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# SOUTH AFRICA

March 2015

## FINANCIAL SECTOR ASSESSMENT PROGRAM

## REFORMS IN THE OTC DERIVATIVES MARKET—TECHNICAL NOTE

This Technical Note on the Reforms in the OTC Derivatives Market on South Africa was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in February 2015.

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# TECHNICAL NOTE

## REFORMS IN THE OTC DERIVATIVES MARKET

Prepared By
**Monetary and Capital Markets Department**

This Technical Note was prepared by IMF staff in the context of the Financial Sector Assessment Program in South Africa. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at http://www.imf.org/external/np/fsap/fssa.aspx

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**APPENDICES**

## Glossary

| | |
|---|---|
| Bankserv | Bankers Services Co Limited |
| BSD | Bank Supervision Department |
| CCP | Central Counterparty |
| CEO | Chief Executive Officer |
| CLS | Continuous Linked Settlement |
| CPMI | Committee on Payments and Market Infrastructures (the new name of the CPSS since September 1st, 2014) |
| CPSS | Committee on Payment and Settlement Systems |
| CSD | Central Securities Depository |
| CVA | Credit Valuation Adjustment |
| EMIR | European Market Infrastructure Regulation |
| ESCB | European System of Central Banks |
| ESMA | European Securities and Markets Authority |
| EU | European Union |
| EXCO | Executive Committee |
| FSB | Financial Services Board of South Africa |
| FMA | Financial Market Act |
| FMI | Financial Market Infrastructure |
| FX | Foreign Exchange |
| IMF | International Monetary Fund |
| IOSCO | International Organization of Securities Commissions |
| IT | Information Technology |
| JSE | Johannesburg Stock Exchange (JSE Ltd) |
| MOU | Memorandum of Understanding |
| NPS | National Payment System |
| NPS Act | National Payment System Act, 1998 (Act No 78 of 1998) |
| NPSD | National Payment System Department of the SARB |
| PFMI | CPSS-IOSCO Principles for Financial Market Infrastructures |
| ODP | OTC Derivatives Provider |
| OTC | Over-the-Counter |
| RTGS | Real Time Gross Settlement |
| SADC | Southern Africa Development Community |
| Safcom | SAFEX Clearing Company (Pty) Limited |
| SAFEX | South African Exchange |
| SAMOS | South African Multiple Option Settlement |
| SARB | South African Reserve Bank |
| SIRESS | SADC Integrated Regional Electronic Settlement System |
| SLA | Service Level Agreement |
| SRO | Self-Regulatory Organization |
| SSS | Securities Settlement System |
| ZAR | South African Rand |

# EXECUTIVE SUMMARY

**As a G20 member, South Africa is committed to reform its OTC derivatives market to reduce vulnerabilities and increase transparency.** Reforms are being implemented through the Financial Market Act (FMA) and Regulations for banks, reflecting the Basel III capital requirements. The FMA establishes a licensing and recognition regime for domestic and foreign central counterparties (CCPs) and trade repositories that provide services to entities in South Africa. The implementation of Basel III aims to introduce additional capital and margining requirements in due course to address the higher risks related to non-centrally cleared transactions, and incentivize banks to use CCPs.

**Swift progress on the consultation and issuance of FMA regulations, trade repository regulations, and related notices are warranted to proceed with reforming the OTC derivatives market.** Secondary legislation still needs to be finalized and will contain requirements for financial market infrastructures (FMIs), such as CCPs and trade repositories, which will contribute to further supervision and reform of the OTC derivatives market. It will also contain the concept of an OTC derivatives provider (ODP) as a new category of regulated person under the FMA for professional entities active in the OTC derivatives market.

**There is room to further reduce risks in the OTC derivatives market.** Risk exposures among local and global participants are currently partly covered. A combination of high exposures and volatile markets would make participants vulnerable to losses following a failure of one or more of their counterparts. The authorities are encouraged to further implement capital and margining requirements to reduce risks related to non-centrally cleared OTC derivatives transactions, while continuously balancing the risk mitigating capacity of these measures and potential unintended consequences. Such consequences could be reduced hedging activity by end-users of OTC derivatives and the creation of an unlevel playing field among CCPs (see following paragraphs). The authorities should also enhance surveillance activities for the OTC derivatives market. This will allow them to obtain a comprehensive overview of OTC derivatives transactions and positions, and an understanding of potential vulnerabilities.

**A CCP can help limit potential credit and contagion risk in the OTC derivatives market, but only if the CCP itself is safe.** Global and local central clearing impact the safety and efficiency of the South African OTC derivatives market in different ways. A number of options are available to South Africa:

- **Using *only* global CCPs.** The largest South African banks are increasingly moving towards central clearing of OTC derivatives transactions in the U.K. and potentially the U.S. Benefits of a global CCP are optimal netting resulting in reduced cost for clearing members. A global CCP will have more clearing members, and therefore more "survivors", which will make it easier for the CCP to manage the default of a clearing member. The authorities in South Africa, however, will have reduced capacity to supervise and oversee a global CCP and a crisis affecting the global CCP will be difficult to manage. Global clearing is difficult to combine with exchange controls. Also, a low number of domestic banks becoming direct clearing members of the global CCP may reduce competition in the market;

- **Using *only* a local CCP.** Although this will provide the authorities with the capacity to supervise the CCP, an important drawback of this option is that cost will increase for foreign banks, which may potentially have a significant negative impact on market liquidity in the local OTC derivatives market;

- **Introduce a local CCP on a competitive basis in addition to a global CCP.** This will reduce the drawbacks of using only a global CCP while deriving the benefits of a local CCP. The authorities are able to exercise supervision of the local CCP in normal and crisis circumstances, exchange controls are not hindering collateral deposits at the CCP, and a higher number of clearing members is expected to increase competition and keep cost low. A disadvantage is that netting opportunities are reduced for those banks participating in both the global and local CCP. Also, the local CCP will not have as many clearing members as a global CCP, and thus less capacity to manage a default due to fewer survivors; and

- **A hybrid model in which a local CCP becomes a clearing member of a global CCP.** Although this option will optimize netting for all market participants, it does not reduce the disadvantages of a global CCP. In fact, the default of a global CCP may have an immediate and direct consequence on the stability of the local CCP, potentially impacting the financial stability of all markets that are served by the local CCP.

**The authorities should consider the benefits of establishing a local CCP in addition to a global CCP.** A domestic clearing house could assume the role of a local CCP but this role could also be assumed by a local branch of a global CCP. The Johannesburg Stock Exchange (JSE) has initiated important improvements to make Safcom, the CCP for exchange-traded derivatives, compliant with international standards. Further work is needed to fully comply with international requirements (the CPSS-IOSCO Principles for FMIs or PFMI). The JSE should improve the robustness of Safcom's risk management waterfall, taking into account the specific liquidation periods for products and counterparty risks of clearing members. Safcom should further continue to develop its liquidity and operational risk management, and develop a recovery plan.

**The authorities should mandate central clearing for standardized derivatives contracts, leaving market participants with a choice as to the CCP through which they clear.** Central clearing should be mandated to bring regulation in line with international practices; however, regulation should not prescribe the mandatory clearing of specific derivatives contracts through a local CCP. Instead, authorities should create a level playing field to allow for fair competition between a local and global CCP, requiring careful timing of (exemptions to) regulations that incentivize the use of CCPs.

**Specific risks of a local CCP should be effectively mitigated.** It is crucial that any local CCP is safe and complies with international standards. The highly interconnected financial system of South Africa challenges the local CCP to be a true firewall in stopping contagion following a default of one of its clearing members. The small number of local banks will generally place a high burden on surviving clearing members to help the CCP in liquidating the defaulter's positions, provide liquidity and generally support the CCP to maintain operations. Therefore, any local CCP should reduce its dependency on local banks, for example, by pursuing with the central bank the possibility of opening an account in the central bank operated payment system (SAMOS) and a securities account in the local central securities depository (CSD). A local CCP should also pursue access to routine intraday liquidity and other central bank services.

**The move to a twin peaks regulatory structure is expected to contribute to comprehensive supervision and oversight of CCPs; coordination and cooperation among the authorities is essential.** Regulatory, supervisory and oversight responsibilities may be distributed among two supervisory entities, with the national payment system oversight division responsible for the oversight of FMIs, and the future market conduct authority responsible for market conduct supervision of FMIs and ODPs. Coordination and cooperation arrangements should be developed, in particular to identify a lead coordinating authority. The parallel implementation of the OTC derivatives reforms and the twin peaks model requires careful planning to ensure sufficient capacity at all stages of the reform process.

### Table 1. South Africa: Main Recommendations

| **Recommendations** | **Timing / Priority*** |
|---|---|
| Bilaterally traded and cleared OTC derivatives market | |
| Make swift progress on the consultation and issuance of FMA regulations, trade repository regulations and other regulations related to OTC derivatives reforms to create transparency and proceed with reforming the OTC derivatives market. | Short term / High |
| Enhance surveillance activities of the OTC derivatives market. | Medium term / Medium |
| Further implement capital and margining requirements, while balancing the risk mitigating capacity of these measures and potential unintended consequences. | Medium term / Medium |
| **Central clearing** | |
| The FSB to develop equivalence criteria for recognition of non-local financial market infrastructures (FMIs), including global CCPs. | Short term/high |
| The FSB to conclude a cooperation agreement with the authorities of global CCPs to ensure that the relevant South African authorities receive timely and relevant information about the safety and efficiency of the global CCP. | Short term / High |
| Consider the benefits of establishing a local CCP in addition to a global CCP. | Short term / High |
| Mandate central clearing through regulation leaving market participants a choice through which CCP they clear. | Short term / Medium |
| Safcom to further increase its compliance with the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMI), in particular regarding its | Medium term / High |

| | |
|---|---|
| dependency on the large four banks in South Africa, the robustness of its risk waterfall, liquidity risk management, operational risk management and recovery planning. | |
| Any local CCP to reduce its dependency on local banks, for example by opening an account in the SAMOS system and the local CSD, as well as pursuing access to routine intraday liquidity and other services provided by the central bank. | Medium term / Medium |
| **Regulation, supervision and oversight of CCPs** | |
| Increase the number of staff in the FSB and SARB with specific knowledge on CCPs, CSDs and OTC derivatives markets. | Short term/High |
| Define oversight responsibilities for payment systems and other FMIs, including CCPs, in the legal and regulatory framework of the SARB oversight division. | Medium term/High |
| Start structural preparations for the simultaneous implementation of OTC derivatives reforms and the twin peaks regulatory structure by the FSB and SARB and prepare for effective coordination and cooperation to ensure a sufficient number of staff with appropriate skills is available at all stages of the reforms. | Short term / High |
| Consider developing a policy to provide central bank emergency liquidity assistance to CCPs under certain conditions to further reduce the probability of default of a CCP. | Medium term / High |

*Short term is within six months; medium term is within 18 months.

# INTRODUCTION[1]

1. **The objective of this note is to analyze the over-the-counter (OTC) derivatives market reforms in South Africa and identify vulnerabilities that may potentially impact financial stability.** The note analyzes the progress of OTC derivatives reforms in South Africa, bilateral and central clearing of OTC derivatives transactions, and the regulatory, supervisory and oversight framework.

2. **The financial crisis that started in 2007‐2008 exposed weaknesses in the structure and operations of the OTC derivatives markets that contributed to global systemic risk.** Although the crisis did not originate in these markets, the size, interconnectedness, and lack of transparency exaggerated financial stress. In 2009, G20 leaders in Pittsburgh called for reforms in the OTC derivatives markets, and agreed that all standardized OTC derivatives should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through Central Counterparties (CCPs). OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. In November 2011, the G20 leaders agreed to add the development of margin requirements on non-centrally cleared derivatives to the reform program. The primary objective of the OTC derivatives reforms is to reduce systemic risk by strengthening these markets to withstand extreme shocks, improve transparency, and protect against market abuse.

