

**The Problem**

Operating in a challenging economic climate, Swiss Baloise Group wanted to be well prepared for a future where analysis and reporting would rely increasingly heavily on the use of fully stochastic life models. To be well set for the future, the challenge was to speed up the stochastic models already in place by a factor in the order of a thousand.

**The Solution**

SunGard's iWorks Prophet with the Replicating Portfolios module by SunGard iWorks, United Kingdom (subsequently "SunGard").

**About Baloise Group**

Headquartered in Basel, Switzerland, the Baloise Group provides insurance and pension solutions to the European market. In Switzerland, Baloise delivers focused financial services, including a combination of insurance and banking services. The company, which employs 8,900 workers, also operates in Germany, Austria, Belgium, Luxembourg, Liechtenstein, Croatia and Serbia. Baloise Holding Ltd. shares are listed on SIX Swiss Exchange, Main Market Segment.

*"With iWorks Prophet, we have the confidence that comes from knowing our calculations can be executed at the rapid pace our business demands. By partnering with SunGard, we have been able to erase our run-time problems and speed up analysis."*

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Baloise Switzerland

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**Switzerland's Baloise Group, an insurance and financial services group with 8,900 employees in eight countries, needed a way to rapidly project fair value balance sheets. This brought about the challenge of speeding up the stochastic models by a factor of about a thousand. The solution was SunGard's iWorks Prophet Replicating Portfolios in conjunction with SunGard's iWorks Prophet ALM platform.**

Switzerland's Baloise Group is all about safety. "Safety is a basic human need," said Dr. Urs Burri. "We want people to feel safe. As an insurer, everything we do is geared toward helping ensure that damage does not occur; and if it does, we respond quickly and professionally. The same is true of our financial services. We need to be as responsive as possible to our customers and stakeholders."

For Baloise, responsiveness means producing period-end results quickly while complying with the European Union's upcoming stringent Solvency II regulatory requirements. But achieving this feat demands that accurate data is used in financial models and that predictions are based on up-to-date information that reflect a changing market.

Baloise was anticipating the need for stochastic life models (for Swiss Solvency Test and Solvency II) and needed a fast and powerful solution to enable projection of fair value balance sheets. That need for speed led Baloise to SunGard.

"We must project fair value balance sheets as fast as possible but our existing calculation practices no longer could keep pace with our needs," Dr. Burri: explained. "We thought SunGard could help."

"We have been using Prophet successfully for about 15 years in a variety of areas, including statutory and IFRS accounting, embedded value calculations, producing cash flows for ALM purposes, and business planning," he continued. "We thought working with SunGard might allow us to rapidly project fair value balance sheets. Since we already were using Prophet, it was natural to look for a solution that could easily be integrated into the Prophet ALS environment. But, we wanted to explore all of our options before making a decision on the vendor and the solution."

Baloise considered a range of replicating portfolio tools, from Excel spreadsheets to organization-wide tools that would necessitate the implementation of an entirely new infrastructure. Eventually, the company rejected these choices as either too small, or too extensive, expensive and time-consuming.

"When we looked closely at all of our options and thought in detail about our specific needs, we concluded that we did not want to have to migrate to an entirely new environment," said Baloise's Dr. Burri. "Instead, we wanted a more manageable solution that was powerful enough to give us fast results, but also flexible enough to keep up with our changing needs."

That's when Baloise took a closer look at iWork's Replicating Portfolio Module.

"We had been using Prophet elsewhere in the business since 1996 and everyone felt comfortable with it," he said. "At a Swiss users' group meeting in 2008, we learned about the new Replicating Portfolios module within Prophet and saw the possibilities it could offer."

"From our vantage point, Prophet and its Replicating Portfolios, which are designed to help companies reduce the time it takes to tackle complex calculations for period-end reporting, could support our reporting and compliance efforts," Dr. Burri said. "When we explored all Prophet had to offer – especially the calculation speed and that the replicating portfolio library could be directly implemented in our established Prophet framework – the answer seemed obvious. Plus, we liked Prophet's open, structured code, which renders it very flexible."

### **Customizing the Solution**

With more stringent Solvency II regulatory requirements such as the Swiss Solvency Test or the one scheduled to take effect in the EU at the end of 2012, Baloise felt some urgency in implementing the SunGard solution, but did not want to cut any corners to ensure the solution would truly deliver as expected.

"To begin the implementation, SunGard provided us with a test license and three intensive days of training by SunGard experts," Dr. Andreas Meister, Valuation Actuary said. "We conducted extensive field testing and later bought the commercial license. During the test phase, we did some customization to address challenges that came to light. We were running at 100% within six months."

With any new implementation, there are initial challenges. For Baloise, they included issues with memory. For example, the original version of Prophet's Replicating Portfolio had difficulty handling more than a few hundred candidate-assets at once. To eradicate this problem, the system was modified so it did not retain cash flows in memory, but instead dealt directly with the quadratic metrics used in the fitting algorithms.

"We needed to store correlation matrices rather than the asset cash flows because that would deliver greater speed while taking up less disk space and memory, and allow us to work with a larger set of candidate assets," Dr. Meister said. He added, "the open code of the SunGard tool made such modifications very easy."

Other issues included problems handling huge binary files, and glitches when using ALS for flexible modeling of synthetic assets. "In all cases, we were able to rapidly find workable solutions that completely eliminated these problems," Dr. Meister said. "And, SunGard's development team was interested in our suggested improvements. The company even provided a platform for us at the Frankfurt user meeting to present our results. We found the collaboration with SunGard to be constructive and solution-oriented."

“With SunGard’s training, our field testing, and our knowledge of Prophet, we have been able to gain a great deal of skill with Replicating Portfolios in a short period of time -- expertise that is crucial for us to make efficient and appropriate use of them as a tool in compliance and other relevant areas,” Dr. Burri said.

“While the process of fully integrating Replicating Portfolios into our risk management process takes time, we have already accomplished several crucial steps, Dr. Burri said. “We now know that iWork’s Prophet, and its Replicating Portfolio Module, fit well in our working environment. And, we feel confident it can be modified as our needs evolve, and we can easily adapt it for use in other areas, such as ALM or hedging. That makes Prophet the right choice for Baloise.”

#### **About SunGard iWorks Prophet**

SunGard iWorks Prophet is an enterprise headquartered in Chertsey, Surrey, United Kingdom.

iWorks Prophet is an enterprise-wide actuarial modeling system, helping insurance and other financial services companies meet their reporting responsibilities and improve risk management. Actuarial libraries, engineered separately from the modeling system, deliver solutions that can be customized and deployed around the world. iWorks Prophet is implemented by more than 8,500 users, in more than 650 sites, in more than 55 countries.

#### **About SunGard iWorks**

SunGard iWorks is a business-driven IT product family for the insurance industry in each of the following major business lines: life/health/annuities/pensions; property/casualty; and reinsurance. iWorks offers a range of products and services including front-office tools, policy administration, reinsurance, actuarial calculations, financial and investment accounting and reporting. SunGard partners with customers to help deliver products and services that align with changing business and regulatory needs.

#### **About SunGard**

SunGard is one of the world’s leading software and technology services companies. SunGard has more than 20,000 employees and serves 25,000 customers in 70 countries. SunGard provides software and processing solutions for financial services, higher education and the public sector. SunGard also provides disaster recovery services, managed IT services, information availability consulting services and business continuity management software. With annual revenue exceeding \$5 billion, SunGard is ranked 380 on the Fortune 500 and is the largest privately held business software and IT services company. For more information, please visit [www.sungard.com](http://www.sungard.com).