Central securities depositories and reform of the settlement process

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Abstract

The organisation and regulation of the European securities clearing and settlement business is again up for reform. The present dispersed European landscape calls for more integration as part of the formation of a European capital market, as proposed by the European Commission. These reforms would result in legislative changes, some of which are analysed in this paper, having raised active interest in the financial world: a new technique of dealing with settlement finality, proposing a mandatory buy-in tool as an effective instrument against settlement fails, and an analysis of settlement internalisation, which has risen to levels that, according to the Commission, might 'undermine confidence in the CSD function' and in the markets. On the two topics of settlement finality and settlement fails, data has now become available and is included. The third item analyses the use of distributed ledger technology (DLT) in the settlement infrastructure. As part of its work stream on digital finance, the Commission has published a proposal — as a 'pilot project' — for a regulation dealing with the main items that have to be adapted upon the introduction of DLT in the existing securities settlement system (SSS) and multilateral trading facility (MTF) segments of the market. For central securities depository (CSD) using DLT, the existing regulation would remain applicable, but the operations would be exempted from numerous requirements applicable today. The impact on the markets will have to be closely monitored, hence the Commission's 'pilot project'. The European Central Bank (ECB) has already formulated its position of cautious optimism.

Keywords: improving finality by mandating a buy-in agent, the internalisation of transactions, the use of distributed ledger technology for market infrastructure, positions of Commission and ECB

INTRODUCTION

The structure and functioning of the post-trade activities in securities have again raised considerable attention and discussions. Several aspects of the settlement process have been the object of recent proposals aimed at changing the applicable legislation, which are the result of a critical analysis by the European Commission, and several public consultations on Commission-proposed actions,[1] resulting in a very active debate of which three issues will be discussed here: settlement finality, with specific attention to the buy-in process, the consequences of introducing distributed ledger technology (DLT) in the securities settlement process, and finality in the widespread use of internalisation as a replacement to recording at the CSDs. Overall, these discussions also result in a debate about the supervisory system. The Commission has published its position on these and several other topics.

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THE CENTRAL SECURITIES DEPOSITORY LANDSCAPE IN EUROPE

Table 1[2] illustrates the considerable differences between the national CSDs, with the main CSD groups concentrating the highest number in terms of assets on their accounts and, as a consequence, a high concentration in terms of value per transaction and number of transactions. In some states, the average value is much higher, due to a lower number of transactions but a relatively high value per transaction. In terms of relative concentration, Euroclear group totals €1,046,824bn — and including Euroclear UK and Ireland (EUI) 596,464 — while Clearstream group stands for €288.616bn in terms of value of transactions, their relative shares amounting to 68 per cent versus 19 per cent

Table 1: Data on CSD and SSS operations

A *CSDs and SSS*	*B* *Value in account (million €)*	*C* *Instructions (thousand €)*	*D* *Value of transactions (billion €)*	*D/C* *Average value (billion €)*
Belgium	15,890,156	119,584	556,689	4.65
Germany	9,595,761	65,218	68,366	1.05
Estonia	9,172	174	8	0.05
Cyprus	167,730	36	0	
Greece	3,438	112	5,321	47.51
Spain	2,367,049	9,394	32,235	3.43
France	7,322,430	29,214	112,464	3.85
Italy	3,363,527	25,662	97,731	3.81
Latvia	3,807	36	5	0.14
Lithuania	12,680	54	5	0.1
Luxembourg	8,037,812	66,540	220,250	3.31
Malta	15,538	35	2	0.06
Netherlands	1,101,287	6,588	5,619	0.85
Austria	586,891	1,321	640	0.49
Portugal	350,960	930	172	0.18
Slovenia	35,744	52	18	0.35
Slovakia	54,508	32	34	1.06
Finland	389,959	9,576	1,557	0.16
Bulgaria	14,398	46	14	0.3
Czech Republic	274,773	1,467	7,353	5.01
Denmark	1,246,284	59,144	40,128	0.68
Hungary	123,021	556	856	1.54
Poland	337,479	6,707	13,816	2.06
Romania	66,086	664	122	0.18
Sweden	1,641,980	13,768	13,311	0.97
			1,176,716	
UK — Ireland	6,406,141	63,019	357,184	5.67

Notes: CSDs, central securities depositories; SSS, securities settlement system.

of the overall Europen Economic Area (EAA) market of 1,533,900. To be mentioned are the very low turnover percentages in certain Member States, which can be related to less familiarity with securities investments.

SETTLEMENT FINALITY

Settlement finality is a core element in the functioning of securities settlement systems (SSSs). It was already the object of one of the first measures in this field, with the Settlement Finality Directive (SFD)[3] introducing a central risk reduction instrument in 1998[4] before the fundamental CSD Regulation (CSDR) of 2014. The directive deals with the obligations of the parties to a settlement operation, stating that 'even in insolvency proceedings, transfer orders and netting shall be legally enforceable and legally binding also on third parties'.[5] No law, regulation or practice on the setting aside of contracts before the opening of insolvency 'shall lead to the unwinding of a netting, nor may a transfer order be revoked . . . from the moment defined by the rules of the system'. These rules introduced a crucial feature of the settlement process; that is, once the process has reached the stage of execution — as defined or agreed — and has entered into the settlement system, it will not be interrupted for any reason, be it insolvency of one of the other participants, revocation of his settlement orders, inability to deliver the securities or lack of funding for making the payment, or any other cause affecting performance. The parties involved have absolute security that the settlement will go through and that the seller of the securities will receive payment, while the buyer will see the securities booked to his account.

This very strict reciprocity is needed to ensure this market, where considerable volumes of securities and capital are traded, to function effectively and avoid any disruption due to the nondelivery of the promised assets, or to failing payment. 'Settlement finality', as this feature of the post-trade market in securities is called, is an essential building block in the build-up of confidence in the functioning of the securities markets settlement systems, securing speedy and reliable execution of the parties' obligations, while avoiding confidence risks. Settlement finality belonged to the early measures the European Union (EU) adopted in this sector, based on recommendations and proposals developed in international statements and codes of conduct.

Objectives of finality: Reducing risk

Finality is a major instrument in reducing risk: it refers to the irrevocable and unconditional character of the settlement that is achieved by delivery versus payment (DvP), ie the simultaneous delivery of the securities against the transfer of the payment and both booked in the accounts of the respective parties. If DvP cannot be achieved by one of the parties not offering to transfer the promised consideration, the transaction will not go through and leave the parties with open positions and consequent risks, causing damages and triggering penalties due by the party who failed to execute its part of the transaction.[6] The failure to perform does not terminate the agreement, as the parties may attempt other ways to achieve performance or equivalent outcomes. But at the same time, the regular settlement process will have been interrupted, and the confidence of the counterparty shaken. This may undermine the reliability of the settlement process, affecting the regular functioning of the market, and in periods of great unbalances, when numerous settlements would fail, it may even contribute to the market's destabilisation.[7] The Commission especially qualified the SFD as a systemically important regulatory regime, implying minimum exposure of CSD participants to counterparty, credit and liquidity risks by applying the principles of irrevocability and finality to all transfer orders.

Settlement discipline and settlement fails: Prevention, remedies and penalties

Originally formulated in the 1998 Directive, the settlement finality principle was further developed in the 2014 delegated regulation on CSDs, the 'CSDR', which constitutes the core regulatory basis for this field of financial activity. The principles laid down in the CSDR on settlement finality and related rules and procedures[8] are further elaborated in the Commission Delegated Regulation of 25 May 2018.[9] The principle of DvP — according to which the delivery of the securities should only intervene, or will only become legally effective, if simultaneously and irreversibly the agreed payment is received — is confirmed, while the failure to settle is usually called a settlement 'fail'.[10]

The 2018 Delegated Regulation mainly dealt with the settlement discipline, requiring CSDs to provide to participants 'a functionality that supports fully automated, continuous real-time matching of settlement instructions throughout each business day'. The 2018 regulation also dealt with aspects of not living up to DvP, whether on a preventative basis or ex post (fails). The former refers to the mentioned techniques to prevent settlement fails, such as a mutually agreed facility to cancel settlement instructions, or to allow partial settlement. The provisions dealing with settlement fails detail the monitoring obligations, the information on the characteristics of the settlement instructions,[11] the reporting on the fails and finally the price compensation[12] and penalties to be imposed by the CSD to the failing party, to be collected by the CSD and distributed among the parties who have been affected by a settlement fail.[13]

Buy-in as a new tool for dealing with settlement fails

The 2018 regulation also introduced a new regulatory instrument for dealing with settlement fails, the basis of which was laid down in the 2014 CSDR: this is the 'buy-in' tool.[14] The objective of the new regime is to improve settlement efficiency, the buy-in becoming applicable on the last day of the extension period of four business days after the intended settlement date[15] and the settlement agent stepping into the shoes of the defaulting party.

The buy-in tool addresses transactions where the securities are not proposed for delivery on the intended settlement date or where the transaction price is not forthcoming. Depending on which party has failed, the buy-in agent will substitute himself to the buyer who has not offered payment, acquire the securities from the seller, and sell them in the market, paying the price to the seller. In the case in which the holder of the securities failed to deliver, the agent will deliver the securities to the original buyer, having acquired the securities in the market.[16] Fails in a transaction chain will cause a series of fails; a single buy-in could be started allowing to settle the entire chain,[17] the other parties not being held to start a buy-in.

The irrevocability and finality of transfer orders would not be affected by the failure of a participant to deliver the securities against payment by another party. More generally, the settlement process would be safeguarded, at least in financial terms, while the buy-in agent will further proceed to the implementation of the transactions by whether substituting for the failed securities, or table the agreed funding from his own funds, or from the market. The buy-in tool as detailed in the delegated regulation is a binding intervention in the settlement process and has since been the subject of an extensive public discussion and controversy within the securities trading profession.[18] It is especially important for short transactions.

