

IT2

Treasury Solutions

Financial Institution Treasury Management



TREASURY EXPERTISE | SOFTWARE INNOVATION | SERVICE EXCELLENCE



IT2TMS



IT2

Treasury Management System

The Secure Route to Treasury Best Practice

The IT2 treasury management system consists of a diverse set of integrated and powerful business modules delivering best practice solutions for a broad range of cash and treasury management requirements.

In the Financial Institution sector, IT2's flexibility and scalability enable the system to be implemented as a solution for several of the demanding – and contrasting – business requirements which are commonly encountered in different Financial Institution treasury environments, including:

1. Investment Treasury Management

- Settlement & Cash Management
- Investment Fund & Portfolio Cash Management
- Foreign Exchange and Money Market Cover

2. Foreign Exchange Dealing

3. Financial Institutions' Treasury Management

4. Funding Management

IT2 supports more than 200 clients in 30 countries over 6 continents. The IT2 client base has been built over more than 10 years of cooperation and dialogue with world-class Financial Institutions.

For some clients, IT2 fulfils requirements in several of the categories listed above. For others, the IT2 implementation is scaled to address a specific set of specialist requirements.

This brochure outlines IT2's complete and cost-effective solutions for these various requirements, with examples of operational clients in each category. In separate sections, it explains generically how IT2 addresses the requirements of Financial Institution Front, Middle and Back Offices, and documents the full set of capital, money market, FX, commodity and derivative instruments that IT2 fully supports.





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Investment Treasury Management

Settlement and Cash Management

Investment Treasury Management encompasses the diverse kinds of support for treasury and cash management that may be required by investment operations. IT2's support includes the provision of Settlement and Cash Management, of stand-alone Cash Management, and of FX and Money Market cover for the exposures generated by the operations of investment funds and portfolios, and brokerage operations.

Settlement and Cash Management

Settlement and cash management IT2 solutions are typically employed by organisations that are focused on complex Front Office asset broking and dealing activities, and require an effective solution to manage the settlement of high volumes of market deals, and also to manage the cash generated in the course of dealing operations.

For such clients, IT2 offers a robust and complete Back Office function, which may be integrated with in-house and third party Front Office systems in seamless STP workflows.

IT2 provides a full service for deal settlement, including:

- Integration with Front Office systems and dealing portals
- Generation and export of secure payment messages / wires, including SWIFT integration
- Generation of accounting entries and integration with accounting systems
- Generation of all required statutory and management reporting

IT2's settlement support services additionally include integration with the system's FX and money market dealing operations, so that the Back Office can buy or sell foreign currencies as and when required, and can invest surplus funds in the instruments and with the counterparties that are permitted by the investment fund's policies.

In cases where an investment fund needs to borrow to finance a trade, IT2 may be used to process the bank loan, facility draw-down or other borrowing that fulfils this requirement.

IT2 includes real time counterparty limit management, which ensures that investment policies are properly followed and documented. IT2's audit functions fully track and report the entire workflow, to fulfill stringent auditing requirements.

IT2 clients who use the system for Investment Treasury Settlement and Cash Management include LCH.Clearnet (London) and MF Global (London).



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Investment Treasury Management

Investment Fund and Portfolio Cash Management

Investment Fund and Portfolio Cash Management

Managers of large and complex investment fund and portfolio structures may use IT2 to provide a specialist, stand-alone multi-currency cash management solution.

IT2 can support large numbers of individual bank accounts. It provides a set of sophisticated cash prediction tools that allow the cash manager to forecast future liquidity over any required time period. IT2 enables fund and portfolio cash managers to establish a complete, global view of cash, so that they can optimise interest income performance for the entire investment management operation.

