

BUSINESS JUSTIFICATION
FOR THE DEVELOPMENT OF NEW ISO 20022 FINANCIAL REPOSITORY ITEMS

A. Name of the request:

Cash Lodgement and Withdrawal

B. Submitting organisation(s):

National Bank of Belgium

On behalf of the national central banks of:

- Belgium
- Finland
- Luxemburg
- Netherlands
- Ireland
- Cyprus
- Latvia

C. Scope of the new development:

The development standardises the electronic data exchange between central banks and commercial banks and/or cash in transit companies. The proposed messages relate to:

- deposits of cash at the central bank (and feedback);
- withdrawals of cash at the central bank (and feedback);
- the settlement of discrepancies discovered in cash deposits at the central bank;

This proposal is consistent with the principals identified by the EPC Cash Work Group as identified in “Basic Principals for Exchanges of Electronic Data between Banks and NCB for Withdrawals and Deposits.

Deposits and withdrawals occur when commercial banks need to either deposit or withdraw cash (banknotes and coins) from the Central Bank resulting from either build up of cash or a continuous need for cash to supply there customers.

This mismatch between the supply and demand for cash is caused by a variety of reasons including:

- The customer base of the commercial bank. Some serve more businesses (which causes an inflow of cash to be received by them) whilst others serve a larger general public that, for example, can causes a “physical” outflow of cash due through cash withdrawals at ATMs.

- The seasonal effects or other fluctuations in offer and demand for cash (banknotes and coins). Typically, for example commercial banks are in need of cash at the end of the week (to supply ATMs) and have excess stock of cash at the beginning of the week (due to inflows of cash from retailers)
- The mismatch between cash denominations or cash unfit for circulation

These common events cause commercial banks to lodge (deposit) and withdraw cash at the central bank just as private customers and businesses do with their own commercial bank.

To lodge cash to a central bank, these lodgements need to be prepared (counted, sorted per denomination, put into containers for lodgement, etc). Some commercial banks do this by themselves while others have outsourced this work to security carriers. The performance is done by what we would call a cash handler.

Similarly, a commercial bank ordering cash from the central bank will need to identify how cash has to be received, will be split out and meet the needs of its individual branches. Again this is either performed by the commercial bank or a subcontractor.

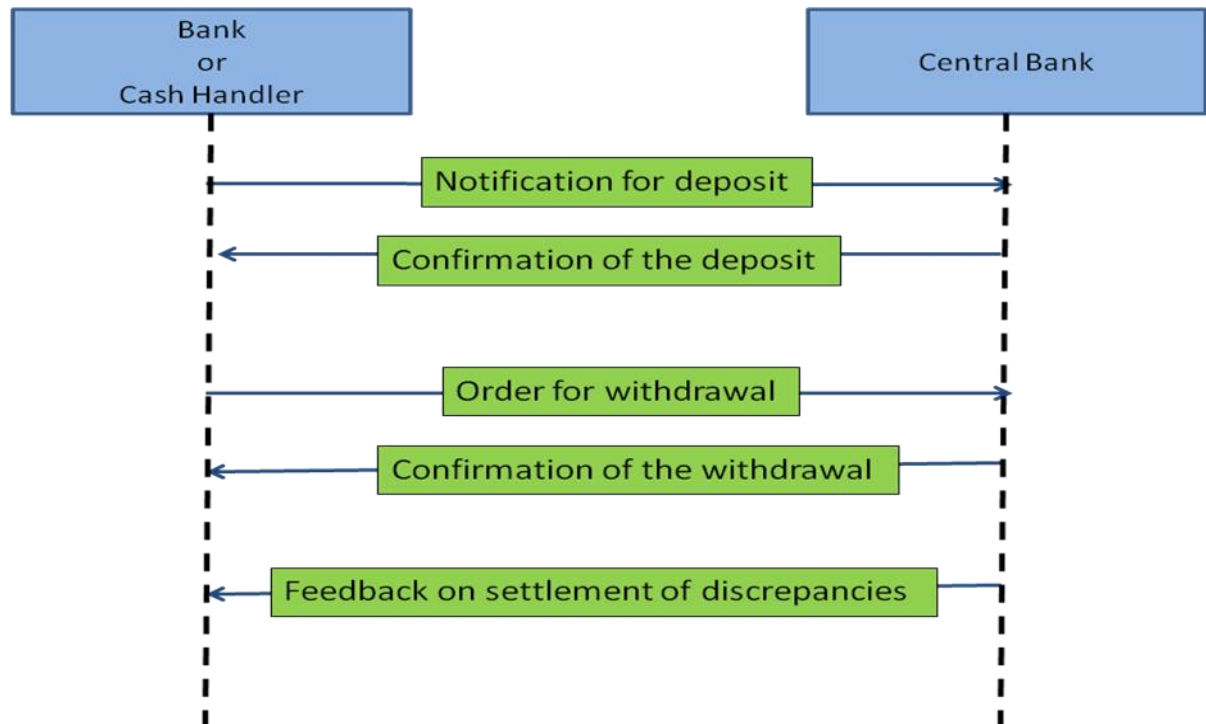
Deposit/Withdraw Activity

The proposals cope with a wide variety of ways in handling cash by identifying the functional roles of the involved parties (actors). As such, the format identifies following roles:

