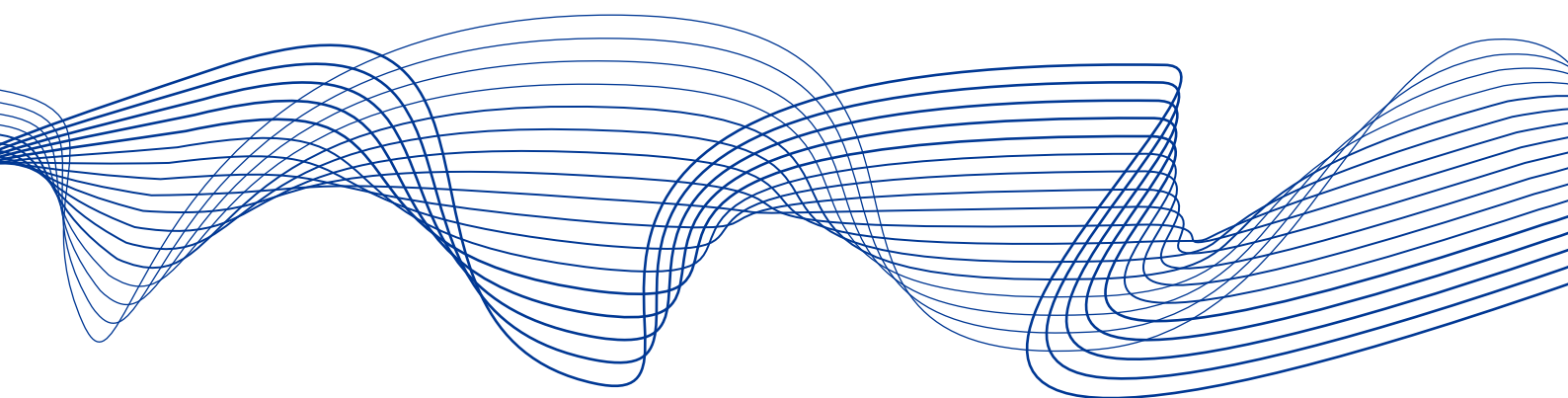




ESRB
European Systemic Risk Board
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Credit default swaps – analysis and policies

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Executive summary

Despite the reforms implemented following the global financial crisis, episodes of instability in derivatives markets have been frequent and have often required intervention by public authorities. While the post-global financial crisis regulatory reforms primarily targeted counterparty credit risk, more recent disruptions highlight the increasing salience of market liquidity and systemic risks stemming from market microstructure. These dimensions remain insufficiently integrated into current systemic risk frameworks. This is particularly pertinent in the case of credit default swap (CDS)¹ markets given that CDS spreads, which reflect market-implied credit risk, may also act as potential channels for indirect, price-mediated contagion.

This report presents an analysis of CDS markets, with a focus on single-name CDSs in terms of their market structure and current regulatory framework. It identifies key findings related to **1) the role of CDSs in credit markets, 2) market structure, 3) market transparency, and 4) supervisory reporting and data quality.**

CDSs serve as instruments for transferring credit risk between counterparties, but their role extends beyond this core function. While traditionally viewed as derivatives influenced by the dynamics of the underlying debt instruments, CDSs can also exert significant influence on those underlying dynamics, and in particular on the cost of funding for reference entities.

CDS spreads play a crucial role in credit markets since they have emerged as key indicators for counterparty credit risk assessment. They function both as “implicit” benchmarks and, through a lead-lag relationship with the underlying credit risk, as drivers for pricing, liquidity and market sentiment. In periods of abrupt liquidity strain, market participants may reassess credit risk, resulting in widening CDS spreads, declining bond prices, diminished market liquidity and, potentially, elevated borrowing costs for the affected issuer. These dynamics can give rise to feedback mechanisms that exacerbate financial stress and contribute to broader market vulnerabilities, particularly in highly interconnected financial systems.

Despite the key role of CDS spreads, the mechanisms underpinning their price formation, particularly the influence of market microstructure on liquidity, remain insufficiently understood. This gap in the academic and policy literature is largely attributable to the inherent opacity of CDS markets and the limited public availability of transaction-level data.

Conventional metrics, such as gross notional outstanding amounts, offer limited insight into actual risk exposures and are insufficient for uncovering the dynamics of price discovery within the CDS market microstructure. However, the increasing availability of granular transaction-level data reported to

¹ See Section 2.1 for further details of CDSs.

authorities provides an opportunity to examine these mechanisms more rigorously – an objective that we seek to advance in this report.

The following key findings emerge from our analysis of the microstructure of single-name CDS markets. First, price-forming transactions are typically low in volume and exhibit pronounced concentration along three dimensions: trading counterparties, reference obligations for a given issuer and temporal clustering. More broadly, single-name CDS markets are characterised by limited liquidity and subdued trading volumes, a small and concentrated set of market participants and a high degree of trade volume concentration. In particular, a narrow subset of counterparties is responsible for most price-setting trades, often focused on a few pivotal reference obligations tied to specific issuers and clustering over time.

Consequently, this highlights two important market imperfections: concentration and illiquidity, given that the single-name CDS market does not fully align with the characteristics of a highly liquid and competitive market in which multiple buyers and sellers participate in price discovery and no small group of market participants has a significant influence over prices. In particular, the high degree of concentration raises important questions about effective market functioning under normal market conditions, and more particularly during periods of market stress. Market concentration can weaken liquidity, and, during periods of market stress, a limited number of participants may be unable to supply sufficient liquidity to accommodate surges in demand for credit protection, amplifying market instability. Price-formation activity frequently clusters around significant market events, which tend to be when trading activity peaks. During normal times, market activity typically concentrates around the twice-yearly contract rollover dates.

Moreover, the opacity of the single-name CDS market implies that important pricing and trading information is accessible to only a handful of market participants. As a result, information asymmetries persist, undermining competition and price discovery, as well as increasing barriers to entry. This information asymmetry highlights another form of significant market imperfection in the single-name CDS market. Given the critical role that CDSs play in credit markets, it is important that both market participants and authorities have access to broader and more timely market information.

Despite recent reforms of the EU regulatory framework for CDSs,² a large proportion of single-name CDS contracts remains outside the scope of EU post-trade transparency requirements. The scope of EU market transparency requirements was broadened under the review³ of the Markets in Financial

² The EU framework for CDS primarily comprises (i) the European Market Infrastructure Regulation (EMIR), (ii) the Markets in Financial Instruments Regulation (MiFIR), and (iii) the Short Selling Regulation (SSR).

³ Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimising the trading obligations, and prohibiting receiving payment for order flow (OJ L, 2024/791, 8.3.2024).

Instruments Regulation (MiFIR)⁴ to include certain single-name CDSs that are centrally cleared. However, about 80% of single-name CDSs on EU global systemically important banks (G-SIBs) and 75% on EU sovereign debt are not cleared and are not, therefore, subject to the public disclosures mandated by the MiFIR. However, both cleared and uncleared CDS transactions can contribute to price formation and affect CDS spreads, leaving an important data gap.

In parallel, the global nature of CDS trading poses further challenges for EU authorities. The current regulatory framework only captures transactions involving at least one EU-domiciled counterparty or transactions executed within the EU, meaning that CDS contracts referencing EU entities (such as sovereigns or G-SIBs) traded exclusively between non-EU counterparties remain entirely outside the scope of EU reporting obligations. The inability to monitor such cross-border exposures hinders the detection of vulnerabilities and reduces the effectiveness of timely responses to emerging risks, as demonstrated during recent market dislocations.

Furthermore, timely access to high-quality, complete and standardised data remains an essential condition for authorities to be able to monitor the CDS market effectively and fulfil their mandates. More than a decade after the introduction of the European Market Infrastructure Regulation (EMIR)⁵ reporting requirements, substantial shortcomings persist. Key data fields, such as information on contract valuations, variation margins and the specific characteristics of underlying reference obligations, are either not available or inconsistently reported.

⁴ Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (OJ L 173, 12.6.2014, p. 84).

⁵ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties, and trade repositories (OJ L 201, 27.7.2012, p. 1).

The above analytical findings highlight the existence of several market imperfections, such as concentration, illiquidity and information asymmetries, in the single-name CDS market. In this regard, three policy objectives seem key:

- policy objective 1: improve market functioning and liquidity;
- policy objective 2: enhance market transparency;
- policy objective 3: obtain better information for oversight.

To address these policy objectives, the report proposes four policy measures:

Policy proposal 1: Enhance post-trade market transparency for single-name CDSs (relates to policy objectives 1 and 2)

- Adjust the EU's post-trade market transparency regime to apply, as a minimum, to single-name CDSs on EU G-SIBs and EU sovereigns, regardless of whether they are centrally cleared and how they are traded.

Policy proposal 2: Strengthen supervisory access to information through improved quality and standardisation of data reported as well as through enhanced global cooperation (relates to policy objective 3)

- Improve the quality and standardisation of data reported to supervisors.
- Enhance global cooperation on information and data sharing amongst authorities on CDS markets.
- Develop a real-time monitoring tool for CDS markets to enable timely macroprudential interventions during periods of systemic market stress.

Policy proposal 3: Promote the efficiency and functioning of the single-name CDS market (relates to policy objective 1)

- Identify and address structural factors limiting demand, supply and competition in the single-name CDS market.

Policy proposal 4: Improve credit risk assessment frameworks by reducing excessive reliance on CDS spreads and raising awareness of the price formation mechanisms (relates to policy objectives 2 and 3)

- Policymakers, market participants and other stakeholders should deepen their understanding of, and consider the structural limitations associated with single-name CDS pricing, particularly under conditions of market stress. It is essential to account for these limitations in order to support more informed and accurate interpretations of the role of CDS pricing as an indicator of credit risk.

The proposed policies constitute a medium-term roadmap intended to improve the functioning of the single-name CDS market and address systemic risks. In the near term, the actions to be taken include strengthening supervisory access to information by enhancing the quality and standardisation of reported data, as well as

increasing global cooperation (policy proposal 2). Subsequently, increased post-trade market transparency on single-name CDSs should be pursued (policy proposal 1). Over the medium term, ongoing efforts should aim to further develop the single-name CDS market, while also assessing any potential rise in systemic risks resulting from greater market activity. It is essential for policymakers, market participants and other stakeholders to recognise the inherent limitations of credit risk assessments based on an illiquid and concentrated market.

Recognising the need for simplification and regulatory efficiency, the proposed policies strive for better and more efficient regulation rather than an increase in regulation. For instance, the objectives under policy proposal 2 could be achieved by ensuring the high quality of data reported, given that using low quality data increases the costs for all parties involved. Similarly, increasing standardisation and single reporting, for both transparency and supervisory purposes, could further increase efficiency and limit undue costs.

To strengthen their capacity to respond to potential systemic threats from the CDS market, authorities need a more robust and integrated reporting environment and enhanced international cooperation to close information gaps. Enhancing the consistency, completeness and granularity of reported data – through standardised formats and broader use of international identifiers – is essential to support accurate risk monitoring and cross-jurisdictional comparability. At the same time, establishing structured information-sharing frameworks with key third-country authorities would enable EU supervisors to access information on CDS exposures referencing EU sovereigns and G-SIBs even when contracts are concluded outside the EU.

Improving the functioning of single-name CDS markets remains a complex objective. A key starting point is to advance in identifying, and subsequently addressing, the structural barriers limiting demand, supply and competition. This depends on access to better information, given that authorities need more complete, standardised and high-quality data, including elements that are currently missing. Strengthening reporting frameworks and establishing international data-sharing arrangements will be essential to close supervisory blind spots.

Improved market transparency may further facilitate the development of a more efficient CDS market structure. Expanding post-trade transparency for CDS contracts referencing G-SIBs and EU sovereigns, even if they are not centrally cleared and regardless of how they are traded, could improve price discovery, reduce information asymmetries and encourage broader participation. However, potential trade-offs between increased transparency and liquidity need to be carefully assessed. These concerns may, however, be overstated. Since the introduction of real-time, trade-by-trade post-trade market transparency requirements in the United States in February 2022, single-name CDS price movements have continued to align with overall financial market trends and have remained cyclical, indicating that post-trade transparency is not associated with liquidity disruptions. This suggests that the EU's current approach of maintaining a limited scope for transparency requirements may not be justified.

Policymakers, market participants and other stakeholders should recognise the limitations of the single-name CDS market and exercise caution, avoiding overreliance on single-name CDS spreads as indicators of credit risk. Although a well-functioning, liquid, competitive and transparent single-name CDS market would provide a more reliable foundation for robust credit risk assessment, structural impediments reduce the reliability of the informational content of CDS spread data. Owing to the implicit role of CDS spreads as measures of credit risk for financial institutions and their explicit role in financial regulations, changes in CDS spreads may give rise to market feedback mechanisms that exacerbate financial stress, as mentioned earlier, or may lead to procyclical behaviour. The ESRB has made a similar case for reducing overreliance on external credit ratings and encouraged financial institutions to work on their own forward-looking credit risk assessments.⁶ As is the case when credit ratings are lowered, higher CDS spreads can lead to an implicit rise in credit risk for market participants or an explicit rise for supervisors, potentially leading to simultaneous increases in capital or liquidity requirements for financial institutions. While changes in credit risk should be reflected in financial institutions' requirements as soon as possible, simultaneous increases can contribute to excessive procyclical behaviour, especially in times of crisis.

⁶ See the *letter to the European Commission and ESMA on the "Procyclical impact of downgrades of corporate bonds on markets and entities across the financial system"* from the European Systemic Risk Board dated 1 October 2020.

This report has been prepared by the ESRB joint Advisory Technical Committee and Advisory Scientific Committee (ATC-ASC) CDS Task Force, which is mandated to perform an analysis of the structure of the CDS market, to identify vulnerabilities and, if needed, to make policy proposals from a systemic risk perspective.

The 2008 global financial crisis and the 2010-2014 euro area sovereign debt crisis exposed significant vulnerabilities within the financial system, with CDSs⁷ playing a pivotal role in exacerbating systemic risks. Before the global financial crisis, derivatives traded over-the-counter (OTC) were largely unregulated, allowing large volumes of transactions to occur without sufficient oversight. This lack of visibility made it difficult for regulators to gauge the scale and nature of potential risks to financial stability, particularly in relation to unmitigated counterparty credit risk. When the US housing market collapsed, the interconnectedness of CDS contracts amplified losses across financial institutions, triggering a widespread financial collapse. At that time, counterparty credit risk between OTC derivatives counterparties was often unmitigated, posing a threat to financial stability.⁸ Moreover, the global financial crisis showed that, in times of considerable financial instability, certain financial transactions, such as short selling, not only aggravate the downward spiral in sovereign debt but also affect the prices of shares, and notably those of financial institutions, in a way that could ultimately threaten the viability of such institutions and create systemic risks.⁹ This also largely applies to CDS transactions.¹⁰

Making derivatives markets sound was one of the key features of the post-global financial crisis reforms mandated by the Group of Twenty (G20).^{11,12} The G20's global regulatory agenda focused on mitigating credit risk by mandating central clearing for standardised derivatives and imposing higher capital requirements for non-centrally cleared products, as well as improving transparency to relevant authorities through data reporting to trade repositories. As the Financial

⁷ CDSs are contracts that transfer the credit risk of a reference entity or instrument from a buyer of credit protection to a seller of credit protection. As compensation for this transfer of credit risk, the buyer makes periodic premium payments to the seller. If a defined credit event occurs with respect to the reference entity or obligation, the seller pays the buyer an agreed amount reflecting the decline in market value of the relevant credit instrument or instruments. In the case of physically settled CDS, the seller would pay the buyer the par value of the relevant credit instrument and the buyer would deliver that credit instrument to the seller. In the case of cash-settled CDSs, the seller would pay the buyer any difference between the par value of the relevant credit instrument and its market value following the credit event. See International Organization of Securities Commissions (2015).

⁸ See *Report from the Commission to the European Parliament and the Council under Article 85(1) of Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties, and trade repositories* (COM (2016) 857 final).

⁹ Recital 1 of the *Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps* (OJ L 86, 24.3.2012, p. 1).

¹⁰ See Aït-Sahalia, Y. et al. (2014), pp. 151-167.

¹¹ See G20 (2008).

¹² See G20 (2009).

Stability Board (FSB) reports,¹³ overall implementation of the G20 OTC derivatives reforms is well-advanced but further progress has slowed in recent years.

The G20 commitments laid the foundation for the European Union's legislative response, primarily through the European Markets Infrastructure Regulation (EMIR),^{14,15} the Markets in Financial Instruments Regulation (MiFIR),¹⁶ and the Short Selling Regulation (SSR).¹⁷ Under EMIR, transparency to relevant authorities was enhanced through the mandatory reporting of derivatives contracts to trade repositories, which make the information available to authorities, while risk mitigation for OTC derivatives contracts was achieved through mandatory clearing for standardised OTC derivatives contracts and, for non-cleared contracts, through the strengthening of rules to mitigate both operational and counterparty risk. From an infrastructure perspective, EMIR introduced specific requirements for central clearing counterparties (CCPs) and created an EU trade repository status.

Building on the Markets in Financial Instruments Directive (MiFID) adopted back in April 2004, MiFIR (adopted alongside MiFID II in June 2014) introduced a series of measures aimed at improving market transparency and oversight. Key provisions include public disclosure of trade activity, transaction reporting to relevant authorities, trading of highly standardised and liquid derivatives on organised trading venues, and non-discriminatory access to CCPs and trading venues as well as to benchmarks. This is in addition to the extension of supervisory powers for national authorities, the European Securities and Markets Authority (ESMA) and the European Banking Authority (EBA). The MiFIR also governs the provision of investment services and activities by non-EU firms, as well as the authorisation and supervision of data reporting service providers (DRSPs).¹⁸

Additionally, under the SSR, adopted in March 2012, taking an uncovered position in a sovereign CDS is prohibited unless the position serves a legitimate hedging function. This was designed to prevent market participants from speculating on sovereign debt without having any true interest in the underlying sovereign debt.

Despite these legislative changes and the overall progress made, several episodes of instability linked to derivatives markets have occurred recently, often requiring interventions by public authorities.¹⁹ These episodes have revealed how the structural characteristics of derivatives markets, namely their pronounced concentration (in terms of trading, clearing and liquidity provision) and

¹³ See Financial Stability Board (2023).

¹⁴ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties, and trade repositories (OJ L 201, 27.7.2012, p. 1).

¹⁵ See the article entitled "Derivatives/EMIR" published on the European Commission website.

¹⁶ Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (OJ L 173, 12.6.2014, p. 84).

¹⁷ Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps (OJ L 86, 24.3.2012, p. 1)

¹⁸ Under the amendments introduced by Regulation (EU) 2019/2175 (the ESAs Review Regulation), the operations of certain data reporting service providers have been subject to ESMA authorisation and supervision since 1 January 2022.

¹⁹ See European Securities and Markets Authority (2022).

market illiquidity can contribute to financial instability, as occurred, for instance, during the 2022 European energy crisis.²⁰

The banking turmoil in March 2023 showed how opaque the single-name CDS market remains.²¹ As stated in the letter by the ESMA Chair,²² the events on single-name CDS markets at the end of March 2023 revealed that the market continues to lack transparency and, in consequence, is subject to a high degree of uncertainty and speculation as to the actual trading activity and its drivers. ESMA urged co-legislators to broaden the scope of instruments subject to transparency requirements, provide for more real-time transparency and establish a streamlined deferral regime. As a consequence, the MiFIR Review adopted in February 2024²³ included certain changes, these being discussed later in this report.

Single-name CDSs, which were at the core of the global financial crisis, are an instrument that serves to transfer credit risk. In contrast to the United States, there has, however, been a more limited regulatory progress in the EU on improving post-trade transparency. This report explores the balance between more transparency and maintaining liquidity in the single-name CDS markets.

According to the International Organization of Securities Commissions (IOSCO), enhanced transparency yields several benefits.²⁴ It contributes to mitigate information asymmetries and implicit transaction costs, thereby fostering improved price efficiency within financial markets. Additionally, increased transparency may be conducive to broader market participation, which may result in heightened liquidity and competition, and reduce the potential for regulatory arbitrage and market fragmentation. Furthermore, the availability of comprehensive information facilitates more informed trading and valuation decisions, contributing to the overall robustness and integrity of markets.

In light of the recent market events and the EU regulatory changes referred to above, and given that more than a decade had passed since the post-global financial crisis reforms were enacted, this report aims to review, from a systemic risk perspective, the current EU regulatory framework for CDSs, as shaped by the reforms that followed that crisis, and the functioning of the CDS market. It will also analyse whether refinements of the regulatory framework or other policy actions are needed. The analytical part of the report reviews trends and developments in CDS markets, focusing on market microstructure, as well as on the role of CDSs in credit markets.

²⁰ In relation to the European energy crisis, see European Securities and Markets Authority (2023a), or Draghi, M. (2024), pp. 43-44. For a more detailed analysis of the EU natural gas derivatives markets, see European Securities and Markets Authority (2023b)

²¹ See Basel Committee on Banking Supervision (2023).

²² See the letter entitled *MiFIR review – transparency regime for single name-CDS and standardised OTC-derivatives*, sent by ESMA Chair, Verena Ross, to ESMA, dated 2 June 2023.

²³ Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimising the trading obligations, and prohibiting receiving payment for order flow (OJ L, 2024/791, 8.3.2024).

²⁴ IOSCO (2015).

The report presents several analytical findings.

A key trend in CDS markets over the past 15 years has been the significant decline in outstanding notional amount, from a peak of approximately USD 60 trillion in 2007 to around USD 10 trillion by 2023. This reduction can primarily be attributed to factors such as trade compression and central clearing. Trade compression has played the largest role in this decline. Consequently, the lower notional amounts should not necessarily be interpreted as a reduction in net risk transfers. In addition, other structural developments in the CDS market include the process of standardisation, the trading obligation for index CDSs²⁵ and the expansion of central clearing. Furthermore, CDS markets are subject to enhanced data reporting requirements.

A second notable aspect of the CDS market is the persistently low trading volumes, in terms of both notional amounts and the number of trades. Since 2014, the average daily trading volumes for single-name CDSs have remained stable at around USD 16 million, with, on average, two trades per day per reference entity. In contrast, index CDSs have dominated overall trading volumes, with highly cyclical activity and averaging around USD 890 million traded daily and approximately 25 trades per day. Trading volumes tend to spike during periods of elevated risk, as observed during the European sovereign debt crisis (2010-2014) and more recently during the global banking turmoil in March 2023. A significant portion of these trades are, however, related to post-trade activities (such as clearing and compression) and risk management activities (such as intragroup risk transfers). Consequently, the number of trades contributing to price formation is even lower than the total trading volume may indicate.

Third, in terms of market infrastructure, most single-name CDSs continue to be traded OTC. The daily average on-venue trading volume remains low, at approximately €22 million, concentrated across two organised trading facilities (OTFs). Furthermore, single-name CDSs are not predominantly centrally cleared, with clearing averaging only 34% between 2021 and 2023, based on aggregated statistics. By contrast, standardised index CDSs are cleared through central counterparties (CCPs), with approximately 70% of investment-grade corporate index CDSs, i.e. most trading activity, being cleared. Using transaction-level data to calculate the clearing rate, less than 30% of the gross notional amount of EU G-SIB CDS, and slightly more than 20% of sovereign CDSs, are centrally cleared.

Fourth, the market microstructure exhibits a high degree of concentration among counterparties, particularly in single-name CDS contracts. On average, over the period 2018 -2024, only 13 counterparties are active in daily single-name CDS trading on selected European banks, compared with 160 counterparties for main index CDSs. Nevertheless, the average number of counterparties involved in

²⁵ See Section 2.1 for an explanation of index CDSs.

each single-name CDS is slightly higher, at 62, indicating a somewhat broader participation relative to the concentration of dealer positions.

Finally, even if single-name CDS prices are based on only a few trades per day, they play a critical role in the broader financial system. Beyond their direct use in financial regulation, such as in the EU Capital Requirements Regulation (CRR),²⁶ CDS prices serve as key inputs in various financial decision-making processes. Specifically, they are used as: (i) a proxy for counterparty credit risk; (ii) a gauge of market risk; and (iii) inputs for a range of front-office pricing models.

Additionally, there are several observations from regulatory and policy standpoints.

A large portion of CDS contracts remains outside the scope of the post-trade transparency requirements introduced in the EU through the post-global financial crisis reforms and more recent regulatory updates. This is largely owing to the fact that the post-transparency rules under the revised MiFIR cover only centrally cleared contracts and contracts traded in trading venues or by investment firms. Single-name CDSs remain outside the scope of the clearing and trading obligations. Furthermore, a significant proportion of single-name CDSs referencing EU entities is not centrally cleared and is traded outside the EU. Consequently, this leaves significant segments of the market outside of the post-trade transparency regime.

Yet another major challenge for EU authorities is that they currently lack detailed information on CDS trades and exposures involving non-EU counterparties, even when these contracts reference EU entities, including G-SIBs and sovereigns. Given the global nature of the CDS market, enhanced cross-border cooperation is essential to obtain the relevant granular information – especially for CDSs referencing G-SIBs and sovereigns.

We also find that critical data elements, such as unique identifiers for underlying reference obligations, are not fully adopted in the current EU reporting framework. In addition, after recent amendments to the EMIR reporting framework, information on contract valuations and variation margins for certain derivatives is often incoherent or absent, which impairs effective monitoring of risk transfers and margin calls.

Timely access to high-quality, standardised data is a sine qua non condition for effective CDS market monitoring. However, more than a decade after the entry into force of the reporting requirements under Article 9 of EMIR, pervasive data quality issues persist, hampering supervisory efforts to maintain a comprehensive view of market dynamics.

In terms of market structure, our analysis shows that the single-name CDS market is characterised by limited demand and supply of credit protection with

²⁶ Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p. 1).

a high concentration of market participants, both in terms of market liquidity providers and end-customers. This imbalance reduces competition and may increase systemic risk, given that the market's resilience and liquidity could be compromised if a few dominant players were to face financial stress or withdraw from the market.

Fragmented liquidity, a high degree of market concentration and incomplete real-time data create challenges for monitoring single-name CDS markets. The decentralised and concentrated OTC structure increases the risk of sudden liquidity shortages and potential liquidity issues, which can exacerbate market volatility during periods of stress.

Finally, CDS spreads are widely used as a reference for credit risk assessment and regulatory decision-making, yet we find that they are derived from a market that is low in volume, illiquid and highly concentrated. Excessive reliance on these price signals without an improved market and supervisory transparency regime can lead to misinterpretations of creditworthiness and contribute to systemic vulnerabilities and procyclical effects during periods of financial stress.

The analytical findings set out above highlight that several market imperfections, such as concentration, illiquidity and information asymmetries, exist in the single-name CDS market. In this regard, three policy objectives seem key:

- policy objective 1: improve market functioning and liquidity;
- policy objective 2: enhance market transparency;
- policy objective 3: obtain better information for oversight.

In order to address these objectives, the report proposes the following four policy measures.

Policy proposal 1: Enhance post-trade market transparency on single-name CDSs (relates to policy objectives 1 and 2)

- Adjust the EU's post-trade market transparency regime to apply, as a minimum, to single-name CDSs on EU G-SIBs and EU sovereigns, regardless of whether they are centrally cleared and how they are traded.

Policy proposal 2: Strengthen supervisory access to information through improved quality and standardisation of data reported as well as enhanced global cooperation (relates to policy objective 3)

- Improve the quality and standardisation of data reported to supervisors.
- Enhance global cooperation on information and data sharing amongst authorities in relation to CDS markets.

- Develop a real-time monitoring tool for CDS markets to enable timely macroprudential interventions during periods of systemic market stress.

Policy proposal 3: Promote the efficiency and functioning of the single-name CDS market (relates to policy objective 1)

- Identify and address structural factors limiting demand, supply and competition in the single-name CDS market.

Policy proposal 4: Improve credit risk assessment frameworks by reducing excessive reliance on CDS spreads and raising awareness of the price formation mechanisms (relates to policy objectives 2 and 3)

- Policymakers, market participants and other stakeholders should deepen their understanding of, and consider the structural limitations associated with, single-name CDS pricing, particularly under conditions of market stress. It is essential that account is taken of these limitations in order to support more informed and accurate interpretations of the role of CDSs as an indicator of credit risk.

The proposed policies constitute a medium-term roadmap intended to improve the functioning of the single-name CDS market and address systemic risks. In the near term, actions to be taken include strengthening supervisory access to information by enhancing the quality and standardisation of reported data, as well as increasing global cooperation (policy proposal 2). Subsequently, increased post-trade market transparency on single-name CDSs should be pursued (policy proposal 1). Over the medium term, ongoing efforts should aim to further develop the single-name CDS market while also assessing any potential rise in systemic risks owing to greater market activity. It is essential for policymakers, market participants and other stakeholders to recognise the inherent limitations of credit risk assessments based on an illiquid and concentrated market.

Recognising the need for simplification and regulatory efficiency, the proposed policies strive for better and more efficient regulation rather than an increase in regulation.

The remainder of the report is organised as follows. Sections 2 and 3 present a quantitative analysis of CDS market trends and market microstructure respectively. **Section 4** gives an overview of the EU regulatory framework for CDSs and provides a high-level comparative analysis with the UK and US regulatory frameworks. **Section 5** presents policy considerations, while **Section 6** concludes.

2 CDS market trends

2.1 Credit default swaps: characteristics and use

CDSs are credit derivatives involving two counterparties and have evolved in terms of characteristics, use and standardisation over time. In simple terms, the protection buyer makes regular payments to the protection seller and, in return, receives a payoff if an underlying financial instrument defaults or experiences a predefined credit event. The CDS may refer to a specified loan or bond obligation of a reference entity, usually a corporation or government. The protection buyer makes regular premium payments to the protection seller, with the premium (usually expressed as a spread in basis points on the notional amount) reflecting the cost of credit protection against a specified credit event.²⁷

CDSs are therefore financial derivative instruments that function as a form of a credit risk transfer between two counterparties. In a CDS, three distinct parties are involved, two of which engage directly in the transaction (the protection seller and protection buyer), while the third plays an indirect but crucial role. The reference entity, the third party, does not participate in the contract but serves as the underlying entity whose creditworthiness (as assessed by the occurrence of a so-called credit event) determines the contract's outcome. While the contractual structure bears similarities to an insurance agreement, it differs fundamentally in its detachment from direct credit exposure and its broader set of default-related triggers, which extend beyond conventional insolvency definitions.

Two distinguishing characteristics set CDSs apart from traditional credit instruments.