3. **The OTC derivatives market in South Africa functioned properly during the financial crisis.** Nevertheless, as a G20 member, South Africa is committed to reform its OTC derivatives market to reduce vulnerabilities and increase transparency. South Africa has started implementing reforms in the OTC derivatives market. An assessment undertaken by the Financial Stability Board analyzed the status of the reforms in 2012. Appendix 1 lists the various recommendations of the Financial Stability Board, and also summarizes the recommendations of the 2008 FSAP report regarding the OTC derivatives market in South Africa.

4. **Reforming the OTC derivatives market entails possible risks.** The model in Figure 1 illustrates the different risks that may prevail in the three phases of the OTC derivatives market reform process.

- *Decentralized phase:* This phase involves bilateral trading and clearing of OTC derivatives transactions, and the potential risks are a lack of proper risk mitigation and a lack of transparency.

[1] This note was prepared by Froukelien Wendt, Senior Financial Sector Expert from the IMF Monetary and Capital Markets department, for the 2014 South Africa FSAP. Her analysis was based on publicly available information, background documentation provided by the authorities, as well as discussions with the National Treasury, SARB, FSB, JSE, banks and other relevant market participants.

- *Reform phase:* Risks in this phase may concern regulatory uncertainty and unintended consequences for the market, resulting in regulatory arbitrage and risks shifting to other parts of the financial system.

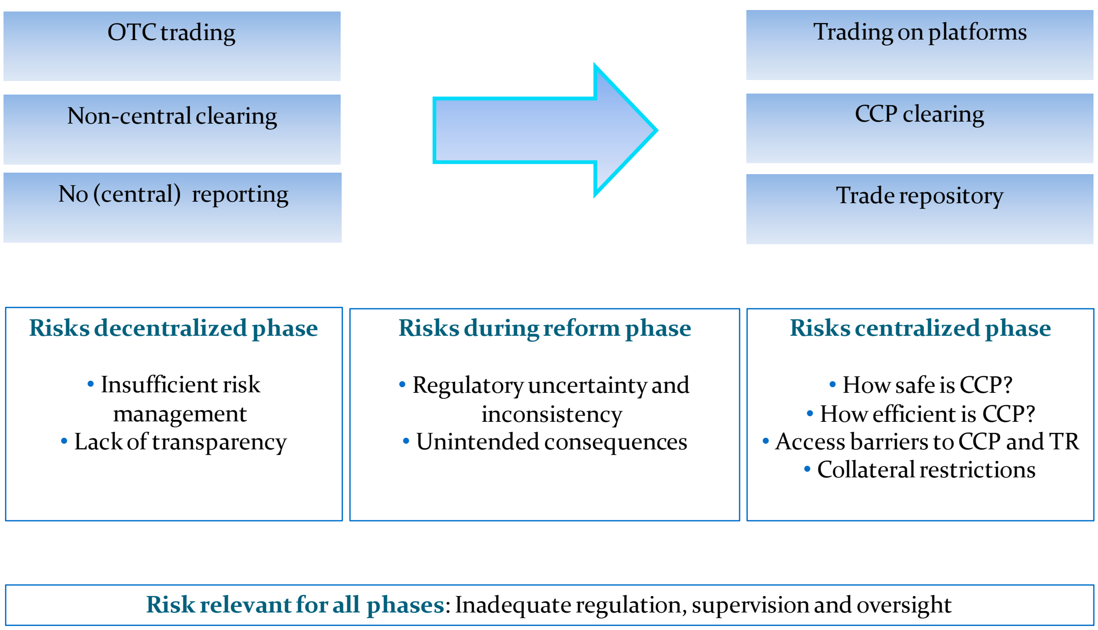
- *Centralized phase:* This phase involves trading on platforms, clearing through CCPs, and reporting to trade repositories, and the potential risks are an increase of concentration risk within CCPs, inefficiencies of central clearing resulting in increased costs, impediments to accessing a CCP or trade repository, and risks related to collateral restrictions.

In all three phases, there is the risk that regulation, supervision, and oversight are inadequate, for example, because local authorities have insufficient opportunities to regulate non-domestic CCPs and access trade repositories.

5. **This note is organized as follows:** section II describes the OTC derivatives market in South Africa, section III contains a risk analysis of the reforms in the OTC derivatives market, and section IV concludes with policy recommendations. The analysis of risks in section III addresses the different types of risks as illustrated in Figure 1, i.e. risks related to (i) the decentralized phase and the reform process, (ii) central clearing, and (iii) regulation, supervision, and oversight. The regulatory, supervisory, and oversight arrangements for Financial Market Infrastructures (FMIs),[2] including CCPs and trade repositories, are addressed using the five responsibilities of the CPSS-IOSCO Principles for Financial Market Infrastructures (PFMI). In addition, the note analyzes the safety and efficiency of Safcom – the exchange-traded derivatives CCP – based on a selection of principles of the PFMI.

[2] In this note, FMIs cover payment systems, securities settlement systems, the Central Securities Depository, CCPs, and trade repositories. The CSD is an entity that provides securities accounts, central safekeeping services, and asset services. A CCP is an entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer, and thereby ensuring the performance of open contracts. A trade repository is an entity that maintains a centralized electronic record database of transaction data.

**Figure 1. Possible Risks in Reforming OTC Derivatives Markets**




Source: Staff, Financial Stability Board 7th progress report on OTC derivatives market reforms, ISDA

# THE OTC DERIVATIVES MARKET IN SOUTH AFRICA

## PRODUCTS

6. **The OTC derivatives market in South Africa is substantial.** The gross notional outstanding value was approximately ZAR 27 trillion (USD 3 trillion) in June 2012.[3] Trading volumes represent 7.5 percent of GDP, which is large compared to other emerging economies.[4] Currency derivatives and interest rate derivatives are the most actively traded products. Volumes keep growing, stimulated by volatility, relatively high interest rates, and high participation of offshore dealers and investors. The figures in Appendix 2 illustrate the size and growth of the OTC derivatives market in South Africa in comparison to other emerging countries.

7. **The largest exposures are in interest rate derivatives, while currency derivatives are the most actively traded.** A study of 2012[5] shows that around 85 percent of the notional outstanding amounts in the books of the largest five South African banks represent interest rate contracts. Banks typically keep these derivatives to maturity. Foreign exchange (FX) contracts

[3] The gross notional values may be exaggerated due to double counting of swap transactions.

[4] BIS, Triennial central Bank Survey, 2013.

[5] Study by Price Waterhouse Coopers for the National Treasury of South Africa.

represent 12 percent of the notional outstanding amount, whereas the outstanding amounts of OTC traded equity, credit, and commodities derivatives are relatively small. Equity derivatives are typically traded on the JSE. Nearly all OTC derivatives traded between local counterparties are South African Rand (ZAR) denominated.

## A. Market Participants

8. **Banks are the most active players in the OTC derivatives market, followed by other financial institutions.** Banks use OTC derivatives to speculate on exchange rates and interest rates and to hedge their own risks and risks of their clients. Other financial institutions, such as pension and insurance funds, asset managers and corporate treasurers use OTC derivatives predominantly to serve as insurance against unwanted price movements to reduce the volatility of their company's cash flow. In 2012, the share of banks in the OTC derivatives market was highest, whereas the share of other financial institutions was a third of the notional outstanding amount (Table 2). The share of corporate investors was very small.

**Table 2. Distribution of Notional Outstanding Value Among Participants**

| | Interbank | Other financial institutions | Corporate investors | Total |
|---|---|---|---|---|
| Interest Rate | 59% | 28% | 1% | 88% |
| FX | 4% | 7% | 1% | 12% |
| Other | 0.2% | 0.2% | 0.1% | 0.3% |
| Total | 63% | 35% | 2% | |

Source: Price Waterhouse Coopers, 2012

9. **Interbank trading between South African and offshore banks constitutes a significant part of transactions in the OTC derivative market.** Similar to other emerging economies, OTC derivative contracts in ZAR are heavily traded off-shore, in particular in the UK.[6] In 2012, more than half of interbank interest rate transactions of the large South African banks involved a foreign counterparty. Foreign dealers are typically the global systemically important financial institutions (G-SIFIs). Domestic banks use foreign dealers primarily to offset risk exposures assumed from domestic nonbank financial institutions.

## B. Financial Market Infrastructures

10. **FMIs aim to support the safe and efficient clearing and settlement of payment, securities, and derivatives transactions.** The South African Multiple Option Settlement (SAMOS) system is an automated interbank settlement system operated by the SARB. SAMOS settles large-value payments on a real-time gross settlement basis, while retail payments are settled as a batch

[6] See Jacob Gyntelberg and Christian Upper, the OTC interest rate derivatives market in 2013, BIS Quarterly Review December 2013

on a deferred basis by BankServ. Securities traded on the JSE are cleared and settled by the CSD Strate. The JSE operates a CCP for exchange-traded derivatives through its subsidiary Safcom. FX transactions have been settled via the Continuous Linked Settlement (CLS) system since the ZAR became a CLS eligible currency in 2004. Appendix 3 illustrates the different FMIs operating in South Africa. No CCP for OTC derivatives contracts or trade repository has been established in South Africa.

11. **Safcom is the local CCP for exchange-traded derivatives**. Safcom operates as a CCP by becoming the buyer to sellers and seller to buyers for futures and options contracts traded on the JSE. It has ten clearing members, of which eight are banks and two are non-banks. It is a wholly owned subsidiary of the JSE and has mandated the JSE, through service level agreements (SLAs), to perform its operating functions, its risk management and clearing services, as well as decision-making regarding the declaration of defaulting participants. The registrar of securities services of the FSB has approved Safcom as a qualifying CCP. Safcom made a formal application for recognition by the European Securities and Market Authority (ESMA) in September 2013.

## C. OTC Derivatives Market Reforms

12. **Reforms are implemented through the FMA and Regulations for banks, reflecting the Basel III capital requirements.** The FMA was passed by Parliament in early January 2013 and was promulgated in June 2013. The FMA establishes a licensing and recognition regime for domestic and foreign CCPs and trade repositories that provide services to entities in South Africa. The Banks Act regulations aim to introduce additional capital and margining requirements in due course, in line with the Basel III requirements, to address the higher risks related to non-centrally cleared transactions, and incentivize banks to use CCPs. Appendix 4 contains a detailed description of the progress in OTC derivatives market reforms so far.

13. **Secondary legislation is in the drafting and consultation phase.** The National Treasury, together with the FSB and SARB, has developed regulations and FSB notices on assets and resources for CCPs, trade repositories, CSDs, and exchanges. The draft regulations also contain the concept of an OTC derivatives provider (ODP) as a new category of regulated person under the FMA for professional entities active in the OTC derivatives market. ODPs are persons who, as a regular feature to their business and for their own account, initiate an OTC derivatives contract or make a market in them. Draft regulations will also include reporting obligations and additional duties for a trade repository. FSB notices will govern criteria for authorization of ODPs and a code of conduct for authorized ODPs. A first set of regulations has been issued for consultation in July 2014. Other regulations and board notices are expected to be issued for consultation later in 2014. The margining requirements for non-centrally cleared derivatives are planned to be implemented by the end of 2015.

14. **The reform of the OTC derivatives is at a relatively early stage.** The vast majority of OTC derivatives are still bilaterally traded and cleared. There is no mandatory clearing requirement. In the absence of secondary legislation, no CCP (other than Safcom for exchange-traded derivatives) or

trade repository has received a license under the FMA and no ODPs have been identified. Margining requirements for non-centrally cleared derivatives are not yet implemented. Transactions of banks with local counterparts are exempted from an additional capital charge for non-centrally cleared derivatives until the end of 2014. There is also no mandatory requirement for certain standardized derivatives to be traded on exchanges or trading platforms.

