SWISS
LIABILITY
INDEX
SLIX

SLIX ___ A reliable Path to Pension Plan Security.

Overview

There is a great variety of financial information which can help you evaluate your investments. Thanks to SLIX, you can now also assess your liabilities against market values. This unique instrument will help you gain a clear view of the financial situation of your pension fund.

Hewitt LIBERA ppc metrics

THE PATH TO SECURITY ___ What is the true financial situation of my pension fund? As a pension board member or a pension fund manager, how can I ensure that adjustments which require intervention with financial control instruments are detected early (and not just after the annual closing)?

HOW IS MY PENSION FUND'S FINANCIAL SITUATION? ___ Actuarial discount and conversion rate changes have far-reaching effects: such changes must therefore be carefully weighed and comprehensively substantiated. In today's rapidly changing environment, it is particularly important to prepare timely well-considered scenarios and answers to these questions.

A pension fund's true financial situation can be determined by comparing its net assets with the mathematical reserve required to satisfy its pension promises. Although a wealth of information is available for tracking market prices and discount rates over time, tools for the valuation of liabilities are much less advanced.

The Swiss Liability Index is a tool designed to evaluate the liabilities of individual pension funds taking into account the market and interest rate levels. Its primary purpose is to help determine a pension fund's economic mathematical reserve and its economic funded status. The mathematical reserves for pensions in payment and the corresponding vested pension rights can be projected on a monthly basis by means of the index calculations.

The Swiss Liability Index is based on the LPP / BVG 2005 biometric tables and on a representative sample of pensioners comprising retirement pensions, including partners' vested pension rights and surviving spouse pensions. Like bonds, liabilities are valued using market interest rates for matching durations.

EXAMPLE ___ In this overview, we present an example illustrating how an economic valuation can be made as of a given balance sheet reference date, and as a projection between two balance sheet reference dates.

THE SWISS LIABILITY INDEX OFFERS THE FOLLOWING COMPONENTS

Liability Price Index	Present value of expected pension payments based on current interest rates. Serves for calculating the economic funded status at the balance sheet reference date.
Liability Performance Index	In addition to the price index, calculates the economic mathematical reserve over the duration taking into account accruing interest. Serves for projecting the economic funded status.
Internal Interest Rate	Average interest rate over the life of the pension liabilities.
Modified Duration	Measures the interest rate variation risk. Shows how strongly the economic mathematical reserve reacts to changes in interest rate.

CALCULATION METHOD ___ To calculate the mathematical reserve for pensions reported in a pension fund's actuarial balance sheet, the expected pension cash flows are discounted at the actuarial discount rate: the resulting present value is equal to the usual actuarial mathematical reserve. The expected pension payments are determined without assuming any increase in life expectancy. To allow for increases in life expectancy, a provision is set aside every year which is then used to increment the mathematical reserve when the mortality tables are changed (e.g. from LPP/BVG 2005 to LPP/BVG 2010).

To calculate the economic mathematical reserve for a pension fund's pensioners, the expected pension payments are determined taking into account an increase in life expectancy, and the resulting future cash flows are discounted using the current market interest rates for the matching maturities. The Swiss Liability Index is based on this method.

A Liability Price Index of 100 corresponds to the present value of pension cash flows, disregarding increasing life expectancy, calculated with an actuarial discount rate of 3.5%.

Assets		Liabilities	Actuarial view (31.12.2005)	Economic view (31.12.2005)
Net assets	210.0	Active members' savings capital	100.0	100.0
		Mathematical reserve for pensions	100.0	*116.2
		Provision for increasing life expectancy	2.0	0.0
		Reserves for fluctuation in asset values/underfunding	8.0	-6.2
Total assets	210.0	Total Liabilities	210.0	210.0
Funded status			104.0 %	97.1 %

The actuarial funded status equals 104% (=210/202) / the economic funded status equals 97.1% (210/216.2)

*116.2 (= 102 x 113.88 / 100). Where 113.88 = Liability Price Index at year-end 2005 (see www.slix-index.ch)

Assumptions

- Defined contribution plan
- LPP/BVG 2005 mortality tables
- Actuarial discount rate of 3.5%
- The example also proceeds on the assumption that expected costs are covered.

