



Close-out netting: Impact on risk management and systemic risk*

UNIDROIT COLLOQUIUM

Enhancing financial integrity: The Geneva Convention and the UNIDROIT Principles on Close-out netting under national law

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Outline

- The BIS and the Committee on Payment and Settlement Systems
- The concept of close-out netting
- The concept of systemic risk
- Close-out netting and the potential for systemic risk
- Safe harbours
- Close-out netting and resolution
- Challenges to close-out netting
- Conclusions



The Bank for International Settlements (BIS)

“The mission of the BIS is to serve central banks in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks”

The world’s oldest international financial institution, established under the Hague Convention of 1930

The BIS pursues its mission by:

- promoting discussion and facilitating collaboration among central banks and with other authorities responsible for promoting financial stability
- conducting research on policy issues confronting central banks and financial supervisory authorities and providing statistics
- hosting committees and secretariats of regulatory bodies
- acting as “bank for central banks”



The Committee on Payment and Settlement Systems

- ⇒ The CPSS is a **standard setting body** for payment, clearing and securities settlement systems. It also serves as a forum for central banks to **monitor and analyse developments** in domestic payment, clearing and settlement systems as well as in cross-border and multicurrency settlement schemes
- Establishment in 1990 by the G10 Governors (preceded by the 1980 **Group of Experts on Payment** and the 1989 **Committee on Interbank Netting Schemes**)
 - 25 member central banks
 - Hosted by the BIS in Basel, reporting to the Governors of the Global Economy Meeting (GEM)
 - Chair: Benoît Coeuré (ECB)



Close-out netting under UNIDROIT Principles

- **Bilateral** arrangements on **close-out netting**
- No coverage of **multilateral netting arrangements** and other types of netting (**settlement netting** or **netting by novation**)
- The **protected products** include financial transactions (e.g. derivative transactions as well as security financing transactions (i.e. repurchase agreements, securities lending transactions and margin lending))



Market participants relying on netting arrangements

- *Financial institutions* (credit institutions, investment firms, insurance undertakings, etc.)
- *Financial Market Infrastructures* (central counterparties, payment and settlement systems, clearing houses)
- *Public sector bodies and central banks*
- *International financial institutions and multilateral development banks*
- *Corporate* (Persons other than natural persons, unincorporated firms and partnerships)



Close-out netting

- *Contractual or statutory* arrangements which upon occurrence of an *enforcement event* result in
 - i. the *acceleration* of the mutual obligations,
 - ii. the *conversion* into monetary amounts and
 - iii. the *determination of a net balance* (*set-off* of the mutual claims)

- ⇒ Upon the occurrence of a enforcement (close-out) event (e.g. a default or commencement of an insolvency proceeding) the netting arrangement should come into effect and should be enforceable as provided in the terms agreed therein



Close-out netting

- **Pros** (if netting is valid and enforceable):
 - Reduction of exposures and counterparty risk
 - Enhanced risk/exposure management
 - Enhanced market liquidity
 - Prevention of contagion
 - (Reduction of capital requirements and cost of capital)

- **Cons:**
 - Preferential treatment of financial institutions in an insolvency situation - Unequal treatment of creditors?
 - Pre-empting liquidators' choices/primacy of insolvency law
 - Limiting resolution measures?



Close-out netting

- **Widely used** in financial market transactions
- **Risk management** and risk mitigation **tool**

⇒ **General enforceability** and **recognition?**

- Still relatively **new legal concept** - not always recognised expressly by legislation
- **Risk of requalification** (set-off) or **voidance** (gambling)