## D. Regulatory, Supervisory and Oversight Framework

15. **Currently, the FSB is the responsible authority under the FMA, whereas the SARB is responsible for the implementation of the Regulations for banks and the oversight of payment systems.** Under the FMA, the register for securities services, whose responsibilities are executed through the capital markets department of the FSB, is the regulator and supervisor of non-bank financial institutions and securities markets, including ODPs, CCPs, CSDs, exchanges and trade repositories. The bank supervision department (BSD) of the SARB is responsible for the implementation of capital and margin requirements at banks to cover exposures related to non-centrally cleared derivatives. The national payment system department (NPSD) within SARB regulates and oversees the safety and efficiency of the payment system pursuant to the SARB Act. The payment system oversight division is responsible for oversight within the NPSD. The NPSD also operates the SAMOS system through its payment system operations division. Operations of payment systems are governed by the National Payment System Act. Table 3 provides an overview of the FMIs that are subject to regulation, supervision and oversight of the SARB and the FSB respectively. Strate is the only FMI that is subject to supervision and oversight of both the FSB and the SARB. The SARB's responsibilities are limited to the payment and settlement leg of securities transactions. The SARB and FSB have concluded a memorandum of understanding (MOU) to coordinate the supervisory and oversight activities of both authorities. Appendix 5 describes the regulatory, supervisory and oversight practices in more detail.

**Table 3. Current Responsibilities of the FSB and the SARB for FMIs**

| Category | SARB-NPSD regulation and oversight | FSB regulation and supervision |
|---|---|---|
| Domestic payment systems | • SAMOS<br>• BankservAfrica Limited | - |
| Domestic securities clearing and settlement systems | • Strate Limited | • Strate Limited<br>• JSE-Safcom |
| Regional and foreign payment systems | • CLS<br>• SIRESS | - |

Source: FSB and SARB

16. **With the introduction of the Twin Peaks regulatory structure the responsibilities regarding the OTC derivatives market and FMIs will shift.** Current proposals discuss the establishment of a prudential authority, while the FSB will become the market conduct authority. Oversight of payment systems will still be the responsibility of the SARB-payment system oversight division.

# RISK ANALYSIS—RISKS IN THE OTC DERIVATIVES MARKET

17. **As the large majority of derivatives contracts in South Africa are bilaterally traded and cleared, it is important that credit risks among counterparts are sufficiently mitigated and authorities have sufficient information to analyze risks in the OTC derivatives market.** The financial crisis in 2007 and 2008 showed that insufficient risk management and opacity in bilaterally cleared markets may contribute to financial stress. Several initiatives of market participants in South Africa have contributed to the safety of the market, such as increased settlement matching through SWIFT and MarkITWire and participation in portfolio compression exercises.

18. **Risk exposures among local and global participants are currently partly covered, making the market vulnerable to a potential failure of one of the banks.** Margining practices are unevenly adopted in the OTC derivatives market in South Africa. Most interbank trades are subject to variation margin calls with cash as collateral, but thresholds are frequently applied (meaning that no margin is collected until a certain threshold is reached) and potential future exposures are not covered. A combination of high exposures and volatile markets would make participants vulnerable to losses following a failure of one or more of their counterparts.

19. **There is room to improve surveillance practices**. As noted in the 2008 FSAP, improving surveillance of the OTC derivatives **market** is warranted given the stability risks it entails. The monthly information collected by the SARB provides insight into the size and positions of banks in the OTC derivatives market. More information is needed, however, to obtain the timely and comprehensive overview of transactions and positions as suggested by the G20 reform agenda. In particular, information about participants other than banks such as non-bank financial institutions and corporate users active in the OTC derivatives market.

20. **A trade repository will potentially significantly improve the ability of South African authorities to identify and evaluate potential risks in a timely and consistent manner.** It is therefore important to adopt the regulations for trade repositories and swiftly start with the application and licensing procedure to establish a trade repository. The data provided by the trade repository will increase the understanding of the OTC derivatives market in South Africa and allow a comprehensive overview of it. The FMA and draft regulations allow for more than one trade repository in the country. It is however recommended to establish no more than one trade repository to avoid operational complexities that may result in overlap and duplication of data and delayed access to data. Full reliance on a foreign trade repository is possible, as long as the South African authorities do not face legal or operational impediments to obtain access to data that are relevant for the South African market under their respective mandates.

21. **Trading platforms may further increase the safety and efficiency of the derivatives market by offering price transparency and effective competition.** The FMA and draft FMA regulations contain requirements for exchanges, but there is currently no mandatory trading requirement for standardized derivatives. There are significant differences across jurisdictions in the

timing of implementation and regulatory design of the reforms, either underway or being contemplated.[7] South African authorities may further consider whether specific requirements in this area are appropriate for the markets in their jurisdiction.

22. **A potential unintended consequence of reforming the OTC derivatives market is that the hedging activities of corporate investors decline due to increased cost.** Potentially increased capital and margining requirements increase the cost for banks, non-bank financial institutions and corporate users. Anecdotal evidence suggests that this does not impact hedging activities of banks, non-bank financial institutions and the largest corporate investor, but for other corporate investors the increased cost may outweigh the benefits. Reduced hedging makes these companies vulnerable to exchange rate and interest rate volatility.

23. **So far, risks related to international regulatory uncertainty seem to be limited as the South African market is focused on compliance with European legislation.** The global regulatory reforms for OTC derivative markets expose the South African market potentially to legal uncertainty due to inconsistencies and overlap among requirements of different jurisdictions as well as extra-territorial measures. So far, legal uncertainty seems to be limited as the FMA reflects a similar interpretation of the PFMI as the European Market Infrastructure Regulation (EMIR). Safcom has no plans to apply for a status under the U.S. Dodd-Frank Act in addition to its recognition by ESMA. Where inconsistencies may arise, the South African authorities are encouraged to strive for a joint approach with relevant foreign authorities to prevent any negative implications of inconsistent legislation and extraterritorialities.

## A. Central Clearing

24. **A CCP can limit contagion and credit risk in the OTC derivatives market, but only if the CCP itself is safe.** Through multilateral netting and strict risk management arrangements, a CCP can substantially reduce counterparty credit risk in a market. A CCP that is well capitalized will act as a firewall. In case one of its participants defaults, the CCP will stop contagion of losses and liquidity shocks in the market that it clears. The CCP does, however, increase concentration risk by substituting for a whole network of financial institutions. It cannot be excluded that in extreme circumstances a CCP may fail with systemic implications, exposing its participants to unexpected credit losses and liquidity shortages. To reduce the probability of default, the CCP should comply with increased international standards and be subject to strict and comprehensive regulation, supervision and oversight.

25. **The largest South African banks are increasingly moving towards central clearing of OTC derivatives transactions in London.** South African banks are not subject to mandatory clearing requirements[8], but their foreign counterparts will be subject to mandatory clearing

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[7] See Financial Stability Board 7$^{th}$ Progress report on OTC derivatives market reforms.

[8] South Africa has an incentives based system, relying on financial incentives to motivate market participants to use a CCP.

requirements under EMIR, effectively forcing the largest South African banks to clear interest rate derivatives and FX derivatives transactions via LCH.Clearnet Ltd in London. South African banks are currently indirect clearing members, but have the possibility to become direct clearing members in the future.

26. **The use of a global CCP[9] reduces risk exposures of South African banks in several ways.** Clearing through a CCP allows banks to benefit from multilateral netting, which reduces the bank's counterparty credit risk exposures. Another risk reducing feature of a global CCP is that it will generally have more opportunities to manage a default of a clearing member, for example, because there are more potential surviving clearing participants that can help the CCP in hedging and liquidating the positions of the defaulter.

27. **Clearing through a global CCP does, however, expose the South African market to global shocks.** South African banks will be exposed to the major international banks via the default fund of the global CCP and thus to shocks arising from a default originating in other jurisdictions. South African banks will also be exposed to the unlikely, but not impossible failure of the global CCP that may default in extreme situations, for example following the default of several large clearing participants. South African banks may be confronted with residual losses through loss-sharing arrangements or other recovery and resolutions tools.

28. **The use of a global CCP reduces the capacity of South African authorities to supervise and oversee the CCP.** Under the FMA, the relevant South African authorities have responsibilities regarding the supervision of CCPs. A foreign CCP may be recognized under the FMA and a cooperative oversight arrangement with the home regulator should be pursued. However, the use of a global CCP will complicate exercising the responsibilities under the FMA, as South African authorities are not the primary regulator. This may result in limited powers to obtain timely information, induce change or enforce corrective action. South African authorities may also have limited capacity to intervene during a crisis and mitigate shocks that (potentially) affect financial stability in South Africa; for example, in case the authorities have conflicting interests.[10] The multitude of jurisdictions with an interest in the global CCP will increase complexities during crisis events.

29. **Clearing through a global CCP is difficult to combine with exchange controls and may reduce the efficiency of the OTC derivatives market in South Africa.** LCH.Clearnet Ltd accepts ZAR to cover variation margin obligations; however, deposits in ZAR are not in line with exchange

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[9] In this note, a global CCP is a CCP located outside South Africa with clearing members originating from multiple jurisdictions. Several global CCPs are relevant for the South African market, for example the UK based LCH.Clearnet Ltd and the US based Chicago Mercantile Exchange. Both CCPs clear high volumes of interest rate swap transactions.

[10] The home authority may pursue the safety of the CCP, whereas the local CCP pursues the global stability of its country. For example, increased country risk resulting in credit downgrades of South African banks may trigger margin calls by the CCP, with increased haircuts on collateral, which may negatively impact the liquidity position of the South African banks, which may further increase margin calls and haircuts. Pro-cyclical effects may be more prevalent in case South African banks use collateral denominated in ZAR.

controls. Deposits of initial and variation margin in global currencies conflict also with exchange controls if a bank reaches its macro-prudential limit, although estimates about the amount of margin that South African banks have to deposit for clearing at LCH.Clearnet Ltd do suggest that the potential impact of those calls on the exchange rate is not significant. Competition issues may arise if only a very limited number of South African banks can offer access to the global CCP. Exchange controls will limit other South African banks, financial institutions and corporate investors to access the global CCP through a foreign bank.

30. **A second option is that authorities could require the use of only a local CCP.** In this option the authorities would legally require the use of a local CCP for the clearing of specific derivatives contracts, for example all standardized ZAR denominated derivatives contracts. This option would provide the authorities with the capacity to supervise the CCP. It would also provide clearing members with full netting benefits. However, an important drawback of this option is that cost will increase for foreign banks, which may result in their retrenchment and which would have a significant negative impact on market liquidity in the local OTC derivatives market.

31. **As a third option, a local CCP can be introduced on a competitive basis in addition to a global CCP.** Such a local CCP could compete with a global CCP by developing a clearing service that is offering specific benefits to the local market. [11] The use of the local CCP should however not be required by regulation. The local CCP may reduce the drawbacks of using only a global CCP to the extent that the local CCP is used. A local CCP may limit the exposure of South African banks to foreign shocks and allows the relevant South African authorities to have direct supervision over the local CCP in normal and crisis circumstances. Clearing through a local CCP is not complicated by exchange controls and collateral can be deposited in ZAR. A higher number of clearing members is expected to increase competition and keep cost low. However, a local CCP may also reduce efficiencies for local banks that decide to participate in both a global and local CCP. They will see a split in their positions, reduced netting opportunities and increased cost. Table 4 compares the benefits and risks of a global and local CCP.

32. **A fourth option is a hybrid model in which a local CCP becomes a clearing member of a global CCP.** Although this option will optimize netting for all market participants, it does not reduce the disadvantages of a global CCP. In fact, the default of a global CCP may have an immediate and direct consequence on the stability of the local CCP, potentially impacting the financial stability of all markets that are served by the local CCP by creating a new channel for risk propagation. Such a link between CCPs may require additional credit and liquidity buffers, reducing efficiency gains for the market.[12]

[11] A local CCP in South Africa may for example offer a broader product range in local currency derivatives, margin off-sets between exchange traded derivatives and OTC derivatives and local collateral solutions with the local CSD.

