What's New in

Temenos Transact

August 2020

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Release Highlights

Analytics

DW Export » Unique Record Extraction

All the new and modified records were being captured in `DW.EXPORT.INCREMENTAL.WRK.FILE`, when the *Dw Online Update* and *Takeover* fields were set to Both/Incremental and Incremental, respectively. Duplicate records were also being captured in the work file due to multiple intraday changes for a particular ID.

The application is now enhanced to support DW incremental extraction, where the DW.INCR.PRE.PROCESS.SERVICE writes only the unique record IDs to `DW.EXPORT.WRK.FILE` eliminating the duplicates.

As a result, only the last modified records of the applications are extracted for the Last Working Day (LWD) in CSV.

> **The topic related to this feature is given below:**
>
> DW Export

Operational Data Store/Snapshot Data Store » ODS and SDS Support PostgreSQL

ODS and SDS support PostgreSQL database, in addition to the existing databases.

> **The topics related to this feature are given below:**
>
> Snapshot Data Store
>
> Operational Data Store

Operational Data Store APIs » Operational Data Store – APIs through Semantic Query Layer

The Temenos Transact system had 40 Operational Data Store (ODS) APIs that belong to various domains to access the Temenos Transact data from ODS in Temenos Data Lake (TDL).

Additional APIs are now introduced into ODS to access different forms of data in Data Lake solution through Semantic Query Layer, which separates the read from the Temenos Transact system.

> **The topic related to this feature is given below:**
>
> Operational Data Store APIs

TDE - Administrator » Data Store Deployment in TDE

Data Store Deployment is a new feature added to TDE to automatically deploy Temenos Transact applications in DES, ODS and SDS, instead of deploying every application manually. The simplified deployment process reduces the manual work in capturing real time transactions of these applications in ODS and SDS.

> **The topic related to this feature is given below:**
>
> Data Store Deployment

Application Framework

System Core » Handling Corrupt Contract during Close of Business (COB)

Initially, when a tSA fails resulting in continuous looping, the erroneous contracts were not moved out of the JOB LIST/QUEUE, which stops the COB process from proceeding further. Now, the tSM can instruct the system to log off that specific agent, which is continuously looping, identify the contract, which caused the looping and remove it from the JOB LIST/QUEUE enabling the COB process to get completed. Such erroneous contracts are recorded in `EB.EOD.ERROR`, with *Fix Required* field set to YES, indicating that they have to be manually resolved before the next COB starts.

> **The topic related to this feature is given below:**
>
> Handling Exception

System Core » Reversal or Replacement of Records during File Upload

This functionality enables the customers to reverse or replace a record during file upload. To enable this functionality, the *Pre Process Api* field is added in `EB.FILE.UPLOAD.TYPE` to attach the jBC API from `EB.API`. The *Reformat Plugin* routine now allows the user to return the operation with two values—ACTION-REVERSE and ACTION-REPLACE.

> **The topic related to this feature is given below:**
>
> External use of FILE.UPLOAD

Banking Framework

Collateral » Exchange Rate in CO.ASSET.DETAILS Table

In Temenos Transact, the exchange rate is based on Reuters feed. During the collateral valuation process, the collateral is revalued using this exchange rate. However, when the collateral asset currency is different from the collateral currency, the exchange rate in which the conversion takes place is not stored anywhere in the system. The latest value of the collateral is updated in the system, but the revised exchange rate is not updated anywhere in the system.

This functionality allows Temenos Transact to consider the revised exchange rate for collateral valuation, thereby giving the latest value of the collateral. The *Exch Rate* field is added to the CO.ASSET.DETAILS table to store the exchange rate for each asset defined under a collateral. The benefits of this functionality are:

- It ensures that there is no mismatch in the collateral execution value and the sum of collateral values of the individual assets in the portfolio, in client-specific reports.
- The user can check the exchange rate in the CO.ASSET.DETAILS table in case there is any doubt over the final collateral value.

Click here to understand the installation and configuration updates for this enhancement.

The topic related to this feature is given below:

Exchange Rate

System Tables/Delivery » Structured Address based on ISO 20022 Payments Standards

Temenos Transact now allows users to capture an address based on ISO 20022 standards. The getCustomerAddressOutput API, which is used by Temenos business applications (such as Temenos Payments Hub (TPH) and Payment Orders) and other external channels, retrieves and returns the customer main address in a structured and/or unstructured format.

- The length of the *Street* and *Flat No.* fields in the `CUSTOMER`, `DE.ADDRESS`, `PERSON.ENTITY` and `CUSTOMER.ADDRESS.HIST` applications has been increased to accommodate up to 70 characters.
- The *Department*, *Sub Department*, *Floor*, *Town Location Name* and *District Name* fields are added in the `CUSTOMER`, `DE.ADDRESS`, `PERSON.ENTITY` and `CUSTOMER.ADDRESS.HIST` applications.
- The *Unstruct Addr Default Format* field is added in the `ADDRESS.OUTPUT.RULES` and `COUNTRY.PARAMETER` applications to identify an unstructured address output format.

Click here to understand the technical impact of this enhancement for customisation and upgrades.

