

TITAN Core Banking

Introduction

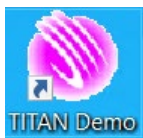
The Titan core banking solution is a client-server-based system. The client applications are written in Visual Basic.Net and run on the workstation. The back-end server is a Microsoft SQL server. The Data access technology is ADO.NET from the Microsoft .Net framework.

TITAN is highly configurable core banking solution and can be easily parameterised to offer bespoke functionality for multi-currency deposit, loans, and treasury products. It has an inbuilt letter creation and document management system as well as an integrated report writing system.

Login

Titan can be configured to use its own login usernames and passwords (with its own bespoke and configurable password policies for complexity and expiry dates etc) or by using Windows authentication. Regardless of the type of authentication used, it uses group-based security based on TITAN user groups.

Launch the TITAN demo by clicking the following shortcut

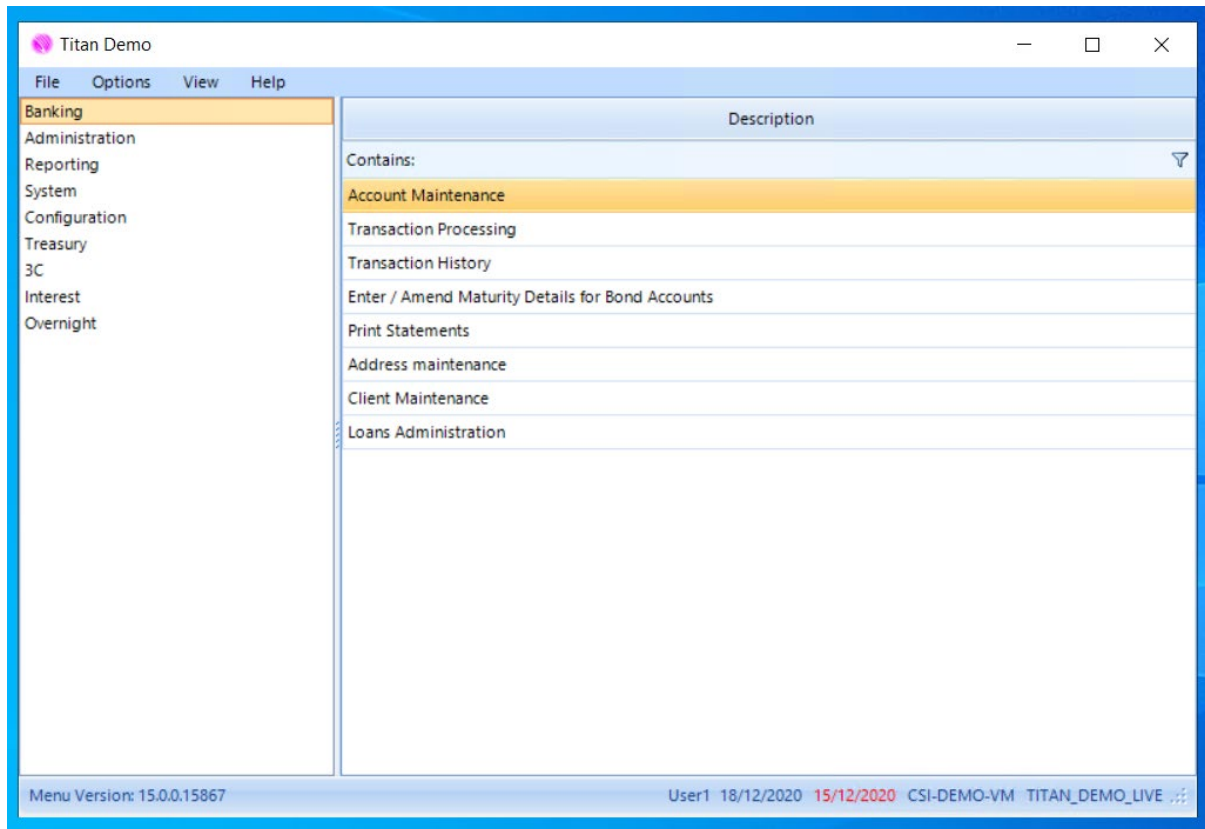


As this demo system has been configured for TITAN authentication login as follows – the password is **Demo2021** (Till Number should be left as the default and will be discussed later)

A screenshot of the 'TITAN Core Banking Login' window. The window has a blue title bar and a light blue background. On the left, there is a yellow padlock icon. To the right of the padlock, there are three input fields: 'Name:' with the text 'User1', 'Password:' with a masked password of 12 dots, and 'Till Number:' with the text '1'. Below these fields is a 'Login' button. At the bottom of the window, the path 'csi-demo-vm\titan_demo_live' is displayed. The window title is 'TITAN Core Banking Login' and it has a close button in the top right corner.

When you log into TITAN you will be presented with the main menu as follows, this menu consists of Tabs on the left-hand side, and programs on the right-hand side. This is completely soft coded and

can be configured to your personal requirements, the choice of tabs and programs visible is based on the TITAN user group. The following menu is configured for User1 based on their TITAN user group), but a lower level user would be presented with fewer options to avoid confusion and potential business risk.



