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CAFRAL CONFERENCE ON DERIVATIVES: ISSUES AND CHALLENGES

DERIVATIVES AND SYSTEMIC RISK MANAGEMENT

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Outline

Overview

- I would usually describe bankers as “glass half full” people, and regulators as their “glass half empty” folks. To take an obvious example, where banks first see opportunity for returns in derivatives market, regulators first see exposure to risk from derivatives. But they are perspectives that define and create the healthy tension in the bank/regulator relationship.
- When it comes to recent regulatory reforms, though, I find the situation strangely reversed - bankers are “glass half empty” people, and regulators as their “glass half full” counterparts i.e., bankers are somewhat despondent, while regulators are focusing on the good and steady progress that has been made.
- Should we see global regulatory reforms as half full glass or half empty glass? I plan to offer some thoughts this morning.

Amounts outstanding of OTC Derivatives

By risk category and instrument (USD Billion)

	Jun.10	Dec.10	Jun.11	Dec.11	Jun.12	Dec.12	Jun.13	Dec.13
Total contracts	**582,685**	**601,046**	**706,884**	**647,811**	**639,395**	**632,582**	**692,924**	**710,182**
Foreign exchange contracts	53,153	57,796	64,698	63,381	66,672	67,358	73,121	70,553
Forwards and forex swaps	25,624	28,433	31,113	30,526	31,395	31,718	34,421	33,218
Currency swaps	16,360	19,271	22,228	22,791	24,156	25,420	24,654	25,448
Options	11,170	10,092	11,358	10,065	11,122	10,220	14,046	11,886
Interest rate contracts	451,831	465,260	553,240	504,117	494,427	489,706	561,314	584,364
Forward rate agreements	56,242	51,587	55,747	50,596	64,711	71,353	86,334	73,819
Interest rate swaps	347,508	364,377	441,201	402,611	379,401	370,002	425,584	461,281
Options	48,081	49,295	56,291	50,911	50,314	48,351	49,396	49,264
Equity-linked contracts	6,260	5,635	6,841	5,982	6,313	6,251	6,821	6,560
Forwards and swaps	1,754	1,828	2,029	1,738	1,880	2,045	2,321	2,277
Options	4,506	3,807	4,813	4,244	4,434	4,207	4,501	4,283
Commodity contracts	2,852	2,922	3,197	3,091	2,994	2,587	2,458	2,206
Gold	417	397	468	521	523	486	461	341
Other commodities	2,434	2,525	2,729	2,570	2,471	2,101	1,997	1,865
Forwards and swaps	1,551	1,781	1,846	1,745	1,659	1,363	1,327	1,261
Options	883	744	883	824	812	739	670	603
Credit default swaps	30,261	29,898	32,409	28,626	26,930	25,068	24,349	21,020

Source: BIS Quarterly Review June 2014

Overview

- Derivatives markets by virtue of their sheer size, warrant the attention of regulators and market participants alike.
- Limited transparency, massive size and interconnectedness of the derivatives market creates impetus for more regulation with a view to improving the robustness and resilience.
- While regulatory reforms aim at reducing structural weaknesses in derivatives markets, the reforms being pursued are drastically changing the financial landscape and business models.
- It is therefore timely and appropriate to look at the reform process and to analyze the consequences for market participants and the economy as a whole.

Overview

- Consequently, in this talk, we take a closer look at the current state of the derivatives market reforms and analyze their potential impact.
- In doing so, I start by summarizing the key objectives of the regulatory reforms.
- Building on this, I then describe the measures initiated. More specifically, I focus on the key building blocks – Capital & Collateral.
- I then discuss the market changes visible already. Finally, I discuss new sources of systemic risk.

Overview

- This talk is organized as follows:
- Section 2 presents a discussion regarding the objective of reforms.
- Section 3 takes a closer look at regulatory capital measures initiated, as well as the issues and challenges.
- Section 4 performs an analysis of the new financial infrastructure in place in the form of EMIR and DFA that has come into effect post-crisis.
- In Section 5, we discuss effect of the regulatory changes to derivative market size.
- We look at new sources of systemic risk in Section 6.
- I conclude in Section 7 with thoughts on is the glass half full or half empty.

