Frequently Asked Questions regarding RTGS

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Question	Answer
General	
1. What is the RTGS system?	A Real Time Gross Settlement System (RTGS) is a funds transfer system in which the transfer of funds between one bank and another takes place in "real time" and on a "gross" – transaction by transaction – basis, without bundling or netting with any other transaction.
	Real time settlement means that a payment transaction is not subjected to any waiting period. If funds are sufficient, transactions are processed and settled as soon as they are entered into the RTGS. Once processed, payments are final and irrevocable. RTGS transactions may be customer to customer or bank to bank but are always sent by one bank (the paying bank) and received by another (the collecting bank).
2. What are the main purposes of the RTGS?	RTGS systems are typically used for high-value and/or urgent transactions that require and receive immediate clearing. In some countries the RTGS systems may be the only way to get same day cleared funds and so may be used when even small payments need to be settled urgently.
	Most regular payments, i.e., low-value or non-urgent payments would not be accomplished through RTGS, but instead would use a national payment system such as ACH that allows participants to batch and net payments. RTGS payments typically incur higher transaction costs and usually operated by a country's central bank.
3. What are the benefits of the RTGS?	The biggest benefit is that RTGS eliminates systemic settlement risk that can arise for end-of-day net settlement of large value transactions. In a net end-of-day system, if one bank fails to pay, then others can also fail, and a country's banking system can crash. RTGS prevent this by settling transactions in Central Bank accounts (the RTGS settlement accounts) before the payment is passed to the collecting bank.
	From the transaction point of view, RTGS is immediate and secure. RTGS is mainly used for high-value transactions, since RTGS payments are processed individually when entered. And since RTGS funds are transferred immediately upon processing, the funds are immediately available for further payments

4.	Why is the system changing now?	Nepal has had a modern Automated Clearing House for cheques and low value bulk payments for some years. However, the problem of systemic settlement risk had not been addressed. Now that the economy is expanding, and many new payment services are emerging, it is time to address this risk.
5.	How are RTGS transactions different from ACH bulk payments? Why use ACH at all if RTGS is faster?	RTGS payments are high-value and/or high priority payments which are settled immediately, one by one, in the RTGS. ACH bulk payments are typically low value and less urgent, and are netted in real-time, and then settled in one or more batch file runs during the banking day. As part of the batch process, the ACH sends Net Settlement Instructions to RTGS in order to effect settlement across the RTGS accounts. In Nepal and several other countries, the ACH now also provides an immediate payment stream for low-value individual transactions. Hence RTGS will mainly deal in very high value inter-bank transactions which need to settle immediately for liquidity and risk avoidance purposes.
6.	What is the (anticipated) time window for RTGS transactions?	RTGS systems usually run during banking business hours. The business day schedule will be published in the RTGS System Rules.
7.	Which banks are participants in the RTGS, and what is the schedule for next banks to be members in RTGS?	When the system is first implemented in Q3 2019, the 28 Class A banks will be members. Once the system has bedded down, plans will be drawn up to include many other domestic financial institutions. Meanwhile, however, the smaller institutions can settle via the Class A banks.
8.	How will high value payments be transacted between RTGS members and non-RTGS members after system launch?	The smaller, non-RTGS institutions can settle via the Class A banks.
9.	What are the minimum and maximum amounts for RTGS transactions per NRB rules?	There are no upper limits for RTGS transactions. Transactions will be settled as long as the paying bank has sufficient funds in its settlement account. The NRB can set a lower limit on transactions if it wishes to do so. The System Rules will set out any restrictions
Customer issues		
1.	How will information about RTGS be communicated to the public – consumers and businesses ?	NRB will provide some educational programmes and media material. The communication of new product opportunities to customers, however, must be done by the commercial banks.