Account Maintenance

The main hub for customer related activity is the **Account Maintenance** program, which is on the **Banking** tab as shown above. Launch the account maintenance program by double clicking it. In the A/C Number field you can enter a known account number or search on a name partial name (you can also load previous accounts you have looked at by choosing File > Recent Accounts from the main menu. I have chosen to load the account explicitly by number so enter **90000963** and tab off to load the details as shown.

From this screen we can view and or amend the following:

Account Holders this account is configured as a single holder account. We support multiple holders such as husband and wife and can also add relationships such as Power of Attorney, Beneficiaries, Trustees etc.

Balances we can see the various account balances such as Current/Un-cleared/Interest Balance/A Accrued etc.

General Account details these include the Status, Product, Interest rates again all of which can be parameterised to your bespoke requirements.

Interest Instructions Depending on how the product is configured you have the choice of reinvesting capitalised interest into the same account, another internal TITAN account or paying it away electronically by BACS.

Account & Client Flags these are usually highly parameterised and different for each customer, so for the demo I just show a few sample indicators.

Note:

As the account maintenance program is a centralised hub, a lot of the options available link to other programs / areas on the system. This guide will now briefly consider each of the customer service functions individually:

[Account Holders](#)

Titan allocates accounts to clients. A client is defined as one or more individual account holders coming together in particular roles (e.g. primary holder, second holder, agent, power of attorney). This has the advantage of complete flexibility whilst only holding the individual holder details in one

place, regardless of how many accounts or client groupings they are party to. This makes changes (e.g., change of address) easy to enter for all applicable clients grouping and accounts. To alter the client details, click on the [client] button and to edit the individual holder details double click on the holder name in question.

The holder details screen allows entry of all personal details:

- Contact Details – Residential, correspondence and email addresses and well as multiple phone numbers
- Know your customer – Proof of address and identity documents and keeps track of country of issue and expiry dates
- Geographical details – birth and residence details
- Employment – occupation, employer details and bank reference details

Account History

From the main account maintenance form a user can quickly access the history of an account by pressing the [History] button. This shows transactions in date order. It is possible to narrow down a search for a particular transaction by specifying a date range.

Transaction History For Account 90000963 [System Date 15/12/2020]

File Options Help

01/04/2016 01/01/2099 90000963 GBP Mrs Linda Kelly Deposit (A)

Transaction	Date	Code	Remark	Debit	Credit	Balance	Contra Number	Backdated	Cleared Flag	ExBonus
3086	01/04/2016	BGC	Payroll Deposit		5,000.00	5,000.00	0		Y	
3088	02/04/2016	TT	Awesome Computers	446.00		4,554.00	0		Y	
3090	02/04/2016	TT	Southbridge Video	405.00		4,149.00	0		Y	
3092	02/04/2016	TT	FusionTomo	186.00		3,963.00	0		Y	
3094	02/04/2016	TT	Humongous Insurance	66.00		3,897.00	0		Y	
3096	02/04/2016	TT	Contoso Ltd.	319.00		3,578.00	0		Y	

Transaction History from 01/04/2016 To 01/01/2099

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If is also possible to see more details, such as clearance dates, comments, cheque details, if applicable. Note that transaction clearance dates are driven by parameterised transaction type properties and are calculated automatically.

Viewing Transaction - 3096

File Options

Account Details

Number 90000963 Name Mrs Linda Kelly

Status Dormant Product Deposit (A)

Opened 01/04/2016 Closed

Transaction Details

Payment Type 44 Telegraphic Transfer Payment

Currency 1

Currency Name Sterling

Amount -319.00

Penalty/Interest 0.00

Trans. Number 3096

Group Number 3096

Batch Number 0

Dates User Info A/C Balances Cheque

Paid Date 02/04/2016 Status Flags

Value Date 02/04/2016 Y N

Interest Date 02/04/2016 Y N

Cleared Date 02/04/2016 Y N

Processed Date 01/04/2016

Server Date 2016-07-04T14:30:09.643

Remark Contoso Ltd.

Comment

Exit

A separate tab shows the details of the user who originally entered the transaction and the till they were logged onto at the time. Note that Titan uses the concept of tills to be able to individually account for cash and cheques processed by a particular bank cashier. By knowing what has been processed at a particular till, it is possible to balance that till cash draw at the end of a shift.

You will also see that on Titan, transactions are created in balanced groups, making it possible to reconcile the system to external bank accounts and produce a balanced accounting feed.

Interest Proof

On Titan, interest is accrued on a daily basis by the overnight batch run. The accrued interest on an account can be recalculated at any time to prove the daily calculation or to make adjustments following a backdated transaction or rate change. This recalculation is automatic following the creation of a backdated transaction. To see the interest proof, use the [Proof] button on the account maintenance form and accept the default options.