Outline

Objective of reforms

- Objective 1: Strengthen bank capital
- Objective 2: All standardized OTC derivatives should be traded on exchanges or electronic platforms, where appropriate.
- Objective 3: All standardized OTC derivatives should be cleared through central counterparties.
- Objective 4: OTC derivative contracts should be reported to trade repositories.
- Objective 5: Non-centrally cleared derivative contracts should be subject to higher capital requirements.

Objective 1: Increased Capital Requirement

- The primary objective is to strengthen bank capital, apart from improving consistency of bank capital measurement and disclosure.
- Capital for ALM:
  - Capital for leverage apart from continuous monitoring of leverage.
  - Short-term liquidity requirement (Liquidity Coverage Ratio) and structural funding measure (Net Stable Funding Ratio).

Objective 2: Higher capital for non-centrally cleared contracts

- Even though central clearing will be mandatory for standardized contracts, a considerable fraction of the derivatives market will remain non-standard and thus would be exempt from central clearing obligations.
- About a quarter of the interest rate swaps (IRSs), one-third of credit default swaps (CDSs) and two-thirds of other OTC derivatives are non-standard (IMF estimates) and thus would still be traded bilaterally after the new regulations come into force.
- Regulators are bent on creating higher safety buffers for potential losses from non-CCP cleared trades.
- They want to set incentives for trades to move to standardized contracts by raising the costs of non-standardized contracts.

Objective 2: Higher capital for non-centrally cleared contracts

- This is important because, due to collateralization requirements, CCP clearing may create an incentive for market participants to switch to non-standardized products.
- Regulators therefore decided to impose higher capital requirements for non-centrally cleared contracts.
- Higher capital requirements would create further incentives for standardization of contracts and transfer the trading activity to exchanges and/or central clearing platforms.

Objective 3: Encouraging electronic platform trading

- In spite of the availability of specialized derivatives exchange markets, the volume outstanding in OTC derivatives markets stands at USD 710 trillion and dwarfs the volume of exchange-traded derivatives, which is only USD 45 trillion of Options and USD 27 trillion of Futures.
- The dominance of OTC products reflects the historical origins of derivatives markets and, more importantly, the fact that users appreciate the flexibility that bespoke contracts offer.

Objective 3: Encouraging electronic platform trading

- Notwithstanding these benefits of flexibility and client specificity, the reform agenda puts greater weight on the benefits of standardized derivative contracts and derivatives trading on exchange platforms.
- The principal benefit is that organized platforms provide pre-trade transparency and, by doing so, reduce information asymmetries in the market.
- By publishing the trade-related information to all market participants, they should, in principle, improve the price discovery process.
- Moreover, this price information is automatically captured in real-time databases, which should improve users' ability to monitor and, if need be, manage derivative positions and exposures.

Objective 4: Improving the market infrastructure

- OTC derivatives provide important benefits. Nonetheless, infrastructure of derivatives markets itself, as it has grown, has become a source of systemic risk.
- Specifically, OTC market has created a highly-connected web of bilateral contractual relationships between market participants which not only limits transparency, but also creates transmission channels for the propagation of shocks throughout the system.

Objective 4: Improving the market infrastructure

- There is need for a robust financial infrastructure that limits contagion.
- Apart from increased capital, another way of achieving this is an entity which interposes itself between the counterparties of derivative trade.
- All standardized derivatives be cleared through a central counterparty, or CCP, to deal with the counterparty risk and to manage the collateral requirements in a timely manner.
- CCPs ensure that trades are honored even if one of the contracting parties fails; potential losses are mutualised. CCPs net out clearing members' trades and require clearing members to post collateral on an ongoing basis.
- By providing daily trading data, CCPs provide post-trade transparency to the OTC derivatives market.

Objective 5: Greater transparency

- Under the new rules, both centrally cleared and bilaterally traded OTC derivatives are reported to Trade Repositories (TRs).
- By centralizing the collection, storage, and distribution of trading data, TRs serve as effective tools to deal with the intransparency of the derivatives market.
- TRs play a pivotal role in supporting regulatory authorities to carry out their market surveillance responsibilities.
- Availability of reliable data would put regulators in a better position to prevent the building-up of unsustainable exposures.

