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NIGERIA

Public CSD Rating Report

Central Securities Clearing System

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Thomas Murray CSD Public Rating for: Central Securities Clearing System is A-

CSD Rating	Overall Rating	Asset Commitment Risk	Liquidity Risk	Counterparty Risk	Financial Risk	Operational Risk	Asset Servicing Risk
CSCS Rating:	A-	AA	A-	BBB	A+	BBB	N/R

The outlook for the rating is: Stable

Overall Risk Summary

Thomas Murray has affirmed the overall Central Securities Depository risk rating of A- for the Central Securities Clearing System (CSCS), which translates as low risk. The rating is a weighted average of five different risk components comprising of Asset Commitment risk, Liquidity risk, Counterparty risk, Financial risk and Operational risk . Since CSCS takes no active part in the entitlement calculation or processing of corporate actions in the market, the rating for Asset Servicing Risk has been omitted from the Overall Risk Rating.

CSCS is responsible for the settlement and clearing of all securities transactions of the Nigeria Stock Exchange (NSE) and for bond transactions conducted on the OTC market. The Depository has a settlement model that focuses on containing and minimising counterparty risk exposure for exchange-traded deals. However the measures taken by CSCS on this front result in some side-effects on market liquidity.

Several enhancements have been made within CSCS (and in the wider market) since the previous rating, which have largely been beneficial but have not been sufficient to alter any of the component ratings. These include:

- Development of bond settlement system to significantly diminish the manual intervention in the settlement process
- The Data Exchange system has replaced physical delivery of documentation for communication between CSCS, registrars and PDMMs.
- Reporting capabilities have been enhanced via the web portal.
- The company is budgeting significant investment in IT to reduce manual intervention both internally and interfacing with participants.
- The Evidence Act has been amended to allow for the admissibility of electronic records as evidence tendered in a Court of Law. This has ramifications in the ability of CSCS to automate physical messaging and operational processes.

In terms of Asset Commitment Risk (ACR), the settlement model used by CSCS results in a short exposure period for buyers of on-exchange traded securities. This is also the case for over-the-counter (OTC) trades (both on the sell and the buy side). However, the asset commitment period for sellers of equities is extremely long as securities are blocked on trade execution until settlement on T+3. CSCS' AA rating for ACR is directly linked to the level of on-exchange and OTC market activity. Accordingly, the OTC market accounted for a much larger share (nearly 97%) of Nigeria's overall market activity with exchange-traded equities only accounting for just over 3%. In turn, this implies that OTC trades are given significantly more weight in the assessment of CSCS risk exposures.

The absence of securities borrowing and lending (SBL) is not deemed locally to be problematic for on-exchange transactions since adequate securities inventory must be available in the client's trading account with the broker before execution (i.e. no short sales). However, since most institutional investors (especially foreign) hold assets with custodians, and these must be shifted to the broker prior to trade, 'technical shorts' may exist which consequently stop trades being executed. Hence, the introduction of an SBL facility may be beneficial for managing these types of 'fails'. Fails management policies for both on-exchange and OTC transactions are inadequately developed. On-exchange transactions settle on a BIS Model 2 basis which optimises cash liquidity (but not securities), while OTC settlement is on a BIS Model 3 basis which optimises both securities and cash settlement liquidity. The requirement for all on-exchange transactions to settle within CSCS (dematerialised environment) combined with only (on average) 50% of market value held in CSCS at any one time, results in some situations where investors may have to wait for prolonged periods for securities to be deposited into CSCS before they can trade and settle them.

CSCS' Counterparty Risk rating is linked to the fact that CSCS operates a non-DVP settlement model. Securities generally settle with finality before cash transfers commence and there is no systemic link between securities and cash settlement platforms which assure transfers are interdependent. Also, the guarantee fund is not large enough to cover liabilities in case of default of large participants and no stress testing is employed.

CSCS' high financial rating is as a result of the profitable position of the depository for the last five years. It also has significant capital resources in comparison to its peer group including healthy levels of reserves held in cash or short term investment forms, which provide for highly liquid financial resources. However, CSCS revenues are highly geared towards trading turnover meaning when exchange volumes fell substantially with the market crash in 2009, CSCS profits diminished by over 70% despite CSCS adjusting its cost structure. CSCS has the full support of the NSE, the settlement banks, and other market participants as shareholders, but no single group has a controlling interest in the depository (NSE remains the largest single shareholder).

The low rating for CSCS' Operational Risk is a combination of several factors. Despite improvements in the automation of the bond settlement system, communication and reporting, there is still a dependency on manual intervention in many operations, which increases the risk of fraud, error or loss as well as negating the possibility of Straight-Through-Processing (STP). In addition, there is a lack of identified key controls and an organised risk management policy. Although CSCS has disaster recovery facilities there is insufficient evidence that the plan could be executed to enable the resumption of transaction processing without significant disruption. Business Continuity facilities have also been removed since the previous rating. Neither disaster recovery nor business continuity plans are fully documented. Testing of facilities has been limited to internal (i.e. CSCS only) testing without the involvement of market participants.

Outlook Summary

There are some developments taking place in the marketplace, which might have an impact on the rating after becoming operational. However, in the absence of definitive implementation dates for most of these projects, there is insufficient justification to assign any other outlook than 'Stable'.

Among the changes in the pipeline is the development of a new proprietary communication system, which would automate information exchange with market participants and reduce the reliance on physical documentation. In addition, the process of implementing SWIFT communication with market participants has begun, although this is still in its early stages.

CSCS is also working on becoming a direct participant of NIBSS to enhance the DVP process. Other plans include the enhancement of the disaster recovery plans (DRP) and business continuity plans (BCP).
Lastly, there is an ongoing review of the Investment and Securities Act (ISA) wherein the CSCS and its operations are being given more legal consideration.

Role of the Depository

Central Securities Clearing System Limited (CSCS) is a private limited company incorporated on 29 July 1992 under the Companies and Allied Matters Act 1990. CSCS is operated as a profit-making entity. Participants are required to acquire a minimum of 100,000 CSCS' shares. The ownership of the CSCS is split between the NSE (27.24%), Settlement Banks (48.27%) and Brokers, Issuing Companies, Institutional investors and registrars who own the remaining 24.49%.

CSCS commenced operations on 14 April 1997 and operates a depository, clearing, settlement and delivery system for transactions in shares listed on the NSE. Use of the CSCS is compulsory by market practice for clearing and settlement but not for safekeeping. It acts as the exclusive depository for equities, and is the optional depository for corporate bonds, local authority bonds and State and Federal Government Bonds. The Central Bank of Nigeria also holds Federal Government Bonds and other money market instruments, although in May 2007 it appointed CSCS as the clearing and settlement entity for secondary market Nigerian Treasury Bills (NTBs) traded OTC by Money Market Dealers (MMDs). CSCS also performs clearing and settlement of FGN securities traded on the OTC bond market and also undertakes same functions for corporate and state bonds.

CSCS is regulated by the Nigerian Securities and Exchange Commission (SEC), the Corporate Affairs Commission and the Nigerian Stock Exchange. Immobilised securities are kept in book-entry form at the CSCS and physical certificates can be held by the respective registrars, custodians, brokers or the beneficial owners. Securities held in physical form have the same ownership rights as securities immobilised at the CSCS but they cannot be traded, settled or otherwise have their ownership transferred without being deposited back into the CSCS at least 24 hours prior to trading. Nevertheless, issuance of share certificates is to be discontinued.