The topics related to this feature are given below:

Structured Address

Customer Address History

Untructured Address

API for Structured and Unstructured Address Format

Centralised Reference Data » Structured Creditor Reference

Structured Creditor Reference is an international business standard based on ISO 11649. It is an alphanumeric string with the letters ‘RF’ at the beginning. The Structured Creditor Reference can be used in both domestic and cross-border invoices. A company can identify customer invoices and automate various financial administration processes using the Structured Creditor Reference. By validating the Structured Creditor Reference provided as part of the payment details, the bank can improve the level of confidence on the accuracy of the supplied data, and therefore, reduce the need for manual intervention during the reconciliation process for their customers.

To comply with the ISO Standard ISO 11649, the following framework APIs are introduced in Temenos Transact to generate and validate the Structured Creditor Reference using the ENQ RD.API.STUCTUREDCREDITORREFERENCE.1.0.0 enquiry:

- RD.GENERATE.CREDITOR.REF.API – Allows the user to generate the Structured Creditor Reference from the supplied Real or Unique Creditor Reference based on the ISO standard.
- RD.VALIDATE.CREDITOR.REF.API – Allows the user to validate the Structured Creditor Reference that is supplied by the payment system.

> **The topic related to this feature is given below:**
>
> Structured Creditor Reference

Collateral » Collateral Allocation

In scenarios where banks use collateral from the pooled security, collateral allocation priority has to be maintained at the collateral record level to allocate among different products. When multiple products are linked to one secured Limit, the system needs to know the order in which the collateral is being

allocated and which product has a higher priority than the other.

The *Contract Seq Rtn* field is added to the COLLATERAL.PARAMETER application. This field allows the users to attach a contract sequence routine.

- When the user attaches a contract sequence routine in the *Contract Seq Rtn* field, the order of the contracts returned from the user exit will be considered instead of the standard pro-rata allocation of the contracts.
- If the API does not return the updated list of contracts in the requested order, the contracts will be allocated in the order in which they are updated in the LIMIT.TXNS table prior to EB.CONTRACT.BALANCES (ECB) update.
- If the *Contract Seq Rtn* field is left blank, the collateral allocation of the underlying contracts utilising the Limit will be done based on pro-rata allocation.
- The collateral allocation amount for the contracts is updated in ECB during Start of Day Batch processing through the LI.CONTRACT.ALLOCATION service. It is also updated online through the LI.CONTRACT.ALLOCATION.SERVICE, which can be executed on ad hoc basis.

> **The topic related to this feature is given below:**
>
> Contract Sequence Routine

Loan Loss Provisioning » Collateral Mitigation and Provisioning Changes

In the Provisioning (PV) module, a framework has been introduced to derive the updated collateral value of an asset using an API for mitigation purpose. The API returns the collateral value during the provision calculation process. This collateral value will be different from the system-calculated collateral amount for the contract. This functionality allows banks to:

- Define an API in the *Collateral Amt Api* field in the `PV.PROFILE` application to fetch the updated and latest collateral value, if there is any change in the collateral amount.
- Define the cut-off factor at the contract level in the `PV.ASSET.DETAIL` application to calculate the base balance.

Click here to understand the installation and configuration updates for this enhancement.

The topics related to this feature are given below:

Calculating Base Balance

Calculating Collateral Value

Corporate

Letter of Credit » Handling Optional Fields in MT707/708 for LC and LC.AMENDENTS

Swift changes 2018 for MT707/MT708 supported only mandatory fields and optional fields were out of scope.

It is now enhanced to support optional fields. MT707 is re-structured and aligned as a mirror image of MT700. The following changes are implemented in the LC and LC.AMENDENTS applications:

- Introduction of new optional fields
- Change of field definition for the existing fields
- Allows usage of structured fields and codes instead of free text in LC.AMENDENTS and all the contracts in LETTER.OF.CREDIT where *Operation* field is set to A.

This also allows mapping of:

- Optional fields to the delivery message to relay MT707
- Inward delivery message to the optional fields to receive the MT707

> **The topics related to this feature are given below:**
>
> Optional Fields in LC.AMENDMENTS
>
> Optional Fields in LETTER.OF.CREDIT

Private Wealth

Corporate Actions » Handling Market Notification for Corporate Action Events

The corporate action details are usually available in the market before the announcement is received from the custodian. Institutional customers should be informed once the information is available in the market. When information is received from a market provider, the system must be able to identify all entitled customers and send out a notification.

Temenos Transact is now enhanced to handle early market notification of a corporate action event from a non-custodian and notify all the entitled customers, who are eligible to receive pre-notifications. The system now:

- Generates an MT564 (NEWM) to entitled customers. Once the official announcement is received from the custodian, the custodian message is considered as the master message. Customers do not receive a duplicate MT564 (NEWM).
- Notifies the entitled customers through MT564 (REPL) message, if there are any differences between the custodian message and the earlier market notification.
- Ignores further market notifications, once the custodian message is received.

Customers are notified about the corporate action event in advance, once the information is available in the market and institutional customers can inform their portfolio holders.

