

PROFIDATA GROUP XENTIS



White Paper

XENTIS for Insurance Companies

The diversity of traditional and exotic financial instruments and the corresponding trade volumes for these products are constantly increasing. The processing and recording of the resulting transactions triggers the application of complex statutory regulations in respect of risk management, reporting and accounting, which affect the insurance sector in particular. In addition to complying with their own national laws, insurers operating within the jurisdiction of the European Union are called upon to implement the Solvency II provisions of the European Insurance and Occupational Pensions Authority (EIOPA), which are modelled on the Basel II requirements pertaining to banks, at the national level. The Swiss Solvency Test was intended, as a counterpart to the European Directive, to evaluate all of the risks to which insurance companies are potentially exposed in respect of insurance policies on the liabilities side and capital investments on the assets side, and to protect the investments of the policyholders from the consequences of insolvency on the part of those companies. An efficient and flexible IT infrastructure is crucial for the implementation of these requirements. Profidata's investment management system XENTIS already integrates all of the functions necessary for the controlling of the capital investments of insurance companies and, by facilitating the required asset classification, assists in establishing an integrated system of risk assessment.

A Flexible Approach to the Defining of Parameters

The financial instruments recorded in XENTIS are presented on a continuous basis, in that standardised and non-standardised financial instruments are recorded in accordance with a uniform concept and with the inclusion of various data providers, and

the subsequent transactions are automatically processed in a front-to-back manner on the basis of freely configurable transaction types. Externally managed positions, such as alternative investments, real estate property or loans, which are recorded for information purposes but must be evaluated and booked for the purposes of the monitoring of the capital invest-

ments, in XENTIS, can be imported at the level of individual positions or grouped together as aggregate positions, for example within maturity bands.

Freely definable information fields play an increasingly important role in the collection of data relating to financial products; by way of example, XENTIS enables various ratings to be maintained within the master data on a parallel basis with a view to enabling an assessment of the default risk. At the same time, it is possible to carry out an internal ranking of the various ratings and to keep a historical record of the results by applying «business rules». Business rules and flexible data fields can be employed throughout the system to, among other things, define workflows and key ratios, as well as attributes enabling the differentiation of positions. Given that all of the data can be accessed from all stations within the system, the master data can also be used for the pricing of the individual assets, for instance for the theoretical evaluation of illiquid and interest-bearing instruments by means of yield or spread curves.

Portfolio Structure and Multi-Client Capability

The management of security assets, mutual and special funds or direct mandates requires a dynamic portfolio structure which presents the assets not only from

Hierarchy	Name	Nominal/Quantity	Price	FX Rate	Book Value	Market Value	%
Asset Allocation					106621453.72	107774639.35	100.00
Shares					850000.00	850000.00	0.79
AFS/DE0005190003	AFS/Bayerische Motoren Werke AG Stammaktien EO 1	25'000.00	34.00000000	1.00000000	850000.00	850000.00	0.79
Bonds					10452009.52	10529264.78	9.77
AFS/DE0002539863	AFS/Deutsche Hypothekenbank Pfandbr. Ser.38 v.03(13)	1'000'000.00	101.00000000	1.00000000	1'010'000.00	1'068'901.37	0.99
AFS/DE0002634972	AFS/Wiselenrot Bank AG Pfandbr bank FLR-Pfandbr.Ser.38 v.99(09/14)	5'000'000.00	100.00000000	1.00000000	5'000'000.00	5'018'453.89	4.66
LaR/DE000A0SPH/P0	LaR/WestLB AG Schuldschein 060L17	5'000'000.00	88.84019042	1.00000000	4442009.52	4442009.52	4.12
Investment Funds					10'500'000.00	10'500'000.00	9.74
AFS/DE0000000001	AFS/Special Fund 1	10'500'000.00	105.00000000	1.00000000	10'500'000.00	10'500'000.00	9.74
Cash					77807006.85	77979923.52	72.35
Options					600000.00	600000.00	0.56
Trading/B710000310A3	Trading/Put DAMLER AG NA O.N. 10.10.35.00	1'000.00	6.00000000	1.00000000	600000.00	600000.00	0.56
Futures					5'000'000.00	5'000'000.00	4.64