- the operating entity initiating the transaction (could be a commercial bank, private cash center or security carrier);
- the contractual counterpart of the central bank (usually the commercial bank);
- the financial counterpart of the central bank (could be another commercial bank, a retailer, for whom the contractual counterpart is performing the operation);
- the entity that will take care of the transport (could be the security carrier or the commercial bank)

Sequence diagram Actors and sequence flow.

In total, 5 data exchange messages have been defined.



Description of the Messages.

Message 1: Notification for deposit

This message is to be sent by the operating entity, initiating the transaction when a commercial bank wants to deposit/lodge cash with the central bank.

The cash to be lodged is put into a transportation unit that is sealed. The seal carries a unique barcode. That barcode may currently vary by central bank and the message is designed to accommodate a variety of choices in what specific barcode is used.

The message will contain the following information:

1. whom is depositing the cash (i.e., the commercial bank);
2. where and when will the deposit take place;
3. who will deposit the cash physically (for example, which security carrier);
4. what will be deposited (banknotes, coins, the number per denomination, total amount, packaging information (container, sealed bags).

The delivery of this message triggers the central bank to expect the deposit. Upon arrival of the actual deposit central bank employees only have to scan the unique seal number and their system will immediately know all the details.

The central bank will then credit the commercial bank's account.

Message 2: Confirmation of the Deposit

A message will be returned to the depositing commercial bank (or its security carrier), as a result of the deposit. It flags, for each pre-announced transportation unit, whether or not it was received as well as any received containers that were not in the original -message. .

Message 3: Order for withdrawal

Like for deposits, commercial banks will send a-message to the central bank when they want to withdraw cash. The message will contain information on:

1. who is ordering;
2. who is going to pick up the order, when it will be picked up and where it will be picked up;
3. what is ordered (the banknotes and coins requested)

The central bank will prepare the cash to be withdrawn in sealed transportation units and upon reception of the counter-value on its account (no cheque), it will give the transportation units to the appointed security carrier.

Message 4: Confirmation of the Withdrawal.

As a result of the delivery to the security carrier, a message with all details of the different transportation units and the seal numbers will be sent to the ordering commercial bank (or its security carrier). The commercial bank can, based upon this message, check seal numbers etc upon arrival at its cash depot.

Message 5: Feedback on the settlement of discrepancies.

The central bank actually verifies the deposit after the activities defined in messages 1 and 2. Where a cash deposit by the commercial bank (messages 1 and 2) is different from the amounts contained in the original message, the central bank will deliver a Feedback on Settlement of Discrepancies message. If shortages or surpluses of cash are found compared to what was described in the original message, a discrepancy needs to be settled.

Typically, discrepancies are totalled across a single day and only one net amount is settled per day on the commercial bank's account. Details regarding discrepancies found in individual transportation units are reported to the commercial bank electronically through the Feedback on the settlement of discrepancies message. This message will contain, for each transportation unit, the discrepancies found and nature (missing notes, counterfeits, etc). The commercial bank can use this message to adjust its books and match with the settlement received on its account.

The Payments SEG should be assigned the evaluation of these messages. The related ISO 20022 Business Area is 'cash management' (camt).

Use of an alternative syntax is NOT envisioned.

D. Purpose of the new development:

Add efficiency to the business process and lower costs in the exchange of information between central banks, commercial banks and cash in transit companies.

Currently, ordering of cash at central banks is often performed by phone, fax or email requiring re-entering of data, checking of the authenticity of the order. Likewise, deposits are often performed without prior notice requiring checks at windows, giving rise to mistakes, fraud and theft. Commercial banks and cash in transit companies operating on behalf of them, have to adapt to as many different procedures for ordering or lodging cash at central banks as there are central banks.

The use of standardised messaging speeds up the operations at the central bank, reduces costs for both parties, makes the operations more secure (by offering tracking and tracing possibilities), allows smooth data processing by both parties and allows for a detailed cost accounting.

These benefits can be gained by commercial banks, central banks and their subcontractors (security carriers) all of whom may confront a variety of message formats across institutions and geographic boundaries. They allow the implementation of lower cost systems because they provide a common format for messaging to each party and reduce the potential for manual errors in the process. In addition, the use of standardised messaging also allows appropriate security and authentication of messages exchanged between the parties.

