# The Investment Policy of Swiss Institutional Investors: Survey Results

## 1. Introduction

With CHF 470 billion invested in Swiss assets, Swiss institutional investors (i.e. pension funds, insurance companies, investment funds and corporate cash managers) hold approximately 30% of Swiss investable wealth, which is estimated at CHF 1,620 billion [1]. Therefore, they constitute a major player on the Swiss markets and their investment policy significantly impacts on the value of the various Swiss asset classes. Moreover, the weight and influence of institutional investors will further increase in the future as a result of the still relatively young age structure of pension funds.

Despite the importance of institutional investors in Switzerland, studies pertaining to their investment policy are still rather scarce in the financial literature (see e.g. AMMANN (1989), HEPP (1990), LUSENTI (1991), ODIER/SOLNIK/MIVELAZ (1991) and WYDLER (1992)) and focus mainly on pension funds. The aim of this study is thus to discuss thoroughly the investment policy of Swiss institutional investors as a whole. This is achieved on the basis of the empirical data collected by means of a questionnaire which was sent in 1992 to 555 of the largest Swiss institutional investors [2]. Although the surveyed institutions account for less than 4% of the aggregate number of Swiss institutions, they manage approximately 80% of the estimated CHF 530 billion held as of December 31, 1991 in Swiss and foreign assets by this type of investor. As more than one third of the managers answered the questionnaire, the results reported in this study should be considered as representative of the investment policy of Swiss institutional investors. This is true not only for large institutional investors, which can effectively diversify their holdings across and within asset classes, but also for smaller pension plans, which are often run by life insurance companies.

The general investment approach of Swiss institutions is analyzed in Section 3. We then examine the empirical results pertaining to the asset allocation by asset classes (Section 4) and to the asset allocation by geographical areas (Section 5). In addition to the global results, this study highlights differences according to the type and the size of institutional investors. Insight is also given as to the future behavior of these investors. Before discussing the survey results, we present in Section 2 the data used in this study.

## 2. The Data

The 555 Swiss institutions surveyed include pension funds, insurance companies, investment funds and corporate cash managers. The major players are the pension funds, which held approximately CHF 250 billion in assets as of December 31, 1991. Private pension funds, i.e. plans of private companies, account for more than two thirds in this figure, the remainder being held by public pension funds

(federal and cantonal). Insurance companies encompass both life and non-life companies; as of December 31, 1991, their assets exceeded CHF 160 billion and CHF 50 billion, respectively [3]. The financial weight of investment funds, which include mutual funds and investment foundations, is significantly lower (approximately CHF 50 billion as of the same date). The financial assets held by the last class of Swiss institutional investors, i.e. the corporate cash management of both banks (nostro accounts in Switzerland) and large corporations, amount to approximately CHF 100 billion [4].

The results reported in this study are based on the anonymous answers received from 200 large Swiss institutional investors (holding at least CHF 50 million in assets). The participation rate is thus of 36%. The data are presented for the following categories of investors: Swiss institutional investors as a whole, private pension funds, public pension funds and insurance companies. The figures pertaining to investment funds and corporate cash managers are not reported separately because of the limited number of data available. The data are further separated according to the size of the investors' portfolios: considered overall, 51% of the questionnaires were received from investors holding less than CHF 200 million, 20% from those holding between CHF 200 and 800 million, 13% from those holding between CHF 800 and 2000 million and 16% from those holding more than CHF 2000 million.

All results are expressed in percentage terms. As regards the average asset allocations (Tables 5 and 7), they are equally-weighted arithmetic averages of portfolio compositions expressed in percentage terms [5]. Therefore, they highlight the average behavior of Swiss institutional investors as of December 1991 with respect to asset allocation strategies and do not represent the amounts allocated to each class of asset.

## 3. General Investment Approach

Although it is difficult to assess what size of management structure is appropriate for a given portfolio, the in-house management structure of Swiss institutional investors globally seems rather light as compared with the amount of assets managed. For example, while 16% of the sample consists of large investors holding more than CHF 2 billion in assets, only 9% (essentially insurance companies) declare that their staff includes more than ten people, which means that 7% of the institutions surveyed manage more than CHF 2 billion with less than ten employees. The low level of in-house staff can partially be explained by the high cost of an adequate, independent professional management structure, which leads many private pension funds to hand over the management of their portfolio to employees of the related company's financial department.