Outline

Capital as a tool

- Solvency ratio = (Regulatory Capital) / (Risk-Weighted Assets).
- Banks that are determined to be globally systemically important under the BCBS methodology as of November this year based on factors such as bank size, interconnectedness, global (cross-border) activity, and complexity indicators, will be subject to a 1%–2.5% capital surcharge above the minimum capital level, capital conservation and countercyclical buffer requirements introduced under Basel III. This additional loss absorption capacity is to be met with common equity and will be phased-in between 1 January 2016 and 31 December 2018.

Capital Conservation Buffer

- The capital conservation buffer, 2.5% of RWA and to be met with CET1 capital, applies at all times and it is intended to ensure that institutions are able to absorb losses in stress periods lasting for a number of years.
- Considering the 4.5% CET1 capital ratio, institutions must hold 7.0% CET1 capital on an individual and consolidated basis at all times.
- In case institutions fail to meet fully the “combined buffer requirement” (i.e., the total CET1 capital required to meet the requirement for the capital conservation buffer extended by an institution-specific countercyclical capital buffer), distribution constraints on CET1 capital are imposed.
- With the introduced capital buffers and the associated distribution constraints falling below the requirements, a “softer” regulatory tool is introduced.

Countercyclical Capital Buffer

- The countercyclical capital buffer is introduced to achieve the broader macro-prudential goal of protecting the banking sector and the real economy from the system-wide risks stemming from the boom-bust evolution in aggregate credit growth and more generally from any other structural variables and from the exposure of the banking sector to any other risk factors related to risks to financial stability.
- The level of this buffer ranges between 0% and 2.5% of RWA and has to be met by CET1 capital. The buffer is required during periods of excessive credit growth and it is released in an economic downturn.
- The buffer is calculated on a deviation of the ratio of credit-to-GDP from its long-term trend on a quarterly basis. An increase of the countercyclical capital buffer should generally be communicated 12 months in advance. A decrease of the buffer could be applicable immediately. The regulator should give an indicative (not binding) period during which no increase in the buffer is expected.

Liquidity Coverage Ratio

- LCR: high-quality highly-liquid assets available must exceed the net cash outflows of the next 30 days:
- High-quality highly-liquid assets: Level 1 assets: Recognized at 100%: cash, sovereign debt of countries weighted at 0%, deposit at central bank. Level 1 assets shall account for at least 60% of the “high-quality highly liquid assets”
- Level 2A assets: Recognized at 85% and must not represent more than 40% of the assets: sovereign debt weighted at 20% (countries rated below AA-), corporate bonds and covered bonds rated at least AA-
- Level 2B assets: non-financial corporate bonds rated between BBB- and A+, with a hair cut of 50%; certain unembumbered equities, with a hair cut of 50%; and certain residential mortgage-backed securities (RMBS), with a hair cut of 25%.
- The Level 2B assets will not be eligible for more than 15% of the “high-quality highly liquid assets” and a total level 2 assets will not be eligible for more than 40% of the “high-quality highly liquid assets”.

Liquidity Coverage Ratio

- Net cash outflows = cash outflows – cash inflows
- Cash outflows:
  - 100% of any repayment in the next 30 days
  - 3% of retail banking deposits
  - 40% of deposits from non-financial corporates and public sector entities
  - 100% of deposits from other financial institutions
  - Between 0% and 15% of secured funding backed with “high quality highly-liquid” assets
  - 10% of credit lines to corporates, sovereign and public sector
  - 30% of liquidity lines to corporates, sovereign and public sector
  - 100% of credit lines to other regulated financial institutions
  - 0% of secured funding from central banks maturing within 30 days
- Cash inflows: 50% of loan repayments by non-financial counterparties (it is considered that banks, even in difficult times, will have no choice than to renew at least 50% of the maturing loans); 100% of loan repayments by financial institutions; 100% of bonds’ repayments (whoever the issuers)

Net Stable Funding Ratio

- Net Stable Funding Ratio is the proportion of long-term assets which are funded by long term, stable funding.
- Stable funding includes: customer deposits, long-term wholesale funding from Interbank lending market, and Equity.
- Stable funding excludes short-term wholesale funding from the Interbank lending market.
- Long Term Assets or “Structural Term Assets”:
  - 100% of loans longer than one year; 85% of loans to retail clients with a remaining life shorter than one year; 50% of loans to corporate clients with a remaining life shorter than one year; and 20% of government and corporate bonds.
- Stable funding/weighted long term assets must be > 100%