Fig. 1: Asset view in accordance with IFRS categories

a trading perspective but also from the perspective of specific reporting requirements or from other perspectives. Here, XENTIS draws a distinction between the institution level and the mandate level. The institution represents the insurance company whereas the insurance company's customers or domestic or foreign subsidiaries are recorded at the mandate level. Portfolios which reflect, for example, the German asset types security assets, investment stock (unit-linked life insurance policies), other fixed reserves or free assets are allocated to individual mandates. Freely definable mandate and portfolio groups ensure that all manner of combinations can be aggregated. Security assets and other fixed reserves, for instance, can be grouped together as fixed reserves. The use of these structures permits consolidated accounting at any hierarchy level. This means that accrued profits and losses can be realised by subsidiaries in the case of internal transactions without this being recorded on the consolidated balance sheet at the higher corporate level. Irrespective of the portfolio structure selected, any view of the assets (**Fig. 1**) desired by the individual customer can be generated throughout the entire system on the basis of a body of rules. Every level of the portfolio structure can be replicated frequently, where desired. The multi-client capability ensures that separate views of master data such as the institution currency and the language (German, English, French, etc.), as well as customer-, fund- and portfolio-related master data, including the associated asset positions

and transactions, can be obtained. Other system areas such as order workflow, compliance and master database may be separated according to institution.

Attributes Enabling the Differentiation of Positions

XENTIS differentiates between the separation of positions in virtual and physical terms. In the accounting context, the assets are virtually separated for evaluation and reporting purposes without this having any impact on the handling of those assets. This means, from an accounting perspective, that assets can be divided into fixed assets and current assets in accordance with local GAAP or into various accounting categories in accordance with IFRS. In the context of the reconciliation with the custodian bank, however, the total nominal value of the assets will be taken into account.

The reporting requirements applicable to insurance companies require that a clear distinction be drawn in order to enable the correct allocation of the individual assets within the list of assets. Here, the acquisition of one and the same type of security will result in the creation of several separate positions. Structured products that are not part of the investments catalogue but are to be recorded and allocated in line with an «opening clause» are handled in a similar manner. The classification of derivative transactions as for the purposes of hedging, preparing acquisitions or increasing

earnings will equally result in the creation of separate positions.

Front Office, Order Routing and Processing

The «prudent person» principle requires a balanced ratio of capital assets to liabilities as well as diversified investments in assets for the benefit of the insurance policyholder. In addition, periods of low interest rates necessitate the generation of additional revenue through active asset management. In XENTIS, the classification of individual positions according to a given asset allocation structure or the risk module for the solvency capital requirement in accordance with the Solvency II Directive (**Fig. 2**) is based on the existing master data or on a definable range of key factors. The XENTIS front office module enables an analysis of all asset categories, including the modelling and re-balancing of portfolios, to be carried out. Long waiting times are undesirable in the context of individually modelled retrieval of information and subsequent analyses. In a typical hardware environment, search and evaluation processes including determination of prices and the calculation of, for example, sensitive key accounting figures for a mandate with several portfolios, approx. 1,000 individual assets and also numerous benchmarks take a matter of seconds. Excel sheets play a significant role in the ordinary course of day-to-day business for fund and portfolio managers. The standardised integration of Excel has enabled both the export of asset-related data and order status information and the import of order