Interest Date	Transaction/Event Type	Transaction Value	Balance	No. of Days	Int. Rate	Interest Eamed	Penalty or Adjustment	Accrued	Base Rate	verag Rate
01/04/2016	Balance brought forward	5,000.00			0.000	0.0000		0.0000		N
01/04/2016	Bank Giro Credit	5,000.00	5,000.00	1	4.000	0.5479		0.5479	1	N
02/04/2016	Telegraphic Transfer Paym...	-446.00	4,554.00					0.5479	1	N
02/04/2016	Telegraphic Transfer Paym...	-405.00	4,149.00					0.5479	1	N
02/04/2016	Telegraphic Transfer Paym...	-186.00	3,963.00					0.5479	1	N
02/04/2016	Telegraphic Transfer Paym...	-66.00	3,897.00					0.5479	1	N
02/04/2016	Telegraphic Transfer Paym...	-319.00	3,578.00	17...	1.600	269.4577		270.0057	1	N
15/12/2020	*** End Of Report ***	0.00	3,578.00		1.600	0.0000		270.0057	1	N

Calculated up to 15/12/2020

Interest	270.0057	Accrued interest at 15/12/2020	Interest	270.0059	Difference	Interest	-0.0002
Balance	3,578.00	Balance	3,578.00	Balance	Balance	0.00	

Print Proof Reports

Customer Form Normal Format

Preview Print View Details Summary OK

titan_demo_live

This calculation also projects interest to a future date (e.g., next scheduled capitalisation date).

Where an event requires it, Interest can be recalculated in bulk for all accounts that meet specified conditions (e.g., in a particular product).

Account Settings

Less frequently accessed account settings and parameters are maintained on the [Settings] screen.

The screenshot shows a software window titled "Account Settings" with a close button (X) in the top right corner. The window is divided into several sections:

- Account Name:** A text field containing "Mrs Linda Kelly".
- Options:**
 - Capitalisation:** A/C Opened (01/04/2016), Frequency (Annually), Seed (Last of Mar), First Cap Date (31/03/2017), Next Cap Date (31/03/2021), Next Cap Value (286.63). Includes a "Recalculate" button.
 - Withdrawals / Additions:** A list of checkboxes: No Additions, Phone Withdrawals, Phone Charges Waived, Fax Withdrawals, Fax Charges Waived.
 - Bad Debt Provision %:** A text field containing "0".
- Various:**
 - Signatures:** A dropdown menu showing "One Signature".
 - Mandated Signatures:** An empty list area with "Add" and "Remove" buttons.
 - Passbooks:** A text field for "Number" and a "Full" button.
 - Interest for Positive Balances:** "Additional interest to Base %", "Positive balances" (0.000), and "Min Tier Level" (0). Includes an "Amend" button.
- KYC:**
 - Various:** Text fields for "Year End", "Other A/C", and "Migrated A/C".
 - Statements:** "Frequency" (Quarterly), "Base Date" (01/04/2016), and "Next Date" (empty).
 - Alternate Statement Name:** Two empty text fields.
 - Account Limit:** "Max Balance" (empty text field).

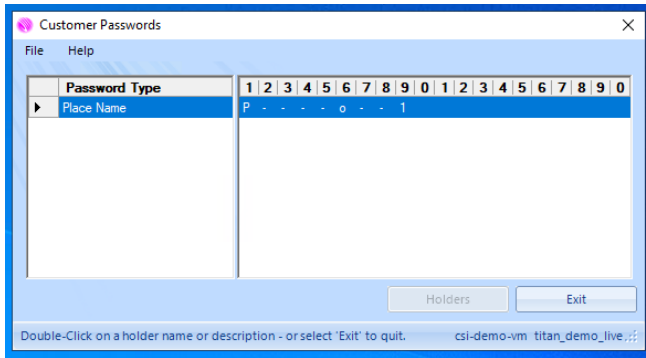
At the bottom of the window are "OK" and "Cancel" buttons.

Titan products can be set up with a range of capitalisation dates and capitalisation frequencies. The settings screen enables the operator to view (or amend) the settings for a particular account (within the rules of the product in question). Similarly, the dates and frequencies for statement production can be maintained on this screen. It is also possible to set up bonus interest rates or negotiated overdraft limits for a particular account on this screen.

Finally, this screen can be used to log expected transactional activity (e.g., expected transaction value, transaction count). This information can be used to drive algorithms that detect exceptional activity such as money laundering.

Passwords

When the customer is contacting the bank by phone it is necessary to maintain a password system to confirm identity. Titan can hold multiple parameterizable key words (e.g., Mother's maiden name) and PINs for each individual. This means that it is not necessary for joint account holders to share passwords. Having identified the customer, the system can be set to display only a set number of randomly selected characters from the password (in this case 3). Passwords can be automatically generated or selected by the customer.