IT2 offers a scaleable, state of the art cash management solution that supports the following activities:

- Managing thousands of bank accounts with banks, brokers and custodians, supporting a wide range of organisational size and complexity, and providing fully transparent account balance analysis
- Provision of automated and intuitive bank account reconciliation, in an efficient process that streamlines routine cash management
- Management of interest allocation over complex, multi-dimensional cash pooling structures, including notional pooling and zero-balancing arrangements, to support effective cash utilisation and interest management

- Controlled, fully-automated and secure STP workflow provision, with integration to SWIFT, other bank systems, Front Office dealing systems, ERP and accounting systems, and to dealing and confirmation portals
- Provision of flexible, dependable and intuitive operational, management, audit and regulatory reporting
- Accommodation of complex fund, portfolio and organisational structures, providing multiple levels of aggregation and consolidation to fulfill multiple processing requirements

The IT2 cash management solution is controlled and documented via the system's unique process maps, which allow clients' best practice workflows to be defined, implemented, controlled and documented. The organisation's cash managers are thus able to focus on their professional cash management duties, rather than on unproductive data management tasks. The IT2 solution is fully integrated with the required in-house and third party systems, so that high levels of efficiency may be achieved in a secure and well-documented STP environment.

IT2 clients who use the system to provide a solution for Investment Fund and Portfolio Cash Management include APG - Algemene Pensioen Groep NV (Amsterdam), one of the world's largest pension fund managers.



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Investment Treasury Management

Foreign Exchange and Money Market Cover

Foreign Exchange and Money Market Cover

Financial Institution treasuries commonly encounter situations in which the organisation's core business generates financial exposures that require covering through intervention in the FX or money markets. These situations include:

- The need to buy or borrow foreign currency on a spot or forward basis, to finance the settlement of an asset purchase
- The need to sell or lend foreign currency, to dispose of the proceeds of an asset sale

These requirements are fulfilled by FX spot, swap and forward deals, by money market loans and deposits, and by bank facility draw-downs. IT2 includes support for:

- Continuous linked settlement ('CLS') facilities
- Automated confirmation issuance, and integration with confirmation matching services

The required FX & money market trade analysis and execution to cover and fund investments and surplus cash is often experienced as a manual and time-consuming process. In contrast, IT2 can be efficiently implemented into a treasury operation, producing immediate benefits by lowering operational risk and helping to maximize investment returns by providing an integrated STP solution for FX and money market cover. IT2 enables client treasuries to maximize their processing efficiencies by eliminating unproductive and repetitive manual

operations, so that staff can be deployed to focus on market operations rather than on unproductive administrative functions.

IT2 has been implemented by a range of clients to fulfill FX & money market cover requirements; examples include Travelex (Peterborough UK and Sydney, Australia), Sumitomo Trust and Banking Co. (Hoboken, New Jersey, USA) and Aspect Capital (London). These clients take advantage of IT2's extensive configuration and scaling facilities to provide the required deal processing and workflow integration solution.



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FX Dealing and Financial Institutions' Treasury Management

Foreign Exchange Dealing

IT2 is used to support Foreign Exchange market making and proprietary dealing activities by banks and other organisations.

In this specialist deployment, IT2 is typically integrated with a real time market rate feed, so that the dealers are presented with current information to support their decision taking in volatile market conditions.

The IT2 FX dealing solution includes integral limit management, confirmation, settlement and accounting, to provide a highly automated STP solution for end-to-end FX dealing support.

Clients who use IT2 for FX dealing include Degussa Bank (Frankfurt).

Financial Institutions' Treasury Management

A number of Financial Institutions' treasuries have selected and implemented IT2 to provide a complete treasury management solution that integrates seamlessly into the organisation's technology infrastructure. IT2 has been implemented to fulfill treasury management requirements by banks, building societies, mortgage lenders and similar operations.

The main elements of the IT2 Financial Institution treasury management solution include:

- **Liquidity and Position Management:** The provision of a complete real time view of position and liquidity organised, for example, by dealer, desk, division and entity. IT2's risk management capabilities include counterparty exposure control, P&L analysis, duration gap analysis, and

sensitivity analysis; all of these tools are available to authorised users in real-time. IT2 will therefore enable the team to deal confidently on the basis of complete and accurate analysis of the current cash and risk position

- Complete and secure treasury instrument dealing coverage, including money market and FX deals, short and long term finance, FX and interest rate derivatives, futures and fixed income and equity investments
- IT2 integrates Front-to-Back Office processing in a secure STP workflow, including reconciliation, SWIFT connectivity, confirmation processing and treasury accounting
- IT2 offers a comprehensive set of more than 350 management, regulatory and compliance reports and workbenches that are available for out-of-the-box implementation, or which may act as templates for configuration to fulfill client-specific reporting requirements
- IT2's security enables Financial Institution treasury clients to define their operating environment, with user access rights control procedures which ensure that the required best practice segregation of duties is set up as required by treasury policy

The IT2 Financial Institution clients who are using the system to support treasury management include Bank of China International (Hong Kong) and the Norwich & Peterborough Building Society (Peterborough UK).