The absence of a direct credit exposure requirement. CDS contracts are structured so that counterparties can assume credit risk exposure without necessitating ownership (at any point in time) of the underlying debt instruments issued by the reference entity. This decoupling of exposure from asset ownership enables what is commonly referred to as synthetic exposure, a mechanism by which investors can simulate the risk and return profile of a credit position through derivative instruments rather than through direct holdings of long or short positions in bonds or loans. Such synthetic exposure facilitates both speculative and risk management strategies. For instance, the purchase of CDS protection (functionally analogous to a short position on the creditworthiness of the reference entity) allows

²⁷ Credit default swaps (CDSs) are derivative instruments intended to transfer the credit risk associated with a specific underlying entity or instrument. In a typical CDS, the buyer of protection enters into a contract with the seller of protection and pays regular premiums, which are in principle determined by the creditworthiness of the reference entity. The seller assumes the obligation to compensate the buyer should a defined credit event, such as default, occur. These contracts may be settled either by the physical delivery of the relevant debt instrument at its face value (physical settlement), or by paying the difference between the par value and the market value (cash settlement). Single-name CDSs pertain to a single underlying entity, while index CDSs cover multiple entities. The cost of protection for index CDSs is affected by the degree of correlation in the likelihood of credit events among the entities involved.

market participants to profit from adverse credit events (e.g. default or restructuring) without holding the reference entity's obligations. In this regard, the protection buyer does not engage in a hedging activity, but rather in a directional speculative bet on deteriorating credit quality. Conversely, the sale of CDS protection enables the seller to replicate a long credit position by assuming contingent liability in the event of a credit event, mimicking the economic exposure associated with owning the reference entity's debt. Importantly, while these synthetic positions can mirror the payoff structures of actual credit holdings, they do not involve any transfer of the underlying instruments and, as such, do not necessarily constitute a hedge of a pre-existing credit exposure. Nonetheless, CDS contracts may be employed as proxy hedging instruments in situations where no direct CDS exists for a given reference entity. In such cases, market participants may hedge credit exposure by taking positions in CDS contracts on correlated entities or credit indexes, introducing basis risk, i.e. the risk that the hedge will not perfectly offset the underlying exposure owing to divergence in credit performance between the proxy and the underlying entity.

Contractual determination of credit events. Unlike traditional credit instruments where default is typically determined by insolvency laws or legal bankruptcy proceedings, a CDS payout is triggered by specific credit events as defined contractually within the International Swaps and Derivatives Association (ISDA) CDS documentation.²⁸ Credit events may include, but are not limited to, bankruptcy, failure to pay, restructuring or any other significant credit deteriorations stipulated in the agreement. The legal clarity of these events is crucial in maintaining contract enforceability and market integrity. A key institutional feature of the CDS market is the existence of a Determinations Committee (DC), an independent adjudicatory body responsible for assessing and confirming whether a credit event has occurred.²⁹ The DC's ruling is binding and serves to enhance market transparency, ensuring consistency in credit event adjudication while mitigating disputes among market participants.

This has several implications. CDS contracts play a role in global credit markets by facilitating risk redistribution and enabling investors to hedge or speculate on credit risk. CDS contracts do not require the protection buyer to hold any direct exposure to the reference entity's obligations. Their ability to decouple credit risk exposure from actual ownership of debt obligations introduces both benefits and risks. On one hand, CDSs enhance market efficiency by providing liquidity and alternative risk management mechanisms. On the other hand, they may contribute to systemic risk, particularly during periods of financial stress when rapid credit risk repricing can exacerbate market volatility and counterparty risk. Moreover, a critical issue arises in situations where neither the two contracting parties (which can potentially be also members of the DC) holds direct exposure to the reference entity.

²⁸ See [ISDA CDS Standard Model](#) for detailed documentation and resources on standard contract specifications, model documentation and archived versions used for pricing CDSs.

²⁹ Credit Derivatives Determination Committees are specialised panels established regionally to adjudicate credit events, determine settlement prices for credit derivatives, such as CDSs, and resolve related disputes. Currently, DCs exist in the Americas, Asia (excluding Japan), the Australia-New Zealand region, the Europe, the Middle East and Africa region and Japan. They are composed of representatives from major financial institutions – including banks and investment firms – and work under a framework coordinated by ISDA.

This detachment can create a scenario in which a credit event³⁰ is declared, based on the contractual definitions of the CDS, even in the absence of a concrete default under insolvency laws or formal bankruptcy proceedings.

In such cases, the declaration of a credit event or an increase in CDS prices may have significant market implications for the reference entity, notably by influencing investor perception of its creditworthiness, increasing its borrowing costs and exacerbating market stress. The mere announcement of a credit event can trigger adverse market reactions, such as widened credit spreads, stock price declines or increased refinancing difficulties, even when the entity remains solvent under legal definitions. In some cases, if the reference entity is a sovereign country or a G-SIB, this may impact the financial markets and raise financial stability concerns. These dynamics underscore the broader market impact of CDS contracts, in that such credit risk transfer mechanisms can contribute to self-fulfilling liquidity crises that affect entities that might not otherwise have defaulted.

Moreover, CDS spreads are frequently used to derive implied default probabilities, serving as key indicators of market expectations of credit risk. However, it is essential to recognise that CDS contracts are contingent on credit events as defined within the CDS contractual framework, rather than on formal insolvency or default as determined by bankruptcy laws.

Consequently, the implied default probabilities extracted from CDS spreads reflect the market-implied probability of a credit event being recognised by the DC, rather than the probability of an actual default under the relevant legal framework. This distinction is particularly significant because the scope of credit events under CDS contracts extends beyond traditional insolvency, encompassing restructuring, failures to pay and other events that may not constitute legal default under the national legal insolvency framework governing the reference entity. As a result, CDS-implied default probabilities may, at times, overestimate or underestimate actual credit risk, particularly in cases where the contractual definition of a credit event diverges from conventional insolvency criteria. Additionally, market conditions, liquidity constraints and investor sentiment can further distort these probabilities, making them an imperfect proxy for true default risk. Understanding this discrepancy is crucial for both investors and policymakers, given that reliance on CDS-implied default probabilities without accounting for the nuances of credit event definitions may lead to misinterpretations of an entity's financial stability and systemic risk assessments.

Moreover, despite the vital role that DCs play in adjudicating credit events and managing CDS settlements, concerns have been raised about the opacity of their operations, potential conflicts of interest and limited public accountability. These issues are highlighted in the 2024 Linklaters report analysing the functioning, governance and membership of the credit derivatives determinations committees that was conducted at the request of the ISDA.³¹ Given the influence of

³⁰ The scope of credit events under CDS contracts extends beyond traditional insolvency, encompassing restructuring, failures to pay and other events that may not constitute legal default under the national legal insolvency framework governing the reference entity.

³¹ Linklaters (2024).

DC decisions on markets and their stability, it is essential to have a transparent, accountable and independent DC process that ensures fair decision-making and accurately reflects the credit worthiness of the reference entity.

CDSs serve a central role in risk management and price discovery within credit markets, traditionally functioning as instruments for hedging credit exposures.

Over time, however, the motivations for engaging in CDS transactions have evolved, encompassing strategies with markedly different implications for credit risk redistribution. In particular, CDS contracts enable market participants to synthetically replicate either long or short credit positions on the underlying reference entities.

Accurately identifying these trading motives is empirically challenging, owing to the necessity of detailed, position-level data across multiple asset classes to capture the full composition of institutional portfolios.

Henricot and Piquard (2023)³² leverage granular data on CDSs and debt exposures to classify market participants into hedgers, speculators and arbitrageurs, each with distinct implications for credit risk reallocation. Hedging accounts for 19% of CDS purchases and is primarily shock-driven, while speculation (comprising 73% of CDS purchases and nearly all selling) facilitates short credit positions in the presence of short-selling frictions. D'Errico et al. (2018) document the fact that hedge funds predominantly assume short credit risk positions by purchasing CDSs, while asset managers typically take on credit exposure through CDS sales.³³ Aldasoro and Barth (2017)³⁴ find that banks use the CDS market for position-taking purposes, effectively doubling their exposure to certain credit risks rather than mitigating them. Analysing CDS trades on firms to which banks are exposed through syndicated lending, they find no evidence that banks use CDSs to reduce regulatory risk-weighted capital ratios, suggesting that CDS activity is not primarily driven by capital relief motives.

In theoretical pricing models, CDSs may be considered redundant given that credit risk can be replicated through dynamic trading in bonds and risk-free assets.

However, in practical settings characterised by market frictions and incomplete markets, CDSs can serve as instruments for isolating and trading credit risk independently of other risk components embedded in bond positions. The underlying intuition is that an investor holding a relatively liquid bond may mitigate exposure to credit risk by partially or fully liquidating the position, potentially reducing the role for CDSs. Oehmke and Zawadowski (2015) propose a model in which CDSs are non-redundant, grounded in the empirically observed fact that bond trading incurs significantly higher transaction costs than CDS trading. Building on this premise, they develop a framework that captures the strategic interaction between bond and CDS markets under trading frictions that render direct bond sales suboptimal.

³² See Henricot, D. and Piquard, T. (2023).

³³ See D'Errico, M. et al. (2018).

³⁴ See Aldasoro, I. and Barth, A. (2017).

2.2 Analytical focus and data sources

Chapters 2 and 3 set out a comprehensive analysis of trends in CDS markets, examining both their structural characteristics and microstructure dynamics.

This analysis leverages multiple datasets, each capturing distinct dimensions of market activity and intermediation, providing a nuanced understanding of market functioning, liquidity provision and risk transmission mechanisms. The current Chapter provides a detailed analysis of the aggregate market dynamics, tracing the evolution of key indicators such as outstanding contract amounts, trading volumes and the role of central clearing.

From an aggregate perspective, the CDS market has undergone profound structural changes since the 2008 global financial crisis, driven by regulatory reforms and evolving market dynamics. Before the crisis, the market experienced rapid growth in total outstanding notional amounts which peaked at USD 60 trillion in 2007. By 2023, however, this figure had contracted significantly to below USD 10 trillion. Within this evolving landscape, multi-name CDSs (particularly index products) have increased their relative prominence, with their share of outstanding notional amounts rising from 20% in 2004 to 60% in 2023. Concurrently, sovereign CDSs have gained significance within the single-name CDS segment. From 3.3% in 2004, their share of outstanding notional amounts peaked at 35% in 2018, before stabilising at approximately 25% by 2023.

However, aggregate gross notional amount does not provide an accurate measure for evaluating risk exposure and market liquidity in the CDS market.

This metric may overstate actual risk transfer owing to offsets, potential for compression and netting arrangements, necessitating a more in-depth approach to assessing market dynamics. The observed decline in notional amounts is primarily attributable to post-trade optimisation techniques, such as portfolio compression and, secondarily, to the adoption of central clearing,³⁵ particularly within the index CDS segment. Conversely, single-name CDSs, especially those referencing G-SIBs and sovereign entities, remain largely uncleared.

Trading activity in the CDS market exhibits cyclicity, which increases during periods of heightened financial risk. Investment-grade corporate CDSs dominate the index segment, which accounts for approximately 80% of total trading activity, while sovereign CDSs represent the most actively traded instruments within the single-name CDS market. The average daily traded notional amounts have shown considerable variation, reaching a peak of USD 190 billion in 2022. The figure for single-name CDS trading remains substantially lower, averaging USD 19 billion per day between the first quarter of 2010 and the third quarter of 2023. Specifically, in 2011, single-name CDS trading averaged USD 37 billion per day but gradually declined, reaching a low of USD 6 billion in 2020. Since then, the market has shown signs of recovery, with trading activity progressively increasing to an average of USD 17.5 billion in 2023.

³⁵ See Aldasoro, I. and Ehlers, T. (2018).

The CDS market structure is shaped by the dynamics of risk transfers between market participants, evolving through interactions between buyers and sellers of credit risk. As described by D'Errico et al. (2018), the CDS market exhibits a so-called bow-tie network architecture. This structure is marked by three key groups: ultimate risk sellers (URs) (typically hedge funds and other entities, who ultimately take short positions on the underlying credit risk by buying credit protection); dealers (who act as intermediaries by connecting risk sellers with buyers while maintaining relatively low net exposure); and ultimate risk buyers (URBs) (often large asset managers, who ultimately hold credit risk). The flow of credit risk through this bow-tie network architecture results in a high concentration of trades and exposures among a limited number of key intermediaries. This concentration is mirrored in the structure of market liquidity provision, where a few central players dominate liquidity supply. Such a configuration, while potentially enhancing efficiency through economies of scale, also introduces systemic vulnerabilities: disruptions among key intermediaries can propagate throughout the financial system.

Not all transactions in the CDS market contribute equally to price formation.

While trading volume is often used as a proxy for market activity and liquidity, this metric can be misleading if it does not take into account the nature of the trades involved. Specifically, certain transactions, such as post-trade transactions resulting from clearing and compression, are primarily operational and do not, at least in principle, exert a significant influence on price discovery. These trades are typically associated with post-trade risk management practices and thus do not necessarily convey new information about credit risk to the market. The existence of non-price-forming trades raises questions about the interpretation of volume data and its correlation with market dynamics. Recognising these aspects is essential for market participants and regulators, who rely on volume indicators to assess liquidity.

To address this issue, in Section 3 we use two methodological approaches that leverage granular transaction data to classify trades based on their contribution to price formation. These methodologies are designed to differentiate between trades that tend to convey fundamental market information and those driven by other factors. By refining trade classification, we aim to construct a more accurate depiction of market activity, ensuring a representation that better captures the true supply and demand dynamics for credit protection.

CDSs have been the subject of significant reforms aimed at increasing transparency. This report leverages three key data sources to shed light on CDS activities:

- the Bank for International Settlements (BIS) OTC derivatives statistics, which provide an overview of outstanding amounts (stock level, open positions) globally;
- the Depository Trust & Clearing Corporation (DTCC) aggregated risk transfer transactions data, which detail transactions (flow level, daily trades) on a global scale;

- EMIR-based reporting data, which offer both stock and flow-level information about transactions involving at least one EU-based counterparty.

Each data source comes with its own strengths and limitations, capturing different aspects of CDS market developments. The BIS data provides a macro-level perspective, capturing broad trends in global derivatives markets. The DTCC data provides aggregate transaction-flow statistics, offering deeper insights into market liquidity and trading activity. The granularity of EMIR reporting data facilitates detailed insights into the EU CDS market, enabling both macro-level analysis of aggregate trends and examination of market microstructure. This section and Section 3 combine these diverse sources to facilitate a comprehensive analysis.

This multi-faceted data approach has two significant implications. Analytically, the reconciliation of different information sources poses a challenge, given that they often describe the same market phenomena but are not directly comparable. For EU authorities, this fragmented data landscape results in an incomplete picture of CDS market trends, particularly those that impact their jurisdictions, such as CDSs written on EU sovereign entities or EU G-SIBs. For instance, CDS contracts traded between non-EU counterparties on EU reference entities remain outside the purview of EU authorities, creating a substantial data gap that hinders effective monitoring and risk assessment.

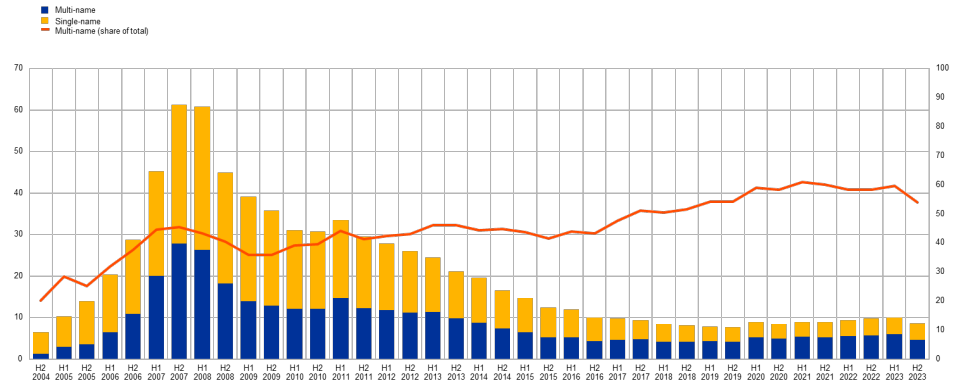
2.3 Outstanding volumes

The structure of the CDS market has undergone significant changes since the global financial crisis, driven both by regulatory interventions and by evolving market practices. Before the global financial crisis of 2008, the outstanding notional amount of CDSs surged, peaking at around USD 60 trillion in 2007, largely fuelled by a rapid increase in both single-name and multi-name CDS contracts. However, following the crisis, the outstanding notional amount has contracted sharply, with the total notional amount gradually declining to just under USD 10 trillion by 2023. Notably, the share of multi-name CDSs, primarily composed of index products, has grown, rising from 20% of the total market in 2004 to 60% in 2023 (Chart 1).

Chart 1

Gross notional amounts outstanding for the global CDS market

(USD trillions)

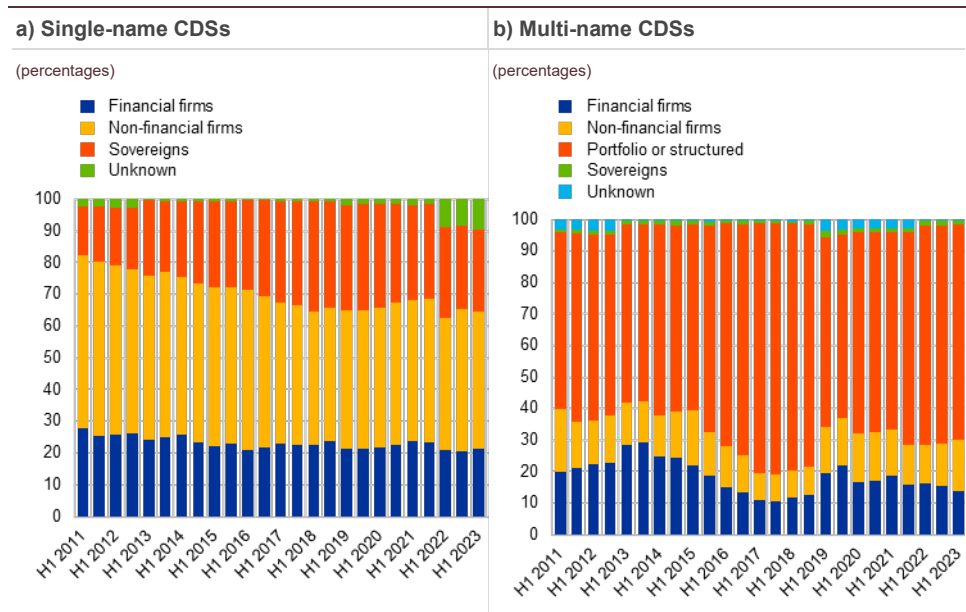


Sources: BIS over-the-counter derivatives statistics and European Systemic Risk Board calculations.

The share of sovereign CDSs in the single-name market has grown since the global financial crisis, peaking at 35% in 2018, while the shares of single-name CDSs referencing financial and non-financial entities have remained relatively stable since 2008 (Chart 2). From the end of 2023, the majority of outstanding multi-name CDSs have referenced debt portfolios or structured products, including asset and mortgage-backed securities. The remainder primarily reference financial and non-financial corporations, while the proportion of multi-name sovereign CDSs has remained marginal.

Chart 2

Composition of the outstanding notional amounts for the global CDS market by reference entity sector



Sources: Bank for International Settlements (BIS) over-the-counter derivatives statistics and European Systemic Risk Board calculations. Notes: "Unknown" refers to cases where certain national authorities did not report sector details to the BIS.

Crucially, a reduction in the aggregate gross notional amounts outstanding does not necessarily indicate a decline in market activity, given that two key drivers of distinct natures significantly influence the dynamics of gross notional values. The first driver is the increased use of post-trade optimisation techniques, such as portfolio compression, which reduces the gross notional amount outstanding by removing offsetting positions while maintaining net positions within certain tolerances. The second driver is the rise of central clearing, which centralises counterparty risk and can lead to more efficient management of outstanding positions.

The main driver of the post-crisis contraction has been the increased use of post-trade portfolio compression, which reduces outstanding notional amounts while preserving net positions.³⁶ Portfolio compression, an optimisation technique that leverages multilateral netting opportunities without necessarily requiring a CCP, can significantly reshape the size and structure of derivatives markets. This process reduces the gross notional amount of derivatives contracts and reconfigures the market by removing offsetting positions among multiple counterparties. The tightly knit and concentrated nature of CDS markets makes them particularly susceptible to the impacts of compression activities. Empirical evidence suggests that portfolio compression can reduce outstanding gross notional amount by as much as 80%, highlighting its substantial influence on aggregate market trends.³⁷

2.4 Trading activity

Over the past decade, CDS trading activity has exhibited procyclical patterns, intensifying during periods characterised by higher market risk. Trading activity, measured in terms of both notional amounts traded and number of new trades, was high from 2010-2014 and 2017-2019, peaking at USD 160 billion and USD 150 billion respectively (Chart 3, panel a). Trading activity picked up again in 2020, when the average daily traded notional increased from around USD 50 billion to an all-time high of USD 190 billion in the second quarter of 2022, before sliding back to USD 90 billion by the fourth quarter of 2023. This cyclical pattern is evident across both single-name and multi-name CDS instruments, as well as across various underlying sectors. However, daily trading volumes in CDS markets remain relatively modest compared with the principal amounts of the underlying referenced debt obligations.

Index CDSs make up most of the total trading activity in the CDS market, averaging a daily traded notional of USD 75 billion between the fourth quarter of 2010 and the fourth quarter of 2023. Trading activity in index CDSs has been cyclical, surging in times of crises, and has increased its share of the CDS market as a whole from 70% to 80% since the fourth quarter of 2010. A similar pattern is observed in the share of average daily trades, which increased from 25% to 65%

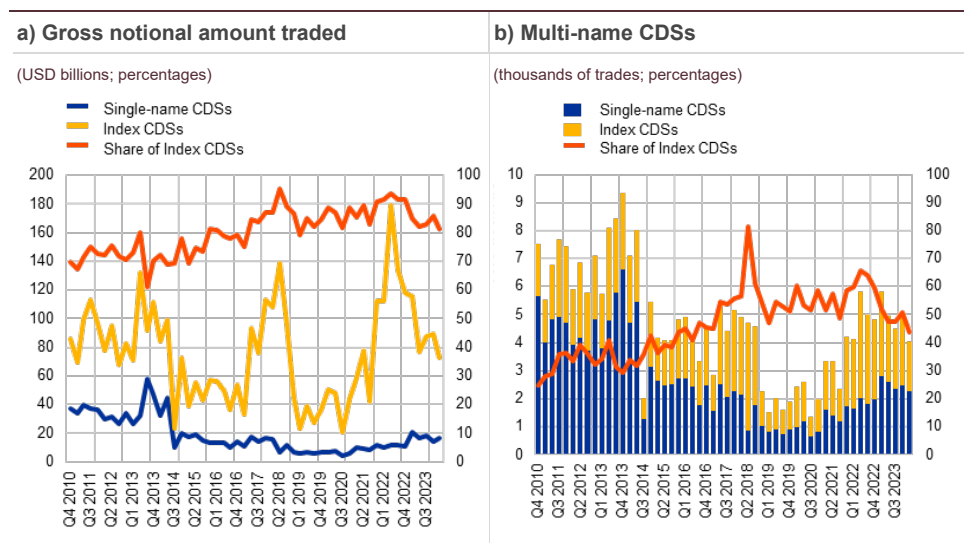
³⁶ See Aldasoro, I. and Ehlers, T. (2018).

³⁷ See D'Errico, M. and Roukny, T. (2020).

over the same period, before stabilising at around 45% (Chart 3, panel b). The average daily traded notional of single-name CDSs was USD 19 billion in the period from the fourth quarter of 2010 to the fourth quarter of 2023. Sovereign CDSs are the most traded single-name CDSs, with an average daily traded notional amount of around USD 4 billion in 2023. Single-name CDSs written on financials had an average daily traded notional of around USD 3 billion (Chart 4, panel a). Investment-grade corporate CDSs dominate the index CDS market trading activity, accounting for an average of 70% of daily traded notional amounts of index CDSs between the fourth quarter of 2010 and the third quarter of 2023 and an average daily traded notional amount of USD 66 billion in 2023 (Chart 4, panel b).

Chart 3

Daily trading activity on the global CDS market

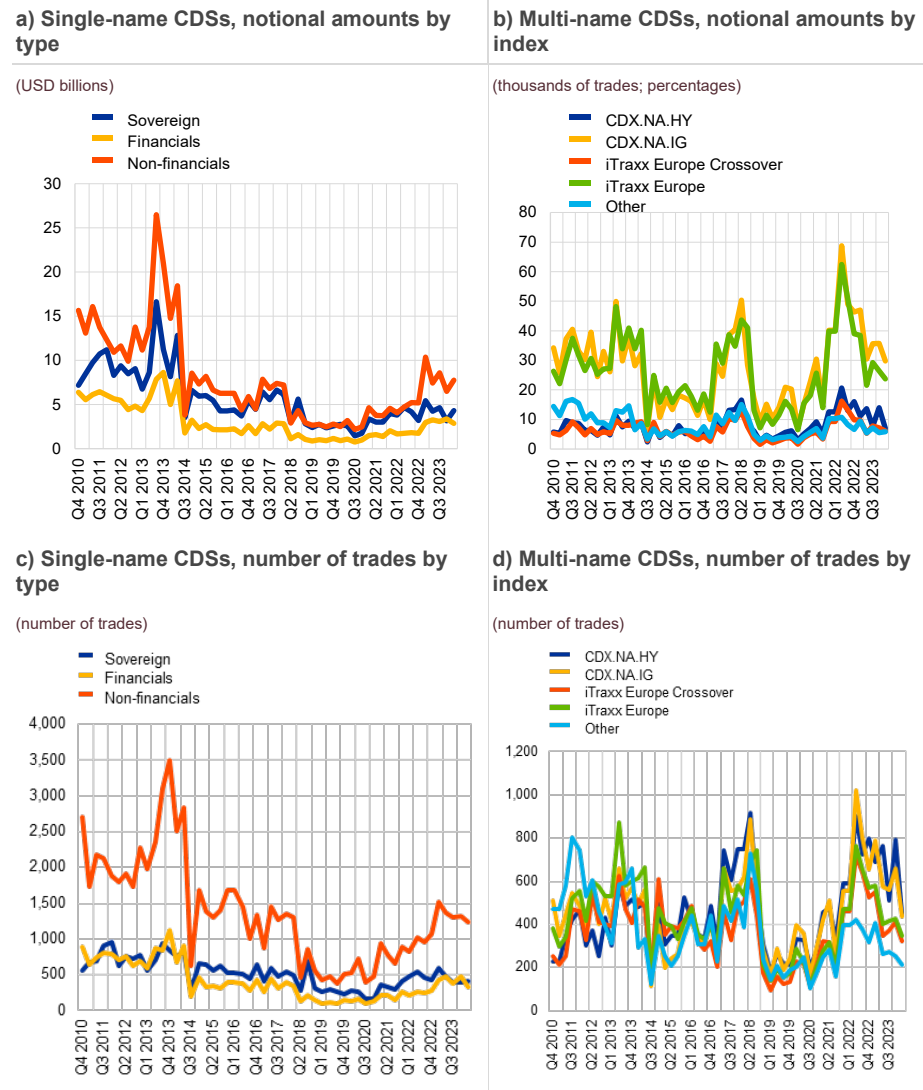


Sources: Depository Trust & Clearing Corporation.

Notes: Quarterly average of the daily number of new CDS trades and their associated gross notional amounts.

Chart 4

Daily trading activity on the global CDS market by reference entity sector



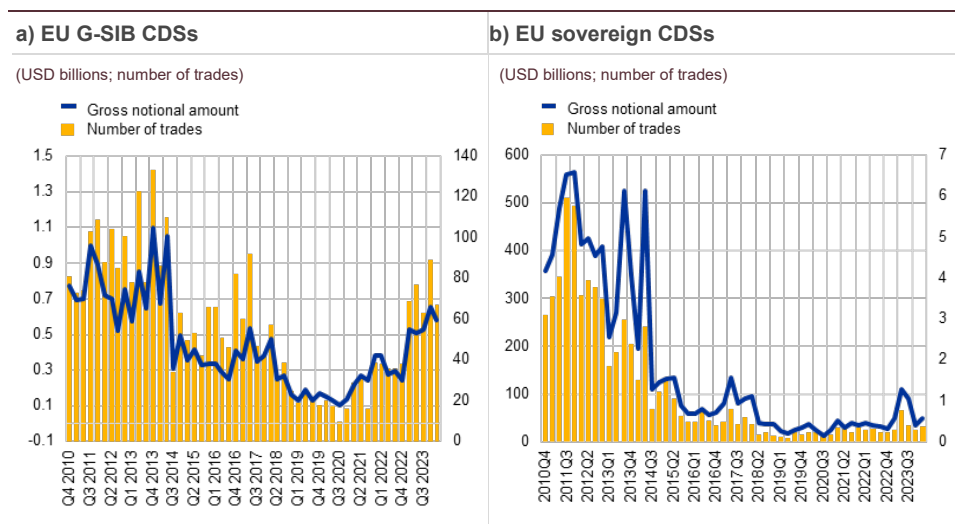
Sources: Depository Trust & Clearing Corporation.

Notes: Panels a) and c) include all sovereigns and all financial and non-financial companies globally. Panels b) and d) show the four most traded index CDSs and the rest of the multi-name market aggregated. The CDX.NA.IG and iTraxx Europe indexes comprise the most liquid investment-grade corporates, while the CDX.NA.HY and iTraxx Europe Crossover indexes comprise the most liquid high yield corporates, in North America and Europe respectively.

Trading activity for CDSs referencing EU G-SIBs and EU sovereigns has experienced a partial and gradual decline since 2010. Average daily traded notional of EU G-SIBs CDSs decreased from USD 1 billion USD and 100 trades a day in the fourth quarter of 2010 to USD 0.5 billion and 60 trades in the fourth quarter of 2023 (Chart 5, panel a). The average daily trading activity of EU sovereign CDSs decreased from a traded notional of around USD 3 billion and 350 trades in the fourth quarter of 2010 to USD 0.3 billion and 50 trades in the fourth quarter of 2023 (Chart 5, panel b).

Chart 5

Daily trading activity in CDSs referencing EU G-SIBs and EU sovereign entities on the global market



Source: Depository Trust & Clearing Corporation.

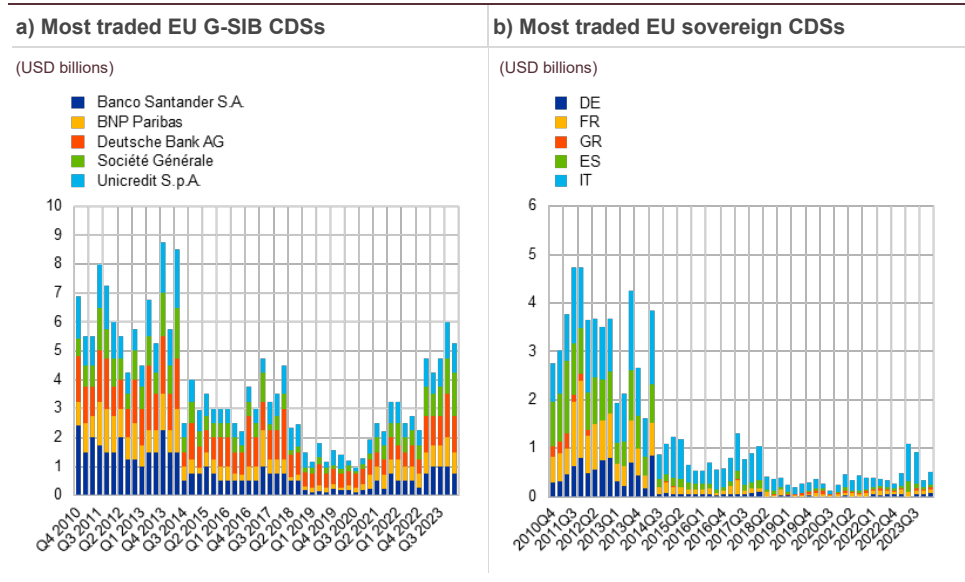
Notes: Panel a) is based on the following reference entities: Banco Santander S.A., BNP Paribas, Credit Agricole S.A., Deutsche Bank AG, ING Bank N.V., Société Générale, and UniCredit S.p.A. Panel b) is based on the following reference entities: all EU sovereign states, other than Estonia, Cyprus, Luxembourg and Malta.