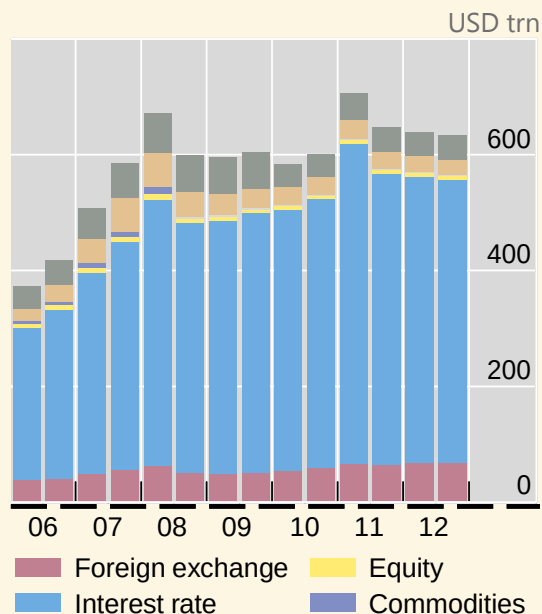
⇒ **Certainty** and **predictability?**

- **Insolvency treatment?**
- Interaction with **Resolution measures?**

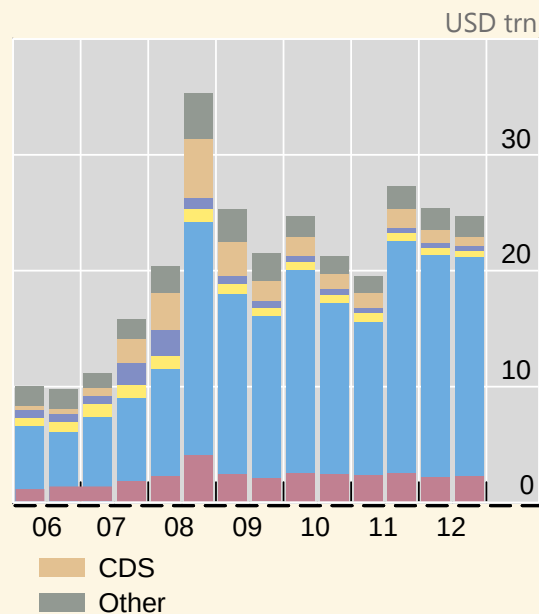


Netting benefits

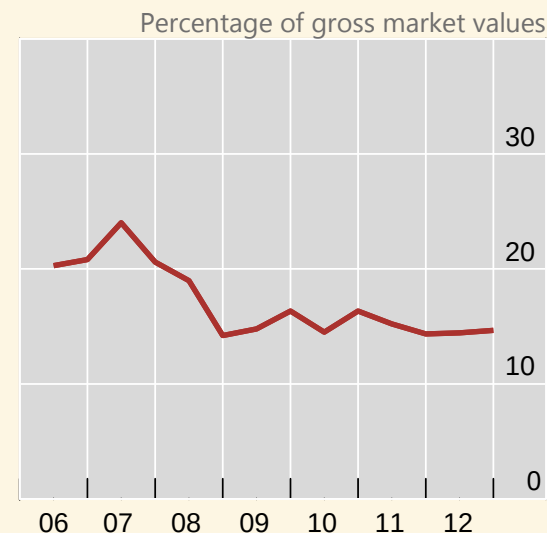
Notional amounts outstanding



Gross market values



Gross credit exposure



Source: BIS OTC derivatives statistics.

The gross market value of all OTC derivatives contracts, ie the cost of replacing the contracts at current market prices, equalled \$24.7 trillion at end-2012 (Graph 1, middle panel). Gross credit exposure, which deducts from the gross market values the amounts that reflect legally enforceable bilateral netting agreements, equalled \$3.6 trillion. This was equivalent to 14.7% of market values, about the same percentage as at end-June 2012 (Graph 1, right-hand panel).



What is Systemic risk?

- Still a comparably recent (and evolving) concept
- “*You know it when you see it*” Paul Volcker
- Only ***few and limited past examples*** (e.g. Asian or Russian crises in the 1990s)
- What about the ***current financial crisis*** (a general loss of confidence following the events of 2007/2008 leading to a radical reduction in market activity as market participants sought to protect themselves against liquidity and credit risk leading to a deep and wide-spread economic contraction)?
- The extreme result might mean an agrarian subsistence economy



Systemic risk

- **Current (FSB) definition of ‘Systemic risk’**

*“the **risk of disruption** in the financial system with the potential to have serious negative consequences for the **financial system** and the **real economy**. All types of financial intermediaries, markets and infrastructure may be potentially systemically important”*

⇒ Can certain products/techniques be “systemic”?