[12] See also CGFS Papers No 46, The macrofinancial implications of alternative configurations for access to central counterparties in OTC derivatives markets, November 2011

**Table 4. Benefits and Drawbacks of a Global and Local CCP**

| Global CCP | Local CCP |
|---|---|
| • Optimal netting for largest banks – increased efficiency through lower cost<br>• More 'survivors' to manage default reduces risk<br>• Reduced capacity of South African authorities to supervise and oversee and manage crisis abroad increases risk.<br>• Difficult to combine with exchange controls.<br>• Competition issues with client clearing reduce efficiency. | • Large banks have reduced netting opportunities if they participate in both a global and local CCP.<br>• Small clearing members have full netting benefits<br>• Few 'survivors' to manage a clearing member's default.<br>• Authorities have capacity to control the CCP in normal and crisis circumstances.<br>• No issues with exchange-controls<br>• Level playing field facilitates client clearing and increases efficiency |

Source: IMF staff

33. **There is no obvious international best practice concerning the establishment of a local CCP for OTC derivatives.** In Australia, Singapore and potentially Mexico, clearing members have the option to use either a local CCP or a global CCP to clear OTC derivatives transactions, dependent on their preferences and needs. Both CCPs co-exist and there is no legal obligation to use the local CCP for derivative contracts denominated in the local currency. The global and local CCPs have different value propositions depending on the scale, scope and nature of their participant's business and offer market participants a choice and promote competition (third option in this section). In Canada, the authorities and market participants have balanced safety and efficiency issues and decided that global clearing provides for the most efficient and safe solution if certain conditions are met (first option).[13] In Brazil, market participants are required to clear OTC derivatives transactions through the local CCP BM&FBOVESPA as the local currency is non-convertible (second option). To date, no practical experience exists on how links among CCPs clearing OTC derivatives trades should be configured and risks monitored and managed (fourth option).

34. **Specific risks of a local CCP should be effectively mitigated.** To reduce concentration risk, it is crucial that any local CCP is safe and complies with international standards. The highly interconnected financial system of South Africa poses a challenge to a local CCP to be a true firewall in stopping contagion following the default of one of its members. A default of a large local bank will generally place a high burden on the few surviving clearing members to help the CCP in hedging and liquidating the positions of the defaulter and to help maintain the operations of the CCP. In case an existing financial market participant develops a local CCP for OTC derivatives clearing, it will be exposed to additional business risks and the relevant South African authorities

[13] Canada has no exchange controls and more large banks that are direct clearing members of the global CCP.

should closely monitor whether there is a potential spill-over to other market infrastructures operated by that market participant.

35. **To further enhance resilience, CCPs in South Africa could pursue access to central bank services.** A local CCP and the SARB could discuss the possible provision of central bank services to the CCP, in particular the CCP's direct access to the central bank operated payment system SAMOS, by opening an account in the system. In addition, the CCP may obtain routine access to intraday liquidity and benefit from collateral services provided by the SARB. All these measures will help to reduce the CCP's dependence on commercial banks. Several central banks in Europe, for example de Nederlandsche Bank and the National Bank of Belgium, provide not only a direct account to the CCPs in their jurisdiction, but also manage their collateral through direct accounts of eligible clearing members and the CCP in TARGET2. Intraday liquidity is provided under certain conditions and a link with the national central securities depository enables the use of securities as collateral. Box 1 provides information about Safcom's observance of the PFMI and its interconnectedness with local banks.

### Box 1. Safcom's Observance of the PFMI

**During the last couple of years the JSE has made important improvements to increase compliance of its exchange-traded derivatives CCP Safcom with the PFMI.** Safcom's legal framework is sound and its risk management committee is independent from its executive management. An enterprise-wide risk management framework identifies and mitigates risks in a comprehensive manner. A 'risk waterfall' is in place to protect the CCP against losses following the default of one of its clearing participants. The JSE is currently working on further improvements to its risk management framework, in particular fine-tuning the determination of margin and default fund contributions as well as further development of its liquidity risk management framework. Appendix 6 describes the risk management framework, rules, procedures and practices of Safcom in more detail.

**Further work is needed to fully comply with the requirements of the PFMI.** Further developments should improve the robustness of Safcom's risk waterfall, taking into account the specific liquidation periods for products and counterparty risks per clearing member. Safcom should further continue developing its liquidity risk management and apply daily stress testing. Operational risk management could be enhanced, for example by including a recovery time objective of two hours and reducing data loss in case of a failure. Also important is the development of a recovery plan to sustain critical services of the FMI. In line with the PFMI and additional guidance from CPMI-IOSCO[14], Safcom should identify scenarios that may potentially prevent it from continuing operations. The scenarios may cover extreme but plausible events, such as the default of one or more large participants that fulfill various roles in the clearing and settlement processes. The service level agreements (SLAs) between Safcom and the JSE should provide details of which staff, systems and other assets and resources are dedicated to the CCP and should be available in case of extreme circumstances to ensure continuation of critical operations. [15] Although not specifically required by the PFMI, Safcom could further reduce its reliance on Fitch in its investment decisions.[16]

[14] See CPMI-IOSCO guidance for recovery of financial market infrastructures, October 2014.

[15] ESMA has suggested that the connectedness of a CCP and exchange does pose additional risk. Article 14 (3) of EMIR (the European Markets Infrastructure Regulation) states that, "Authorisation shall only be granted for activities

(continued)

**A main challenge for Safcom is to manage the risks related to its high interconnectedness with its four clearing members.** The CCP should reduce its dependency on its largest clearing participants. The large four banks fulfill various roles that may prevent the CCP from stopping contagion of losses in case one of the large four banks would default. The banks fulfill the roles of general clearing member (clearing for clients), liquidity provider, deposit-taking bank, custodian and settlement bank for Safcom. They are also crucial during a default of a clearing member in helping the CCP to liquidate and hedge the defaulter's positions and take over the positions of the defaulter's clients. The CCP may lose access to collateral in case the defaulter is also one of the CCP's investment banks, it may lose access to one of its credit lines, it may face operational problems due to the loss of one of its settlement banks etc. To reduce these dependencies the JSE should find alternative solutions for the services provided by the largest banks. It has already started to invest collateral in government securities; however, more should be done, for example by pursuing efforts to open an account in SAMOS and gain access to central bank services. It may seek to (partly) replace its commercial credit lines by a credit line with the SARB. In addition, Safcom may open a direct account at Strate.

Source: IMF staff, FSB and JSE

36. In addition, the SARB may determine its approach towards emergency liquidity assistance to CCPs. In normal market circumstances, a CCP manages its liquidity risk by accepting only high quality liquid collateral, monitoring payment flows, conducting stress tests, maintaining committed credit lines with commercial banks, and, if available, with central banks through routine access to the central bank's intraday liquidity facility. In extreme circumstances, the commercial bank's credit lines may however be unable to provide timely and sufficient liquidity to the CCP. A CCP is vulnerable to wrong-way risk in the sense that it is most likely to be under stress at the same time as its clearing participants and liquidity providers. Providing CCPs with access to emergency liquidity assistance ensures that the CCP can continue to make payments to counterparties and would thereby maintain the stability of the market. To manage potential risk related to the default of a CCP, central banks are increasingly developing policies to provide emergency liquidity assistance to CCPs.[17] In determining its approach, the SARB may take into account the importance of providing liquidity only to CCPs that are sound and adhere to the international principles. It is therefore important that the oversight division within the SARB has good understanding and knowledge of the adherence of

linked to clearing and shall specify the services or activities which the CCP is authorised to provide or perform including the classes of financial instruments covered by such authorisation."

[16] At the St Petersburg G20 Summit the G20 has called on national authorities to accelerate progress in reducing mechanistic reliance on credit rating agency ratings in accordance with the FSB roadmap agreed in October 2012. Financial institutions, including CCPs, should develop their own credit risk assessment capabilities and use multiple indicators for determining creditworthiness before investing in certain assets.

[17] In 2012 the Economic Consultative Committee publicly stated that central banks are working towards a regime that ensures there are no technical obstacles for the timely provision of emergency liquidity assistance by central banks to solvent and viable CCPs, without pre-committing to the provision of this liquidity. See Financial Stability Board third progress report on implementation of the OTC derivative markets reforms referencing to one of the "four safeguards" of the Financial Stability Board for global CCPs concerning "appropriate liquidity arrangements".

the CCP to the PFMI. No commitment to provide emergency liquidity should be made to reduce moral hazard.[18]

37. **Finally, the team found that the different roles of the JSE in the South African market hamper the cooperation and coordination among relevant market participants in developing the South African financial markets.** The JSE has at least three different roles in the financial markets of South Africa, i.e. regulating market participants as a self-regulatory organization (SRO), managing a for-profit business that sometimes results in competition with market participants, and providing a clearing and settlement infrastructure. Although regulations, procedures and policies exist[19] to manage and mitigate potential conflicts of interest, in practice the different roles of the JSE seem to hamper the development of the markets. The South African authorities have started to further investigate the effectiveness of the JSE as an SRO.

## B. Effective Supervision and Oversight

38. **The supervision and oversight of FMIs is generally appropriate, but more staff is needed with a good understanding of CCPs and the OTC derivatives market.** The regulation, supervision and oversight of the FSB and SARB are based on statutory law. Relevant laws and policies are publicly available. The recently adopted FMA reflects the PFMI and all systemically important FMIs have been assessed, or are in the process of being assessed, against the new principles. Under the current regulatory framework, the authorities have sufficient powers and resources, including fining powers.[20] The number of staff with specific knowledge of CCPs and OTC derivatives markets should however be increased, both within the FSB as well as within the SARB. The authorities cooperate and coordinate sufficiently with regard to their supervisory and oversight activities (Appendix 5).

39. **The move to a twin peaks regulatory structure is expected to contribute to comprehensive supervision and oversight of CCPs; coordination and cooperation among the authorities is essential.** The FMA and secondary regulations bring the supervisory and oversight requirements for CCPs and other financial market infrastructures in line with international standards. Under the twin peaks regulatory structure, the SARB is expected to strengthen the oversight of CCPs, which is expected to contribute to their resilience. Responsibilities may be distributed among two supervisory entities, with the national payment system oversight division responsible for the oversight of FMIs, and the future Market Conduct Authority responsible for market conduct supervision of FMIs. Coordination and cooperation arrangements should be developed, which, among others, identify a coordinating authority. The oversight function of the SARB should be

[18] Expectations that a firm will not be allowed to fail creates moral hazard as the CCP and its clearing participants expect that the CCP's failure will be prevented. They may therefore take greater risks than otherwise because they are shielded from the negative consequences of those risks at the taxpayers' expense.

[19] See for example principle 9 of the FSAP IOSCO assessment 2014.

[20] Fining powers have been added to the set of enforcement tools at the recommendation of the Financial Stability Board's peer review report of February 2013.

further separated from the payment operations division. There should at least be a separate reporting line from the oversight division directly to another department within the SARB, for example the risk management and compliance department, to manage and mitigate potential conflicts of interest. Oversight responsibilities for CCPs, CSDs and trade repositories should also be clearly defined in the legal and regulatory framework supporting the oversight function of the SARB, in line with Responsibility A of the PFMI and international best practices. The oversight division should actively seek to enhance its resources to oversee CCPs, CSDs and TRs and ensure that staff has the appropriate knowledge and understanding of these FMIs.

40. **Regulation and supervision of ODPs will have to be proportional upon the activity of the ODP and the risks it poses to the OTC derivatives market.** ODPs will comprise of different types of institutions, including banks and smaller financial intermediaries. Before the implementation of the twin peaks model, the FSB will be the sole regulator and supervisor of ODPs, but under twin peaks a prudential authority will be responsible for prudential supervision, whereas the FSB will be responsible for market conduct supervision. The challenge for authorities will be to apply the same requirements to different types of entities and combine the requirements for ODPs with other legal requirements for other types of regulated entities.