In addition to the cost of an in-house management structure, the insufficient knowledge of finance and/or the various other tasks of many private and public pension funds managers lead 51% of the surveyed Swiss institutional investors to entrust financial professionals with the management of part of their portfolio. This proportion is logically higher for pension funds than for the other classes of investors. However, only 5% of the surveyed institutions transfer the management of their whole portfolio to financial intermediaries. Furthermore, of the above-mentioned 51%, only approximately one fourth (mainly private pension funds) entrust outside managers with the management of more than half of their assets. These figures demonstrate that only a small percentage of the estimated CHF 530 billion held by Swiss institutional investors is managed externally.

Table 1 shows that stocks constitute the asset type which is most often managed, at least partially, by external professionals: 57% of the surveyed managers who do not manage their portfolio exclusively in-house entrust financial professionals with the management of all or part of their stock holdings, whereas this figure amounts to 19% for bonds and 20% for real estate. However, insurance companies and large institutional investors holding more than CHF 2 billion in assets, which have larger in-house staffs, manage to a much larger extent internally the stock and bond components of their portfolio. The

relatively high figures of in-house management for real estate can be explained by the fact that decisions concerning the purchase of properties are often motivated by the needs of the associated company or the institution's affiliates [6].

The empirical results further show that most Swiss institutional investors do not manage their portfolio "actively". First, 42% of the managers who responded declare that their investment strategy is reexamined less than twice a year. Second, Table 2 shows that a large majority of investors (72%) hold more than 80% of their stock portfolio for more than a year, and this conclusion is fairly similar across categories. This can to a certain extent be explained by the limited number of liquid stocks available to institutions: as the 30 largest Swiss corporations account for almost 80% of total market capitalization, the variety of domestic stocks among which Swiss institutions can pick is much smaller than is the case e.g. in the United States or in the United Kingdom. Third, Table 3 shows that Swiss institutions also follow a passive investment policy with respect to bonds: 80% of the surveyed managers hold more than 80% of their bond portfolio until final maturity (buy-and-hold policy).

As far as the use of derivative instruments is concerned, the results show that 46% of the Swiss institu-

**Table 1: Types of assets managed in-house (when part of the portfolio is managed by financial professionals) (several answers possible)**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Stocks | 43% | 42% | 28% | 100% |
| Bonds | 81% | 79% | 78% | 100% |
| Real estate | 80% | 81% | 78% | 86% |
| Other assets | 58% | 49% | 78% | 71% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Stocks | 33% | 32% | 50% | 91% |
| Bonds | 74% | 89% | 79% | 91% |
| Real estate | 72% | 100% | 71% | 82% |
| Other assets | 49% | 53% | 71% | 82% |

**Abbreviations**

| | | |
|---|---|---|
| Private PF | : | Private pension funds |
| Public PF | : | Public pension funds |
| Insurances | : | Insurance companies |
| Global: | | Private pension funds, public pension funds, insurance companies, mutual funds and foundations, cash managers |
| <200 M | : | Less than CHF 200 million in assets |
| 200-800 M | : | Between CHF 200 and CHF 800 million in assets |
| 800-2000 M | : | Between CHF 800 and CHF 2000 million in assets |
| >2000 M | : | More than CHF 2000 million in assets |

**Table 2: Share of the stock portfolio which is held for more than one year**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Less than 50% | 5% | 5% | 4% | 0% |
| Between 50% and 80% | 23% | 23% | 21% | 24% |
| More than 80% | 72% | 72% | 75% | 76% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Less than 50% | 5% | 6% | 9% | 0% |
| Between 50% and 80% | 24% | 26% | 27% | 16% |
| More than 80% | 71% | 68% | 64% | 84% |