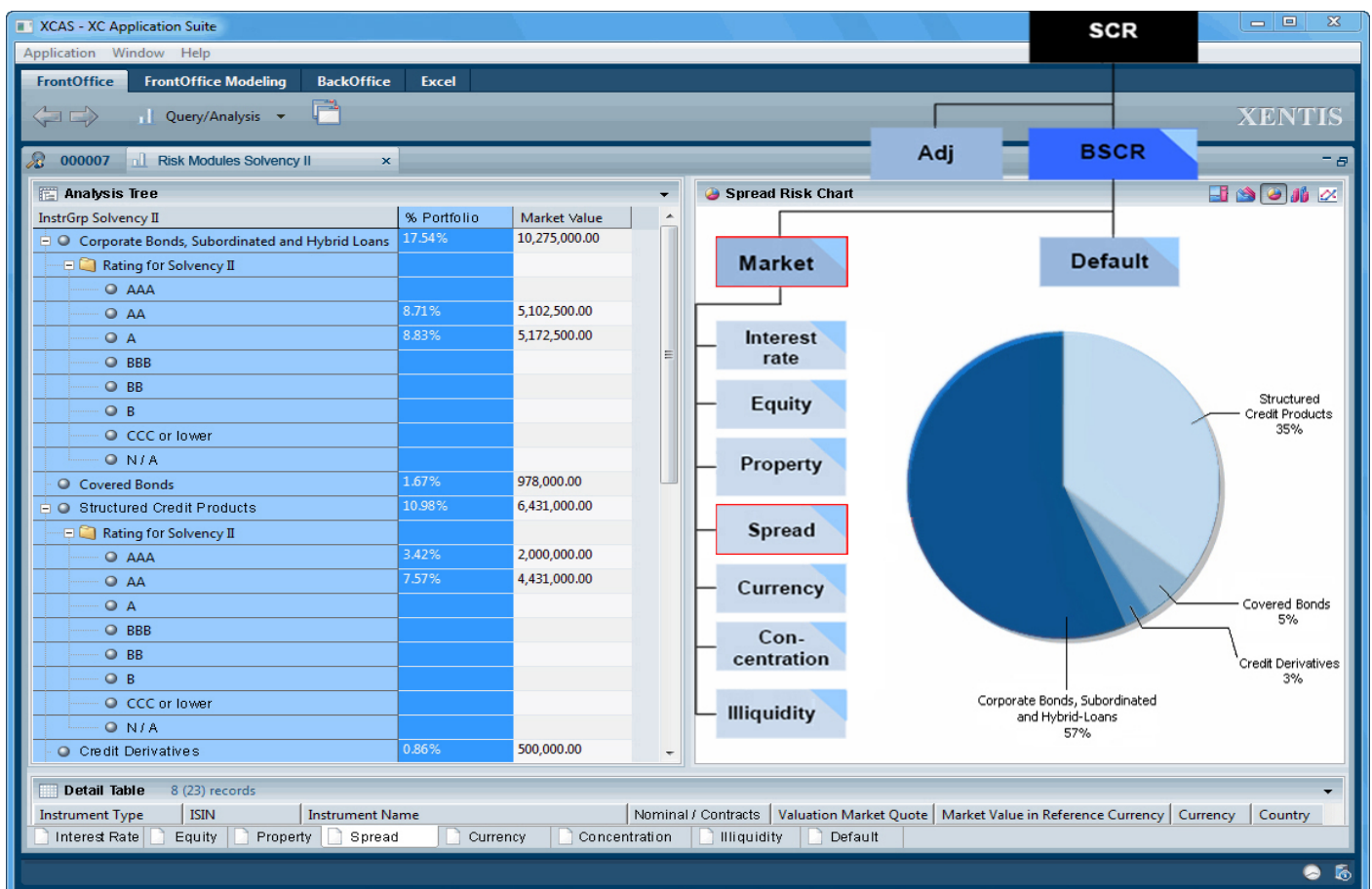


Fig. 2: Risk module in accordance with the Solvency II QIS5 Standard Formula

placements from external asset managers. Orders can also be generated directly on the basis of analyses carried out and branched off into the middle or back office for the purposes of onward order routing by switching perspectives. The carrying out of transaction simulations is also possible once an order has been generated; here, orders with a lower status are incorporated within existing positions and the impact on key ratios, profit and loss, etc. at both the individual asset and the portfolio level then become apparent. In the further course of transaction processing, defined compliance checks are applied in respect of the order placements and the transactions carried out are subjected to a market conformity check. Various reconciliation procedures, including the matching of orders, custodian bank and settlement matching of transactions as well as the matching of payments, can be carried out in all established file formats, such as FIX, SWIFT, flat file, etc., as part of a continuous workflow. In addition, assets, and acquisition, carrying and fair values, as well as (FX) rates, master securities data and key ratios, can be reconciled. Furthermore, the option of reconciling account balances recorded in subsidiary ledgers with the account balances of associated general ledgers is also available. All processing steps can be carried out either manually and/or automatically by way of straight-through processing in XENTIS.

