



GUARDIAN

Portfolio Management System

A unique asset management solution for investment funds and private clients' portfolios.

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Who We Are

Swiss-Rev SA is a software house with a high degree of specialization and flexibility in the area of software solutions for the financial sector. Our team of professionals with both IT and financial expertise can provide the solution that best meets your needs.



“

Our drivers are **automation** and **flexibility** for your business.

Our Key Figures

100+
clients

**Banks, asset
management
companies, family
offices, mutual
funds, SICAVs**

€ 70 Bn

**Total AuM
managed with
our software**

7

**Different client
countries**

2010

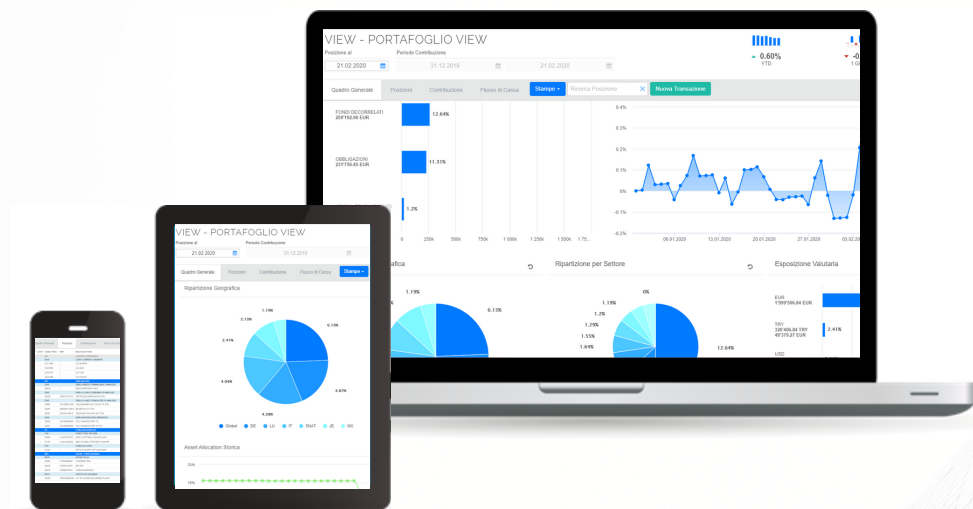
Foundation year

36

**Average age of
our team**

“

Your portfolios on all devices.



What We Do

Guardian

Asset Management Software

We are totally committed in developing **Guardian**, a highly flexible and comprehensive **all-in-one solution** for managing **private clients' accounts** and **mutual funds**.

Why use Guardian Software?

The Guardian software is the result of twenty years of development, constantly evolving in step with the **latest technologies**, **highly flexible** and customizable to meet and exceed our customers' needs. All users in your company will work with the same software, the same interface, and a single database for maximum **cost reduction**, **efficiency**, **automation** and **quality**. You can monitor the performance of **your portfolios on all devices and operating systems**.

Guardian modules

Automatic connections with custodian banks

Everyday on your server the position of all the portfolios (NAV for funds) and transactions recorded by the banks in T-1.

Risk management

Real-time checks on all regulatory and discretionary limits for your portfolios, with advanced pre- and post-compliance tests and risk analysis.

Reports

Wide range of reports available up to five languages.

Portfolio management functions

Advanced functions and tools to support the managers' analyses and management activities, with an intuitive, high-performance interface, and with depth of information.

Back and middle office

Complete digitization of all operations for the highest level of automation and efficiency.

Fees & Profitability

Automatic fee calculation for funds and private clients accounts, and automatic generation of invoices for private accounts. Automatic retrocession calculation and cost controlling. Detailed profitability analysis at many levels (ROA).

Order routing module

Electronic submission of orders directly to brokers via FIX or other protocol for maximum security and speed of execution.

Compliance & Reporting

MiFiD II, LSerFi compliant and reporting to banking and financial authorities.

KYC, AML & CRM

Management of all portfolio and client-related information and documents.