The buy-in tool and its objectives

The buy-in tool aims essentially at reducing the deleterious effects of fails and reducing their number by identifying certain techniques to prevent a fail or more importantly by dealing with them once they occurred so that the market-driven process can continue. Similar techniques are already applied today on an individual basis, based on contractual arrangements, but leaving the buy-in party a wide freedom for organising it, eg by pursuing partial settlement.[19] According to the Commission's future regulation, the buy-in process would be mandatory for all participants and be enforceable accordingly on the same conditions in all relevant jurisdictions.[20]

Upon failure, there will be a grace period allowing for an extension of the delivery date.[21] After the extension period, a mandatory buy-in process will become applicable for all types of securities on the basis of a standardised contractual arrangement applicable to all participants in the settlement service.[22] This would be achieved by the mandatory intervention of the buy-in agent — a neutral third party, designated by the CSD – who will acquire the securities for delivery to the receiving party if the seller has not done so within four business days.[23] Penalties and a cash compensation[24] become due and will be imposed on the failed party[25]: these will be collected by the buy-in agent and credited to the nonfailed participant. From then on, the original securities cannot be delivered except to the buy-in agent. The agent will deliver to the buyer 'replacement' securities within four days.[26] He will organise automated auctions in order to acquire the securities from the network or in the market and deliver these to the receiving buyer in the original transaction. Funding of these purchases will be made available at market prices by the parties participating in the buy-in agent. The failing party will be responsible for penalties, execution fees and also price differences[27] vav (referring to) the original transaction.

This buy-in process would be neutral and, therefore, protect the interests of the different parties involved, the failing counterparty and also of a later buyer in the market. It would be applicable not only to all types of securities, mainly to shares, but also to bonds. The CSDs would not be incurring any liability.[28] The rules applicable to the buy-in process should moreover be uniform: the major lines of the process were spelled out in the delegated act, a directly applicable EU regulation and, therefore, uniformly applicable in all EU markets.[29]

Postponed regulatory implementation

The regulatory implementation of the buy-in has been postponed for some time. Due to COVID-19 and the already large work overload for CSDs and market participants, the entry into force of this delegated regulation has been postponed, originally until February 2021, now until 1st February 2022.[30] In the meantime, some CSDs have prepared the new buy-in regime and announced the identity of their settlement agent: this is the case for the two main systems.[31,32]

In policy terms, the buy-in process would facilitate the way parties deal with settlement fails, which today are reducing the effectiveness of the settlement process, by taking these blocked transactions out of the settlement process. This would be a considerable benefit, expediting the main settlement process, creating clarity and putting the burden on the failing party. It amounts to requiring both parties to well prepare their positions before putting these through the settlement process so that the transaction may go through at full DvP speed, Straigth through processing (STP) being the most evident one.[33] Other techniques of intervention may save the settlement process; the regulation mentions manual intervention, partial settlement, a cancellation facility, tolerance levels, a hold and release mechanism or extending the period for settling, but this would increase risk and put the burden on parties other than the defaulting one.[34] These processes are today being practiced on an individual, voluntary basis. In case of major market turmoil, however, such as was illustrated in the US GameStop case, when many transactions without meeting the criteria for DvP were coming to the settlement phase, the regular functioning of the settlement process had been deeply affected.[35] The buy-in agent would be confronted with a very considerable number of failed or failing transactions, probably preventing the settlement process to continue.[36] Special attention should also go to the securities made available for settling transactions that are unblocked as a consequence of this process, as their price movements may have become erratic.

Hefty debate/disputes on the buy-in technique

The introduction of this new regime for dealing with settlement fails as was laid on the table in 2018 has raised some hefty reactions from not only associations of market professionals[37] especially International Capital Market Association (ICMA),[38] European Central Securities Depositories Association (ECSDA),[39] International Swaps and Derivatives Association (ISDA)[40] and Association for Financial Markets in Europe (AFME) but also several other associations,[41] individual banks and financial institutions expressing their reservations as to the appropriateness of the buy-in proposal, the likely costs to be expected and calling for a thorough reassessment. Some reactions were rather angry. The CSDs also expressed their concern in the context of the Commission's targeted consultation of February 2021.[42] The French regulators have also expressed their concern.[43]

The arguments against the buy-in regime are numerous and multiple: ICMA[44] published a detailed description of the buy-in process and listed the challenges: the process is time-consuming and costly; distortion on market pricing due to the mandatory nature of the buy-in regime; difficulty to execute due to illiquidity of the underlying securities; disputes if the original execution price is much higher than the market price and difficulties in legal enforcement in some jurisdictions.[45] ECSDA also called for a 'significant revision' and considered that the buy-in should not be applied in the Eurobond markets as it could undermine market liquidity and stability. It is unclear whether several of these flaws would only occur in an officially organised and structured buy-in regime. They probably also occur under the present regulatory system, although not in a structured, mandatory way, so that the introduction of the regulatory buy-in regime would not be a major change. On many points, the associations[46] asked for further clarifications and in the meantime for suspension of the further work on the buy-in.

Fundamental objection: Mandatory or optional buy-in?

There is one more fundamental objection formulated by several participants in the consultation: it is related to the mandatory nature of the buy-in. But would an optional buy-in offer the same benefits to the involved market participants?[47] And can bought-in securities be placed with local banks, dealing mainly with internalisation, bypassing CSD services and related safeguards? Taking into account the numerous objections and remarks, it would be useful for the Commission to proceed with circumspection, after having analysed in detail the arguments proposed by the professional associations and by other market participants, and this to not compromise the wider revision of the regulation.[48]

For further initiatives, it would be useful to develop a comparative analysis that would consist of reviewing the regime of fails in accordance with the buy-in rules and the fails regime as applied today. It would preferably be established by an objective third party and would contribute to more clarity and better decision-making. Under the proposed buy-in regime, the fails regime will be fully applied on a mandatory basis and according to uniform rules and conditions.[49] Effectiveness and equal treatment will be the rule. Supervision, ie with a view of convergence of the buy-in practices, will be easier, and uniform data on the actual practice will become available. Both from the angle of investor protection and efficient functioning of the settlement processes, this option will be convincing.

On the other hand, the present optional practice is more flexible and based on the individual decision of the financial intermediary whose client is confronted with a fail.[50] The CSD can offer certain preventative facilities such as a cancellation facility and other derogatory solutions.[51] Whether the CSDs will extend the four-day period or abandon the process,[52] or look for other ways of settling the proposed transaction, will be their decision, along with the calculation of the penalties, fees and compensation. It will also decide on the distribution of these sums, which will not benefit the CSD, and the penalties, paid to the CSD, will be distributed to the receiving participants. These cash payments will only be considered as paid when received by the receiving participants. The process may be partly confidential,[53] creating competitive differences and allowing more limited reporting on the actual practices.

The final decision will have to be based on the interest of the investors and the efficient functioning of the markets.

Brexit and central securities depository regulation

As far as the application of the CSD regulation to the United Kingdom (UK) is concerned, the Commission[54] decided to consider the regulatory framework applicable to CSDs of the United Kingdom of Great Britain and Northern Ireland as being equivalent in accordance with Regulation (EU) No 909/2014 until 30th June, 2021. European Securities and Markets Authority (ESMA) declared that EUI is recognised as a third-country CSD after the transition period from 31st December, 2020, and may continue to provide services in the EU until 30th June, 2021. Issuers may transfer securities to EU CSDs.

The UK authorities have decided not to implement the CSDR but would undertake legislative changes referring to 'legitimate industry concerns'.[55] UK firms active in the EU markets will have to take account of CSDR, especially of the buy-in regime. In the meantime, the UK regulator Financial Conduct Authority (FCA) declared that it may 'take advantage of the experience' of ESMA and the EU in key areas like mandatory buy-ins.[56] The buy-in regime was mentioned by ECSDA as a negative element in the competition with the common law regimes. ESMA also announced the creation of a Supervisory Convergence Network with respect to the treatment of authorisation requests by UK firms to EU27 national competent authorities (NCAs) in the context of the UK's withdrawal from the EU.

This long and winding development illustrates how much this part of the settlement subject raises a lot of controversy and, due to the important stakes involved, will trigger strong negotiations. It is not unlikely that, after a first postponement, the regulation on the buy-in will not be further postponed again.

Settlement internalisation

The internalisation treatment

In the general discussion on the settlement processes, the subject of settlement internalisation is receiving more attention.[57] Regulatory attention is now being paid to the settlement internalisers, for which the applicable regulations have only been applied and related data collected from 2019 onwards.[58] Internalisation is a process in which an intermediary executes transfer orders on behalf of his clients on its own books, bypassing the SSS. In most cases, there is no financial consideration: free of payment transactions, inheritance transfers, transfers between accounts of the same owner or between an owner and a beneficiary of a gift, collateral transactions etc. The transaction will be booked twice in his books, on the one hand a debit, on the other a credit for the same securities.[59] Some banks have used it as a regular booking method for their clients acquiring securities held or for the account of the client, and with the client's funds, to be held at the bank. Internalisation can be practiced by all financial institutions and informally by some asset managers as well. It may apply to all securities, even those initially recorded at a transfer agent, or a registrar. As data about this practice is crucial, the Commission adopted two regulations on the reporting by internalisers,[60] but the overviews of the internalised transactions have only recently been published. In general, internalisation is not subject to any specific supervision, but ESMA has adopted guidelines[61] and Q&As that contain useful information.[62] It also addressed a comprehensive report on the subject to the Commission.[63]

Internalisation: The findings of the European Securities and Markets Authority

The internalisation subject has drawn attention from ESMA and the Commission due to the impressive volume of securities transactions being dealt with this way, the high degree of these being concentrated in a few Member States and the high level of concentration with some settlement internalisers, adding that with 'the extremely high values and volumes of internalised settlement, it seems clear that this practice cannot be continued further as it will undermine the confidence the markets have in the CSD's functions'.[64] The published figures indicate that concentration of those practices is very different depending on the Member States involved, and for some types of products, while no clear justification for this practice has been identified.[65] Notwithstanding these findings, ESMA did not announce specific measures but would further investigate this segment of the market, collecting more and better reliable data.[66] It also remarked that this development was not visibly due to the CSDR settlement discipline requirements. ESMA's data collection started in 2019 and is only complete until Q3, 2020. Even today, the quality of the data is still improvable, as has been remarked in the then public consultation.[67]

Internalised transactions

The volume of these internalised transactions is impressive: in the European Economic Area (EEA), in 2020, it reached between 123 and 116 million instructions per quarter, considerably higher than in 2019.[68] Most internalisation instructions were noted in Belgium, Germany, Italy, Luxembourg and Sweden, amounting in total to 116 million for Q3, 2020, these figures being in line with their position in the CSD business. In terms of value, these instructions amounted to €66.951tn. ESMA has only collected data since 2019 but has not adopted any specific measures in its recent consultation nor did it announce specific measures but expressed its concern, as this activity implies bypassing the role of the CSD and takes places without the same safeguards and supervision. Will transactions settled according to internalisation lead to the same protection, eg with respect to legal certainty? When changes in beneficial ownership are not communicated to the CSD, this may create tensions with other regulations such as the shareholder identification regime or for tax purposes.[69] The subject will have to be further studied and monitored on the basis of additional data. It was included in the Targeted Consultation focusing on the reporting requirements. An analysis of the drivers for internalisation could lead to a comparative analysis of settlement in CSDs versus by way of internalisation, allowing to improve on each of them. Further data is needed with respect to the relationship of internalisation and CSD settlement, ie with respect to the type of transactions remaining unsettled, whether the buy-in process is applied and how the penalty mechanisms are applied, especially as to the time of calculation and the collection and distribution of cash penalties.[70] The reform of the settlement process by mandating the buy-in, but mainly with the use of DLT, might change the attractiveness of internalised settlement. One could also argue that internalisation could continue to be practiced for failed transactions for lower amounts.