**Table 3: Share of the bond portfolio which is held until final maturity (buy-and-hold policy)**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Less than 80% | 20% | 22% | 9% | 12% |
| More than 80% | 80% | 78% | 91% | 88% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Less than 80% | 19% | 16% | 35% | 16% |
| More than 80% | 81% | 84% | 65% | 84% |

tional investors holding a stock portfolio have, at least once, followed a stock hedging strategy (see Table 4). This table also shows that larger institutions are more inclined to follow such a strategy (77% for institutions holding more than CHF 2 billion in assets and 27% for those holding less than CHF 200 million). The global figure is even higher (56%) for strategies designed to increase the return of the stock portfolio (issuance of "Stillhalter" and writing of covered short calls). Such return-oriented strategies essentially consist of the issuance of Stillhalter [7]: because of their large and long-term holdings, institutional investors, in particular the largest ones, are often asked by financial intermediaries to "freeze" part of their stock portfolio as coverage for the possible exercise of these options. Another feature of the general investment approach of Swiss institutions is that pension funds and, to a lesser extent, insurance companies are not yet under strong pressure with respect to the return they must achieve. Their only constraint in this regard is to achieve a long-term return at least equal to the capitalization rate (at least 4% per annum for pension funds [8]). Despite this low level of return, many of these investors seem to be reluctant to make decisions that would be profitable in the long run if such decisions might prevent them from obtaining year after year a return equal to the long-term constraint.

Pension fund managers are relieved from a great deal of pressure because they can evaluate assets at historical cost (in the case of real estate and stocks) or at nominal or historical value (in the case of bonds) [9]. This allows them not to book capital losses when the assets have not been sold and tends to place more emphasis on the yield component of the annual return. This in turn favors buy-and-hold policies and the overweighting of bonds. In addition, the possibility which is granted to Swiss pension funds of integrating into their free reserves part of the retirement benefits of leaving employees offers them a kind of "pillow". However, new legislation will provide for increased vesting in favor of leaving employees and will thus reduce this inexpensive and important source of income for pension funds.

**Table 4: Kind of strategies for which derivative instruments are used (in the case a stock portfolio is held) (several answers possible)**

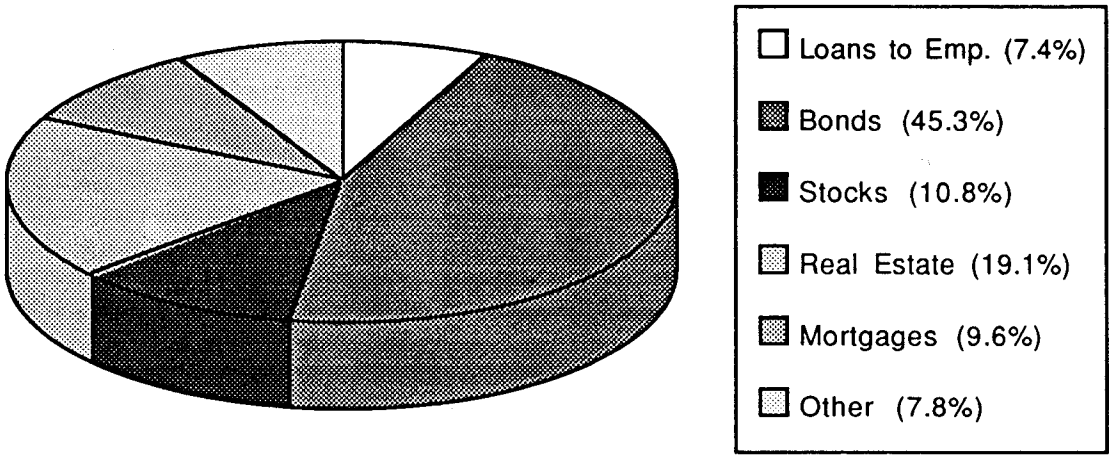
| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| A | 46% | 42% | 29% | 72% |
| B | 56% | 51% | 43% | 94% |
| C | 13% | 11% | 18% | 11% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| A | 27% | 44% | 68% | 77% |
| B | 32% | 61% | 77% | 93% |
| C | 7% | 11% | 18% | 23% |

A = hedging strategies (long puts for instance)
B = return-oriented strategies (issuance of Stillhalter, covered short calls)
C = leverage-oriented strategies (long calls, short puts for instance)

## 4. Asset Allocation by Asset Classes

The overall average asset allocation by asset classes of Swiss institutional investors as of December 31, 1991 appears in Figure 1. This figure shows that Swiss institutional investors manage their portfolios far more defensively than what the applicable provisions allowed them to do at the time of the survey [10]. The conservative investment behavior of Swiss institutions as regards their asset allocation by asset classes mainly stems from the lack of real pressure on return described in Section 3 hereabove. It is not a direct consequence of the investment limits provided in the applicable statutes, although some very professional institutional managers might at times be restricted by specific investment limits. Table 5 shows that interest rate-linked assets (loans to the employer, bonds, mortgages and other assets) are largely represented in Swiss institutional portfolios (70.1% considered overall). This average figure is fairly similar in the three categories considered: 68.2% for private pension funds, 74.9% for public pension funds and 70.5% for insurance

**Figure 1: Average asset allocation by asset classes of Swiss institutional investors (based on survey results)**




companies. Nevertheless, the composition of interest rate-linked assets differs significantly across categories.