Automatic connections with custodian banks

More than 40 custodians already connected with our software:

CREDIT SUISSE

JPMorganChase

UBS

EDMOND
DE ROTHSCHILD

EFG

Goldman
Sachs

ABN-AMRO Bank

J. SAFRA SARASIN

BANQUE
DEGROOF

KBL
EUROPEAN
PRIVATE BANKERS

CIC

UBP

Banca Zarattini & Co

LGT

Banca
Sella



CMB
Compagnie Monégasque
de Banque

RBC

Deutsche Bank

APEX
FUND SERVICES

INTESA SANPAOLO

KAIROIS
a Julius Baer Group company

DEXIA
Bank

banca
ifigest

17 96
LOMBARD ODIER
LOMBARD ODIER DARIER HENTSCH

caceis
INVESTOR SERVICES

Julius Bär

BancaStato
BANCA DELLO STATO DEL CANTONE TICINO

NORTHERN
TRUST

BIL
1856
BANQUE
INTERNATIONALE
À LUXEMBOURG

BOV
Bank of Valletta

CRÉDIT
AGRICOLE

PICTET
1805

BANCA LEONARDO

corner

EFA

Calamatta Cuschieri
YOUR PARTNER IN FINANCIAL SERVICES

ALBERTINI
BANCA PRIVATA

STATE STREET

ONE
swiss bank

Fully automated connection with custodian banks. The number always is increasing due to the requests of our clients.

The advantages of a banking interface

By interfacing with your custodian banks, you can achieve the highest levels of operating process efficiency and automation. Users will be able to check every day, at their convenience, all the trades, transactions, commissions and positions for each portfolio, as recorded by the custodian bank, and to align and verify all portfolios in a matter of minutes.

What if your custodians are not in the list?

No problem. Every year we create new interfaces at the customers' request. One of our strengths is the ability to create a new interface via FIX, SWIFT, or other protocols in just 15 days. Of course, with Guardian you can manage and add to portfolios for which there is no interface with the custodian bank, by entering trades manually.

Portfolio management functions

Advanced functions and tools to support the managers' analyses and activities

Maximum flexibility in the asset allocation window

Maximum flexibility in reclassifying the assets held in a portfolio according to different classification levels (asset class, type of security, currency, geographic area, industry sector, risk, credit rating, maturity, etc.), or according to the user's own classifications.

Real-time prices and all data of any security in a few seconds

Real-time valuation of any listed instrument through a link to your financial information provider (Bloomberg, Refinitiv, Six Financial Information or other). **Obtain the complete data of any new security (over 100 dynamic and static fields) in a few seconds:** all you need is the Bloomberg Ticker or ISIN code. Moreover, automatic generation of trades related to securities cash flow (coupons, dividends, redemptions).

Pre-compliance check on every trade

Every trade is subjected to a **strict check on limits** set on the portfolio, so that in every moment you can check the exposure of your portfolio to all the limits.

Performance contribution in detail

Performance contribution and attribution analysis according to different levels of aggregation (asset classes, types of securities, product category, industry sector, currency etc.), **down to the exact contribution of each security.**

Rebalance and consolidate your portfolios through massive orders

Rebalancing of groups of portfolios according to an ideal portfolio, with automatic creation of all adjustment trades. **Generation of cumulative purchase, sale, or currency exchange orders/simulations**, or to rebalance the weight of a security contained in multiple portfolio, all from a simple processing window.

Only for fiduciaries and family offices

Consolidation of bankable assets as well as non-bankable assets in the same portfolio view. Option to have a **detailed and highly professional report** showing the total assets of your clients **with real estate assets, private equity, industrial shareholdings and art collections.**

Search past trades and positions and export every data of your portfolios

Quick search for historical trades, current account or portfolio movements at any past date.

All portfolios, processed data and reports **can always be exported to Excel and PDF**, also according to specific layouts (e.g.: **Bloomberg Port**).

Only for funds, SIFs and SICAVs

Real-time calculation of the NAV per share of the main asset class and **up to 12 different secondary classes**, with details on the number of shares and total assets for each class. **Automatic calculation of management and performance fees and any other type of cost** for an accurate calculation of the estimated NAV and effective monitoring of the fees charged by the custodian. Trade Blotter to check the status of orders placed on the market and/or recorded in Guardian. **Calculation of portfolio VAR and all key risk indicators.**

Order routing



Some of our interfaced brokers:



Electronic submission of orders directly to brokers via FIX or other protocols

With **Guardian FIX Blotter** you can trade in equities, bonds, options, futures, CFDs and Forex directly to the market with maximum security and speed, **with any broker in the world**.

Orders are sent electronically through a specific connection to your brokers via FIX, SWIFT, XML or other protocol, and they contain price, date, quantity and all the main parameters of the order.

Quick entry of trades and **automatic completion of transaction fees**.

Real-time verification of all limits, blocks and restrictions set on a fund and/or security, to guarantee total safety in executing the order.

Bloomberg ESMX certification

Guardian is an official **Bloomberg ESMX Staging and ESMX NET platform** certified software. Automatic receipt of trade executions from brokers flow and/or via **Bloomberg Dropcopy**, even in the case of orders placed by telephone, through passive feeding of your Guardian server.