Even the most traded reference entities for EU G-SIBs and EU sovereigns exhibit low trading volumes and frequency. Among CDSs referencing EU G-

SIBs, the Deutsche Bank CDS is the most traded, with an average daily traded notional of USD 99 million and 13 trades per day over the period from the fourth quarter of 2010 to the fourth quarter of 2023 (Chart 6, panel a). Although trading activity in EU G-SIBs picked up again in the first quarter of 2021, EU sovereign CDS trading has remained at low levels. CDSs referencing Italy are the most traded amongst CDSs referencing EU sovereigns, with an average daily traded notional of USD 571 million and 13 trades per day in the same period (Chart 6, panel b). By contrast, most EU sovereign CDSs are traded about 5 to 7 times a day.

Chart 6

Daily trading activity of the five most traded CDS contracts referencing EU G-SIB and EU sovereign entities on the global CDS market – Notional amounts



Source: Depository Trust & Clearing Corporation.

Notes: The chart displays the five most traded CDS contracts by reference entity based on average daily traded gross notional amounts. The top five entities in each category were identified using data for the period from the fourth quarter of 2010 to the first quarter of 2024.

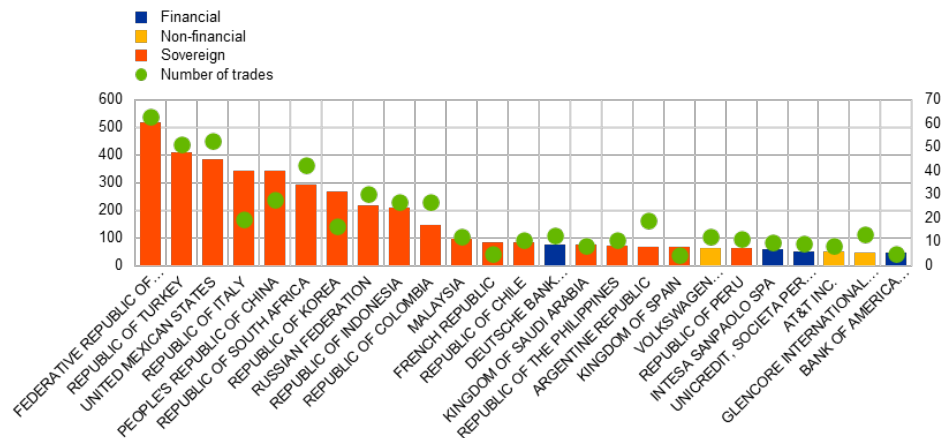
CDSs referencing sovereign entities are the most traded single-name CDS contracts globally (Chart 7, panel a). Over the 2014-24 sample period, CDSs referencing Brazil, Turkey and the United States were the most traded single-name sovereign CDS contracts at global level. Italy is, however, the most traded EU sovereign at global level, ranking fourth, while France and Spain come twelfth and eighteenth respectively, indicating lower trading volumes for most European sovereigns compared with non-European sovereigns. Among EU G-SIBs, CDSs referencing Deutsche Bank are the most traded (ranking 14th overall), with five of the top seven most traded G-SIBs being European. This suggests that European G-SIBs experience higher trading volumes than non-European G-SIBs.

Chart 7

Daily trading activity on the global CDS market for the 25 most traded reference entities

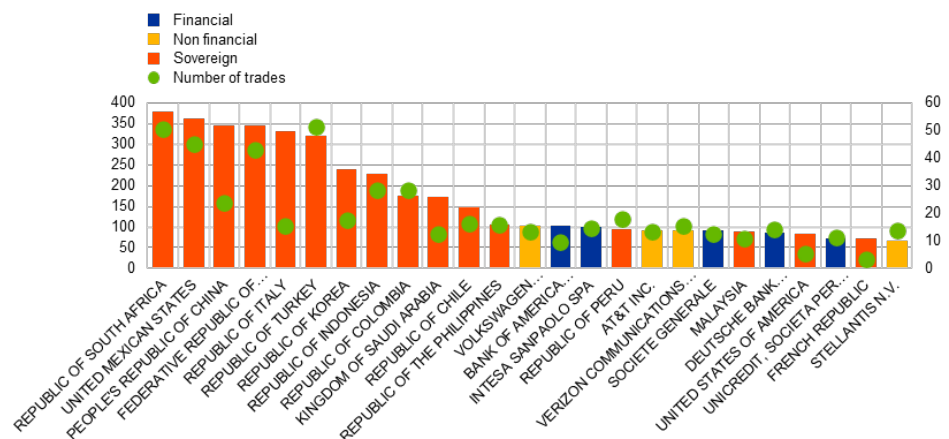
a) 2014-24

(USD millions; trades)



b) Quarter 1 of 2023 to quarter 3 of 2024

(USD millions; trades)



Sources: Depository Trust & Clearing Corporation.

Despite shifts in the most actively traded sovereign CDSs, the overall market structure has remained stable in recent years. Data from the first quarter of 2023 to the third quarter of 2024 show that CDS contracts referencing South Africa, Mexico and China are the single-name sovereign CDSs most traded globally over the past two years (Chart 7, panel b). CDSs referencing Italy continue to be the most actively traded among EU sovereigns, ranking fifth globally, with an average daily notional amount traded of USD 330 million and an average of 16 trades per day. Among EU G-SIBs, Société Générale, Deutsche Bank and UniCredit hold the third, fourth and fifth positions respectively in their category. Each institution exhibits comparable trading activity, with an average daily notional amount traded of approximately USD 83 million and 13 trades per day.

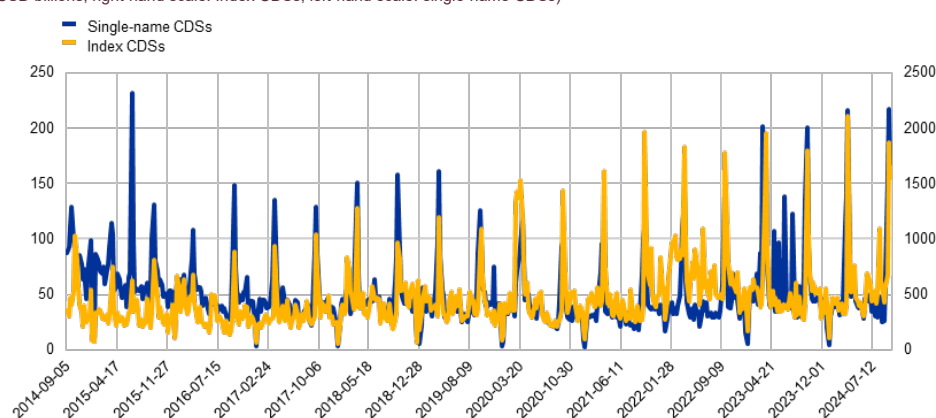
Analysing weekly aggregated trading activity provides insights into the temporal concentration of CDS transactions. In fact, there are distinct seasonal

patterns, characterised by recurring peaks and troughs over the 2014-24 sample period (Chart 8). These patterns are undetectable if the data are examined at lower frequencies (e.g. quarterly). Additionally, trading activity in both the single-name and multi-name CDS markets appears to correlate during periods of heightened fluctuations. The seasonal patterns observed in the single-name CDS market persist across all reference entity sectors and are not solely driven by the trading activities of reference entities with the highest notional volumes.

Chart 8

Weekly trading activity for single-name and index CDSs on the global CDS market – gross notional amounts

(USD billions; right-hand scale: Index CDSs; left-hand scale: single-name CDSs)



Sources: Depository Trust & Clearing Corporation.

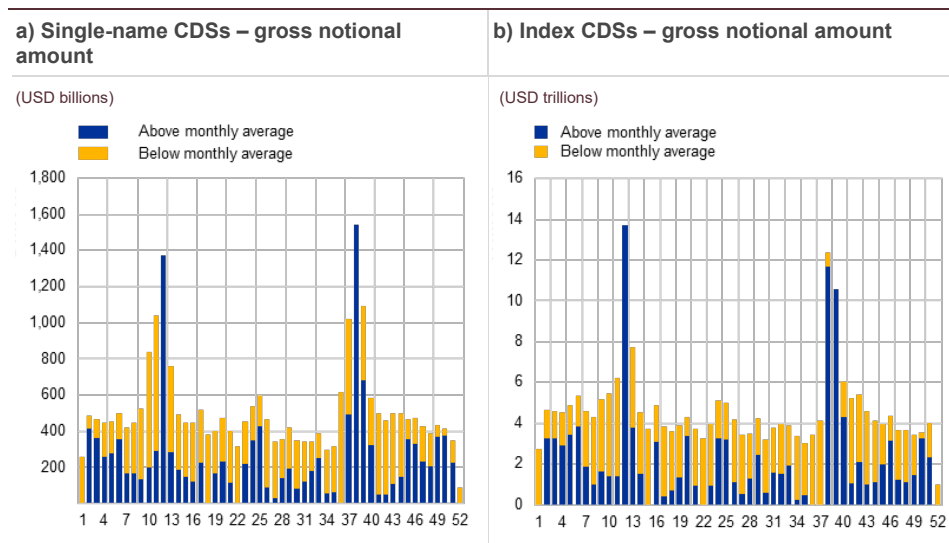
Note: The weekly gross notional is computed as the aggregated trading activity across all reference entities in the sample for each week.

A more detailed examination shows that trading activity is concentrated in March and September, collectively accounting for 40.31% and 36.41% of the total notional traded over the ten-year sample period for the single-name and index CDS market respectively. Notably, these months exhibit above-average activity relative to their respective quarterly averages in each of the ten years analysed. This concentration extends to the weekly level, with Weeks 12 and 38 (corresponding to the last weeks of March and September) consistently exceeding monthly averages in most years of the sample period for both the single-name and multi-name CDS markets (Chart 9). This pattern aligns with the standardisation of contract rollovers in both the single-name and index CDS markets, which take place semi-annually on 20 March and 20 September of each year.³⁸ In contrast, February, August, and December consistently display below-average trading activity within their quarters across the same timeframe.

³⁸ In December 2015, the ISDA revised the rollover frequency for single-name CDS contracts from quarterly to semi-annual, aligning with credit index CDSs. Rollovers now occur on 20 March and 20 September, enhancing liquidity, netting efficiency and market transparency, while reducing capital costs. Other contract terms, including coupon payments and settlement conventions, remain unchanged. See the article entitled "*Frequently Asked Questions – Amending when Single Name CDS roll to new on-the-run contracts: December 20, 2015 Go-live*", published on the International Swaps and Derivatives Association website on 10 December 2015.

Chart 9

Concentration of weekly trading activity on the global CDS market – 2014-2024



Sources: Sources: Depository Trust & Clearing Corporation.

Notes: CDS stands for credit default swap. The chart compares the weekly gross notional with the monthly weekly average for each week of each year. This makes it possible to identify, for any given month, whether activity is concentrated in specific weeks.

2.5 Central clearing

The rise of central clearing has reshaped the CDS market. Central clearing has two countervailing effects on aggregate notional amounts. On one hand, bilateral trades novated to a CCP effectively double the outstanding volume, given that each trade is replaced with two opposing trades with the CCP. On the other hand, CCPs often net or compress trades in opposite directions, provided they are related to contracts with the same characteristics. This netting can lead to a reduction in outstanding gross notional amounts, partially offsetting the initial volume increase from novation. BIS OTC statistics show that the share of outstanding amounts for which at least one counterparty is a CCP grew from 0% in 2009 to approximately 70% in 2023.

Central clearing has become more widespread, particularly in multi-name CDSs, but a large fraction of single-name CDSs, especially those referencing G-SIBs and sovereigns, remain uncleared. Deducing which trades are cleared and which are not is a challenge given how trades are reported to, and accounted for in, the various data collections. Computing clearing rates is subject to methodological definitions and associated challenges, as well as the problems related to data reporting.^{39,40} In the analysis, the clearing rate is calculated as the

³⁹ BIS OTC derivatives statistics: reporting dealers report positions by counterparty sector, so that direct inter-dealer trades can be identified and not double-counted. However, when trade is novated to a CCP it becomes impossible to distinguish which trades between reporting dealers and CCPs are inter-dealer and should not be counted twice. If it is assumed that all dealer-CCP trades are dealer-CCP-dealer trades, adjustment can be made for double-counting of outstanding amounts by dividing reported dealer-CCP positions by two, achieving a lower bound for the real clearing rate. Not adjusting for this double-counting leads to upper bound for the real clearing rate.

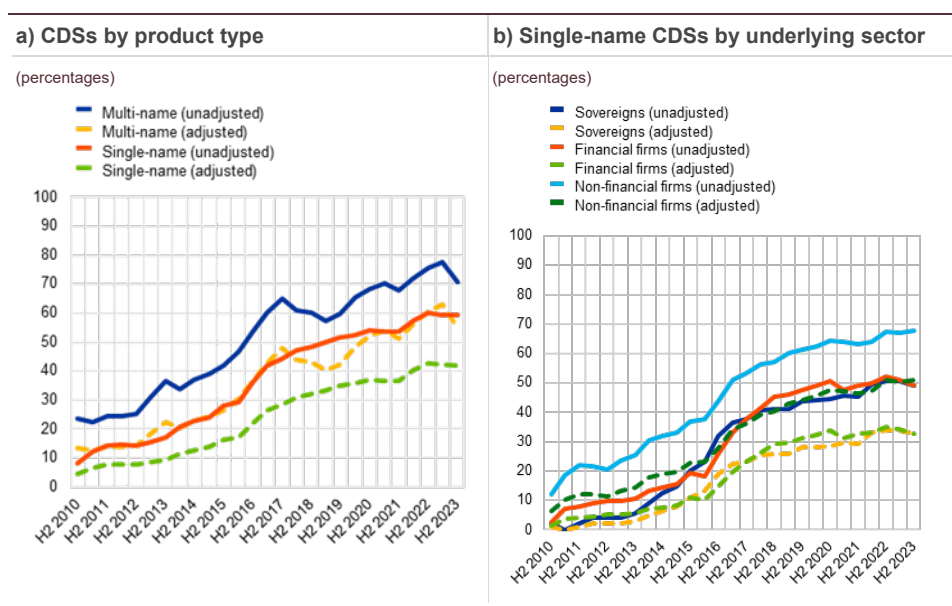
⁴⁰ See also Bank for International Settlements (2018).

share of gross notional amounts of outstanding trades novated through a CCP divided by the total gross notional amount of all outstanding trades.⁴¹ To address difficulties in defining the clearing rate, we have calculated both the upper and lower bounds, drawing on all available clearing-related information from data derived from the DTCC and BIS OTC derivatives statistics and the EU EMIR reporting data. The upper bound assumes that a trade is cleared if there is any indication of clearing, while the lower bound requires all relevant variables to confirm clearing.⁴²

The BIS OTC statistics show that the share of outstanding notional amounts for single and multi-name CDSs cleared through a CCP has risen from 5% and 15% respectively in 2010 to 40% and 60% in 2023 (Chart 10). Multi-name CDSs are cleared more often owing to their higher degree of standardisation. Clearing of single-name CDSs is most prevalent for CDSs written on non-financial firms, reaching 50% in 2023, while the clearing rates for sovereign and financial CDSs have stabilised at around 35%. These figures are based on adjusted rates and should be considered lower bounds for actual clearing rates. The upper bounds are about 20 percentage points higher.

Chart 10

Clearing rates for the global CDS market based on outstanding gross notional amounts



Sources: Bank for International Settlements (BIS) over-the-counter derivatives statistics.

Notes: The adjusted clearing rate avoids double-counting of centrally cleared inter-dealer positions (see Aldasoro and Ehlers, 2018). It is calculated by halving the outstanding gross notional amount between reporting dealers and central clearing counterparties (CCPs): $(\text{Cleared NA}/2)/(\text{Total NA} - \text{Cleared NA}/2)$, where Cleared and Total NA refer to the outstanding gross notional amount of trades between reporting dealers and CCPs and reporting dealers and all counterparties respectively. The adjusted clearing rate assumes that all the trades between reporting dealers and CCPs are inter-dealer trades and should be considered as the theoretical lower bound for the clearing rate. The unadjusted figure assumes that none of the trades outstanding between dealers and CCPs is inter-dealer and should be considered as an upper bound.

⁴¹ We focus on outstanding notional as opposed to the notional at the inception of a contract, which means that the calculated clearing rate accounts for life-cycle events, such as post-trade compression that reduces outstanding notional amounts.

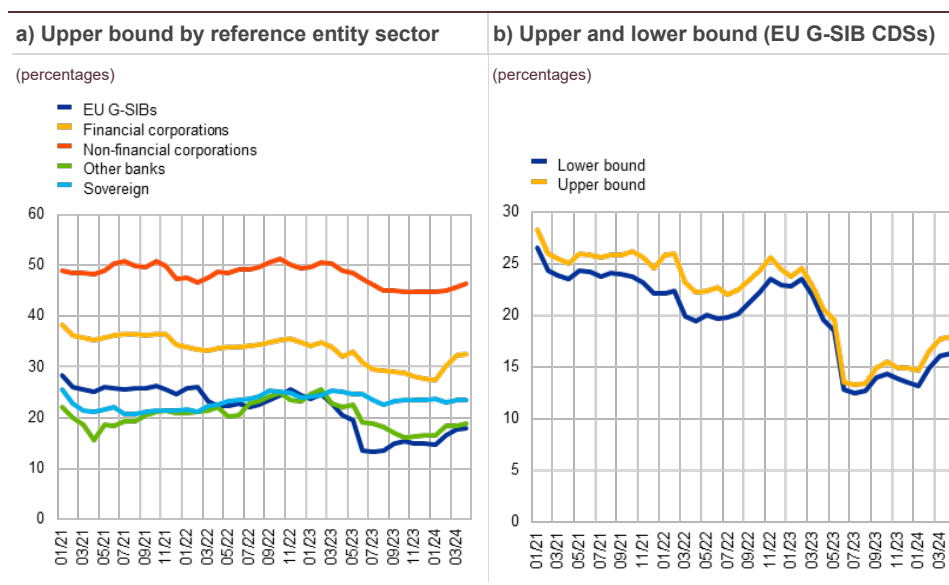
⁴² A trade is considered surely cleared if: 1) the reporting counterparty flags it as being cleared; 2) the other counterparty is identified as a known CCP; and 3) the reporting counterparty indicates that the trade was cleared by this CCP.

Transaction-level data allows for a more detailed analysis of clearing activity.

EMIR reporting data provides for analysis at the individual reference entity level, making it possible to focus on CDS contracts referencing to individual EU G-SIBs. Our analysis looks at trade reports from EU clearing members, excluding reports from CCPs in order to avoid double-counting. The difference between the upper and lower bound is illustrated in Chart 11, panel b, for EU G-SIB CDSs.

Chart 11

Estimated clearing rates based on outstanding gross notional amounts



Sources: European Market Infrastructure Regulation reporting data.

Notes: Monthly averages. The clearing rate is calculated as the share of outstanding gross notional amount of cleared trades over the total. All domiciles are included in panel a), except for the G-SIBs. EU G-SIBs covers the following reference entities: Deutsche Bank, BNP Paribas, BPCE, Credit Agricole, ING, Banco Santander, Société Générale and UniCredit.

Based on EMIR reporting data, clearing rates for most traded single-name CDSs, including CDSs referencing sovereigns, banks and financial corporations, remain relatively low in 2021-24.

Specifically, less than 30% of the outstanding gross notional amount of EU G-SIB⁴³ CDSs is cleared through CCPs, a share that further declined below 20% in May 2023 (Chart 11, panel a). Single-name CDSs referencing banks are generally infrequently cleared, with the clearing rate for non-G-SIB banks typically being even lower. Additionally, only just over 20% of the outstanding gross notional amount of sovereign CDSs are cleared. In contrast, around 70% of the most traded index swaps, such as those on the investment-grade corporate CDS indexes iTraxx Europe and CDX IG, are cleared.

⁴³ EU G-SIBs include Deutsche Bank, BNP Paribas, BPCE, Credit Agricole, ING, Banco Santander, Société Générale and UniCredit.

3 CDS market microstructure

In this chapter, we analyse the microstructure of the single-name CDS market.

The analysis leverages transaction-level EMIR reporting data to generate key metrics of market microstructure. EMIR reporting data makes it possible to identify individual transactions, including detailed information on counterparties, reference entities, underlying debt issuances and pricing. This granularity provides a deeper understanding of how each buyer and seller contributes to price formation, liquidity, availability and other critical market dynamics, including the number and diversity of market participants. By examining these aspects, we seek to provide insights into the dynamics of liquidity, market depth and the potential for systemic risks arising from market concentration and participant heterogeneity.

The CDS market structure is shaped by the dynamics of risk transfers between market participants, evolving through interactions between buyers and sellers of credit risk. As outlined by D'Errico et al. (2018), the CDS market exhibits a bow-tie network architecture. This structure is marked by three key groups: URSs,

typically hedge funds and other entities, who ultimately have short positions on the underlying credit risk by buying credit protection; dealers, who act as intermediaries by connecting risk sellers with buyers while maintaining relatively low net exposure; and URBs, often large asset managers, who ultimately hold credit risk. The flow of credit risk through this bow-tie architecture results in a high concentration of exposure among a few central players, which raises systemic risk concerns owing to potential interconnected defaults across the network.

Large market makers play a central role in the CDS market, serving as the primary providers of liquidity to end users. By intermediating between buyers and sellers of protection, they help to facilitate market liquidity for other participants. However, their behaviour is shaped by internal risk management practices and capital constraints. During periods of market stress, market makers may reduce their liquidity provision to manage exposure, resulting in wider spreads and heightened volatility. This effect is magnified by market concentration, where the withdrawal or reduced intermediation capacity of a single large dealer can have significant repercussions for overall market liquidity.⁴⁴

Price formation in the single-name CDS market occurs OTC, operating with a certain degree of opacity. Requesting quotes from dealers in OTC markets incurs higher time and resource costs compared with trading on exchanges or multilateral trading platforms. Combined with limited transparency, this makes it challenging for market participants to evaluate quotes against previous trades, potentially increasing quote dispersion and reducing price discovery efficiency. Furthermore, the high level of intermediation in the CDS market means that dealer competition plays a crucial role in determining bid-ask spreads.

⁴⁴ See Bilan, A. and Gündüz, Y. (2022)

Moreover, price formation occurs at a granular level within each reference entity, indicating market segmentation. CDS contracts are not only traded on the reference entity itself but also on specific types of debt, such as senior or subordinated issuances. This underscores the importance of accurately identifying the reference obligation (i.e. the specific debt type) to which the CDS is tied. From a market functioning perspective, it shows that trading activity is split among several different CDS contracts, leading to market segmentation.

While granular data allows us to analyse market microstructure, this is challenging owing to significant data quality issues arising from reporting entities. For example, implausible volumes are reported for some transactions, while others are reported with significant delays. This necessitates significant effort to clean and prepare the data for effective use by authorities. These data quality issues undermine transparency, making it difficult for authorities to monitor and analyse market dynamics effectively.

3.1 Price-forming trades

Developing a methodology to identify price-forming trades from transaction-level data is essential for modelling and assessing the price formation process and liquidity. In fact, only a subset of daily CDS transactions is price-forming, i.e. trades that contribute to the determination of CDS spreads. Post-trade transactions, such as clearing and compression, reallocate risk within the financial system but, at least in principle, should not have a significant impact on price formation. However, by enabling capital and margin savings through netting and optimisation, these trades may still influence pricing. Further research is required to fully comprehend this dynamic. Intra-dealer trades, which account for the majority of trading volumes, primarily help to balance order flow from end clients and facilitate market liquidity. In contrast, large client trades can have a higher degree of influence on the demand or supply of credit risk protection, playing a much more significant role in price formation.

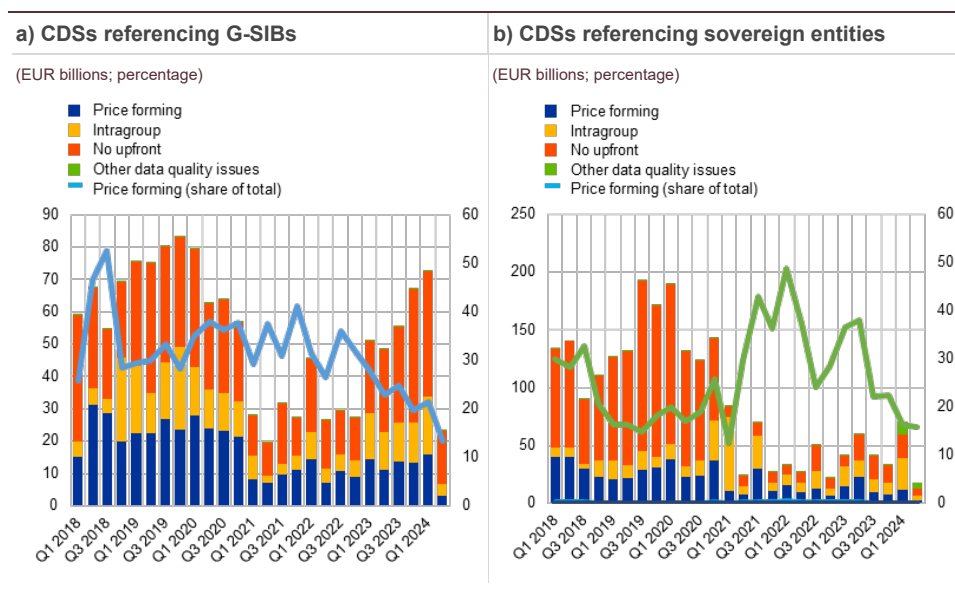
We define price-forming trades as new transactions that are neither part of post-trade activities nor intragroup transactions (either they are reported to be intragroup, or the trading counterparties have the same ultimate parent). Additionally, we exclude trades where the reporting entity is a CCP, focusing on the reports by the clearing members instead. Throughout the analysis for this section, all references to gross notional amounts refer exclusively to price-forming trades. This distinction is maintained across all charts and data presented in this section.

Around 28% of all single-name sovereign and G-SIB CDS transactions reported in EMIR reporting data are evidently price-forming market-risk transfers (Chart 12, panels a and b), while the rest are intragroup (20%) and errors or trades that omit information on the up-front payment (50%). The last group of trades are either misreported price-forming trades or possibly associated with post-

trade activities.⁴⁵ The big drops in the gross notional traded in the first quarter of 2021 shows how much the sample available for analysis shrank after the UK withdrawal from the EU.

Chart 12

Gross notional amounts by CDS transaction type



Sources: European Market Infrastructure Regulation reporting data.

Notes: Sum of gross notional amounts broken down classification (single-name CDSs). Price-forming transactions are trades that report a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. No up-front refers to transactions for which no up-front payment is reported. A transaction is classified as intragroup when both counterparties have same ultimate parent in the Global Legal Entity Identifier Foundation (GLEIF) data file or when both counterparties report the trade to be intragroup. Other data quality issues are outlier up-front payment (over 50% of the notional amount), ambiguous intragroup status, unidentified reference entity or contract type. The sample includes all the new CDS transactions in G-SIBs CDSs, EU28 (or, post-Brexit, EU27) sovereigns and US, Japanese and UK single-names executed between January 2018 and April 2024.

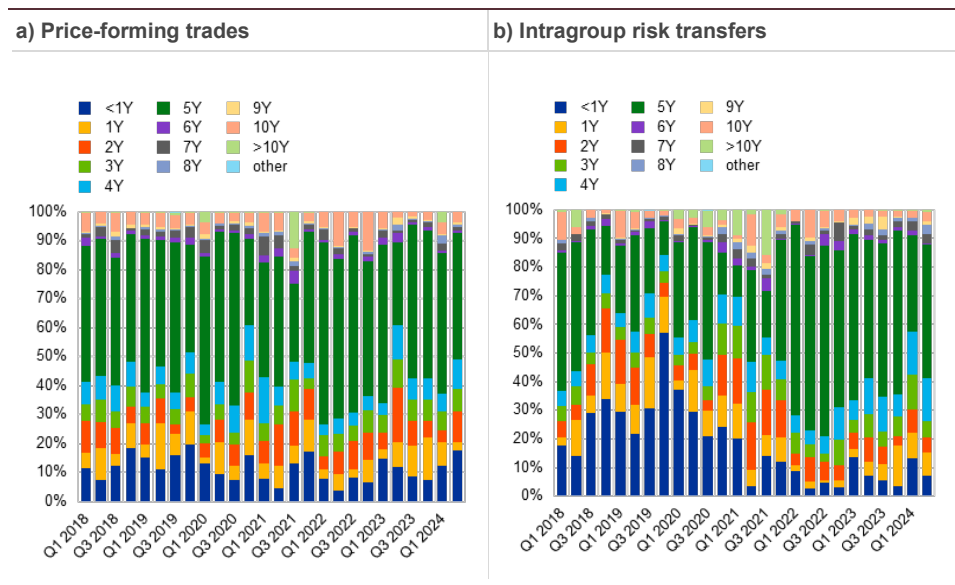
3.2 Maturity structure

Most of the price-forming trading activity is concentrated in the five-year maturity, while the shorter maturities (one year or less) were slightly more common in intragroup risk transfers before 2021 (Chart 13). In the EMIR reporting data, nearly all the traded contracts have their maturities set for the standardised maturity dates of 20 June and 20 December. The maturity structure in price-forming trades remained relatively stable during the sample period.

⁴⁵ We assume that trades without up-front payment are post-trade activities. In the EMIR reporting data model, the possible action types for a report include compression, but the DTCC, which is the largest trade repository, does not report any trades under this action type. The percentages are the shares of total gross notional amount of new trades in G-SIBs single-name CDSs and in EU28, US, Japan and UK sovereign single-name CDSs reported under EMIR between January 2018 and April 2024. 2% of trades are unidentified due to poor data quality.

Chart 13

Gross notional amounts of CDS trades by maturity over time



Sources: European Market Infrastructure Regulation reporting data.

Notes: Y stands for year. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. A transaction is intragroup when both counterparties report the trade to be intragroup or when both counterparties have same ultimate parent in the Global Legal Entity Identifier Foundation (GLEIF) data file. The sample includes all new CDS transactions in G-SIB CDSs, EU28 (or, post-Brexit, EU27) sovereigns and US, Japanese and UK single-names executed between January 2018 and April 2024.

3.3 CDS contracts segmentation

Trading in single-name CDSs is further segmented into different types of contracts that may have different price and liquidity dynamics. Single-name CDS contracts are mainly defined by five dimensions: reference entity, tenor, seniority of the referenced debt, restructuring clause and ISDA trading definitions.⁴⁶ Other dimensions, such as the currency of denomination of the swap contract, may also be pertinent in this context.

⁴⁶ Restructuring clauses define how a restructuring event is treated under the CDS contract and what kind of bonds are eligible for delivery when credit event is triggered. ISDA provides standard definitions and clauses to specify these terms. The ISDA definitions were first formulated in 1991 and updated in 1999, 2003, and 2014. While many contracts were converted to the latest 2014 definitions, single-name sovereigns and many large financial/non-financial corporations continue to trade in multiple definitions including applying old versions. The price can vary significantly between the contracts using different definitions (the definitions basis).