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Funding Management

Funding Management

IT2 supports a very broad range of wholesale multi-currency funding, borrowing and liability management operations. IT2 allows the evaluation of funding alternatives, and the execution and administration of the chosen funding program. IT2 fully supports both fixed and floating rate funding instruments, without maturity restriction, and with the option to utilise all the industry standard day count bases and interest payment and accrual calculation conventions. The supported IT2 multi-currency funding instrument set includes:

- Simple and term loan structures (including bullet, amortising, annuity and non-standard arrangements)
- Bank facility draw-downs
- Commercial paper issuance (discounted and interest bearing)
- Certificate of Deposit (CD) issuance
- Floating Rate Note (FRN) issuance
- Medium Term Note (MTN) issuance
- Bond issuance

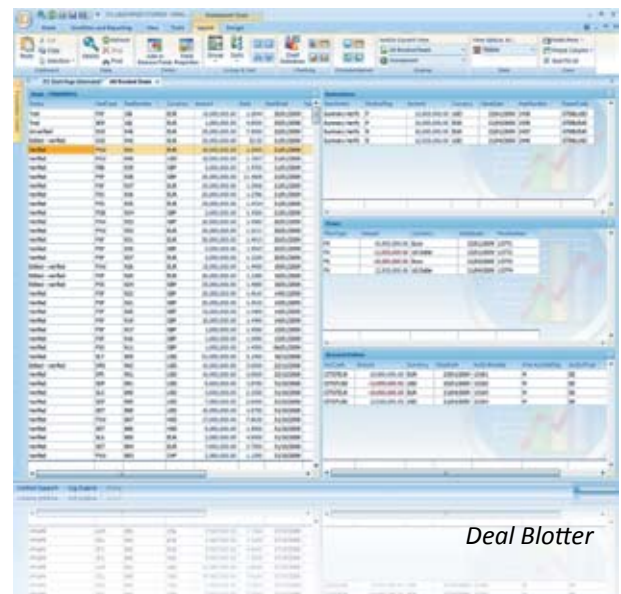
IT2 fully supports the operation of any funding-related derivative instruments, such as interest rate swaps, cross-currency interest rate swaps, caps, floors and collars, FRAs and financial futures.

IT2's risk management functionality supports wholesale funding operations through robust scenario and Value at Risk (VaR) derivation, in addition to mark-to-market valuation and NPV (net present value) derivation. These provide the funding manager with a range of analytical and decision support tools which support the choice of funding strategy, and its subsequent management.

The IT2 Funding Management solution includes a powerful facility that enables the user to define and evaluate assets such as equity and property investments and infrastructure development projects against the funding structures employed, so that asset/liability risk relationships can be linked, analysed and reported.

IT2 supports the full set of Middle and Back Office processes required to manage a complex funding operation, including confirmation, settlement, accounting and interest/coupon payment management, plus the production of statutory and management reporting.

The IT2 clients who use the system to support their funding activities include HBOS (Halifax, UK), Bank of Ireland UK Financial Services (Bristol, UK), Travelex (Peterborough UK) and Aberdeen Property Investors Corporate ASA (Oslo).





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Front, Middle & Back Office Solution

Generically, IT2 incorporates user-configurable treasury process definition and management functionality, which may be scaled as needed to meet each client's requirements. In the course of implementation, client-specific work flow processes are defined and locked down for subsequent secure, automated operation.