Data on internalised transactions

Table 2 gives an overview of the internalised transactions for Q3 2020, as the figures for the full year 2020 are not available. Only for the jurisdictions where internalisation has been most frequently practiced have been selected. The table also gives an overview of the proportion of internalised transactions to the total number of transactions processed by the CSD in the selected jurisdictions[71] Internalisation for the different types of financial instruments illustrates that mostly shares, sovereign debt and bonds are subject to internalisation. Data about the fails points to a high frequency for shares and exchange traded funds (ETFs), much lower for bonds, which is a more professional market. Fails deserve attention also from a market structure point of view.

The European Securities and Markets Authority: Supervisory observations on internalisation

The European Securities Markets Authority has not observed major risks due to internalisation but calls attention to some practices inherent to the position of the internalisers, such as operational risks, custody and weak operational processes, eg with respect to the identification of the clients and the amount held for their account, especially in omnibus accounts. Fails in the internalisation process should be analysed in more detail, eg with respect to the causes of these fails, their higher frequency in some jurisdictions or differences depending on the type of security, the relationship with fails in CSD processing and more generally whether the fail regulation applies.[72] Clients should be informed about the risks and costs of internalised settlement, as these are different from CSD settlement. Some internalised positions may have been created as a consequence of settlement fails. The possibility that settlement was moving away from CSD to internal settlement was not considered high by the NCAs and by the trade associations but should be monitored. It was described as not being a separate business model but rather an accidental phenomenon.[73] The subject was included in the Targeted Consultation, although only for asking whether a minimum level for reporting should be

Table 2: Internalised Settlement Instructions

Internalised settlement Instructions: Per country					
	Instructions/year	*Value/year (million €)*	*Value/instruction (million €)*	*Number of internalisers*	
Belgium	132233372.00	122223351.30	**0.92**	11.00	
Germany	143626896.00	242715119.35	**1.69**	1228.00	
France	24158360.00	67648696.37	**2.80**	129.00	
Luxembourg	28185348.00	19859582.89	**0.70**	71.00	
Netherlands	45983936.00	19859582.93	**0.43**	15.00	
Sweden	38599708.00	2012349.83	**0.05**	32.00	
Internalised settlement instructions: Per asset type					
			2020	*ESMA data*	*ESMA data Q3*
	Instructions/year	*Value/year (million €)*	*value/instruction (million €)*	*fails/number*	*fails/value*
Equity	289253932.00	105246481.37	**0.36**	12,56%	5.91%
Sovereign debt	74852000.00	84426023.66	**1.13**	0,28%	0.84%
Bonds	42416256.00	45064907.66	**1.06**	1,9%	3.52%
ETFs	27458832.00	6401003.81	**0.23**	17,51%	6.39%
Other fin instruments					20.86%
Internalised settlement instructions: Per transaction type					
				ESMA Q3	*ESMA data Q2*
	Instructions/year	*Value/year (million €)*	*Value/instruction (million €)*	*NR instruction*	*value/instruction (€)*
Sec buy/sell	183614144.00	19301694.82	**0.11**	23.45%	59.47%
Collateral mgt	193982804.00	144368296.82	**0.74**	0.01%	0.05%
Sec lending borrow	76692304.00	80316972.32	**1.05**	1.32%	3.09%
Repurchase	315096.00	3230973.85	**10.25**	0.93%	0.80%
Other	10503740.00	20590036.81	**1.96**	8.40%	24.85%
Total					11.38%
Total internalised settlement value Q3		Instructions 3rd Q		Value 3rd Q	
Professional clients		7.97%		6.94%	
Retail clients		16.69%		73.40%	

Source: ESMA, CSDR Internalised settlement, 5th November, 2020/ESMA70-156-3729. On the basis of data for q 3 *4.
Notes: ESMA, European Securities and Markets Authority; ETFs, exchange-traded fund; NR.

considered. It was also considered that proposals for more freely allowing not only the buy-in but also the use of DLT may support the attractiveness of internalised settlement as a simpler and more easy-to-handle process. Which percentage of internalised positions may have been created as a consequence of settlement fails? A more ambitious initiative would be indicated.

Supervision of the settlement process

The reform of the supervisory system has been a discussion documents on securities settlement. Supervision is exercised by the NCA of the state whose law governs the settlement system and by the EU central bank responsible for the cash leg.[74]

Reform proposals relating to the role of CSDs have been issued in the context of the Capital Market Union. In the Capital Market Union 2020 Action Plan,[75] the Commission tabled as an objective the 'integration of national capital markets into a genuine single market',[76] followed by the introducing remark that 'Europe's capital market does not match the significance of its economy'. Among the concrete steps, it called for an improvement of the conditions for cross-border settlement services, and relaunching the 'consolidated tape' in order to have a better view on the overall price movements.[77] These ideas were further discussed in the June 2020 report of the High-Level Forum on the Capital Markets Union, stating 'in the context of integrating the national capital markets and the improvement of the cross-border settlement services in the EU' as evidenced from the overview of the present CSD landscape earlier, CSDs are organised on a national basis, allowing for some cross-border activity through a complex and incomplete network of group structures and links. This 'network' is still incomplete: as far as their settlement business is concerned, several CSDs are not linked to other European CSDs, although they are connected with indirect links — often of variable intensity — leading to considerable differences in not only cross-border involvement but also efficiency. This makes the overall system less than fully effective, more costly and might reduce easy access to some securities in other markets.

The future supervisory system

With respect to the future supervisory system, the independent report of the High-Level Forum on the Capital Markets Union[78,79] rightly states that well-functioning capital markets need a high-quality, well-resourced and convergent supervisory system based on a single rulebook. This will call for a strengthening of the present powers of ESMA and European Insurance and Occupational Pensions Authority (EIOPA), especially for crisis management, reforming their governance.[80] The adoption of a enhanced single rulebook is put forward[81] but no additional areas of competence are proposed: the two European Supervisory Authorities (ESAs) should move to an 'efficient federative European model, split between prudential and market conduct'. These ideas have been discussed at different levels, but no political initiative has been forthcoming.[82]

Interesting is the (concluding) statement that 'the strengthening of EU level supervision should take inspiration from the existing EU supervisory architecture. This is a cooperative model with a coordinating decision-making body at EU level, with appropriate independence and accountability, and an implementation structure that capitalises on the existing expertise and involvement of national authorities'. Is this the Single Supervisory Mechanism (SSM)– European System of Central Banks (ESCB) model pointing at the horizon? The Commission from its side made a similar statement: 'Truly integrated and convergent supervision is needed to ensure a genuine level-playing field for all market players. It is an essential condition for a well-functioning CMU'. ESMA also mentioned a similar idea even adding direct ESA supervision.[83] ECSDA stated that convergence would contribute to consistent and efficient supervision, including in the authorisation process.[84] There is wide agreement that a more harmonised application of passporting rules for CSDs and converging supervision across Member States are essential to deliver efficient post-trading services in the EU.

Towards a more efficient single European securities market

How a more efficient single European securities market has to be developed will be the subject of difficult discussions and negotiations, also in the field of C+S, starting with the national character of the trading markets, the different characteristics of the securities, not to mention differences in the company laws, which determine the rights of the securities traded. The basic building blocks of this business are still very much rooted in national law.[85] Also, both the NCAs and the national CSDs will not be very keen on further centralisation, a condition for more integration.

CSDs are a typical example: there are today 22 CSDs[86] established in the EU, and 6 more in the EEA states. These are still very much related to their national securities markets, the two ICSDs excepted.[87] Their freedom of establishment, mentioned in Article 23 of the CSDR, allows them to create branches in the other EU states: this freedom has been extensively used by the two largest CSD groups but not by the many individual CSDs. The same applies for the links networks, although the latter cover a larger network, not only with the two largest groups but also with other, often neighbouring CSDs. The overall view is that for most of the EU CSDs, the activity is mainly confined nationally, with some extension by their links network. Integration in this segment of the financial markets is still principally focused around the two largest CSD groups. On the free provision of cross-border CSD services, and the free issuance of securities, several limitations still apply[88] leading to some segmentation. At the same time, a certain number of CSDs have a limited settlement activity, leading to an increase of costs and sometimes to more limited expertise. If centralisation is politically not feasible, at least delegation of certain functions could reduce the burden and the cost.[89]

Reform suggestions

The links network could be remodelled along the lines followed by T2S, creating a central platform where all transactions to be settled could be matched electronically, be booked for recording securities and transmit the payment messages to the T2S platform.

This raises the question why all EU Member States needed to create a separate CSD, likely to have been a quite expensive undertaking. Protection of the assets deposited by the home investors at the CSD may have been a reason but with today's integration of these markets is less convincing. The Commission's intention to contribute to more market integration should take this structural element into consideration.

As evidenced from the overview of the present CSD landscape, CSDs are organised on a national basis, serving fragmented national capital markets, allowing for some cross-border activity although with variable intensity, leading to considerable differences in cross-border involvement.[90] The granting of an EU-wide cross-border passport is a useful instrument, for subsidiaries or branches, providing for a short-form authorisation process for subsidiaries (Article 17(7)) while information requirements would apply for branches (Article 23).[91] The extension of the network of links to all CSDs might also simplify the cross CSD settlement transactions; indirect links or other intermediaries should be avoided. The buy-in procedure would eliminate failed transactions and allow the other transactions to go through and motivate clearing members to carefully prepare for DvP. In a second stage, the most active custodian banks could directly take part in this network. The relationship with T2S should be considered, creating a platform for both sides of the transaction. The CSDR contains the basic elements for this scheme.