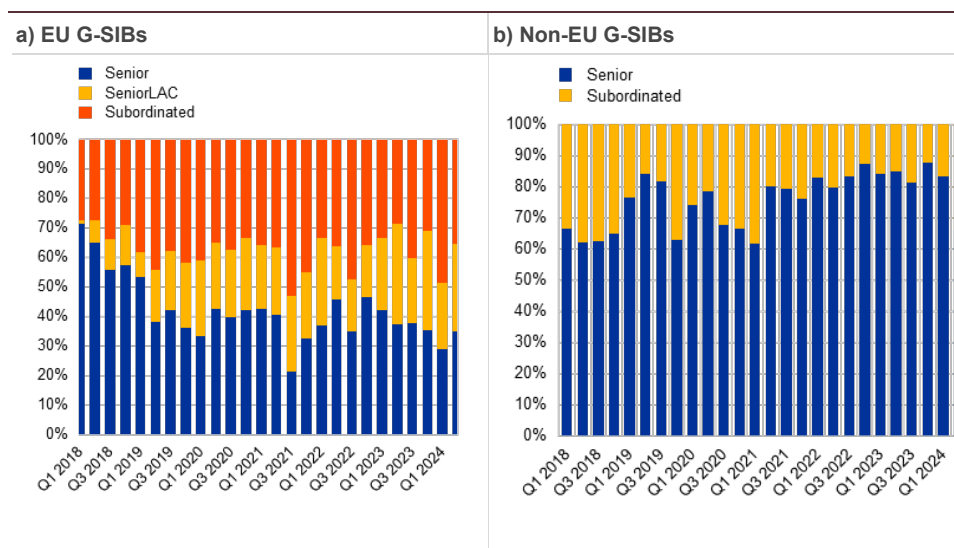
Table 1
Different types of CDS contracts

Example reference entity	Quoted seniority	Maturity bucket	Restructuring clause	ISDA definition	Number of unique contracts
Republic of Italy	Senior	<1Y, 1Y, 2Y, 9Y, 10Y, 10Y<	CR	2003, 2014	22
Deutsche Bank AG	Senior, Subordinated, SeniorLAC	<1Y, 1Y, 2Y, 9Y, 10Y, 10Y<	MM	2003, 2014	55

Notes: LAC stands for loss absorbing capacity and Y for year. CR denotes full credit restructuring and MM modified-modified restructuring, the difference relating to what is deliverable following a restructuring event.

In the sovereign CDS segment, most CDSs are written on senior unsecured debt with full credit restructuring (code CR in the ISDA nomenclature) and using either 2003 or 2014 ISDA definitions, yielding two different types of CDS. For G-SIB CDSs, we observe two to three levels of seniority (senior, senior loss absorbing capacity and subordinate) and modified restructuring (MM) with either 2003 or 2014 definitions, yielding 4 to 6 different types of contracts. For non-EU G-SIBs, we also observe contracts with no restructuring (XR) included as a credit event (Charts 14 and 15). The price difference between contracts using different ISDA definitions can be considerable (the definitions basis).

Chart 14
Gross notional amount by seniority of the reference debt

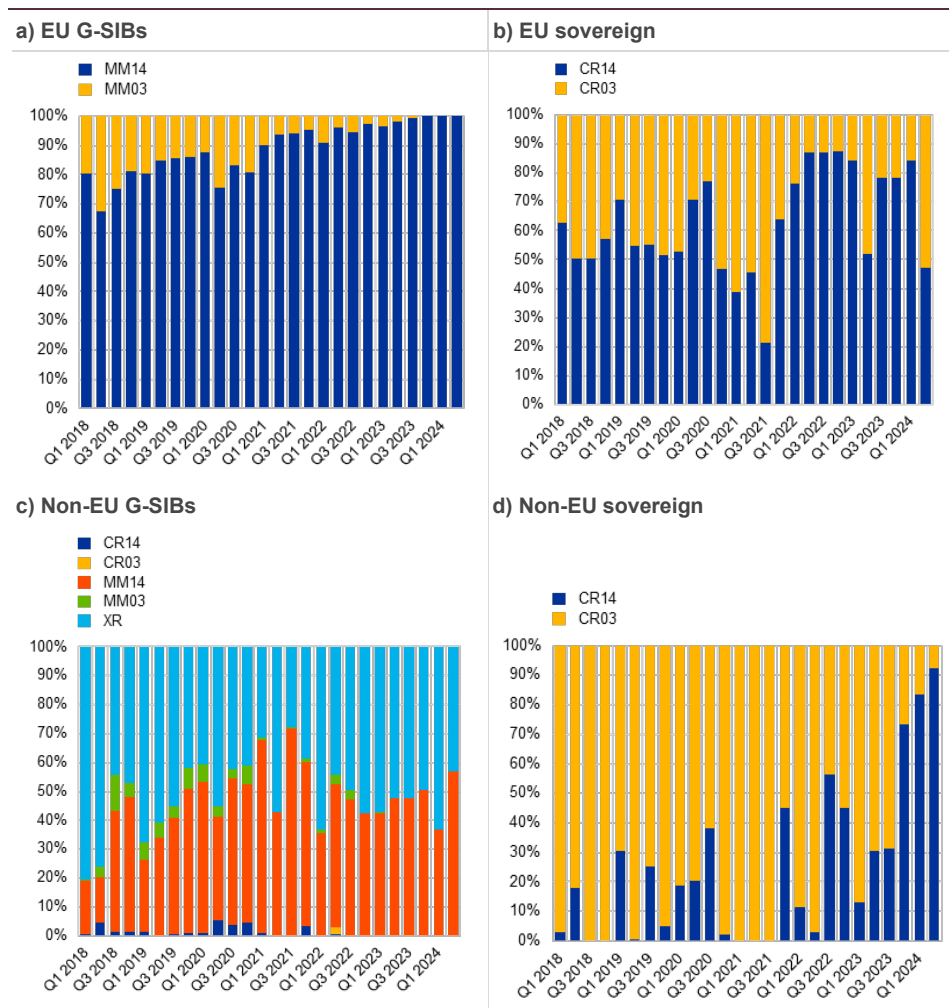


Sources: European Market Infrastructure Regulation reporting data, Intercontinental Exchange (ICE), European Systemic Risk Board calculations.

Notes: LAC stands for loss absorbing capacity. Gross notional amounts are aggregated from trade level data. Each trade is assigned a restructuring type-definitions pair by minimising the distance between the reported price (the up-front payment as percentage of notional) from the end-of-day mid quote in ICE. The shares are calculated based on the dates for which all quotes in different restructuring type-definitions pairs are available at the reference entity level (79% of price-forming trades) and then filtered by dropping trades for which the distance between price and quote is more than 80 basis points (75% of remaining trades), yielding a sample of 60% of all price-forming trades. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. The sample includes all new price-forming CDS transactions in G-SIB, EU28 (or, post-Brexit, EU27) sovereigns and US, Japanese and UK sovereign single-names executed between January 2018 and April 2024.

Chart 15

Gross notional amount by restructuring type and ISDA definition



Sources: European Market Infrastructure Regulation reporting data, Intercontinental Exchange (ICE), European Systemic Risk Board calculations.

Notes: ISDA stands for International Swaps and Derivatives Association. The two first letters in the labels denote the ISDA restructuring type: CR stands for full credit restructuring, MM for modified restructuring and XR for no restructuring. Where these are followed by 03, this denotes the 2003 ISDA definitions rather than the latest 2014 definitions. Gross notional amounts are aggregated from trade level data. Each trade is assigned a restructuring type-definitions pair by minimising the distance between the reported price (the up-front payment as percentage of notional) from the end-of-day mid quote in ICE. The shares are calculated based on the dates for which all quotes in different restructuring type-definitions pairs are available at the reference entity level (79% of price-forming trades) and then filtered by dropping trades for which the distance between price and quote is more than 80 basis points (75% of remaining trades), yielding a sample of 60% of all price-forming trades. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. The sample includes all new price-forming CDS transactions in G-SIB CDSs, EU28 (or, post-Brexit, EU27) sovereigns and US, Japanese and UK sovereign single-names executed between January 2018 and April 2024.

EMIR reporting data suggest that the vast majority of price-forming transactions in single-name CDSs on EU G-SIBs and sovereigns are executed purely OTC, i.e. bilaterally without using intermediating brokers or third-party trading platforms.⁴⁷ On average, brokers were used as intermediaries only in 7% of transactions and identified execution venues used in 10% of trades during the

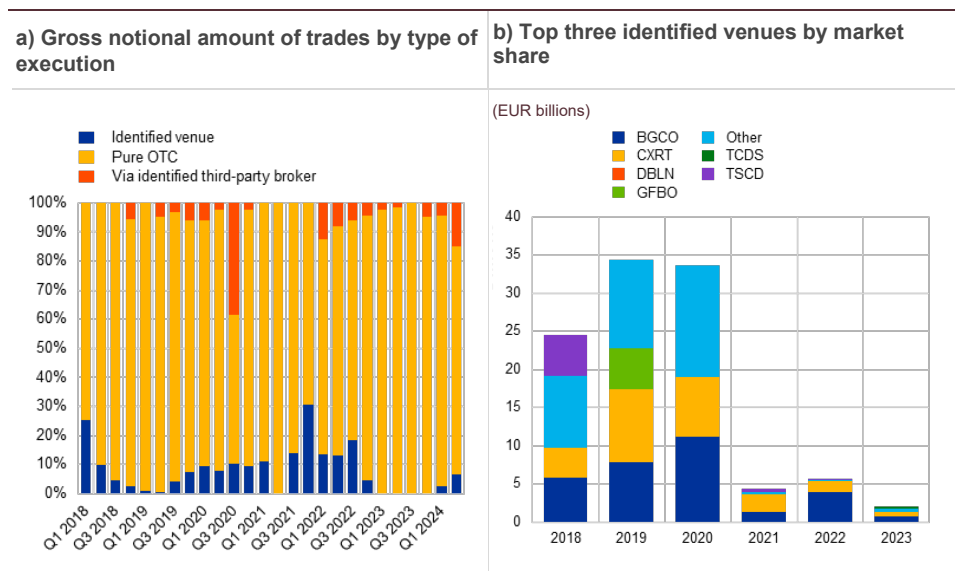
⁴⁷ Under the EMIR 2017 Regulatory Technical Standards (RTS 2017), counterparties must report the venue of execution as 'XOFF' when the contract is traded OTC, and the respective instrument is "admitted to trading or traded on a trading venue", and 'XXXX' when the respective instrument is "not admitted to trading or traded on a trading venue". In practice, many participants report the market identifier code (MIC) of the market where the trade was executed.

sample period.⁴⁸ The share of purely bilateral trades seems to have slightly increased since the UK withdrawal from the EU.⁴⁹ In 2021, not only did the share of trades executed in identified venues drop, but the market also became more concentrated (Chart 16). During the sample period, from January 2018 to April 2024, no trades were executed on a regulated market.

Typically, CDS contracts are traded using third-party communication platforms (such as the Bloomberg terminal) where counterparties can post requests for quotes to a set of dealers. Some of these platforms also continuously stream indicative quotes, although these quotes cannot necessarily be executed as such. A binding/executable quote defining trade size and other contract terms in detail must therefore be posted directly to a dealer or to a set of dealers. After agreement is reached on the price and trade size between counterparties, execution of the trade can then take place in a third-party venue or bilaterally.

Chart 16

Gross notional amount of EU-reported market risk transfers by type of execution



Sources: European Market Infrastructure Regulation reporting data.

Notes: The bars show the total gross notional amount of market risk-transfer/price-forming CDS contracts. Price-forming trades are trades that report a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. Trade is defined as pure OTC if the execution does not take place in an identified venue and an intermediary broker is not involved. Via identified third-party broker means that identified broker serves as an intermediary for the trade but is not a counterparty. The top three execution venues are determined annually by the share of gross notional of new price-forming trades. In the sample, no trade was executed in a regulated market, i.e. it was all OTC. The sample includes all the new CDS transactions in G-SIB CDSs, EU28 (or, post-Brexit, EU27) sovereigns and US, Japanese and UK single names sovereign executed in 01/2018-04/2024.

⁴⁸ A List of these regulated markets is maintained by ESMA. Under the EMIR 2017 Regulatory Technical Standards (RTS 2017), counterparties must report the venue of execution as 'XOFF' when the contract is traded OTC, and the respective instrument is "admitted to trading or traded on a trading venue", and 'XXXX' when the respective instrument is "not admitted to trading or traded on a trading venue". In practice, many participants report the market identifier code (MIC) of the market where the trade was executed. These trades do not qualify as exchange-traded derivatives if the reported venue is not a regulated market recognised by ESMA.

⁴⁹ UK reporting entities contributed the most to the share of trades executed in venues and they also had the largest share of trading overall before the first quarter of 2021. Moreover, all top three venues by market share are in the United Kingdom.

3.4 Market liquidity

Analysing market liquidity in single-name CDSs using quote data from market data vendors involves certain complexities. While these vendors provide several metrics (including the number of quotes, the number of quoting dealers and bid-ask spreads) across different maturities and contract types, the transparency of their data collection and aggregation methodologies may be limited for some market participants and regulators.

Bid-ask spreads of indicative quotes for the EU sovereign CDSs spiked during the market turmoil following the outbreak of the COVID-19 pandemic in the first quarter of 2020, but have remained relatively stable, settling down to around 15-20 basis points of notional amount since then. Similarly, bid-ask spreads of EU G-SIB CDSs spiked to around 90 basis points during the COVID-19 pandemic in the first quarter of 2020 and then again to 80-100 basis points during the banking turmoil in the first quarter of 2023, but remained relatively stable, at around 20 basis points, during the periods in between and thereafter (Chart 17).

Bid-ask spreads increase with contract tenor but are clearly lower in five-year contracts than four and six-year contracts, and decrease in reference debt seniority (Charts 18 and 19). The bid-ask spread for EU and non-EU G-SIBs, as well as for non-EU sovereigns, is visibly lower in the five-year maturity (around 30 basis points on average), which is in line with the fact that most market-risk transfers use five-year contracts. This concentration of liquidity with five-year contracts is not as clear for EU sovereign CDSs, however. In general, the bid-ask spreads are, on average, higher for G-SIB CDSs than for sovereign CDSs, both for EU and non-EU entities. While all sovereign CDSs are written on senior debt, G-SIB CDSs can reference subordinated, senior loss absorbing debt⁵⁰ or senior debt. Generally, quoted bid-ask spreads decrease with seniority.

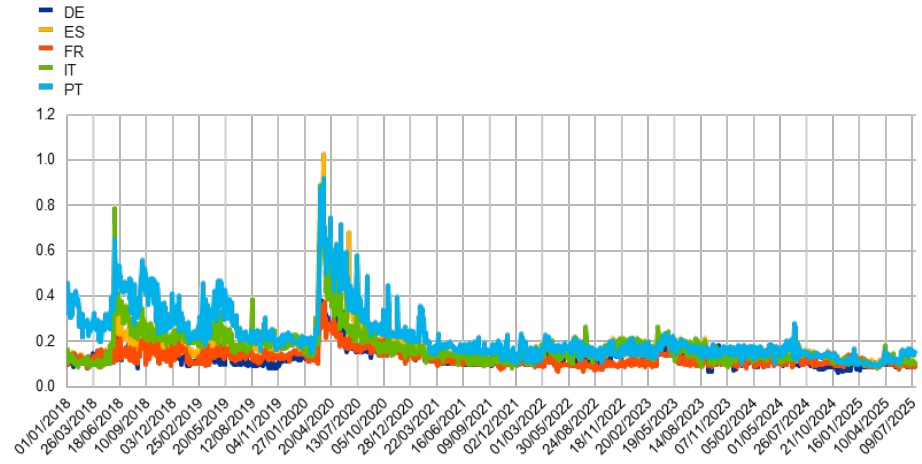
⁵⁰ Senior debt eligible to be counted as total loss-absorbing capacity (TLAC), EU G-SIBs only.

Chart 17

Quoted bid-ask spreads over time

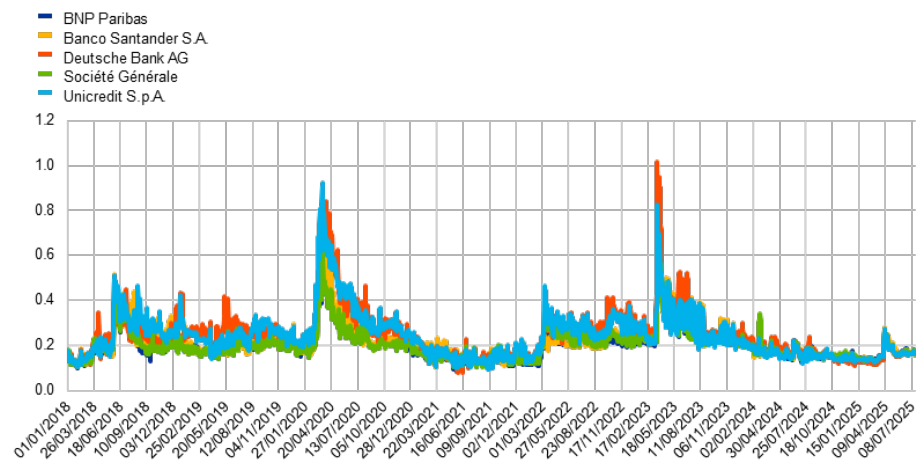
a) EU sovereign five-year senior (CR) CDSs

(percentages)



b) EU G-SIBs five-year senior (MMR) CDSs

(percentages)

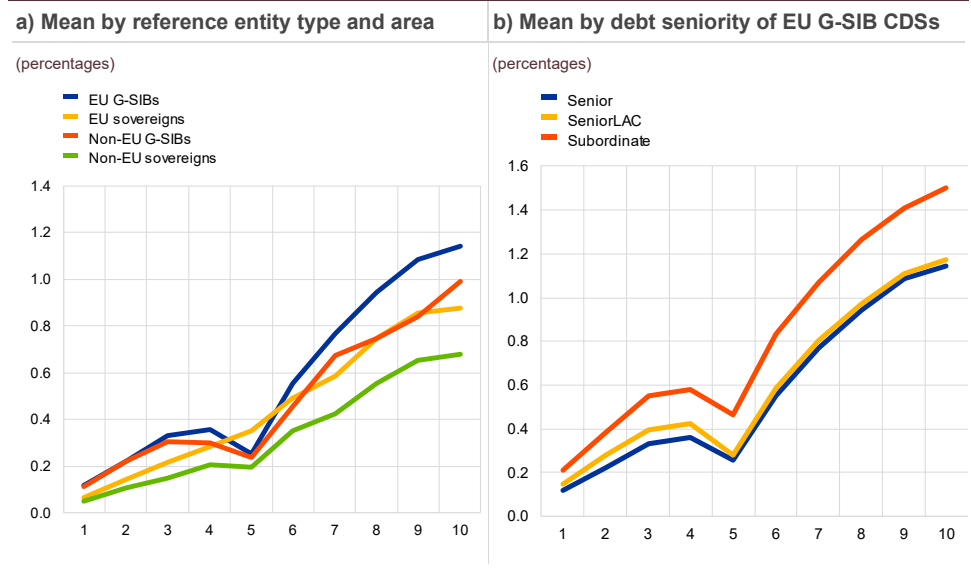


Sources: Intercontinental Exchange (ICE).

Notes: CR denotes credit restructuring and MMR modified-modified restructuring, the difference relating to what is deliverable following a restructuring event. Daily end-of-day quoted bid-ask spreads as percentages of the notional amount. Bid-ask spread is defined as the up-front ask minus the up-front bid as percentages of the notional amount. When the quoting convention is in spreads, the conversion to the up-front is made by ICE using the ISDA standard model.

Chart 18

Daily quoted bid-ask spreads across tenors on the global CDS market – 2018-24

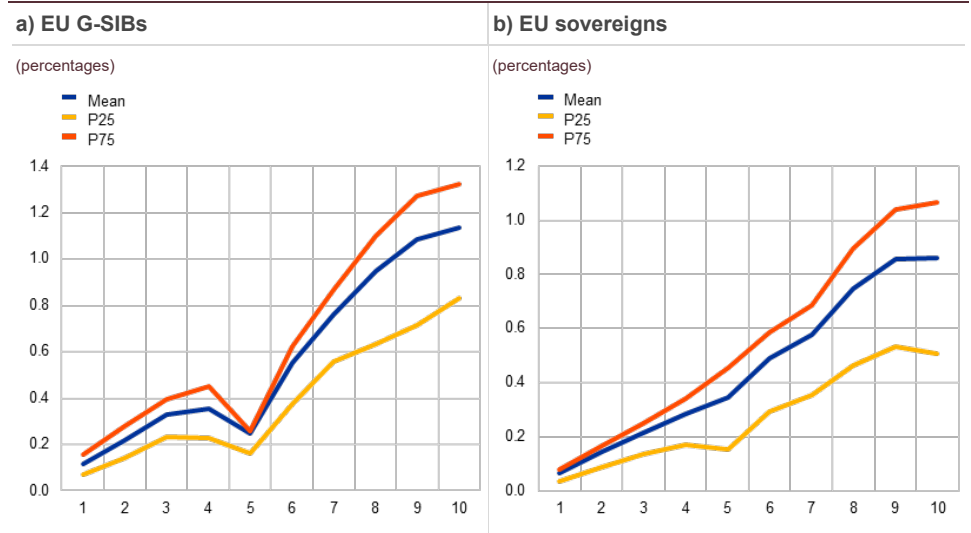


Source: Intercontinental Exchange (ICE).

Notes: G-SIBs for global systemically important banks and LAC for loss absorbing capacity. The bid-ask spread is defined as the up-front ask minus the up-front bid as percentages of the notional amount. When the quoting convention is in spreads, the conversion to the up-front is made by ICE using the ISDA standard model. Non-EU sovereigns include those of the United States, the United Kingdom and Japan.

Chart 19

Means and interquartile ranges for quoted bid-ask spreads across tenors on the global CDS market (2018-2024)



Source: Intercontinental Exchange (ICE).

Notes: P25 represents the 25th percentile and P75 the 75th percentile. A bid-ask spread is defined as the up-front ask minus the up-front bid as percentages of the notional amount. When the quoting convention is in spreads, the conversion to the up-front is made by ICE using the ISDA standard model. Daily frequency.

Notes: G-SIBs for global systemically important banks and LAC for loss absorbing capacity. The bid-ask spread is defined as the up-front ask minus the up-front bid as percentages of the notional amount. When the quoting convention is in spreads, the conversion to the up-front is made by ICE using the ISDA standard model. Non-EU sovereigns include those of the United States, the United Kingdom and Japan.

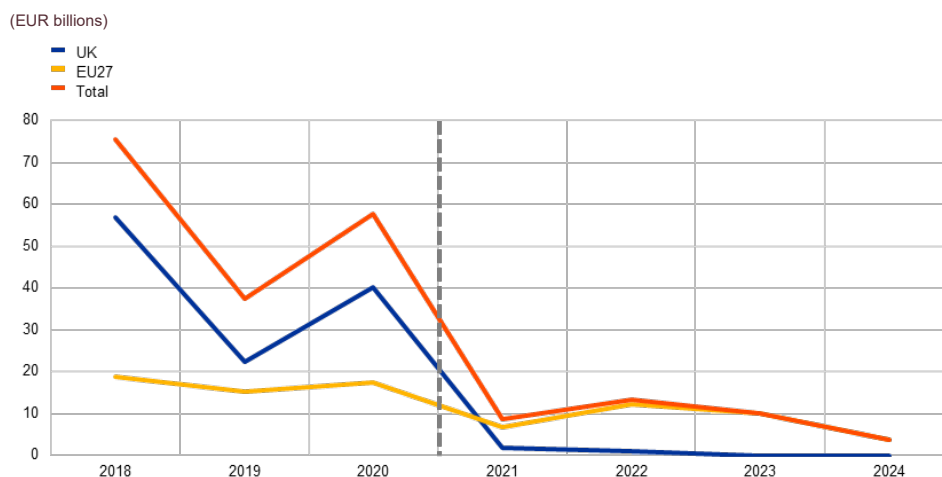
3.5 Concentration of trading activity

The analysis of trading activity is structured as follows. We focus on two types of single name CDSs: first, those referencing the most actively traded EU sovereign entities⁵¹ and second, those referencing EU G-SIBs.⁵² For each category, we conduct a detailed examination across seven distinct two-month periods (specifically, March and April of each year) spanning from 2018 to 2024. The analysis focuses on topics such as price-forming trades, maturity structure, market segmentation, organisation of trading, liquidity and concentration of trading at the reference entity and counterparty levels.

The European sovereign CDS market is characterised by high trading concentration and low trading volumes. A small group of market participants account for most of the gross notional amounts traded every day. This pattern persisted consistently across the months of March and April during the 2018-24 sample period. Although, at first glance, the market would seem to be declining (Chart 20), this is primarily attributable to the fact that UK entities have ceased to report under EMIR since the end of the transition period for the UK withdrawal from the EU. This has resulted in a significant gap in data coverage and the importance of UK-based counterparties in CDS trading of European reference entities. Consequently, it is crucial to distinguish between trends occurring before and after the UK withdrawal from the EU.

Chart 20

Gross notional traded for EU-reported CDSs by counterparty origin for the top five European sovereign CDSs



Source: European Market Infrastructure Regulation (EMIR) reporting data.

Notes: The dotted line indicates a break in the EMIR reporting data series. With the ending of the Brexit transition period, UK counterparties are no longer mandated to report their trades when trading with non-EU entities, resulting in a noticeable gap that has a considerably impact on the total notional amount. Post-2020, the total notional amount has been nearly equivalent to the notional traded within the EU. The trades involving UK counterparties are reported under EMIR when these entities trade with EU counterparties. The top five most traded sovereign CDSs were identified by calculating the total notional amount traded across all reference entities over the sample period. The sample period consists of two-month snapshots in March-April of each year. The reference entities were Germany, Spain, France, Greece and Italy.

⁵¹ The most traded EU sovereign entities are Germany, Spain, France, Greece and Italy.

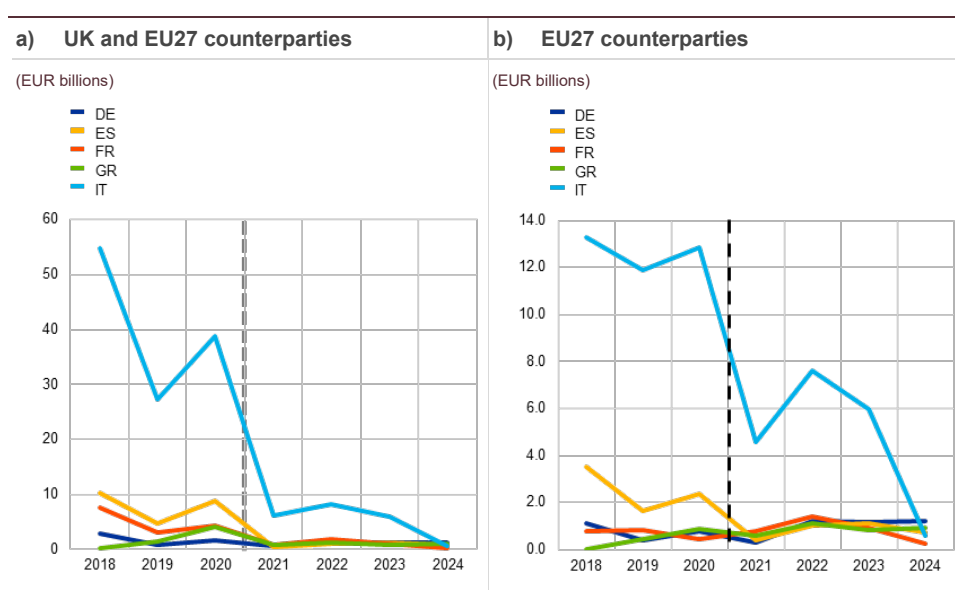
⁵² The EU G-SIBs are Banco Santander S.A., BNP Paribas, BPCE, Credit Agricole SA, Deutsche Bank AG, ING Bank N.V., Société Générale and UniCredit S.p.A

There is a high concentration of trading activity in sovereign CDSs. In fact, Italian sovereign CDS transactions account for 68.5% of the total gross notional volume traded among the top five European sovereign CDSs (Chart 21a). Spain ranks second, with a significantly smaller share of 13.1%, underscoring the high concentration of trading activity across underlying reference entities. The other most traded reference entities are France (9.3%), Greece (4.6%) and Germany (4.5%).

The decline in aggregate CDS trading volumes is primarily driven by the reduction in Italian CDS trading volumes. For EU27-based counterparties, notional amounts traded for the top five most traded sovereign CDSs have steadily decreased, from approximately €14 billion in 2018 to less than €2 billion by 2024 (Chart 21). As shown in Chart 21, panel b, this decline is mainly attributable to the sharp decline in Italian CDS trading, while the other top five sovereign CDSs have maintained relatively stable volumes. This underscores the impact of Italian CDSs on the overall market, with their reduced volumes contributing to the trading activity decline observed across the European sovereign CDS market.

Chart 21

Gross notional traded for EU-reported CDSs for the top five European sovereign CDSs



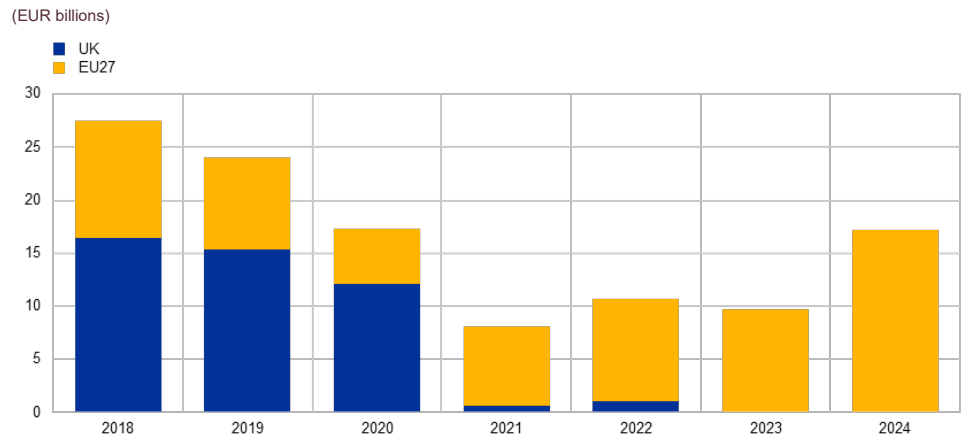
Source: European Market Infrastructure Regulation (EMIR) reporting data.
Notes: Price-forming trades only. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. The vertical dotted line marks the end of the Brexit transition period and of reporting by UK entities under EMIR, resulting a break in the data series. The sample period consists of two-month snapshots in March-April of each year.

Trading activity in CDSs referencing EU G-SIBs exhibits similar characteristics to that of EU sovereign CDSs (Chart 22). UK counterparties (or subsidiaries of US entities in the UK) play a significant role, as reflected in the gross notional traded and reported up to the end of the transition period (i.e. until the end of 2020). In fact, UK counterparties accounted for more than half of the reported notional amounts for price-forming transactions. Despite an increase in notional volumes in 2024, the traded gross notional amounts remain low relative to the aggregate size of G-SIB balance sheets. Concentration of trading activity across reference entities is high,

although less than in the case of EU sovereign CDSs. The majority of trading is focused on three key G-SIBs: Deutsche Bank, Société Générale and UniCredit (Chart 23).