Loans to the employer, i.e. various types of loans granted by pension funds to the associated company (in the case of private pension funds) or to the State (in the case of public pension funds), represent on average a substantial share (7.4%)[11]. This figure must, however, be examined with caution as the mean result stems mainly from the public pension funds which lend considerable amounts to the State (federal, cantonal or municipal): the proportion reaches 21.2% for this class of investor. In addition, it must be observed that every fourth Swiss public pension fund holds more than 40% in this type of asset and that some of them (even large funds) are fully invested in loans to the State (as employer). Although applicable legislation provides that the interest paid on loans to the employer must be in line with market rates [12], the quality of such an asset allocation must be questioned in view of the interests of pension fund beneficiaries because of the low return on this type of asset.

As far as bonds are concerned, the overall average share is high (45.3%). This is mainly due to the substantial weight allocated to bonds in private pension funds' portfolios (51.0% on average). These investors, however, only grant a small proportion of their portfolio to loans to the employer and to mortgages. The results further show that smaller institutions tend to have a higher stake invested in bonds. For example, the proportion allocated to bonds amounts to 52.4% for investors holding less than CHF 200 million in assets, while it is 36.2% for investors holding more than CHF 2 billion [13]. The high percentage of wealth allocated to bonds in the portfolios of smaller institutions can to a certain

**Table 5: Asset allocation by asset classes**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Loans to Emp. | 7.4% | 3.2% | 21.2% | 0.0% |
| Bonds | 45.3% | 51.0% | 32.3% | 42.5% |
| Stocks | 10.8% | 12.2% | 5.8% | 7.7% |
| Real Estate | 19.1% | 19.6% | 19.3% | 21.8% |
| Mortgages | 9.6% | 6.7% | 13.8% | 20.3% |
| Other | 7.8% | 7.3% | 7.6% | 7.7% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Loans to Emp. | 6.1% | 6.0% | 10.8% | 9.2% |
| Bonds | 52.4% | 44.3% | 36.3% | 36.2% |
| Stocks | 9.5% | 12.2% | 10.3% | 13.0% |
| Real Estate | 17.3% | 22.3% | 21.3% | 17.9% |
| Mortgages | 5.5% | 10.7% | 12.4% | 16.2% |
| Other | 9.2% | 4.5% | 8.9% | 7.5% |

extent be explained by the fact that bonds are often perceived by the managers of such institutions as an investment vehicle which is easy to manage. In addition, the lower volatility of this asset class attracts risk-averse investors.

The overall average share allocated to mortgages is 9.6%. The results show that the larger the institution, the higher the stake in mortgages (5.5% for investors holding less than CHF 200 million in assets and 16.2% for institutions holding more than CHF 2 billion). The stake is particularly high (20.3%) for insurance companies, which belong to the largest institutions included in our sample [14]. This discrepancy between smaller and larger investors can be attributed in part to the critical size which is necessary to achieve an adequate diversification of default risk. As a result, almost 50% of the surveyed institutions holding less than CHF 200 million in assets do not have any mortgages in their portfolio. For some of the latter institutions, however, the stake allocated to mortgages reaches 15% of total assets: this is largely due to the number of mortgages granted to employees, in particular in public pension funds. This kind of policy is, however, questionable in view of the equality of treatment principle when such loans are offered at below market rates.

The final class of interest-rate linked assets, i.e. the so-called "other" assets, mainly include short-term loans. The average share allocated to this asset class (7.8%) can to a large extent be explained by the reverse yield curve prevailing at the time of the data collection (December 31, 1991) which led Swiss institutions to invest part of their cash inflows in short-term loans. Moreover, such holdings enable pension funds and insurance companies to comply with the legal requirement that they should hold at any time sufficient liquid assets to meet current payments [15].