Risk Summary	Risk
Overall Risk	A-
Asset Commitment Risk Settlement of on-exchange and OTC trades in Nigeria is on a non-DVP basis, with the settlement of OTC trades accounting for the bulk of the settlement activity. For OTC trades, the asset commitment period for the seller is 2 hours while for the buyer it is 0 hours. For on-exchange trades, the asset commitment period is around 72 hours for the seller and 0 hours for the buyer. The buyer has to ensure that funds are in the broker's/custodian's account at their Settlement Bank by 10.00am local time on settlement day. However, by this time securities have already been transferred to the buyer's account at CSCS (transfer at 9.00am).. Funds are subsequently transferred by 3.45pm at the Central Bank and afterwards transferred to the Settlement Bank by 4.00pm to enable payment to the seller.	AA
Liquidity Risk The overall liquidity risk exposure for settlements at CSCS is the result of a combination of factors. On-exchange trades settle using a BIS model 2 (gross settlement of securities, net cash), which puts higher pressure on securities liquidity than net positioning. In addition, the fails management policy is underdeveloped and securities lending and borrowing is not available in the market. Admittedly, there are several elements that partially mitigate CSCS participants' Liquidity risk exposure. Such elements include the use of BIS Model 3 for OTC trades (net settlement for both securities and cash), and the netting of cash obligations for on-exchange trades. Finally, the fact that Settlement Banks in Nigeria provide overdraft facilities to stockbrokers on a bilateral basis and the CBN can provide collateralised intra-day credit to Settlement Banks contribute to increased settlement liquidity in the market.	A-
Counterparty Risk Non-DVP settlement implies that counterparty risk exists on principal value between participants despite the arrangements set by CSCS to ensure both securities and funds are available on settlement day (SD). Financial authorities and the stock exchange conduct surveillance on participants, although this is not done on a daily basis. The CBN monitors settlement banks' financial positions continuously and sets minimum reserve requirements. For on-exchange trades, the guarantee fund acts as a resource that mitigates against Counterparty Risk exposure. However, the fund, which has been used three times to cover defaulted settlements, lacks an adequate contribution scheme and sufficient resources to cover the largest possible liabilities. There is no guarantee fund for OTC transactions.	BBB
Asset Servicing Risk The CSCS does not act as a resource in terms of asset servicing and is not responsible for corporate actions. In the market, these are handled by the respective company registrars as well as custodians.	N/R
Financial Risk CSCS is a privately-owned company with a total capital of NGN 11.74 billion (USD 76.6 million) at year-end 2010. The depository has been profitable for the last 5 years although revenues have reduced in the last two years due to lower trading activity. CSCS assumes liability for direct losses caused by its staff and the failure of the depository's system, which may be covered under the insurance policy. CSCS may be held liable for consequential losses leading to reasonable compensation. However, under Civil Law the company would not be subject to punitive damages.	A+
Operational Risk There are significant operational vulnerabilities that raise Operational Risk exposures. CSCS has basic internal controls documenting procedures and key controls. However, there is no risk management policy or risk assessment division within the organisation. In addition, staff are not specifically trained in this area. The internal audit department mainly focuses on data control and is not charged with a broader role of risk prevention and ensuring compliance to controls. CSCS processing and communications rely heavily on manual intervention and physical documentation precluding Straight-Through-Processing (STP) in the Nigerian market. Regarding disaster recover arrangements, CSCS has several sites designed to back-up data. However, there are flaws in the scheme, as the main back-up centre is a single point of failure and the plan is not able to demonstrate that processing could be resumed in a timely fashion. Finally, the Business Continuity Plan has been poorly conceived and CSCS would not be ready to continue operations if the main offices were to shut	BBB

down in the event of a disaster or broad emergency.	
CSD on CSD Credit Risk There are no international links operated by the Depository with other CSDs.	**No Links**

Asset Commitment Risk

Summary

Settlement of on-exchange and OTC trades in Nigeria is on a non-DVP basis, with the settlement of OTC trades accounting for the bulk of the settlement activity. For OTC trades, the asset commitment period for the seller is 2 hours while for the buyer it is 0 hours.

For on-exchange trades, the asset commitment period is around 72 hours for the seller and 0 hours for the buyer. The buyer has to ensure that funds are in the broker's/custodian'saccount at their Settlement Bank by 10.00am local time on settlement day. However, by this time securities have already been transferred to the buyer's account at CSCS. Indeed, the buyer receives securities by 9.00am. Funds are subsequently transferred by 3.45pm at the Central Bank and afterwards transferred to the Settlement Bank by 4.00pm to enable payment to the seller.

Processing Cycles

On-Exchange Trades

Securities settle gross, on a T+3 basis for equities and T+2 for corporate bonds. There is tight-coupling between the trading system and the settlement system, which allows for the pre-validation of securities before the execution of trade orders. Thus, sellers must have the relevant stock available at the depository prior to trading. The NSE transmits to CSCS the details of executed trades using a real-time online link.

Once CSCS receives matched trade data, the securities are placed on hold in the seller's account. The pre-validation of securities effectively means that short selling is not permitted in the Nigerian market.

By the close of business, the depository reports all net obligations to market participants involved. On T+3, the processing batch is manually initiated by CSCS around 8.00am and it concludes by 9.00am. Securities transferred to a buyer's account within CSCS can be re-sold during the same day trading hours.

OTC Trades

Nigeria's OTC market is mainly dedicated to Federal Government Bonds (FGN) and Treasury Bills (NTB), although some corporate bonds are traded from time to time. The standard settlement cycle is T+ 2. However, counterparties may mutually agree to settle on the trade date (T + 0) or a day after (T+ 1) or any other mutually agreeable trade date.
In the case of a T+2 cycle, after agreeing on the terms of the trade, primary dealers must send the instructions to the depository by 10.00am on T+1 at the latest. CSCS subsequently matches all trades and communicates to the parties the matching result. If there is an error, participants must submit a correction within 30 minutes of notification of the error by CSCS.

On T+2, securities must be in place in the beneficiary account by 1.00pm when the processing batch is initiated manually. The batch runs for 30 minutes, concluding at 1.30pm.

For the T+1 cycle, primary dealers must advise CSCS by 3.30pm on TD. CSCS then proceeds to match the instruction, and securities must be available by 1.00pm on T+1. For trades settling on T+0, instructions must be sent to CSCS by 9.30am and securities must be available by 1.00pm.

Secondary market transactions (January to November 2011)
- Equities: NGN 591.20 billion
- FGN Bonds: NGN 16,265.15 billion

Cash

The Nigerian capital market has 20 settlement banks (as at May 2012). NSE and CSCS have a legally binding contract with some selected banks to act as Settlement Banks (Cash Clearing Banks) for the stock market. Each broker has an account with a Settlement Bank. The debit/credit instruction is effected on the Settlement Banks' accounts with the Central Bank in accordance with a schedule forwarded to it by CSCS.

On-exchange Trades

In the case of on-exchange trades, on SD-1 CSCS advises participants of the net obligations due the next day. On SD, brokers must make funds available by 10.00am in their accounts at their selected Settlement Bank. By 12.00pm, monies must be placed in the Settlement Bank's account within the Central Bank of Nigeria (CBN). Between 12.00pm and 2.00pm, the Nigerian Inter-Bank Settlement System (NIBSS) nets out cash obligations for participants.

Once this step has been completed, the RTGS system at CBN transfers cash from buyers to seller's accounts within the CBN. The RTGS batch for CSCS trades begins at 3.15pm and concludes by 3.45pm. Subsequently, funds are placed in the seller's Settlement Bank's account at 4.00pm. Finality is achieved once cash settles.

OTC

For OTC trades, the cash settlement does not involve NIBSS. After CSCS conducts the matching of instructions, the depository reports net cash obligations to the Settlement Banks and the CBN. CSCS runs its batch process from 1.00pm to 1.30pm and informs the CBN by 2.00pm SD, which then proceeds to transfer funds for OTC trades in the same batch for on-exchange operations. Finality is achieved once cash has been transferred after 3.00pm.

However, there is a potential problem on the broker-custodian settlement. In some cases, when the custodian bank is not domiciled with a Settlement Bank, the settlement to the client may occur after the closure of CBN's deadline to transfer funds, even though the Settlement Banks receive funds on SD for onward debiting/crediting of clients' accounts same day. As a result, the Settlement Bank may not transfer the cash same day to the custodian.

Asset Commitment Periods

On-exchange trades

Buyers have to ensure that funds are at their Settlement Bank in the settlement account by 10.00am on SD. Settlement Banks fund their accounts at the CBN by 12.00pm local time on SD. The buyer receives securities around 9.00am local time on settlement day, thus ensuring there is no asset commitment period for the buyer.

A seller loses control of securities when these are put on hold on TD and then transferred around 9.00am local time on SD. The seller then receives funds via wire transfer by 4.00pm SD (T+3) and thus experiences a 72 hour asset commitment period.

OTC trades

The asset commitment period for the seller is 2 hours. Cash finality is usually achieved by 3.00pm.

For the buyer, the asset commitment period is far shorter, as CSCS runs the settlement batch between 1.30pm and 1.45pm. Once net obligations are advised to CBN, cash transfer takes place by3.00pm funds are available in the seller's account in the Settlement Bank. However, since securities transfers have already been completed by 1.30pm, there is no asset commitment risk for the buyer.

Irrevocability

Securities transfers become final once they have been made by CSCS even though the registrar may be notified later. The Investment and Securities Decree 45 1999 recognises CSCS transfers such that certificates are not the only evidence of title but book-entry by CSCS is also evidence of title.