The topics related to this feature are given below:

Market Notifications for Corporate Action Events

Custodian Vs Non-Custodian Deviation - Enquiry

Non Depo Msg

Institutional Custody » Handling Order Cancellation Request

Institutional customers can send their order instructions through SETR.004 or SETR.010 for placing a redemption order or a subscription order, respectively. Upon receiving the subscription or redemption order, the system creates the order accordingly and sends the order status message to the institutional customers through SETR.016. Also, the system sends the order communication to the broker when the transaction is authorised.

Temenos Transact is enhanced to accept the cancellation request through SETR.005 and SETR.011 for previously sent redemption (SETR.004) or subscription order (SETR.010). On receiving the cancellation request, the system can now trigger the order cancellation status message to the institutional customer through SETR.017.

The banks can now receive the order status cancellation report through SETR.017 from brokers and send the order status cancellation report to their institutional customers.

The topics related to this feature are given below:

Cancelling Orders based on Incoming MX Messages

Generating Order Cancellation or Instruction Status

Fixing Order Cancellation Status Advice in Error

Regional Banking Solutions

Argentina Model Bank

Accounts » Saldos Inmovilizados Accounts - Embargo CBU)

In Argentina, the tax revenue agency and associated affiliates can impose an embargo (seizure) of funds held by customers in banks.

This functionality allows banks to apply seizures to Saldos Inmovilizados accounts when the customer does not have any available funds in other financial products.

Saldos Inmovilizados is not a financial product, hence it will not have a Clave Bancaria Uniforme (CBU) registration, but it can be used for seizure requests.

> **The topic related to this feature is given below:**
>
> Saldos Inmovilizados Accounts - Embargo

China Model Bank

Goods and Services Tax » VAT Processing

In China, the price tax separation must be divided by the tax collected from charges and accrued income in real time.

This functionality allows users to manage the charges collected for banking transactions and accrued incomes, collected for loans, deposits, payments due to interests and letter of credits.

The following applications are released as part of this functionality:

- The `TAXGST.VAT.DETAILS` application stores the VAT information extracted from the income.
- The `TAXGST.VAT.TRANS.REF` application stores the payments ID for the tax entry by contract, in the form of a funds transfer or payments ID.
- The `TAXGST.TAXRATE.CHANGE` application is used to initiate the VAT adjustment whenever there are backdated changes in the VAT rate.
- The TAXGST.VAT.DETAILS enquiry allows the users to view the VAT posting for transactions.

The topic related to this feature is given below:

Goods and Services Tax

Finland Model Bank

Account Related Processing » ITELLA Scanned Payments

This functionality generates the account statement on a defined frequency for each account using the ITELLA postal services, as per the information requested by ITELLA. ITELLA is the postal service in Finland responsible for the delivery of the account statements requested by customers.

The data required for generating the account statements is sent from Temenos Transact through the interface to the ITELLA postal services. The `NORACC.ITELLA.ACCOUNT.STATEMENT` application stores the account details that are captured for a customer.

> **The topic related to this feature is given below:**
>
> ITELLA Scanned Payments

Payments Posting and Validations » Payment Confirmation Slip

This functionality allows users to generate the payment confirmation slip from the `PAYMENT.ORDER` application in the Finnish format, based on the nature of the transaction, to send it to the customer.

Two versions of the `PAYMENT.ORDER` application are provided to the bank, one for normal Single European Payments Area (SEPA) payments and another for foreign currency SEPA transactions. The payment confirmation slip format for normal SEPA payments is attached to the SEPA version, and the format for foreign currency SEPA is attached to the foreign exchange SEPA version.

The topic related to this feature is given below:

Payment Confirmation Slip

Periodic Interest » Configure the Date for the Periodic Interest Rate

Banks have common rules on how the Euro Interbank Offer Rate (EURIBOR) for contracts has to be determined.

This functionality allows users to set the periodic interest rate for the current date for loan contracts for individual customers, using the `NORPIR.PARAMETER` application.

Whenever a loan is disbursed and if interest type is periodic, Temenos Transact will pick the rates based on configured values in the `NORPIR.PARAMETER` application. The `NORPIR.PARAMETER` application is provided to update the effective date of the rate that needs to be picked. This functionality might not be required for banks dealing with corporate customers, and so a disable functionality is also provided in the parameter application.

The topic related to this feature is given below:

Periodic Interest

Subsidy Loans » Configure the First and Last Disbursement

The Central Approval Authority for the subsidy loans has laid out conditions on the minimum amount of loan that can be disbursed during the first and last instalments. The bank's users are warned when the loan amount disbursed is

less than the minimum percentage value as advised by the approval authority.

This functionality allows the user to define the minimum first disbursement percentage and the maximum allowed number of disbursements.

Three new fields are introduced as part of the existing external property class XSUBSIDYLOANPRODUCT to update the *Loan Min First Dis Percent*, the *Loan Min Last Dis Percent* and the *Loan Max Allowed No Of Disbursment* fields.

When the user is performing a loan disbursement, the system raises a warning in the following cases:

- If the first disbursement is less than the configured amount.
- If the last disbursement is less than the configured amount
- If the total number of disbursements exceeds the maximum number.

> **The topic related to this feature is given below:**
>
> Subsidy Loans

Student Loan » KELA Interface

KELA (Social Insurance Institution of Finland) guarantees student loans given by any bank in Finland. An interface communicates the loan request details between the bank and KELA.

