



# GUARDIAN

Portfolio Management System

A unique asset management solution for investments funds and private clients.

# TABLE OF CONTENTS

Who We Are	03
Our Key Figures	03
What We Do	04
Guardian modules	05
Automatic connection with custodian banks	06
Portfolio management functions	07
Order routing	08
Risk management	09
Back and middle office	10
KYC, AML & CRM	11
Compliance & Reporting	12
Fees & Profitability	13
Reports	14
Technical specifications	15
Ask for a demo	16

## 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**

**\$70BN**

**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**

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 30 custodian banks already connected with our software:



## 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 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.

### Pre-compliance check of all trades

**Enter trades quickly and see the pre-compliance check of all trades** entered and **real-time verification of regulatory limits** in accordance with the prospectus or the management mandate.

### 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**, or to rebalance the weight of a security contained in multiple portfolio, all from a simple processing window.

### Automatic generation of trades related to cash flow, derivatives and corporate actions

Querying and **automatic generation of trades related to securities cash flow** (coupons, dividends, redemptions), corporate actions, expiry and exercise of options, futures and forwards.

### 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 via **Bloomberg platform (EMSX, TSOX)**, and/or through a dedicated connection with your brokers (FIX, SWIFT, XML, etc.), with all the main parameters, price and time 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 portfolio and/or security, to guarantee total safety in executing the order.

## Guardian is a Bloomberg certified software for the EMSX Staging and EMSX NET platform

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 software.

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. For each limit there is a check section with details of all the securities included in the calculation.

For each limit, check section with details of all the securities included in the calculation. 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**

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**. Setup of all prospectus limits for each fund and each type of limit can be set with different levels of complexity and depth.

**Real-time monitoring of all limits on all funds**, from a single window, **with alerts instantly displayed** and/or sent via email or text, in case of warning or limit exceeded.

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, 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 all securities' data and generation of trades**

Automatic update of the securities database through your financial provider (Bloomberg, Reuters, Six Financial Information, 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 and assignments according to market specifications (cash delivery, future delivery, out/in the money).

## **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.

## **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.

**Automatic calculation of commissions to be paid back to third parties** according to assets contributed and to be collected from funds or third parties.

## **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**, 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 with special windows to document the **meeting with the client**, with the possibility to **upload attached documents** and reminders on dates set by the user.



# Compliance & Reporting

## ● MiFiD II, LSerFi target markets and questionnaire

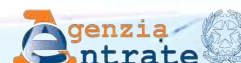
**Calculation and automatic completion of MIFID II and LSerFi six target markets resulting from Suitability and Appropriateness questionnaires** given to your private clients. This part monitors the risk profile of your clients according to your management mandate, in customized forms too, so that the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

## ● Compliance with 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 (fix amount, percentages, AUM brackets) and performance fees (absolute performance, HWM, hurdle rate), for all the 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 aggregated by different criteria (managers, custodian banks, groups, management styles) and divided by the different source of revenues (management & performance fees, receivable fees, upfront fees, etc)