The average weight allocated to "real" assets (stocks and real estate) is relatively low (29.9%). This result is mainly due to the reluctance of most Swiss institutions to invest in stocks: although the average proportion allocated to stocks (10.8%) is increasing [16], it remains low in view of both the 30% limit fixed by the Swiss legislation applicable to pension funds and insurance companies at the time of the survey and the situation prevailing in some foreign countries [17]. Aside from the below average proportion observed for public pension funds (5.8%), insurance companies only allocate 7.4% of their portfolio to this asset class, which is surprisingly low even for non-life business. Some institutional managers, however, have a much higher exposure to equity markets: 26% of all managers who responded allocate more than 15% of their portfolio to stocks and large private pension funds (holding more than CHF 800 million in assets) even invest 18.3% on average in stocks.

As far as real estate is concerned, the average weight is 19.1% and is fairly similar across categories. This average percentage is in line with the results of a research by HOESLI (1993). This study demonstrates that the optimal weight which should be allocated to real estate in mixed-asset portfolios is in the 20%-30% range when the illiquidity of this asset class is taken into account. This conclusion is particularly true for large investors who can efficiently diversify their portfolio. For instance, our results show that all surveyed insurance companies holding more than CHF 2 billion in assets allocate between 14% and 29% of their portfolio to real estate. By contrast, the results concerning small pension funds (holding less than CHF 200 million in assets) exhibit higher variance: 42% allocate less than 10% of their portfolio to real estate, whereas 24% allocate more than 30%. This can be explained, inter alia, by the lump asset nature of real property investments: the purchase of each piece of real estate requires substantial amounts of funds. Thus, an appropriate diversification of the real estate component can only be achieved in large portfolios [18].

Considered overall, the weight allocated to each asset category by Swiss institutional investors is more or less consistent with the results yielded by studies pertaining to optimal portfolio compositions which have been conducted in a mean-variance framework [19]. Their current asset allocation by asset classes should therefore enable them to reach

their target minimum rate of return (4% for pension funds) with a minimum or close-to-minimum risk exposure. However, the question arises as to whether Swiss institutions should not target higher levels of return. Higher returns would for instance make it possible for defined contributions pension plans to increase the retirement benefits paid to beneficiaries [20]. Ceteris paribus, the final value of 40 years of contributions would be 27% higher if the rate at which these contributions are compounded was increased from 4% to 5%. Considering the significant impact such an increase would have on the level of retirement benefits (or on the level of pension plan contributions or insurance premiums), more emphasis should be placed on expected returns. This would mean an increase of the proportion allocated to real assets, as stocks and real estate yield higher returns than bonds and other interest rate-linked assets in the long run [21].

Our empirical study further shows that private pension funds, which have a rather young age structure (44% have at least six active members for each pension beneficiary), allocate a larger proportion of their portfolio to stocks than public pension funds, which have on average an older age structure (32% have less than three active members for each pension beneficiary). This observation is consistent with the fact that stocks offer lower yields but higher returns in the long run than bonds and other interest rate-linked assets. It does not necessarily mean, however, that Swiss pension funds define their investment strategies according to the age structure of their affiliated members, which is one of the components of the structure of their liabilities. On the contrary, it seems that the structure of the liabilities is not yet fully taken into consideration in defining an institution's asset allocation by asset classes.

Finally, the results contained in Table 6 show that a majority of institutional managers intend to increase the percentage allocated to stocks over the five coming years (89%). Many of them seem to consider a share of 20-25% in stocks as a reasonable long-term objective. These figures reflect the tendency of Swiss institutional investors to accept higher volatility in order to achieve higher return levels.