Maturity Details

Titan offers a wide range of options for fixed deposits and loans. We now move to a different sample account (10005084 is a 1 Year fixed rate bond)

By selecting [View Maturity] the user can see the current and historical rollovers for this account, and by double clicking on the current term (with a future maturity date) you can drill down to set maturity instructions (e.g., pay away, rollover for another year, transfer to a new account) ahead of the actual maturity date.

Nominated Banks

To add security to telephone banking and to save re-entry of bank details, it is possible to save nominated banks for a client. These payment details can be used for regular payments, such as standing orders, maturity and interest payment destinations. These details can be used for any of a client's accounts.

Transactions

Transactions are at the core of Titan. Account balances and accrued interest are both calculated from and reconciled to stored transactions. To add a new transaction to an account, select [New] from the account screen and then select [Transaction] and then select whatever sort of transaction you require.

The screenshot displays the 'Transaction Processing' application window. The interface is organized into several sections:

- Account Information:** Account number 90000963, Customer Name Mrs Linda Kelly, and Customer Account type.
- Payment Details:** Payment type 'Bank Giro Credit', Amount GBP 5,723.00, and Penalty 0.00.
- Date and Remarks:** Paid Date 04/01/2021 and Remarks 'Car sale'.
- Current Details:** A summary box showing Status: Active, Balance GBP 9,301.00, Accrued GBP 273.142800, and Previous Interest Rate 4.000%.
- Navigation and Action:** Buttons for 'Contra', 'Multiple Cheque Rcpts', 'New Credit', 'Transfer', 'New Debit', 'A/C Closure', and 'Exit'. A 'Group Trans.' field is set to 4198.

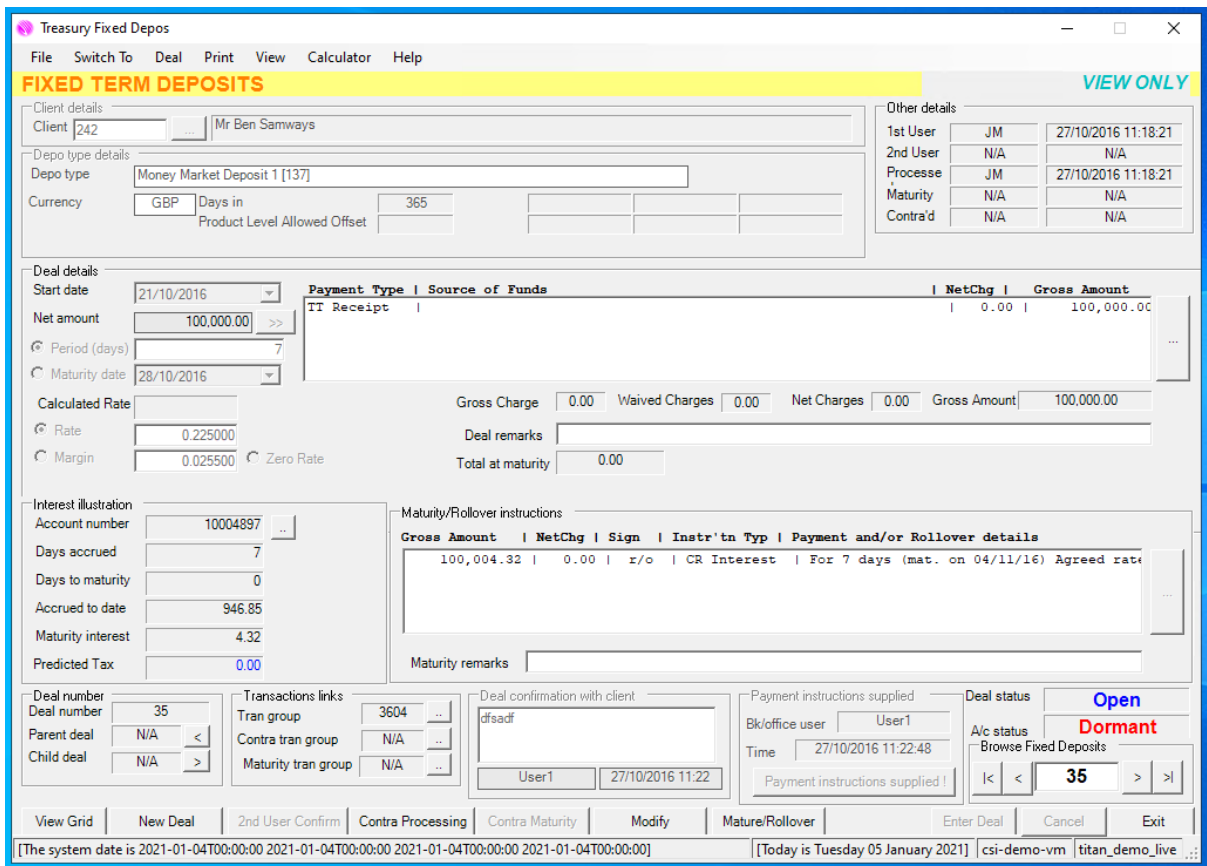
You will be prompted to enter the transaction type, and the amount. Each payment type has a wide range of parameterizable validation and authorisation rules which can be set up to control who does what and who is required to authorise what (as a second user check). Transactions can be back or forward dated and the effect of the new transaction on accrued interest is automatically calculated and adjusted as necessary. Transaction charges can be levied automatically and system wide exchange rates applied in cross currency transactions.