41. **The parallel implementation of the OTC derivatives reforms and the twin peaks model requires careful planning to ensure sufficient capacity at all stages of the reform process.** These two large reform initiatives coincide, challenging the authorities to ensure a smooth transition of responsibilities and simultaneously ensure a sufficient number of staff with appropriate knowledge during different stages of the reform implementation. This requires structural preparations with plans that analyze the numbers and profiles of staff that are needed under different implementation scenarios. This is currently being developed under the Prudential Authority Implementation Working Group, a joint task force made up of organizations with a stake in the future Prudential Authority.

42. **FMIs should be included in legislation on resolution regimes.** In line with the international guidance on resolution frameworks for FMIs, led by the FSB, the South African authorities should plan for a dedicated resolution regime for systemically important FMIs, in particular CCPs, and designate the SARB to be the resolution authority.

# POLICY RECOMMENDATIONS

## A. Recommendations to Reduce Risks in the Bilaterally Traded and Cleared OTC Derivatives Market

43. **Make swift progress on the consultation and issuance of FMA regulations**, trade repository regulations and other regulations and notices related to OTC derivatives reforms to create transparency and proceed with reforming the OTC derivatives market.

44. **Improve surveillance activities of the OTC derivatives market in anticipation of its financial stability mandate** by collecting information from non-bank financial institutions and corporate users, in addition to the periodic information SARB receives from banks, as well as information about exposures to offshore counterparts. This will allow the authorities to obtain a comprehensive overview of OTC derivatives transactions and positions and an understanding of potential vulnerabilities in the market. The information should be useful in preparing for the collection and analysis of data to be provided by the trade repository.

45. **Further implement capital and margining requirements, while continuously balancing the risk mitigation capacity of these measures.** This will reduce risks in the non-centrally cleared OTC derivatives market, while limiting potential unintended consequences, such as a reduction in the use of derivatives to hedge financial and corporate risks. Also, early implementation may encourage the use of a global CCP, in the absence of a local CCP, leaving a potential local CCP with fewer opportunities to develop a competitive offer. Therefore, the authorities should carefully plan (exemptions to) regulations.

46. **Analyze whether mandating trading of standardized derivatives on exchanges would contribute to the safety and efficiency of the OTC derivatives market.** It is recommended to first implement the twin peaks and mandatory clearing reforms to enable market participants to adopt the reforms gradually and to control unintended consequences of reforms.

## B. Recommendations to Reduce Risks Related to Central Clearing

47. **The FSB should mitigate risks related to a global CCP by establishing a solid recognition procedure under the FMA and concluding a cooperation agreement with the authorities of global CCPs.** The FSB should develop equivalence provisions for recognition of non-local FMIs that provide services in South Africa. The objective should be to strengthen the responsible authorities' capacity to supervise and oversee non-local FMIs, such as global CCPs.[21] In addition, cooperation agreements should be concluded with the authorities of global CCPs that offer services to South African banks and other regulated market participants. The SARB should be included as one of the signatories with an eye on the implementation of the twin peaks regulatory

[21] See for example the equivalence provisions of the Reserve bank of Australia on overseas equivalence.

structure. The cooperation agreement should contain the formal intention that the South African authorities are informed about all relevant changes regarding the functioning and operations of the global CCP. The South African authorities should also be part of a crisis management framework for the global CCP. This should provide the FSB with comfort that the global CCP observes the PFMI and that they will receive timely and relevant information about the safety and efficiency of the global CCP.

48. **Consider the benefits of establishing a local CCP, in addition to a global CCP, to reduce risks related to a global CCP.** The authorities may encourage the development of a local CCP, to be offered by a local CCP or the local branch of a global CCP. Authorities should ensure that the CCP is safe. Business risks should be for the potential operator of the CCP.

49. **Mandate central clearing through regulation, leaving market participants a choice as to the CCP through which they clear.** The regulation in South Africa should mandate central clearing in line with international practices, allowing for competition among different CCPs under the FMA.

50. **The JSE should increase the compliance of Safcom with the PFMI.** In particular, it should i) reduce its dependency on the large four banks by directly using services of the central bank and local CSD; ii) further enhance the robustness of its risk waterfall, taking into account liquidation periods per product and specific risks of clearing members; iii) further develop liquidity risk management by including daily stress testing; iv) include a recovery time objective of two hours in its operational risk management framework and reduce data loss in case of system failures; and v) develop a recovery plan in line with the PFMI and additional CPSS-IOSCO guidance, specifying, in the SLAs with the JSE, which staff, systems and other assets and resources are dedicated to the CCP and should be available in case of extreme circumstances to ensure continuation of critical operations.

51. **Consider giving a local CCP access to central bank liquidity and collateral services to further enhance financial stability.** A local CCP could have its own account in the SAMOS system to reduce its dependency on settlement banks. It may have access to intraday central bank liquidity using the CCP's collateral and capital as eligible collateral. To that purpose, legal and operational barriers should be removed. Preferably, the local CCP is able to keep cash collateral at an account at the SARB. The SARB may use the securities collateral of Safcom deposited at the local CSD, if eligible, to collateralize intraday credit. The SARB is further encouraged to continue discussions with the market to enable the use of ZAR denominated collateral for the purpose of the global CCP.

52. **Further investigate the effectiveness of the multiple roles of the JSE in the South African market and ensure that conflicts of interest are sufficiently managed and mitigated.**

## C. Recommendations to Reduce Risks related to Regulation, Supervision and Oversight of FMIs

53. **Consider distributing responsibilities for FMIs among two supervisory entities, as part of the twin peak reforms,** with the national payment system oversight division responsible for the oversight of FMIs, and the future market conduct authority responsible for market conduct supervision. The legal and regulatory framework of the national payment system oversight division should be adapted to support the increased oversight responsibilities in line with responsibility A of the PFMI and international best practices.

54. **Start structural preparations for the simultaneous implementation of OTC derivatives reforms and the twin peaks regulatory structure by the SARB and FSB,** and prepare for effective coordination and cooperation to ensure a sufficient number of staff with appropriate skills is available at all stages of the reforms.

55. **Increase the number of staff with specific knowledge of CCPs and OTC derivatives markets**, both within the FSB as well as within the SARB-payment system oversight division. The FSB has built capacity through assessing Safcom and Strate against the PFMI. Further capacity is needed to regulate and supervise CCPs and ODPs active in the OTC derivatives market. The payment system oversight department should increase the number of staff with appropriate knowledge and understanding of these entities.

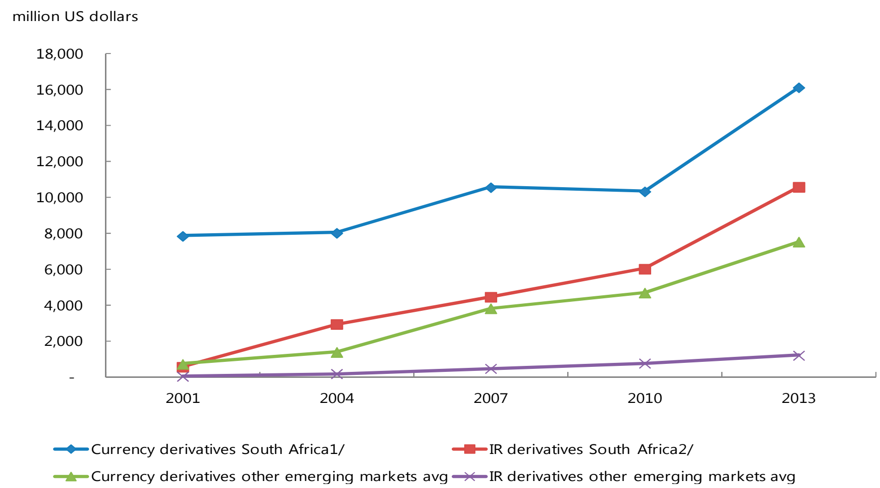
56. **Include systemically important FMIs in legislation on resolution regimes in line with international guidance from the FSB**.

# Appendix I. Recommendations of the 2008 FSAP and Financial Stability Board Peer Review

| **Summary of FSAP recommendations (2008):** |
|---|
| Enhance surveillance of the OTC FX derivative markets by systematic processing and analysis of information on offshore activity. Nonresident activity is very significant and a potential source of volatility in the foreign exchange market. Should such activities typically involve sizeable transactions, they are likely to be accompanied by spikes in volatility on foreign exchange markets. |
| **Summary of Financial Stability Board peer review recommendations (2013):** |
| The authorities may want to consider the following actions: |
| Publicly announce a date on which the exclusive reliance on incentives to migrate contracts into central clearing arrangements will be reviewed. |
| Give the FSB (and SARB) the ability to levy fines on licensed FMIs for failure to comply with substantive standards of the FMA or their license conditions. |
| Ensure that licensed FMIs are subject to adequate recovery and resolution requirements, drawing upon international guidance. |
| Conduct follow-up work using data reported to trade repositories on whether the trading of appropriate contracts on exchanges or through electronic trading platforms can be encouraged or mandated in a timely fashion. |
| Ensure that the FSB is ready to supervise all facets of the OTC derivatives market in the event that the SARB lacks legal supervisory powers at the time the market is brought within the regulatory net via the FMA, i.e. by a cooperative arrangement with the SARB. |

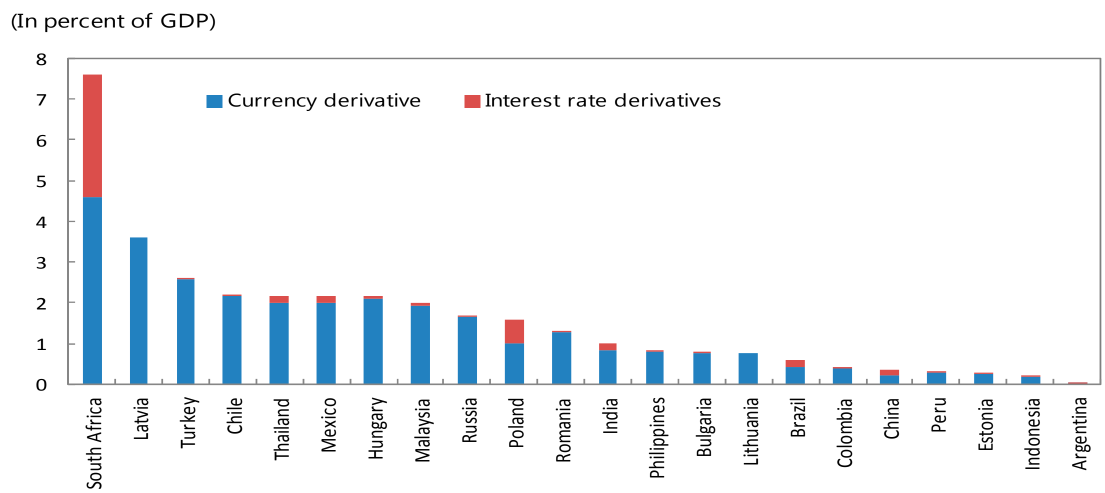
# Appendix II. Statistics of OTC Derivatives Market South Africa