Leverage Ratio

- Basel III introduces a “Leverage Ratio” such that the amounts of assets and commitments should not represent more than 33 times the Regulatory Capital, regardless of the level of their risk-weighting and of the credit commitments being drawn down or not.
- Leverage ratio is a measure of capital as a proportion of total adjusted assets. More specifically, it has been defined as the average of the monthly leverage ratio over the quarter based on Tier 1 capital (the capital measure) and total exposure. The minimum ratio is currently calibrated at 3%.
- Tier 1 comprises essentially common share capital, share premium, retained earnings and other comprehensive income. To qualify as Tier 1, capital has to be subordinated, perpetual in nature, loss bearing and fully paid up with no funding having come from the bank.
- Exposure includes both funded and unfunded exposure.

Leverage Ratio

- The Basel Committee proposed a 3% ratio, but national regulators are pushing it higher. US regulators have raised it to 5% and the Swiss have proposed raising it to between 6% to 10%. This would have a huge impact on banks.
- In their first quarter 2014 financial reports, Credit Suisse and UBS reported leverage ratios only slightly above 4%. To get to a higher ratio would require either an increase in capital or a reduction in leverage, or possibly both at the same time.

Leverage Ratio

- The calculation simply sums up the exposures, rather than netting out exposures that offset each other. The result is that the amount of leverage in a cleared portfolio comes out much higher under the proposed leverage ratio than what risk models would estimate.
- There is a need to remove client clearing activity from the leverage ratio calculations. The leverage ratio will require banks to set aside more capital for cleared derivatives than for uncleared derivatives. This seems paradoxical, given the regulator's stated interest in greater use of clearing.
- The leverage ratio should be revised to more accurately reflect the restrictions on the banks' ability to use customer collateral in a centrally cleared environment.
- These changes would have the doubly beneficial impact of accurately reflecting the realities of the centrally cleared futures and OTC markets and aligning bank capital costs in favor of central clearing for standardized OTC products.

Capital on Derivative Exposure: CCR

- The new regulations strengthen the requirements for capitalization of counterparty credit risk (CCR) from Derivatives.
- It includes an additional capital charge for possible losses associated with deterioration in the creditworthiness of counterparties or increased risk weights on exposures to large financial institutions.
- The new framework enhances incentives for clearing over-the-counter (OTC) instruments through central counterparties (CCP).

Effective Expected Positive Exposure

- Basel III requires determining the default risk capital charge by using the greater of the portfolio-level capital charge (not including CVA charge) based on
- Effective Expected Positive Exposure (EEPE) using current market data and the one based on EEPE using a stress calibration. The greater of the EEPEs is applied on total portfolio level.

Credit Valuation Adjustment

- In addition to the default risk capital requirements for CCR, Basel III introduces an additional capital charge to cover the risk of mark-to-market losses on the expected counterparty risk (Credit Valuation Adjustment, CVA) to OTC derivatives.
- Transactions with a central counterparty (CCP) need not be considered.
- Additional capital charge calculated by modeling the impact of changes in the counterparty's credit spread on the CVAs of all OTC derivatives using the internal VaR model for bonds. This VaR model is restricted to changes in the counterparties' credit spreads.

Wrong Way Risk

- Basel III introduces an explicit capital charge for specific wrong way risk.
- Banks are exposed to specific wrong way risk if future exposure to a specific counterparty is highly, positively correlated with the counterparty's probability of default.
- To calculate the CCR capital charge, the instruments for which there exists a legal connection between the counterparty and the underlying issuer, and for which specific wrong way risk has been identified, are not considered to be in the same netting set as other transactions with the counterparty.

Affect on foreign banks

- Major global banks are under tremendous pressure to reduce their risk-weighted derivative exposure across all of their businesses.
- For example, Morgan Stanley informed recently that it aimed to reduce risk-weighted derivative exposure to less than $200 billion by the end of 2016 from $390 billion currently.
- UBS is making an even bigger reduction; the Swiss bank has said it will slash risk-weighted derivative exposure by 50% from current levels to the end of 2017.
- To achieve these goals, banks are examining the capital costs in every line of derivative business and exiting certain derivative business lines that have been rendered less attractive by changes in both regulation and market developments.