This functionality allows users to send details to KELA whenever there is a new student loan request in the bank or a change in the loan details during the loan transfer.

The following applications are released as part of this functionality:

- The `FIBASE.KELA.PARAMETER.DETAILS` application is created to store the common information across the company.
- The `FISTLN.KELA.TRANSACTION.DETAILS` application is created to hold the information received from KELA.
- The FISTLN.KELA.TRANSACTIONS enquiry is created to list the transactions for which the responses are not received from KELA.

The topic related to this feature is given below:

KELA Interface

Student Loan » Term or Maturity Date

This functionality allows users to calculate the repayment maturity date of student loans depending if KELA (Social Insurance Institution of Finland) sends the interest capitalisation confirmation for a loan or not.

New rules are applied for the interest capitalisation:

- If the capitalisation falls on a holiday, the system will not move it to the next working day, the interest capitalisation will start from the holiday date itself.
- If KELA does not confirm the interest capitalisation for three consecutive times, then the repayment will have the maturity date as the first repayment date plus the number of the *Academic Year*.
- Whenever KELA confirms the interest capitalisation, the system schedules the interest capitalisation with the maturity date as the guarantee expiry date.

The topic related to this feature is given below:

Term or Maturity Date

Global Model Bank

All Funds Bank Interface » Fund Catalogue Record 71 Sub03

Every working day All Funds Bank (AFB) sends the funds order confirmation details in a file to the corresponding bank that has placed the order. These files contain the instrument level details that are provided by AFB to update the distributor's structural, functional and operational information about the funds available in the bank.

This functionality allows users to process the commission details for the Record 71 Sub03 received from AFB in the ALLFND.FUND.SECURITY application.

> **The topic related to this feature is given below:**
>
> Fund Catalogue Record 71 Sub03

All Funds Bank Interface » Order Settlement Document

All Funds Bank (AFB) sends the funds order settlement confirmation details in a file to the corresponding bank that has placed the order.

This functionality allows users to load the data from the incoming file from AFB in the ALLFND.TRANSACTION.LOG application, and update the confirmation date, value date, currency, and commissions in the SC.SEC.EXE.ORDER, SECURITY.TRANSFER, POSITION.TRANSFER and ESFUND.TRASPASO.REQUEST corresponding applications.

The *Allfnd Fund Attribute* and *Allfnd Charge Name* multi-value fields are added to the ALLFND.AFB.PARAMETER application to update the AFB fee and the corresponding SCDX.CHARGE.PARAMETER application name that is part of the

execution.

The *Charge Value* and *Charge Name* fields are added to the ESFUND.TRASPASO.REQUEST application to hold the SCDX.CHARGE.PARAMETER commission name and value that is sent by AFB.

The ALLFND.FAILED.AFB.TRANSACTIONS enquiry allows the user to view the failed confirmations from AFB.

> **The topic related to this feature is given below:**
>
> Order Settlement Document

Core Functionality for all Country Modules » MiFID TRAX Reporting

This functionality allows users to capture multiple trading venue transaction identification codes provided by the broker, when there are multiple executions for a single order using the *Trd Venue Txnid* field from the SC.EXE.SEC.ORDERS application.

The structure of the *Trd Venue Txnid* existing field from the SC.EXE.SEC.ORDERS application was modified to be a multi-value field. The validation routine in the SEC.TRADE application used to populate *Trd Venue Txnid* field was modified to handle multiple values from *Trd Venue Txnid* field from the SC.EXE.SEC.ORDERS application.

> **The topic related to this feature is given below:**
>
> MiFID TRAX Reporting

Hungary Model Bank

Warrants » Queuing of Payments and Warrants - UOD

An Unauthorised Overdraft (UOD) is the amount drawn over and above the sanctioned limit in case of overdraft accounts, and any debit balance in case of accounts without a sanctioned limit.

This functionality allows users to queue unauthorized overdrafts.

A queue is established when an eligible account has a UOD due to debit interest and/or charges and/or fees charged to that account. Once the collection of forced warrants is completed, queued but not capitalised, the UOD will be capitalised to the account. Penalty fee and queuing item fee will be collected once the collection or expiry of forced warrants is completed and if sufficient balance is not available, the same will be capitalised on the account, which will result in UOD.

> **The topic related to this feature is given below:**
>
> Warrants

Warrants » Queuing of Payments and Warrants - Settlement

There are three types of settlements:

- None: If the settlement is none, no accounting entries are passed but a message needs to be sent to PCS (a third party clearing system) so that the same can be forwarded to the initiator.
- Partial: Partial settlements happen when the queued amount is not fully collected, but a part of the outstanding warrant amount is collected and the

regulatory warrant is not cancelled or expired. Queued items are also eligible for partial collection.

- Full: Full settlement happens when the entire outstanding amount of the queued item is collected.

This functionality allows bank users to manage settlements for warrants and loans. The *Min Payment Amount Check* field is introduced in the `HUWRNT.QUEUE.TYPE` application to specify whether during the partial settlement of a warrant, the minimum threshold amount defined for partial settlement is required or not.