## Figure 2. Trading Volumes, Daily Average Notional Amount, in Millions of USD



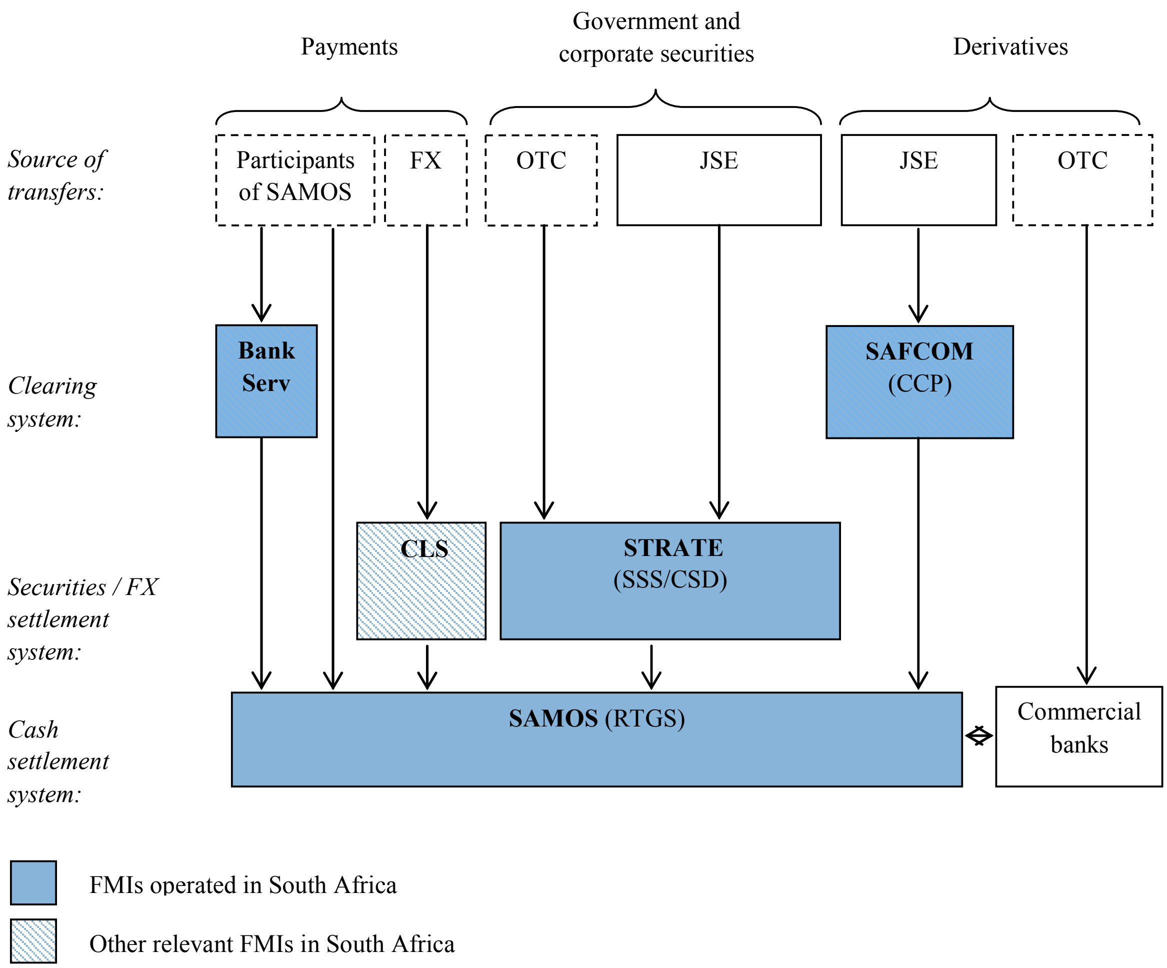

Source: BIS, Triennial central Bank Survey, 2013.

## Figure 2. OTC Derivatives Averages Daily Turnover in 2013, as percentage of GDP




Source: BIS, Triennial central Bank Survey, 2013.

# Appendix III. Financial Market Infrastructure Landscape[22]




[22] In addition, the SADC Integrated Regional Electronic Settlement System (SIRESS) is an automated, real time gross, cross border settlement system for SADC Member Countries. Currently the system is operated in Lesotho, Namibia, South Africa and Swaziland as a pilot project.

# Appendix IV. Progress in OTC Derivatives Market Reforms

| | |
|---|---|
| **Regulation of market participants** | |
| Legal and regulatory framework | The draft FMA regulations specify in chapter III that OTC derivative providers or ODPs (those who as a regular feature to their business and for their own account initiate an OTC derivatives contract or make a market in those) need to be authorized as a regulated person in terms of article 5(1)(b) of the FMA. ODPs are required to be authorized by the Registrar of Securities Services of the FSB.<br>The draft FMA regulations have been released early July 2014 for public consultation. In addition, the Treasury has drafted two additional FSB notices prescribing i) requirements for such authorization (including prudential requirements for non-bank ODPs) and ii) a binding code of conduct on the ODP, its employees and clients. These FSB notices will be released later in 2014 for public consultation. |
| Implementation | The implementation of the regulation of market participants can start as soon as the draft FMA regulations and draft FSB notices will be finalized, which is expected early 2015. The FSB will authorize and supervise the ODPs. Upon implementation of the twin peaks model the SARB will be the prudential supervisor of ODPs and the FSB the market conduct regulator. |
| **Trade reporting** | |
| Legal and regulatory framework | The FMA and draft FMA regulations specify that trade reporting should be conducted through a licensed trade repository or a recognized external trade repository.<br>Draft regulations for trade repositories have been issued early July 2014 for public consultation. They provide that ODPs will need to report all of their OTC derivatives transactions, whether confirmed or not, on a daily basis. Corporate end users don't have to report as the working assumption is that they transact most of their OTC derivatives through ODPs. In addition an FSB notice prescribing reporting obligations for ODPs will be released later in 2014 for the public consultation period.<br>The requirements for central reporting take into account international standards including the use of standardized identifiers such as the legal entity identifier (LEI), unique product identifier (UPI), and unique transaction identifier (UTI). |
| Infrastructure availability | No trade repository has been established in South Africa. |
| Implementation | Mandatory reporting will be phased in over the 12 months following the commencement of the mandatory reporting requirement, which is expected early 2015. |
| **Central clearing** | |

| | |
|---|---|
| Legal and regulatory framework | The FMA establishes a licensing and recognition regime for domestic and foreign CCPs to provide services to entities in South Africa. The FMA does not contain a mandatory clearing requirement.<br>Draft FMA regulations further prescribe for CCPs:<br>Functions and duties that may be exercised by a CCP;<br>Assets and resources requirements applicable for an applicant for a CCP license. |
| Infrastructure availability | No local CCP has been licensed and no foreign CCP has been recognized. |
| Implementation | A few large banks have moved to central clearing via LCH.Clearnet Ltd in London. Discussions about a local CCP are ongoing. |
| **Capital requirements** | |
| Legal and regulatory framework | South Africa has implemented Basel III in recent years, including the credit valuation adjustment (CVA) requirement, in the regulations relating to banks under the Banks Act (94/1990). South African banks are subject to capital requirements that are equal to or higher than the respective requirements specified in the Basel II, Basel 2.5 and Basel III frameworks. |
| Implementation | At the end of 2012, the Bank Supervision Department of the SARB issued a directive that temporarily exempts South African banks from holding capital against CVA risk for OTC derivatives denominated and transacted solely in South African rand, as well as for all OTC derivatives entered into bilaterally between local counterparties. This directive has been extended at the end of 2013 for a further 12 month period. One of the reasons South African banks have been granted this temporary exemption from the CVA requirement for the specified transactions is the lack of qualifying central counterparties (QCCPs) for clearing OTC transactions, domestically and internationally. |
| **Margin for non-centrally cleared derivatives** | |
| Legal and regulatory framework | Requirements for margining non-centrally cleared transactions are planned to be issued as regulations under the Banks Act (94/1990). |
| Implementation | South African authorities will implement margining requirements as prescribed in the BCBS-IOSCO report “Margin requirements for non-centrally cleared derivatives” of September 2013, which means that initial and variation margin requirements come into force by the end of 2015. |
| **Trade execution** | |
| Legal and regulatory framework | The FMA does not contain provisions to mandate trading of standardized OTC derivatives contracts. |
| Implementation | - |

Source: National Treasury, FSB and SARB

# Appendix V. Regulation, Supervision and Oversight of FMIs[23]

| **Regulatory, supervisory and oversight framework (Responsibility A)** |
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| Under the current structure the FSB regulates and supervises CCPs, CSDs and trade repositories, whereas SARB regulates and oversees payment systems.[24] The FMIs operating in the securities and derivatives market are required to be licensed and supervised by the FSB according to the FMA. Powers are delegated to the Registrar of Securities Services, which consists of an executive director and deputy executive director of the FSB.<br><br>Those FMIs that are payment systems are governed by the SARB according to the SARB Act and the National Payment System Act (NPS Act). All national payment system participants are regulated, supervised and overseen by the NPSD based on the materiality of the risks posed by the participant. The SARB has been given the power to govern the entire payment process, from the moment that a payment is initiated until the beneficiary receives the money. Its oversight therefore also includes Strate Limited.<br><br>The supervision and oversight is based on statutory law. The Financial Market Act 19 of 2012 or FMA replaced the Securities Services Act No 36 of 2004. The FMA governs the licensing and supervision of exchanges, CSDs, clearing houses and trade repositories and was promulgated on June 3, 2013. The Registrar for Securities Services is empowered under the FMA to prescribe Board Notices (subordinate legislation) in respect of certain issues prescribed in the Act. Further to this, the Minister's powers have been extended to issue regulations. The FMA aims to align the regulatory framework of South Africa's financial markets with international developments and financial regulatory standards.<br><br>The SARB Act (1996), in particular section 10 (1)(c)(i)), provide the NPSD with the regulatory and supervisory power to manage and oversee the national payment system, and to carry out its responsibility in regulating, supervising and overseeing the FMIs that execute functions linked to, and within the payment system environment. The NPS Act enables the SARB to perform the functions as provided for in the SARB Act. The NPS Act (1998) also provides for the regulatory and supervisory powers of the SARB to operate SAMOS. In addition, the position paper NPS 01/2013 confirms SARB's support for and commitment to the implementation of the PFMI. The information paper NPS06 09/2013 recognizes FMIs that should adhere to the updated standards outlined in the PFMI and set out in the position paper.<br><br>The supervision and oversight of the FSB and SARB respectively consist of regular meetings with the FMIs, regular reporting, assessments and the implementation of improvements if needed. The FMA under section 59 requires the registrar to annually assess, whether a licensed market infrastructure complies with the FMA, the rules of the market infrastructure and, where applicable, complies with |

[23] Based on the five responsibilities of the CPSS-IOSCO Principles for FMIs, 2012

[24] South Africa follows a SRO model where the exchange, CSD and independent clearing house are responsible for the licensing and supervision of its members with the FMA and its rules and directives. The SRO model may only enforce its rules and the FSB is responsible for enforcing the provisions of the FMA.

directives, requests, conditions or requirements of the registrar in terms of the FMA.

The FSB and SARB have taken measures to improve a transition of responsibilities between the FSB and the SARB with the introduction of the twin peaks regulatory structure. The FSB and SARB signed a MOU to promote closer cooperation and a number of committees have been established to discuss issues of mutual interest and concern.

**Powers and resources (Responsibility B)**

*Powers*

The legal and regulatory framework provides the authorities with powers to supervise and oversee FMIs. Powers include the power to obtain timely information and induce change. The authorities are allowed to obtain information through information requests and regular meetings. FMIs under the FMA also have to provide an annual report containing the details prescribed by the registrar and audited annual financial statements that present the financial affairs and status of the market infrastructure.

The FSB, the registrar, has the following supervisory instruments at its disposal:

- The registrar may impose conditions in respect of any license, authorization, approval, consent or permission granted by the registrar (section 6(3)(h) FMA).
- The registrar may issue directives to implement specific practices, procedures or processes, to take specific actions or measures, to desist from undertaking specific practices, procedures, processes, actions or measures; or prohibiting certain practices, procedures, processes, actions or measures (section 6(4)(a) and (b) FMA).
- The registrar may direct a regulated person to have its accounts, records and financial statements audited (section 93 FMA)
- The registrar may conduct an on-site visit or instruct an inspector to conduct an inspection. After an on-site visit or inspection has been done under section 95, the registrar may apply to the court for the winding-up of the person, begin business rescue proceedings the appointment of a curator for the business of the respondent or hand the matter over to the National Director of Public Prosecutions (section 95 and 96 FMA).
- the registrar may impose a fine in the case of any failure by a regulated person to submit to the registrar within any period specified by or any statement, report, return or other document or information required by or under this FMA to be so submitted, of an amount to be prescribed by the registrar for every day during which the failure continues (section 97(1) FMA).
- The registrar may refer any contravention of the FMA and any directives to the Enforcement Committee (section 99 FMA).