- **Types of systemic risk**

- The emergence of a sudden focused shock causing **contagion** (e.g. «interdependencies»)
- The build-up of **imbalances** that suddenly unravel (e.g. «bubbles»)
- An **aggregate shock** causing simultaneous problems across the financial system (e.g. «sudden repricing of risks»)



Systemic risk types

- **Supposedly idiosyncratic shock causing contagion**
 - Physical exposures (Allen and Gale, 2000; Freixas, Parigi and Rochet, 2000)
 - Asymmetric information (King and Wadhvani, 1990; Kodres and Pritsker, 2002)
 - (Multiple equilibria)
 - Amplification: Fire sales of illiquid assets (Cifuentes, Shin and Ferrucci, 2005)
- **Aggregate (macro) shock causing simultaneous problems**
 - US banking crises in the 19th century (Gorton, 1988)
 - Early early warning indicators literature (Demirguc-Kunt and Detragiache, 1998)
 - Two explanations: (i) Bank liabilities not conditional on asset values (Hellwig, 1994), (ii) moral hazard (Kane, 1989)
 - Information problems can lead to the breakdown of the interbank market (Heider, Hoerova and Holthausen, 2008)
- **Small or “arbitrary” change causes imbalances to unravel**
 - Early descriptions of pro-cyclicality and asset bubbles (Minsky, 1977; Kindleberger, 1978)
 - Role of herding behaviour (Scharfstein and Stein, 1990)
 - Too low interest rates for too long relax lending standards and encourage risk taking (Jimenez et al., 2007)
 - Changes in risk change leverage/balance sheets in a pro-cyclical way (Adrian and Shin, 2008; Greenlaw et al., 2008)
 - Pro-cyclical capital requirements (Kashyap and Stein, 2004)
 - Mutually reinforcing downward spirals of market and funding liquidity (Brunnermeier and Pedersen, 2009)



Prevention of Systemic risk

- ⇒ ***micro-prudential supervision***: looks at the soundness of individual institutions, but: the soundness of an individual institution cannot be equated to the soundness of the whole financial system
- ⇒ ***macro-prudential oversight***: aims to prevent the emergence of systemic risk and to mitigate its effects by taking a system-wide perspective

Forms:

- ***Contagion*** ⇒ *Structural* ⇒ *Ring-fencing*
- ***Aggregate shocks*** ⇒ *Structural* ⇒ *Increasing the resilience*
- ***Imbalances*** ⇒ *Cyclical* ⇒ *Countercyclical measures*

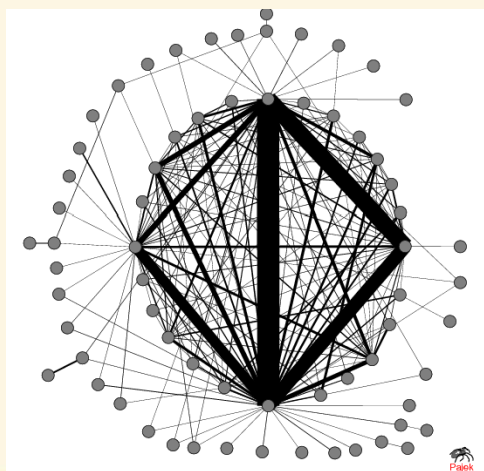
Consequences:



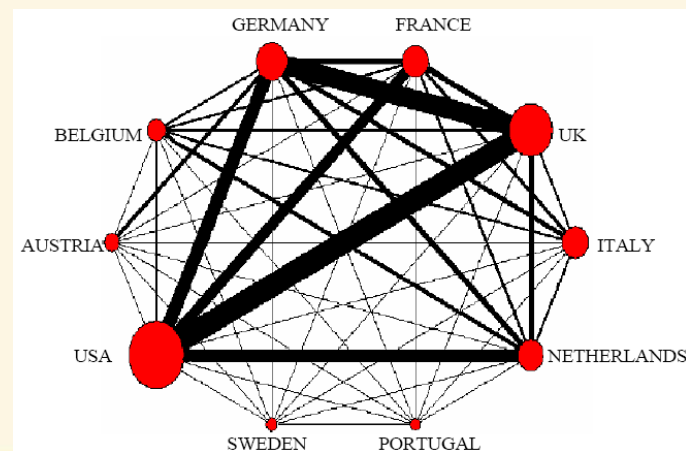
Systemic risk and close-out netting

- **Number** of (standardised) netting arrangements
- **Interconnectedness** of market participants
- Complexity (business, structural or operational)
- **Global activities** (cross-jurisdictional) of market participants

Networks between counterparties



Cross-border banking flows





Potential for systemic risk (I)

- If **netting** is (or will become) **unenforceable**
 - market participants would need to assume **gross exposure**, not net exposure, as the relevant measure of counterparty risk
 - high demand for additional collateral and capital, potentially resulting in **shortfalls of collateral and liquidity**
 - **difficulties to manage risk** due to the inability of market participants to adjust market risk positions or hedge portfolios against major market movement or other macroeconomic shocks
 - **banks deleveraging risk**, potentially leading to asset contractions and extended periods of weak economic activity
 - market participants would lose the ability to engage in offsetting trades to reduce counterparty exposure to troubled entity, increasing **likelihood of early termination** of transactions



Potential for systemic risk (II)

- If ***netting arrangements*** are found to be ***invalid or unenforceable*** in particular in a market wide stress situation
 - **Uncovered exposures**
 - **Possible contagion** through counterparty channel (default of a counterparty leads to losses or other impairments at other market participants)
- ⇒ Standardisation and number of (standard master) agreements may lead to *simultaneous shock*, in particular if becoming evident in a crisis situation



Potential for systemic risk (III)

- **Simultaneous exercise of close-out netting** by a wide number of market participants upon the default of systemically important financial institution
 - ⇒ *Standardisation and number of arrangements* may amplify market strains through large scale asset liquidation.
 - ⇒ Forced liquidation (*fire sales*) of assets could cause distortions in market liquidity or prices (amplified by leverage/margin calls), leading to system-wide shocks
 - ⇒ Exercise of close-out netting against a systemically important entity under recovery or resolution (e.g. a CCP) may *thwart recovery or resolution attempts* (and which in particular in cases of lack of substitutability may cause critical services to fail)



The Lehman case

- The sudden fragmentation across jurisdictional lines of a previously tightly integrated enterprise
- Risk positions were disaggregated (e.g. partly undocumented intra-group re-use of assets, derivatives against intercompany hedges in the form of physical assets subject to separate administration or back-to-back derivatives with insolvent affiliates)
- *Close-out netting was actually effective* (to some extent), but:
 - Counterparty terminations were effected at once in huge numbers and could not be monitored or managed effectively real-time
 - Lack of documentation maintenance and planning for default by counterparties led to wrong or too late exercise of close-out



Safe harbours

- Certain “***safe harbour***” provisions are necessary to make netting enforceable:
 - Allowing **termination** following an event of default even in case of insolvency/resolution
 - **Automatic stays** should not apply
 - **Exceptions** (short limited stays e.g. if the defaulting entity is a failed bank)?
 - **Restricting cherry picking** by affirming the enforceability of the *single agreement structure* in which all transactions under a master agreement are treated as one contract



Short-term stays

- Following the 2008 events, policy makers turned their attention to procedures for the **resolution** of failed **systemically important financial institutions** (first banks, then non-banks)
- Introduction of short periods in which authorities would have the opportunity to **transfer the *entire* book of transactions** (a “netting set”) to a solvent entity
- To support this, regulators have sought to **delay for short periods** (24 or 48 hours, in order to minimise market risk) the ability to terminate contracts in order to allow for an orderly transfer of the netting set to a solvent entity. If the transfer is not successful, termination can go ahead
- **No general challenge** of the concept of close-out netting