The *Cot Settlement*, *Debit Txn Code* and *Credit Txn Code* fields are added to the `HUWRNT.QUEUE.PARAMETER` application to define the transaction codes, which will be used for warrants and loans settlements.

The `HUWRNT.QUEUE.MANUAL.SETTLEMENT` application is introduced o allow the user to initiate the manual settlement process for warrants.

> **The topic related to this feature is given below:**
>
> Warrants

Warrants » Queuing of Payments and Warrants - Cashpool

This functionality allows the user to handle cashpool accounts for collection. The available balance is calculated based on the accounts of the customer. In the case of cashpool accounts, the aggregated or shared balance usage depends on the type of cashpool and type of collections.

The Queue Item and the Customer Level Collection (CLC) services are used to fetch the extended accounts of a customer which has a queue item. The information is then stored in the `HUWRNT.CUS.QUEUE.INFO` and `HUWRNT.QUEUE.INFO` applications.

The Queue Overview enquiry has drill-down options to view the warrant request details, loan request details, extended account details, queue collection details

and the active deposits.

> **The topic related to this feature is given below:**
>
> Warrants

Warrants » Queuing of Payments and Warrants - CLC

The functionality addresses the tasks performed by the Customer Level Collection (CLC) service, which is a common service used for warrant collection, collection of loan repayments and collection of an un-authorised overdraft (UOD). Collections happen across all accounts of customers, except for certain types of accounts which are excluded.

The following applications are released as part of this functionality:

- The `HUWRNT.QUEUE.EXEMPT.AMOUNT` application is created to manage the exempt amount in accounts.
- The `HUWRNT.LOCK.PRIORITY` application is introduced to store the priorities that can be set on locks.

> **The topic related to this feature is given below:**
>
> Warrants

India Model Bank

Accounts » Booking Branch Information Printed on Account Statements

Based on regulatory guidelines set by the Reserve Bank of India (RBI), the address and telephone number along with other details of the branch need to be displayed in the passbooks or the statement of accounts.

This functionality allows users to generate and print account statements that contains the branch details, using the BNK/IN.PRINT.STATEMENT service.

The *Display Nominee* field is added to the `AA.PRD.DES.STATEMENT` and `AA.ARR.STATEMENT` applications with the following field values: Yes, No and Do Not Print. This field will allow users to decide whether to print the nominee name in the generated advice or not. Temenos Transact has an existing functionality to store the booking branch details for the account, required to be printed in the account statement.

> **The topic related to this feature is given below:**
>
> Booking Branch Information on Account Statements and Dr Cr Advices

Lending Compliance » Foreign Currency Advances

Foreign currency advances refer to advances that help companies to finance commercial operations abroad.

This functionality allows users to generate the necessary reports with a specified frequency for each customer category so that, every month, the bank can monitor and review the unhedged portion of the foreign currency exposures of their

customers.

The following applications are released as part of this functionality:

- The LD.LOANS.AND.DEPOSITS,LOAN.AMEND.IN version allows the bank to extend the foreign currency loans above 10 million USD.
- The LD.LOANS.AND.DEPOSITS,LOAN.AUTH.IN version allows the bank to authorise or delete the extended foreign currency loans.

> **The topic related to this feature is given below:**
>
> Foreign Currency Advances

Lending Compliance » Loan Rolled Over

The term rollover refers to the practice of extending the due date of a loan.

This functionality allows banks to track and restrict rollovers for customer loan contracts created under the short-term loan product.

As per the current regulatory guidelines defined for rolled over short-term loan contracts, the number of times a loan contract can be rolled over is 2. The INLEND.LDPD.PARAMETER application allows users to set the number of rollovers allowed for a category as defined by the regulatory.

For tracking the number of rollovers, bank users will use the INLEND.LD.ROLLOVER.DETAILS application to capture the date of the rollovers.

Using the LD.LOANS.AND.DEPOSITS application, users can link the rollover of the loan (created as a new contract) to the previous contract. The previous contract number will be retained throughout all the rollovers to maintain the traceability.

The INLEND.LD.ROLLOVER.DETAILS enquiry is used to list the number of rollovers for a loan contract.

The topic related to this feature is given below:

Loan Rolled Over

Lending Compliance » Penal Interest

Every bank in India is given targets and sub-targets for lending under the priority sector. For loans given to borrowers under the priority sector, no penal interest is charged for loans that have principal amount up to 25000 rupees.

The penal interest can be levied for reasons such as default in repayment, non-submission of financial statements, etc. However, the policy on penal interest should be governed by well-accepted principles of transparency, fairness, the incentive to service the debt and due regard to genuine difficulties of customers.

The functionality allows the user to configure and capture the classification of a loan under the priority sector category, to prevent charging penal interest for the principal amount up to 25000 rupees.

The topic related to this feature is given below:

Penal Interest

Payments information » Remittance Regulatory Returns to RBI and FIRC

A Foreign Inward Remittance Certificate (FIRC) acts as documentation for a foreign money transfer. It tracks the amount of the transfer in both the foreign currency and in rupees, where the transfer comes from and where it ends up. Since the foreign fund transactions might be used for illegal activities like money laundering, an FIRC is a safeguard against such purposes.