Asset Commitment Risk - Key Indicators

Irrevocable commitment to the processing cycle

	Transaction Type	*Start*	*Finish*
Securities	On-exchange	TD	9.00am SD
	OTC	1.00pm SD	1.30pm SD
Cash	Central bank	3.15pm SD	3.45pm
	Settlement bank - via CBN	10.00am SD	4.00pm

Comments (i.e., on pre-funding and irrevocability)

Key Times:
SD-1, 4.00pm: CSCS reports settlement obligation to Brokers/Custodians
SD, 9.00am: Securities are transferred at CSCS from Seller's account to Buyer's Account
SD, 10.00am: Funds should be in Broker/Custodian account at Settlement Bank
SD, 12.00pm: Settlement Banks' Central Bank of Nigeria Account to be funded by the respective Settlement Banks.
SD, 3.15pm: Cash is transferred between Settlement Banks' accounts within the Central Bank.
SD, 4.00pm: Cash is transferred at the Settlement Bank.

Securities processing cycle outlined

On-exchange trades: Securities transfers are effected on a gross basis by 9.00am on T+3.
OTC trades: the settlement cycle is negotiable, usually between T+0 and T+2. The settlement of Government Bonds is completed by 1.30pm.

Cash processing cycle outlined

Funds transfers are effected on a net basis. Same day funds settlement is usually made through the CBN.

Funds should be in the Brokers/Custodians' accounts by 10.00am (local time) on SD in order for the Settlement Banks to be able to confirm to CSCS that the required funds are available.

Cash transfers for Government Bonds are effected by 3.00pm on SD.

Liquidity Risk

Summary

The overall Liquidity Risk exposure for securities at CSCS is the result of a combination of factors. On-exchange trades settle using a BIS model 2 (gross settlement of securities), which puts significant pressure on securities liquidity. In addition, CSCS has a poor fails management policy and there is a ban on securities lending and borrowing. Also, dematerialisation of securities prior to trading and settlement is required which could take several days.

There are several elements that partially mitigate CSCS participants' liquidity risk exposure. Such elements include the use of BIS Model 3 for OTC trades (net settlement for both securities and cash), and the netting of cash obligations for on-exchange trades. Finally, Settlement Banks in Nigeria provide overdraft facilities to stockbrokers on a bilateral basis and the CBN can provide collateralised intraday liquidity to settlement banks.

Processing Model

CSCS uses BIS Model 2 for settlement of trades conducted on the exchange; i.e. securities settle on a gross basis, cash on a net basis. The securities batch is conducted intraday at 9.00am. However, the depository's settlement system (Equator) does have stock netting capabilities, which have not been utilised yet. Netting of funds is undertaken by the Nigerian Inter-Bank Settlement System (NIBSS) but cash settlement is done through the CBN.

Short selling is not permitted by market regulation; hence securities for delivery must be available on TD through a pre-validation mechanism. Funds only need to be made available on T+3. One batch per day is run on a BIS Model 2 basis with a cash netting efficiency of 50%.

For OTC trades, the depository uses BIS Model 3 (net settlement for both securities and cash) settlement, which uses a single intra-day batch for securities and cash. For the former, settlement takes place at around 1.30pm on SD, while cash settles around 3.00pm. Netting efficiency for bonds is 48% by value and 26% by volume.

Fails Management

On-exchange

The fact that securities are blocked by CSCS on TD is an assurance that securities will settle. Brokers can only sell shares that are in the depository. While the market is open, the trading engine interrogates the depository for the availability of the requested shares for sale. Once securities have been traded, they are automatically flagged and blocked in the CSCS system.

However, most securities for institutional clients are held under the custodian and hence have to be transferred into the client's trading account under the broker prior to trade execution. This is done via manual instruction to CSCS and should the securities not be positioned into the trading account in time, the sale transaction cannot be executed. Since the trade will not be executed it will not count as a fail from the perspective of the market, but in terms of the client this would be regarded as a failed trade.

However, the risk of settlement failure exists on the cash side of the trade. While CSCS advises Settlement Banks of broker's cash obligation prior to SD, it is the responsibility of the broker to provide funds before the settlement cycle begins. In the event that the broker fails to adequately fund their account, the Trade Guarantee Fund (TGF) may be utilised to fill the broker's funding short. Where the guarantee is not sufficient, the Settlement Bank funds the shortfall on behalf of their broker-client. Afterwards, the securities purchased are sold by an NSE appointed stockbroker. The stockbroking firm is suspended from both clearing and trading until they make good on the debit to their TGF contribution. A fine may be charged against the failing participant of NGN=100,000 or 1% of the failed trade value (whichever is the greater).

In the case of over-trading by a broker, fails management techniques employed centre around fines on brokers and the Guarantee fund which can be used to motivate the broker to execute a compensating trade or facilitate such a trade if they are unable to do so.

OTC

The settlement fails rate was 1.21% for 2011. The arrangements to deal with fails in the Nigerian OTC market are virtually non-existent. The only measure adopted by CSCS in order to prevent fails is to advise participants when (and if) there is a discrepancy in the trade matching details. Participants must then submit a correction within 30 minutes of notification.

After securities have been transferred, the only mechanism to assure cash settlement is the use of reserves at the CBN which is responsible for transferring monies between Settlement Banks' accounts. In the event, that funds are not available, the CBN can use the T-bills pledged by the defaulting bank to cover the financial obligations at that time. However, this is a riskier approach than a guarantee fund as it uses the Settlement Bank's statutory reserves.The CBN can also provide intraday liquidity.

Credit Facilities

CSCS does not provide credit facilities to its participants. However, CSCS participants can obtain credit facilities from their

Settlement Banks. Since Brokers cannot use loans or overdrafts to fund their Trading Account, there should always be adequate pre-funding from the broker's client.

In the event that a Settlement Bank is short of liquidity intraday, the bank can either take an interbank loan or make use of the intraday, collateralised credit facility provided by the CBN.

Securities Lending

CSCS does not provide stock lending facilities. Securities borrowing and lending and short selling are prohibited by market regulation. Although the CSCS system has the functionalities to support securities lending, these are not operational yet.

Registration Model

Securities held in CSCS are dematerialised and the registration process is a mix of electronic and manual operations. CSCS' records act as a sub-register of the external issuers' registrars. Registration is in the beneficial owners' name. Investors can operate one CSCS account for each local broker used to execute their trades.

Any security listed on the NSE has to be dematerialised prior to trading. Thereafter, any subsequent delivery/receipt of this security will be in dematerialised form. Securities deliveries are achieved by automated book-entry maintained by CSCS. All securities that are deposited at CSCS are treated as fungible and can be transferred or pledged by book-entry.

Securities are held in participants' (brokers and custodians) accounts. Participants have sub-accounts with the records of the beneficial owners' names, thus clients' securities are held in designated client accounts, although brokers are also able to hold securities in omnibus accounts. However, custodian participants hold securities primarily in a participant omnibus account unless the client requests otherwise.

The title to a security passes once the transfer is electronically processed on CSCS's books, which means shares will automatically register in the new owner's name, i.e. on settlement date. Once securities have been credited to a participant's account, reversals are not possible. Although in theory, the registrar could reject a registration, it is market practice for the registrars in Nigeria to recognise all securities transactions which have been recorded by the CSCS as being cleared and settled.

In order to update the registers of securities, CSCS sends data of all traded securities via the Data Exchange System to all registrars. Hard copies are also sent every 2 weeks or every week for active securities. Although, reconciliation data is provided through an electronic medium, it is not certain that all registrars have the capacity to auto-reconcile this data with their systems and some of the process may be done manually. The registrars are also informed of beneficial owner details after the close of the register for payment of dividends and the issuance of bonuses. The registrar is recommended by market practice to update the register within 48hrs of notification from CSCS and many are doing so, but registration can take up to 10 working days. There are 26 registrars in the market but 70% of the business is concentrated within four (First Registrars Nigeria Ltd, Union Registrars Ltd, UBA Registrars and City Securities Limited).

The company register is closed once a year by the company to allow payment of dividends and/or bonuses.

Deposited securities

Securities are held in participants' (brokers and custodians) accounts at CSCS. Participants have sub-accounts with the records of the beneficial owners' names, thus clients' securities are held in designated client accounts, although brokers are also able to hold securities in omnibus accounts. However, custodian participants hold securities primarily in a participant omnibus account unless the client requests otherwise.