For a given client treasury, IT2 may be deployed to deliver a complete STP Front, Middle and Back Office solution, or to fulfill a specific office's needs. The business areas that may be addressed include:

Front Office:

IT2 supports Front Office dealing operations, offering a range of functionality to deliver:

- Real time position management, monitoring and display
- Integrated limit checking
- Intuitive, streamlined deal entry function, for the required instrument set. The full set of IT2 supported instruments is described below in 'Instrument Coverage in IT2'

Middle Office:

Today's Middle Offices perform a range of functions that proactively support Front Office activities. IT2's Middle Office capabilities include:

- Deal verification & approval workflow operations
- Limit management & analysis (including VaR limit reporting)
- Real time risk management tools, including mark-to-market (for all supported instruments), VaR derivation (Delta-Gamma), scenario analysis and NPV derivation, for specific deals and portfolios

- Control & auditing support, including segregation of duties, control monitoring and complete audit trail management and reporting

Back Office

Back Office processing in IT2 supports the many different activities that may be performed in the Back Office and Accounting departments, including the following functions that are typically organized into controlled STP workflows to maximize efficiency benefits:

- Deal confirmation production and matching control (using electronic systems such as SWIFT Accord & Misys CMS, and also manual paper based processes where required)
- Deal settlement, including payment / wire generation and secure release
- Accounting, including Nostro accounting and journal creation and export
- Automatic generation of operational, regulatory and management reporting



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Instrument Coverage in IT2

IT2 may be implemented with a very high level of hands-free, secure STP, so that transactions can flow through the Front, Middle and Back Offices with a minimum of unproductive, error-prone human intervention, and with the generation of the alerts and reports needed for best practice treasury management and control.



Instrument Coverage in IT2

IT2 offers exceptional breadth of multi-currency instrument support. In the IT2 context, 'support' is a truly comprehensive term: it consistently covers Front, Middle and Back Office functions, including integral settlement, risk management, accounting and reporting functions. IT2 includes a range of powerful industry standard pricing models and risk management tools, emphasising the completeness of the available solution set.

IT2 is fully scalable, so prospective clients who require a limited range of instrument coverage need only license the applicable system modules. The system includes facilities for users to define debt and investment instruments, providing the high level of flexibility that is frequently needed in some innovative treasury departments.

The IT2-supported multi-currency instrument set is listed below. These instruments are available for external and inter-company dealing, investing, and issuing/funding purposes:

Supported Foreign Exchange Instruments

- Spots, Forwards, Swaps & NDFs
- FX Options (vanilla, barrier & average rate, European, American & Bermudan)

Supported Money & Capital Markets Instruments

- Loans & Deposits (simple & term)
- Bullet and amortising fixed & floating rate structures
- CDs (Certificates of Deposit)
- BAs (Bankers' Acceptances)
- Bills of Exchange (including Treasury, Local Authority and Corporate Bills)
- Commercial Paper (Euro & Domestic, for both issuers & investors)
- Money Market Fund investments
- Repos & Reverse Repos
- Mutual Fund investments
- Government, Supranational, Municipal / Local Authority Bonds
- Medium Term Notes (MTNs)
- Index-linked Instruments
- Trade finance (L/Cs and Guarantees)