Only Vanilla Trades

- Customers will migrate towards strategies that are less capital-intensive. In fact, some trading strategies may be priced out of the market altogether.
- Traders are moving toward more “plain vanilla” products that will require less capital under the new standards.
- I think the movement away from exotic to vanilla has already begun to happen. The banks that made markets in the exotic products saw this trend coming, and they have been offloading their books or winding them down. Those products are extremely expensive from a capital perspective. Even in the vanilla space, I see the potential for hedging in a more simple way by standardizing dates, which would drive ease of compression.
- People are going to be looking for ways to reduce these exposures. They will be trying to get to the lowest common denominator wherever they can.

Consequences to Indian Derivatives Markets

- Domestic banks have a business advantage over Foreign Banks.
- Systemic risk has changed within indian banking system because of these regulations.
- Using an 18-month USD/INR Forward as a sample trade:
  - If Rupee depreciates, we can expect Domestic banks' Derivatives books losing money.
  - If Rupee appreciates, we can expect Foreign banks' Derivatives books losing money.

Outline

Margin versus Capital

- Margin is more “targeted” and dynamic, with each portfolio having its own designated margin for absorbing the potential losses in relation to that particular portfolio, and with such margin being adjusted over time to reflect changes in that portfolio’s risk.
- In contrast, capital is shared collectively by all the entity’s activities and may thus be more easily depleted at a time of stress.
- It is also difficult to rapidly adjust capital in response to changing risk exposures.
- Capital requirements against each exposure are not designed to cover the loss on the default of the counterparty but rather the probability-weighted loss given such default. For these reasons, margin can be seen as offering enhanced protection against counterparty credit risk provided that it is effectively implemented.

Collateral and CCP as a tool: Regulations in Europe

- The European Union is implementing the new rules for derivatives markets mainly through two legal instruments: the European Markets Infrastructure Regulation (EMIR) and the revised Markets in Financial Instruments Directive (MiFID 2).
- EMIR introduces a reporting obligation for OTC derivatives, a clearing obligation for eligible OTC derivatives, measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives, common rules for CCPs and TRs.
- MiFID 2 covers a number of additional requirements on market structure, exemptions from financial regulation, powers of national authorities, sanctions and rules for non-EU firms operating through a branch.
- Markets in Financial Instruments Regulation (MiFIR) sets out requirements for trade transparency.

Derivatives market regulations: Regulations in US

- In the US, regulation and governance of the derivatives market is addressed by the Dodd-Frank Wall Street Reform and Consumer Protection Act.
- To achieve improved consumer protection and a reduction of systemic risks, the reforms cover a large range of regulatory legislation on systemic supervision, investment advisors and OTC derivatives trading.
- Dodd-Frank Act (DFA) establishes a comprehensive new regulatory framework for swaps and security-based swaps in the US. However, it leaves the important definitions and the implementation of rules to the Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission (SEC).

Major crunch points: Requirements for CCPs

- With the envisaged reforms, CCPs will become crucial building blocks of the financial system, whose faultless functioning is essential for the stability of the system.
- CCPs are required to maintain sufficient financial resources to cover stress scenarios that include the default of two participants and their affiliates.
- There is room for improvement regarding points such as cooperation between regulatory authorities and CCPs.
- There is a major debate on interoperability between CCPs which, brings benefits such as simplified trading and a reduction in systemic risk.

Major crunch points: ECB liquidity to non-euro area CCPs

- Clearing participants are responsible for fulfilling their obligations and, normally, should and will be able to do so.
- However, if one of the clearing members fails, the CCPs will have to fulfill the obligations of the defaulting party, such as the variation margins, payments at the settlement etc., given that the CCP is then the counterparty of the non-defaulted participant.
- As a result, in distressed circumstances when more than one clearing member fails, CCPs may be in need of considerable amounts of liquidity.
- To address this, one of the safe-guards for a resilient and efficient environment for central clearing is that, as a last line of defense, there should be appropriate liquidity arrangements for CCPs with central banks in the currencies in which they clear.
- As a consequence, EMIR recommends that CCPs should have access to central bank liquidity or to creditworthy and reliable commercial bank liquidity, or a combination of both.