The proposal:

- speeds up operations at windows of central banks, hereby reducing costs for the banking industry;
- automates the data exchange to a large extent, reducing errors and redundant data entry as cash is transported between central banks and commercial banks;
- offers full tracking and tracing possibilities, which allows for instance cost allocation to the smallest business unit of the customer;
- allows for commercial banks and cash in transit companies (CIT) to standardise the IT-applications they have in use throughout different countries creating the possibility to generate substantial cost savings.

E. Community of users and benefits:

Central banks:

for central banks the use of standard electronic data exchange messages offers possibilities to introduce common back-end IT-systems.

Commercial banks:

for commercial banks it offers efficiency gains and cost reduction because IT-developments can be implemented in different countries without requiring any adaption. Furthermore, the feedback possibilities offer opportunities to track and trace operations to individual employees and to allocate costs to its different business units in the most flexible way

Private cash centers and/or security carriers:

for private cash centers and security carriers, the standards offers tracking and tracing possibilities and offers the efficiency gains to make it's business more profitable. Furthermore, the standards offer the possibility for them to develop one IT-application that can be used and re-used in different countries, enabling them for instance to work on a single internal IT-platform for their whole cash business

The standard will be successful because:

- The CIT's have identified the need and the support for a standard. Two major security carriers (G4S Securicor and Brink's) have already flagged their support for the project with the European Federation ESTA.
- A non ISO 20022 compliant version of the messages is already used in Belgium from 2002, in Luxemburg and The Netherlands from 2007 and in Finland since 2008, all exchanging the messages between the central bank, the commercial banks and the cash handlers or CIT companies. Currently, about 200.000 messages per year are exchanged in these countries. In January 2010, Cyprus will start to use them. In 2011, Ireland and Latvia plan to use them.
- The 7 central banks who are submitting this BJ are committed to use the proposed ISO 20022 messages, as well as the commercial banks and the CIT companies working on their behalf. The timing of the migration to the ISO 20022 version of the messages will be planned after the messages have been approved.
- The adoption by the banking industry in Europe is very likely as it answers a request by the European Payment Council (EPC) to establish a common electronic data exchange format throughout the euro area. Similarly, adoption by central banks in Europe is probable, as the European Central Bank is seeking an answer to the EPC's request.
- The business case is not limited to Europe only, because it reflects a global need to exchange messages between all parties involved in Cash Handling all around the world. The business case relates to common global practices used in this business area.

F. Timing and development:

Candidate message models will be ready for submission to the RA in the course of the second quarter of 2010, in accordance to the statements formulated in section G.

A complete model and definition report (defining the elements) as well as a review of draft messages will be undertaken with broader participation based on approval of this Business Justification. These additional parties will include other central banks inside and outside Europe, commercial banks and cash in transit companies as well as any ISO20022 expertise available to us.

G. Commitments of the submitting organisation:

The National Bank of Belgium (and its partners) confirms that it can and will:

- undertake the development of the candidate ISO 20022 business models and message models that it will submit to the RA for compliance review and evaluation. The submission will include Business Process Diagram (activity diagram), Message Flow Diagram (sequence diagram) and Message Definition Diagram (class diagram), and examples of valid XML instances of each candidate message and other descriptive material that will be used by the RA to generate the Message Definition Report;;
- address any queries related to the description of the models and messages as published by the RA on the ISO 20022 website.

The National Bank of Belgium confirms that it will promptly inform the RA about any changes or more accurate information about the number of candidate messages and the timing of their submission to the RA.

The National Bank of Belgium confirms that it is committed to support implementation initiatives by national central banks.

The National Bank of Belgium confirms that it is committed to initiate and/or participate in the future message maintenance.

The National Bank of Belgium confirms its knowledge and acceptance of the ISO 20022 Intellectual Property Rights policy for contributing organizations, as follows.

“Organizations that contribute information to be incorporated into the ISO 20022 Repository shall keep any Intellectual Property Rights (IPR) they have on this information. A contributing organization warrants that it has sufficient rights on the contributed information to have it published in the ISO 20022 Repository through the ISO 20022 Registration Authority in accordance with the rules set in ISO 20022. To ascertain a widespread, public and uniform use of the ISO 20022 Repository information, the contributing organization grants third parties a non-exclusive, royalty-free licence to use the published information”.

H. Contact persons:

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I. Comments from the RMG members and Payments SEG and disposition of comments by the submitting organisation:

South Africa comments and disposition of comments by submitter

South Africa recognized the need to automate the processes described in the Business Justification and developed a system, based on proprietary message standards, which has been operating successfully since 2005 in South Africa. However, we support the proposed development of ISO 20022 message standards for the electronic data exchange between central banks and commercial banks and/or cash in transit companies.

