICSD. In addition, procyclicality should be limited by seeking a careful balance between protecting the CCP and avoiding the exacerbation of financial problems of participants and markets. Authorities should monitor and analyze such a situation in a cooperative way and pursue the interests of the EU as a whole.

With the reverticalization of infrastructures, the rights of CCPs and CSDs to access other markets and infrastructures should gain particular attention to further level the playing field. Interoperability between cash CCPs can be a useful tool for enhancing the efficiency of the clearing market, but may also threaten the market share of incumbent CCPs. A trading platform that also owns a CCP can refuse access of other CCPs, and eventually CSDs, to the platform. CSDs should also gain nondiscriminatory access to CCPs. Restrictions to access rights as prescribed in EMIR, and potentially the Markets in Financial Instruments Regulation and the CSD Regulation, should be exclusively risk based (excluding business risk) and publicly disclosed. Competitive distortions should be avoided.13

**CRISIS MANAGEMENT\(^{14}\)**

EU legislation recognizes the need for crisis management arrangements for authorities of CCPs and CSDs. Information sharing among authorities is covered in several EU Directives. EMIR, the draft CSD Regulation, and the SFD specify ESMA’s role in times of crisis. Other information-sharing requirements are set forth in the Banks Winding-Up Directive, the Market Abuse Directive, and the Capital Requirements Directive. The framework prescribes information sharing with known creditors and the sharing of information between designated competent authorities in the EU.

Box 21.4 summarizes the recommendations on crisis management arrangements for authorities. The SFD notification scheme did not work properly during recent defaults of major participants and should be reviewed. Market participants

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14 Based on Responsibility E for authorities of FMIs and Principles 13 and 17 in the PFMI (see pp. 133–37, 78–81, and 94–100 of http://www.bis.org/publ/cpss101a.pdf).
and public authorities alike perceived that information sharing on a defaulting market participant was not always timely and comprehensive.\textsuperscript{15} It is recommended that the awareness of designated authorities under the SFD be raised regarding their obligations in case of a crisis, and that tests be conducted to familiarize authorities with their obligations. ESMA should play a leading role in this regard together with the ESCB. The SFD notification scheme should include all relevant authorities, including the ECB in its role as lead overseer of T2S and EURO1.\textsuperscript{16}

Colleges (chaired by respective competent authorities), ESMA, and the ESCB are encouraged to continue the development of a crisis management framework to deal with the potential failure of a CCP, CSD, or other relevant FMI. The benefit of this crisis management framework in addition to the SFD is that information sharing can precede the actual default and that all EU competent authorities and central banks would be involved. The plan should be regularly tested and updated.

REFERENCES


\textsuperscript{15}See, for example, ECB (2010).

\textsuperscript{16}EURO1 is a private-sector-owned large-value payment system for interbank payments in euro.
### APPENDIX 21A. MAIN CENTRAL COUNTERPARTIES AND CENTRAL SECURITIES DEPOSITORIES IN THE EU

#### Main CSDs

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Value of delivery instructions, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearstream</td>
<td>Clearstream: An international central securities depository (ICSD) and CSDs of Germany and Luxembourg.</td>
<td>CBL: €74 trillion</td>
</tr>
<tr>
<td></td>
<td>Clearstream: An international central securities depository (ICSD) and CSDs of Germany and Luxembourg.</td>
<td>CBF: €80 trillion</td>
</tr>
<tr>
<td>Euroclear S.A.</td>
<td>Euroclear Bank: ICSD for Eurobonds and other international securities.</td>
<td>€367 trillion</td>
</tr>
<tr>
<td></td>
<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear Belgium: €0.6 trillion</td>
</tr>
<tr>
<td></td>
<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear Nederland: €5 trillion</td>
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<td></td>
<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear France: €146 trillion</td>
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<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear United Kingdom &amp; Ireland: €150 trillion</td>
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<td></td>
<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear Sweden: €11 trillion</td>
</tr>
<tr>
<td></td>
<td>ESF CSD: The Belgian, Dutch, and French CSDs operate one common platform</td>
<td>Euroclear Finland: €0.5 trillion</td>
</tr>
<tr>
<td>Monte Titoli</td>
<td>CSD for trades executed on the Italian trading platforms. Part of LSE Group.</td>
<td>€72 trillion</td>
</tr>
<tr>
<td>Iberclear</td>
<td>Spanish CSD for trades executed on the Spanish stock exchanges, Latibex, and for debt transactions.</td>
<td>€88 trillion</td>
</tr>
</tbody>
</table>

#### Main CCPs—Cash Markets

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Value of delivery instructions, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC&amp;G</td>
<td>CCP clearing for the Italian markets.</td>
<td>€3 trillion</td>
</tr>
<tr>
<td>CCP Austria</td>
<td>CCP for Austrian cash and derivative markets.</td>
<td>€0.08 trillion (in 2010)</td>
</tr>
<tr>
<td>EUREX Clearing</td>
<td>CCP incorporated in Germany, offering clearing services for derivatives and equities traded on German markets.</td>
<td>€3 trillion</td>
</tr>
<tr>
<td>LCH.Clearnet Limited</td>
<td>Part of the LCH.Clearnet Group, Clears equities and derivatives for various platforms, including the London Stock Exchange. Swapclear is part of LCH.Clearnet Limited and is the largest CCP for interest rate swaps globally.</td>
<td>€4 trillion (in 2009)</td>
</tr>
<tr>
<td>LCH.Clearnet SA</td>
<td>Part of the LCH.Clearnet Group, Clears equities and derivatives for the Euronext markets in Belgium, France, the Netherlands, and Portugal; government bonds for MTS Italy; equity for Bourse de Luxembourg and several electronic trading platforms</td>
<td>€6 trillion</td>
</tr>
<tr>
<td>EuroCCP</td>
<td>CCP incorporated in the United Kingdom; clearing for 17 markets in Europe and the United States.</td>
<td>n.a.</td>
</tr>
<tr>
<td>European Multilateral Clearing Facility</td>
<td>CCP incorporated in the Netherlands; clearing for 19 European markets through nine different exchanges and trading platforms.</td>
<td>€6 trillion</td>
</tr>
<tr>
<td>KELER CCP</td>
<td>CCP for Hungarian market</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Source: European Central Bank.

Note: CBF = Clearstream Banking Frankfurt; CBL = Clearstream Banking Luxembourg; CCP = central counterparty; CSD = central securities depository; ESES = Euroclear Settlement for Euronext-zone Securities; ICSD = international central securities depository; n.a. = not available; OTC = over the counter.

1No consistent statistics are available on cleared values of exchange traded or OTC traded derivatives per CCP. CC&G, Eurex Clearing, LCH.Clearnet Limited, LCH.Clearnet SA, and MEFF clear substantial amounts of derivatives transactions. LCH.Clearnet Limited and the United Kingdom's ICE Clear Europe clear substantial amounts of OTC derivatives.
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