Chart 22

Gross notional amounts (price forming trades) for CDS referencing EU G-SIB by country of the reporting counterparty

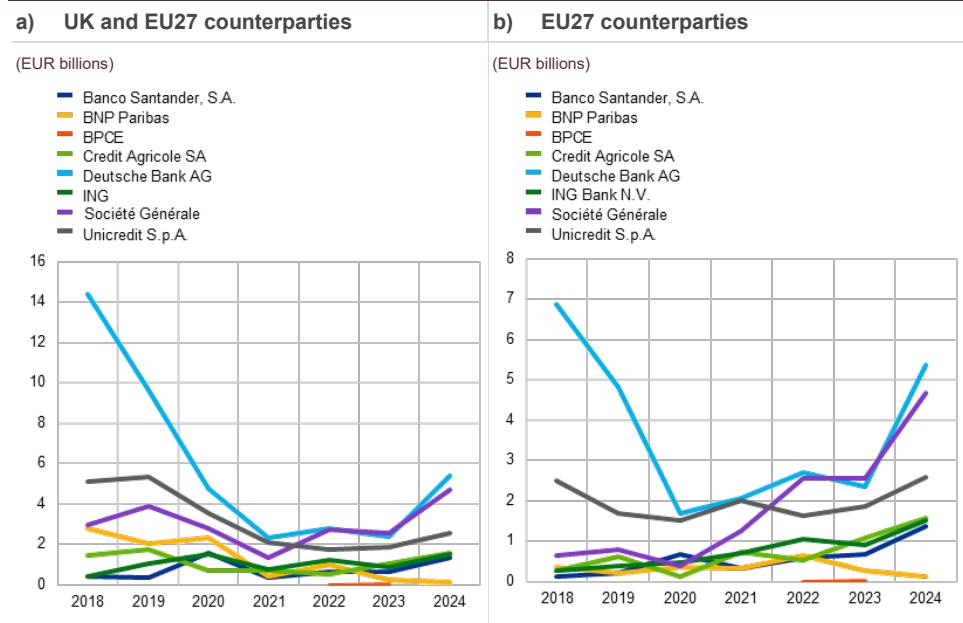


Source: European Market Infrastructure Regulation (EMIR) reporting data.

Notes: Price-forming trades only. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. The sample period consists of two-month snapshots in March-April of each year.

Chart 23

Gross notional amounts, price-forming transactions for CDSs referencing EU G-SIBs



Source: European Market Infrastructure Regulation reporting data.

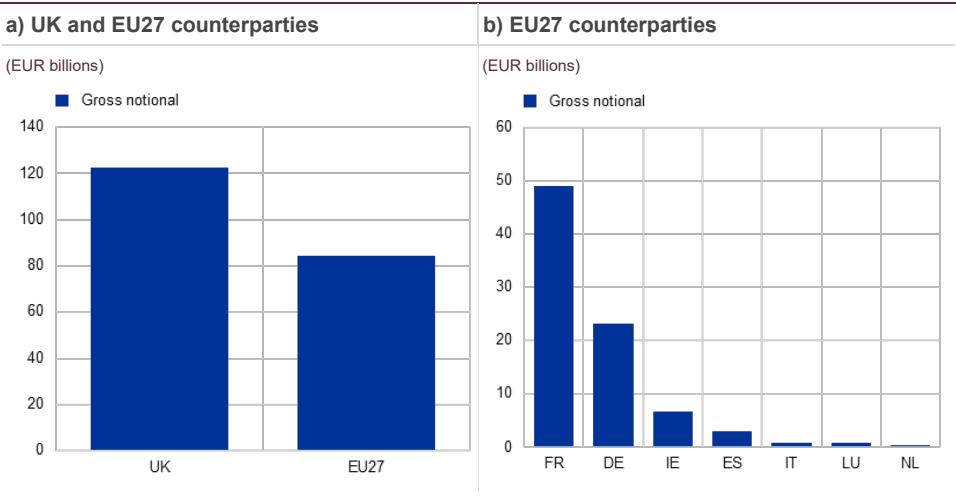
Notes: Price-forming trades only. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. The sample period consists of two-month snapshots in March-April of each year.

3.6 Concentration of trading counterparties

Trading activity in the EU sovereign CDS market has been largely driven by non-EU counterparties. From 2018 to 2020, UK-based counterparties accounted for 69% of the total gross notional amount traded for the top five European sovereign CDSs (Chart 24, panel a). Within Europe, two countries have dominated trading activity between 2018 and 2024, with French counterparties contributing 58% of the gross notional amount traded and German counterparties a further 27.5% (Chart 24, panel b).

Chart 24

Gross notional amounts traded for EU-reported CDSs by counterparty country of origin (2018-2024)

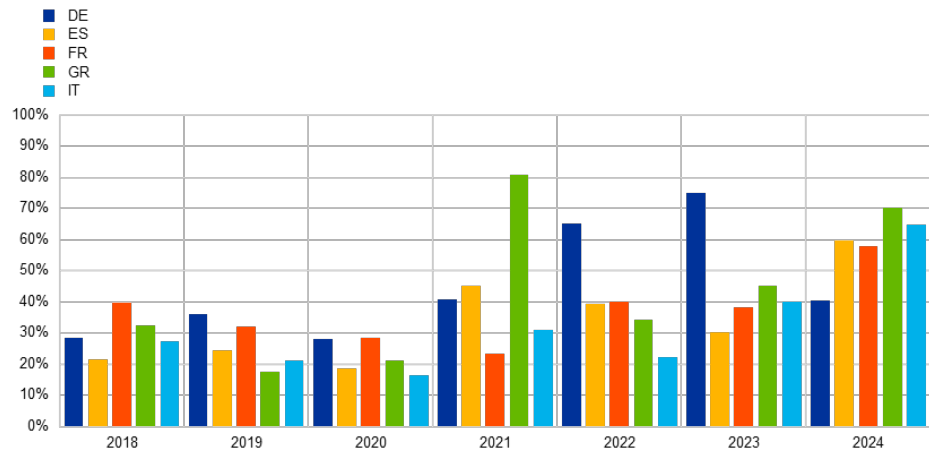


Source: European Market Infrastructure Regulation reporting data.
Notes: Price-forming trades only. Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. Reference entities include the top five most traded European CDSs, specifically Germany, Spain, France, Greece and Italy.

The largest counterparties account for a significant portion of total trading volumes. Chart 25 shows the market share of the top trading counterparties for each underlying EU sovereign entity across the sample period. Prior to the 2021 data series break, the leading trading entity accounted for an average of 26% of the total daily volumes, with approximately 20 unique trading counterparties over this period. Following the UK withdrawal from the EU, concentration intensified considerably, with the top trader's share rising to an average of 47%, while the average number of active participants declined to 11. In a perfectly equal distribution of market activity, the share of trading volume would be inversely proportional to the number of market participants. In such a scenario, each trader would account for a significantly smaller share (approximately 5-9%) indicating a more balanced distribution of trading activity. The discrepancy between this theoretical figure and the actual market share highlights the concentration of CDS market activity, suggesting that a small group of dominant traders may exert substantial influence over the price-formation process.

Chart 25

Volume share of the largest trading entity per EU-reported sovereign CDS



Source: European Market Infrastructure Regulation (EMIR) reporting data.

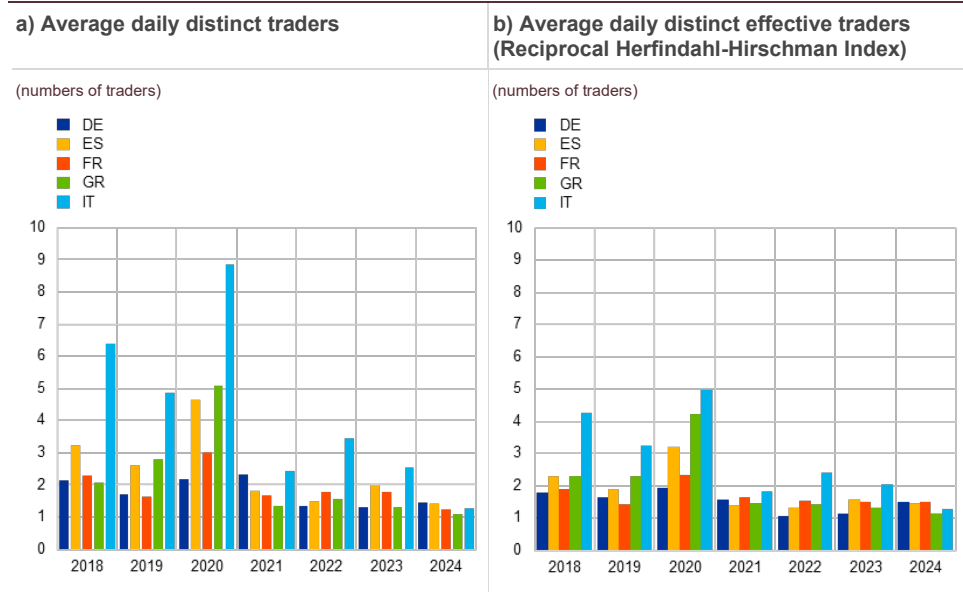
Notes: Price-forming trades only. Price-forming trades are transactions that report the price and are not intragroup risk transfers. The vertical dotted line marks the end of the Brexit transition period and of reporting by UK entities under EMIR, resulting a break in the data series. The sample period consists of two-month snapshots in March-April of each year.

Additional measures of market concentration reinforce and broaden these observations. Market concentration can be further quantified using the Herfindahl-Hirschman Index (HHI), which provides additional information about how market activity is distributed. The HHI calculates market concentration by summing the squared market shares of each counterparty. Here, we present the reciprocal of the HHI, which reflects the effective number of participants driving market activity. The reciprocal of the HHI can provide a measure that is often interpreted as the “effective number of entities”, or “effective competition” in a market, or, in broader terms, the level of “diversity” in the market. This reciprocal is useful for understanding how many equally sized entities (traders) would generate the same level of market concentration as the actual market distribution.

Even when we observe a larger number of market participants during periods of greater financial stress, market activity is still dominated by a few players. The number of effective traders remains limited, even in periods of heightened activity, such as the 2020 market turmoil following the onset of the COVID-19 pandemic. While it may appear that more traders are participating during these more active periods (Chart 26, panel a), only a small fraction of them have a significant share of the trading activity (Chart 26, panel b). During periods of heightened activity, the number of effective traders is, on average, about half the total number of unique participants, indicating that markets remain concentrated among a few counterparties.

Chart 26

Average daily distinct vs effective traders per EU-reported sovereign CDS



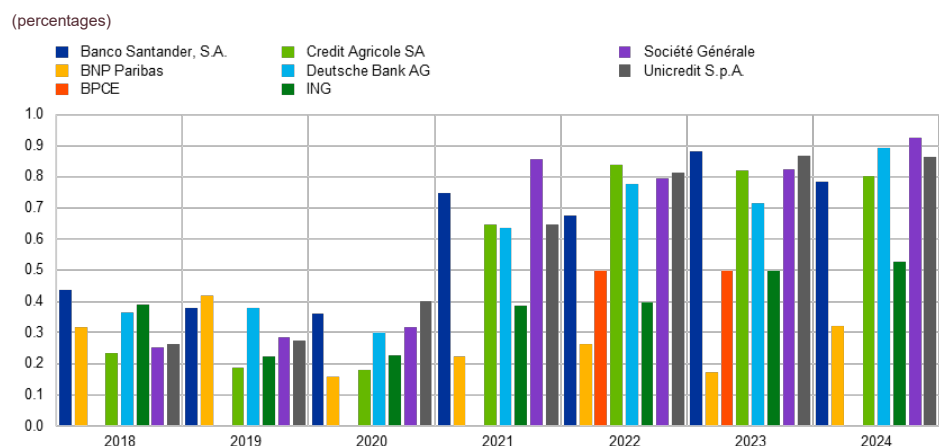
Source: European Market Infrastructure Regulation reporting data.

Notes: Price-forming trades only. Price-forming transactions are trades that report the price and are not intragroup risk transfers. The vertical dotted line marks the end of the Brexit transition period and of reporting by UK entities under EMIR, resulting a break in the data series. The sample period consists of two-month snapshots in March-April of each year.

Similarly, single-name CDSs referencing to EU G-SIBs exhibit substantial concentration in terms of trading counterparties. While we do not have information after 2020 on trades by UK counterparties, the share of price-forming trading activity attributed to the top EU contributor increased significantly, from approximately 40% in 2018 to nearly 80% in 2024 (Chart 27).

Chart 27

Concentration of traded notional on EU-reported EU G-SIB CDSs



Source: European Market Infrastructure Regulation (EMIR) reporting data.

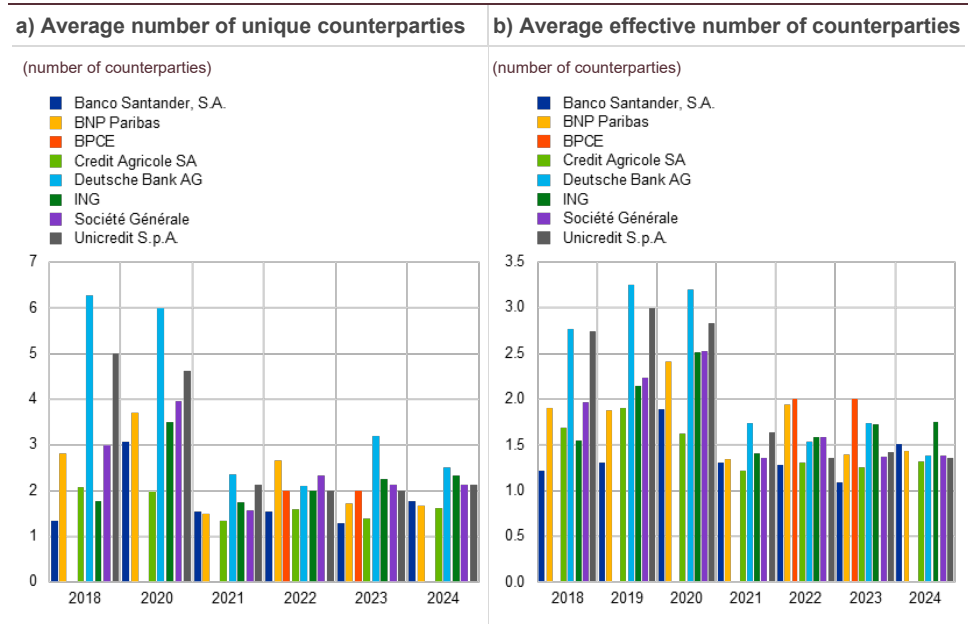
Notes: The largest trading entity is defined as the counterparty that contributes the largest share to the total traded gross notional amount each day. The chart shows the average share of the largest trading entities by G-SIB reference entity for the sample period, which consists of two-month snapshots in March-April of each year.

These findings are corroborated by further analyses based on the effective number of counterparties (Chart 28). On average, two to six counterparties

engage in daily trading for each G-SIB CDS. The effective number of counterparties, calculated as the reciprocal of the HHI, ranges from 1 to 3, approximately half of the actual number of daily trading participants. These figures remain largely consistent across the different G-SIBs.

Chart 28

Number of counterparties trading EU-reported EU G-SIB CDSs over time



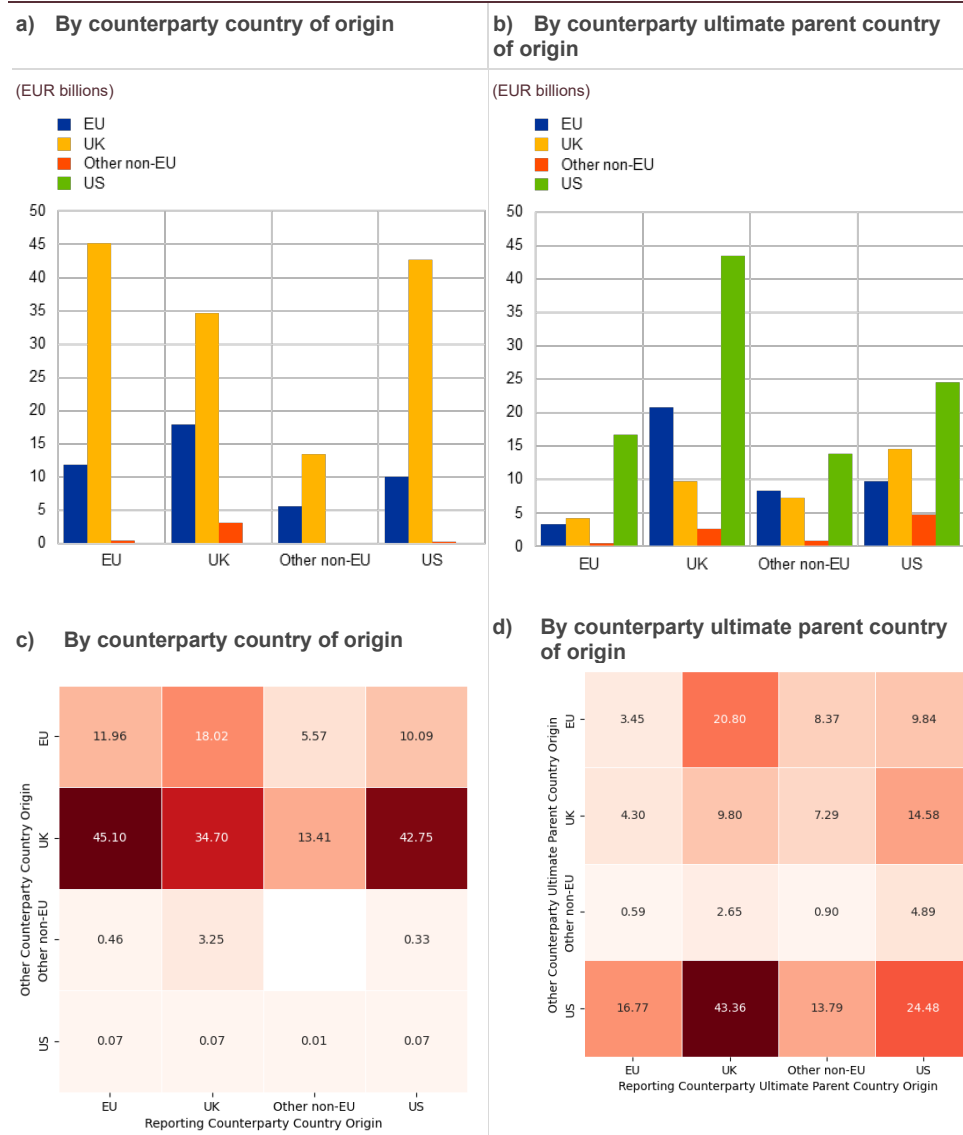
Source: European Market Infrastructure Regulation reporting data.

Notes: Effective number of counterparties is defined as the reciprocal of the Herfindahl-Hirschman Index. It can be interpreted as the number of counterparties who effectively make up the total trading activity. The sample period consists of two-month snapshots in March-April on each year.

In the wake of the end of the Brexit transition period in 2020, trades involving UK-resident counterparties are no longer reported under EMIR, leading to a substantial loss of data on CDS transactions within the EU regulatory framework. By assessing the volume of trades involving UK-based counterparties and non-EU entities prior to Brexit, we can approximate the extent of trading activity that continues to impact EU sovereigns and G-SIBs outside the EU's remit.

Chart 29

Gross notional amount traded for EU-reported European G-SIBs CDSs – 2018-20



Source: European Market Infrastructure Regulation reporting data.

Notes: Price-forming trades only (strictest price-forming criterion). Price-forming trades are trades reporting a price and that transfer market risk, excluding intragroup transactions and transactions related to post-trade risk reduction. This sample includes trades from 2018 to 2020. EMIR reporting data include only trades that involve at least one EU counterparty. Thus, the trades that are no longer available in EMIR reporting after 2020 are the those involving: UK-UK, UK-US, US-UK, UK-other non-EU and other non-EU-UK. EU G-SIBs include Deutsche Bank, BNP Paribas, BPCE, Crédit Agricole, ING, Banco Santander, Société Générale, and UniCredit. The identification of the ultimate parent country is derived from reference data provided by the Global Legal Entity Identifier Foundation (GLEIF).

CDSs referencing EU sovereigns and G-SIBs are primarily traded outside the EU. Between 2018 and 2020, the total notional volume of CDSs referencing European G-SIBs reached approximately €185 billion. Of this, 50.6% (€94.2 billion) involved transactions between non-EU counterparties, with notable segments including UK-UK (€35 billion), UK–Other non-EU (€16.6 billion), and US-UK (€42.8 billion) (Chart 29, panel a). This indicates that a significant proportion of CDS activity on EU reference entities occurs outside the EU’s regulatory remit. Breaking the data down by ultimate parent of the trading counterparties (Chart 29, panel b), only €65 billion in notional volume involved a counterparty whose ultimate parent is domiciled

in the EU. In contrast, counterparties with a US ultimate parent accounted for approximately €127 billion, while those with a UK ultimate parent totalled €102 billion (Chart 29, panel b). An analysis of the “who-to-whom” distribution of volumes traded, considering both the direct and ultimate parent country of origin (as illustrated in Chart 29, panels c and d), reveals that a substantial proportion of CDS transactions on EU G-SIBs is conducted between counterparties whose direct and ultimate parent entities are domiciled in the UK and the US.

4 Regulatory framework for CDSs

In response to the Global Financial Crisis, the G20 leaders convened at the 2009 Pittsburgh Summit, committing to a comprehensive reform of the OTC derivatives market to prevent a recurrence of such systemic failures:

“All standardised OTC derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at latest. OTC derivatives contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements.”⁵³

The G20 commitments laid the foundation for the European Union's legislative response, primarily through the EMIR,⁵⁴ the MiFIR⁵⁵ and the SSR.⁵⁶

4.1 EU regulatory framework for CDSs

4.1.1 European Market Infrastructure Regulation

EMIR, adopted in July 2012, lays down rules on OTC derivatives, CCPs and trade repositories, in response to the global financial crisis of 2008 and fulfilling, within the EU, the G20 commitments. Since its implementation, EMIR has been amended by two legislative acts adopted in 2019 (EMIR REFIT⁵⁷ and EMIR 2.2⁵⁸) and by EMIR 3,⁵⁹ adopted on 19 November 2024.

⁵³ See “[Leaders' Statement – The Pittsburgh Summit](#)”, G20, 24 September 2009. See also the earlier communication “[Declaration of the Summit on Financial Markets and the World Economy](#)”, G20, 15 November 2008.

⁵⁴ Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties, and trade repositories (OJ L 201, 27.7.2012).

⁵⁵ Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (OJ L 173, 12.6.2014).

⁵⁶ Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps (OJ L 86, 24.3.2012)

⁵⁷ Regulation (EU) 2019/834 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 648/2012 as regards the clearing obligation, the suspension of the clearing obligation, the reporting requirements, the risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, the registration and supervision of trade repositories and the requirements for trade repositories (OJ L 141, 28.5.2019, p. 42)

⁵⁸ Regulation (EU) 2019/2099 of the European Parliament and of the Council of 23 October 2019 amending Regulation (EU) No 648/2012 as regards the procedures and authorities involved for the authorisation of CCPs and requirements for the recognition of third-country CCPs (OJ L 322, 12.12.2019, p. 1).

⁵⁹ Regulation (EU) 2024/2987 of the European Parliament and of the Council of 27 November 2024 amending Regulations (EU) No 648/2012, (EU) No 575/2013 and (EU) 2017/1131 as regards measures to mitigate excessive exposures to third-country central counterparties and improve the efficiency of Union clearing markets (OJ L, 2024/2987, 4.12.2024).

EMIR introduces an obligation to centrally clear certain classes of OTC derivatives through CCPs⁶⁰ that have been authorised (for European CCPs) or recognised (for non-EU CCPs) under the EMIR framework. This clearing obligation (CO) applies to transactions between financial counterparties, non-financial counterparties whose positions (excluding certain hedges) exceed a specified clearing threshold and to certain non-EU entities in some circumstances.⁶¹

In 2016, based on ESMA's draft regulatory technical standards (RTS),⁶² the European Commission adopted a Delegated Regulation specifying the classes of CDS subject to the mandatory clearing under EMIR.⁶³ The obligation applies to unrated Index CDSs settled in euro with a five-year tenor from Series 17 onwards, and referencing either the iTraxx Europe Main or iTraxx Europe Crossover indexes; these are considered the most liquid CDSs in the market.⁶⁴ In contrast, single-name CDSs were excluded from the clearing obligation owing to their lack of liquidity and infrequent trading.

At that time, the view reached by the ESRB converged with ESMA's analysis and it was considered prudent to introduce the clearing obligation for credit derivatives into the system cautiously by excluding single-name CDSs from its scope and by limiting the obligation initially to just iTraxx Europe Main and iTraxx Europe Crossover index contracts.⁶⁵ Currently, only one EU CCP and few recognised third-country CCPs may clear CDS contracts. However, as further developed in Chapter 3, only a relatively low percentage of CDS contracts (in particular, of single-name CDS contracts) are cleared, and that on a voluntary basis. ESMA, supported by the ESRB, emphasised that it will continue to monitor single-name CDS activity, leaving scope for reconsideration in the future of whether single-name CDSs should be made subject to mandatory clearing.⁶⁶

EMIR has also introduced an obligation to apply risk mitigation techniques to derivatives contracts not cleared by a CCP in order to mitigate the systemic risk that may arise from such transactions.⁶⁷ As a result, classes of CDS that are not subject to mandatory clearing must comply with this obligation by exercising due diligence to ensure that appropriate procedures and arrangements are in place to measure, monitor and mitigate operational risk and counterparty credit risk. Consequently, financial counterparties and non-financial counterparties that enter into an OTC derivative contract not cleared by a CCP must adopt risk mitigation techniques, such as timely confirmation of the terms of the relevant OTC derivative contract. In addition, they must adopt formalised processes in order to reconcile

⁶⁰ Article 4 of EMIR.

⁶¹ Article 4 of EMIR.

⁶² Article 5 of EMIR.

⁶³ Commission Delegated Regulation (EU) 2016/592 of 1 March 2016 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards on the clearing obligation (OJ L 103, 19.4.2016, p. 5).

⁶⁴ The iTraxx Europe Main is a CDS index tracking 125 high-grade European companies, while the iTraxx Europe Crossover tracks 75 sub-investment-grade European companies, both reflecting the credit risk of their constituents.

⁶⁵ See European Systemic Risk Board (2014).

⁶⁶ See European Securities and Markets Authority (2014) and European Systemic Risk Board (2014).

⁶⁷ Article 11(1) of EMIR.

portfolios, manage the associated risk, identify early any disputes between parties and resolve them, and monitor the value of outstanding contracts with marking to market on a daily basis. Timely, accurate and appropriately segregated exchange of collateral with respect to OTC derivative contracts is required for some contracts.

In addition, EMIR introduced a general reporting requirement that applies to all derivatives contracts.⁶⁸ Counterparties and CCPs are required to report the details of any derivative contract they have concluded and of any contract modification or termination to a trade repository by no later than the close of the following working day.⁶⁹ Trade repositories are required to make such information available to authorities to enable them to fulfil their mandates. The main objective of this reporting requirement is to provide the authorities with information to facilitate the identification and mitigation of systemic risk arising from the derivatives market. The reporting requirements also aim to enable the identification of relevant classes of OTC derivative contracts that should be subject to the clearing obligation, the calculation of liquidity thresholds and the determination of systemically relevant non-financial counterparties. A retrospective reporting obligation is needed, to the largest possible extent, for both financial counterparties and non-financial counterparties, in order to provide comparative data, including to ESMA and the relevant competent authorities.

These reporting requirements do not, however, ensure that regulatory authorities have all the data they require to have a full understanding of the derivatives market relevant to their remit. For instance, under EMIR, EU authorities can only access data on transactions where at least one counterparty is located within the EU. When both counterparties are located outside the EU, the transaction falls outside the scope of EU regulatory oversight, even if the CDS contract references an EU-based entity, such as a G-SIB or an EU sovereign. This lack of visibility creates a significant data gap, impairing authorities' ability to comprehensively monitor systemic risk and assess cross-border spillovers.

In April 2024, the EMIR REFIT initiative came into force as part of the EU's broader efforts to streamline derivatives regulation, introducing certain adjustments that impact the CDS market. EMIR REFIT seeks to further standardise reporting frameworks, including through the use of global standards, such as the ISO 4914 unique product identifier (UPI) and ISO 20022 XML messaging standard, in order to streamline reporting and reduce data quality issues. It aimed at increasing the granularity of reported information, as well as to put in place stricter data quality measures for trade repositories, including validation checks, regular reconciliation and feedback loops to help reporting entities ensure the accuracy of their submissions to regulators.

⁶⁸ Article 9 of EMIR.

⁶⁹ Article 9(1) of EMIR.

More recently, EMIR was recast by the so-called EMIR 3 Regulation,⁷⁰ which came into force on 24 December 2024. These amendments to EMIR sought to address the financial stability risks associated with excessive exposures of EU clearing members and clients to systemically important third-country CCPs (Tier 2 CCPs) where those CCPs provide clearing services identified by ESMA as clearing services of substantial systemic importance.

EMIR 3 introduces measures to mitigate excessive exposures of EU clearing members and clients to systemically important third-country CCPs and to improve the efficiency of EU clearing markets. It requires all market participants subject to a clearing obligation to hold active accounts at EU CCPs for clearing a portion of the categories of derivative contracts identified by ESMA as being of substantial systemic importance for the EU financial stability.⁷¹ Moreover, it provides for a Joint Monitoring Mechanism, with the aim of making the supervision of EU CCPs more efficient and effective, and to make it possible to gauge financial stability risks on a timely basis.⁷²

Authorities nevertheless need to be mindful of possible new gaps emerging. For instance, in a response to an ESMA consultation,⁷³ the European Association of CCP Clearing Houses argued that daily changes in contract values resulting in cash exchanges in the form of variation margin payments would lead to both contract valuations and variation margins being reported at zero value under specific accounting models. This approach challenges basic asset valuation principles and makes it impossible for authorities to accurately assess the risks associated with derivatives and the liquidity risks arising from margin calls.⁷⁴ It is crucial that EMIR reporting rules, both at Level 1 and under the relevant ESMA Guidelines, RTSs and Implementing Technical Standards (ITS), are structured to ensure that authorities can access this vital information to fulfil their mandates effectively.

4.1.2 Markets in Financial Instruments Regulation

In the aftermath of the global financial crisis, it also became evident that improvements in the transparency and oversight of financial markets, including derivatives markets, were necessary.⁷⁵ Building on MiFID and adopted alongside MiFID II in June 2014, MiFIR introduced a series of measures aimed at improving market transparency and oversight. Key provisions include the public disclosure of trade activity, transaction reporting to relevant authorities, trading of derivatives on organised trading venues and non-discriminatory access to CCPs and

⁷⁰ Regulation (EU) 2024/2987 of the European Parliament and of the Council of 27 November 2024 amending Regulations (EU) No 648/2012, (EU) No 575/2013 and (EU) 2017/1131 as regards measures to mitigate excessive exposures to third-country central counterparties and improve the efficiency of Union clearing markets (OJ L, 2024/2987, 4.12.2024).

⁷¹ Article 7a of EMIR.

⁷² Article 23b of EMIR.

⁷³ See European Association of CCP Clearing Houses (2022).

⁷⁴ See A system-wide approach to macroprudential policy, ESRB, November 2024, p. 48.

⁷⁵ See the page entitled "Investment services and regulated markets" published on the European Commission website.

trading venues and to benchmarks, as well as the extension of supervisory powers for national authorities, ESMA and the EBA. Additionally, MiFIR governs the provision of investment services and activities by non-EU firms, and authorisation and supervision of data reporting service providers (DRSPs).