Major crunch points: ECB liquidity to non-euro area CCPs

- Local central banks could certainly provide liquidity in local currency, but in case of a foreign-currency liquidity shortage, it is unclear whether the foreign central bank would be able to intervene and provide liquidity to the relevant CCP.
- The problem could be even more severe if the liquidity shortage is in more than one foreign currency, meaning that more than one central bank should intervene.
- Issue of setting up viable arrangements for providing central bank liquidity to CCPs is still pending.

Outline

Market changes observable: Trends in Derivative Markets

- There are a number of possible factors which should ideally lead to decrease in volumes: (i) a number of real-economy-related factors such as GDP growth; (ii) deleveraging by financial institutions and (iii) technical factors such as so-called trade compression, which has gained momentum with central clearing. But volumes have actually increased!
- Looking at the three potential factors, evidently, GDP had contracted both in the US and in the EU following the financial crisis, and there is indeed a positive correlation between GDP and derivative markets' growth rates especially in the post-crisis period.
- As regards the impact of deleveraging, several financial institutions have indeed exited the market due to a refocusing of their business models or due to capital shortages, and this, too, should have contributed to the shrinkage of derivatives markets. However, volumes have increased. This suggests that increase in volumes is over and above real-economy-related factors or impact of deleveraging or trade compression.

Substitution effect between exchange-traded and OTC

- As the new regulatory rules would eliminate some of the main advantages of OTC derivatives (i.e. low cost, easy use, etc.), market participants may move to more standardised instruments. For instance, the imposition of the new rules may lead to the "futurisation of swaps".
- One of the issues is the higher margin requirement, i.e. 5-day value-at-risk versus 1-day value-at-risk charge, for OTC swap transactions, as compared to futures transactions. Given that futures are identical in terms of cash flows to identically structured swaps, the higher margin requirement creates an economic disadvantage for swaps, which may create a substitution effect and push the market towards more standardised or exchange-traded future contracts.

MARKET CHANGES OBSERVABLE

Amounts outstanding of Exchange Traded Derivatives: Futures

MARKET CHANGES OBSERVABLE

Futures (USD Billion)

	Jun.12	Sep.12	Dec.12	Mar.13	Jun.13	Sep.13	Dec.13	Mar.14
All markets	23,699	24,969	24,089	26,118	25,222	25,052	25,927	27,767
Interest rate	22,389	23,545	22,640	24,630	23,808	23,399	24,191	25,967
Currency	216	237	232	240	227	227	244	240
Equity index	1,094	1,187	1,217	1,248	1,187	1,427	1,492	1,560
North America	13,262	13,286	12,909	13,795	13,048	13,021	14,262	15,057
Interest rate	12,673	12,670	12,297	13,135	12,467	12,399	13,592	14,394
Currency	140	158	158	165	127	142	155	150
Equity index	450	459	454	494	454	480	515	513
Europe	7,381	8,480	8,024	8,814	8,718	8,701	8,522	9,431
Interest rate	6,948	8,015	7,560	8,334	8,234	8,110	7,957	8,841
Currency	3	3	3	4	3	4	4	5
Equity index	430	462	460	477	481	587	562	585
Asia and Pacific	2,232	2,124	2,118	2,470	2,369	2,386	2,216	2,340
Interest rate	2,017	1,869	1,822	2,203	2,122	2,034	1,807	1,889
Currency	9	9	11	11	13	9	10	9
Equity index	206	247	284	256	235	343	399	443
Other Markets	823	1,079	1,038	1,039	1,088	945	927	939
Interest rate	751	992	960	959	985	855	835	844

Source: BIS Quarterly Review June 2014

Amounts outstanding of Exchange Traded Derivatives: Options

MARKET CHANGES OBSERVABLE

Options (USD Billion)