Algorithmic trading strategies have been developed for several customers, based on the customer's specifications, to allow the automatic submission of trades to the market in response to signals generated by the strategy.

Risk management

Real-time checks on all regulatory and discretionary limits for your portfolios, with advanced pre- and post-compliance testing reports and risk analysis

Maximum flexibility in creating your limits

Possibility for the user to set **any type of limit** to ensure **maximum safety of all trades** and to monitor in **real-time the exposure for each limit**, even in passive breach case. For each limit there is a check section with details of all the securities included in the calculation.

Two kinds of limits: regulatory and discretionary limits. The first ones are required by the national banking and financial authorities, the second ones derive from the risk profile of your clients or from your investment committee decisions. The user can create alerts (**warnings**) in case of approaching the limits already set, according to an editable tolerance range, and a recap file can be sent to the risk manager periodically, or each time a warning and/or a limit is exceeded.

For each order entered, a document is created and saved in a digital database, non-editable by the user, which summarizes all the data relating to the entered trade and the outcome of the pre-compliance check.

Only for funds, SIFs and SICAVs

Real-time monitoring of all limits on all funds, from a single window, with alerts instantly displayed and/or sent via email, in case of warning or limit exceeded. Calculation of limits according to the committed approach and VaR approach.

Automatic setting of all UCITS and AIFMD regulatory limits, updated in accordance with the **latest regulatory requirements**, and of all prospectus limits for each fund.

1

The transaction is entered by the front office

When a transaction is entered, the user is immediately informed whether the transaction is compliant according to all the limits and restrictions set for that portfolio.

2

Pre-compliance check and example of check report

Check on all regulatory, prospectus, mandate or discretionary limits set for the portfolio. Possibility for the user to set any type of limit to ensure maximum safety of all trades and to monitor in real time the exposure for each limit.

3

Outcome of the pre-compliance check

The customer can define each user's permissions if the trade is found to be "not compliant". Automatic jobs can be created so that, in case of non-compliant transaction, a notice is sent immediately to the risk manager who may authorize trade execution.

4

Post-compliance check and risk reports

Check on all the limits set to all portfolios or groups of portfolios from a simple viewing window, in real-time or at a past date. Specific **portfolio risk analysis reports** (**concentration risk, liquidity risk**, etc.) and stress tests.

Calculation of VaR and key synthetic indicators (**volatility, Sharpe ratio, Sortino ratio, alpha, skewness, kurtosis**, etc.).

Back and middle office

Complete digitization of all operations to ensure the highest level of automation and efficiency

Automatic receipt of banking flows for daily reconciliation of the positions of securities, current accounts, transactions, commissions and cash flow. Guardian will highlight the trades and portfolios that are mismatched compared to the data received from the bank, in order to identify unjustified differences between Guardian's and the bank's position.

Automatic update of the securities database through your financial provider (Bloomberg, Reuters, Six, other), so as to always have a securities and portfolio valuation calculated independently by Guardian for comparison against the bank's valuation. For each portfolio, **automatic generation of trades relating to dividends, coupons, redemptions, corporate actions, option exercises** according to market specifications (cash delivery, future delivery, out/in the money).

Only for private clients portfolios

Automatic calculation of management and performance fees for each portfolio, and **automatic invoice generation. Portfolio profitability analysis report (ROA)** with breakdown of all types of direct and indirect commissions collected, searchable according to different levels of aggregation.

Only for funds, SIFs and SICAVs

Guardian calculates the NAV of funds and the value per share for each class, and then compares it to the official NAV and checks any unjustified difference.

Automatic receipt of trade executions through **Bloomberg Dropcopy, EMSX**, or other broker generated data flow, to automatically update the details of executed transactions (commissions, execution price etc.).

The **end-of-day trade summary file** is structured and sent automatically to the custodian bank in accordance with the specifications requested by the counterparty (email, FTP, SFTP, encrypted file, etc.).

The **Standard Settlement Instructions (SSI)** of all executed trades entered in the software are automatically generated and sent according to counterparty, market, currency, etc.

Daily calculation of **management and performance fees (absolute, HWM, hurdle rate)**, and any other costs charged to the funds.

Automatic calculation of **commissions to be paid back according to investors' subscriptions and redemptions**. Transfers of shares can be automatically associated with each investor through automatic flow with the transfer agent.

Fully outsourced back office service

You have the **opportunity to outsource to Swiss-Rev all of your company's back&middle office activities**: we guarantee highly professional services and a partner who will effectively support your asset management business.