Most securities are held in the custodian's nominee name, but institutional and high net-worth investors are able to have designated accounts. All of the securities held at CSCS are in dematerialised form. CSCS holds on average around 45% of all securities traded in Nigeria at any one time although securities are continuously being deposited and withdrawn. Since securities have to be dematerialised within CSCS in order to be traded on-exchange, it can be asserted that the vast majority of liquid securities are deposited at CSCS.

Deposit and Withdrawal of securities

Physical certificates held outside the Depository must be deposited back into the CSCS 24 hours prior to trading. The deposit and withdrawals processes are manually intensive. The Seller has to provide the relevant certificates to verify ownership when selling securities. Certificates are verified manually by the issuing agent, who then lodges them with the depository. The registrar must send a list of the securities in hard and soft copies (CD). The information in the CD is automatically uploaded in the system but there is a manual checking process to make sure information is correct. Lodgement takes between 3-5 days end-to-end although the processes within CSCS are concluded within 24 hours. Securities cannot be traded or settled in the interim. Once dematerialised, equities can be re-certificated and physically held outside CSCS. The re-certification process takes around 1-2 days during which time the securities cannot be traded and settled.

CSCS has introduced E –Lodgement which means registrars can advise CSCS of verified items through a computer storage media (diskette, flash, CD etc) accompanied with the registrars' schedules of those verified certificates and signed by the registrars authorised signatories. This process also depends on a significant amount of manual intervention and physical documentation.

The dematerialisation process is on-going and affects all physical securities which have been deposited with the CSCS for trading.

CSCS dematerialised 1.7 million share certificates in 2007, 3.3 million in 2008, 2.0 million in 2009 and 886,124 in 2010. A total of 11.28 million share certificates have been dematerialised since 1997.

New issues of securities and bonus issues can be issued in physical form and need to be verified and certified by registrars.

Liquidity Risk - Key Indicators

Settlement Models

On Exchange: BIS Model 2 - gross settlement of securities followed by net settlement of funds transfer.
OTC: BIS Model 3 – net settlement of securities and funds for OTC operations.

Processing Periods

Overnight (by batch)
No

End of day
No

Batch daylight processing
Yes

Real-time and on-line
No

Other
Yes

Comments
For on-exchange, shares move at 8.00am and cash at 3.15pm.
For OTC, securities move at 1.00pm and cash at 2.30pm.

Credit Facilities

Central bank money used to settle cash elements of trades
Yes

Credit facilities provided by the CSD
No

Credit facilities provided by commercial banks
Yes

Comments
Net settlement obligations must be pre-funded with the Settlement Bank by 9.00am SD.

Stock Lending

Is stock lending permitted in the market
No

Are stock lending facilities provided by the CSD?
No

Are stock lending facilities provided by commercial banks/brokers?
No

Transfer of Securities

Are securities deliveries achieved by book-entry?
Yes

Registration of Securities

Period of time required to register a holding?

Immediate*
2 days to 10 days for registration via registrar

Comments

* For securities dematerialised in CSCS.

Counterparty Risk

Summary

Non-DVP settlement implies Counterparty risk exposure exists on principal value between participants, despite the arrangements set by CSCS to ensure both securities and funds are available. Cash generally settles after securities and there is no technical link between the securities and cash settlement systems to ensure interdependence between the transfers. Financial authorities and the Stock Exchange conduct surveillance on participants, although this is not done on a daily basis. The CBN oversees the Settlement Banks and ensures they hold a collateral reserve on deposit in their CBN Account which should be sufficient to cover their obligations in the event of default.

For on-exchange trade, the guarantee fund acts as a mechanism for the mitigation of potential counterparty risk. However, the fund, which has been used twice to cover defaulted settlements, lacks an adequate contribution scheme and sufficient resources to cover the largest possible defaults. In the case of OTC trades, there is no guarantee fund to protect investors in case a participant defaults, rather the CBN provides intraday facility for DMBs and Discount Houses to enhance funds settlement.

Participant Counterparty Risk

All brokers are required to hold an account at one of the Settlement Banks. CSCS initiates instructions across these Settlement Bank accounts on behalf of participants. However, CSCS instructions to the Settlement Banks only include the trades entered by the brokers. As CSCS and the NSE systems are linked with no trace of manual intervention, there is no effective responsibility on CSCS.

For both on-exchange and OTC transactions, settlement is not on a DVP basis, hence participants have direct Counterparty risk exposure against each other on the principal value of the transaction. In practice, it is generally only the seller who runs the exposure, since funds settle after securities. Once securities have settled, instructions to settle the requisite funds are provided to NIBSS (for on-exchange trades) or directly to CBN (for OTC trades) to settle the cash. Since there is no automated communication at the point of settlement between the two systems which checks the positioning of adequate securities and funds balances, CSCS has no way of knowing at the point of securities settlement whether the commensurate countervalue is available in the payment system.

Risk Containment Model

CSCS does not have a risk model in place. Liens are held on securities in the process of settlement, but do not extend to settled positions.

Delivery Versus Payment

There is no DVP settlement in Nigeria, which means that counterparty risk exposure exists on principal value between participants. CSCS advises participants of securities balances and cash obligations in the accounts of the stock-broking firms prior to transfer. As described in the Asset Commitment Risk section, securities are transferred one hour before funds have to be made available at the settlement bank.

CSCS and CBN are working to achieve direct connectivity between CSCS and CBN's RTGS payment system to achieve simultaneous DVP. The requirements for connectivity have been identified and implementation details are being worked on.

Role of Central Counterparty (CCP)

CSCS does not act as central counterparty to settlements.

Participant Criteria

The SEC defines all participation criteria in function of the role participants may have in the capital market. The main differences lay on the capital requirements that apply in each case (see list below). Eligible participants include Settlement Banks, registrars, issuing houses, institutional investors and brokers that, in addition to being registered with the SEC, must be licensed by the NSE.

All Settlement Bank participants are required to contribute to depository capital. The minimum contribution by any participant is 100,000 units of shares. In addition, all participants are subject to a review and approval process both prior to admission and after admission to ensure compliance with the depository's eligibility requirements. Participants' conditions are reviewed by the SEC, the CSCS and the NSE. Breaches of conditions may result in fines, restrictions, suspension and termination of participation.

Capital requirements for Market Participants

In May 2007, the Ministry of Finance approved a new capital base for capital market operators. Accordingly, the minimum paid-up capital was raised significantly and operators were given until 31 December 2008 to comply with the new norm. Nonetheless, market participants found the new requirements too stringent and the authorities decided to postpone the implementation of the new capital requirements until further notice.

Current participant requirements for the following institutions are as follows (USD value as at March 2012):

- Underwriters: from NGN 150 million (USD 950,420);
- Broker/Dealers: from NGN 70 million (USD 443,530);
- Fund/Portfolio Managers: from NGN 20 million (USD 126,720);
- Registrars: from NGN 50 million (USD 316,810);
- Clearing and Settlement Agencies: from NGN 500 million (USD 3.16 million).

Requirements for Banks

Banks have different requirements to participate in Nigeria. The minimum capital adequacy ratio of capital to total risk-weighted assets is 10%. In addition, at least half of any bank's capital must be made of paid-up capital and reserves. All banks have to maintain a ratio of not less than 10% between its adjusted capital funds and total credit net of provisions. The CBN has also established that a bank must maintain at all times capital funds unimpaired by losses in such a ratio to all or any asset or liabilities. Finally, all Banks have to keep cash reserves and special deposits and hold specified liquid assets, with the CBN.

Participant Concentration

There are 20 settlement banks and five custodians (Stanbic/IBTC, First Bank of Nigeria Plc, UBA Plc, FCMB Plc and Citibank) in the whole of the Nigerian market. However, foreign investors' assets are concentrated in Stanbic/IBTC.

Levels of settlement concentration are different for OTC and on-exchange trades. For OTC trades, the largest participant accounted for 9.44% while the top 10% of participants accounted for 43.18% by value in 2011. The levels of concentration are higher for on-exchange trades, since the largest participant accounted for 30.50% and the top 10% of participants 74.24% by value during the same period.

Financial Compliance/Surveillance

Brokers' financial strength is monitored by the NSE and the SEC. The NSE is the primary supervisor for brokers. Annual financial statements must be submitted to the NSE and inspections are executed at least once a year. In addition, quarterly financial statements (returns) must be sent to the SEC. The SEC does on-site and off-site monitoring of brokers. They also execute inspections at least on a bi-annual basis.