	Jun.12	Sep.12	Dec.12	Mar.13	Jun.13	Sep.13	Dec.13	Mar.14
All markets	37,824	33,757	30,047	36,179	43,917	46,368	38,687	44,952
Interest rate	33,192	28,797	25,906	31,020	38,373	39,961	32,794	38,864
Currency	112	108	106	115	117	144	143	133
Equity index	4,520	4,851	4,035	5,044	5,427	6,264	5,751	5,955
North America	18,756	15,762	12,322	13,737	20,487	25,643	20,890	24,953
Interest rate	16,253	13,208	10,280	11,067	17,461	22,510	17,770	21,890
Currency	77	80	69	87	83	91	95	74
Equity index	2,426	2,474	1,973	2,583	2,942	3,042	3,026	2,988
Europe	17,505	16,285	15,637	20,668	21,593	18,579	15,807	18,166
Interest rate	15,970	14,559	14,225	19,065	20,017	16,758	14,274	16,485
Currency	0	0	1	0	0	1	1	1
Equity index	1,535	1,726	1,411	1,602	1,575	1,820	1,532	1,680
Asia and Pacific	518	617	618	829	881	1,365	1,161	1,271
Interest rate	3	7	2	4	2	0	4	22
Currency	1	1	1	2	3	0	0	0
Equity index	514	608	615	823	877	1,364	1,156	1,248
Other Markets	1,045	1,093	1,469	945	956	781	829	562
Interest rate	967	1,024	1,399	883	893	693	746	467

Source: BIS Quarterly Review June 2014

Substitution between exchange-traded and OTC

- To shed light on the question of whether there is already progress in realising the policy objective of shifting business from the OTC space to exchange-based trading, it is useful to look at how the share of exchange trading to overall trading activity has developed.
- What the data suggest is the following: In contrast to the steady increase in the share of CCP-cleared transactions, there is little evidence that the market share of the (electronic) trading platforms has gathered steam. On the contrary, the ratio of exchange-traded derivatives to overall derivatives trading seems to have decreased slightly. If exchange trading were also seen as an indicator of the degree of standardisation in the market, this would also seem to suggest that higher standardisation has, to date, remained limited. Moreover, in contrast to portfolio compression, the idea of a shift to exchange-traded contracts is not supported by the data.

MARKET CHANGES OBSERVABLE

Outline

Open Issues: Effect of mandatory clearing on trading

- On the one hand, the decline in counterparty risk could lead to a perception that contracts are safer / imply lower risk – thereby increasing the inclination of market participants to trade.
- On the other hand, market participants may lower their engagement in the derivatives market as the cost of trading becomes higher than its economic benefit.
- There is greater likelihood of a decrease in trading volumes following wider use of CCPs.

Open Issues: CCPs as a new source of systemic risk

- With the new regulations, CCPs will become key building blocks of the financial infrastructure.
- However, it is important to note that the central clearing of OTC derivatives is not a panacea for counterparty risk and that in fact CCPs themselves may become a new source of systemic risk for financial markets.
- Accordingly, there is a concentration of risk at the CCPs and that they are non-substitutable, highly interconnected and international as well as presumably large, thereby meeting all the essential criteria for a systemically important financial institution.

Open Issues: CCPs as a new source of systemic risk

- Even though updating margin requirements in a timely manner may prevent CCP failures in theory, in present market conditions forecasting or managing risks could be non-trivial in practice.
- Based on the normality assumption that is widely used to model financial variables a 5 standard deviation increase in daily stock market returns should take place every 4,776 years – but it has in fact happened 44 times since 1950 and six times since 2008.
- So, outliers and distortions in market conditions occur with considerably higher frequency than theoretical models suggest.
- Given that CCPs are non-substitutable, regulators should consider measures that would enhance systemic stability. These could include creating even higher safety buffers (i.e. capital requirements) for CCPs, clarifying the access to central bank liquidity, and considering a common fiscal backstop in case of a CCP failure.
- Otherwise, an unprepared failure would pose serious threats to global financial system and CCPs would be the next too-big-to-fail institutions.

Outline

Conclusions

- In this talk, we have taken a closer look at the structural reforms of the derivatives market infrastructure.
- In broad terms, the objective of regulatory reforms is to create robust financial infrastructure by strengthening bank capital and through CCPs and TRs.
- Regulatory pressure to encourage standardisation seems to have created little impetus for greater standardisation to date and the use of exchange platforms seems to remain subdued.
- CCP concentration presents a notable development in the financial infrastructure. There are certain CCPs dominating the market which are also specialised in clearing particular products.
- Finally, even with proper capitalisation, CCPs could pose serious systemic risks in times of market upheavals and high uncertainty and thus regulators should explicitly prepare contingency plans for a potential CCP failure.
- The glass may be half full or half empty but it is certainly more transparent.

Thank you for your attention ...