At the same time, there is quite some criticism about the present situation. The complexity of the regulations, guidelines, Q&As and other statements of different nature in this field is impressive. The market participants complained about this aspect mentioning that a simpler regulatory apparatus would be more effective.[92] They mentioned that the authorisation process is burdensome, very lengthy and complex, which can be explained due to the complexity of the process itself.[93] In some cases, the registration in the ESMA register seems to imply a separate administrative decision.[94] The administrative burdens are considerable, not always proportional and time-consuming, while the outcome of the process is difficult to predict. ECSDA suggested stronger cooperation and harmonisation among NCAs and the European authorities.

A certain number of preliminary steps have been mentioned in the statement of the professional associations: these are worthwhile to be analysed and, if adequate, pursued. Complaints have been made about the lack of clarity of definitions in many of the concepts and wordings used in the regulations. Some of these have been dealt with in ESMA Q&As. But more harmonisation and clarity should be considered where possible, eg for the statistical data or the periodical reporting documents.

Another suggestion relates to the characteristics of the securities traded, and especially their legal regime, also pointing to the differences in the underlying civil law regimes.[95] Details can be found in ESMA Q&As. Harmonisation of these features could be considered, but more efficient techniques may be found in opening the token regime for securities: this would eliminate the national features by replacing them with a neutral, easily transferrable token.[96] A similar reflection applies to the differences in custody of securities at CSDs and at national level, when securities are held at local banks after internalisation: are investors exposed to different risks, lower legal certainty, risk of insolvency?

A useful step towards better integration of the markets would be the introduction of the consolidated tape, which has been on the list of proposals for many years,[97] as a true single market cannot exist without a more integrated view of EU trading. A consolidated tape will provide consolidation in data on prices and volumes of traded securities in the EU, thereby improving overall price transparency across trading venues and increasing competition. It would also improve competition between trading venues. Together with the single entry point for company information (action 1), it would give investors access to considerably improved information at a pan-European level.

A certain number of preliminary steps are worthwhile to be analysed and, if possible, pursued. Complaints have been made about the definitions of many of the concepts and wordings used in the regulations. Harmonisation and clarity should be considered. The coordination among the different regulations and an overview of the different versions would be helpful. The complexity of the regulations and guidelines and statements of different nature in this field are impressive. The market participants complained about this aspect mentioning that a simpler regulatory apparatus would be more effective also in terms of market integration.[98]

The work in the CSD field is far from over. The European Parliament urged the Commission and the Member States to commit significant efforts to streamline and harmonise existing and future rules, phasing out national exemptions and preventing gold plating . . . for a smooth and steady path to regulatory convergence. ESMA addressed to the Commission its report on the use of FinTech by CSDs.[99]

The use of distributed ledger technology in securities settlement activities

Among the subjects frequently mentioned in the context of the settlement process is the usefulness of rebuilding the securities clearing and settlement activity on DLT or 'Distributed Ledger Technology' — often also referred to as 'blockchain' — for the C+S of securities traded both on exchanges and over-the-counter (OTC).[100] It is mentioned as especially effective for bond markets.[101] The use of this technology could considerably facilitate the processes, make them faster and more reliable and, due to their uniform model, reduce the number of transactional steps and, therefore, their costs.[102] There is strong awareness that the successful application of DLT could revolutionise the C+S business,[103] standardising and streamlining the communication processes, leading to cost savings (by reducing unnecessary duplication of activities, eg for reconciliation) and better risk management. Issues of fragmentation and interoperability will rank high in the list of concerns.

The opportunities and technical challenges of DLT are increasingly identified and controlled. Some focused projects are reported to be tested or are even operational. While the costs for the investors would be reduced, these would set off against the increased costs for the intermediaries. Some refer to the deleterious effects on the environment due to the excess consumption of electrical power.[104] As one writer stated, 'the reflection on this matter is worthwhile'.[105] The Australian Stock Exchange has decided to introduce DLT, starting from 2022. The project was criticised for its lack of clarity on technical and operational aspects and its launch may be delayed again. Credit Suisse and Instinet announced that they had settled stock in a private company by using blockchain, the deal being completed in about two hours.[106]

The Commission's approach to DTL for CSDs

In the EU, the Commission, as part of its digital finance package plan, has undertaken several work streams dealing with the development of market infrastructures based on DLT.[107] In one of its consultations, the Commission mentioned that it envisages a DLT-driven system as a multilateral scheme, in which the participants would be unidentified, without a central operator.[108] Putting DLT in the existing regulatory context raises questions of scope — payments being excluded — and of definitions and concepts, which have to be redefined. Early research was undertaken by ESMA in its report on 'The Distributed Ledger Technology applied to securities markets'.[109] The supervisory issues should also be highlighted as legal and regulatory uncertainty is mentioned as one of the key handicaps for introducing DLT in the present state of development. Numerous states and authorities have already undertaken detailed work or adopted regulations in this field.[110] Research activities on DLT in the financial field are under way in a great number of states worldwide and operations have started in at least nine EU states.[111] As there is not enough experience, the Commission has announced a pilot project that is likely to attract most attention in the coming years.[112]

The subject of DLT in the settlement activity has also been included in the Commission's Targeted Consultation regulation on improving securities settlement. ECSDA commented that some of the present Settlement Finality Directive (SFD) provisions create obstacles for the use of DLT and the tokenisation of securities,[113] while the definitions in the CSDR will have to be adapted or specified for use in the DLT context.[114] It further identified a list of different concepts and techniques that will have to be adapted. This would be the case for the settlement in Central Bank Digital Currencies or in commercial bank money or in cash tokens. All subjects to be followed with great attention.

The next important step in this debate is the discussion around the Commission-proposed 'Regulation of the European Parliament and of the Council on a Pilot regime for market infrastructures based on distributed ledged technology', which is now being planned for discussion in the European Parliament.[115] In the proposed level 1 regulation, the Commission exposes, adopted by way of experimentation, ideas on how DLT could fit into the existing systems of trading and post-trading of cryptoassets that qualify as financial instruments and identify how and where the existing financial services rules have to be clarified or amended.

Conditions for the functioning of a DLT SSS

The regulation as proposed to Parliament and Council distinguishes two regimes: DLT market infrastructures as elements of the functioning of the CSDs (DLT SSS) or as elements of the multilateral trading facilities (MTF DLT). Different conditions would apply to each of these regimes as they address different market segments. In both cases, existing regulation — especially CSD Regulation 909/ 2014 — would continue to constitute the basis but with significant adaptations to the participants' specific market positions and needs.[116] These adaptations are detailed in the proposed regulation and mainly consist of exemptions to be granted by the national supervisors, provided the conditions of the proposed regulation are met. This approach illustrates that the two DLT regimes could be considered as implants into the existing regulatory systems, respecting the fundamental characteristics of each of these. The main thrust of the changes is the significant simplification of the previous regulatory regimes, but always to be monitored by the competent authorities, and in many respects overseen by ESMA. This rejoins the statement by Coletta,[117] of the London Stock Exchange (LSE), that 'DLT is to weave its benefits into existing standards and procedures, rather than try to create new regimes and new silos of information'.[118] How far these changes will affect the main CSD regime will probably only become visible over a few years. Only the proposed regime for DLT SSS will be analysed here.

Regulatory regime for the MTF-SSS

With respect to securities traded on CSD, the proposed MTF regime would apply at the level of the SSS to the larger securities issues recorded on the distributed ledger, such as shares for more than 200 million in terms of capital but also bonds (eg convertibles, covered, publics bonds) standing for more than 0.5 billion but excluding sovereign bonds. The MTF regime being based on a specific concept, different from the CSD regime, requires a certain number of derogations from the general CSD regime: these should be approved by the NCA that granted the original DLT permission, resulting in an overall simplified and more flexible regime than applicable to CSDs that do not use DLT. These permissions take the form of exemptions from central provisions of CSD Regulation 909/2014 proposed to be granted by the national competent authority — under ESMA's watch — based on this future regulation. In order to convey a more precise view on what would be the central characteristics of the DLT regime, one has to look at the flexibilities that could be granted by the supervisors, making the DLT regime simpler than the present SSS process. In that perspective, the following list of exemptions from the listed requirements outlines the regulatory regime of the DLT for securities infrastructures:

- No further mandatory use of the dematerialised form, if the operator provides

that the 'securities account' as defined in 909/2014 or the book entry form are incompatible with its DLT regime.
- Recording on the distributed ledger of the DLT transferable securities.
- The number of securities in one system and on the DLT is the same.
- Segregation of the DLT securities of a member from those of any other member.
- The authorisation of outsourcing (Articles 19 and 30 of the CSD Reg) can be waived.
- Participants may be natural as well as legal persons provided they meet the fit and proper requirements and have sufficient ability and competence in the post-trading and DLT functioning.
- Exemption from the cash settlement requirement, provided the CSD ensures DvP, through different payment channels, such as central bank money, commercial bank money, including the latter in a token-based form, or in e-money tokens.
- Exemption of access to the standard link access according to Articles 50 and 53 Reg, on proof that this access would be incompatible with the DLT or would cause disproportionate costs.
- The principle that the DLT system offers adequate protection to participants (see Article 39(1) of the Reg and that Member States designate the SSS according to Article 2 of the SFD 98/26.
- CSDs benefiting from the exemptions of the outsourcing rules will give access to other CSDs operating a similar DLT system and remain limited to other network settlement systems operated by the same CSDs.

Many of these exemptions will also proportionately be applicable to DLT MTFs within the general regime of directive 2014/65(Markets in Financial Instruments Directive [MiFID]) and Regulation 2014/600 (Markets in Financial Instruments Regulation [MiFIR]) as these will remain applicable.[119]

- Organisational requirements

The proposed regulation further contains a series of organisational requirements that in general are also applicable to both DLT market infrastructures. The same principles are applicable to the DLT MTFs but in simplified form.