**Table 6: Types of investments which the surveyed institutional investors intend to increase in the next five years (several answers were possible)**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Stocks | 89% | 87% | 96% | 100% |
| Bonds | 39% | 42% | 38% | 27% |
| Real Estate | 38% | 35% | 63% | 7% |
| Mortgages | 30% | 32% | 36% | 13% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Stocks | 88% | 84% | 94% | 96% |
| Bonds | 47% | 39% | 28% | 25% |
| Real Estate | 46% | 47% | 24% | 13% |
| Mortgages | 41% | 31% | 12% | 17% |

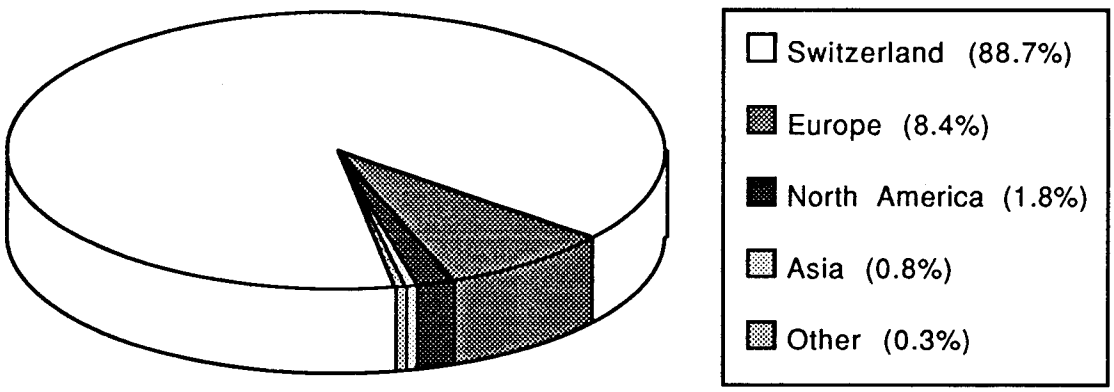
## 5. Asset Allocation by Geographical Areas

Figure 2 illustrates the average geographical allocation of assets held by Swiss institutional investors (more details are presented in Table 7). This figure clearly demonstrates that Swiss institutions focus mainly on Swiss assets (88.7%) [22]. This is particularly true of public pension funds and small institutions holding less than CHF 200 million in assets:

**Table 7: Asset allocation by geographical areas**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Switzerland | 88.7% | 87.4% | 93.9% | 86.7% |
| Europe | 8.4% | 9.2% | 4.9% | 10.8% |
| N. America | 1.8% | 2.0% | 0.8% | 1.9% |
| Asia | 0.8% | 1.0% | 0.3% | 0.3% |
| Other | 0.3% | 0.4% | 0.1% | 0.3% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Switzerland | 92.0% | 84.6% | 86.8% | 87.6% |
| Europe | 6.2% | 11.3% | 9.1% | 9.3% |
| N. America | 1.2% | 2.3% | 2.7% | 2.0% |
| Asia | 0.4% | 1.4% | 0.7% | 0.8% |
| Other | 0.2% | 0.4% | 0.7% | 0.3% |

**Figure 2: Average asset allocation by geographical areas of Swiss institutional investors (based on survey results)**




for these investors, the figures are 93.9% and 92.0%, respectively. At first glance, the share of foreign assets (11.3%) may appear surprisingly low. However, in an international perspective, the foreign currency exposure of Swiss pension funds is higher than that of German and French pension funds (5% and 6%, respectively, according to a recent study [23]). The same study shows that British pension funds, which are known for investing large amounts abroad, hold 25% of their assets in foreign currencies.

Three main reasons can be given to explain the relatively low level of geographical diversification of Swiss institutional portfolios. First, as their liabilities are due in Swiss francs, Swiss institutions are reluctant to running exchange rate risks even though hedging opportunities are available. Second, despite higher interest rates (for similarly rated debtors) offered abroad and the greater liquidity of other European currencies as compared with Swiss franc issues, Swiss institutional investors did not switch from Swiss bonds to foreign bonds because they did not want to enter into their books the losses made on Swiss bonds (resulting from the rise in interest rates)[24]. Third, Swiss institutional investors can only effectively diversify approximately 55% of their portfolio on a geographical basis (i.e. the 45.3% stake in bonds and the 10.8% stake in stocks): the geographical diversification of the other asset classes is restricted by both legal and practical considerations [25].