2.	How can we be sure bank staff are trained to sell and support new products ?	This is very much a responsibility of the banks. Bank trainers will be trained by the system vendors, and the trained trainers must pass on their knowledge to bank staff. NRB trainers will be able to support this ask but it is primarily a commercial bank responsibility
3.	How will this new software in banks affect day-to-day dealings of the public ?	Banks have the opportunity to offer new real-time, secure payment products for high value instant settlement, complete with potential to send a large amounts of information (such as remittance advices) integrated with the payment. It is an advanced tool for better inter-company trading, as well as settlement of large consumer transactions such as car and house purchases.
Operations		
1.	How are permissions access rights set up. ? What happens if I need access to something I don't have ?	The system imposes more discipline on the execution of payments in banks. In a manual system, supervisors have a large degree of freedom which can cause errors and other risks. The RTGS is set up so that there is dual control over submission of transactions and important data updates
2.	What are the (anticipated) fees per RTGS transaction?	In the region, the fees charged by a Central Bank to RTGS participants are usually flat fees ranging between 1 and 5 USD equivalent, depending on time of day. The sending bank is normally charged. There may be volume discounts. The charges made by banks to their customers who request an RTGS transactions also vary widely in different countries, between around USD 10 - 25 equivalent. NRB will not regulate fees directly, but will watch for any escalation of fees beyond reasonable levels.
3.	Are other fees charged ?	Yes, normally a joining fee and an annual subscription fee are charged to participants, in the region of a few thousand USD equivalent. Special fees may be charged for special services provided by the Central Bank, such as special reports, or extension of the business day. Penalties can also be charged for breaches of the System Rules. All fees and charges are documented in the System Rules.
4.	When are the fees charged?	Normally RTGS fees accumulate through the month and are payable at the end of the month. Fees are charged by Direct Debit to each participants' settlement account.

5. When is the credit from an RTGS transaction debited from the sending bank and when does the beneficiary receive the funds in their account ?	The debit and credit are immediate and occur in real-time. The funds are immediately available for the receiving bank to credit to their customer or utilize, and the transaction is irrevocable. Beneficiary customers should normally be credited in less than 1-2 hours	
6. How can RTGS payments be checked if they have been successful?	The participants can view online the status and balance of their settlement account(s) within the RTGS, as well as view all the transactions affecting these accounts for that day, and for historical days.	
7. What is the timeframe in which the receiving bank must credit the beneficiary's account? How should the receiving bank notify their customer of the funds received?	This will be set out in the System Rules? It should normally be closed to real-time. At most 1-2 hours. The collecting bank may send a notification to the customer if that is within the customer agreement. Otherwise the customer can normally see the account on-line via internet banking.	
8. If the funds are not credited to the beneficiary's account, when will the funds be credited back to the sending bank and how will they be notified?	This will be set out in the System Rules. It should normally be within 24 hours. All movements to a settlement account are notified to the participant by message and are viewable on-line.	
9. When does an RTGS transaction become final and how does this differ from ACH payments?	RTGS transactions become final and irrevocable immediately upon the debit and credit being applied to the settlement accounts in RTGS, rather than the 1-2 day period needed to settle low-value ACH payments. RTGS transactions are settled one at a time, upon successful validation provided funds are available, whereas ACH payment instructions are settled in batch at the end of a clearing session.	
10. Is there a monetary limit on the amount banks can transfer through RTGS? Who sets such limits and what criteria will be taken into account?	In principle there are no limits on an RTGS transaction. The Central Bank can impose limits if they so wish, and lower limits may be imposed to segregate what is better processed in ACH fast stream rather than RTGS. However, the Central Bank can impose certain restrictions on Participant accounts – keeping a minimum balance for example and imposes bilateral or multi-lateral debit volume controls	
Liquidity management		
1. Who manages funds for settling RTGS transactions?	Each bank manages its own liquidity in real-time during RTGS hours using the on-line capabilities of the RTGS system. Banks can monitor their RTGS balance and queue status in real time.	

		Additionally, NRB oversees the banks' ability to settle RTGS transactions and facilitates intra-day lending. The Central Bank has access to on-line screens and reports which will enable them to monitor participants' intra-day positions and alert any participant who is causing a queue and potential gridlock. NRB payments staff will be in contact with participant managers in order to maintain the flow of transactions through the RTGS and provide advice on mechanisms to provide liquidity
2.	How are settlement funds used?	Each participant bank will maintain a settlement account in RTGS with sufficient funds to meet their intraday obligations, in each available currency. When an RTGS transaction is sent, the system checks that there are sufficient funds in the settlement account of the paying bank to make the payment. If there are sufficient funds, the payment is settled between the paying and receiving banks' settlement accounts. If not, the payment is queued.
3.	How does pledging of securities support liquidity ?	In the event that the participant bank does not have sufficient funds in their settlement account to cover their payment obligations, they may use their securities registered in the Central Securities Depository (CSD) and pledge them in favour of NRB to provide collateral for intraday liquidity facility (ILF). This is effectively an intra-day loan, provided by the NRB. The value of securities pledged (less a small percentage "haircut") is registered in a collateral account for each bank in the RTGS. An ILF can be drawn down to release specific payments from the RTGS queue against this collateral. Collateral is managed separately for different currencies.
4.	What is the procedure for providing collateral?	Each Participant holds securities in the MoF DOMS system or, in due course, the NRB CSD. Participants can pledge a number of units to the NRB. Their total value, adjusted for any possible fall in value (the "haircut", to be specified by NRB) is registered in their RTGS collateral account.