Banks are monitored by the CBN. However, there is no monitoring of brokers' or Settlement Banks' daily exposure. The NSE depends on Settlement Banks to report any problem with a broker. CSCS reviews participants' compliance once a year or on a as needed basis.

Guarantee Funds

The Trade Guarantee Fund (TGF), which only covers on-exchange trades, is funded by a fixed contribution from each participant and from penalties imposed on brokers. The fund operates a on a 'defaulter pays' model, i.e. if the defaulting participant's funds are not sufficient to cover their obligations, the remaining losses are not shared across the other fund participants. The TGF covers direct Depository participants plus the beneficial account owners and is held in nominee accounts at the Settlement Banks. The Fund is replenished from the fines received from the defaulting stockbroker in addition to the refund of resources used to bail out a defaulting participant.

The TGF increased by 8.5% from NGN 49.5 million in 2010 to NGN 53.7 million (USD 340,250) as at November 2011. The Fund's growth was mainly driven by interest income from the management of the Fund. Nevertheless, the size of the Fund is deemed insufficient and there are plans to significantly increase the size of the Fund. The Fund has been used three times since its inception. CSCS publishes the schedule of administration of the Fund by the banks that manage the Fund following a rotation schedule.

In the case of the OTC market, there is no guarantee scheme available to cover a default by a participant. Currently, if a Settlement Bank is unable to fund its net cash obligations from OTC trades, the CBN would use the pledged T-bills of the defaulting Settlement Bank in order to cover its obligations.

This is a risky policy as it uses banks' reserves for a different purpose instead of protecting the public's savings, which is the original objective of the reserve.

Counterparty Risk - Key indicators
Capacity of CSD Agent
Surveillance of Participants by CSD Yes
Settlement Assurance Yes

Participation Criteria
Yes

Minimum Capital (local currency)
Underwriters: NGN 150 million (USD 1 million)
Broker/Dealers: NGN 70 million (USD 464,656)
Fund/Portfolio Managers: NGN 20 million (USD 132,758)
Registrars: NGN 50 million (USD 331,895)
Clearing and Settlement Agencies: NGN 500 million (USD 3.3 million)

Size of Guarantee Fund - (Name, local currency, Euro and USD - (millions))
NGN 53.7 million (USD 340,250) as at November 2011

Does the CSD act as a Central Counterparty?
No

Participant Concentration (Local Currency Millions)

Value of transactions in the market by top 10% of participants
2011:
For on-exchange trades: 74.24%
For OTC trades: 43.18%

Volume of transactions by top 10% of participants
2011:
For on-exchange market trades: 69.36%
For OTC trades: 42.92%

Volume of largest individual participant
2011:
For on-exchange trades: 16.48% by volume and 30.50% by value
For OTC trades: 9.06% by volume and 9.44% by value

Asset Servicing Risk

Summary

The CSCS acts as a limited resource in terms of asset servicing and is not responsible for corporate actions. In the market, these are handled by the respective company registrars as well as custodians.

Information processing

CSCS is not responsible for the provision of notification of corporate events to investors. This is done directly by the registrars via the NSE, which is regarded as the official source of information to the Market. However, the NSE passes on the details to CSCS which has a website that publishes the corporate action information.

CSCS provides information on capitalisations including bonus issues, conversions, mergers, stock splits, rights issues and takeovers. CSCS does not accept any liability for losses arising from late, inaccurate or incomplete information provided to the market via its website.

Instruction processing

CSCS is not responsible for handling the distribution of income nor is it responsible for handling the distribution of corporate action entitlements.

CSCS has however introduced an electronic bonus distribution process called E-Bonus. Within E-Bonus, the registrar instead of issuing physical certificates to investors in the CSCS depository when a bonus issue is declared, advises CSCS through a computer storage media (diskette, flash, CD etc) accompanied with the registrars' schedules of the various bonus units and duly signed by the registrar’s authorised signatories.

CSCS, on receipt of the e-bonus file, checks for correctness, format and conformity with the signed hard copy and then proceeds to credit the investors' accounts in the CSCS system. After updating its system with the bonus issue, CSCS advises the registrar of the successful up-load and sends to them details of the allotment to enable them to advise the various investors of the allotment. Allotments are made same day or the next day after advice. CSCS also provides participants with accounting statements on the allotments.

CSCS also runs an E-Allotment program, which electronically captures all allotted shares into investors’ accounts in the CSCS.

Interest payments on Federal Government of Nigeria (FGN) bonds are based on holdings as at the interest payment date, whereas previously they were based on booked positions as of 21 days before payment date (since the register was closed during this period up to pay date).

Proxy Voting

Not applicable

Other services

Not applicable.

Asset Servicing Risk - Key indicators
Information processing
Securities covered Equities
Information sources used Stock Exchange
Information provided in English Yes
Number of Events during last full year
Interest & Redemptions None
Corporate actions None

Notification via
Newsflash on ATS, Exchange Website, CSCS Website and Newspaper.

SWIFT message types
None

Notification within
Notification is sent 21 days before the Annual General Meeting (AGM).

Instruction processing

Use of depository
Not market practice

Settlement on due date
Yes

Optional corporate actions supported
No

Cash account credited
No

Central paying agent
No

Entitlements based on
Holding position of the security as at record date

Proxy voting services

On-line
No

Outsourced
No

Announcement of meetings
Yes

Elections (Voting)
Yes

Results reporting
No

Financial Risk

Summary

CSCS is a privately-owned company with a total capital of NGN 11.74 billion (USD 76.6 million) at year-end 2010. The depository has been profitable for the last 5 years although the revenues have significantly reduced in the last two years due to lower trading activity. CSCS holds a high proportion of its assets in the form of bank balances and short term investments. In addition, the depository's strong reserves have become a non-cyclical source of revenue, essential to assure minimum level of income during volatile times. CSCS has also proven to be financially flexible cutting expenditure in the face of declining revenue.

CSCS assumes liability for direct losses caused by its staff and the failure of the Ddpository's system, which may be covered under the insurance policy. CSCS may be held liable for consequential losses to the extent of reasonable compensation. However, the company cannot be subject to punitive compensation.

It should be noted that CSCS financial accounts have not been prepared in compliance with the International Financial Reporting Standards (IFRS) at this stage, although this is expected to be adopted for the 2012 accounts.

Financial and other Resources

Capital Structure

CSCS is a limited liability company incorporated on 29 July 1992 under the Companies and Allied Matters Act 1990. The largest single shareholder is the NSE. However, a group of Settlement Banks hold nearly half of CSCS ownership. Brokers, institutional investors and registrars hold around 25% of CSCS shares. The summary ownership structure is presented below:

Nigeria Stock Exchange: 27.24%
Participant Banks: 48.27%
Brokers/ Dealers: 19.13%
Institutional Investors: 4.24%
Registrars: 1.12%.

All investors are domestic; there is no foreign stake in the organisation. CSCS has authorised capital of 5 billion ordinary shares with a nominal value of NGN 1.

The total shareholders' capital of CSCS (including issued capital, surplus or share premium, and general reserve) amounted to NGN 11.74 billion (USD 76.6 million) at year-end 2010. The general reserve increased from NGN 6.18 billion in 2009 to NGN 6.75 billion in 2010; an increase of 9% year-on-year (y/y).

Earnings Performance

CSCS operates as a profit-making entity. The income comprises the value of fees payable for services rendered and interest income. CSCS fees include depository fees, eligibility fees, transaction fees, and participation fees. Interest income is accounted for on an accrual basis.

CSCS recorded yearly increases in net profit between 2004 and 2008 on the back of intense financial activity in the Nigerian market. Indeed, during this period, CSCS' revenues grew at exponential rates that averaged 103% y/y. The peak was reached in 2007 when turnover increased by 269.2% y/y. However, after the financial crisis hit global markets in late 2008, turnover fell by 59.7% in 2009. Consequently, net profits dropped by 72.8% y/y and then by 9% in 2010 – see below.

CSCS Net Profits
2004 - NGN 101.4 million (USD 762,979)
2005 - NGN 234.1 million (USD 1.7 million)
2006 - NGN 745.8 million (USD 5.7 million)
2007 - NGN 3.5 billion (USD 28.2 million)
2008 - NGN 4.2 billion (USD 35.9 million)
2009 - NGN 1.16 billion (USD 8.4 million)
2010 – NGN 1.06 billion (USD 7.5 million)
(Figures in USD have been converted from local currency using the respective year average exchange rate.)