The implementation of MiFIR's transparency regime has implications for the CDS market, given that the provisions seek to enhance market efficiency and reduce systemic risk by increasing the availability of trade and pricing information. In particular, MiFIR extends pre-trade transparency obligations to non-equity instruments, including derivatives such as CDSs. Trading venues are mandated to publicly disclose current bid and offer prices, along with the depth of trading interests at those prices which are advertised through their systems for CDSs traded on their platforms before trades are executed.⁷⁶ This information must be continuously available during normal trading hours, regardless of the trading system employed. This regime is complemented by the possibility for competent authorities to exempt from pre-trade transparency requirements those CDSs that lack sufficient liquidity and are not subject to the trading obligation, as well as orders deemed to be large in scale compared to the normal market size.⁷⁷

No single-name CDSs are subject to MiFIR's trading obligation, which requires certain derivatives contracts to be traded on regulated markets, multilateral trading facilities or OTFs, owing to the fact that the derivative classes that fall under MiFIR trading obligation must be: (i) subject to the clearing obligation under EMIR; (ii) traded on at least one trading venue; and (iii) be deemed sufficiently liquid. ESMA assesses liquidity based on criteria such as the average daily notional amount and the average number of trades per day, typically evaluated at the sub-asset class level. Currently, ESMA classifies single-name CDSs as insufficiently liquid, given that they generally do not meet the quantitative liquidity criteria of an average daily notional amount of €10 million and an average of ten trades per day. Furthermore, the customised nature of these contracts results in limited standardisation, making it impractical to make it mandatory that they be transacted on trading venues.⁷⁸

Under post-trade transparency requirements, trading venues are required to publicly disclose the price, volume, and execution time of CDS transactions as close to real-time as technically possible following the execution of a trade.⁷⁹ Again, however, competent authorities may authorise deferred publication of transaction details up to two days after execution for transactions involving illiquid CDSs, in order to prevent the adverse market effects that immediate disclosure might cause. In some cases, competent authorities may also permit extended

⁷⁶ Article 8 of MiFIR.

⁷⁷ Article 9 of MiFIR.

⁷⁸ See Commission Delegated Regulation (EU) 2017/583 of 14 July 2016 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council on markets in financial instruments with regard to regulatory technical standards on transparency requirements for trading venues and investment firms in respect of bonds, structured finance products, emission allowances and derivatives.

⁷⁹ Article 10 of MiFIR.

deferral periods or the release of limited information to further mitigate potential market impacts.⁸⁰

Post-trade transparency deferrals are aimed at protecting the liquidity of these markets, given that enhanced transparency could be seen as leading to higher trade execution costs and volatility, and might even discourage dealers from providing liquidity.⁸¹ In this regard, the United States has introduced a real-time, trade-by-trade post-trade transparency framework, including for single-name CDS contracts, that has been in place since February 2022.⁸² From its introduction, DTCC data on weekly trading show that notional amounts have moderately increased, which suggests that shifts in the single-name CDS markets (i) correspond to overall trends in financial markets, and (ii) are cyclical rather than being caused by the post-trade transparency requirements. Although constructing a counterfactual is challenging, this implies that the implementation of an almost real-time post-trade transparency regime for single-name CDSs in the United States has not yet resulted in a deterioration of market activity.

Moreover, post-trade transparency in single-name CDS markets brings significant benefits by enhancing market efficiency, price discovery and investor confidence. By reducing information asymmetry, it allows smaller participants to access critical transaction data, levelling the playing field and fostering greater competition. While it is true that public dissemination of trade details can inadvertently reveal trading strategies, particularly in illiquid markets, enhanced transparency broadens market participation and reduces barriers to entry, ultimately creating a more competitive and accessible trading environment. This is reinforced through the integration of fragmented markets by standardising information across platforms, creating a unified environment that boosts liquidity. Transparency can therefore improve valuations, making risk management, margin calculations and capital allocation more effective. These factors collectively contribute to a more reliable market, increasing trust among participants and reducing systemic risks. This notwithstanding, regulation must be carefully designed to mitigate potential downsides to both market liquidity and operational and compliance costs to firms.

Recognising persistent transparency challenges in the derivatives market, a revised MiFIR was adopted in February 2024⁸³ aimed at simplifying and harmonising the securities markets transparency framework, boosting secondary trading in euro-denominated debt instruments,⁸⁴ and empowering investors through consolidated market data. Its goal is to give investors better

⁸⁰ Article 11 of MiFIR.

⁸¹ See Priem, R. (2024).

⁸² See Regulation SBSR-Reporting and Dissemination of Security-Based Swap Information, 81 FR 53546, 53608, Securities and Exchange Commission (2015) and Statement on Public Dissemination of Security Based-Swap Transactions, Securities and Exchange Commission (2022)

⁸³ Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimising the trading obligations, and prohibiting receiving payment for order flow (OJ L, 2024/791, 8.3.2024).

⁸⁴ Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, The European economic and financial system: fostering openness, strength, and resilience (COM (2021) 32 final).

access to market data, increase the EU capital markets' global competitiveness and ensure a level playing field.⁸⁵ The rules establish a framework for selecting and authorising EU-level “consolidated tapes” (i.e. centralised data feeds) for different kinds of assets, bringing together market data provided by platforms on which financial instruments are traded in the EU.

The revised MiFIR extends the scope of the transparency framework with the aim of covering derivatives that are sufficiently standardised for published data relating to them to be meaningful for market participants beyond the contracting parties. According to Recital 8 of the Regulation amending MiFIR, the previous transparency framework for derivatives – which was largely based on the criterion of being traded on a regulated venue – has proved problematic for certain instruments that lack fungibility and sufficient identifying data. Under the revised regime, transparency should be determined by predefined characteristics, such as standardisation and liquidity, rather than solely by trading venue. As a result, the regime now covers not only derivatives traded on regulated markets but also OTC derivatives that are subject to a clearing obligation under EMIR and those that are centrally cleared.

For credit derivatives, the revised MiFIR extends pre- and post-trade transparency requirements to single-name CDSs that reference a G-SIB and to CDSs referencing an index comprising G-SIBs, and that are centrally cleared.⁸⁶

As highlighted in the recitals to the amending regulation, market events have shown that a lack of transparency in certain CDSs referencing G-SIBs or referencing an index comprising such banks might fuel speculation on the creditworthiness of those banks. Such CDSs should therefore also be subject to the transparency requirements when they are centrally cleared, even if they are not subject to the clearing obligation and even if they are not traded in trading venues. The European Commission is empowered, under the amending regulation, to amend the conditions for determining which derivatives should be made subject to the transparency requirements where market developments so require.

The revised MiFIR makes it mandatory for market operators and investment firms operating a trading venue to publish post-trade data as close to real-time as technically possible for CDSs referencing G-SIBs and that are centrally cleared.⁸⁷ For investment firms trading OTC, on own account or on behalf of clients, this information must be made public through an approved publication arrangement. The MiFIR Review overhauled the system for deferred publication in respect of derivatives, replacing the previous criteria for allowing deferred publication by new concepts (i.e. five categories of transactions,⁸⁸ including illiquid financial instruments). Furthermore, the amending regulation seeks to better tailor the deferral duration by removing the discretion for national authorities to extend deferrals, while, at the same time, providing for the possibility of deferring information on trading

⁸⁵ See the press release entitled “MiFIR and MiFID II: Council adopts new rules to strengthen market data transparency” published on the European Council website on 20 February 2024.

⁸⁶ Article 8a and Article 21 of (revised) MiFIR.

⁸⁷ Article 10 of (revised) MiFIR.

⁸⁸ Article 11a of (revised) MiFIR.

volumes for very large transactions for a longer period. ESMA will further calibrate this regime in its draft RTS, to be submitted to the European Commission by September 2025. In practice, this means that the existing deferral regime will remain in effect until the revised framework is adopted. It is anticipated that this will occur by mid-2026, with implementation of the new regime expected to commence in the course of 2027. In this regard, the ESRB acknowledges and supports the ESMA consultation paper addressing the transparency mandate for derivatives under MiFIR (Consultation Package 4).⁸⁹

However, even with the extended scope of derivatives subject to the transparency regime introduced by the revised MiFIR, the regime still only applies to a limited segment of the CDS market, given that single-name CDSs referencing non-G-SIB entities and those not centrally cleared remain exempt from these obligations. Indeed, as shown in Section 3, less than 30% of the outstanding gross notional amount of EU G-SIBs is cleared, a share that further declined below 20% in May 2023.

Furthermore, consolidated tape providers (CTPs) will be responsible for collecting market data about financial instruments from trading venues and approved publication arrangement (APA) systems, and for consolidating that data, by financial instrument, into a continuous electronic live stream made available to the public. The idea behind the introduction of CTPs was that data from trading venues and APA systems would be made available to the public in a consolidated manner, including all of the EU trading markets, using identical data tags, formats and user interfaces. This is expected to reduce fragmentation and information asymmetries within the EU. In July 2025, ESMA selected the first CTP for bonds.⁹⁰ The selection process for a CTP for derivatives is expected to take place in 2026.

Finally, trading obligations are strengthened for certain derivatives to ensure that they are traded on regulated platforms rather than OTC, but their application to the CDS market is as limited as before. The scope of counterparties subject to the trading obligation remains aligned with the scope of counterparties subject to the EMIR clearing obligation and single-name CDSs are not included in the classes of OTC derivatives subject to the clearing obligation.

Despite the reforms introduced through the MiFIR Review, the impact on the single-name CDS market remains limited owing to the fact that both the transparency regimes and the trading obligation are linked to the clearing obligation under EMIR. Under the revised MiFIR, pre- and post-trade transparency requirements apply to CDSs referencing G-SIBs only when they are centrally cleared. Moreover, because single-name CDSs are not subject to the EMIR clearing obligation, this effectively means that more than 70% of the market is not subject to

⁸⁹ See [European Securities and Markets Authority \(2025a\)](#).

⁹⁰ See the press release entitled “[ESMA selects Ediphy \(fairCT\) to become the first Consolidated Tape Provider for bonds](#)” published on the European Securities and Markets Authority website on 3 July 2025.

transparency obligations. Despite the intended regulatory transparency, the market remains largely opaque.

Expanding central clearing, trading venue use and standardisation of single-name CDSs could bring notable benefits to the market. These measures may reduce entry costs, improve transparency, attract new liquidity providers and ultimately enhance price discovery and resilience. Greater use of platforms and real-time pricing could foster a more competitive and accessible trading environment, while standardised contract terms may mitigate fragmentation and improve the reliability of CDSs as a credit risk management tool. These benefits are not guaranteed, however, and must be weighed against potential downsides. Enhanced transparency and increased standardisation may constrain market-making capacity during periods of market stress or diminish the flexibility required for bespoke hedging strategies. A thorough assessment is therefore essential to ensure that any change in the current regime enhances overall market functioning without creating new vulnerabilities.

4.1.3 Short Selling Regulation

The global financial crisis of 2008 showed that in times of considerable financial instability, short selling could not only aggravate the downward spiral of sovereign debt but also that of share prices, and notably those of financial institutions, ultimately posing a threat to the viability of those institutions and creating systemic risks.⁹¹ Indeed, even if short selling and CDSs may generate economic benefits, such as increasing market liquidity, they also carry certain risks, such as negative price spirals, settlement failures and transparency deficiencies, resulting in risks to financial stability, market integrity and information asymmetries between market participants.⁹²

Under the SSR, adopted in March 2012, taking an uncovered position in a sovereign CDSs is prohibited unless the position serves a legitimate hedging function.⁹³ This was designed to prevent market participants from speculating on sovereign debt without having an actual interest in the underlying debt, which could have severe consequences for the borrowing costs and creditworthiness of sovereign issuers and, indirectly, for borrowers of that economy. However, to preserve market liquidity, the SSR allows for flexibility through exemptions and temporary suspensions of the ban on uncovered positions in sovereign CDSs. Competent authorities are permitted to temporarily suspend the restrictions if there are signs that the market is not functioning properly, such as a significant increase in bond yields or liquidity shortages in sovereign debt markets. In exceptional circumstances, further restrictions may be imposed on sovereign CDS transactions to address serious threats to financial stability or market confidence.

⁹¹ Recital 1 of the Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps (OJ L 86, 24.3.2012, p. 1).

⁹² See the page entitled “Short selling” published on the European Commission website.

⁹³ Article 14 of SSR.

Furthermore, where a competent authority suspends restrictions, entities holding an uncovered position in a sovereign CDSs must notify the relevant competent authority if that position reaches or falls below the relevant notification thresholds for the sovereign issuer. This disclosure requirement applies to natural and legal persons domiciled or established within the EU or in a third country, in an attempt to allow visibility over transactions carried outside the EU.

4.2

Examples of uses of CDSs in EU banking regulation

Information derived from CDSs, such as quoted credit spreads, are used throughout the financial system and are also referenced in EU regulations, such as the CRR. CDS prices are, indeed, often used as input for decision-making throughout the financial system by a variety of actors and in a variety of contexts. For instance, CDS spreads for contracts written on a given reference entity may be used as a proxy of the counterparty credit risk of that entity.

Banks use various techniques, including CDSs contracts, to mitigate credit risks they face. These techniques help to reduce or transfer credit risk and, in some cases, to provide capital relief. The Basel Framework (Basel I, II and III)⁹⁴ recognises that credit derivatives, including CDSs, can allow banks to take appropriate credit protection into account when calculating capital requirements, if certain conditions are met.⁹⁵ As a result, banks can use CDSs to manage their regulatory capital requirements by reducing their risk-weighted assets, allowing them to hold less capital. The EU has implemented the Basel framework, mainly through the CRR and the Capital Requirements Directive (CRD).⁹⁶ CDS spreads are explicitly incorporated into the CRR in several key areas.

The CRR mirrors the Basel III provisions, emphasising the importance of CDS spreads as part of market-based monitoring tools.⁹⁷ These instruments, in principle, provide near real-time data regarding potential concerns about creditworthiness, which may consequently influence an institution's capacity to access funding within wholesale financial markets.

The CRR outlines the calculation of own funds requirements for credit valuation adjustment (CVA) risk.⁹⁸ In this regard, the CRR stipulates that institutions must utilise the CDS spreads of the relevant counterparty, provided these

⁹⁴ See Bank for International Settlements (2025).

⁹⁵ The Basel Framework provides that, where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, and where supervisors are satisfied that banks meet the standard operational requirements and risk management processes, such credit protection may be recognised for the purpose of calculating capital requirements. See Basel Framework CRE22.1–22.14 and CRE22.70–22.77 (Standardised approach: credit risk mitigation).

⁹⁶ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/E (OJ L 176, 27.6.2013).

⁹⁷ Article 292(3) of the CRR.

⁹⁸ Article 383 and 383a of the CRR.

are observable in the market, or, in the absence thereof, rely on credit spreads from other instruments issued by the same counterparty, where such data are available, or proxy spreads that are appropriate. Furthermore, CDS instruments are acknowledged throughout the CRR as hedging tools for helping to reduce own funds requirements. CDS notional amounts are also used in the calculation of various capital charges.

4.3 A comparative analysis of the CDS market regulatory frameworks

To explore potential pathways for improvement, this section examines how other major jurisdictions – the United Kingdom and the United States – approach CDS regulation. We aim to draw insights that may inform further reform of the EU framework. The following sections lay down key aspects of the UK and US regulatory frameworks for CDSs, and how they compare with the EU approach, providing input for future EU legislation and policy options.

4.3.1 The UK regulatory framework

The European Union Withdrawal Act 2018 (EUWA) sought to ensure continuity in many areas of UK law that were originally based on EU law.⁹⁹ To achieve this, the EUWA repealed the European Communities Act 1972¹⁰⁰, incorporated into UK law the existing body of directly applicable EU laws and preserved the UK laws adopted to implement EU obligations.¹⁰¹ It provides for retained EU laws to be assessed, as from the exit day, and then either repealed, amended or retained, as appropriate, depending on their relevance. In this regard, the EUWA empowers UK ministers to use statutory instruments to address any perceived shortcomings in EU law resulting from the withdrawal.¹⁰²

While the UK EMIR was incorporated into UK law and currently mirrors the EU EMIR in its impact on CDS instruments, one significant area of divergence relates to transparency through MiFIR. The MiFIR Review does not apply in the United Kingdom and this jurisdiction therefore deviates from the EU approach by currently not extending the transparency requirements to single-name CDSs and CDS indexes referencing G-SIBs.

The Financial Services and Markets Act 2023 (FSMA 2023)¹⁰³ **is the United Kingdom's flagship post-Brexit financial legislation.** Among its provisions, Article 10 empowers the Financial Conduct Authority (FCA) to design the United Kingdom's

⁹⁹ [European Union \(Withdrawal\) Act 2018](#), c. 16.

¹⁰⁰ [European Communities Act 1972](#), c. 68.

¹⁰¹ See the article entitled "[European Union \(Withdrawal\) Act 2018](#)" published on the [legislation.gov.uk](#) website.

¹⁰² See the article entitled "[Statutory instruments relating to Brexit](#)" published on the [UK Parliament](#) website.

¹⁰³ See [Financial Services and Markets Act 2023](#), c. 29 (UK), given Royal Assent on 29 June 2023.

post-trade transparency regime for fixed-income instruments and derivatives. Rather than setting down specific transparency rules in legislation, the Act gives the FCA the discretion to determine which instruments are in scope and what transparency requirements apply. The FCA must consider its statutory objectives and the potential impact on market liquidity when exercising these powers.

Following the introduction of the FSMA 2023, the FCA published a Policy Statement in November 2024 setting out its final position on the implementation of a transparency regime for bond and derivatives markets, adopting a narrower approach than that of the EU.¹⁰⁴ This was subsequent to the consultation launched by the FCA, in December 2023, under the Wholesale Markets Review (WMR), which concluded that the existing regime failed to provide meaningful transparency, had minimal influence on price formation and placed a significant cost burden on market participants.¹⁰⁵ The FCA explained that it sought to “reduce the compliance costs of the transparency regime in order to increase the benefits of liquidity without risking the incentive for liquidity providers to continue to provide liquidity”. The changes to the transparency regime will come into force on 1 December 2025.

In relation to CDS, mandatory post-trade transparency applies to both trading venues and investment firms dealing OTC as regards the two indexes falling under the Bank of England’s clearing mandate and under the FCA trading mandate, where for Single-Name CDS trading venues are granted additional flexibility in this regard. CDS indexes iTraxx Europe Main and iTraxx Europe Crossover with a tenor of 5 years, being among the most liquid indexes available for trading globally, are considered Category 1 financial instruments. These indexes are also those subject to the trading obligation under the EU MiFIR. Single-name CDS are considered Category 2 instruments and therefore trading venues – including UK MTFs and OTFs – are expected to calibrate the appropriate level of pre- and post-trade transparency to ensure fair and orderly trading and efficient price formation. This additional flexibility will reflect in the determination of transactions that are large in scale, where trading venues can determine the size of those transactions and the length of the deferral or deferrals in accordance with criteria set in the relevant rules.

In November 2024, the FCA also released a discussion paper on the UK transaction reporting regime.¹⁰⁶ The FCA noted that the rules “may not align with the EU’s MiFIR Review transaction reporting changes” and points to a shared ambition with the Treasury for a “streamlined transaction reporting regime, tailored to the United Kingdom, to cut costs for businesses and make [UK] capital markets more attractive”.

Finally, the United Kingdom has also recently reviewed its approach to short selling under the SSR. In January 2025, the United Kingdom adopted the Short

¹⁰⁴ See Financial Conduct Authority Policy Statement 24/14: Improving transparency for bond and derivatives markets.

¹⁰⁵ See Financial Conduct Authority Consultation Paper 23/32: Improving transparency for bond and derivatives markets.

¹⁰⁶ See Financial Conduct Authority Discussion Paper 24/2: Improving the UK transaction reporting regime.

Selling Regulations 2025 (SSR 2025),¹⁰⁷ aimed at tailoring regulation of short selling to UK policy objectives and giving the FCA rulemaking powers to complete and implement the new regime in respect of these activities, as well as powers to intervene in exceptional circumstances.¹⁰⁸ Most notably, the new Regulations do not include restrictions on uncovered short selling of sovereign debt and sovereign CDSs nor sovereign debt notification requirements. However, the new framework does maintain the FCA emergency intervention powers for sovereign debt and sovereign CDSs in the same way as for other financial instruments.¹⁰⁹ The UK Government removed these restrictions because it considered, based on feedback to their consultation on the UK short selling regime, that they were not necessary for the nature and size of the UK sovereign debt market and adversely impacted its more efficient functioning. In contrast, the EU SSR maintains these restrictions to mitigate potential risks associated with short selling. More broadly, the UK regime also simplifies disclosure rules for net short positions.

4.3.2 The US regulatory framework

US policymakers, like their EU counterparts, have enacted regulatory reforms for the OTC derivatives market consistent with the 2009 G20 Leaders’

Statements. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was enacted in 2010 to address the market and regulatory deficiencies exposed by the 2008 global financial crisis.¹¹⁰ It aimed to promote the financial stability of the United States by improving accountability and transparency in the financial system in order to protect the American taxpayer by ending “too big to fail” bailouts and to protect consumers from abusive financial services practices.¹¹¹

One of the core pillars of the Dodd-Frank Act is the mandatory central clearing of standardised derivatives, including certain classes of CDS. The Commodity Futures Trading Commission (CFTC)¹¹² has made central clearing mandatory for broad-based CDS indexes, such as the CDX.NA.IG and iTraxx Europe, that are highly liquid and standardised. As of the date of this report, the Securities and Exchange Commission (SEC) has not made clearing of single-name CDSs mandatory, although they may be cleared on a voluntary basis, which is similar to the EU’s approach.

Furthermore, the Dodd-Frank Act imposes a trade execution requirement for CDSs subject to clearing, as in the EU, requiring that these transactions be executed on regulated platforms, such as swap execution facilities (SEFs) or security-based swap execution facilities (SBSEFs). This enhances market

¹⁰⁷ See *The Short Selling Regulation*, 2025.

¹⁰⁸ The FCA is expected to launch a consultation on its new short selling rules in the third quarter of 2025.

¹⁰⁹ See HM Treasury (2025).

¹¹⁰ See *Dodd-Frank Wall Street Reform and Consumer Protection Act*, Public Law 111-203, 124 Stat. 1376 (2010).

¹¹¹ The Dodd-Frank Act, 124 Stat. at 1376.

¹¹² Within the US institutional framework, the CFTC has primary authority over swaps, except for security-based swaps, which are regulated by the SEC, while “mixed swaps” are jointly regulated by the CFTC and the SEC.

transparency by ensuring that price, volume and other key trading data are publicly available.¹¹³ The CFTC has made it mandatory for certain products to be subject to the exchange-trading requirement, in particular the two classes of untranch index CDSs that are subject to the clearing requirement. As of the date of this report, the SEC has not made mandatory trading determinations for single-name CDSs.

The Dodd-Frank Act also mandates the regulatory reporting and public dissemination of certain derivatives transactions, including CDS. All CDS transactions, whether cleared or uncleared, must be reported to swap data repositories (SDRs) or security-based swap data repositories (SBSDRs).¹¹⁴

These requirements are intended to enhance oversight and transparency by providing regulators and market participants with access to comprehensive data on certain derivatives transactions, including CDSs.

Specifically with respect to public dissemination, the real-time public reports must include price and volume data that are reported as soon as technologically practicable after the transaction has been executed. The purpose of the real-time reporting requirement is to make transaction and pricing data available to the public in such form, and at such times, as are appropriate to enhance price discovery.¹¹⁵

4.3.3 Policy implications from the comparative analysis

From the comparative analysis of the regulatory frameworks governing CDSs in the EU, UK and US, it is evident that, while all three jurisdictions aim to enhance market stability and transparency, they adopt differing approaches. The EU places an emphasis on transparency and systemic risk reduction through EMIR and MiFIR, but practical effectiveness is limited because most single-name CDS transactions remain out of scope, even after recent regulatory amendments.

The UK will soon have a new set of rules on transparency for derivatives markets, which takes account of market integrity but also of competitiveness, with post-trade transparency requirements being mandatory for the most liquid CDS indexes under the clearing and trading obligations, while for single-name CDS trading venues benefit from flexibility to calibrate the adequate level of transparency.

In the US, by mandating immediate post-trade reporting for all CDS transactions, including single-name CDSs, the regulatory approach focuses on market transparency and aims to facilitate timely regulatory oversight. The fact that the introduction of immediate post-trade transparency does not appear to have adversely affected market liquidity provides valuable insights for EU policymakers going forward.

¹¹³ See the [Commodity Exchange Act](#), 7 U.S.C. 7b-3(f)(9)(A); the [Commodity Exchange Act](#), 15 U.S.C. 78c-4(d)(8)(A).

¹¹⁴ See [Dodd-Frank Act](#), sections 727, 728 and 763(i).

¹¹⁵ See the [Commodity Exchange Act](#), 7 U.S.C. 2(a)(13)(B); the [Commodity Exchange Act](#), 15 U.S.C. 78m(m)(1)(B).

These divergent regulatory strategies draw attention to the need for greater international coordination in addressing systemic risks and market transparency. The comparative analysis presented here will inform policy considerations, particularly as regards fostering international cooperation and improving transparency.

Overview of the CDS market regulatory frameworks in the EU, UK, and US.

	EU	UK	US
Regulatory focus	- Post the 2008 global financial crisis, the EU introduced EMIR and MiFIR with the aim of increasing transparency, mitigating systemic risk, and enhancing the market infrastructure for OTC derivatives. - The SSR seeks to prevent speculative risks in sovereign debt markets, restricting uncovered positions unless they are for legitimate hedging. - The MiFIR Review focuses on improving transparency and establishes a consolidated tape for market data.	- While initially mirroring EU regulations post-Brexit, the United Kingdom is moving towards its own regulatory approach through the Financial Services and Markets Act (FSMA 2023). - Aims to reduce compliance costs and maintain liquidity in the CDS market by proposing more targeted transparency requirements. - New Regulation on Short Selling does not include restrictions on uncovered short selling of sovereign debt and sovereign CDSs (FCA rules to be adopted).	- The Dodd-Frank Wall Street Reform and Consumer Protection was enacted in 2010 to address the market and regulatory insufficiencies exposed by the 2008 global financial crisis. - The Dodd-Frank Act focuses on mitigating systemic risks, increasing transparency and curbing market abuses, such as manufactured credit events.
Clearing obligation	- EMIR makes central clearing mandatory for untranchised index CDSs settled in euro (iTraxx Europe Main and Crossover). - Single-name CDSs are excluded from mandatory clearing due to lack of liquidity/infrequent trading.	- The UK EMIR, incorporated into UK law, currently aligns with EU EMIR as regards clearing requirements for CDSs. - To date, no major changes have been made to clearing obligations for CDSs post-Brexit.	- Requires central clearing for standardised derivatives, including certain CDS indexes (e.g. CDX.NA.IG, iTraxx Europe). - Single-name CDSs are not subject to mandatory clearing, due to their customised nature and lower liquidity, but may be cleared voluntarily.
Trading execution obligation	- Derivatives subject to the clearing obligation, traded on a trading venue and sufficiently liquid to be subject to trading obligation. - Currently, this only applies to certain CDS indexes (iTraxx Europe Main and Crossover). - Single-name CDSs are not subject since they are not subject to the clearing obligation.	- Trading obligations apply to the same CDS indexes as for the EU (iTraxx Europe Main and Crossover). - Maintains exemptions for illiquid and customised CDS instruments. - Aims to avoid disrupting the market for bespoke CDS contracts.	- Makes it mandatory for CDSs subject to clearing to be traded on regulated platforms (SEFs or SBSEFs). - Single-name CDSs are not subject to the trade execution requirement. - Aims to improve market integrity by ensuring standardised CDSs are traded on regulated venues.
Post-trade transparency	- MiFIR makes public disclosure of price, volume and execution time mandatory for certain CDS transactions and as close to real-time as possible. - National competent authorities may allow deferred publication or temporarily suspend it for certain trades depending on the liquidity of the instrument.	- The FCA's Policy Statement 2024/14 introduces, from December 2025, a new transparency regime: Mandatory post-trade transparency applies to the most liquid CDS indexes, while for single-name CDS trading venues are expected to calibrate the adequate level of transparency.	- Trade data – price, volume – is to be reported to swap data repositories or security-based swap data repositories and made publicly available as soon as technologically practicable. - Applies to all CDS transactions, enhancing market transparency and facilitating efficient pricing.

5 Policy considerations

5.1 Key findings

The analysis of CDS market structure in combination with the current regulatory framework has led to several findings related to:

- **the role of CDSs in credit markets;**
- **market structure;**
- **market transparency;**
- **supervisory reporting and data quality.**

The role of CDSs in credit markets

CDSs serve as instruments to transfer credit risk between counterparties, but their role extends beyond this core function. While traditionally viewed as derivatives influenced by the dynamics of the underlying debt instruments, CDSs can also exert significant influence on these underlying dynamics, particularly the cost of funding for reference entities. CDS spreads play a crucial role in credit markets by serving as key indicators for counterparty credit risk assessment. They function both as “implicit” benchmarks and, through a lead-lag relationship with underlying credit risk, affect pricing, liquidity and market sentiment.

Due to their implicit role as measures of credit risk for financial institutions and their explicit role in financial regulations, changes in CDS spreads can give rise to market feedback mechanisms that exacerbate financial stress or may lead to procyclical behaviour. As with the lowering of credit ratings, higher CDS spreads can lead to an implicit rise in credit risk caused by market participants or an explicit rise caused by supervisors, potentially leading to simultaneous increases in capital and liquidity requirements for financial institutions. While changes in credit risk should be reflected in financial institutions’ requirements as soon as possible, simultaneous increases can contribute to excessive procyclical behaviour, especially in times of crisis. One additional mechanism through which CDSs can influence underlying dynamics is their role in credit events. Such events heighten default risk perception and have the potential of leading to an increase in CDS spreads, bond selloffs, reduced liquidity and higher borrowing costs for the affected entity. This role is also reflected in the recent amendment to MiFIR, which states that “recent market events have shown that a lack of transparency in certain credit default swaps referencing global systemically important banks or referencing an index comprising such banks might fuel speculation on the creditworthiness of

such banks”, further acknowledging their role as contracts that are “meaningful for market participants beyond the contracting parties”.¹¹⁶

Market structure

Analysis of the single-name CDS market microstructure reveals two important market imperfections: concentration and illiquidity. In particular, price-forming trades are low in volume and highly concentrated, at least across three dimensions: trading counterparties, reference obligations for a given issuer and time. A small number of trading counterparties drive most of the price-setting trades, particularly on a few key reference obligations for specific issuers. This high degree of concentration raises important questions about market functioning in normal market conditions, and particularly during periods of market stress. Moreover, at times of market stress, these market participants may not provide sufficient liquidity to absorb sudden spikes in demand for credit protection, exacerbating market instability. Price formation also tends to cluster around significant market events when trading activity peaks, while, in normal times, market activity is higher at times when there are changes in benchmark contract dates.

Market transparency

Despite recent reforms, a large proportion of single-name CDS contracts remains outside the scope of EU post-trade transparency requirements, given that these requirements do not cover single-name CDS contracts that are not centrally cleared. The scope of market transparency requirements has been recently broadened under the MiFIR Review to include certain single-name CDSs that are centrally cleared, however a large fraction of single-name CDS transactions are not cleared. Our analysis suggests, however, that non-cleared CDSs can be equally influential in shaping price formation and market sentiment as centrally cleared instruments.

This limited coverage of post-trade transparency requirements contributes to the continued opacity of the single-name CDS market, in which important pricing and trading information is accessible only to a handful of market participants. As a result, another market imperfection, namely information asymmetry, persists, undermining competition and price discovery.