This functionality allows users to mark the already issued FIRC series ID as

cancelled using the INPYMT.FIRX.SERIES application, so that the next available FIRC series will be assigned to this payment transaction. No change will be made in the payment transaction.

The topic related to this feature is given below:

Remittance Regulatory Returns to RBI and FIRC

Israel Model Bank

Price Feed Source Selection » Separate Price Feed for Own Book Revaluation (ICE Feed)

This functionality allows the user to choose multiple price feed sources to change the price per security and portfolio. In addition to the price feed selection, there is also a provision for using the manual price feed, stored in the *Last Price* field in the `SECURITY.MASTER` application.

Foreign securities are valued based on the price feed from Bloomberg or Interactive Data (ICE) while local securities are valued based on price from Tel Aviv Stock Exchange (TASE).

> **The topic related to this feature is given below:**
>
> Price Feed Source Selection

Saudi Arabia Model Bank

Early Closure Charges » Minimum or Maximum Rate

This functionality allows users to calculates the maximum and minimum interest rates for products. The rates will be recorded based on Saudi Interbank Offered Rate (Sibor) rates. The calculation of the maximum and minimum rate is done at the time of revision.

The maximum and minimum interest rates are configured at the product level, in the interest product condition and attached to the product.

> **The topic related to this feature is given below:**
>
> Minimum and Maximum Rate

Customer Infrastructure » Foreign Currency Exchange

This functionality allows banks to manage the requests raised by non-customers to perform foreign exchanges from foreign currency to local currency. Each transaction has to be within the transaction and cumulative limit which is based on the legal document or visa type.

The `SACUIN.CASH.NONCUST.PARAM` application allows users to configure the legal document available for non-customers and the limits corresponding to the legal documents.

There are two types of limits:

- Transaction limit: The transaction limit is set to the transaction amount.
- Cumulative limit: There is a timeframe configured in the `SACUIN.CASH.NONCUST.PARAM` application. Within that time, the

transaction amount is added to the cumulative limit and when the cumulative limit is reached, any transaction over that limit will be declined by the system.

The cumulative amount for a particular legal ID reference number and the first transaction date for a particular legal ID reference number are captured in the SACUIN.CUMULATIVE.UPDATE application whenever a transaction is authorised. If the limits set in the SACUIN.CASH.NONCUST.PARAM application are breached, the transactions will not be allowed.

The topic related to this feature is given below:

Foreign Currency Exchange

Spain Model Bank

Special Institutions Interfaces » Embargo

This functionality allows users to process the Phase A, B, C and un-blocker files received from the tax authorities: AEAT (Agencia Estatal de Administración Tributaria) for rest of Spain, and Navarra and Guipuzkoa for territories.

Once the Phase A file is received, if the customer account does not have sufficient balance to fulfil the block request, then a partially block will be done. If the blocked amount from the first three accounts received in Phase A cannot cover the Embargo block amount requested, then additional accounts of the customer will be identified where there are available balances to be blocked. Such accounts will be listed and blocked in Phase B.

The BNK/OFS.MESSAGE.SERVICE service is used to created locks in the `AC.LOCKED.EVENTS` application.

> **The topic related to this feature is given below:**
>
> Embargo

Cheques and SNCE Clearing » SNCE03 Regulatory Requirement for Account Verification

This functionality allows banks to send and receive account customer validation messages to or from participating banks across Spain through the Iberpay communication services on a 24x7 schedule.

The following enquiries and applications are created for this functionality:

- The `ESIBER.PARTICIPANTS` application allows users to store the details of the valid participants.
- The `ESIBER.ACCOUNT.VERIFICATION.ONLINE` application allows users to send and receive account verification requests.

- The ESIBER.ACCOUNT.VERIFICATION.ONLINE.STATUS enquiry allows users to view the status of the requests sent and received.
- The ESIBER.PARTICIPANTS.VIEW enquiry allows the users to view the participant details for account verification.

The topic related to this feature is given below:

SNCE03 Regulatory Requirement for Account Verification

Sri Lanka Model Bank

Provisioning and Collateral » Non-Performing Loan Parameters

This functionality enables users to classify credit facilities like overdraft and loans as non-performing, based on specific conditions.

The following applications and field are created for this functionality:

- The `LKPVCO.OVERDRAFT.DETAILS` application is created to allow users to record the aging days of facilities like overdraft and loans, on a daily basis, for a customer which has been overdrawn.
- The *User Class* field is added to the `PV.ASSET.DETAIL` application, which allow users to manually upgrade or downgrade a facility.
- The *Manual Provision Amount* field is added to the `PV.ASSET.DETAIL` application, which allows users to manually capture the provision amount.
- The *Npl Status* field is added to the `AA.PRD.DES.ACCOUNT` application, which allows users to view if the status of an account was updated as non-performing by the system.

> **The topic related to this feature is given below:**
>
> Non-Performing Loan Parameters

Provisioning and Collateral » Collateral Management

This functionality allows users to create different classes of collaterals with rules defined for each class. The rules defined for each collateral class will decide whether the collateral type can be considered for provision.