Although CSCS has been profitable in the last few years, it should be noted that the CSD is quite dependent on revenues from transaction fees (58% in 2010), and that other streams of revenues would be beneficial in periods of low trading activity to ensure financial stability. This has been partially mitigated in 2009 with relatively high interest income in 2009 (25% of CSCS revenues), however it has been around 10% in other years.

The collapse of CSCS total revenue in 2009 was compensated against by a drastic cut in expenditure, with CSCS reducing spending by 40% y/y. This has been replicated in 2010 with slightly lower expenses in line with lower revenues. The cut in expenditure experienced in 2009 included reductions in salaries, staff bonuses, investment in IT upgrades and other improvements, subscriptions, office building maintenance, public relations, and staff training among others.

Some components of CSCS in particular the staff retirement and gratuity fund had suffered large one-off charges in 2008 and 2009 which have impacted on CSCS' profitability; however, this has been mitigated in 2010.

Guarantee Funds (Central Counterparty Funds Only)

CSCS does not act as a central counterparty and does not guarantee settlement of trades.

Access to Credit

There are no legal restrictions prohibiting CSCS from obtaining credit. CSCS has no need for credit at the moment. About 80% of CSCS' assets are held in cash, which gives management at the depository great flexibility to cope with market fluctuations and/or to cover any investment requirements associated with ongoing projects.

Insurance

CSCS maintains a portfolio of insurance coverage with a variety of local insurers, which aims to protect the depository against all possible eventualities. There are three main policies that account for the bulk of the insurance coverage: electronic equipment, fidelity guarantee and life insurance.

Electronic equipment - Amount insured NGN 1.6 billion (USD 10.4 million):

This policy protects CSCS against loss of or damage to computer hardware and software as well as accessories and other electronic equipment (typewriters, stabilisers, printers and photocopiers). However, the policy only applies if the equipment is held at CSCS' main premises in Marina. The policy also contains two additional clauses that extend CSCS coverage. One covers CSCS against the loss of or damage to external computer data. The other covers the cost the depository might incur when hiring substitute equipment during the interruption of operations caused by damage to computers and/or equipment. The deductible for this policy is NGN 50,000 (USD 326) or 10% of each claim. The deductible will be 10% for every claim thereafter.

Fidelity guarantee – Amount insured NGN 1 billion (USD 6.52 million):

CSCS fidelity guarantee insurance has a limit of 100 occurrences for any one period of coverage.

Life and Personnel insurance – NGN 2.28 billion (USD 14.86 million):

CSCS has two policies concerning staff coverage. The bulk of this coverage is for life insurance, equivalent to NGN 2.3 billion (USD 15.1 million). The second policy is for employee compensation. The sum insured under this scheme is NGN 387 million (USD 2.5 million).

CSCS insurance portfolio is complemented by a number of additional policies, which include:

Equipment breakdown – NGN 17 million (USD 110,000)
Vehicle and motor insurance – NGN 252.3 million (USD 1.6 million)
Housebreaking and fire – NGN 266 million (USD 1.7 million).
(All figures have been converted from local currency to USD using spot exchange as at 1 December 2010.)

CSCS has secured re-insurance arrangements with four corporations (African Reinsurance Corporation – 50%, Continental Re-insurance – 25%, WAICA Reinsurance Pool – 15% and Nigeria Reinsurance – 10%).

Potential Claims on Financial Resources

Credit Loss

CSCS does not provide credit to participants, thus there is no risk of credit loss.

Central Counterparty Exposure

There is no risk exposure as CSCS does not act as central counterparty.

Liability for Operational Losses

CSCS is a limited liability company that can sue and be sued. The corporation can be held liable for consequential losses leading to reasonable compensation. CSCS cannot be subject to punitive compensation.

CSCS assumes liability for direct losses resulting from theft of securities, for direct damages or losses to participants due to the depository's errors, omissions or fraud, and for direct damages or losses to participants caused by a failure of the depository's systems. This includes taking full responsibility for errors in calculating net settlement obligations. In addition, CSCS acknowledges responsibility for reconciliation errors with the Registrar, the theft of securities, the failure of its systems that results in loss or damage to a participant because access cannot be obtained and losses to participants resulting from errors, omissions or fraud. However, the depository does not assume liability for force majeure events.

Since its inception, CSCS has had no incidence of errors or negligence in reconciliation with the registrars, and no fraud by or against CSCS has been reported. Moreover, there has not been any material loss suffered by the Depository during the past three years.

No claims have been made against CSCS in the past five years.

Investment in Infrastructure

The main investment for 2011/2012 is the relocation of the data centre, which has been budgeted at NGN 500 million. There are plans for other investments in IT such as new computer equipment. CSCS has also advised that it is expected to implement SWIFT messaging in 2012.

The investment in infrastructure for 2011 was higher than in 2010 which had been budgeted at NGN 215 million (USD 1.4 million), which CSCS used for computer and office equipment.

This was part of the measures adopted by management to adjust the budget in reaction to the fall in market activity.

CSCS has been appointed as the country's National Numbering Agency (NNA) for Nigeria by the SEC.

Financial Risk - Key indicators

Ownership of the CSD

	Number - Domestic	Number - Foreign	Total Percentage
Central Bank	0	0	0
Stock Exchange	1	0	27.24%
Participant banks	17	0	48.27%
Broker/dealers	5	0	19.13%
Mutual funds	0	0	0
Private clients	0	0	0
Others	0	0	0
Other Institutional Investors	Not known	-	4.24%
RNSE Nominee (Registrar)	1	-	1.12%

Comments

-

Statistics

	Capital structure Local Currency
Issued capital	5,000,000
Reserves	6,744,809
Retained earnings	0
Total	11,744,809

Comments

Statistics (Audited as at 31 December 2010) in NGN thousands

Fixed Income

	2008	2009	2010	2011	2012
Market Value	-	-	2.85	-	-

% of issued securities in the CSD	-	-	98.8%	-	-

Comments

Figures in trillions of local currency units as at December 2010.

Expenses

	2008	2009	2010	2011	2012
Expenses as % total operating revenue	42%	62%	61%	-	-

Operational Risk

Summary

There are significant operational deficiencies that increase CSCS' operational risk exposure. CSCS does not appear to have a detailed, standard approach to establishing and documenting procedures and key controls. Also, there is no risk management policy or risk assessment division within the organisation and staff are not trained in risk prevention. The internal audit department mainly focuses on data control and is not integrated with a broader role to assess compliance with internal controls and procedures. CSCS processing and communications rely heavily on manual intervention and physical documentation with no Straight-Through-Processing (STP) established in the Nigerian market.

Regarding disaster recover arrangements, CSCS has several sites designed to back up data. However, there is a flaw in the scheme, as the main back-up centre is a single point of failure. Finally, the business continuity plan has been poorly conceived and CSCS would not be ready to continue operations if the main offices were to shut down in the event of a disaster or broad emergency.

Depository controls

Established Procedures

CSCS has documented its core procedures; however, the manuals appear weak as they are brief explanation of the functions executed in each area. There is no detailed description of the responsibilities of each team member within their respective divisions, and the documented procedures do not include process diagrams or daily check lists. New procedures have been developed with a standard template and have been submitted for approval. However this has been delayed due to a recent change in the management structure of the company.

Identification of key controls

CSCS procedures do not include an identification of controls to minimise risks, especially in manual-intensive operations. Furthermore, there is no risk management department, responsible for identifying potential risks across departments. Although proper controls have not been developed to minimise these risks, part of the internal audit function is to identify errors and to report them to management (and the procedures would be amended following this)

Internal Audit

Although CSCS does have an internal audit department, the functions executed by their members are more related to data checking and data-entry control. The internal auditors do not focus their efforts in making sure that CSCS staff properly follow the procedures in observance of all established controls.

In addition, there is no internal audit programme and it appears that no operational areas are audited on a regular basis. Furthermore, there is no log where records are kept of last time each area was audited.

Internal Audit currently reports errors to the head of each department and the general manager. However, the Internal Audit does not report directly to the board and the main participants.

Operational Audit

There is an external auditor, which performs the financial audit functions. As part of their financial audit process, they also supervise different processes and areas within CSCS. This seems to be more in-depth than other financial audit reports. The last audit conducted based on the result of Accounts for 2010.

An external audit that examines all operational controls is regarded as 'highly desirable', preferably on an annual basis. In the absence of a full SAS 70 audit, annual external audits of critical operations are normally seen as a minimum requirement.
On the IT side, there is no specific audit of the system and IT security arrangements. CSCS has never hired a company to hack or penetrate their systems to identify their vulnerabilities and areas that might need improvement.