The NPSD may from time to time, issue directives to any person regarding a payment system or the application of the provisions of the NPS Act (NPS Act section 12).

*Resources*

The FSB's capital markets department currently consists of 10 staff members who are responsible for the regulation and supervision of the financial markets. There are a range of skills that inter alia include

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| legal, commercial, accounting, research and statistical experience. The FSB will increase the number of staff with 3 to 4 staff members to manage the increased responsibilities related to ODP's and OTC derivatives markets in general.<br><br>The NPSD currently consists of 30 staff members, of which 8 are dedicated to NPS oversight. The NPSD will increase the number of staff to manage the increased responsibilities potentially under the FMA once the twin peaks structure will be implemented. The new staff members should complement the current knowledge of the NPSD with knowledge on specifically CCPs and CSDs. |
| **Disclosure of policies (Responsibility C)** |
| The various acts governing the supervision and oversight are publicly available. The FMA, board notices and any regulations issued by the Minister are published in the Government Gazette as well as on the website of the FSB. SARB's website contains the relevant laws, position paper and information paper. |
| **Application of the PFMI (Responsibility D)** |
| Both the FSB and the SARB are committed to use the PFMI. The FMA and its draft regulations are based on the PFMI. The SARB confirmed its support for and commitment to the implementation of the PFMI in its position paper NPS 01/2013, whereas the information paper NPS06 identifies FMIs that should adhere to the PFMI, i.e. SAMOS, Bankserv and Strate Limited.<br><br>The FSB and SARB have started to assess the FMIs against the PFMI. The FSB has requested self assessments from Safcom and Strate. The FSB has used these self assessments to conduct its own assessments of these FMIs and has published the results on its website. SARB also requested the FMIs that it identified in its information paper to conduct a self assessment against the PFMI. The NPSD is currently in the process of reviewing these self assessments.<br><br>To limit conflicts of interest the NPSD consists of a separate oversight division in addition to the operational division. The NPSD has a policy of 'Chinese walls', meaning that the staff members of the two divisions cannot access the documents and reports of each other. Both divisions report to the head of the NPSD. The head of the NPSD has a reporting line to the responsible deputy governor as well as a reporting line to the risk management and compliance department. The oversight division has no separate reporting line to the risk management and compliance department. |
| **Cooperation in normal and stress circumstances (Responsibility E)** |
| The following coordination platforms among the FSB and the SARB are relevant regarding FMIs:<br><br>• The Financial Sector Contingency Forum (FSCF) is a financial-industry-wide crisis management forum chaired by the SARB. The main forum meets at least twice a year to discuss issues relevant to systemic risks. In addition, there are subcommittees and working groups focusing on the identification of systemic risks in the financial sector and ways to mitigate these. All the regulators, the JSE, FMIs, banks and non-bank financial organizations are represented at the FSCF and its subcommittees, either directly or through their industry associations. The members of the FSCF have signed a memorandum of understanding in terms of which they commit to share information required to assess systemic risks, report incidences or disruptions that could have systemic |

implications, participate in crisis management processes and contribute to the mitigation of systemic risk. The FSCF organized a simulation exercise in March 2014, including the SARB, FSB, National Treasury, JSE and FMI's to test the coordination among the authorities during a crisis scenario. The exercise results are used to further improve the cooperation and coordination among the different stakeholders during crisis events.

- The Financial Stability Oversight Committee co-ordinates the management of risk to financial stability and is jointly chaired by the Governor of the SARB and the Minister of Finance.

In addition, the National Treasury, capital market department of the FSB and the SARB have regular meetings to review their respective assessments of the FMIs as well as to exchange ideas and obtain views about the implications of the international reforms related to FMIs. Cooperation and coordination is explicitly governed by the FMA, for example in section 6(3)(n).

International cooperation agreements relate to payment systems, i.e. for the SIRESS and CLS. On a regional basis, the Committee of Central Bank Governors of the Southern African Development Community (SADC) and the Payments System Oversight Committee - consisting of the central banks of the SADC countries and with the SARB as the lead overseer - ensure cooperation and promote the efficiency and effectiveness of the SIRESS system. Domestic and SIRESS self-assessments and reviews are planned to take place at least once every 2 years.

SARB is a member of the cooperative oversight committee relating to the CLS with the Federal Reserve Bank of New York as the lead overseer.

There is also an MOU in place between the SARB and the FSB for the supervision of Strate. There is no international cooperation agreement with the UK authorities regarding the clearing of OTC derivatives by South African banks in LCH.Clearnet Ltd, although the FSB intends to initiate such explicit coordination in the future.

# Appendix VI. Risk Management and Governance of Safcom[25], [26]

| Legal risk (Principle 1) |
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| The legal framework of Safcom is grounded in the Constitution and the Promotion of Administrative Justice Act, 2000 as well as the rule of law and the principles of common law. Laws and regulations specifically governing Safcom comprise:<br><br>FMA: The JSE and Safcom operate solely in South Africa under licenses granted by the Registrar of Securities Services of the FSB in terms of the FMA.<br><br>JSE derivatives rules: As a clearing house licensed under the FMA, Safcom has a duty to adopt rules in accordance with the provisions of the FMA and to enforce its rules in furtherance of the objects of the FMA. The JSE has issued a set of rules known as the "Derivatives Rules" and the "Interest Rate and Currency Rules" (applicable to the respective markets). These rules are secondary legislation under the FMA and are binding on the FMI, its participants and clients.<br><br>Insolvency Act: Section 35A of the Insolvency Act, 1936 provides that rules & practices of the Safcom are binding on the liquidator or trustee of an insolvent estate.<br><br>Potentially FMA regulations: Safcom / JSE will be subject to the FMA regulations upon issuance of the FMA regulations.<br><br>Safcom is only governed by South African law as Safcom is active solely in South Africa, its members have their seat in South Africa and Safcom accepts only cash collateral in Rand.<br><br>The legal and regulatory framework aims to reduce legal risks and addresses relevant key issues for the safe operations of a CCP. It addresses rights and interests of participants, novation, finality and netting at client level, default and insolvency events and the protection of collateral:<br><br>Rights and interest of participants in derivatives: All the securities traded and cleared through Safcom form part of the JSE's list of securities kept in terms of section 12 of the FMA and section 13 of the JSE derivatives Rules. The terms, conditions and obligations of the parties that conclude transactions in these securities are contained in the contract specifications.<br><br>Novation is governed by the JSE's derivatives rules article 8.30.2.<br><br>Netting of cash payments is protected according to Section 5 of the NPS Act, which specifies that that settlement through the SAMOS system is final and irrevocable. The protection of netting of derivative transactions in case of a participant's default is covered under Section 35A. 4.<br><br>Default management is governed by section 12 of the JSE's derivatives rules. Section 35 A of the Insolvency Act provides that the provisions of the JSE's Rules and the JSE's practices are binding on |

[25] Based on a selection of principles from the CPSS-IOSCO Principles for FMIs, 2012.

[26] Partly based on the 'assessment report on the observance of the principles for Safcom as a qualifying CCP' by the FSB, December 2012, additional documentation and discussions with the FSB, SARB, the JSE and market participants.

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| the trustee or liquidator in the event of an insolvency.<br><br>Rights and interests in collateral: Both initial margin and default fund are deposited and managed by the JSE on behalf of market participants. The funds can only be used for the purpose for which it is collected – that is in the case of a default of a market participant. Safcom and the JSE cannot use these funds to cover any operational or other losses. Collateral deposited is only in the form of local currency cash and remains the property of the market participant until default or close-out of the position. The JSE's derivatives rules support the use of these funds in the case of a market participant default which in turn is supported by the national legal framework. The JSE has obtained an independent legal opinion confirming the use of these funds in the case of default. |
| **Governance (Principle 2)** |
| As a wholly-owned subsidiary of the JSE, Safcom is required to adhere to the standards of corporate governance, as set out in the Companies Act, 2008 and the King III Code of Corporate Governance.<br><br>Safcom's governance framework encompasses a memorandum of incorporation (required by statute, and which defines inter alia, the powers, duties and governance arrangements of Safcom) as well as a Board Charter, Board Committee Terms of Reference, and a Code of Ethics.<br><br>Although Safcom is licensed as the appointed clearing house for the JSE, in practice it operates as an integrated part of the JSE and within the regulatory framework of the JSE rules. Safcom has mandated the JSE (in terms of a formal contract) to perform its operating functions, and its risk management and clearing services. This Clearing and Settlement Services Agreement is supported by a series of service agreements which provide context to this operating relationship and provide the Safcom Board with a degree of control over the JSE resources providing the services on which it relies.<br><br>The internal governance structure of Safcom comprises the following components:<br><br>The Safcom Board: a formally constituted body responsible for the overall management of the CCP in terms of the setting of strategic direction, implementation and ongoing assessment of the clearing house's risk management framework, monitoring investment decisions, and considering significant financial matters and risk. The Safcom Board consists of 3 JSE directors, 1 FSB member, 6 clearing member representatives, 1 secretary from the JSE and is chaired by the JSE CEO.<br><br>The Safcom Risk committee: a formally constituted body responsible for assisting the Safcom Board in the execution of its responsibility for the governance of risk. Areas of focus include setting risk strategy policies, agreeing risk tolerance and appetite levels, and the ongoing maintenance of the CCP's risk management framework. The Safcom Risk committee consists of 3 JSE directors, including the JSE CEO, 6 clearing member representatives, 1 secretary from the JSE and is chaired by one of the clearing member representatives. The Safcom risk committee directly reports to the Safcom Board.<br><br>The Safcom Advisory committee: a formally constituted body (comprising a broad range of market |

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| participants) created to enable market consultation and provision of advice on any major changes introduced into the Safcom environment.<br><br>Additional support is also provided via the JSE's governance structures, namely the JSE Board, the JSE Executive committee (Exco), the JSE Exco Risk Committee, the JSE Audit and Compliance committee, the Remuneration committee and the JSE's Post Trade Services Risk committee.<br><br>The organizational structure for Safcom includes:<br><br>The JSE Responsible Officer: The JSE appointed the Head of Post Trade Services as the Responsible Officer who, in terms of the Safcom Board Charter is charged with monitoring and reporting of the services provided by the JSE to Safcom in terms of the outsourced services agreement to the Safcom Board. The officer is also responsible for day-to-day oversight of Safcom's operations and accountable forr the proper functioning and regulation of the JSE's market to ensure the effective risk management and clearing of transactions that are novated by the CCP.<br><br>The JSE Risk Management Team: responsible for the identification, measurement, monitoring and reporting of credit, market and liquidity risks applicable to transactions cleared by Safcom, as well the quantification of initial margin and default fund size. The team performs stress testing in terms of the sufficiency and liquidity of financial resources, along with regular back-testing of margin and the default fund to the ensure adequacy thereof.<br><br>The JSE Clearing and Settlement Operations Team: conduct the daily operations as outlines in the JSEs Rules as well as the SLA between Safcom and the JSE and include ensuring system availability, calculation of initial margin by the clearing system, including the valuation of prices for the end of day (EOD) processing, running the EOD processing, reconciliation with clearing members, generating payment instructions and monitoring payments and default management<br><br>Additional functional areas within the JSE required providing services to Safcom include the Audit and Compliance committee and the Remuneration committee.<br><br>The JSE is a publicly listed company. The JSE Board constituted the Self-Regulatory Organization (SRO) board committee in 2011 to deal specifically with conflicts of interest between the public interests and its shareholders interests. There are various stakeholder advisory committees in place that the JSE uses to balance the interests of its shareholders, users and that of the public. Rules are specified in the Board Charter as well in the philosophy and standards of the Code of Ethics and Conduct. An annual review will be initiated in case of major changes or breaches. |
| **Risk management framework (Principle 3)** |
| Safcom has created a risk assessment framework that is used for the identification and categorization of risks applicable to Safcom specifically. The framework is based on the COSO Risk Assessment Methodology, which is a commonly used framework for businesses. An initial assessment was completed to determine the actual risks to which Safcom is exposed.<br><br>The JSE and Safcom risk management framework is reflected in policies and procedures. The Risk Framework policy statement identifies the broad risk categories faced by Safcom. The Risk |

governance framework adopted by the Safcom Board sets out the governance processes re risk management, as well as Safcom's approach to risk methodologies, risk appetite and risk self-assessments.