Thanks to investments in process automation and digitization, Swiss-Rev can provide this service at a very competitive price.

KYC, AML & CRM

Extreme security for personal data and documents

Management of all information and documents relating to the involved parties and portfolios, with an **encrypted digital archive for uploading all** associated **documents** (PDF, Word, Excel and other formats). Quick and export of all the information related to a party and/or a portfolio. Option to allow **only certain Guardian users to access** and/or edit data in this section.

KYC and onboarding section

Thanks to the **Guardian Web app**, the financial advisor can **directly onboard his client with his tablet in a very easy and quick way, through a OTP system legally certifying the client's e-signature of documents** such as the management mandate, financial advices, etc.

Accurate Anti-Money Laundering tools

Anti-Money-Laundering questionnaire to give to your clients, where its structure is **editable by the user**, in order to have the right AML profile of the client and keep always under control the risk of money laundering. Possibility to set AML parameters according to single movements, single cash movements and fractional movements, Automatic extraction and reports of unusual cash movements with the possibility to attach documents and comments to justify the transaction. **Automatic generation of alert emails** with attached details of the unusual movement.

CRM section

CRM section in order to **track all the activities made and to be made in terms of customer relations** (recalls, emails, face-to-face meetings, etc.), with the possibility to **upload documents and receive reminders** on specific dates set by the user.

Compliance & Reporting

● MiFiD II, LSerFi target markets and questionnaire

Calculation and automatic completion of MiFiD II and LSerFi six target markets resulting from Suitability and Appropriateness questionnaires given to your private clients. This part monitors the risk profile of your clients according to your management mandate, in customized forms too, so that the printout of the document is already filled in and ready to be signed.

● Compliance with MiFiD II, MIFIR, EMIR, FIDLEG and the latest regulatory requirements

Guardian software is constantly updated according to the latest regulatory requirements issued by the regulators.

● Automatic reporting for banking and financial authorities

Automatic elaboration and sending of **Transaction Reporting** and other reporting to supervisory bodies according to the specific formats required (**Consob, Bank of Italy, Agenzia delle Entrate, FINMA, CSSF, MFSA, etc.**).



Fees & Profitability

Management & Performance fees calculation

Different methodologies are available for an **automatic calculation of management fees** (fixed amount, percentage, AuM brackets) **and performance fees** (absolute, performance, High Water Mark, hurdle rate), for all your portfolios.

Retrocession calculation and controlling

Reports for receivables and/or payables commissions, automatically supplied by the bank dataflow. Breakdown of total assets of Funds/Sicavs, showing the amount invested by each investor in each fund.

Portfolio profitability analysis

Return on assets analysis (ROA) aggregated by different criteria (managers, custodian banks, portfolios groups, management styles, etc.) and divided by the different source of revenues (management and performance fees, receivable fees, upfront fees, etc.).

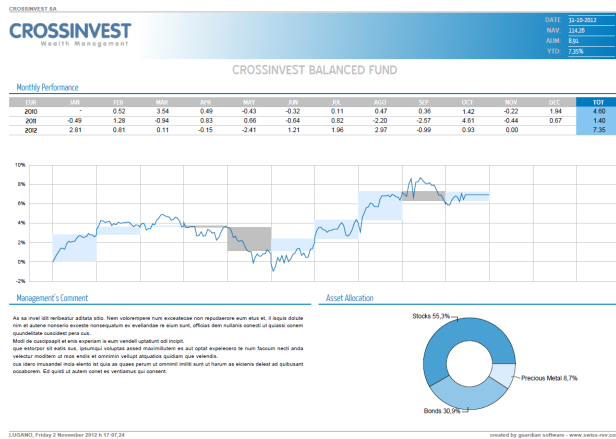
Generation of invoices

Automatic calculation of the commissions paid by the clients and **automatic invoice generation and sending**.

Reports

Wide range of reports available

Wide range of reports available to the user, such as performance contribution reports, newsletters, market overviews, fund fact sheets, KIIDs. All these reports are generated automatically and they can be sent to a mailing list up to five different languages, with the possibility to customize them according to specific needs.