If a transaction has been incorrectly entered and needs to be removed a [Contra] is created with an equal and opposite effect, thus preserving the historical record whilst not necessarily showing the incorrect transaction (or the contra) on customer facing statements.

External electronic transactions and destination payment details are entered in this program, but the actual payment instructions are queued for export as a batch to the external payment service for BACS, CHAPS, SWIFT etc.

Treasury

Titan contains a powerful treasury function capable of creating entirely bespoke deposits or loans in any currency for high net-worth clients, or indeed the banks own deposits. The system contains maturity ladder reports to assist in balancing loans and deposits.



Customer Correspondence

Titan contains a sophisticated letter writing function for generating automated correspondence to clients (e.g., welcome letters, transaction confirmations). Letters are set up as templates with automatically filled data inserts, but it is also possible for the operator to tailor the text or add a personal message before the letter is saved and sent. It is possible at any time to see the correspondence history for an individual.

Note that it is also possible to combine incoming emails and scanned incoming correspondence with outgoing correspondence (both automatic and manual) to see a complete picture of the relationship between the bank and the customer.

A preview pane enables the operator to quickly drill down to view a particular letter in response to a customer query.

The screenshot shows a window titled "Document List - Contact: CORKHILLRC(Mr Robert Corkhill)". The window has a menu bar (File, Edit, View, Tools, Help) and a toolbar with various icons. Below the toolbar are several filter dropdowns: "<All Roles>", "<All Categories>", "No start date", "<All Sources>", "<All Users>", "<All Cabinets>", "No end date", "CORKHILLRC(Mr Robert Cork)", and "<All Groups>".

ID	Author	Cabinet	Description	Document Creation Date	Contact	Document Contact Group
238	csi-demo-vm\demo	csi-demo-vm\demo	Bank Giro Credit	07/12/2020 17:13:12	CORKHILLRC(Mr Robert Corkhill)	
232	csi-demo-vm\demo	csi-demo-vm\demo	Welcome Letter	30/11/2020 15:02:06	CORKHILLRC(Mr Robert Corkhill)	
231	csi-demo-vm\demo	csi-demo-vm\demo	Bank Giro Credit	30/11/2020 14:58:15	CORKHILLRC(Mr Robert Corkhill)	
230	csi-demo-vm\demo	csi-demo-vm\demo	Welcome Letter	26/11/2020 14:22:43	CORKHILLRC(Mr Robert Corkhill)	
228	csi-demo-vm\demo	csi-demo-vm\demo	Bank Giro Credit	18/11/2020 13:22:38	CORKHILLRC(Mr Robert Corkhill)	

The selected document (ID 238) is shown in a detailed view below the table. The view includes a "Hide Lines:" checkbox and the following text:

(238) Bank Giro Credit

Mr Robert Corkhill
407 Oldtown
Bath
Avon
BA1 1PR

7th December, 2020

csi-demo-vm\demo\csi-demo-vm\demo /238

Dear Mr Corkhill,

Re: Deposit (A) 90000930 Mr Robert Corkhill

We are pleased to inform you that we have credited your account with the sum of GBP 612.50 received by our bankers on 7th December, 2020.

We can advise you that your balance is GBP 6,011.50, currently earning interest of 5.0000 %.

Please do not hesitate to contact this office if we can be of further assistance.

Yours sincerely

csi-demo-vm\demo
New User

Ready 5 csi-demo-vm\demo titan_demo_live 14:49

Administration

As already mentioned, Titan is highly parameterized with the bank in control of almost every aspect of the system. Fixed data lists (e.g., counties, occupations, KYC document types, accounting ledger codes, client flags, account status) can all be maintained in the general purpose [Codes] program or by using their own bespoke maintenance program.

System parameters are used to enable or disable particular business functions (e.g., the number of characters of a password that appear on screen, the number of days before a user password expires)

Certain exceptional or high value tasks (e.g., entering high value transactions, backdating transactions, adjusting interest rates) can be set up to be either performed only by a user in a higher-level admin user group, or approved by such a user (by entering their username and password). This access can be controlled at menu level or in certain cases within a program where the instruction to save is issued. Either way the system administrator has complete control as to which user groups can perform with tasks.

Products

All banking products (e.g., Current account, 1 Year fixed deposit) can be set up using the [Product Maintenance] program. A Titan system will usually be set up on delivery to meet the customer's initial requirements (often as part of an initial data migration project).