Risks are quarterly reported to the JSE Exco and Safcom Board. Risk reporting includes reporting on the credit and liquidity risks of the CCP. Results are collected at a client level (lowest possible level) and viewed at client, trading member, clearing member and market levels.

An annual review of all policies is undertaken to maintain relevance and accuracy. The annual reviews take into account changing business practices, alterations to Safcom's service and product offerings, the changing risk profile, the evolution of best-practice and developments with Safcom's regulatory environment. All regular risk reports and the risk profile they depict are used as an input to policy review.

Safcom has no recovery plan as prescribed by the PFMI.

The SARB currently does not provide liquidity to any CCP and the JSE or Safcom have no account in the SAMOS system. Section 10 of the Reserve Bank Act allows the SARB to provide liquidity against collateral, without limiting the types of institutions to which liquidity can be provided. However, secondary legislation limits access to SAMOS to banks.

**Credit risk and default management (Principles 4, 5, 6, 13, 14 and 18)**

Safcom has a comprehensive framework to manage credit risk following the default of one or more clearing members. In the case of a default, losses will be funded as follows (the Safcom risk waterfall):

1. Initial margin of the defaulting clearing member

2. The defaulting clearing member’s contribution to the default fund

3. JSE’s contribution to the default fund; and

4. Non-defaulting member’s contribution to the default fund. The surviving clearing members can be asked to replenish the fund twice within a 12 month period for other loss events.

Safcom has several lines of defense in place to protect itself against losses following the default of a clearing participant.

*Access criteria for clearing members*

The first line of defense consists of access and participation requirements for clearing members as set out in the JSE Derivatives Rules. Clearing members have to comply with specific capital requirements.

*Margin*

The second line of the defense consists of a system of margins used to manage daily price risk. Initial margin is required for each transaction booked and daily variation margin is called for on a client account (lowest) level to account for daily gains and losses. In the case of high volatilities of if the JSE deems it otherwise necessary Safcom may also initiate an intra-day margin call.

Margins and risk parameters ranging from implementing a 99.95% confidence level and 1 day holding period for most derivatives to a 99.7% confidence level and 2 day holding period for interest rate derivatives. Margins are further calculated on an instrument level and offsets are allowed on a client level only.

An initial margin review was started last year and will be implemented in 2014, strengthening Safcom's ability to handle a potential default. A conceptual paper has been issued to the market for comment on the proposed introduction of Portfolio VAR. The current clearing system cannot accommodate the changes necessary to facilitate the margin offset. The integrated clearing solution will make this possible, meaning that the date of implementation for the new model will have to be aligned with the integrated clearing roadmap. The Risk team is investigating alternative means of providing offset prior to the go-live of the new clearing system.

*Default fund*

The third line of defense against counterparty failure consists of JSE's own resources and the Safcom Default Fund. The total size of the default fund is ZAR 500 million. Safcom's contribution to the default fund is currently ZAR 100 million. This amount will be reviewed annually by the Safcom board or more frequently as Safcom's financial position, market conditions or the nature of the market changes. The Safcom Default Fund is set up to withstand the default of two average sized clearing members, but should in addition be able to cover at least the default of the largest clearing member under stressed conditions.

*Stress testing*

Stress testing is conducted on a daily basis, and the results thereof compared to the current default fund size, to ensure that the default fund would be sufficient to cover the default of the largest clearing member under stressed conditions. Stress tests include sensitivity testing on individual risk factors, historical stress scenarios and hypothetical stress scenarios. Should the size of the fund be deemed insufficient, Safcom can ask clearing members to increase their contribution to the default fund. The Safcom default Fund is rebalanced on at least a quarterly basis.

Safcom implemented and operationalized its distinct, prefunded default fund in 2013. During 2014 the risk function will be proposing an updated contribution methodology and reviewing the calculation of the Safcom Default Fund. This work should be completed in Q3 2014.

*Back testing*

Formalized back-testing has been implemented, the results of which have spurred various improvements to Safcom's margining methodology. Back-testing is conducted on a daily basis to compare the number of exceptions to the stated confidence level in the margin methodology. A portfolio coverage test sums the number of exceptions on each day across all clients active in the JSE's derivative portfolio. Days are aggregated at monthly periods, and the total number of exceptions in each period is compared to the total number of test points (each trading day for each active client) to measure the total risk coverage achieved by the initial margin. The test is done at a client account level due to JSE's margining structure, but is also aggregated at the trading and Clearing Member levels for information purposes.

*Independent validation*

The FSB is in the process of determining an appropriate frequency for the execution of independent validation – although a period of once every 2 years is being contemplated. External consultants were used to validate all risk management models, including margin calculations, stress testing and back testing in December 2012. The outcome of the validation is shared with and should be endorsed by the supervisors and overseers.

*Collateral*

Currently only cash (ZAR) is accepted as collateral, although a project is underway to broaden the range of acceptable collateral. No haircuts are applied. The collateral is deposited with local banks, according to a investment mandate which governs the credit quality of the banks as well as the required liquidity of the funds. Safcom has also started to invest part of its cash collateral into government securities. Discussions are underway to investigate the possibility for a CCP to place funds with the SARB to diversify away from commercial bank credit risk.

*Default management and portability*

Safcom and the JSE have initiated default simulations on an annual basis with clearing members– alternating each year between tests for the derivatives and equities markets (the simulation for the equities default scenario is planned to take place in Q3 of this year). The operations team evaluates default management tests to identify areas of the default management process that could potentially be streamlined to enhance performance in future simulations and real default events).

Safcom has portability arrangements in place to transfer accounts and positions between a defaulting and surviving clearing members to reduce risks for clients in case their clearing member defaults.

**Liquidity risk (Principle 7)**

The JSE has recently developed a liquidity framework for Safcom, consisting of:

A liquidity policy specifying that Safcom's liquidity profile will be managed on an ongoing basis;

Dedicated JSE's derivatives and interest rate and currency derivatives rules for the use of the liquidity facilities; and

Establishment of three committed credit facilities of R500m each, provided by three of the local commercial banks.

Safcom's daily liquidity flows are as follows: Clearing members must make or receive net variation margin payments to / from Safcom, based on their underlying client's position movements. These variation margin flows are processed through Safcom's settlement bank. Any new positions that are entered into or closed require net initial margin to be paid or received by Safcom. This initial margin is managed by Safcom and deposited into investment bank accounts, to be paid out when

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| a position is closed out or used in the case of a default.<br><br>Safcom is potentially exposed to the following liquidity risks:<br><br>Operational issues at or the default of a clearing member: in case a member does not pay the initial margin payments due Safcom may face liquidity shortages on its account at its settlement bank and be unable to pay its own obligations.<br><br>Operational issues at or default of a settlement bank: in case a settlement bank defaults or has operational issues Safcom and its clearing members are exposed to the loss the account balances in the long term and may face liquidity shortages in the short term.<br><br>Operational issues at or default of an investment bank: Safcom is exposed to the inability of accessing its investments at the investment bank.<br><br>Safcom manages its liquidity risk follows:<br><br>Daily monitoring of liquidity flows: the JSE finance department monitors cash flows daily. Safcom is aware of the status of settlement for all instructions that they have sent to paying banks for derivative payments. The SARB sends daily messages on in and outflows of payments. Once settlement is completed and successful, SAMOS sends a message to both parties (payer and beneficiary) as well as a message to Safcom to confirm settlement.<br><br>Safcom's quarterly stress testing process includes liquidity risk stress testing, which involves identifying peak historical and possible future liquidity needs. The liquidity stress testing regime aims to quantify the maximum liquidity requirement of the CCP. The maximum liquidity requirement observed historically (under each scenario defined) is used to achieve this.<br><br>Safcom does have dedicated and committed liquidity lines in place with three local banks (to the total value of ZAR 1.5 billion) which can be accessed in the case of a liquidity stress. In determining the liquidity need the CCP considers the failure of one and two clearing members but has set its risk appetite to cover a portion thereof. |
| **Money settlements and physical deliveries (Principles 9 and 10)** |
| Safcom carries out the daily cash movement of initial and variation margin as well as booking fees through central bank money. For that purpose Safcom is recognized as a Payment Clearing House or PCH under the SAMOS rules since October 2012. Clearing participants that do not have an account in SAMOS need to access SAMOS via a direct member of SAMOS. Safcom has no direct account in Samos, but does receive messages from SAMOS, via a Swift link, confirming settlement of derivative payment instructions.<br><br>Safcom is responsible for the facilitation of the delivery process for commodities, bonds and equity physical deliveries. For commodities Safcom administers invoicing and approves the silo facilities, as well as vetting the silo operators. |
| **Investment and custody risks (Principle 16)** |

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| Safcom's policy for the investment of funds under management is captured in the Safcom Investment Guidelines, where the primary aim is to maximize the investment income earned on funds invested whilst minimizing the investment risks. All these funds are administered and managed by Safcom.<br><br>At present all funds managed by Safcom are invested in a variety of accounts spread across a number of banks with a minimum of a "F1+" or "F1", for terms between call and 90 days with an average not exceeding 40 days. Safcom relies on the independent ratings granted by Fitch Ratings and has no internal credit rating procedure. The Safcom investment guidelines are publicly available. |
| **Operational risk (Principle 17)** |
| Safcom has fully outsourced its operations system to the JSE. The JSE operates the IT systems and applications and no resources of Safcom are involved. An SLA is in place between the JSE and Safcom. Compliance is monitored on a daily basis and the Safcom Risk Committee receives reports about compliance on a quarterly basis.<br><br>The JSE also provides a service delivery reporting for systems supporting Safcom operations, covering system availability, incidents and service levels. No key system has failed in the last year.<br><br>There is an operational risk framework in place at the JSE, which also covers Safcom operations. The framework serves as the basis for all of JSE's internal operational risk management activities. Physical vulnerabilities are managed in line with the JSE Physical security policy. Information security vulnerabilities are management as per the JSE IT and User security policies. Most JSE policies are reviewed annually. Capacity of systems are managed and tracked and incorporated into service delivery reporting. Annual internal and external audits include general IT controls.<br><br>The JSE has in place the JSE IT disaster recovery plan and the JSE business continuity management policy as well as a crisis communication manual that lists the appropriate parties for issues to be escalated to - both internally and externally. (The same document will be used to manage a clearing member's default.) Full tests are carried out at least annually to test business continuity management arrangements. Tests include market participants of the JSE and Safcom. The JSE has a back up site and second processing center with a different risk profile at a distance of approximately 7.4 kilometers. There is no third center, but offsite backup tapes are kept in addition to data replication between sites as well as backup copies on disk. Asynchronous data replication may result in data loss of up to 5 minutes.<br><br>The recovery time objective for the JSE, including Safcom is 48 hours. Disaster recovery tests simulating the failure of all JSE systems showed that systems can be restored within 8 hours. |