Account: CONSODEM099 - EXAMPLE CONSO

Asset Allocation as of 03.07.2019 - Currency: EUR

Real Estate Asset

01805 - WAREHOUSE, ZÜRICH, SADELSTRASSE

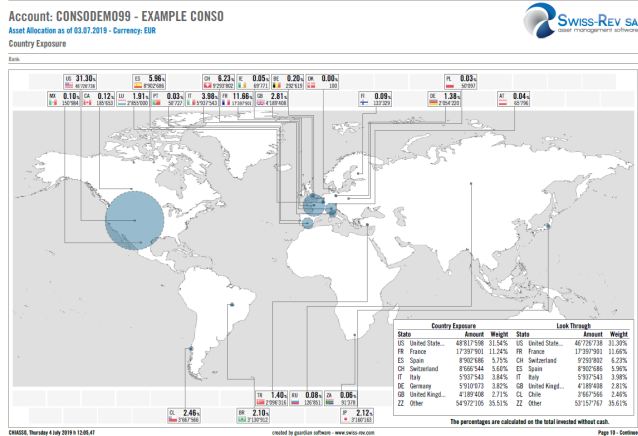
Address: Woldurg Strasse Town: Zurich Country: CH Type: Business Subtype: Construction Year: 1999

Initial Asset	Final Asset
Square Metre	Square Metre
Price per Square Metre CHF	Price per Square Metre CHF
Fic	Fic
Total Amount EUR	Total Amount EUR

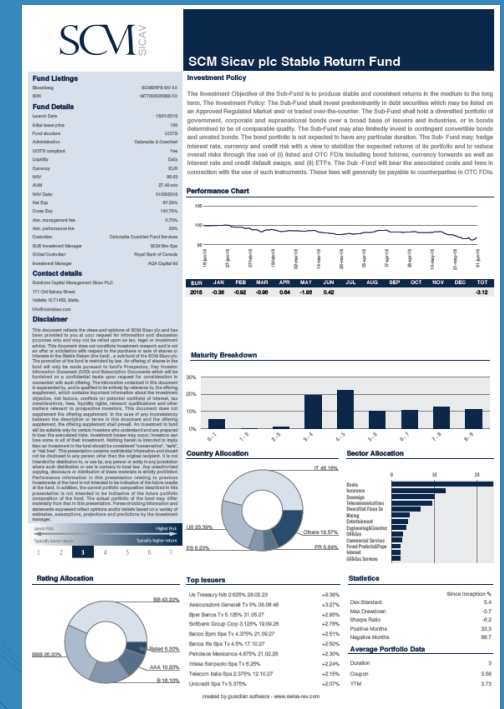
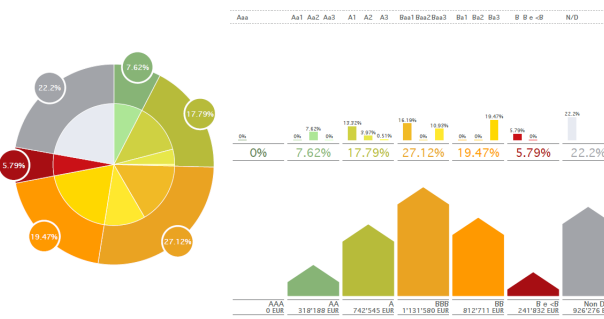
01807 - WAREHOUSE, CHIASSO VALDANI STREET

Address: Via Valdani Town: Chiasso Country: CH Type: Business Subtype: Construction Year: 1990

Initial Asset	Final Asset
Square Metre	Square Metre
Price per Square Metre CHF	Price per Square Metre CHF
Fic	Fic
Total Amount EUR	Total Amount EUR



Financial Asset. Breakdown by Bond Rating



Technical specifications

Software architecture

Client/server architecture for the management of individual portfolios and of funds, in **Java** language and based on **SQL database**. Option to add a **Web interface** for front office users (managers, promoters, end clients) in order to access the application via HTML. Guardian can be installed on **Windows, iOS**, and **Linux** systems, on physical servers or in cloud.

Automatic updates

New versions of the software are released automatically under maximum security conditions thanks to nightly scheduled jobs on the server which update the database to the most recent release, through **SFTP protocol**, without the intervention of an operator.

Encrypted database

The sensitive information contained in the Guardian database is encrypted for a **high level of security**.

User profiling

Possibility to determine **permission levels depending on the role**: portfolio manager, back officer, risk manager, advisor, end customer, other.

Audited and certified by EY

Guardian has been audited by **Ernst & Young**, who verified and certified its compliance with the principles of good asset management for the purpose of obtaining the authorization required by the **Swiss LiCol law** (Collective Capital Investment Law) **from the SFBC** (Swiss Federal Banking Commission).

User interconnection

Guardian has been developed to be used **both in Intranet and Internet networks**, and it is suitable for **Geographical Distributed Environments** (GDE), to allow **users from all over the world to be connected and operate in real-time**.

Multi-language application

Guardian can be used in Italian, English, French, German and Spanish.

ASK FOR A DEMO

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