A combination of several collaterals like: immovable properties, movable

machinery, personal guarantees, cash deposits, and stock mortgages, may be obtained for commercial facilities. This is commonly known as pooled security. Collateral utilisation may vary based on the utilisation of limits by the client.

However, in the case of project lending and facilities backed by cash, the collateral is obtained on a one-to-one basis. The collaterals in such cases are specific for the facility or contract and will be assigned to that particular facility only.

The topic related to this feature is given below:

Collateral Management

Tunisia Model Bank

Customer Infrastructure » Customer and Customer Relationship Management (CRM)

This functionality allows the validation of the legal documents that need to be submitted by the customer when creating a customer record.

The postal code of the customer address is mandatory, and when the place is updated, the system also updates the postal code, governance and delegation accordingly.

The `CMBASE.STATE, TNCUIN.DELEGATION.DETAILS` and `TNCUIN.POSTAL.CODE` applications store the details of the governorates, delegations, places and postal code.

The `TINCUIN.CUSTOMER.PARAM` application is created to check if the customer is minor or major, and check if the necessary relationship is updated if the customer is minor or dependent.

The topic related to this feature is given below:

Customer Infrastructure

United States Model Bank

US Regulations » Corrections Before IRS Filing

The IRS (Internal Revenue Service) component that is part of the US Regulations feature is enhanced to allow bank users to correct the income reported to IRS.

This functionality will allow the financial data to be corrected without raising financial entries in the system.

> **The topic related to this feature is given below:**
>
> Corrections Before IRS Filing

Payveris Interface - Bill Pay and P2P » Payveris Bill Payments

Payveris is a payment hub that provides banking functions including bill pay and P2P (Person-to-Person) payments.

The posting file from Payveris for the bill payment and P2P payments will be processed by the Payveris Bill Payments feature to debit or credit the customer's account and post the settlement entries to the clearing account.

> **The topic related to this feature is given below:**
>
> Payveris Interface

Retail

Arrangement Architecture » Generating IBAN

Bundles is a non-financial Product Line. The bundle arrangements do not have any underlying account number and also no option to generate an IBAN number.

Bundles is now enhanced to generate an IBAN by attaching a customised routine in *Alt Acct Gen Api* field in `ALT.ACCT.PARAMETER` table. The routine returns a dummy account number based on which the IBAN is generated.

Additional fields are introduced in Product Bundle Property Class based on which the system auto-populates the IBAN for the Bundle arrangement.

IBAN generation is now enabled for Master account arrangement in Balance Netting Hybrid Pool structure.

NOTE: The generation of the IBAN does not enable the bank to use the Bundle Arrangement for posting any transactions. If at all, a transaction is initiated, it will throw an error.

Click here to understand the technical impact of this enhancement for customisation and upgrades.

The topics related to this feature are given below:

Generating IBAN

IBAN in Bundles

Hybrid Pooling

Collections » Monitoring Multi-Currency Collections

Banks offer foreign currency loans. The delinquent foreign currency loans have to be monitored by the banks. The Collections module needs to track the past due foreign currency loans and post tracking, has to record the outcome of the collection meeting/discussions with the customer. Various attributes are introduced in the `CL.PARAMETER`, `CL.COLLECTION.ITEM` and `CL.ACTIVITY` tables to support:

- Monitoring of overdue contracts in multi-currencies.
- Recording collection outcome in any foreign currency and viewing the equivalent local currency amounts.
- Collection of AA overdues and Past Dues in all currencies.

> **The topics related to this feature are given below:**
>
> Monitoring Multi-Currency Collections
>
> Configuring Collections
>
> Workflow for Monitoring Multi-Currency Collections

Arrangement Architecture » Repayment Calculator

Customers likely to avail a loan (like Fixed Mortgage) prefer to have an option to know the loan repayment amount without contacting the bank.

To enable this feature, a simple enquiry-driven Repayment Calculator is introduced. It provides the customers with the following information without any simulation in the system

- Repayment Amount
- Total Interest Amount

- Total Fees
- Total Repayment Amount (Loan Amount + Total Interest + Total Fees)

The enquiry is synced with an user interface (for instance, the banks' website or a mobile app) where the customer can specify the required loan amount, tenor, the product and optionally, the currency and a repayment frequency to fetch the repayment details.

Click here to understand the technical impact of this enhancement for customisation and upgrades.

The topic related to this feature is given below:

Simulations

Technology

Integration Framework

Interfaces » SWIFT Interface

This feature provides users with a standard L1 interface (generic SWIFT Alliance Interface) to process any SWIFT message. SWIFT Interface camel flow implementation provides connectivity channels between SWIFT Interface endpoint and Temenos Transact queues. The SWIFT Alliance Interface can be used to process both the incoming and outgoing SWIFT messages in Temenos Transact.

The topic related to this feature is given below:

Swift Interface

Integration Framework Designer » Creating Banking Framework Events

In Event Designer, users can now define integration events for Banking Framework. For example, users can generate integration events when an accounting entry or statement entry is raised.

This feature enables collection of data from multiple related applications.

The topic related to this feature is given below:

Creating Banking Framework Events

Interaction Framework

IRIS R18 » Health Check Service in IRIS R18

In IRIS R18, a new infra service is introduced to test the configured Queues and Temenos Transact connectivity status (or health). Users can now fetch queue health, current Hostname, and Temenos Transact health using this service.