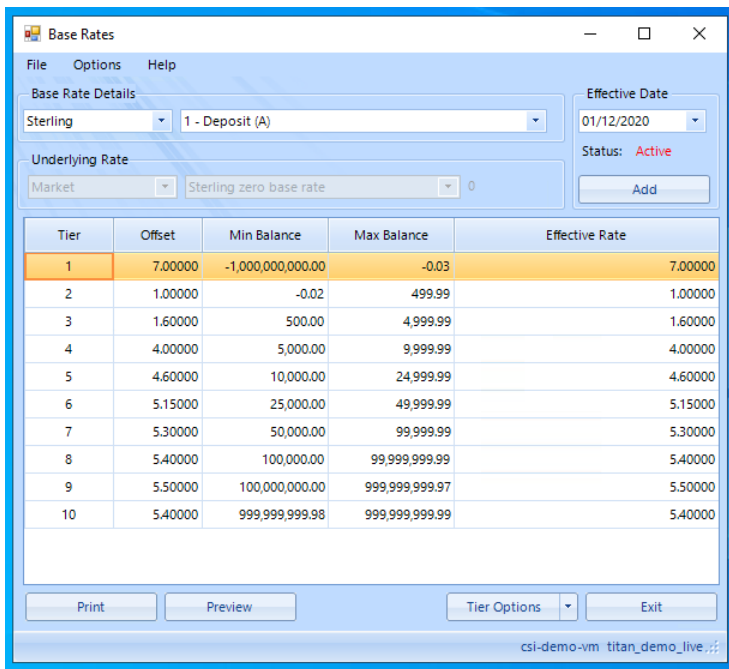
Once live, new products can be created from scratch or if a new product is a variation on an existing product, the operator can clone an existing product and then make the specific required changes.

The bank has control over: currency, geographical availability, capitalisation and statement options, maturity periods, interest rates including bonus and penalty rates, withdrawal limitations and availability to different teams within the bank in addition to a large number of other options and reporting flags.

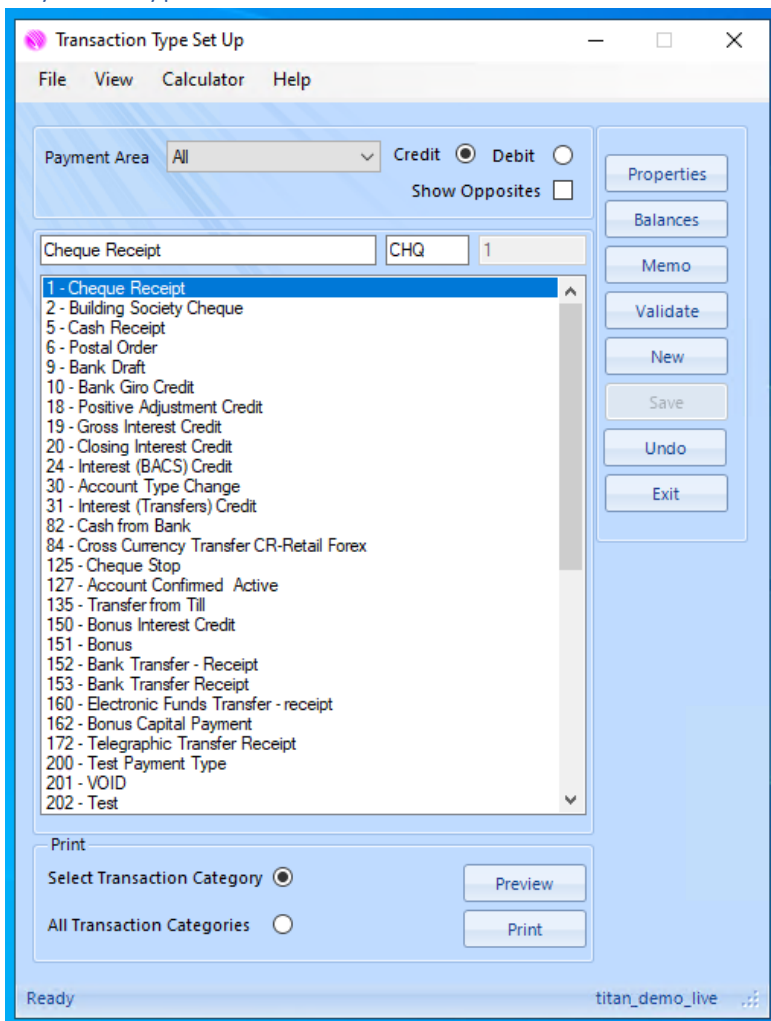
Interest Rates

Interest rate and tier structures are created independently to products. A rate structure consists of one or more tiered rates specifying a rate per balance band. These can be updated at any time and will be picked up and used from the next overnight interest accrual run. A rate structure can stand on its own or be an offset to an underlying base rate (e.g., Bank of England) or market rate (e.g. 1 week USD LIBOR). Titan contains an import function to upload Market rates on a daily basis if required.

A complete history of interest rate and tier structures is held indefinitely for reference and to enable accrued interest on accounts to be validated.