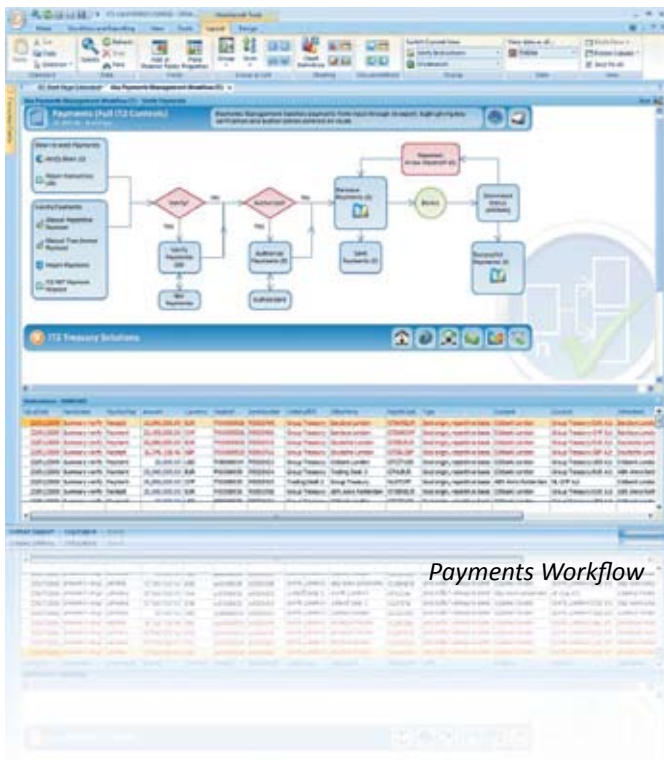
Instrument Coverage in IT2

Supported Derivative Instruments

- Interest Rate Options (vanilla, barrier, average rate; European, American & Bermudan)
- Interest Rate and Cross Currency Interest Rate Swaps
- Swaptions
- Caps, Floors & Collars
- FRAs (Forward Rate Agreements)
- FX & Financial Futures
- Credit Default Swaps

Other Supported Instruments & Actions

- Equities
- Equity Derivatives (including Options)
- Corporate Actions (including Mergers/De-mergers, Rights Issues & Stock Splits)
- Commodities (Spots, Forwards, Swaps, Options, including Average Rate Swaps & Options)
- Index Options
- Leases



“Sumitomo Trust & Banking Co. (U.S.A.) liked the user friendliness and flexibility of IT2, which we found provides a cost effective FX straight-through processing solution with a low risk implementation”.

-Michael Sweeney, Head of Settlements, Sumitomo Trust & Banking Co. (U.S.A)



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Examples of IT2 Financial Institution Clients

North America & Caribbean Region

- Carlisle Leasing International (Park Ridge, New Jersey, USA)
- Nephila Capital Limited (Hamilton, Bermuda)
- Paramax Capital Group (Stamford, Connecticut, USA)
- Sumitomo Trust & Banking Co. (Hoboken, New Jersey, USA)

Asia/Pacific Region

- Bank of China International (Hong Kong)
- Travelex Financial Services NZ Limited (Sydney, Australia)
- Travelex Australasia Limited (Sydney, Australia)

United Kingdom & Channel Islands

- Aspect Capital Limited (London, UK)
- Bank of Ireland UK Financial Services (Bristol, UK)
- Barings Investment Management (London, UK)
- HBOS plc (Halifax, UK)
- Kensington Mortgages (London, UK)
- LCH.Clearnet (London, UK)
- MF Global plc (London, UK)
- Norwich and Peterborough Building Society (Peterborough, UK)
- Orbian (London, UK)
- Sigma Asset Management Limited (Guernsey, Channel Islands)
- THFC (London, UK)
- Travelex (Peterborough, UK)

Nordic Region

- Aberdeen Property Investors (Oslo, Norway)
- Baugur Group (Reykjavik, Iceland)
- Entra Eindom (Oslo, Norway)
- Norwegian Property (Oslo, Norway)
- Straumur Burdaras Investment Bank (Reykjavik, Iceland)
- Teris (Reykjavik, Iceland)

Republic of Ireland

- Irish Life Investment Managers (Dublin, Ireland)
- Irish Nationwide Building Society (Dublin, Ireland)
- XL Treasury Europe Limited (Dublin, Ireland)

Benelux Countries

- AMG Property Europe (Amsterdam, the Netherlands)
- APG - Algemene Pensioen Groep NV (Amsterdam, the Netherlands)
- The Currency Exchange (TCX – Amsterdam, the Netherlands)

France, Spain & Malta

- APS Bank (Floriana, Malta)
- Instituto Valenciano de Finanzas (Valencia, Spain)

Germany, Austria & Switzerland

- Degussa Bank GmbH (Frankfurt am Main, Germany)
- Global Refund (Nyon, Switzerland)

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Technology Summary

IT2 is a functionally rich, integrated treasury management system. It is based on a single application and SQLServer database, and it is fully scaleable, as a direct consequence of its architectural organisation into more than 17 logical modules. IT2 has been selected and implemented by Financial Institution clients who have established that it offers a strong functional solution to one or more specific business issues.

IT2 features the Microsoft Fluent User Interface, and Office 2007. The IT2 look-and-feel and user interface are therefore based on state-of-the-art Windows technology; this empowers IT2 users in active treasuries to produce better results, more quickly, easily and efficiently.



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