- Available business plan.
- Documentation on operational rules, indicating ie the governing law and the dispute settlement mechanism.
- Rules on the functioning of the DLT, rules on access, participation of the validating nodes.
- Information to members and other interested parties on how to carry out their functions.
- IT and cyber arrangements to be proportionate; integrity, security and confidentiality to be supported.
- Risk procedure especially for operational risks.
- Securing the funds of the different participants.
- Reliable records on funds and on securities.
- Segregation of assets.
- Transition strategy.
- Supervisory regime

Only CSDs may apply for a permission to operate a DLT SSS, applying to the competent authority on the basis of a detailed file, a copy of which will be transmitted to ESMA for nonbinding advice on the exemptions. It will also ensure consistency and proportionality of the exemptions. Refusals of permissions by the competent authorities for individual clearing members are limited to considerations of investor protection, market integrity and financial stability. Circumvention of legal or regulatory requirements may also be a ground for refusal. The permission to operate a DLT SSS system is limited to six years.

The ECB's opinion on DLT in the post-trade

The European Central Bank (ECB) has been closely following DLT developments in the markets as these may directly affect its activity.[120] In April 2021, the ECB published an extensive analysis of the implications of the introduction of DLT in post-trade processes.[121]

The ECB[122] welcomed the Commission's proposal on the use of DLT for both MTS and SSS allowing for inclusion of a wider range of asset classes, including sovereign bonds. It warned against the lowering of the thresholds, allowing lowering by the sole NCAs. Level playing field and financial stability considerations were mentioned on several points. The most critical points will be summarised here.

The ECB remarks that the thresholds should not be the only criterion for exemption, financial stability also to be considered. The exemption on the access conditions set in CSDR 909/2014 might affect the interoperability between SSS — resulting in more fragmentation and illiquidity, reducing harmonisation and reducing the cross-border settlement efficiency. Equal treatment between the two types of DLTs (MTF and SSS) should be ensured, ensuring the level playing field, allowing for settlement on each other platforms. It pointed to the merger of trading and post-trading activities due to compression to nearly real time of trading and settlement. Differences between the exemptions for DLTs may affect the interoperability between SSS – resulting in fragmentation and illiquidity.

On the monetary side, the ECB warned for a significant increase of payments in commercial money or e-tokens, an evolution to be thoroughly evaluated on a long-term policy basis but affecting monetary policy. There were also some points on oversight according to the proposal: the ESCB members are neither involved as relevant authorities for granting permissions nor for DLT MTFs granting core services. They do not receive the same reports. It should be confirmed that, as in the present regulation, CSDs operated by central banks will be exempted.

The proposed DLT system allows natural persons and other legal persons to be involved in the DLT market infrastructures: the regulation is unclear as to how their risks will be assessed and to what requirements they will be held. Retail investors may even directly take part in DLT securities what may be inappropriate for them. Risks may expand towards the entire DLT infrastructure and undermine its reputation.

The topic of payments is a delicate point: central bank money should be the default requirement. The settlement in the DLT context will have to be analysed against the background of the criteria — technological and regulatory — for T2S access. If taking place outside T2S, some limitations on the use of central bank money may become applicable. If payments take place in the CSD's own account, or through an account at a credit institution, the specific requirements of Article 40 of the CSD Reg will apply. In case the CSD ensures DvP, the DLT may be exempted from the cash settlement provisions under the CSDR.

As natural persons or legal persons not licensed as a credit institution may directly participate in DLT market infrastructures, their cash account would not benefit from the deposit guarantee system nor from the depositor preference under the Bank Recovery and Resolution Directive (BRRD), increasing the liquidity and credit risks not only for these participants but also for the other participants in these operations, affecting the position of DLT technology in the post-trading sector.

Insolvency protection under the SFD would not apply, as DLT SSS is not a 'system'. When a CSD is operating both an SSS and a DLT SSS, in different legal entities, finality risks from the latter could spill over to the regular SSS and its participants, when the same entities participate in both SSS operated by the same CSD.

CONCLUSION

Securities transactions are one of the core activities in the financial markets. Part of this business activity is handled by specialised organisations, the CSDs. They have run this activity with great efficiency: safety and efficiency are their core objectives, and in the EU at least, these objectives have been achieved.

Their legal status of the CSDs in the EU is the subject of detailed regulations and intense supervision. This paper aims at giving an overview of some of the most actively debated issues: finality, internalisation and supervisory structure. In recent years, other subjects have been capturing attention, especially the use of DLT for organising this activity. The latter technology will, if successful, revolutionise the SSS. Some aspects will require further investigation to protect the interests of all involved. Over time, these reforms will also call for an overhaul of the regulation on the basis of the first outline as has been published.

POSTSCRIPTUM

On the 1st of July 2021, the Commission published its report on 'Improving securities Settlement in the EU'[123] which constitutes the result of the broad consultations on CSDs and related items. The report refers to the different consultations undertaken ie the targeted consultation and the High-Level Forum on the Capital Market Union, the findings of which may be taken on board in the CMU Action plan 4, while a legislative proposal under the form of a CDSR Refit will be prepared but subject to an impact assessment. The overall objectives are: the development of a more integrated post-trading landscape, fostering competition in the markets, enhancing supervisory convergence among NCAs and achieving cost savings.

The report points to the concerns expressed by the stakeholders on specific aspects, some of which have also been dealt with in the present paper. The organisation of settlement discipline, which has received extensive attention in the consultation and was analysed in this paper, did not receive much welcome. Criticism focused on the mandatory nature of the buy-in provisions, their lack of clarity, pointing to the effects on the markets, reducing liquidity, the cost to investors and the negative effects on competition with non-EU CSDs. The negative effects in case of market turmoil were pointed at. For these and other reasons, the Commission decided to amend its proposal, to make it more proportionate and avoid undesired consequences. The impact assessment will be eagerly awaited, broadening the analysis to the structural consequences, including the increased internalisation.

As to the proposals for technological innovation – essentially DLT – the stakeholders argued that regulatory changes should wait until the Commission's pilot project is in force and its effects can be identified. Whether ESMA can adopt regulatory amendments to deal with these technological tools should be further investigated.

As to the regime of internalisers, the report merely mentions that the trend towards more internalisation warrants careful monitoring to prevents risks to financial stability.

Several parties, including public authorities and CSDs, complained about the burdensome requirements imposed on the basis of the actual regime and related costs, calling for simplification, and where needed, for clarification. The annual review and evaluation of the CSDs, were referred to as of 'limited value and disproportional'. These burdens were seen as due to the application of specific duties, not to wider organisational features. The passporting regime is subject to restrictions applicable to services to be provided for nondomestic securities, as these services are subject to the agreement of the host Member State, to compliance with its corporate law requirements and a cooperation agreement between both home and host states authorities. The outcome speaks for itself: in most jurisdictions, only a small fraction of settlement activity is represented by these nondomestic securities.[124] The passporting regime is due for reform, developing an integrated European trading pattern, applicable to all securities including bonds.

On the provisions of banking-type ancillary services, access to nondomestic central banks is quite limited in practice. Settlement in foreign currencies hampers cross-border activity. The requirements are too costly and too restrictive and are only used by a handful of CSDs. The settlement in commercial bank money needs to be reviewed and simplified. The ESCB is invited to facilitate access to their central bank services for CSD of other Member States.

On the application of a future resolution regime to CSDs, the Commission intends to examine the matter once sufficient experience has been gathered with the application of the recovery and resolution regime for other financial infrastructures (CCPs).

The Commission concludes that no fundamental changes to the CSDR regime are needed, but the issues identified in the report need to be included in the future Refit regulation.

References and Notes

(1) See Commission, TARGETED CONSULTATION DOCUMENT REVIEW OF REGULATION ON IMPROVING SECURITIES SETTLEMENT IN THE EUROPEAN UNION AND ON CENTRAL SECURITIES DEPOSITORIES, 2nd February, 2021.

(2) ECB Securities Settlement Statistics, 2019, available at: https://sdw.ecb.europa.eu/reports.do?node=1000001581 (accessed 1st July, 2021).

(3) Directive of 19 May 1998, 98/26 on settlement finality in payment and securities systems.

(4) DvP has initially been formulated by the Group of Thirty in its 1992 report as mandatory for all securities settlement systems. Also: CPSS-IOSCO, Principles for financial market infrastructures, April 2012, Principle 8 on Settlement Finality; see also the Giovannini barriers for a recent comment. AFME under Divisions-and-Committees/Post-Trade welcomes publication of the European Post Trade Forum (EPTF) report, 23rd August, 2017.

(5) Article 1, Regulation No 909/2014 of 23 July 2014 on improving securities settlement . . . and on central securities depositories ('CSDR'). The rule only applies to orders entered into the system before the opening of insolvency proceedings.

(6) Non-DvP transactions may be stipulated as free of payment (FoP), delivery versus free, which refer to transactions in which the securities are gifted, inherited or transferred between accounts at the same custodian for other assets than cash payment. The

agreed absence of consideration will not prevent the transaction to be implemented. It is unclear whether these data have been included in the internalisation data.

(7) Systemic risk is often mentioned in this context: FSB, Guidance on Central Counterparty Resolution and Resolution Planning, 7th July, 2017, and 16th November, 2020.

(8) Chapter III on Settlement Discipline of CSDR, applicable to all transactions to be settled on CSD and traded on an EU trading venue. Shares traded on a third-country market are excluded from the fails system: Article 7(13). On the relations with third countries, see Article 25 CSDR.

(9) Commission Delegated Regulation 2018/1229 of 25 May 2018 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on settlement C(2018) 3097 final ('regulation 2018/1229'); also: Commission Delegated Regulation (EU) 2020/1212 of 8 May 2020 amending Delegated Regulation (EU) 2018/1229 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on settlement discipline, OJ L 275, 24.8.2020, p. 3–4, postponing to 1st February, 2022.

(10) Article 7(13), CSDR; not applicable to shares listed in a third country.

(11) ESMA, in cooperation with the ESCB members, will develop regulatory technical standards allowing to monitor CSD's systems for settlement fails and report on the settlement fails that occurred and the details of the operation of the buy-in process. Articles 6(5) and 8(2) CSDR.

(12) Article 7(6) and (7) CSDR, the price difference to be paid to the receiving participant within two business days after the delivery of the securities (or cash compensation after the deferral period if the securities cannot be delivered).

(13) See Article 16 e.s. Regulation 2018/1229; Commission Delegated Regulation (EU) 2017/389 of 11 November 2016 supplementing Regulation(EU) No 909/2014 as regards the parameters for the calculation of cash penalties for settlement fails and the operations of CSDs in host Member States. CSDs should only be responsible for charging, collecting and distributing those cash penalties (Recital 18).

