

## ***Risk Assessment - Cheque Processing System***

### *Introduction*

This document provides a risk assessment of the current cheque processing system. While cheque processing systems are not generally considered to be systemically important payment systems, the fact that it is one of the few payment systems currently in operation in Egypt gives it special significance. In 2005-2006 the total value of cheques processed was 288,715 LE mn (US\$52.5bn). The average cheque value was 30,365 LE or US\$5,521. The system processes approximately 1.3bn LE or US\$238mn per day. A chart is provided in the annex that gives more detailed information regarding historical volumes and values.

The following assessment is intended to help guide the CBE to assess the risk in light of international standards. The “Core Principles for Systemically Important Payment Systems”, developed by the Bank for International Settlements is an internationally recognized set of universal guidelines that are used by the World Bank and IMF in assessing payment systems. The Core Principles are composed of ten principles that can be used as guidelines for assessing payment systems. As not all of the core principles are applicable to cheque processing systems, we will look at a subset of the ten that are most applicable. The selected subset is as follows:

1. ***Legal Basis*** - The system should have a well founded legal basis under all jurisdictions.
2. ***Understanding Financial Risks*** - The system’s rules and procedures should enable participants to have a clear understanding of the system’s impact on each of the financial risks they incur through participation in it.
4. ***Prompt Final Settlement*** - The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.
7. ***Security and Operational Reliability*** - The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing.
8. ***Efficiency*** - The system should provide a means of making payments which is practical for its users and efficient for the economy.
9. ***Access Criteria*** - The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.
10. ***Governance*** - The system’s governance arrangements should be effective, accountable and transparent.

The format and terminology is adopted from the Financial Sector Assessment Program (FSAP) tool used by the World Bank and IMF. The terminology used for assessment of compliance with each core principle is defined below.

The compliance with each core principle is assessed on a qualitative basis of a five-fold assessment criterion:

**Observed:** When all assessment criteria are generally met without any significant deficiencies;

**Broadly Observed:** When there are only minor shortcomings which do not raise major concerns and when corrective action to achieve full observance with the core principles are scheduled and realistically achievable, within a prescribed time;

**Partly Observed:** When shortcomings are sufficient to raise doubts about the ability to achieve observance within a reasonable time frame;

**Non-Observed:** When major shortcomings are found in adhering to the assessment criteria; and

**Not Applicable:** A core principle may not be relevant or applicable, given differences in legal and institutional conditions.

### ***Core Principles for Systemically Important Payment Systems***

#### ***1. The system should have a well-founded legal basis under all relevant jurisdictions.***

##### Description/Recommendation

Article 6 Section G, Law No. 88 of The Year 2003 Promulgating The Law of The Central Bank, The Banking Sector And Money, Amended by Law No. 162 of the Year 2004 and Law No. 93 of the Year 2005, states one of the responsibilities of the Central Bank is supervision of the national payments system.

At present, there is not a well-defined legal basis for the CBE role in payments other than what is currently in the Central Bank law. As part of this project, it has been agreed that the current law should be expanded to include detailed definitions of the roles and responsibilities of the CBE, operators and participants. It should include the applicability of the law, functions of the central bank, how payment systems are designated, regulations for the issuance of designated payment instruments, the powers of the central bank including examination and control, investigation, search and seizure, what constitutes an offence and what penalties will be assessed as well as other more general items such as regulations and guidelines. These roles, regulations and responsibilities need to be defined and enforceable and their consequences predictable. The legal environment includes the general legal infrastructure in the relevant jurisdictions (such as the law relating to contracts, payments, securities, banking, debtor/creditor relationships, and insolvency) as well as specific statutes, case law, contracts (for example, payment system rules) or other relevant material.

In general, a legal basis needs to be defined that includes:

- Contract Law (i.e. between operator and participant)

- Insolvency Law
- Laws governing Collateral Transactions
- Banking and Central Banking Laws

As part of this consultancy we will work with the CBE on the development of a set of regulations that can be used as an agreement that can be sent out by the CBE that will have the force of law. The agreement can be used with the operators (as part of the licensing procedure) and participants (in their agreement with the clearing house) that clearly define each of their roles and responsibilities as participants in payment systems. As an example, I have attached both the Malaysian and Norwegian Payments Acts which can serve as examples for the type of document that should be developed in Egypt.