Payment types



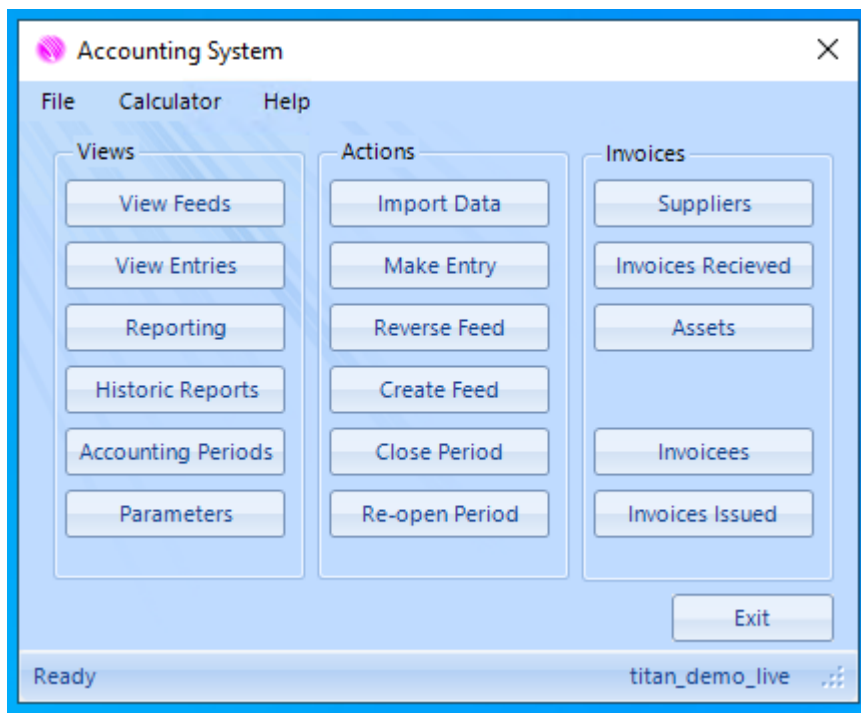
As with products, all payment types are parameterized and new payment types can be set up as required at any time. The operator has control over: days to clear, availability, whether the payment

type affects interest, is available as a for closure, whether it triggers balancing transactions, how it is reported to the accounting system and many more including properties set up by the customer.

General Ledger

In most installations, Titan exports accounting information to the banks own accounting package (e.g., Sun Accounts) This can be raw (every transaction) or pre-processed (like transactions combined together to give a single total post). The user has complete control over which records are totalled (by payment type, product, credits or debits)

Alternatively, Titan contains its own basic general ledger system. This uses the same parameters as the export function to summarise the daily transactional activity and maps the activity to its own chart of accounts. Other (non-Titan) transactions (e.g., invoices, assets) can be added manually and Balance Sheet and Profit and Loss reports created.



Overnight processing

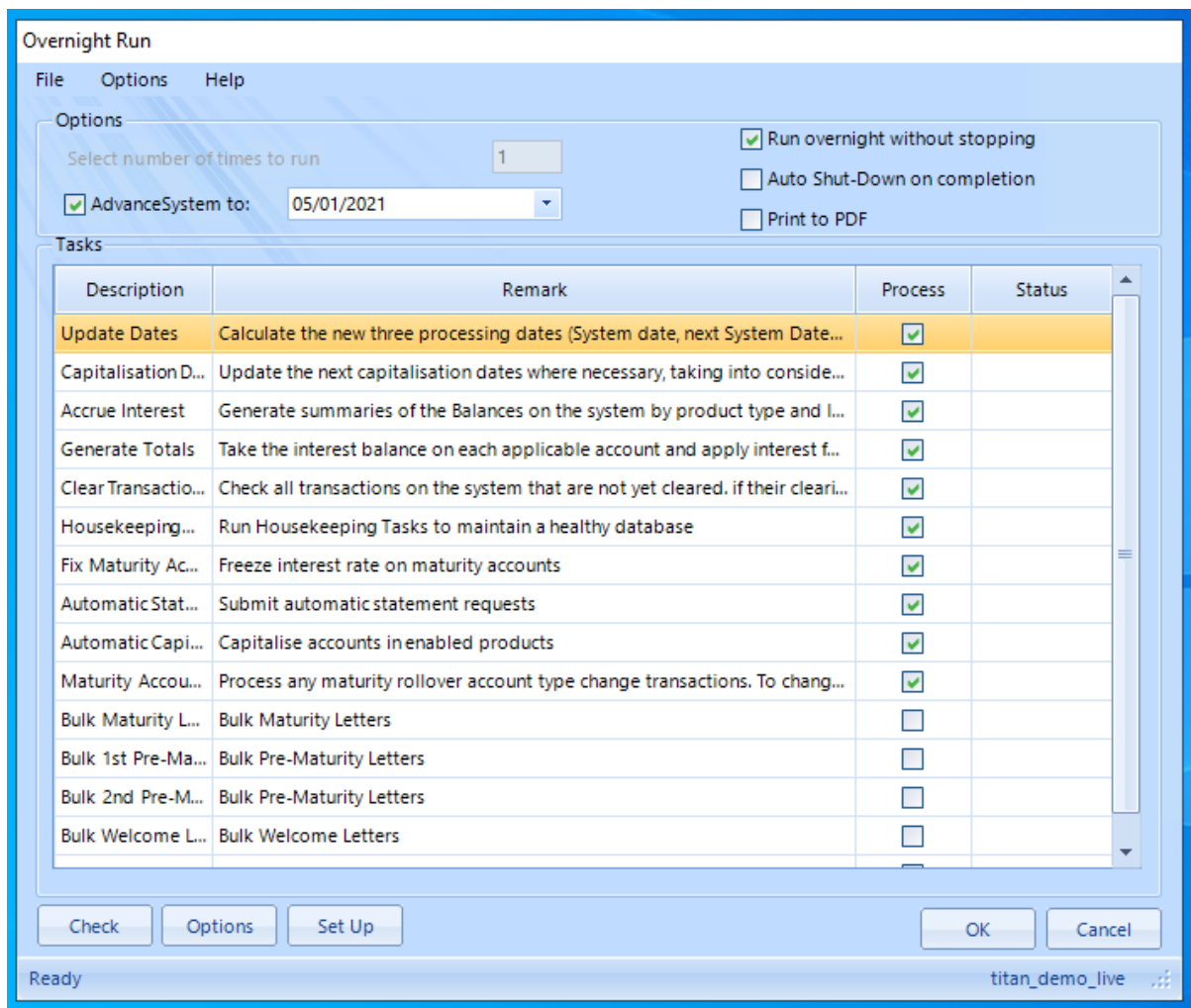
The overnight process is run one a day to perform a large number of automated tasks. Its primary task is to clear transactions and accrue a day's interest on every account on the system. It activates any forward dated interest rate changes and marks dormant and inactive accounts that have not been used for a specified period.