Staff Training

When a new employee starts, there is an orientation programme that lasts between one and three months. There is no proper staff training programme for employees at CSCS and no specific qualifications are required, however training exists on an ad-hoc basis and is done internally per department. More importantly, no special training on risk awareness surrounding operational areas appears to be provided. Detailed job descriptions are in the process of being developed and the plan for 2012 is to identify any training needs based on these descriptions.

Clearing controls

Processing

There is no straight through processing (STP) in CSCS since there is manual intervention in all areas of core operations (i.e. clearing, settlement, and custody). Also, the matching system does not seem to be an integral part of the settlement system. Admittedly, there is an intensive data checking process executed by the members of each department / unit and the internal audit. However, human intervention always generates a certain degree of risk exposure. Given the volume of manual input in CSCS processes, this is an issue of concern, especially for OTC trades.

CSCS has introduced a new tool, called the data exchange, where files can be transferred and uploaded. Although this significantly improves the communications between the CSD and market participants, at this stage, the tool has only been introduced for registrars (May 2011). It is planned that the tool will be gradually implemented for brokers, dealers, custodians and settlement banks in 2012.
In addition, although CSCS' communications with other market participants are also on a physical basis. The transfer of information is mainly done using couriers who must deliver CDs and documents to the participants. This practice increased the risk of theft, loss and fraud of data and information.

There is also no confirmation sent by CSCS to participants to notify that instructions have been properly received.

Reporting

As mentioned above, most of CSCS communications with participants are not conducted through electronic means. This includes most of CSCS reporting. Nevertheless, some automation has been introduced and participants now receive an email when settlement has been completed and daily transaction reports are now available online with the breakdown of trades. How there are no specific timelines as to when the emails are sent or the website updated. Portfolio reports are still in physical form and are sent using couriers.
There is no SWIFT connectivity available in Nigeria, although there is an advisory group looking into this and the plan is to implement it in Q1 2012.

A consequence of the lack of electronic STP is that there is no tracking system of each stage in the settlement process (i.e. whether a transactions has matched, it is pending, etc). This is a serious concern for the OTC market. For on-exchange trades, participants are able to monitor the settlement of transactions via CSCS's website.

In June 2010, CSCS conducted a series of upgrades to their website, which improved the look and feel of the site. The changes are part of CSCS' efforts to enhance communications and reporting with market participants.

Data processing controls

Every document, before processing, is vetted to ensure that requests are appropriate and the certified signatories of each stock broking firm duly signed according to their Signatory Mandate.

The software system has access levels for different categories of staff members. However, it has been determined that some of the user permission groups may be too broad to allow for sufficiently granular control over individual roles. Entries and exits to the menu and sub-menus are restricted depending on the staff members' job requirements. The hardware system also has access restrictions. The file server is only accessible to the system administrator and its assistant. Entry to the network requires a user-identification code and a unique password for each member of staff. CSCS supervises the data prior to being accepted.

In addition, the NSE operates an investor protection scheme product called 'Trade Alert' designed to protect subscribers of the product against unauthorised transactions on their accounts in CSCS. At close of trading time at the NSE, the day's transactions related to a 'Trade Alert' subscriber will be forwarded from the NSE database to a separate electronic platform, from where a trigger is instituted to access the GSM phones of shareholders. This gives the stockholder the opportunity to abort the transaction if they did not authorise the stocks to be traded. Any unauthorised transactions will be subject to investigation and arbitration by the NSE.

Disaster Recovery/Business Continuity Procedures

CSCS backs-up data on a daily basis. For this, three radio-linked back-up centres are used: Parkview, Ikeja and Abuja. However, there are serious flaws in the disaster recovery procedures (DRP) and considerable improvements are needed in order to significantly mitigate the risks associated with data loss in case of disaster.

The first back-up of data is done in real-time to a server located next to the trading engine at CSCS main offices in Marina (Lagos). This is the first line of defence in case problems arise with the main server. However, this back-up machine is in the same room as the main server, so both machines are exposed to the same level of risk of external disruption.

CSCS's main back-up centre is located in the area of Parkview, 3 kms from the offices in Marina, which is not regarded as far enough from the main offices by international standards (20 kilometres minimum).

Parkview replicates data in real-time using redundant radio networks. In addition, tapes with data are also taken to this facility every night for storage. The main back-up centre acts as a communication hub between Marina and the other sites.

The main flaws in this scheme are that Parkview acts a single point of failure, which means that if Parkview were to shut down or cease operations, Marina would be isolated from Ikeja and Abuja and no data would be backed-up. There are also concerns about the back-up centre's ability to carry on processing in the event of the main Marina site failing. Although settlements already submitted could be processed, there is no replica of the tight coupling between the exchange and CSCS production systems between the main exchange and back-up CSCS system, or the backup exchange and back-up CSCS systems. Also, the fact that there is a heavy dependency on radio links implies that data back-up is subject to atmospheric events which could disrupt communications.

CSCS has conducted some tests on weekends to assess the backup facilities, but results of the tests have not been provided to the external auditor. These tests have not involved market participants and no live test has been executed to date.

Parkview is deemed as a warm business continuity centre (BCC). However, CSCS has not developed a full and documented Business Continuity Plan (BCP). Parkview's dual role (DRP and BCC) actually increases concentration risk in terms of security and effectiveness in the face of disaster.

Parkview had 12 dedicated workstations for employees to continue operations in the event the main site became inaccessible. However, these have been removed and no dedicated stations are currently set-up. This appears to be barely adequate for a company of over 100 employees, especially if it is for a prolonged period of time. Staff are expected to secure and use their laptop computers from the main sites in the event of evacuation at Marina.

Moreover, the facilities at Parkview do not appear to be set up properly to be up and running and ready to host staff from Marina at short notice, since there is no replication of the settlement system in Parkview and the software would need to be set up by someone of the Marina offices. Furthermore, there is no link between CSCS' back-up centre and the NSE or the NSE back-up centre which would prevent trading and settlement for equities in case the Marina offices could not operate.

In addition, key personnel at CSCS that would be required to work from Parkview to continue operations in the event of an emergency in Marina have not been identified and fully briefed, and CSCS employees have not been to Parkview to get familiar with the BCC.

Since there is no documented BCP, no tests have been made so far to ensure the continuation of operations in the event of a disaster. However, there are plans to develop a BCP, and use the Ikeja site (located 24.7km away from the Marina) as a DR site. The new site is expected to go live in mid 2013.

Depository Liability

The CSCS assumes liability for direct losses resulting from theft of securities, for direct damages or losses to participants due to the depository's errors, omissions or fraud, and for direct damages or losses to participants caused by a failure of the depository's systems. This includes taking full responsibility for errors in calculating net settlement obligations. The Depository does not assume liability for force majeure events. The depository provides protection against risk of loss of participant assets by the depository in the form of indemnification, insurance and acknowledgment of liability for losses caused by the depository's own actions.

There are pending litigations against CSCS amounting to NGN 15 million (USD 112,000) by December 2006 compared with NGN 12 million (USD 92,000) in December 2005. The solicitors are however confident that the action will not succeed against the company.

Systems Performance

CSCS' system is generally used at 40% of its capacity and can go up to 70% if needed, which is higher than best market practice. This could be a concern in case of a spike in transactions volumes.

Operational Risk - Key indicators
Control objectives identified by the CSD match standard objectives No
Key controls and procedures are identified by the CSD No
Independent evidence exists that key controls and procedures have operated effectively through the last year No
Material errors have been identified No

CSD on CSD (Credit) Risk

Summary

There are no international links operated by the Depository with other CSDs. The Nigerian Stock Exchange has signed co-operation agreements with the Cairo and Alexandria Stock Exchange and Johannesburg Stock Exchange, but no trading links have been established which would require settlement links.

CSD - CSD Links

There are no links operated by the Depository with other CSDs.

CSD on CSD (Credit Risk) - Key indicators
International Links: List of international links established and/or planned by the CSD There are no international links operated by the Depository with other CSDs.

Governance and Regulation

Management and governance of the depository

CSCS is governed by a Board of Directors, which is made up of the Managing Director of CSCS and 7 non-executive Directors. The structure is tailored to ensure inclusiveness of all participants. However, CSCS regulations state that the Board must be limited to a maximum number of 13 individuals. Changes to the structure of the Board in terms of the number of directors would require that the Memorandum and Articles of CSCS be amended. In turn, this would be subject to a special resolution by members of the Company.