MATHEMATICAL RESERVE ACCRUING INTEREST ON A MONTHLY BASIS: ACTUARIAL VIEW

	Actives 49.5% (Savings interest rate)	Pensioners 50.5% (Change in present value)	Total 100 % (Weighted change)	BVG Index (Investment performance)	Actuarial Funded status
Dec 2005					104.00 %
Jan 2006	0.206 %	0.327 %	0.267 %	0.25 %	103.98 %
Feb 2006	0.206 %	0.327 %	0.267 %	0.66 %	104.39 %
March 2006	0.206 %	0.327 %	0.267 %	-0.33 %	103.77 %
April 2006	0.206 %	0.327 %	0.267 %	-0.99 %	102.47 %
May 2006	0.206 %	0.327 %	0.267 %	-1.32 %	100.85 %
June 2006	0.206 %	0.327 %	0.267 %	-0.11 %	100.47 %
July 2006	0.206 %	0.327 %	0.267 %	1.22 %	101.42 %
Aug 2006	0.206 %	0.327 %	0.267 %	1.72 %	102.90 %
Sep 2006	0.206 %	0.327 %	0.267 %	1.39 %	104.04 %
Oct 2006	0.206 %	0.327 %	0.267 %	0.78 %	104.58 %
Nov 2006	0.206 %	0.327 %	0.267 %	0.22 %	104.53 %
Dec 2006	0.206 %	0.327 %	0.267 %	0.55 %	104.83 %
Year 2006	2.500 %	4.000 %	3.255 %	4.08 %	

MATHEMATICAL RESERVE ACCRUING INTEREST ON A MONTHLY BASIS: ECONOMIC VIEW

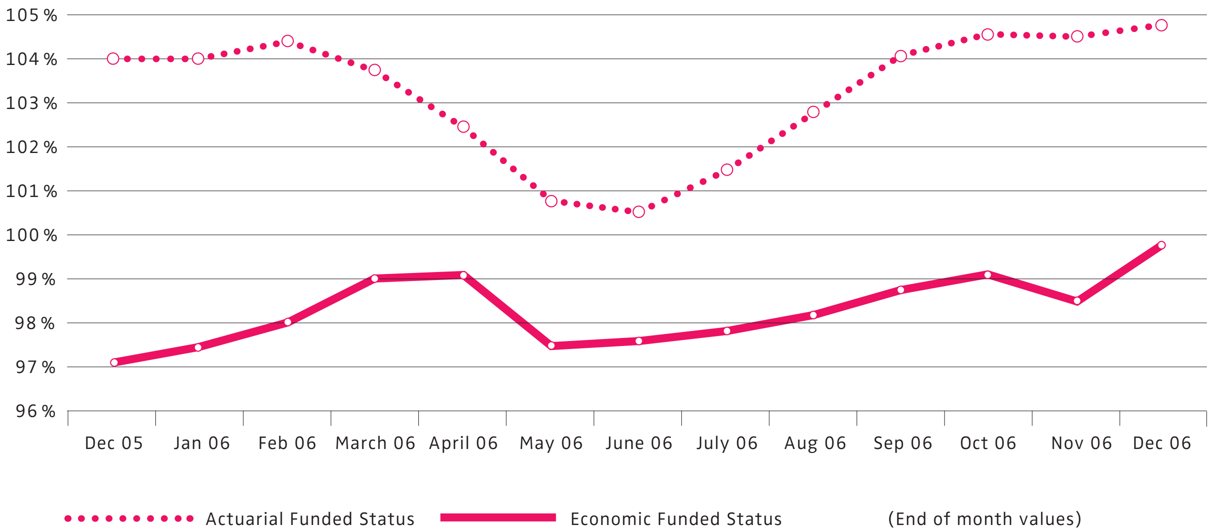
	Actives 46.25 % (Savings interest rate)	Pensioners 53.75 % (Change in present value)	Total 100 % (Weighted change)	BVG Index (Investment performance)	Economic Funded status
Dec 2005					97.10 %
Jan 2006	0.206 %	-0.324 %	-0.079 %	0.25 %	97.42 %
Feb 2006	0.206 %	-0.119 %	0.031 %	0.66 %	98.04 %
March 2006	0.206 %	-2.630 %	-1.318 %	-0.33 %	99.02 %
April 2006	0.206 %	-2.139 %	-1.055 %	-0.99 %	99.08 %
May 2006	0.206 %	0.233 %	0.221 %	-1.32 %	97.56 %
June 2006	0.206 %	-0.452 %	-0.148 %	-0.11 %	97.60 %
July 2006	0.206 %	1.446 %	0.873 %	1.22 %	97.93 %
Aug 2006	0.206 %	2.535 %	1.458 %	1.72 %	98.19 %
Sep 2006	0.206 %	1.271 %	0.778 %	1.39 %	98.78 %
Oct 2006	0.206 %	0.657 %	0.448 %	0.78 %	99.11 %
Nov 2006	0.206 %	1.331 %	0.811 %	0.22 %	98.53 %
Dec 2006	0.206 %	-1.580 %	-0.754 %	0.55 %	99.82 %
Year 2006	2.500 %	0.095 %	1.235 %	4.08 %	
		SLIX			