(14) See Article 7(3) CSDR under the general CSDR settlement regime; Article 16 e.s. Regulation 2018/1229. Postponed until 1st February, 2022.

(15) As provided in Article 7(3) CSDR.

(16) See Deutsche bank, 'Pointing to greater efficiency and therefore investor safety', available at: https://corporates.db.com/files/documents/Your-guide-to-csdr-an-overview.pdf?language_id=1Positive (accessed 1st July, 2021); see for differences with the traditional buy-in operations: ICMA, Mandatory buy-ins, European settlement regulation with global trading level implications, July 2018, available at: https://www.google.com/search?client=safari&rls=en&q=Commission+buy-in+CSD&ie=UTF-8&oe=UTF-8 (accessed 1st July, 2021).

(17) Where a receiving trading party in a transaction chain initiates the buy-in process, all other receiving trading parties in that transaction chain are relieved of any obligation to initiate a buy-in process. See the case of ETFs, where settlement will often be calling for an additional process involving a new issuance in the primary market for the creation of the instruments to be delivered.

(18) See below on the disputes, p. 6 and 7.

(19) ICMA, CSDR Settlement discipline, Mandatory buy-ins, European settlement regulation with global trading level implications, July 2018 gives a detailed overview of the then applied Buy-in procedures. See for former statements: ICMA Buy-ins, how they work, and the challenge of CSDR: An ICMA briefing note, July 2015; ICMA, Mandatory buy-ins, European settlement regulation with global trading level implications, July 2018, available at: https://www.google.com/sea

rch?client=safari&rls=en&q=Commission +buy-in+CSD&ie=UTF-8&oe=UTF-8 (accessed 1st July, 2021).

(20) Recital 15, CSDR; Article 25(2) regulation 2018/1229.

(21) See Article 7(3) CSDR providing for a 4-day extension period; recycling of failed orders is mandatory under Article 9, 2018/1229.

(22) Recital 28 Commission Delegated Regulation 2018/1229 referring to the buy-in as a mandatory contractual arrangement.

(23) Or seven business days for illiquid instruments, Article 7(4) CSDR. The procedure should not be applied to SME growth markets, Recital 17.

(24) See Article 29(9); calculated according to Article 32, Regulation 2018/1229. The indemnity will be paid to the non-defaulting party. See also for the price difference of the securities between market price and fail price, Article 35, Commission Delegated Regulation 2018/1229.

(25) Article 7(2) CSDR; see also ESMA, Questions and Answers, Implementation of the Regulation (EU) No 909/2014 on improving securities settlement in the EU and on central securities depositories, ESMA 70-708036281-2 'settlement discipline' pt 5.

(26) Every bought-in financial instrument should therefore be delivered to the buyer, even if the number of bought-in financial instruments does not allow for the full settlement of the relevant settlement instruction, Recital 38.

(27) Article 7(2) and (8) CSDR according to Article 35, Regulation 2018/1229 on the price difference; see also ESMA, Questions and Answers, Implementation of the Regulation (EU) No 909/2014 on improving securities settlement in the EU and on central securities depositories, ESMA 70-708036281-2.

(28) Recital 18 to Regulation 2018/1229 who should only be responsible for charging, collecting and distributing the penalties.

(29) Article 28 of Regulation 2018/1229 of 25 May 2018 referring to the buy-in agent. Based on a regulation, the same regime will apply in all EU states. The regulation's entry into force is postponed until 1st February, 2022: see Commission Delegated Regulation (EU) 2021/70 of 23 October 2020 amending Delegated Regulation (EU) 2018/1229 concerning the regulatory technical standards on settlement discipline, as regards its entry into force.

(30) ESMA has published a Q&A on the different dates at which the numerous regulations have entered into force or will soon do, but the RTS 2018/1229 has not entered into force, having been postponed, and last until 1st February, 2022, ESMA, CSDR RTS on Settlement discipline, Postponement until 1st February, 2022, ESMA 26th August, 2020, ESMA 70-156-3490.
Confirmed by Commission Delegated Regulation 2021/70 of 23 October 2020, on the basis of ESMA 70-156-3490, final report.

(31) Euroclear has announced to organise a buy-in regime by the separate company Taksize, a UK limited company, majority owned by Euroclear SA; see for further information: Taksize Helping you comply with CSDR Settlement Discipline, available at: https://www.euroclear.com/taskize/en/taskize-settlement-discipline.html; https://www.euroclear.com/newsandinsights/en/Format/Videos/csdr-buy-in-reporting-with-taskize.html (accessed 1st July, 2021); Taksize is up to now mainly a communication tool — 'query tool' — between the client banks and the Euroclear client service teams, allowing for a speedy solution for issues. Its role as buy-in agent started on February 2021.

(32) Also: Watkins, J., 'Eurex STS Buy-in Agent Service', available at: https://www.deutsche-boerse.com/dbg-en/products-services/ps-market-data-and-regulatory-services/ps-buy-in-agent (accessed 1st July, 2021). Eurex Securities Transactions Services GmbH Eurex STS, starting summer 2021. For an analysis: Introduction of new mandatory buy-in regime according to EU Central

Securities Depository Regulation, 1st March, 2021, available at: https://www.clearstream.com/clearstream-en/newsroom/202103-1653758 (accessed 1st July, 2021).

(33) See Recital 5 to Regulation 2018/1229 and the Articles 2 to 12, referring ie to automation (limiting manual interventions). Real Time Gross Settlement (RTGS) should be offered by CSDs. Recital 10, Regulation 2019/1229.

(34) See Articles 3 to 11, Regulation 2018/1229.

(35) On the US Gamestop case: Gamestop case puts the focus on market plumbing, FT 5th February, 2021.

(36) In the United States, the settlement time period of three days has been criticised as allowing for unhealthy speculation as was prevalent in the US markets. DTCC proposes shortening the settlement cycle from T +2 to T +1. See DTCC, the key benefits of T+1 settlement, available at: https://www.dtcc.com (accessed 1st July, 2021). After the US GameStop case, DTTC is arguing for an even shorter cycle to avoid requiring even more margin and more insurance to cover fails, as the two-day process lies at the basis of the decisions to restrict share trading; see Ph. Stafford, US clearing house, seeks quicker settlements after GameStop sage, FT., 25th February, 2021.

(37) See, eg, The TRADE, ESMA rejects industry calls for changes to the CSDR buy-in regime.

(38) ICMA objections in its 1st April, 2021, communication declared that the MBI (Mandatory Buy-In) proposal is 'not fit for purpose and requires substantive revisions'. It points to the negative impact on market liquidity, functioning and stability, as occurred in the March–April 2020 bond market, the efficiency and liquidity of which may again be affected. The cost to the markets, especially to retail investors, might be considerable. ICMA proposed to make buy-in discretionary, not mandatory. It further presented a list of seven 'essential revisions': ICMA,CSDR-Review-Roadmap,Feedback-010421.pdf. . . Referring to its submission in the Targeted consultation, it pleaded for ESMA to provide for timely clarification to market participants and stakeholders and to introduce certain changes such as a pass-on mechanism, narrowing the scope for more workable cash settlement for illiquid bonds, adapting timeless of completing the buy-in and guaranteed delivery for the buy-in process. ICMA also referred to the joint position with AFME proposing a pass-on mechanism between failing transactions that have different intended settlement dates (see ICMA, CSDR-SD Working group, March 2020); see also: ICMA, Mandatory buy-ins, European settlement regulation with global trading level implications, July 2018; AFME Position Paper: Review of CSDR, February 2021, AFME Consultation Paper on Draft Regulatory Technical standards on the CSD Regulation – The Operation of the Buy-In, August 2015.

(39) ICMA CSDR Settlement discipline, 2nd March and 11th March, 2021, referring to the opposition of 15 trade associations, available at: https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/Secondary-Markets/secondary-markets-regulation/csdr-settlement-discipline/ (accessed 1st July, 2021) and mentioning ESMA's refusal to postpone the project. Especially the 'cash bond market and subsequent liquidity impacts' would be negatively exposed. Societe generale, The future settlement discipline, available at: https://www.securities-services.societegenerale.com/en/insights/views/news/csdr-the-future-settlement-discipline-regime/ 5 March 2020, calling the "Mandatory buy-in a nuclear option". It asked on behalf of the industry for postponement to allow a more in-depth assessment of the impacts. It pointed to the danger with respect to chains of transactions, where it may lead to numerous fails impacting all buyers. Also, the regulation would not be applicable to certain transactions, eg the transfer of a whole portfolio between same buyers and sellers. In the same sense: FIA, FIA EPTA and ISDA, 2nd February, 2021,

pointed to the detrimental effects from the Buy-in rules for derivative markets. The Commission rules should clarify that the buy-in requirements do not apply to margin transfers, physically settled derivates and emission allowances: ISDA, FIA and FIA EPTA joint response to the European Commission Targeted Consultation on the CSDR Review. 1st February, 2021, available at: https://www.fia.org/epta/resources/fia-fia-epta-and-isda-offer-joint-response-european-commission-targeted-consultation (accessed 1st July, 2021). AFME criticised the mandatory buy-in rules for non-centrally cleared transactions, as it was considered a significant risk to Europe's recovery, the buy-in should be discretionary and will impact disproportionately SMEs and illiquid securities. It would lead to high volatility, and low liquidity would have been exacerbated during the COVID-19 crisis, in case the buy-in would have been applicable. The buy-in is disproportionate to address settlement fails. See AFME Position Paper, Review of the CSDR, 12th February, 2021, proposing to do away with a buy-in agent but introduce a pass-on mechanism allowing the buy-in notice to be passed on to a counterparty with which he has an in-scope failing receipt. Joe Parsons, European Commission launches consultation to review CSDR and buy-in regime, The trade, 9th December, 2020; The TRADE, ESMA rejects industry calls for changes to the CSDR buy-in regime, 21st April, 2020.

(40) ISDA International Swaps and Derivatives Association, Futures Industry Association (FIA) and European Principal Traders Association (FIA EPTA) have published their position in the framework of the Commission Targeted Consultation 1st February, 2021.

(41) According to 51 out of 91 respondents to the CSDR consultation, the buy-in regime should be a voluntary one, while 14 preferred the regime to be retained: Securities Finance times, CSDR: there are yet to be changes in industry behaviour, 23rd March, 2021.