5.	What is an Intra-day Liquidity Facility (ILF) ?	When a participant finds itself potentially short of funds, it can use the ILF (which is an intra-day collateralised loan from the NRB) in order to release payments awaiting funds from its settlement queue. The value of the ILF will be locked in the collateral account. Collateral can only be used once at any one time.
		ILFs are intended for short term liquidity, in the expectation of funds arriving later in the day. When the Participant receives funds into its settlement account, the ILF can be repaid and the collateral account unlocked for future use.
		In the event funds are not received by end of day, so that the ILF remains outstanding, the ILF is converted to an overnight REPO (repurchase agreement) when the title of the pledged securities will be transferred to NRB. The participant must organize to receive funds for the next morning so that the REPO can be reversed (which happens automatically as long as funds are available) and the securities are returned less a fee as specified by NRB.
6.	Will overnight repos be used if ILFs are not repaid at end of day ? and if yes, how?	Yes. The NRB will take temporary ownership of the securities. This will be an automated process facilitated by agreements built into the System Rules
7.	If overnight repos are used, what is the role of the bank employee at that point?	Overnight repos are executed automatically based on the collateral supporting the ILF; and the second (repayment) leg is also automatically executed first thing in the morning. The authorisation for the use of such repos is contained in the System Rules. Only if a repayment is not made does there need to be escalation to management.
Technical and System Security		
1.	How is an RTGS transaction generated?	RTGS payments between banks may be accomplished in two ways: first, via Straight-Through-Processing (STP), whereby the payment is entered into the Core Banking System (CBS) (or some other payment origination system) by the paying bank. Second, RTGS payments can be manually entered through the RTGS payment entry screens.
2.	What are the benefits of STP vs. manual entry?	Implementation of Straight-Through-Processing (STP) for payments results in faster entry and settlement of high-value, urgent payments. Through automation, STP reduces the number of people, documentation, approvals, decisions, manual errors, and processing time needed to effect these payments. Automation also ensures that banks follow payment policy rules, as well as perform monitoring and accounting duties surrounding payments.

3.	What system changes in the participant bank CBS need to be made to accomplish STP?	The RTGS vendor will provide the specifications for the interfaces between participant bank core systems (CBS) and the RTGS application. It will describe the processing that needs to take place within the participants' Core Banking Systems to meet the format and protocol requirements of the RTGS with respect to transactions flowing across the interfaces and will set out the technical requirements for the interface.
		Participant banks will need to engage their CBS system vendor to make the changes necessary in their CBS on a timely basis in order to have enough time to test STP during the market testing process.
4.	Could RTGS be made available through internet banking?	Yes. Any bank channel that allows transactions to be set up and submitted can be used to submit RTGS transactions, but the commercial bank's internet and mobile payments applications would have to be enhanced to do so.
		Both originating and receiving banks would need to be RTGS participants
		Customers would need to be informed about the fees.
5.	What level of security does the RTGS system provide to participants ?	The RTGS application has a 2-factor logical access control system that implements security services through use of a security token with PIN and a Username and password facility. Authentication is integrated with Active Directory (via LDAP); PKI and X.509 certificates on smart cards and/or token devices (such as Gemalto e-Token cryptographic tokens).
		Communications security provided by the RTGS is compliant with current security standards, and includes source authentication, non-repudiation, integrity, confidentiality and audit. PKI methods are used, with digital signatures and encryption to guarantee that messages are secure. Some additional investment in security will be necessary for banks setting up STP connections, But NRB will provide digital certificates and a starting set of tokens.
		Transaction Authorization – role-based access control (RBAC) use used to provide and configure authorization service. All transaction submission and data update must involve a data entry user and an authorizer ("4 eyes" principle). A further verification process ("6 eyes") can also be added.
		Audit – application-level audit mechanism allows to track all user activities (such as access to certain actions or data; changes in configuration) and ACS decisions (authorized or denied access Audit records are stored securely by built-in centralized Security Audit Trail service

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