Assumptions
- Monthly valuation • Investment performance = Pictet BVG-25 Index (25% equities and 75% bonds)
- For active members: Monthly interest accruing at 0.206% (geometric) based on a savings interest rate of 2.5% p.a.
- The weighting between active members and pensioners remains constant during the year which explains why the weighted annual change does not exactly correspond to the cumulated weighted monthly changes.

RISK ASSESSMENT ___ The example also shows that when distinguishing between the actuarial funded status and the economic funded status it is not merely a case of deciding which of the two "correctly" mirrors the true financial situation. It is just as important to determine which funded status is relevant for risk management purposes.

Assuming a bond portfolio which perfectly matches the pension cash flow (cash flow matching), the economic funded status will remain constant over the duration. The actuarial funded status, on the other hand, will show an interest rate variation risk, since only the price of the bonds reacts to a change in interest rates whereas the actuarial mathematical reserve remains unchanged because of the constant actuarial discount rate.

The interest rate variation risk for the actuarial funded status can be reduced by decreasing the duration of the bonds so that their price becomes less sensitive to interest rate fluctuations. However, reducing the duration of investments creates an interest rate variation risk for the economic funded status. Steps reducing the interest rate variation risk of the actuarial funded status inevitably increase the interest rate variation risk of the economic funded status. Accordingly, the economic funded status is the proper yardstick for measuring and managing risk.



Interpretation

The actuarial funded status mirrors the investment performance. Overall, there is a slight increase from 104.0% to 104.83%. The economic funded status also depends on interest rates and how they develop. In the first six months, the interest rate increase (of about 0.7%) compensated the negative return on investment and the economic funded status improved slightly. The 0.3% increase in interest rates over the year had a positive effect on the economic funded status which improved from 97.1% at the beginning of the year to 99.82% at the end of the year.

COMBINED KNOW-HOW ___ Three leading pension plan consulting firms joined forces in developing the Swiss Liability index. Thanks to their vast experience and comprehensive technical know-how, they have produced a unique valuation tool for the liabilities' side of pension fund management.

ABOUT HEWITT ___ Hewitt Associates is the world's foremost provider of human resources outsourcing and consulting services, including pension plan consulting. The company consults with more than 2,300 organisations and provides HR outsourcing services on behalf of more than 340 companies to millions of employees and pensioners worldwide. Located in 35 countries around the world, Hewitt employs approximately 24,000 associates: in Switzerland it has over 160 employees in its offices in Zurich, Neuchâtel and Nyon.

ABOUT LIBERA ___ LCP Libera AG is a leading consulting company that is entirely independent from banks, life insurance companies and auditing firms. For over 35 years, Libera has been supporting clients with comprehensive pension plan and occupational benefit consulting services, and custom-managing their pension funds. Libera's experts are highly qualified and committed: they devise creative and innovative occupational benefit solutions satisfying the highest quality standards. As a member of the Lane Clark & Peacock Group, Libera AG offers its international clients access to an international network.

ABOUT PPCMETRICS ___ PPCmetrics AG is a leading investment consultant for institutional investors in Switzerland. We have over 15 years of experience in assisting our clients in planning, implementing, and monitoring their investments. Our specialists provide independent and professional advice on asset liability management, strategic asset allocation, investment process design, selection of asset managers and custodian banks, asset monitoring and controlling, and executive training for pension boards. Our clients include public and private pension funds of all sizes and all industry sectors.

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For more complete information on the Swiss Liability Index and a calculator visit: www.slix-index.ch