(42) ECSDA, pointing moreover to the unlevel playing field with non-EU countries without a buy-in regime: See https://ecsda.eu/wp-content/uploads/2021/02/2021_02_01_ECSDA_response_to_the_CSDR_Consultation.pdf. The Commission suggested a further postponement, referring ie to the work overload due to the Corona crisis, see FISMA letter, FISMA C2 SK/cv Ares(2020) 3761873.

(43) AMF and Banque de France in their response to the Targeted Consultation: reponse-amf-bdf.pdf.

(44) ICMA Buy-ins, how they work, and the challenge of CSDR. An ICMA briefing note, July 2015; ICMA Mandatory Buy-in Provision of the EU CSDR, January 2020, available at: https://www.icmagroup.org/assets/documents/Regulatory/Secondary-markets/ICMA-CSDR-mandatory-buy-insOverviewJanuary-2020-160120.pdf (accessed 1st July, 2021); Also: ICMA, Detailed response to the Targeted Consultation, February 2021, ICMA proposed to maintain its 'well established and widely used Buy-In Rules' But the buy-in regime should be delayed, as ICMA tabled a 'waterfall of proposals' such as 'implement cash penalties, all firms should have contractual frameworks to remedy falls and regulatory buy-in should be last resort, but critical revisions are needed. Preference for pass-on mechanism, which is not compatible with CSDR.

(45) See: ICMA, ICMA Detailed Response (February 2021) and especially its **'**Overview of ICMA's position on Settlement Discipline'. ICMACSDR-Review-Targeted-ConsultationFeb-21Detailed-response-020221.pdf.

(46) See note 39 above.

(47) The buy-in process was already mentioned in the CSDR in 2014. Among many: Hill, Mandatory buy-ins: Five reasons why the buy-side should care, available at: https://www.globalinvestorgroup.com/articles/3691398/mandatory-buy-ins-five-reasons-why-the-buy-side-should-care (accessed 1st July, 2021), expressing his preference for the existing

system, including the contractual buy-in frameworks and cash penalties. Also: mandatory buy-ins would have been disproportionate as they would have heavily impacted market making and liquidity for certain asset classes (in particular, the non-cleared bond market). In some cases, however, voluntary procedures were not followed up or took a long period of time before being settled in the market; discussions about penalties and other add-ons were difficult.

(48) In the same sense: ICMA, Feedback on 1st April, 2021, available at: https://www.icmagroup.org/assets/documents/Regulatory/Secondary-markets/ICMACSDR-Review-RoadmapFeedback-010421.pdf (accessed 1st July, 2021).

(49) See Articles 24 and 25, Regulation 2018/1229.

(50) See Article 13 e.s, Regulation 2018/1229.

(51) Article 6 e.s Regulation 2018/1229.

(52) Article 7(3) in case of bilateral cancellation.

(53) The information on the fails will be communicated to the NCAs on a monthly basis and be made public on an annual basis: Article 15, Regulation 2018/1229. The first data was collected by ESMA in 2019 and partly for 2020, ESMA 70-156-3729.

(54) Commission Implementing Decision (EU) 2020/1766 of 25 November 2020, until 30th June, 2021.

(55) Pershing, available at: https://www.pershing.com/uk/en/news/what-is-big-in-our-world/regulation/csdr (accessed 1st July, 2021).

(56) E.S. Latter, A forward look at regulation of the UK's wholesale financial markets, 16th March, 2021, available at: https://www.fca.org.uk/news/speeches/forward-look-regulation-uks-wholesale-financial-markets (accessed 1st July, 2021). This also was the opinion of Pershing, BNY Mellon UK entity: CSDR, available at: https://www.pershing.com/uk/en/news/what-is-big-in-our-world/regulation/csdr (accessed 1st July, 2021). The UK will develop legislative changes responding to legitimate industry concerns. In the meantime, the UK regulator will take advantage of the experience of ESMA and EU in key areas like mandatory buy-ins.

(57) See for an overview of the regulatory and other measures adopted by ESMA: Settlement, CSDR Internalised Settlement, Report to the European Commission ESMA 70-156-3729; Commission Delegated Regulation (EU) 2017/389 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council as regards the parameters for the calculation of cash penalties for settlement fails and the operations of CSDs in host Member States; Commission Implementing Regulation (EU) 2017/393 of 11 November 2016 laying down implementing technical standards with regard to the templates and procedures for the reporting and transmission of information on internalised settlements in accordance with Regulation (EU) No 909/2014 of the European Parliament and of the Council; ESMA Guidelines on internalised settlement reporting under Article 9 CSDR, ESMA 70-151-1258; Commission Delegated Regulation (EU) 2017/391 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards further specifying the content of the reporting on internalised settlements; ESMA, CSDR, Article 9 – Internalised Settlement Reporting, 31st July, 2019, ESMA65-8-6561.

(58) Article 9 CSDR and ESMA Technical guidance, validation rules, 31st July, 2019, ESMA 65-8-6561 Settlement internalisation was practised for many years in Sweden and in other markets; ESMA CSDR Internalised Settlement, Report to the European Commission, 5 November 2020, ESMA 70-156-3729, stating that no major risks have been identified but NCAs referred to operational risk and custody risk, p. 8. ESMA pointed to the high level of concentration, an element of relevance for custodians and their clients; see also Coletta,

LSE, Bringing tokenisation to life, Euroclear collateral conference, 4th May, 2020.

(59) An internalising instruction failing to settle for several days will be reported as having failed each of the days in which it failed, see ESMA Report, 5th November, 2020, 70-156-3729, p 21 for an example. This may inflate the fail figures.

(60) See: Commission Delegated Regulation (EU) 2017/391 of 11 November 2016, Commission Implementing Regulation (EU) 2017/393 of 11 November 2016, supra nt 75.

(61) ESMA 70-151-367 of 30 April 2019, Guidelines on Internalised settlement reporting; ESMA709-151-1258 of 28 March 2018 Guidelines on Internalised settlement reporting under Article 9 of CSDR.

(62) See ESMA Q&A, Implementation of the Regulation (EU) No 909/2014 on improving securities settlement in the EU and on central securities depositories, 17 February 2020, 70-708036281-2, available at: https://www.esma.europa.eu/document/questions-and-answers-csdr (accessed 1st July, 2021).

(63) ESMA, CSDR Internalised Settlement, Report to the European Commission 5 November 2020, ESMA 70-156-3729. Custodian banks may prefer to record the securities of their clients in their own books for a series of –unverified – reasons: continuing relationship with the client, proximity contributing to confidence, lower cost, control, easier access for later internalised transactions, lack of information of the clients. . .

(64) ESMA, 5th November, 2020, ESMA 70-153-3729.

(65) See about the data ESMA 70-153-3729 and further below.

(66) The extensive list of data to be transmitted to the NCA on a monthly basis is listed in the annex to regulation 2018/1229. ESMA's data collection started in 2009 and is only complete for Q1–3 of 2020. Data should be related to the overall settlement activity in the same markets and calculate the proportion of the internalised transactions to the overall securities settlement activity in the same markets.

(67) See ESMA, Information about the systematic internaliser activity under Mifid II, see: https://www.esma.europa.eu/data-systematic-internaliser-calculations (accessed 1st July, 2021), 28th April, 2020.

(68) On the basis of: COMMISSION DELEGATED REGULATION (EU) 2017/391 of 11 November 2016 with regard to regulatory technical standards further specifying the content of the reporting on internalised settlements. The data for 2019 is incomplete. The Commission mentioned that the quality of the data needs improvement.

(69) In that sense: ECSDA; see also the notification of shareholdings to the issuer company under the shareholders rights directive, Directives 2007/36 and 2017/828.

(70) See Regulation 2018/1229.

(71) ESMA, CSDR and Internal settlement, 5 November 2020, available at: https://www.esma.europa.eu/sites/default/files/library/esma70-156-3729_csdr_report_to_ec_-_internalised_settlement.pdf (accessed 1st July, 2021). The fail rates differ depending on the type of security involved. High volume, high concentration with some internalisers may lead to operational and custody risk. ESMA also identified common errors in the data.

(72) See below the data for 2019 (Q2 to 4) and 2020 (Q 1to 3).

(73) See note 21 above.

(74) Article 12, CSDR; see ESMA 70-151-887.

(75) Commission Capital Markets Union for people and businesses-new action plan COM/2020/590 final, available at: https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/capital-markets-union-2020-action-plan_en, 24 September 2020, Com (2020) 590 final (accessed 1st July, 2021).

(76) A new Vision for Europe's capital markets, p. 9, referring to forthcoming Commission initiative, available at: https://ec.europa.eu/info/sites/info/files/

business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf (accessed 1st July, 2021); Commission, Integrate national capital markets into a genuine single market, Action 14, adding as a further suggestion: 'Improved dispute resolution mechanisms at national and EU level and other measures such as, for example, gathering information on investors' legal rights' 24th September, 2020, available at: https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/capital-markets-union-2020-action-plan_en (accessed 1st July, 2021); Final Report of the High Level Forum on the Capital Markets Union June 2020, available at: https://ec.europa.eu/info/sites/info/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf (accessed 1st July, 2021); Smits, R., 'Towards a borderless market in securities post-trading: issues of competence and competition', available at: https://www.ecb.europa.eu/events/pdf/conferences/septa/smits.pdf (accessed 1st July, 2021), determines the competence of the home member state by the competent authority as established by each state, including the central banks as issuers of currencies.

(77) Commission, CMU action 14.

(78) Commission, Integrate national capital markets into a genuine single market, 24th September 2020.
A new Vision for Europe's capital markets, Final Report of the High Level Forum on the Capital Markets Union June 2020, available at: https://ec.europa.eu/info/sites/info/files/business_economy_euro/growth_and_investment/documents/200610-cmu (accessed 1st July, 2021)- mentioning the consolidated tape among the issues with which the Commission is dealing with.

(79) A new Vision for Europe's capital markets, June 2020, available at: https://ec.europa.eu/info/sites/info/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf (accessed 1st July, 2021); see also: Commission A capital markets Union for people and business - new action plan, Commission communication, 24th September 2020, Com (2020) 590 Final, Annex, item 16.

(80) The European Parliament mentions the need for binding emergency powers and instruments addressing cyber risks; the prohibition of certain products or activities to be referred in EU case law.