*Assessment: Non Observed*

***2. The system's rules and procedures should enable participants to have a clear understanding of the system's impact on each of the financial risks they incur through participation in it.***

***Description/Recommendation***

The new rules and procedures that are currently awaiting approval by the Governor are quite good as regards governance; however, need further development regarding mitigation of risk. Currently, participants have arrangements with other participants to cover the risk of not being able to meet their settlement obligations. This is not sufficient to mitigate the system risk. The document should be improved through clarification on the management of financial risks that could occur through participation in the system. More specifically, how the systems deals with

- **Credit Risk** is the risk of financial loss as a consequence of counterparty's inability to meet its payment obligations, either at the time of settlement or at a later time.
- **Liquidity Risk** is the risk of incurring a loss because liquidity is not received at the expected time.
- **Legal Risk** is the risk that a participant in a payment system is exposed to legal risk in the event of uncertainty regarding the system's contractual basis or the underlying legislation.
- **Operational Risk** is the risk that a participant runs if there is a risk of financial loss as a consequence of manual or technical faults, breach of rules or laws, or as a consequence of external events such as natural disasters, terrorism, etc.

The current lack of risk management procedures make participants in the current system vulnerable to the aforementioned types of risk. At present, the cheque processing system is vulnerable to some extent in each of the major risk areas.

- Credit Risk – Despite the arrangements that banks have with other participants, there is still a need to have a more formal process for the reduction of credit risk. The CBE should only have to intervene as a last resort.
- Liquidity Risk – Liquidity risk is low at this point due to the fact that participants know their exposure a day in advance of actual settlement.
- Legal Risk - The new cheque clearing rules lower the risk as the rules under which it operates have been clarified; however, the document needs to place more focus on processes for resolution of problems that may occur.
- Operational Risk – The system that supports cheque processing needs to have a more robust backup environment to ensure maximum uptime and should be tested on a periodic basis. This is reviewed in more detail in Core Principle 7.

This will be to some degree minimized with the introduction of the RTGS system as settlement will take place over the RTGS system on the same day as opposed to T+1 in the current system and the participant will have greater access to liquidity.

The CBE has done a good job of the new rules as they clearly define the rights, roles, responsibilities and obligations of all the parties involved. It is important that all such parties be provided up-to-date explanatory material. The only shortcoming in the new rules is the need to provide more information regarding resolution of issues that may arise. It appears that the CBE updates the rules and procedures as appropriate.

*Assessment: Partly Observed*

***4. The system should provide prompt final settlement on the day of value, preferably during the day and at a minimum at the end of the day.***

***Description/Comments***

The cheque processing system does not currently provide same day settlement. The BIS recommends that a country should have at least one system that exceeds the minimum requirements for end of day settlement. The planned RTGS system will meet the criteria as defined in this core principle as will the cheque processing system as both will perform same day settlement upon introduction of the RTGS. This will minimize the risk and place the cheque processing and RTGS well within the guideline set by the BIS. It would be a useful process to clearly define the actual settlement time vs. acceptance of the payment for settlement as well as the legal definition for payment finality.

*Assessment: Broadly Observed*

**7. The system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing.**

***Description/Comments***

The intent of this core principle is to ensure a high degree of operational reliability and integrity. Payment systems must be predictable to foster usage. The primary goals of this core principle are as follows:

- System should incorporate commercially reasonable standards of security appropriate to the transaction values involved.
- System must have reliable technology and adequate back up of all hardware, software and network facilities.
- System must have effective business procedures and well trained and competent personnel who can operate the system safely and efficiently and ensure that the correct procedures are followed.
- Appropriate business continuity arrangements should be planned in the event of a disruption of services.

The CBE system currently operates effectively; however, there is risk associated with its current operating environment which needs to be addressed to ensure the safe and reliable processing of payments. In general, more attention needs to be paid to off-site backup and testing. The current environment has no off-site backup for the cheque processing system. There are two options that exist: the first is to relocate the backup system currently in Cairo to the new centre in Tanta, the second is to keep the backup system that exists in the processing centre in Cairo and acquire another system for Tanta. The latter is preferable as this would allow the possibility of setting up a test environment that does not currently exist. There will also need to be provision for backup of the telecommunications lines as well.