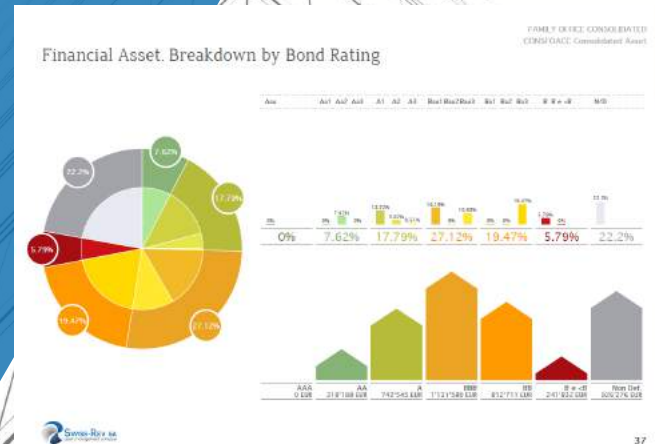
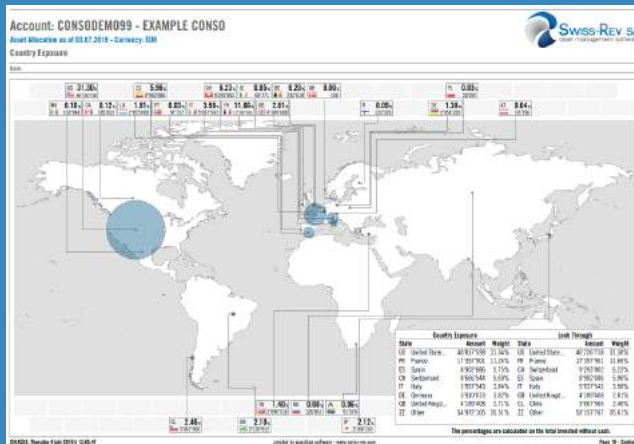
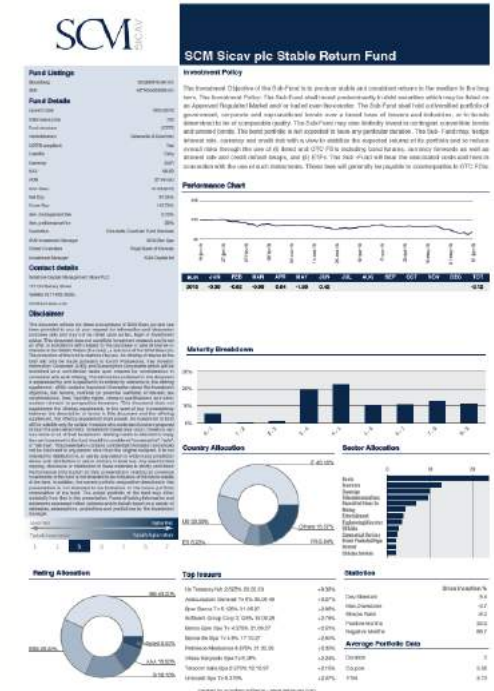
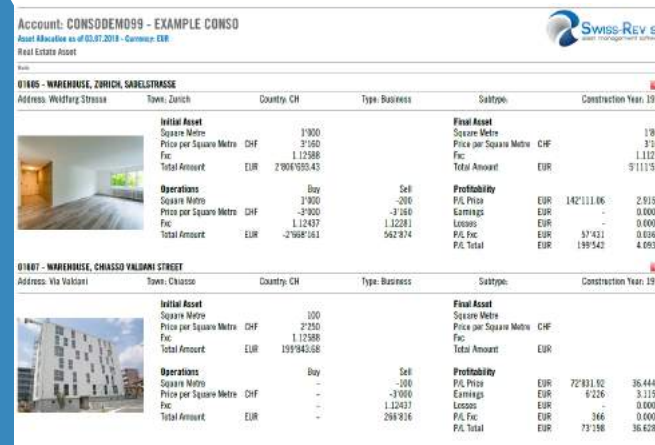
## Generation of invoices

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

# 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.





# 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 internet via HTML. Guardian can be installed on **Windows, iOS, or Linux** systems, on physical, virtual or hosted servers.

## User profiling

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

## Encrypted database

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

## Multi-language application

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

## 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

Developed to be used in **both Intranet and Internet networks** and suitable for geographically distributed environments, to allow the **different users located outside your company headquarters to be connected** and operate in real-time.

## Automatic updates

**Updates are released automatically** under maximum security conditions, on scheduled nightly processing on the server, which retrieves via the Internet, **through SFTP protocol**, the most recent version and applies the updates to the database, without the need for an operator.



# ASK FOR A DEMO

## Headquarter:

Viale Serfontana 13, 6834 Morbio Inferiore (Switzerland)  
Tel: +41 (0)91 922 7340  
Email: [info@swiss-rev.com](mailto:info@swiss-rev.com)  
[www.swiss-rev.com](http://www.swiss-rev.com)

## Branch:

Avenue Mon Repos 22, 1005 Lausanne (Switzerland)  
Tel: +41 (0)21 525 2089  
Email: [info@swiss-rev.com](mailto:info@swiss-rev.com)  
[www.swiss-rev.com](http://www.swiss-rev.com)