The Chairman of the Board of CSCS is the NSE representative. CSCS management team, responsible for day-to-day administration of the company, is headed by the Managing Director/CEO.

The Board, which meets at least four (4) times a year, is responsible for:
- Deliberating on /reviewing/approving the performance of the company as well as company and staff processes;
- Representing CSCS in international boards and organisations;
- Making calls and request forfeiture of CSCS shares;
- Borrowing money and issue debentures on behalf of the Company.

The board has three committees (Technical Committee, Human Capital Committee, and Finance and Risk Management Committee). The latter is responsible for ensuring that all financial data is made available to the board in a proper manner. However, such committee does not appear to be involved with risk assessment and risk prevention in CSCS. The committees meet on a need-to basis.

Regulatory and independent examination of the depository

CSCS is regulated by the Nigerian Securities and Exchange Commission (SEC), the NSE and the Corporate Affairs Commission. CSCS submits regular reports, containing market statistics and transaction details to the SEC. In addition, CSCS staff meet with SEC representatives on a quarterly basis.

Financial audits are carried out by independent external auditors on an annual basis. These audits include an operational component that can be deemed as a limited operational audit. However no full independent operational audit is undertaken.

Internal controls and procedures for safeguarding investments

- Fire extinguishers are available and all members of staff have been trained to use them.
- There are smoke detectors installed.
- Only accredited representatives of participants and investors with proven identity are allowed into the Depository.
- There is a resident company that maintains the buildings. They stay in the building 24 hours a day, 7 days a week.
- Sensitive areas are restricted even to members of staff.
- The systems are password controlled. Comprehensive audit trails are available.
- Authority levels are defined by users and enforced by the system.

Other legal protection mechanisms

A lien may be placed on a participant's account for the purpose of collateral for overdrafts and securing payment for purchased securities. The lien is limited to securities that have settled.

CSCS transfers securities by book-entry under the auspices of Nigerian Company law and NSE/SEC rules and regulations.

About the Depository

Name and Address
CSCS
1st, 12th, 14th & 15th Floors, Stock Exchange House
2/4 Customs Street
PO Box 3168 Marina
Lagos
Nigeria

Website
www.cscsnigerialtd.com

Date of establishment
29 July 1992

Date commenced operations
14 April 1997

Segregation of Assets at the Depository

Depository assets from participants
Yes

Participant assets from clients
Yes

Eligible Securities Depository under SEC Rule 17f-7

System of central handling of securities
Yes

Regulated by a financial regulatory authority
Yes

Holds assets of all participants on equivalent terms
Yes

Legal status
Companies and Allied Matters Act 1990

Type of legal entity
Public limited liability company

Regulated by
Nigerian Securities and Exchange Commission (SEC), the Corporate Affairs Commission and the Nigerian Stock Exchange.

Is use of the CSD required?

	Settlement	Safekeeping
By Law	Yes	No
By Market Practice	Yes	No

How securities are held
Dematerialised at CSCS

Domestic eligible participants
Settlement Banks (20 as at May 2012), Brokers that are licensed by the SEC and listed with the NSE, the NSE itself, Registrars, issuing houses and institutional investors.

Ownership
Nigeria Stock Exchange: 27.24%
Participant banks: 48.27%
Brokers/ dealers: 19.13%
Institutional Investors: 4.24%
Registrars: 1.12%

Identifies and segregates participant assets
Yes

Periodic reports to participants
Yes

Periodic examination by a regulator or independent accountant
Yes

Internal Safety Measures

Participant Eligibility Criteria

Minimum Capital Standards
Yes

Financial Aspects

Ability to raise capital/borrow
Yes

Committed lines of credit in place
No

Publish audit financials
Yes

Take lien on stock held
No

Central Bank Guarantee
No

Other third party guarantee
No

Services Provided

Matching

Pre-matching services
No

Matching services
Yes

Clearing

Clearing services
Yes

Comments
CSCS calculates the net payment obligations of participants, and instructs the payment to the Settlement Banks.

Securities Settlement

Book-entry settlement
Yes

Fails management
No

Third party insurance
Yes

Comments
Liens are asserted on stocks under pledge operations to the order of the pledgee.

Safeguard Facilities

Offsite Backup
Yes

Disaster Recovery

Disaster Recovery Plan
Yes

Back-up power generator
Yes

UPS (Uninterruptible power supply)
Yes

Cash Settlement

Internal cash settlement
No

Stock Lending

Securities lending for fails coverage
No

Asset Servicing

Notifications
No

Securities processing
Yes

Paying agent
No

Central registrar
No

Proxy voting services
No

Communications

Electronic communications
Yes

Reporting Services

Electronic reporting
Yes

Reporting of every movement
Yes

Regular statement of securities deposited
Yes

Definition

Public Rating. This assessment has been compiled from information provided by third parties and the CSD and has been verified by Thomas Murray analysts during an on-site visit to the CSD. The report has been reviewed by the CSD. The ratings that have been assigned to the risks that are reviewed in the report have been determined by Thomas Murray analysts and approved by the Thomas Murray Rating Board. The ratings have been assigned in accordance with the process outlined in the published methodology as developed by Thomas Murray and on the basis of information confirmed by Thomas Murray analysts during a site visit to the CSD.

Publication Date

The publication date represented here is August 2010. This is the date that the assessment report has been reviewed by third parties including the CSD. The report is updated on an on-going basis throughout the year as new information is received and should be read in conjunction with the relevant newsflashes issued since the publication date.

RISK EXPOSURE DEFINITIONS

Asset Commitment Risk - The period of time from when control of securities

RATING SCALE

AAA	Extremely low risk
AA+	Very low risk
AA	
AA-	
A+	Low risk
A	

or cash is given up until receipt of countervalue. This risk concerns the time period during which a participant's assets, either cash or stock, are frozen within the CSD and payment system pending final settlement of the underlying transaction(s). Following settlement, the risk period is extended until the transfer of funds and stock becomes irrevocable. It excludes any periods when assets, cash or stock, are committed to a market participant including brokers, banks and custodians, not caused by CSD processing.

Liquidity Risk - The risk that insufficient securities and or funds are available to meet commitments; the obligation will be covered some time later. This is where for certain technical reasons (e.g., stock out on loan, stock in course of registration, turn round of recently deposited stock is not possible) one or both parties to the trade has a shortfall in the amount of funds (credit line) or unencumbered stock available to meet settlement obligations when due. These shortfalls may lead to settlement 'fails' but do not normally lead to a default.

Counterparty Risk - The risk that a counterparty (i.e., a participant) will not settle its obligations for full value at any time. This is simply the total default of a direct participant of the CSD. This is the event when a participant is unable to meet its financial liability to other participants. This risk only goes as far as direct participants of the CSD and excludes clients of direct participants that default on liabilities to such participants, even if such a default should systemically cause the direct participant to subsequently default.

Asset Servicing Risk - The risk that a participant may incur a loss arising from missed or inaccurate information provided by the depository, or from incorrectly executed instructions, in respect of corporate actions and proxy voting. This risk arises when a participant places reliance on the information a depository provides or when the participant instructs the depository to carry out an economic transaction on its behalf. If the depository fails either to provide the information or to carry out the instruction correctly then the participant may suffer a loss for which the depository may not accept liability. The depository may provide these services on a commercial basis, without statutory immunity, or it may provide the service as part of its statutory role, possibly with some level of protection from liability. This risk is likely to become much higher when international securities are included in the service.

Financial Risk - The ability of the CSD to operate as a financially viable company. This risk concerns the financial strength of the depository and if its financial resources are sufficient to meet the on-going operation of the organisation. This risk also includes where the CSD may act as central counterparty, or otherwise acts in a Principal capacity.

Operational Risk - The risk that deficiencies in information systems or internal controls, human errors or management failures will result in losses. The risk of loss due to breakdowns or weaknesses in internal controls and procedures. Internal factors to be considered in the assessment include ensuring the CSD has formalised procedures established for its main services. The CSD should have identified control objectives and related key controls to ensure operation and proper control of established procedures. Systems and procedures should be tested periodically. There should be external audit processes in place to provide third-party audit evidence of the adequacy of the controls.

A-	
BBB	Acceptable risk
BB	Less than acceptable risk
B	Quite high risk
CCC	High risk
N/R	No rating has been given due to insufficient information

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Names of analysts available on request.

any Depository. Thomas Murray relied on information provided by third parties believed to be accurate and reliable but due to the possibility of human or mechanical error, Thomas Murray can not guarantee the accuracy of any such information.

Report Date

Nigeria

17 September 2012