Supervisory reporting and data quality

Timely access to high-quality, complete and standardised data remains an essential prerequisite for supervisory authorities to effectively monitor the CDS market and fulfil their mandates. Yet more than a decade after the

¹¹⁶ See Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimizing the trading obligations and prohibiting receiving payment for order flow (OJ, L 2024/791, 8.3.2024).

introduction of the EMIR reporting requirements, substantial shortcomings persist.¹¹⁷ Key data fields – such as information on contract valuations, variation margins and the specific characteristics of underlying reference obligations – are either absent, inconsistently reported or lack the granularity needed for meaningful analysis. The recent amendments to the EMIR Guidelines¹¹⁸ have not fully resolved these issues, and deficiencies in data quality, reconciliation and standardisation continue to impair the ability of supervisors to interpret the reported data and assess systemic risk exposures with confidence.

Finally, the global nature of CDS trading poses further challenges for EU authorities. The current regulatory framework captures only transactions involving at least one EU-domiciled counterparty or being executed within the EU, meaning that CDS contracts referencing EU entities – such as sovereigns or G-SIBs – concluded exclusively between non-EU counterparties remain entirely outside the scope of EU reporting obligations. This jurisdictional gap limits supervisors' visibility of risks affecting the EU financial system, particularly during episodes of stress. The inability to monitor such cross-border exposures hinders the detection of vulnerabilities and reduces the effectiveness of timely responses to emerging risks, as demonstrated during recent market dislocations.

5.2 Policy proposals

The analytical findings highlight the existence of several market imperfections, such as concentration, illiquidity and information asymmetries, in the single-name CDS market. In this regard, three policy objectives seem key:

- policy objective 1: improve market functioning and liquidity;
- policy objective 2: enhance market transparency;
- policy objective 3: obtain better information for oversight.

In order to address these policy objectives, the report proposes four policy measures.

- **Policy proposal 1: Enhance post-trade market transparency on single-name CDSs (relates to policy objectives 1 and 2)**
 - Adjust the EU's post-trade market transparency regime to apply at least to single-name CDSs on EU G-SIBs and EU sovereigns, regardless of whether they are centrally cleared and how they are traded.
- **Policy proposal 2: Strengthen supervisory access to information through improved quality and standardisation of data reported as well as enhanced global cooperation (relates to policy objective 3)**

¹¹⁷ See European Systemic Risk Board (2020a)

¹¹⁸ See the page entitled "ESMA Guidelines for reporting under EMIR" published on the European Securities and Markets Authority website.

- Improve the quality and standardisation of data reported to supervisors.
 - Enhance global cooperation on information and data sharing amongst authorities on CDS markets.
 - Develop a real-time monitoring tool for CDS markets to enable potential timely macroprudential interventions during periods of systemic market stress.
- **Policy proposal 3: Promote the efficiency and functioning of the single-name CDS market (relates to policy objective 1)**
 - Identify and address structural factors limiting demand, supply and competition in the single-name CDS market.
 - **Policy proposal 4: Improve credit risk assessment frameworks by reducing excessive reliance on CDS spreads and raising awareness about the price formation mechanisms (relates to policy objectives 2 and 3)**
 - Policymakers, market participants and other stakeholders should deepen their understanding of, and consider the structural limitations associated with single-name CDS pricing, particularly under conditions of market stress. It is essential to account for these limitations to support more informed and accurate interpretations of the role of the CDS market as an indicator of credit risk.

These policy proposals are interconnected and closely related to the above three policy objectives. Enhancing post-trade transparency (policy proposal 1) for G-SIB and EU sovereign CDSs could improve price discovery and reduce information asymmetries, lowering barriers to entry and encouraging broader market participation, as well as improving market efficiency and liquidity. Strengthening supervisory reporting frameworks and international cooperation (policy proposal 2) is essential to standardise and expand the data available to supervisors, closing gaps in oversight and enabling deeper analysis. Combined with efforts to promote more efficient and well-functioning market structure (policy proposal 3), these measures aim to create the conditions for better market functioning and price formation. Policy proposal 4 addresses the need to reduce excessive reliance on CDS spreads as indicators of credit risk given the market's structural limitations. Authorities and stakeholders must remain cautious about how CDS spreads are interpreted, recognising that factors such as low liquidity and limited participation can distort perceptions of creditworthiness. These proposals would also improve market transparency and provide better information for oversight.

Policy proposal 1: Enhance post-trade market transparency on single-name CDSs

Adjust the EU's post-trade market transparency regime to apply at least to single-name CDSs on EU G-SIBs and EU sovereigns, regardless of whether they are centrally cleared and how they are traded.

A large proportion of CDS contracts remains outside the scope of the EU post-trade transparency requirements introduced by the regulatory reforms adopted both post-global financial crisis and more recently. This is because:

- uncleared single-name CDSs and those neither traded in venues nor by investment firms, which constitute most of the volume, are not within the scope of the MiFIR post-trade transparency framework;
- a large fraction of CDSs referencing EU entities is traded outside the EU.

Considering the critical role that CDSs play, it is important that market participants have access to additional information on CDS market activity.

Therefore, we propose that legislative amendments be considered to address the identified limitations with the aim of achieving the same level of market transparency for key single-name CDSs as enjoyed by index CDSs.

Economic reasoning

Currently, single-name CDS markets remain largely opaque,¹¹⁹ with most trades occurring OTC and subject to neither on-venue trading obligations nor the public disclosure requirements under the MiFIR pre-trade and post-trade transparency regimes. These regimes apply only to centrally cleared CDSs when traded in venues or by investment firms. Lack of market transparency causes information asymmetry: a limited number of frequent market participants – mainly dealers – have better access to pricing and trading data than other counterparties, limiting competition and price efficiency.

By reducing information asymmetry, increased market transparency levels would level the playing field, enabling all market participants to access critical transaction data. This would foster greater competition, enhance market efficiency and improve price discovery. It would also reduce systemic risk and prevent market manipulation. Post-trade transparency, by disclosing transaction details (price,

¹¹⁹ See the letter entitled *MiFIR review – transparency regime for single name-CDS and standardised OTC-derivatives*, sent by ESMA Chair, Verena Ross, to ESMA, dated 2 June 2023.

volume and execution time) in real time or near real time, enables accurate contract valuations and better risk management.¹²⁰

Furthermore, while post-trade transparency deferrals were initially introduced to protect liquidity, there is an ongoing debate about whether their broad application is necessary, or if they unintentionally reduce the effectiveness of market transparency rules. In relation to concerns about liquidity, confidentiality and operational burdens, it should be noted that in less liquid single-name CDS markets, transparency to the market could expose trading strategies, increasing hedging costs and discouraging dealers from providing liquidity – potentially leading to wider bid-ask spreads and reduced market depth. The public dissemination of trade details in thinly traded markets could also raise the risk of front-running or strategic positioning against disclosed trades, which might deter participants from entering the market.

These concerns may, however, be overstated, as also pointed out by IOSCO.¹²¹ There is no evidence that the introduction of mandatory close-to-real-time post-trade transparency in CDS markets leads to a deterioration in market liquidity. Real-time, trade-by-trade post-trade market transparency requirements were introduced in the United States in February 2022. Since then, single-name CDS price movements have, in fact, continued to align with overall financial market trends and have remained cyclical – indicating that post-trade transparency was not associated with liquidity disruptions. Data from the DTCC on weekly trading activity in the CDS market shows a moderate increase in notional volumes traded following the introduction of the transparency framework in the United States, indicating that there has been no adverse impact on market liquidity. This suggests that the EU's current approach of maintaining a limited scope for transparency requirements may not be justified.

Furthermore, public disclosure of information on a broader set of CDSs would (i) contribute to raising awareness of the limitations of CDS prices and their formation, and (ii) prevent market abuses, such as manufactured credit events, where investors may take positions in CDSs and then trigger defaults for profit. Aligning the EU's CDS transparency framework with the US model, where trade-by-trade reporting requirements have been in place since 2022, would also strengthen global financial market integrity and prevent regulatory arbitrage.

Implementation

This policy proposal could be implemented by taking the following actions.

¹²⁰ In IOSCO (2015), page 1, the following recommendation is made: "In consideration of these potential costs and benefits, IOSCO believes that greater post-trade transparency in the CDS market—including making the price and volume of individual transactions publicly available—would be valuable to market participants and other market observers. IOSCO, therefore, encourages each member jurisdiction to take steps toward enhancing post-trade transparency in the CDS market in its jurisdiction, while recognizing that each member jurisdiction is best placed to judge the appropriate time and manner for enhancing post-trade transparency for CDS that trade in its respective market."

¹²¹ Ibid.

1. **Amending EU legislation to provide for the disclosure of post-trade information on single-name CDSs referencing EU G-SIBs and EU sovereigns, whether centrally cleared or not and regardless how they are traded.** This could be achieved by making it mandatory for trade repositories to publish details of single-name CDS transactions (such as price, volumes and timestamps), along the lines of the solution currently foreseen under Article 81(1) of EMIR for aggregate positions, given that this information is already reported to them under Article 9 of EMIR.

It is expected that the proposed framework for public disclosure would achieve the intended purpose of allowing visibility over a considerable proportion of the CDS market without triggering any relevant additional burden. The key drawback is the fact that the information is currently reported to the trade repositories up to one working day after the conclusion, modification or termination of a contract and would therefore not amount to real-time (or close-to-real-time) disclosure.

As an alternative, amendments to MiFIR could be considered, given that it currently provides for a post-trade transparency regime applicable to OTC derivatives, as referred to in Article 8a(2) of MiFIR and in accordance with its Articles 10 and 21.

In any event, it should be noted that any such changes would require a fundamental overhaul of the EU's transparency regime – a complex and challenging undertaking. As such, the proposed policy measure should primarily be understood as serving as guidance to highlight areas within the transparency framework for further consideration and gradual intervention, rather than as a definitive target to be fully implemented in the short term.

2. **The previous proposal could be accompanied by amendments to Level 2 regulation on transparency for derivatives to reduce post-trade publication deferrals, improving the timeliness of post-trade data publication.** We acknowledge and support ESMA's current consultation paper on transparency for derivatives under the MiFIR Review (Consultation Package 4),¹²² which seeks to ensure consistency and harmonisation of deferrals across EU Member States – a step in the right direction.

Policy proposal 2: Strengthen supervisory access to information through improved quality and standardisation of data reported as well as enhanced global cooperation

Timely access to high-quality and standardised data is a sine qua non condition for authorities to monitor CDS markets effectively and to deliver on their mandate. However, two major challenges continue to undermine this objective.

First, the quality of the data reported to supervisors needs improvements (see Section 2.1). Over a decade after EMIR's reporting requirements were established,

¹²² See European Securities and Markets Authority (2025a).

the data reported by market participants continue to have significant quality issues and are marked by inconsistent use of the standards for reporting to authorities.¹²³

Second, a significant proportion of trading activity on key EU single-name CDSs is not captured by the current supervisory reporting framework owing to the global and decentralised nature of the CDS market (see Section 2.2). CDS contracts referencing EU entities, such as sovereigns or G-SIBs, that are concluded between non-EU counterparties are not captured by EMIR reporting, leaving a significant blind spot in the monitoring framework. This fragmentation results in an incomplete picture of the market activity over CDS written on EU entities that limits authorities' ability to assess related risks.

These limitations could be addressed by a set of measures that would improve the completeness, quality and international exchange of CDS data. These actions would enhance the capacity of authorities to oversee market developments, detect emerging vulnerabilities and intervene more effectively during episodes of stress.

Finally, leveraging the improved and expanded information obtained by introducing these measures, authorities should pursue real-time monitoring of CDS markets to facilitate targeted and timely macroprudential interventions during periods of market stress, should this prove to be necessary (Section 2.3).

2.1. Improve the quality and standardisation of data reported to supervisors

Strengthen supervisory data quality by enhancing reporting discipline, improving internal controls of reporting entities and aligning technical standards with global identifiers to ensure consistent, accurate and timely supervisory data reporting.

Economic reasoning

The ability of authorities to monitor the CDS market hinges not only on the set of information they access but also on the quality of this information and how these trades are reported. The measures we propose are aimed at improving the quality of data reported under the EMIR and MiFIR frameworks. Moreover, we also propose that standardisation be enhanced, in line with international standards, and that international identifiers be adopted to ensure greater data consistency across reporting entities. These identifiers include the ISO 10962 Classification of Financial Instruments (CFI), the international securities identification number (ISIN) and the UPI (due to come into force in the EU in 2026).

¹²³ See, for example European Systemic Risk Board (2020a); European Systemic Risk Board (2022); European Systemic Risk Board (2023) and European Systemic Risk Board (2024).

The ESRB has consistently highlighted the critical importance of data quality in safeguarding financial stability, emphasising that reporting entities bear the responsibility of maintaining high-quality data, which is also essential for their own effective risk management. Moreover, the ESRB has also emphasised how poor data quality undermines the ability of authorities to monitor financial stability risks, conflicting with the transparency objectives established after the 2008 global financial crisis.¹²⁴ The ESRB has also underscored the necessity for reporting entities to enhance their internal processes, controls and governance structures to ensure high-quality data submission to the supervisors and authorities.

Although the quality of EMIR reporting data has improved over the years, challenges persist, particularly as regards implausible notional values, inaccurate market valuations and inconsistencies, including with respect to other key attributes. Many of these reporting errors originate from the poor ability of counterparties to reconcile their trades effectively.

Improving data quality in reporting is imperative, given that there are no evident costs or other drawbacks to maintaining high standards of data accuracy and completeness. In order to achieve this objective, reporting entities must acknowledge the critical role of transparency. Despite their status as key pillars of market transparency, some EU CCPs have faced significant challenges in maintaining data quality, confirming, indeed, that the details of centrally cleared trades reported are not necessarily of high quality. Furthermore, even when ex post enforcement is applied, the inherent delays hinder authorities from monitoring risks effectively within the timeframes necessary to limit the spread of systemic risk.¹²⁵

Despite the importance of accurate data, inconsistent reporting practices and the low quality of key data fields impair data reliability that constrain supervisors' ability to analyse CDS price formation and liquidity dynamics effectively. Common issues include frequent misreporting of up-front payments, ambiguity in fixed premium measurements and insufficient granularity in classifying debt seniority. Moreover, key data fields – such as information on contract valuations, variation margins and the specific characteristics of underlying reference obligations – are either absent, inconsistently reported or lack the granularity needed for meaningful analysis. Moreover, reporting gaps, such as the exclusion of restructuring types, ISDA definitions and insufficient granularity in UPIs, further hinder analysis of the CDS markets. While the EMIR REFIT framework¹²⁶ enables the identification of trades from post-trade risk reduction exercises or market risk transfers, data quality in this area also remains inadequate. Although the EMIR REFIT framework has addressed some of the inconsistencies, challenges persist, such as unclear units for fixed premiums and limited classifications for seniority.¹²⁷

The ESRB also considers standardisation to be a critical component in improving data quality and transparency. Historically, OTC derivatives such as

¹²⁴ See, for example, European Systemic Risk Board (2020a); European Systemic Risk Board (2022); European Systemic Risk Board (2023) and European Systemic Risk Board (2024).

¹²⁵ See European Systemic Risk Board (2022).

¹²⁶ Data reporting under this framework began in April 2024

¹²⁷ See European Securities and Markets Authority (2025b).

CDSs have lacked consistent identifiers, complicating the tracking and reporting of trading activity and exposures. To address these challenges, the ESRB has repeatedly underscored the need for increased standardisation to ensure greater data consistency across reporting entities, enhancing macroprudential analysis and financial stability oversight.

In support of these objectives, the ESRB emphasises the importance of global efforts on standardisation, particularly with respect to the adoption of international identifiers. These identifiers – the CFI, the UPI and the OTC ISIN – operate as complementary layers within an integrated framework for identifying OTC derivatives:

- CFI: provides the classification category of the derivative;
- UPI: identifies the economic “product type”;
- OTC ISIN: specifies the individual instrument for both reporting and operational purposes.

While there could be costs associated with the implementation of new standards, there is an agreement at international level that the benefits outweigh the costs. Moreover, further standardisation in derivatives could contribute to the process of automation and standardisation for the financial industry. As part of this process, it is essential to ensure that reference data associated with the OTC identifiers are up-to-date and of highest quality.

The Derivatives Service Bureau (DSB), designated by the FSB as the global UPI service provider,¹²⁸ plays a key role in ensuring that these identifiers function cohesively. By meeting global regulatory requirements and supporting market participants' need for consistent, accurate and real-time identification of OTC derivatives, this integrated framework promotes enhanced transparency and risk monitoring. In this regard, the European Commission has recently adopted a delegated regulation providing for the inclusion, from 1 September 2026, of the ISO 4914 UPI in the identifying reference data for the purposes of pre- and post-trade transparency laid down in MiFIR.¹²⁹

Implementation

This policy proposal could be implemented as follows.

- A necessary first step for data quality is to enhance the data reported under Article 9 of EMIR and to prevent similar shortcomings in the**

¹²⁸ See Financial Stability Board (2019).

¹²⁹ From 1 September 2026, the ISO 4914 UPI must be used in the identifying reference data for OTC credit default swaps. This was imposed to meet the transparency requirements laid down in Articles 8a(2), 10 and 21 of MiFIR under Commission Delegated Regulation (EU) 2025/1003 of 24 January 2025 supplementing Regulation (EU) No 600/2014 of the European Parliament and of the Council as regards OTC derivatives identifying reference data to be used for the purposes of the transparency requirements laid down in Article 8a(2) and Articles 10 and 21 (OJ L, 2025/1003, 22.5.2025).

information reported under the revised MiFIR. This could be achieved through:

1. Addressing errors and inconsistencies at source by improving internal processes, controls and governance structures related to reporting before the submission of data to national authorities. This could be achieved by engaging with reporting entities, including large financial groups and CCPs, to ensure that they acknowledge their responsibility in submitting high-quality data.
 2. The adoption by the national authorities (in collaboration with ESMA) of measures, such as the imposition of fines, to improve the role of enforcement for data quality issues and the establishment of stricter reconciliation requirements.
- (ii) **The EMIR reporting Guidelines should be amended to ensure consistent contract valuation and margin reporting.** The Guidelines for reporting under EMIR should be amended so that all derivatives (including CDSs) contract valuations and variation margins are reported in a consistent and accurate way by all reporting entities. The new guidelines should be aligned to current developments in international standards and specify how contract valuations and margins should be reported in order to ensure that the authorities can properly monitor these markets.
- (iii) **In relation to standardisation, the process of adoption of international identifiers for OTC derivatives (including the CFI, UPI, and OTC ISIN) should be continued.** In particular, Commission Delegated Regulation (EU) 2025/1003 should be implemented, to ensure the use, from 1 September 2026, of the UPI for the purposes of pre- and post-trade transparency, as laid down in MiFIR. As concerns EMIR, in line with the measures proposed in paragraph (i), it must be ensured that reporting entities adopt these standards consistently and maintain high-quality reporting practices by addressing errors and inconsistencies at source through enhanced internal processes, controls and governance. Engagement with key stakeholders, including large financial groups and CCPs, is essential to ensure that they take responsibility for adopting these standards in a timely and consistent manner.

2.2. Enhance global cooperation on information and data sharing amongst supervisory authorities on CDS markets

Increase global cooperation on information and data sharing amongst supervisory authorities to ensure better visibility over the global CDS markets. This might be achieved through a framework for (bilateral) information and data exchange between supervisors in key jurisdictions.

Economic reasoning

CDS markets are global, but regulation and supervision are regional or country-specific. Despite the enhanced authority oversight brought about by the reporting requirements introduced in EU legislation following the global financial crisis and strengthened more recently, EU authorities do not have access to information about CDS contracts written on EU reference entities that occur between counterparties domiciled outside the EU. This is due to jurisdictional limitations, given that under EU legislation a link to the EU – such as at least one EU-based counterparty or execution on an EU trading venue – is generally required for transactions to fall under EU reporting obligations. These data would have been particularly valuable during events such as the 2023 banking turmoil. In the case of CDSs, these limitations add to their identified structural characteristics, resulting in only a small portion of the overall CDS market being subject to enhanced transparency requirements.

A broader data exchange framework with key jurisdictions would greatly enhance the amount of data available to EU supervisors for monitoring. It would be particularly beneficial to obtain information on CDS trades referencing EU G-SIBs and EU sovereigns even if the counterparties entering into the contract are not EU counterparties.¹³⁰ By improving supervisory information on CDS transactions and exposures, including on CDSs referencing G-SIBs and sovereigns outside the EU, authorities would gain a more complete picture of market dynamics.

Greater international cooperation may offer an effective solution to achieve visibility on these transactions. A formal data-sharing framework between supervisory authorities could lead to the exchange of relevant information on CDS between jurisdictions in a secure, coordinated and timely manner, helping EU authorities to better fulfil their mandates.

Implementation. This policy proposal could be implemented as follows.

ESMA, in collaboration with the ESRB, should seek to establish a cooperation framework with key authorities outside the EU in order to obtain information about trades and positions. This may be achieved through the establishment of Memoranda of Understanding (MoUs) between authorities or through other forms of voluntary arrangements for cooperation and exchange of information.

The exchange of information with authorities from jurisdictions outside the EU should be carefully assessed and implemented through a step-by-step approach, with particular attention being paid to any legal constraints emerging from the framework governing the reporting of derivatives data or the authorities that hold such data (e.g. confidentiality regimes). A preliminary analysis should be conducted to determine the conditions, under the current legislation, for sharing the relevant information with authorities in third countries. Where such an exchange is currently not possible, an assessment should be undertaken to identify the applicable

¹³⁰ An intention to obtain such information is reflected in the SSR, which provides for the reporting of positions on uncovered sovereign CDSs even if entered into by non-EU entities outside the EU. However, these trades are generally prohibited and this ban may only be suspended by competent authorities in exceptional circumstances.

limitations, possibly leading to amendments to the relevant legal framework to enable that exchange. The establishment of MoUs or cooperation agreements might create a structured framework for the effective exchange of information, providing for the appropriate confidentiality safeguards.

Finally, building on the data/information sharing frameworks outlined above, the ESRB will seek to develop a cooperation framework for exploring synergies with third-country authorities and international organisations, such as the International Monetary Fund (IMF), the FSB and the BIS. This framework should facilitate knowledge sharing, promote collaboration and training, assist with analysis of common systemic risk issues and foster the sharing of experiences. This could be implemented by establishing dedicated task forces or project teams, which could regularly provide additional information to support ESRB monitoring and decisions.

2.3. Develop a real-time monitoring tool for CDS markets to enable potential timely macroprudential interventions during periods of systemic market stress

With improved information, authorities could enhance real-time CDS market monitoring to enable potential timely macroprudential interventions during periods of systemic market stress, when needed. This proposal involves:

i) establishing a real-time monitoring framework that uses high-frequency data, such as price quotes, pricing terms, requests for quotes, bid-ask spreads, and transaction volumes, from supervisory reporting and market data providers; and

ii) the use by authorities, during periods of systemic financial stress, of this enhanced transparency and real-time access to CDS data to deliver timely communication, prevent market overreactions, preserve liquidity and restore confidence.

Economic reasoning

The decentralised and bilateral nature of OTC derivatives markets makes implementing exchange-style volatility controls, such as circuit breakers and price limits, impractical. Liquidity in OTC markets relies heavily on a few key dealers, complicating market-making during periods of stress. The market developments during the banking turmoil in March 2023 highlighted the limited information available to authorities for real-time monitoring of these markets when they are under stress. A real-time monitoring tool for CDSs is proposed to provide early indications of potential liquidity shortages or disruptive trades that could cause volatility spikes. Supervisors should focus on metrics that detect market instability – such as sudden illiquidity, high concentration, widening bid-ask spreads and significant changes in transaction volumes – to quickly identify market stress. Sudden shifts in bid-ask spreads, trade volumes and concentration, or spread volatility can signal market stress or inefficiencies. Early detection could enable pre-emptive action to be taken to maintain stability and prevent liquidity issues from escalating into financial crisis.

Based on the information and situations identified in this regard, authorities would be able to assess the use of the various tools available to stabilise the CDS market during periods of stress. Authorities could use various tools to stabilise the CDS market during stress, such as relaxing margin requirements or expanding eligible collateral. For example, in 2022¹³¹ these measures helped to ease liquidity pressures in European financial and energy markets. Collaboration with market makers and real-time data collection would enable early detection of risks and make it possible to improve market stability by taking proactive measures.

Integrating real-time data collection into the CDS market would make it possible for supervisors to manage risks related to market illiquidity more effectively by enabling early detection and pre-emptive actions to maintain stability. Liquidity stress tests tailored to the CDS market could assess resilience and refine intervention strategies to prevent systemic contagion. However, data gaps in OTC markets and complex coordination among dealers, CCPs and regulators may limit the effectiveness of real-time monitoring and interventions.

Authorities can leverage their informational advantage to stabilise markets by providing accurate and timely assessments during periods of distress.¹³² Transparent communication with market participants helps to align expectations with economic fundamentals, preserving liquidity and preventing contagion. By addressing informational asymmetries, authorities can reduce unwarranted risk repricing and enhance market confidence. Prioritising structured communication deters opportunistic trading and fosters rational assessment of credit risk.

Implementation

This policy proposal could be implemented as follows.

- (i) Implementing this policy proposal involves establishing a near-real-time monitoring system to detect early warning signals of CDS market instability. The system would aggregate and analyse data from various sources, including market and supervisory transaction-level data, to enable potential macroprudential interventions during stress periods, such as optimising capital and margin requirements and market communication. Assuming that data disclosed under the post-trade transparency regime is made available in a more effective manner and always presuming that the supervisory reporting proposals are implemented, supervisors would be able to benefit from this enhanced data availability and quality. The system's design should focus on accuracy, clarity and frequency, especially during financial stress, in order to be able to counteract misinformation, increase investor trust and enhance financial system resilience.
- (ii) Authorities should create a communication framework that enhances market stability without causing unintended effects, such as increased volatility or

¹³¹ See European Securities and Markets Authority (2022).

¹³² See European Systemic Risk Board (2016).

systemic uncertainty. This means providing targeted briefings with timely, context-rich data to align market expectations with economic fundamentals. Strong regulatory coordination at the national and EU levels is essential to ensure consistency and prevent market fragmentation, as recommended in policy proposal 2. Additionally, legal risks and constraints in relation to transparency, especially as regards confidential information, must be carefully considered.

Policy proposal 3: Promote efficiency and functioning of the single-name CDS market

Identify and actively address structural factors limiting demand, supply and competition in the single-name CDS market in order to promote its efficiency and functioning.

Economic reasoning

The single-name CDS market shows limited demand and supply, with a high concentration of market participants. While CDSs serve multiple purposes, such as hedging or creating synthetic positions, such functionalities depends on well-functioning, liquid and competitive markets. Today, however, the market is dominated by just a few large dealers, while many potential participants face entry barriers.

The first step toward promoting a more efficient and better-functioning single-name CDS market is to understand the root causes of its current structure.

This involves analysing internal and external factors influencing demand and supply, as well as evaluating whether CDS products can effectively serve their intended purpose in the current environment. By doing so, policymakers can assess whether targeted reforms are warranted. This assessment is complementary to policy proposals 1 and 2 above that are aimed at increasing transparency and improving market information and which could, in themselves, reduce information asymmetries and lower entry barriers, enhancing market participation.

A thorough understanding of both the demand and supply dynamics in the CDS market is essential for potential policies to promote market efficiency and functioning. On the demand side, limited use of CDSs may be driven by factors such as limited demand for hedging, regulatory constraints, the availability of alternative hedging instruments or perceived inefficiencies. On the supply side, both liquidity and participation may be hindered by barriers to providing credit protection – such as opacity and information asymmetries, existing market concentration, a high degree of market segmentation in several types of CDS contracts, the need for further standardisation and limited profitability for market makers. Market concentration poses a significant challenge, given that a small number of large dealers dominate market-making owing to economies of scale. This concentration may discourage smaller institutions from entering the market, reducing competition

and innovation while increasing the risk of systemic disruptions in times of financial stress.

Since the CDS market relies on balanced interactions between those seeking protection and those providing it, addressing supply-side constraints is just as important as addressing those on the demand side. Emphasis should be placed on whether CDS products can effectively serve as hedging tools when the underlying market has sufficient liquidity. Analytical work would enable policymakers and stakeholders to uncover structural constraints and opportunities for reform, facilitating more effective interventions to enhance market functioning.

Using both demand and supply factors, along with granular supervisory data, policymakers could design targeted reforms to enhance efficiency and competitiveness in the CDS market. Evidence-based insights would enable balanced policy measures that support both the availability and use of credit protection, while also fostering innovation by reducing barriers faced by protection sellers. These improvements could encourage new entrants and expand market participation, as well as enhance liquidity provision and market stability.

However, expanding research to encompass both demand and supply dynamics may require significant time, with no assurance of immediate actionable insights. Certain constraints, such as scale economies in market-making, may be inherent to the CDS market and difficult to alter through policy. Additionally, obtaining reliable data may be challenging, given that dealers may be reluctant to share sensitive information. Implementing reforms to address both demand and supply constraints may further complicate the policy process, owing to the fact that it often requires coordinated efforts across multiple areas, including regulation and market infrastructure.

Implementation

This policy proposal could be implemented as follows.

Authorities should utilise data already available to launch structured analytical initiatives – such as setting up a working group – at both the EU and global level, involving regulators, market participants and academic institutions. This group should be tasked with investigating demand/supply drivers and structural impediments in the single-name CDS market. The findings should then inform whether, and which, targeted policy actions could improve market efficiency and resilience. Any reform proposals should be evidence-based and pursued in coordination with ongoing efforts to enhance market transparency and supervisory reporting (see policy proposals 1 and 2).

Policy proposal 4: Improve credit risk assessment frameworks by reducing excessive reliance on CDS spreads and raising awareness about the price formation mechanisms

Until there is improvement in the overall functioning and identified structural limitations of the single-name CDS market, EU legislation and authorities' regulatory acts and practices should aim at reducing excessive reliance on CDS spreads as a credit risk indicator.

This should be complemented by publication of indicators and statistics to foster a more informed interpretation of its role as a credit risk indicator.

Economic reasoning

Single-name CDS spreads are widely used as a reference for credit risk assessments in financial transactions, as well as in financial regulations and policies. Yet, as shown in the analysis, CDS spreads are determined from a low volume, illiquid and concentrated market that can distort price formation. The inherent limitations of these instruments can lead to misinterpretations of an underlying entity's creditworthiness.

The ESRB has identified the market price channel and information spillovers as key mechanisms through which financial distress spreads indirectly.¹³³

Excessive reliance on CDS spreads may exacerbate these risks owing to the inherent characteristics of the CDS market. Sharp fluctuations in CDS prices in periods of financial stress can prompt procyclical responses, such as forced asset sales or higher borrowing costs, amplifying volatility and contributing to indirect contagion.

Current structural factors, such as low liquidity, high concentration, low number of market participants and incomplete transparency, limit the reliability of CDS prices as credit risk indicators. Pending improvements in the overall functioning and in the identified structural limitations of the single-name CDS market, legislators and financial authorities should reduce reliance, by themselves and by financial entities, on single-name CDS spreads that fall within their mandates. The ESRB has made a similar case for reducing overreliance on external credit ratings and has encouraged financial institutions to work on their own forward-looking credit risk assessments.¹³⁴ Like the lowering of credit ratings, higher CDS spreads can lead to a rise in credit risk, implicit for market participants or explicit for supervisors, potentially leading to simultaneous increases in capital and liquidity requirements for financial institutions. While changes in credit risk should be reflected in those requirements as soon as possible, simultaneous increases can contribute to excessive procyclical behaviour, especially in times of crisis.