Disposition of comment: The CashSSP partners welcome the support of South Africa and would appreciate receiving more information about the proprietary messages used in South Africa to ensure that the future ISO 20022 messages address the needs of this community.

Switzerland comments and disposition of comments by submitter

Switzerland is supporting this Business Justification.

We think that the development of standards in this business area is the right action to take.

We will evaluate the business case for the adoption of the new standards when those are certified and ready to use. Such evaluation will offer an adequate basis for all subsequent decisions concerning their implementation.

Disposition of comment: The CashSSP partnership thanks Switzerland for their support.

French comments and disposition of comments by submitter

- An international (ISO/TS 15000-5) the standard already exists. We would like you to explain the different business requirements between existing standard and the need to develop a new one. We would also like to understand the need in investing in another standard. In the case of the new messages development, as in Europe several standards are used, which evolution will be for the other standards ? We would like to avoid to maintain different ones. Can you confirm us that the new messages development will be made with the convergence target between the existing standards and the new one ? Have you an agreement from existing standards users to give up their use ?

Disposition of comment:

The NBB has indeed been made aware of a set of proprietary messages developed by GS1 based on the ISO 15000-5 Core Component Technical Specification. We are not aware though that either these messages or ISO/TS 15000-5 have been approved as International Standards. The goal of the proposed ISO 20022 messages is to offer a global solution that addresses the business requirements of all existing proprietary or national solutions, including existing messages currently used by the CashSSP partnership, the South African proprietary solution and the CashEDI messages developed by GS1. The very purpose of proposing an ISO 20022 solution is to eliminate the need to support different proprietary standards. The seven central banks of the CashSSP partnership sponsoring this business justification have agreed to migrate to the ISO 20022 solution once developed. The Bundesbank, the FED, South Africa and Switzerland have expressed interest to consider the ISO 20022 solution. The CashSSP partnership would welcome the help of France to promote a single ISO 20022 solution.

- The fundamental requirements for standards evolution is an “end to end” approach taking into account all market players and data exchanged in the transaction chain. The 5 messages proposed by the BJ are far from covering the full activity of the industry and therefore don’t provide end-to-end standards in the entire supply chain. Most of all, the 5 messages don’t meet the most fundamental needs of this market which are :
 - identification of the transaction issuer thanks to an electronic signature;

- full physical tracking of goods during transportation with regular status reports on their location ;
- considering the risk of physical aggression;

Disposition of comment:

The scope of the proposed development does indeed not cover the full transaction cycle, but covers most of the electronic exchange requirements. A proprietary version of the proposed message set is already in use among the CashSSP partners and their clients (Banks, CIT, printing works,...) generating around 200,000 messages/year and addressing 80% of the requirements. The business case to address the remaining 20% could be considered in a second phase.

The identification of the transaction issuer is certificate (X.509v3) based. Not only digital signature but encryption is used to protect the messages from tampering or disclosure, so unauthorized usage of the message content is guaranteed, avoiding possible physical aggressions.

- Is a feedback message scheduled for deposits with no discrepancy after Central Bank's checking ?

Disposition of comment:

For the moment, no feedback message is scheduled when no discrepancies are encountered. Indeed, it could be a good idea to provide also a “discrepancy” message indication that no discrepancies were found.

- Which message does a bank receive as it wishes to carry out a withdrawal but whose account balance is not sufficient ? How is this case processed ?

Disposition of comment:

CashSSP does not allow a withdrawal without payment. Banks have to send a SWIFT MT202 payment message prior to the action of the withdrawal. This SWIFT MT202 payment message will update the credit capacity of that bank in CashSSP. Furthermore, the orders for withdrawal and the credit capacity of the banks are carefully monitored by staff of the Cash Department.

Payment SEG comments and disposition of comments by submitter

The Payment SEG endorses the Cash Lodgement and Withdrawal business justification with the following comments. The involvement of numerous submitters is a clear indication of its broad support. The Payment SEG offers the following comments:

- The Payment SEG is aware that some central banks, such as the Bundesbank, are using a set of non-ISO XML messages developed by GS1. The Payment SEG recommends that the submitting organization contact the GS1 to include the requirements of the GS1 and other central banks using the GS1 messages for inclusion in the ISO 20022 messages under development. The Bundesbank is interested in joining the message development effort and will participate in the evaluation of the submitted ISO 20022 messages.

Disposition of comment:

The CashSSP partnership welcomes the help of the Bundesbank in ensuring that the future ISO 20022 messages includes the business requirements of the current users of the proprietary messages developed by GS1.

- The U.S. central bank, The Federal Reserve, is also interested in the effort, and has discussed their interest with the submitting organization, who has plans to include Federal Reserve requirements in the ISO 20022 messages under development. The Federal Reserve will also participate in the message evaluation.

Disposition of comment:

The CashSSP partnership thanks the Federal Reserve for their willingness to cooperate in this effort.