Netting and resolution

FSB Key Attribute 4 **Set-off, netting, collateralisation, segregation of client assets**

- Contractual netting should be *clear, transparent and enforceable*
 - It should not hamper the effective implementation of resolution measures
 - Entry into resolution should **not trigger close-out netting**, *provided the substantive obligations under the contract continue to be performed*
 - The *resolution authority* should have the power to **stay temporarily** termination rights where they arise by reason only of entry into resolution or in connection with the exercise of any resolution powers. The stay should:
 - (i) be strictly limited in time (for a period not exceeding *2 business days*);
 - (ii) be subject to *adequate safeguards* that protect the integrity of financial contracts and provide certainty to counterparties; and
 - (iii) not affect the exercise of early termination rights of a counterparty against the firm being resolved in the case of *any other event of default*
- ⇒ Acknowledged by **Principle 8 of the 2013 UNIDROIT Principles**



Insolvency/resolution treatment of close-out netting

- **On-going debate** on whether there should be a **wider abolition of the safe harbour treatment** (automatic exemption from stays) , in particular regarding *securities financing transactions* (repo/securities lending)
- Since the financial crisis, a number of **academics** have argued that the ‘safe harbour’ status of repos may in fact increase systemic risk, because it may in their view:
 - (i) increase the ‘money-likeness’ of repos and result in a rapid growth in cheap and potentially unstable short-term funding;
 - (ii) facilitate the fire sales of collateral upon default; and
 - (iii) reduce creditors’ incentives to monitor the credit quality of repo counterparties
- See for example Duffie and Skeel (2012), A Dialogue on the Costs and Benefits of Automatic Stays for Derivatives and Repurchase Agreements, Stanford University Working Paper No. 108; Perotti (2010), Systemic liquidity risk and bankruptcy exceptions, CEPR Policy Insight No. 52; Acharya and Öncü (2012), A Proposal for the Resolution of Systemically Important Assets and Liabilities: The Case of the Repo Market



Insolvency/resolution treatment of close-out netting

- Alternative proposals include e.g. that:
 - repos backed by risky or illiquid collateral should either not be exempt from automatic stay or be exempt from automatic stay but subject to a tax, which could be varied as a macro-prudential tool; or
 - in the event of default, lenders of such repos should be able to sell collateral only to a ‘Repo Resolution Authority (RRA)’ at market prices minus pre-defined haircuts specified by asset class by the RRA
- The FSB considered the proposals made and concluded that “*while theoretically viable in addressing some financial stability issues, [they] can involve substantial practical difficulties, particularly the need for fundamental changes in insolvency laws, and therefore should not be prioritized for further work at this stage*”
- Consequently, the FSB recommends that ***changes to the insolvency regime should not be pursued*** at this point in time



Capital requirement treatment of close-out netting

- **Possible impact of Basel III through:**
 - Increased capital charges for derivatives and securities financing transactions and increased risk charges for financial institution exposures
 - ***Liquidity coverage ratio*** (BCBS proposal to hold enough “high quality liquid assets” to ensure that it has enough liquidity to withstand a 30-day stressed event - matched repo books (other than repos against govt. bonds), despite being cash transactions collateralized by highly liquid securities, would negatively impact these ratios)
 - ***Leverage ratio*** (to be based on gross rather than net value of SFTs) => A leverage ratio is risk-insensitive by definition
- ⇒ *No judgement on the risk management merits of netting*



Conclusions

- ***Clear and certain rules** for validity and enforceability close-out netting contribute to financial stability*
- *The **risk management benefits** (in terms of risk exposures and liquidity management) of close-out netting have to be weighed against potential adverse market impacts*
- *Limitations to the **safe harbour protection of close-out netting** (stays) should remain strictly limited in time to support orderly resolution of systemic financial institutions*
- *Desirability of **global consistency and harmonisation***