(81) See Commission, CMU action plan Action 16.

(82) See the suggestion of the European Parliament, ie granting ESMA direct supervisory powers cooperation of the ESAs, while respecting the role of the NCAs, pt. 34 REPORT on further development of the Capital Markets Union (CMU): improving access to capital market finance, in particular by SMEs, and further enabling retail investor participation (2020/2036(INI)).

(83) Commission CMU Action plan, Actions 15 and 16 'consider proposing measures for stronger supervisory coordination or direct supervision by the European Supervisory Authorities'.

(84) ECSDA, Answer to EC consultation 1st February, 2021, with the list of topics where convergence could be useful. Cooperation of ESMA and EBA were considered useful.

(85) The High level report recommended to tackle the key remaining obstacles to market integration: taxation, non-bank insolvency and company law (p. 22); caused by divergent, burdensome, lengthy provisions; but a fully fledged regulatory review was considered premature(p.77).

(86) The register mentions 24; ECSDA, Answer to the EC consultation, mentioned 22 out of 33, the difference relating to CSDs managed by Central banks. Moreover seven CSD of EEA EFTA states are awaiting their authorisation.

(87) Seven existing CSD have not finalised their authorisation process.

(88) ECSDA Answer to the EC consultation p.15 e.s.

(89) In other fields, delegation of day-to-day

supervision has been introduced while maintaining the policy matters at the national level. See, eg, in the prospectus directive.

(90) Under national law, different legal rules may apply as to insolvency, liability of directors, conflicts of laws issues, competence of local tribunals, arbitration, etc.

(91) See ECSDA Answer to EC consultation, 1st February, 2021, p. 14, calling for a simplification of the CSDR, a more integrated landscape, mentioning the burdensome processes, due to different interpretations of the applicable requirements, and a more integrated landscape Simplify CSDR _ more integrated.

(92) The Commission made reference to the 'one-in, one out rule' for simplifying regulation.

(93) ECSDA considered that improvement may be also achieved by more convergence among the NCAs on the requirements for authorisations, Answer to EC consultation,1st February, 2021, see p. 17 on the difficulties in the administrative processes esp. for the passport.

(94) And this notwithstanding Article 21, CSDR.

(95) ECSDA, Answer to EC consultation, 1st February, 2021, suggested simplifications on the frequency of certain reporting requirements, some having to be finetuned, or more clearly defined.

(96) See about this: ECB, The use of DLT in post-trade processes, April 2021, p. 22.

(97) ESMA recommends real time consolidated tape for equity, 5th December, 2019; Previously, the Commission considered that this issue to be solved by the private sector. Although a considerable amount of data is available, these are mostly very general and do not meet the degree of relevance of the consolidated tape.

(98) For example, that the penalty calculation is too complicated and too costly. Also the entry into force of the regulatory provisions is confusing.

(99) European Parliament, Report on further development of the Capital Markets Union (CMU): improving access to capital market finance, in particular by SMEs, and further enabling retail investor participation (2020/2036(INI)). ESMA, Use of FinTech by CSDs, Report to the European Commission, ESMA70-156-4576, 2nd August, 2021.

(100) For an extensive overview of the use of DLT in the securities context, see; R. Priem, Distributed ledger technology for securities clearing and settlement: benefits, risks, and regulatory implications, February 2020, available at: https://jfin-swufe.springeropen.com/articles/10.1186/s40854-019-0169-6 (accessed 1st July, 2021).

(101) See ICMA New FinTech application in bond markets, available at: https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/fintech/new-fintech-applications-in-bond-markets/ (accessed 1st July, 2021).

(102) See: Callsen, G., FinTech, DLT and regulation, 2017, 45, available at: https://www.icmagroup.org/assets/documents/Regulatory/Market-Infrastructure/FinTech-DLT-and-regulation-by-Gabriel-Callsen-160517.pdf (accessed 1st July, 2021). The author points among the advantages that the STP will be facilitated as it will not be governed by a disparate number of applications. Settlement will be almost instant reducing the need for collateral, and relevant information will be accessible for both parties based on the same source. ESMA has pointed to the need of suitable governance arrangements with clear liability rules, including on conflicts of interest, warning for cyber security and the danger of loss or theft of access keys.

(103) See ECB, 'The use of DLT in issuance and post-trade processes', available at: https://www.ecb.europa.eu/paym/groups/shared/docs/c3c3e-joint-ami-pay-ami-seco-2020-06-29-item-3-fintech-tf-executive-summary-the-use-of-dlt-in-issuance-and-post-trade-processes.pdf (accessed 1st July, 2021): 'The change from

incumbent bilateral systems of exchanging information to a shared communication model enabled by DLT as well as use of digital assets and tokens could impact existing roles of capital market players or even require new ones'.; Priem, R. (2020) 'Distributed ledger technology for securities clearing and settlement: benefits, risks, and regulatory implications', *Financial Innovation*, Vol. 11, available at: https://jfin-swufe.springeropen.com/articles/10.1186/s40854-019-0169-6 (accessed 1st July, 2021); mentioning the absence of quantitative data on this topic.

(104) See Coletta, LSE, Bringing tokenisation to life, Euroclear collateral conference, 4th May, 2020; also R Fulterer j Oesc, Eine einzige Überweisung in Bitcoins verbraucht so viel Energie wie ein Schweizer in einenhalb Monaten, 5th April, 2021; Potter, M. (2020) 'What are the environmental effects of blockchain technology', *The European Environmental Magazine*, available at: https://emagazine.com/environmental-effects-of-blockchain (accessed 1st July, 2021).

(105) Priem, R. (2020) 'Distributed Ledger Technology for securities clearing and settlement: benefits, risks and regulatory implications', *Financial Innovation*, Vol. 6, No. 11, nt.103; see: A new Vision for Europe's capital markets; Final Report of the High Level Forum on the Capital Markets Union, June 2020, p. 80 calling for an appropriate legal environment; ICMA Distributed Ledger Technology (DLT) Regulatory directory, available at: https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/fintech/icma-distributed-ledger-technology-dlt-regulatory-directory/.G (accessed 1st July, 2021). Callsen, FinTech, DLT and regulation, available at: https://www.icmagroup.org/assets/documents/Regulatory/Market-Infrastructure/FinTech-DLT-and-regulation-by-Gabriel-Callsen-160517.pdf (accessed 1st July, 2021); ICMA Distributed ledger technology (DLT) in the international bond markets over the last three years., or in international capital markets, lists the DLT-related legislation and regulatory framework in capital markets, 08-04-21.
See for the states that have started legislative work in the field: ESMA, Level 2 measures, on CSDs Internal Settlement, Drafts technical standards. Guidelines, Q& As, Notifications, Reports on the implementation of the CSDR, SFD, T2S.

(106) Ph. Stafford, Clearing system faces rivalry from blockchain technology, FT, 7th April, 2021; Tett, G. (2021) 'Blockchain may change equities trading for good' FT, 8th April, 2021.

(107) Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on a pilot regime for market infrastructures based on distributed ledger technology, COM/2020/594 final.

(108) This would raise a difficulty in markets where a CCP plays a central role.

(109) ESMA, 7th February, 2017, ESMA50-1121423017-285a.

(110) See for an overview, R. Varrall, ICMA Brief, DLT-related legislation and regulatory frameworks in capital markets, December 2019, available at: https://www.icmagroup.org/assets/documents/Regulatory/FinTech/DLT-related-legislation-and-regulation-201219.pdf (accessed 1st July, 2021).

(111) See ICMA Distributed ledger technology (DLT) Regulatory Directory, 26 January 2021, listing the numerous developments in regulation in different parts of the world. It is unclear which ones have been operational.

(112) Proposal for a REGULATION on a pilot regime for market infrastructures based on distributed ledger technology Com(2020), 591.

(113) See Bech, M., Hancock, J. Rice, T. and Wadsworth, A. (2020) 'On the future of securities settlement, linking DLT to tokenization', *BIS Quarterly Review*, March 2020, 67.

(114) See for a list of examples: ECSDA, available at: https://ecsda.eu/wp-content/

uploads/2021/02/2021_02_01_ECSDA_response_to_the_CSDR_Consultation.pdf (accessed 1st July, 2021), p. 25; also on settlement discipline p. 40 e.s. Are DLT addresses 'accounts'? or are to be qualified as 'omnibus accounts'? p. 31. Also the position of an MTF, is it to be qualified as an internaliser, p. 27. The number of subjects to be redefined raises questions of insecurity and instability, with many unclear terms, or terms to be refined, obscuring the essential issues. Complexity as this has its price.

(115) Commission 2020/0267 (COD) 24th September, 2020; see European Parliament, Legislative Train Schedule, available at: https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-crypto-asset (accessed 1st July, 2021).

(116) This is for CESD regulation 909/2014 on improving securities settlement and for DLT MTFs Directive 2014/65 (Mifid).

(117) See Coletta, M., available at: https://www.euroclear.com/newsandinsights/en/Format/Articles/bringing-tokenisation-to-life.html (accessed 1st July, 2021).

(118) Commission, Blockchain strategy, Shaping Europe's digital future, 9 March 2021, available at: https://digital-strategy.ec.europa.eu/en/policies/blockchain-strategy (accessed 1st July, 2021), listing the different workstreams.

(119) For example, the regulation on settlement fails remains applicable to the DLT MTFs (Article 4,(3)(g)) but is not mentioned for the DLT SSS.

(120) See the AMI-SeCo report entitled 'The potential impact of DLTs on securities post-trading harmonisation and on the wider EU financial market integration', September 2017. See the AMI-SeCo report entitled 'Potential use cases for innovative technologies in securities post-trading', January 2019.

(121) ECB, The use of DLT in post-trade processes – Key features of using DLT for issuance, custody and settlement, ecb.20210412_useofdltposttradeprocesses~958e3af1c8.en.

(122) OPINION OF THE EUROPEAN CENTRAL BANK of 28 April 2021 on a proposal for a regulation of the European Parliament and of the Council on a pilot regime for market infrastructures based on distributed ledger technology (CON/2021/15).

(123) Commission, Report to the European Parliament and the Council under Article 75 of Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012, Com (2021) 348 final, (accessed 1st August, 2021).

(124) For most CSDs, settlement of securities issued by issuers of other Member States represents less than 5% of their activity, although more than 80% of the activity of ICSDs. Commission report of 1st July 2021, p. 3.