¹³³ See European Systemic Risk Board (2016).

¹³⁴ See European Systemic Risk Board (2020b).

Furthermore, authorities should raise awareness of the limitations in price formation of single-name CDS pricing, which would help to reduce excessive reliance on these instruments in decision-making. It is crucial, therefore, that stakeholders are aware, when using CDS spreads, of the structural limitations of these markets and understand how these limitations could influence CDS spreads and, as a consequence, perception of an underlying entity's credit worthiness. It follows from this that the authorities must take the lead in raising awareness to ensure better contextualisation and interpretation of CDS movements, mitigating the risk of misinformed risk assessments.

Reducing reliance on single-name CDS spreads offers the advantage of delivering a more holistic assessment of an entity's creditworthiness. This can be accomplished by encouraging a broader use of diversified credit risk metrics (such as bond yields, structural credit models and other market indicators). This approach mitigates the risks associated with basing critical decisions on a market that is vulnerable to the influence of a few dominant dealers operating in an illiquid market. By shifting away from CDS spreads, which are often subject to sharp fluctuations and procyclical effects, financial institutions and regulators can reduce systemic vulnerabilities and better manage market stress.

Finding adequate alternatives to CDSs may be challenging. These may lack the real-time sensitivity of CDS spreads, leading to delays in detecting emerging credit risks unless sufficient market liquidity and transparency are ensured. It is important, therefore, that alternative indicators are sufficiently responsive to reflect changes in credit conditions.

Implementation

This policy proposal could be implemented as follows.

- (i) **Supervisors and authorities should carefully assess the implications of relying on CDS prices for risk assessments and in policies.** Financial institutions and authorities should adopt a more diversified approach, integrating additional credit risk indicators to achieve a more robust and accurate assessment framework for decision-making and policy.
- (ii) **Relevant financial regulations should be amended to allow the use of indicators that are complementary to CDSs.** For example, in the context of the banking sector, this might entail: (i) revising Article 292(3) of the CRR to make it mandatory for banks, when they use CDS spreads for monitoring and calibrating credit risk, to also integrate supplementary metrics (such as bond yields, internal credit ratings and other validated market signals) into their risk models; and (ii) revising Articles 383 and 384 of the CRR, which employ CDS data for the calculation of CVA risk and own funds requirements, to require institutions to cross-check CDS-derived inputs against alternative data sources.
- (iii) **Authorities should publish structural indicators and statistics on CDS markets to enhance market knowledge and transparency in this regard.**

Key metrics, such as the number of active participants, traded volumes, bid-ask spreads and market concentration, are essential to contextualising CDS price movements and assessing their informational content. Given the potential for illiquid and concentrated markets to alter risk signals, greater disclosure of these structural indicators could improve the ability of market participants and policymakers to interpret CDS spreads more accurately. This, in turn, could help mitigate the risk of excessive reliance on potentially misleading price signals, fostering a more informed and resilient approach to risk assessment.

6 Conclusions

This report presents an analysis of CDS markets, focusing on single-name CDSs from the viewpoint of their market structure and current regulatory framework.

Making derivatives markets sound was one of the key objectives of the post-global financial crisis reforms. Despite progress made and ongoing regulatory and supervisory efforts, several episodes of instability linked to derivatives have occurred in recent years. These episodes have revealed that structural elements of derivatives markets, particularly high concentration, illiquidity and endogenous feedback mechanisms, can act as amplifiers of market stress.

CDSs serve as instruments to transfer credit risk between counterparties, but their role extends beyond this core function. While traditionally viewed as derivatives influenced by the dynamics of the underlying debt instruments, CDSs can also exert significant influence on these underlying dynamics, particularly the cost of funding for reference entities.

Despite the key role of CDS spreads, the mechanisms underpinning their price formation – and in particular the influence of market microstructure on liquidity – remain insufficiently understood. This gap in the academic and policy literature is largely attributable to the inherent opacity of CDS markets and the limited availability of public transaction-level data.

Our analysis using EMIR data¹³⁵ of the microstructure of single-name CDS markets has uncovered the following key findings. First, price-forming transactions are typically low in volume and exhibit pronounced concentration along three dimensions: trading counterparties, reference obligations for a given issuer and temporal clustering. More broadly, single-name CDS markets are characterised by limited liquidity and subdued trading volumes, a small and concentrated set of market participants and a high degree of trade volume concentration. In particular, a narrow subset of counterparties is responsible for most price-setting trades, often focused on a few pivotal reference obligations tied to specific issuers and clustering over time.

Moreover, the opacity of the single-name CDS market means that important pricing and trading information is accessible to only a handful of market participants. As a result, information asymmetries persist, undermining competition and price discovery. Considering the critical role that CDSs play in credit markets, it is important that both market participants and authorities have access to broader and more timely market information.

¹³⁵ The current regulatory framework captures only transactions involving at least one EU-domiciled counterparty or execution within the EU, meaning that CDS contracts referencing EU entities – such as sovereigns or G-SIBs – traded exclusively between non-EU counterparties remain entirely outside the scope of EU reporting obligations.

Despite recent reforms related to the EU regulatory framework for CDSs,¹³⁶ a large portion of single-name CDS contracts remains outside the scope of EU post-trade transparency requirements. The MiFIR Review has broadened the scope of market transparency requirements to include single-name CDSs that reference a G-SIB and that are centrally cleared. However, about 80% of single-name CDSs on EU G-SIBs and 75% on EU sovereign CDSs are not cleared and, being traded OTC and off venue, are only subject to the public disclosures mandated by MiFIR if they are concluded by EU investment firms.

In parallel, the global nature of CDS trading poses further challenges for EU authorities. The current regulatory framework captures only transactions involving at least one EU-domiciled counterparty or execution within the EU, meaning that CDS contracts referencing EU entities – such as sovereigns or G-SIBs – traded exclusively between non-EU counterparties remain entirely outside the scope of EU reporting obligations. The inability to monitor such cross-border exposures hinders the detection of vulnerabilities and reduces the effectiveness of timely responses to emerging risks, as demonstrated during recent market dislocations.

Furthermore, timely access to high-quality, complete and standardised data remains an essential condition for authorities to effectively monitor the CDS market and fulfil their mandates. More than a decade after the introduction of the EMIR reporting requirements, substantial shortcomings persist. Key data fields, such as information on contract valuations, variation margins and the specific characteristics of underlying reference obligations, are either not available or inconsistently reported.

The analytical findings above highlight the existence of several market imperfections, such as concentration, illiquidity and information asymmetries, in the single-name CDS market. In this regard, three policy objectives seem key.

1. policy objective 1: improve market functioning and liquidity;
2. policy objective 2: enhance market transparency;
3. policy objective 3: obtain better information for oversight.

In order to address these policy objectives, the report proposes four policy measures.

- **Policy proposal 1: Enhance post-trade market transparency on single-name CDSs (relates to policy objectives 1 and 2)**
 - Adjust the EU's post-trade market transparency regime to apply, as a minimum, to single-name CDSs on EU G-SIBs and EU sovereigns, regardless of whether they are centrally cleared and how they are traded.

¹³⁶ The EU framework for CDSs primarily comprises: (i) EMIR; (ii) MiFIR; and (iii) the SSR.

- **Policy proposal 2: Strengthen supervisory access to information through improved quality and standardisation of data reported as well as enhanced global cooperation (relates to policy objective 3)**
 - Improve the quality and standardisation of data reported to supervisors.
 - Enhance global cooperation on information and data sharing amongst authorities on CDS markets.
 - Develop a real-time monitoring tool for CDS markets to enable potential timely macroprudential interventions during periods of systemic market stress.
- **Policy proposal 3: Promote the efficiency and functioning of the single-name CDS market (relates to policy objective 1)**
 - Identify and address structural factors limiting demand, supply and competition in the single-name CDS market.
- **Policy proposal 4: Improve credit risk assessment frameworks by reducing excessive reliance on CDS spreads and raising awareness of the price formation mechanisms (relates to policy objectives 2 and 3)**
 - Policymakers, market participants and other stakeholders should deepen their understanding of, and consider the structural limitations associated with, single-name CDS pricing, particularly under conditions of market stress. It is essential to take these limitations into account to support more informed and accurate interpretations of the role of CDS pricing as an indicator of credit risk.

The proposed policies constitute a medium-term roadmap intended to improve the functioning of the single-name CDS market and address systemic risks. In the near term, the actions to be taken include strengthening supervisory access to information by enhancing the quality and standardisation of reported data, as well as increasing global cooperation (policy proposal 2). Subsequently, increased post-trade market transparency on single-name CDSs should be pursued (policy proposal 1). Over the medium term, ongoing efforts should aim to further develop the single-name CDS market, while also assessing any potential rise in systemic risks resulting from greater market activity. It is essential for policymakers, market participants and other stakeholders to recognise the inherent limitations of credit risk assessments based on an illiquid and concentrated market.

Recognising the need for simplification and regulatory efficiency, the proposed policies strive for better and more efficient regulation rather than an increase in regulation.

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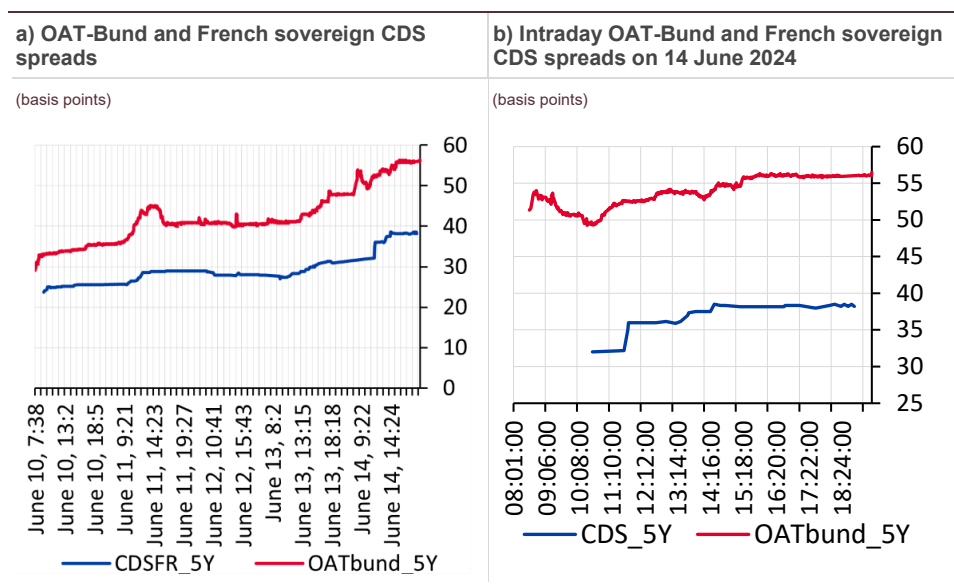
8 Annex

8.1 Developments in French sovereign CDS in June 2024

The political uncertainty that followed the EU elections on 9 June 2024, coupled with high levels of public debt and a deficit in France, triggered a strong reaction by market participants on the French sovereign bonds market, including the market in obligations assimilables du trésor (OATs).¹³⁷ Reflecting heightened concerns about French bonds, the OAT-Bund spread¹³⁸ rose, in the following week, from 29 to 56 basis points (Chart A.1(a)).

Chart A.1

Developments in French sovereign CDS spreads



Source: Eikon data.

Note: OAT stands for obligation assimilable du trésor and CDS for credit default swaps. OAT-Bund and French sovereign CDS quoted spreads on the five-year tenor between 10 and 14 June 2024. Left panel: OAT-Bund and French sovereign CDS quoted spreads on the five-year tenor on 14 June 2024. Right panel: OAT-Bund and French sovereign CDS quoted spreads on the five-year tenor on 14 June 2024.

Quote frequency seems to suggest that price discovery primarily occurred within the government bond market rather than in the sovereign CDS market. Overall, both the OAT-Bund bond and French sovereign CDS spreads increased after the European Parliament election. Although the French CDS spread increased from 24 to 38 basis points, the change was, however, less than that of the OAT-Bund spread (Chart A.1(b)) and may have been indicative of a flight to safety in the Bund market (decreasing Bund yield). On this occasion, price discovery appears to have taken place on the OAT sovereign bond market rather than in the CDS market. In this regard, it should be noted that French CDS spreads are updated significantly less

¹³⁷ OATs are the main French sovereign debt securities.

¹³⁸ Bunds are the main German sovereign debt securities.

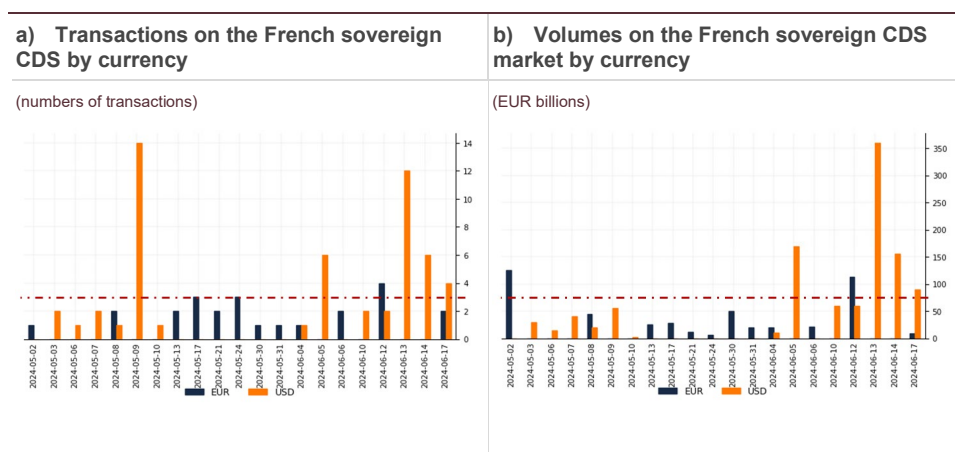
frequently than those of bonds, e.g. 87 times for CDS spreads as compared with over 3,200 times for bonds between 10 and 14 June 2024.

As Chart A.1(b) shows, the two spreads can diverge locally. For instance, the significant increase in CDS quotes, ranging from 32 to 36 basis points, on 14 June may not have affected the OAT-Bund spread. Determining which market leads is challenging owing to the limited liquidity in French sovereign CDS.

Trading volumes in the French sovereign CDS increased, but remained low overall

Chart A.2

Volumes on the French sovereign CDS market by currency



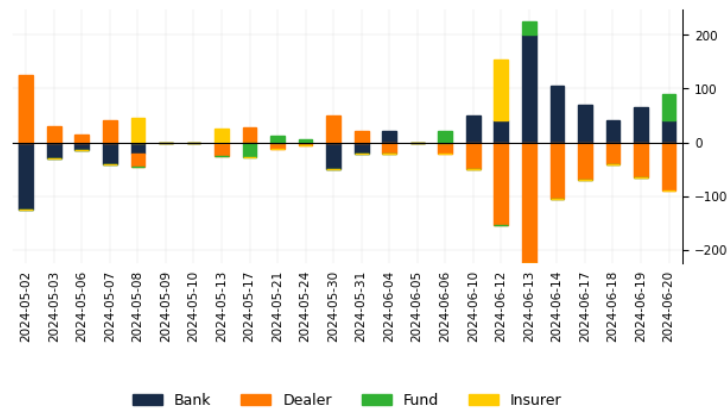
Source: European Market Infrastructure Regulation reporting data, Eurosystem Centralised Securities Database.
Notes: EU counterparties, new transactions by reporting timestamp. Intragroup transactions and transactions with central counterparties were excluded. The red horizontal bar indicates the average number of daily transactions (left panel) and average daily volumes (right panel) reported by the Depository Trust & Clearing Corporation at the global level.

A week after the European Parliament election, a sharp increase in the number of transactions and volumes (Charts A.2(a) and A.2(b)) was seen, but their levels remained low. The number of transactions in the French sovereign CDS increased from around two to three a day to twelve on 13 June 2024, before falling to six on 14 June, with notional volumes of approximately USD 350 million and USD 150 million respectively. As Chart A.3 shows, most of the transactions between 10 and 14 June involved Italian banks buying USD-denominated CDS protection. The selling counterparties were primarily US-based dealer subsidiaries in Ireland or Germany.

Chart A.3

Volumes on the French sovereign CDS market by country-sector of counterparty

(EUR millions)



Source: European Market Infrastructure Regulation (EMIR) reporting data, Eurosystem Centralised Securities Database.
Notes: EU counterparties, new transactions by reporting timestamp. Intragroup transactions and transactions with CCPs were eliminated.

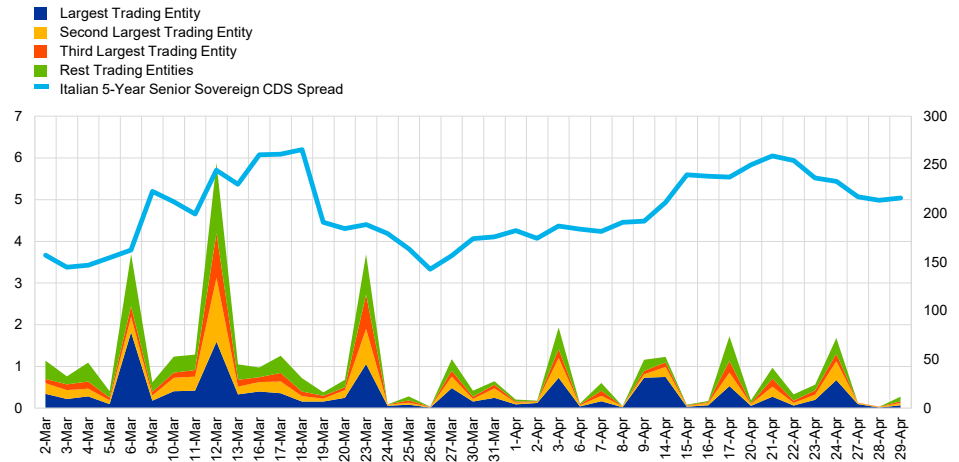
8.2 Market activity and concentration in the Italian sovereign CDS market during March-April 2020

The onset of the COVID-19 pandemic led to a significant surge in sovereign CDS spreads and heightened volatility, making it a case study for examining trading activity in the CDS market. Italy's sovereign CDS spread surged from 157 basis points on 2 March to 265 basis points by 18 March. Transaction-level data indicate that trading activity was predominantly concentrated among a limited number of banks and investment funds. During March-April 2020, Italian sovereign CDS trading was dominated by a few major counterparties. Only three entities accounted, on average, for 70% of the daily traded notional, with the largest contributor alone representing about 35% each day (Chart A.4). Over a two-month period, eight distinct entities alternated as the leading contributors to trading volume, underscoring a high degree of market concentration.

Chart A.4

Market activity concentration on the Italian sovereign CDS market

(USD/EUR billions; notional amounts; basis points)



Source: European Market Infrastructure Regulation (EMIR) reporting data, Refinitiv Datastream.

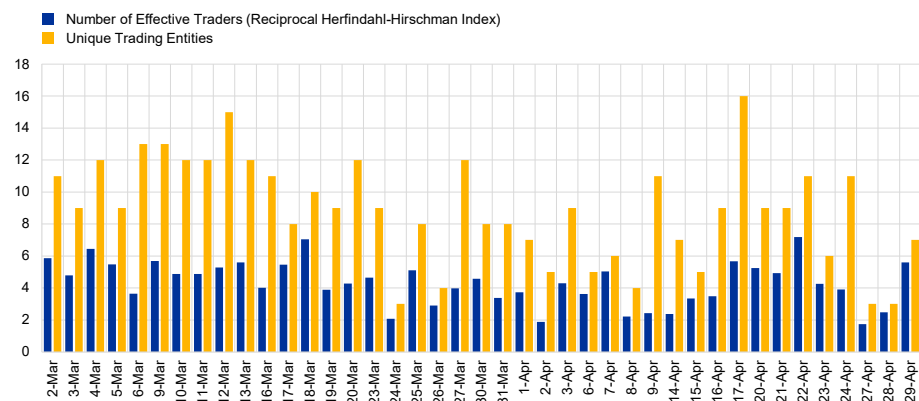
Notes: The figure presents the notional amounts attributed to the first, second, and third largest contributors to daily traded notional volumes, alongside the cumulative total for the remaining trading entities. The secondary axis shows the Italian 5-year senior sovereign CDS spread.

Over the period from March-April 2020, the average “effective” number of trading counterparties was slightly more than four, representing around half of market activity. The number of counterparties trading Italian sovereign CDS each day ranged from three to 16, with an average of nine over the period. The reciprocal of the Herfindahl-Hirschman Index (HHI) ranged from 1.73 to 7.19, with an average of 4.3, indicating that a small portion of traders accounted for most of the trading activity (Chart A.5). During this period, the average effective number of traders was 4.3, representing approximately 50% of all market participants each day.

Chart A.5

Total and effective number of counterparties for the Italian sovereign CDS market

(number of entities)



Source: European Market Infrastructure Regulation reporting data.

Notes: The Herfindahl-Hirschman Index is calculated using each participant's share of the gross notional amount for new CDS transactions on Italian sovereign CDS executed on a given day.

8.3 Relevant academic research

8.3.1 CDS market structure

Insider trading in credit derivatives (Acharya, V. V. and Johnson, T. C., 2007): This paper investigates the prevalence and impact of insider trading in credit derivatives markets, providing evidence that insiders can exploit private information to trade profitably in CDS markets.

The anatomy of the CDS market (Oehmke, M. and Zawadowski, A., 2015): This study dissects the structure and functioning of the CDS market, detailing the interaction between dealers and clients, the concentration of trading among major participants and the implications for market stability.

The Search Theory of Over-the-Counter Markets (Weill, P-O., 2007): This paper develops a theoretical model based on a search and matching theory to explain the unique characteristics of OTC markets, responding to questions such as why trades occur less frequently and with greater price dispersion compared with centralised markets.

How does risk flow in the credit default swap market? (D'Errico, M. et al. , 2018): This study analyses the flow of risk within the CDS market, mapping how risk is transferred among different market participants and assessing the implications of these risk flows for financial stability and systemic risk.

CDS market structure and bond spreads (Bilan, A. and Gündüz Y., 2022): The paper investigates how the structure of the CDS market, including market concentration and liquidity, affects bond spreads, highlighting the relationships between CDS market conditions, bond pricing, and the perceived credit risk of issuers.

Over-the-counter Markets (Duffie, D. et al., 2005): This study develops a theoretical framework for analysing the functioning of OTC markets, highlighting the roles of search costs, bargaining and market structure in determining trading outcomes and efficiency.

The network structure of the CDS market and its determinants (Peltonen, T. A. et al., 2014): This paper analyses the intricate network of the CDS market, revealing that it is highly concentrated around 14 major dealers and exhibits characteristics of a “small world” and scale-free network. These structures affect the market's robustness and potential for systemic risk, driven largely by the interconnectedness and central roles of key financial institutions.

8.3.2 Role of intermediaries

Limited Investment Capital and Credit Spreads (Siriwardane, E.N., 2019): The author explores the relationship between the availability of investment capital and credit spreads, arguing that limited capital increases spreads due to higher risk premiums demanded by investors.

Entry and Exit in OTC Derivatives Markets (Atkeson, A.G. et al., 2013): This paper analyses how firms' decisions to enter or exit OTC derivatives markets affect market liquidity, prices and the distribution of trading volume among participants.

Intermediary Asset Pricing (He, Z. and Krishnamurthy, A., 2013): The study develops an asset pricing model that incorporates the role of financial intermediaries, showing how intermediaries' capital constraints and their capacity to bear risk influence asset prices, liquidity and risk premiums in financial markets.

OTC Intermediaries (Eisfeldt, A.L. et al., 2023): This study examines the crucial role of intermediaries in OTC markets, detailing how they facilitate trades, manage risk and impact overall market liquidity and pricing through their activities.

Endogenous intermediation in over-the-counter markets (Babus, A. and Hu, T., 2017): This paper concludes that intermediaries in OTC markets arise endogenously to facilitate trade by reducing search costs and enhancing market efficiency, but their concentration can also lead to market power and systemic risk.

Endogenous liquidity in credit derivatives (Qiu, J. and Yu, F., 2012): The authors investigate how liquidity in the credit derivatives market is generated from within, showing how market participants' strategic behaviours and liquidity provision affect pricing and market dynamics.

8.3.3 Information spillovers

A Theory of Liquidity Spillover Between Bond and CDS Markets (Sambalaibat, B., 2022): The author develops a theory explaining how liquidity spillovers occur between bond and CDS markets, demonstrating the conditions under which liquidity in one market affects the other, and the implications for market participants.

Credit Market Speculation and the Cost of Capital (Che, Y. and Sethi, R., 2014): This paper examines the impact of speculative trading in credit markets on the cost of capital for firms, showing how speculation can lead to higher borrowing costs and influence corporate investment decisions.

On Feedback Effects from Hedging Derivatives (Platen, E. and Schweizer, M., 1998): This paper explores the feedback effects that arise from the use of hedging derivatives, discussing how these effects can influence market prices, liquidity and overall financial stability.

When do CDS spreads lead? Rating events, private entities, and firm-specific information flows (Lee, J. et al., 2018): The study examines the conditions under

which CDS spreads lead market movements, particularly around rating events, for private entities, and how firm-specific information is reflected in CDS spreads ahead of other markets.

Credit Shock Propagation Along Supply Chains: Evidence from the CDS Market (Agca, S. et al., 2021): This paper investigates how credit shocks propagate through supply chains using evidence from the CDS market and shows how financial distress in one firm can affect its suppliers and customers, leading to broader market implications.

Are Credit Default Swaps a Sideshow? Evidence That Information Flows from Equity to CDS Markets (Hilscher, J. et al., 2015): The authors provide evidence that information flows predominantly from equity markets to CDS markets, rather than the other way around, suggesting that equity markets play a primary role in price discovery for credit risk.

Does the Tail Wag the Dog?: The Effect of Credit Default Swaps on Credit Risk (Subrahmanyam, M.G. et al., 2014): This study examines whether the existence and trading of CDS impact the underlying credit risk of firms, finding that CDS trading can influence firms' borrowing costs and financial stability.

Credit Spreads: an empirical analysis on the informational content of stocks, bonds, and CDS (Forte, S. and Peña, J.I., 2009): The authors empirically analyse the informational content of credit spreads, comparing how information flows between stock, bond and CDS markets, and identifying which market leads in price discovery.

Credit-Implied Volatility (Kelly, B. et al., 2019): The authors introduce a measure of credit-implied volatility derived from CDS spreads, demonstrating its usefulness in predicting future volatility and assessing credit risk.

Benchmark Status in Fixed-Income Asset Markets (Dunne, P.G. et al., 2007): This study explores the effects of certain assets being designated as benchmarks in fixed-income markets, demonstrating how this status enhances their liquidity, lowers their yields, and influences the behaviour of other market participants.

8.3.4 Sovereign CDS spreads and systemic risks

Regime-Dependent Sovereign Risk Pricing During the Euro Crisis (Delatte, A-L et al., 2017): This paper examines how the pricing of sovereign risk for euro area countries changed during different phases of the euro crisis, highlighting the influence of political and economic regimes on bond spreads.

Default and Recovery Implicit in the Term Structure of Sovereign CDS Spreads (Pan, J. and Singleton, K.J., 2008): This study models the default probabilities and recovery rates implied by the term structure of sovereign CDS spreads, offering insights into market expectations of sovereign credit risk over different maturities.

Sovereign CDS spread determinants and spill-over effects during financial crisis: A panel VAR approach (Galariotis, E.C. et al., 2016): This paper uses a panel vector

autoregression (VAR) approach to analyse the determinants of sovereign CDS spreads and their spill-over effects during financial crises, identifying key factors such as global risk aversion and macroeconomic fundamentals.

The Core, the Periphery, and the Disaster: Corporate-Sovereign Nexus in COVID-19 Times (Jappelli, R. et al., 2024): This study investigates the interconnections between corporate and sovereign credit risk during the COVID-19 pandemic. It highlights how shocks to sovereign credit risk affect corporate credit spreads, especially in peripheral countries, and discusses the implications for financial stability and policy responses during crisis periods.

Measuring sovereign contagion in Europe (Caporin, M. et al., 2018): The authors develop a methodology to measure contagion effects among European sovereigns, focusing on the transmission of credit risk during financial turmoil. The paper provides evidence of significant contagion during the European debt crisis and identifies channels through which sovereign distress spreads across countries.

Sovereign credit risk, liquidity and ECB intervention: Deus ex machina? (Pelizzon, L. et al., 2016): This paper analyses the impact of ECB interventions on sovereign credit risk and liquidity in the euro area. The findings suggest that ECB actions, such as bond purchases, significantly reduce sovereign credit spreads and enhance market liquidity, acting as a stabilising force during periods of financial stress.

Mutual excitation in euro area sovereign CDS (Ait-Sahalia, Y. et al., 2014): The study models the dynamic interactions among euro area sovereign CDS spreads, showing how credit events in one country can trigger increases in CDS spreads in other countries through a mechanism of mutual excitation. This interdependence highlights the systemic risk within the euro area and the potential for contagion during financial crises.

Sovereign credit risk and exchange rates: Evidence from CDS quanto spreads (Augustin, P. et al., 2020): This paper investigates the relationship between sovereign credit risk and exchange rates using CDS quanto spreads, showing how currency risk and sovereign credit risk are interconnected and priced in financial markets.

8.3.5 Financial stability and regulatory environment

Synthetic or Real? The Equilibrium Effects of Credit Default Swaps on Bond Markets (Oehmke, M. and Zawadowski, A., 2017): This paper analyses the equilibrium effects of CDS on bond markets, discussing how synthetic markets (CDS) interact with real markets (bonds) and how this interaction affects pricing, liquidity, and risk distribution.

The leverage externalities of credit default swaps (Li, J.Y. and Tang, F.Y., 2016): This study explores the leverage externalities created by CDS trading, showing how CDS can amplify leverage in financial markets, leading to greater systemic risk and potential instability.

Contagion in Derivatives Markets (Paddrik, M. et al., 2020): This study examines how financial contagion can spread through derivatives markets, identifying the channels through which shocks in one part of the market can affect other areas, leading to broader systemic risks.

Reaching for Yield in the Bond Market (Becker, B. and Ivashina, V., 2014): This paper uses CDS spreads as a key metric to assess risk-taking behaviour and pricing dynamics in the bond market. Specifically, it examines how changes in CDS spreads, which reflect the market's perception of credit risk, correlate with investors' search for higher yields in bonds. By analysing the relationship between bond yields and CDS spreads, the paper sheds light on how investors' appetite for risk affects both the pricing of bonds and the broader financial system.

The market for inflation risk (Bahaj, S. et al., 2023): The authors explore the trading, pricing and hedging of inflation risk, focusing on the instruments used by market participants to manage inflation expectations and on the market mechanisms that determine the cost and availability of inflation protection.

The demand for central clearing: To clear or not to clear, that is the question! (Bellia, M. et al., 2024): This paper examines the factors influencing the decision to use central clearing for derivatives transactions. It explores the trade-offs between the benefits of reduced counterparty risk and the costs associated with central clearing, such as margin requirements and operational expenses, providing insights into market participants' clearing choices.

Credit Default Swaps and Bank Regulatory Capital (Shan, C. et al., 2014): This paper examines the impact of CDS usage on bank regulatory capital requirements, analysing how banks use CDS to manage credit risk and influence their regulatory capital ratios, and looks at the broader implications for financial stability.

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