Risk Management and Performance

Active asset management also goes hand in hand

with effective management of the associated risks. The management of capital investments thus also requires a dedicated overview of bank accounts, as well as money market and forward exchange transactions, in order to ensure that sufficient liquidity is maintained and foreign currency risk exposure can be assessed at all times. Long-term liquidity planning furthermore entails making cash-flow projections in the future and the re-investment of due amounts. With a view to optimising investments and hedging market risk, key ratios such as economic exposure, duration etc. and systematic risks arising out of selected positions are weighted and the number of derivatives contracts, for example, required for the attainment of the stipulated targets is calculated. Parameters can in turn be defined for these optimisation models by applying business rules. The same applies to compliance rules (Fig. 3), by means of which compliance with statutory, contractual and internal limits is verified on an ex ante and ex post basis, with a view to avoiding concentration and cluster risk. In this context, counterparty risk, which often arises in connection with OTC transactions but which can be kept at a low level by means of effective collateral management, must also be considered. Collateral management may also be applied in the context of securities lending transactions.

In the compliance context, a review must be carried out not only in respect of indirect investments, mean-

ing that fund certificates and structured products must be decomposed into their constituent positions and allocated to the pertinent market risk category. Stress tests based on market data scenarios may be simulated (for example, in accordance with the specifications of the BaFin and/or the EIOPA), adjusted «clean» and «dirty» values as well as carrying values may be reported, and profits and losses, or the existence of a resultant amortisation requirement, directly determined. XENTIS also implements more advanced risk models, such as parametric and non-parametric VaR models, the suitability of which may be ascertained by means of back testing.

Moreover, risk-adjusted measures of performance and risk estimation methods, as well as performance attribution and contribution are also available. Performance calculations include TWR, MWR and IRR. The corresponding benchmarks can be set up as indices, as benchmark portfolios at the individual security level or as composite benchmarks, and also applied, together with the performance calculation, in the context of front office analyses or the determination of performance-related fees.

Accounting

Parallel accounting in compliance with both national and international accounting standards is a standardised and integral element in XENTIS; transactions only need to be input once. Definable item types are generated for each type of transaction on the