Once the back-up site is operational, it requires periodic testing with a test environment to be viable. This may require an additional server at the backup site. This will solve the problems of redundancy, testing and the possibility of a server failure forcing the systems to run in a degraded mode. Additionally, it is understood that a business continuity plan exists, but if it has not been tested, there is a question as to the viability of the plan itself. All procedures and processes need to be tested to ensure the highest level of uptime and the effectiveness of contingency planning.

***Assessment: Partly Observed***

**8. The system should provide a means of making payments which is practical for its users and efficient for the economy.**

***Description/Comments***

The current systems are practical and appear to meet the needs of the financial community. The centralized approach adopted by the Cheque Clearing Center maximizes the efficiency and effectiveness of the clearing process. Closing down the manual clearing centers in Alexandria and Port-Said was a good decision on the part of the CBE. The system puts all of the encoding responsibility on the banks and, as such, streamlines the netting process at the Centre.

*Assessment: Broadly Observed*

**9. The system should have objective and publicly disclosed criteria for participation, which permit fair and open access.**

***Description/Comments***

The system is available to all prospective participants and there are no special criteria for access. The new rules describe the basis for membership and make clear the rules associated with censure from the Cheque Clearing Centre. These rules should be reviewed on a periodic basis which appears to part of the CBE practice.

*Assessment: Broadly Observed*

**10. The system's governance arrangements should be effective, accountable and transparent.**

***Description/Comments***

The recently completed cheque processing rules/regulations awaiting approval by the Governor largely fulfill this particular guideline as defined by the BIS. The CBE has done a good job with this as the rules clearly define the roles of the participant and operator including membership, operational days, and all procedural and operational responsibilities.

The major shortcoming as regards governance is that there is no independent oversight process in place for the cheque processing system. This is needed and should be addressed immediately. These reviews should take place periodically and should be based on clear inspection criteria. This also does not currently exist, however will be put in place as part of this project.

*Assessment: Broadly Observed*

### ***Recommendations***

The primary focal points for the cheque processing system should be improvement of the legal basis and enhancement of the back-up environment. The legal basis will be addressed as part of this project. The CBE will need to support the enhancement of the back-up environment and should be addressed in the short term.

The other major area that represents the most significant risks is in the area of credit and settlement risk. There is not sufficient risk mitigation in place to adequately cover the failure of a participant to meet its settlement obligations. As a result, participants including the CBE are vulnerable in the event of a settlement failure. Cheque processing systems are not generally viewed as systemically important payment systems; however, when they are one of the only payment systems in the country, it takes on special significance.

The advent of the RTGS system changes this due to the fact that some of the current value in the cheque processing system will likely migrate to the RTGS system thereby lowering the total value of the cheque processing system and the associated risk. A review of the current cheque payments should be conducted to estimate the value that is likely to move to the RTGS. A random sampling of transactions over a certain amount should be conducted as the basis for a guesstimate of the potential value. The amount chosen for the analysis should be consistent with the transaction values supported by the current FinCopy system. Our belief is that the amount that migrates to the RTGS could be quite significant over time. The resultant decrease in exposure in the cheque processing system will negate the need to initiate a loss-sharing agreement. It is recommended that the CBE actively encourage participants to use the RTGS system decreasing their use of cheques. We realize the cultural significance of cheques and the challenges of discouraging usage, but believe that over time traditional patterns of payment will change.

### ***Conclusion***

The cheque processing system on the whole is a comparatively effective and efficient means of making payments in Egypt. Though it is difficult to predict the behavior of the Banks as regards use of the RTGS vs. the Cheque Clearing system, it is quite likely that much of the value currently associated with the cheque system will migrate to the RTGS. In the long run, we see this system decreasing in size as alternatives for payments processing become available.

**Appendix 1**

<b>Fiscal Year</b>	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004- 2005	2005-2006
<b># of Cheques (000)</b>	8555	8228	7918	10025	9591	9321	9508
<b>Value (LE) of Cheques (000,000)</b>	338083	292168	270543	244581	248224	262423	288715

Figure 1 - Cheque Processing Volumes and Values 1999-2006  
Source: Central Bank of Egypt Annual Report 2005-2006