> **The topic related to this feature is given below:**
>
> Health Check Service in IRIS R18

UXP Browser » Connecting Resource Server to Databases Automatically

To connect resource server with the databases such as MSSQL, ORACLE, PostgreSQL, NUODB etc., you should usually create resource schema manually by executing appropriate queries depending on the database that is going to be used.

UXP Browser is now enhanced to connect to all the mentioned databases including h2 (both Temenos Transact and Resource Server).

To obtain the database connection, you should get the DB parameters using tenantID from the tenant system property (default value is SYSTEM).

Once DB connection is obtained, Resource Schema gets created automatically during the deployment of `resourceserver.war` without any manual work.

> **The topic related to this feature is given below:**
>
> Connecting Resource Server to Databases Automatically

Platform Framework

Temenos Workbench V1 (UXP) » Code Packager

In DSF Packager, users can now compile and package jBC and Java codes along with Data records. This feature is supported only in IDE mode. IDE can be Eclipse or Design Studio.

Users can create a project specific to jBC and Java, compile it and create a JAR out of it, which can later be used for Transact operations.

> **The topic related to this feature is given below:**
>
> Code Packager

TAFJ » Message Integrity Crypto API

The ICryptoSPI interface has been introduced in the Message Integrity module. This allows Message Integrity to sign and verify a message using custom security APIs. The custom security APIs have the ability to implement this new interface and integrate Message Integrity with custom security library. This feature ensures the message is securely transmitted.

> **The topic related to this feature is given below:**
>
> Working with ICrypto Interface

Infrastructure » Multipart Data Support

The API end points of Microservice Framework now supports to upload and

download the files through multipart content type. You can upload binary content along with the payload json and download it using download API.

As a part of cloud agnostic file reader, a file reader is introduced in the GetPaymentOrder API to get and read the file from the particular location through the BASE64 encoded format.

As a part of cloud agnostic file writer, a file writer is introduced in the CreateNewPaymentOrder API to write a file to a particular location through the BASE64 encoded format.

The topic related to this feature is given below:

Multipart Data Support

Infrastructure » PAP UI Integration

Based on the entity and API json files available under the model project, it is now possible to generate the metadata. Alongside, the system generates a resource file, which comprised of the consolidated list of Entity and API metadata files.

The topic related to this feature is given below:

PAP UI Integration

Treasury

SWAPS » LIBOR Replacement in SWAPS

Risk-Free Rate (RFR) will replace London Interbank Offered Rate (LIBOR) at the end of 2021. The backward-looking RFR requires daily averaging (simple or compound), which provides the final rate by the end of the interest period.

The `SWAP` application that captures and processes (L)IBOR-linked transactions is enhanced to calculate the interest rate in arrears, based on the RFR and interest rate spread. This functionality offers the following benefits:

- Process new transactions (Overnight Index Swaps - OIS) with RFRs.
- Allow swap contract to use RFRs, which used benchmark rates (such as LIBOR) to calculate the interest rate.
- Ensure a smooth transition from (L)IBOR to RFR.

Click here to understand the technical impact of this enhancement for customisation and upgrades.

The topics related to this feature are given below:

Introduction to Risk-Free Rate

Capturing an Overnight Index Swap

Installation and Configuration Notes

Banking Framework

Collateral » Exchange Rate in CO.ASSET.DETAILS Table

The CX module must be installed in Temenos Transact.

Loan Loss Provisioning » Collateral Mitigation and Provisioning Changes

The PV module must be installed in the system.

I Technical Notes

Banking Framework

System Tables/Delivery » Structured Address based on ISO 20022 Payments Standards

The following routines have been enhanced to return the newly added address fields:

- getCustPostalAddressEnrich
- getNameAddress
- getPhysicalAddress
- de.get.formatted.address

Retail

Arrangement Architecture » Generating IBAN

As Bundles is a non-financial product line, which do not have an associated account, the BBAN ID or account number should be generated and returned by the local routine that is attached in *Alt Acct Gen Api* field of the `ALT.ACCT.PARAMETER` table based on which the IBAN gets generated.

Arrangement Architecture » Repayment Calculator

An enquiry is released in Temenos Transact that facilitates the calculation of the required values.

1. The Repayment Calculator enquiry uses the AA.PRODUCT.SCHEDULE.PROJECTOR core routine to calculate the loan schedule details without creating a new arrangement.
2. It accepts the Term, Amount and Product.ID as mandatory arguments, uses the Product Catalogue conditions and calls the Schedules enquiry.
3. Then it returns the schedule details such as payment dates, property amounts, payment types, payment type amount and outstanding balances.
4. Finally, all interest property amounts are accumulated and shown under Total Interest Amount column, all charges are accumulated and shown under Total Fees column and the total interest, total fees and total principal are accumulated and shown under the Total Payment Amount column.

Treasury

Swaps » LIBOR Replacement in Swaps

When back patched clients are upgrading to the current release, the SW.CONV.RFR.ALL.SWAP service has to be executed once to map the values from the local reference fields to core Risk-Free Rate (RFR) fields.