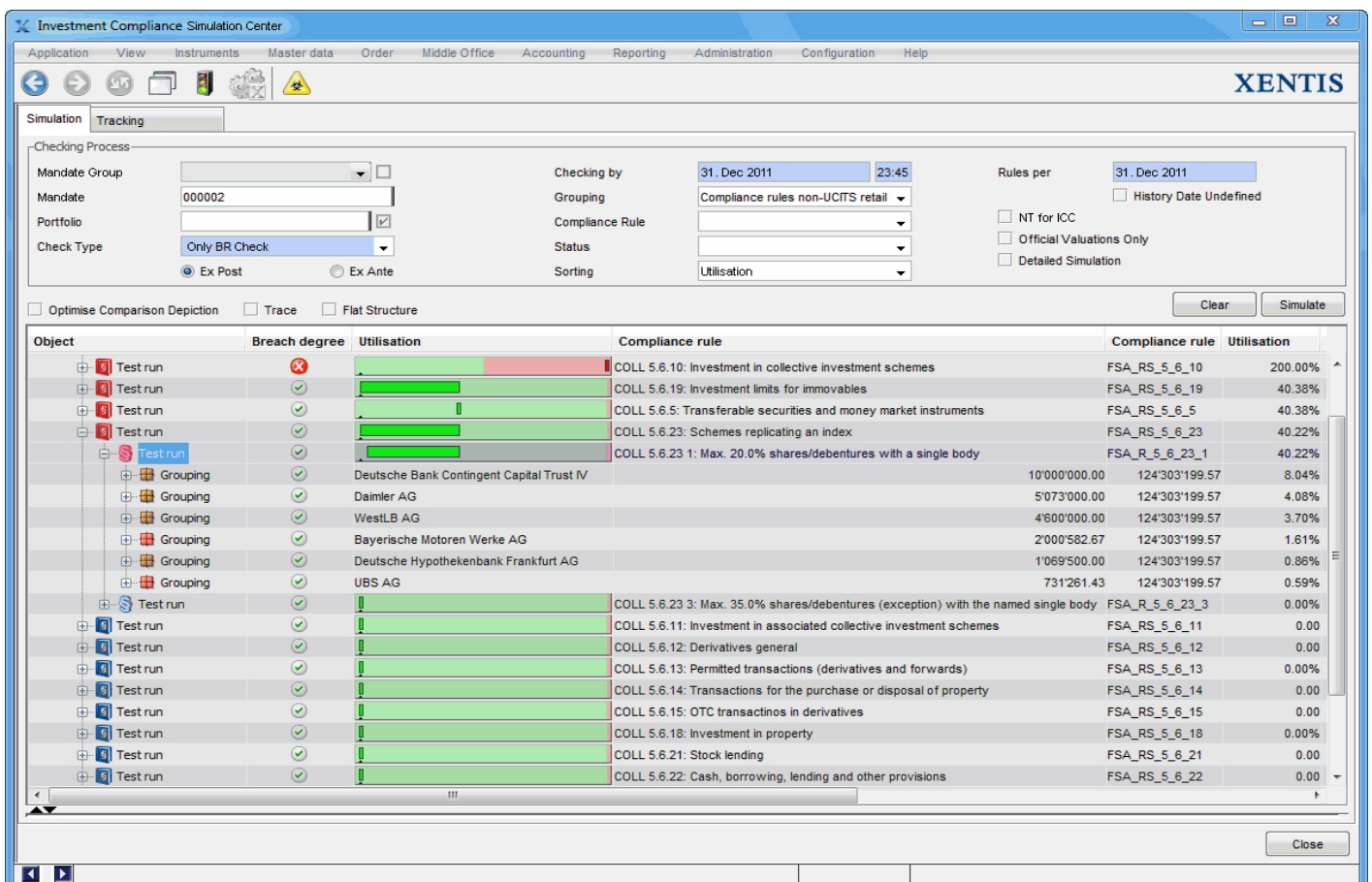


Fig. 3: Investment compliance check

basis of appropriate systems of rules and booked in accordance with the maintained charts of accounts. In XENTIS, it is equally possible to define parameters for the recording of nominal values on the balance sheet, increases in fair value and capital adjustments, for example, in accordance with local GAAP, and to carry out evaluations according to category, impairment procedures and the linear or exponential amortisation of amounts in accordance with the IFRS. Changes to the accounting procedures that follow, for instance, a switch from the IAS 39 to the IFRS 9, can thereby be implemented in a timely manner and often without any need for reprogramming. A comprehensive evaluation of the balance sheet items also involves the simulation of period-end closings («fast close») at any point in time. Full historical period data is provided for both in- and outflows in the context of the presentation of the statement of capital investments. XENTIS provides an overview of the assets and also of the accounts. The desired accounting data in respect of assets and/or transactions can be imported or exported to established general ledgers via a standardised interface. The same applies to the export of data for the purposes of regulatory reporting and reporting to third party systems.

Regulatory Reporting and Client Reporting

According to Solvency II (Fig. 4), not only information regarding risk profiles and investment management must be reported, but also results of the measurement of performance. Reporting in line with GIPS 2010 is possible using XENTIS, as is the satisfaction of reporting requirements for insurance companies aimed at ensuring compliance with the investment guidelines, which are primarily determined by national financial market supervisory authorities. In order to respond quickly to legislative developments, Profidata maintains close contact with its customers, regulatory authorities and industry associations within the financial sector. This enables it to adapt XENTIS in line with the ongoing amendments to the Investment Ordinance in the reporting and compliance contexts in a timely manner. In XENTIS modifications or enhancements of the reporting system for insurance companies can be implemented swiftly.

Conclusion

In summary, insurance companies are faced

with significant challenges in order to meet the legal reporting requirements. The core of these challenges comprises the timely, consistent and accurate positioning of the assets held by the company in question and risk analysis in respect thereof. The challenges involved in merely collating the position-related data should not be underestimated and the subsequent challenges involved in applying stress- and other tests to this data will likely prove to be complex and costly.