It capitalises interest and creates statements for accounts as per the product and account settings. Note that in both of these cases, the overnight run creates the database records, but the sending of interest by BACS and actually printing the new statements are usually done the following day as both of these tasks require manual intervention.

Fixed accounts which have reached their maturity date and have maturity instructions on file are processed. Automated correspondence relating to the new fixed term can also be created at this stage.

Daily reconciliation, exception and management information reports are produced. These enable the business to get a quick summary of the customer balances and daily movements. The reports also highlight exceptional events of items that require further investigation.

Note that the Day end process is entirely configurable with the user in control of what tasks are included. New tasks (either programs or housekeeping tasks) can also be easily added to the run.



Reporting

Titan produces several different classes of reports:

Fixed Reports

Formatted reports to assist in regular business tasks, such as day end reports, capitalisation and statement production reports, bank reconciliation reports and interest proof reports.

Statutory Reports

Formatted reports to meet statutory needs such as FATCA and CRM reporting. These are increasingly produced as files for electronic submission.

Flexible Report Generator

Titan is supplied with a series of view holding data relating to accounts, clients, individual holders etc. The operator can create their own one-off report from this data (e.g., all customer account with balances over 100,000). The report generator is also an excellent way to make quick bespoke SQL reporting procedures accessible to the users.

Administrator: Reports										
File Options Help										
ID	Name	Summary	Group Name	Data Source	DS Ty...	Runco...	LastRunBy	LastRunOn		
1	Memo Report	Memo Report	Default Report Gr...	CS_RGVMemos	VIEW	8	CSI-DEMO-VM\d...	15/12/2020 11:24:16		
2	Accounts over 100...	Customer accounts with balances over 1...	Default Report Gr...	CS_RGVCustomerAcco...	VIEW	0				

Report ID 2 - Accounts over 100000										
Export										
accountnumber	productid	investmentname	currencynumber	capital	interest	status	accountopened	clientid	primaryholder	
10000395	24	90 Day (W)	1	127411.9200	113900.9190	D	01/03/2000 00:00:00	142	Mr Ian Barker	39 Arkway, Wis
10000425	23	90 Day (A)	1	174988.4200	192921.5424	D	02/04/2000 00:00:00	112	Mrs Claire Sully	16 Duncliffe C
10000879	114	Fixed Rate (3Mat)	1	135000.0000	186213.7266	D	05/06/2000 00:00:00	123	Mr John King	Central Softwa
10000607	1	Deposit (A)	1	146000.0000	163187.7041	D	01/05/2000 00:00:00	92	Mrs Diane H. O'Toole	9 Farmhill Me
10000102	1	Deposit (A)	1	122438.7100	111310.5445	D	29/03/2000 00:00:00	27	Sir Fred Bloggs	The Manor Hc
10000128	23	90 Day (A)	1	303796.0000	334797.1617	P	22/03/2000 00:00:00	31	Mrs Diane O'Toole	9 Farmhill Me
10000698	1	Deposit (A)	1	202000.0000	225622.2090	D	02/05/2000 00:00:00	22	Mr Fred Smith	6 Poplar Ave,

Rows: 159