XENTIS from Profidata, however, offers a unique solution to these challenges. With its integrated and modular investment management system, which is able to support all types of asset whilst providing accounting, risk management, investment compliance and performance functionality, Profidata not only provides a solution in respect of the requirements of insurance companies but also the possibility of operational streamlining, the reduction of operational risk and the capability to support larger asset and client bases across entire asset management systems.

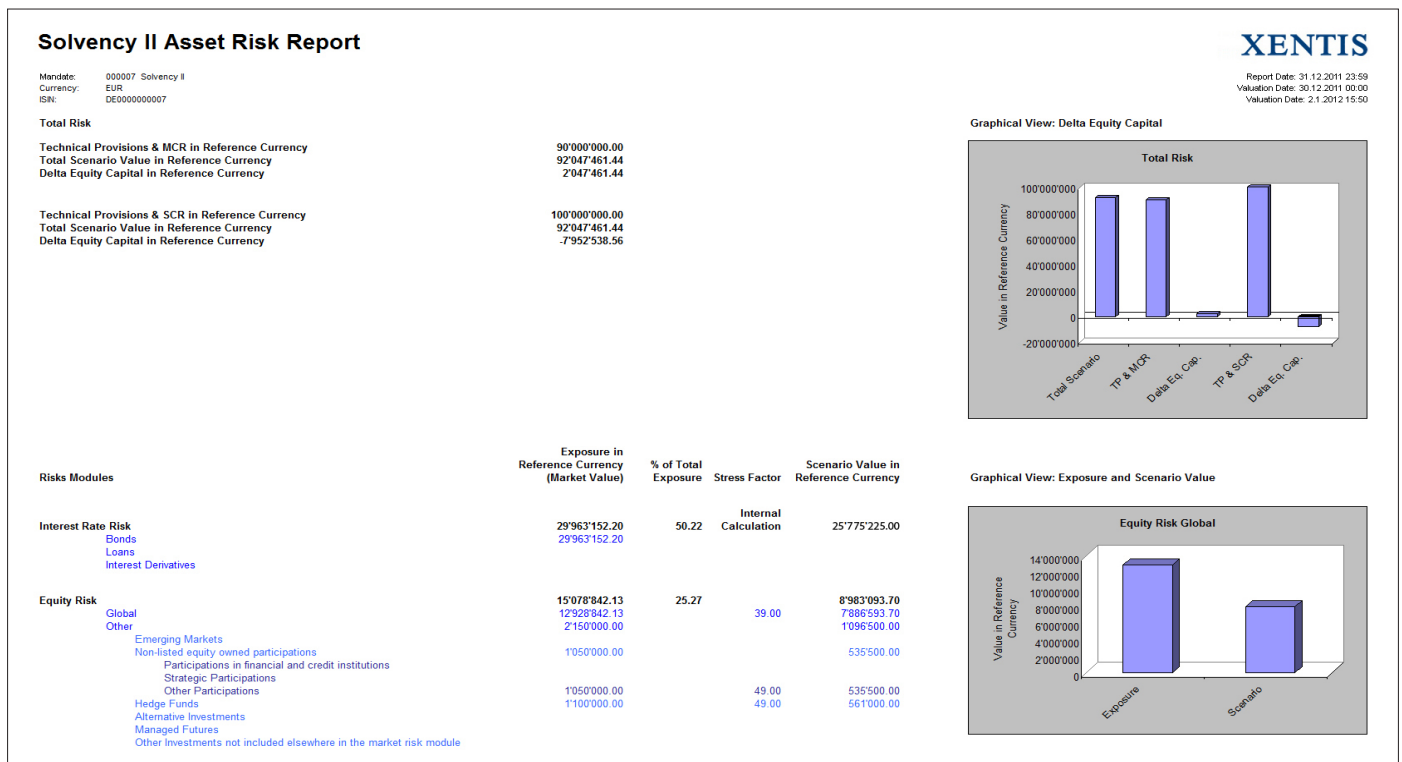


Abb. 4: Solvency II Reporting



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