Nevertheless, the share of European assets has increased over the last five years to 8.4%, and this trend should continue as 94% of the responding managers indicated that they intend to increase the share of European assets (Table 8). Investments in North America (1.8%) and in South-East Asia (0.8%) are marginal but, according to the results, their weight in Swiss institutional portfolios should rise over the next five years (particularly in the case of large investors holding more than CHF 800 billion in assets). Although Swiss institutional inve-

**Table 8: Geographical areas in which the surveyed institutional investors intend to increase their investments in the next five years (several answers possible)**

| | Global | Private PF | Public PF | Insurances |
|---|---|---|---|---|
| Switzerland | 34% | 35% | 38% | 8% |
| Europe | 94% | 92% | 100% | 93% |
| N. America | 48% | 35% | 94% | 73% |
| Asia | 54% | 41% | 87% | 91% |
| | <200 M | 200-800 M | 800-2000 M | >2000 M |
| Switzerland | 43% | 33% | 35% | 0% |
| Europe | 91% | 97% | 94% | 96% |
| N. America | 44% | 35% | 62% | 65% |
| Asia | 33% | 57% | 67% | 85% |

stors were on average far from reaching the legal ceiling on foreign currency investments applicable at the time of the survey (20%), some pension funds (which had taken advantage of higher European interest rates by purchasing foreign currency bonds) were restricted by the applicable provisions of the OPP 2 [26].

## 6. Conclusion

This study has shown that Swiss institutional investors, particularly pension funds and insurance companies, still follow a very conservative investment policy. They favor interest rate-linked assets and allocate a rather small proportion of their total portfolio to stocks. They further appear to focus on Swiss assets, as they seem particularly reluctant to expose their portfolio to exchange rate risks despite the availability of hedging instruments. Their current asset allocation should enable them to reach their target minimum rate of return with a limited risk exposure. Considering the significant impact which higher returns would have on the level of retirement benefits (or on the level of pension plan contributions or insurance premiums), the question arises as to whether Swiss institutions should not target higher levels of return and thus increase the proportion allocated to real assets.

This prudent behavior stems from two main factors. First, Swiss pension funds and insurance companies are not subject to real pressure with respect to the level of return which they must achieve. The affiliated members of pension funds do not yet pay much attention to the performance achieved on their compulsory savings by fund managers. This situation should gradually evolve and lead Swiss institutions to follow a more return-oriented investment policy. Second, the investment limits provided in the Swiss legislation applicable to pension funds and insurance companies at the time of the survey prevented the most professional institutional managers from taking advantage of the higher interest rates offered on some foreign currencies. By relaxing the investment limits, in particular that applicable to foreign currency investments, the Swiss legislator has taken into account the diversification needs of Swiss institutions.

While the legislator has taken into account the interests of beneficiaries when relaxing the investment limits, he could pay more attention to those interests in other respects. For instance, unsecured investments with the employer, including the employer's shares, are permitted up to a maximum of 20% of the total assets of Swiss pension funds: such investments cause important conflicts of interest as the interests of the employer are often privileged in comparison with those of the plan beneficiaries, and can become prejudicial to beneficiaries if the company goes bankrupt. Furthermore, the Swiss legislation allows deviations from the principle of equal treatment among beneficiaries as it does not prevent pension funds from leasing properties or granting mortgage loans to some beneficiaries at below market prices.

### Footnotes

[1] These figures stem from ANDERSON/HERTIG (1992) and HOESLI/GACEM/BENDER (1993). The figure regarding holdings of Swiss institutional investors is as of 1991, whereas that of investable wealth is as of 1990.

[2] The data used in this study are derived from the answers received by ANDERSON/HERTIG (1992).

[3] The assets managed by life insurance companies include premiums paid by individuals under life insurance policies as well as funds managed for the account of medium and small size pension funds. Thus, some double counting exists between the figures for pension funds and those for insurance companies.

[4] All figures reported in the paragraph stem from ANDERSON/HERTIG (1992).

[5] This computation method is used for two reasons. First, in order to insure perfect anonymity, institutional investors were not asked to report the exact amounts they hold but rather to indicate in which of the four size brackets they lie (i.e. less than CHF 200 million, CHF 200 to 800 million, CHF 800 to 2000 million, more than CHF 2000 million). Second, value-weighted averages would place too much emphasis on the largest institutions. However, the stronger weight and influence of the largest investors is not disregarded as the data are also presented by size for the various categories.

[6] However, the collection of rents and other aspects of day-to-day management are quite often taken care of externally.

[7] 41% of the investors participating in the issuance of Stillhalter cover more than 10% of their stock portfolio with these transactions, whereas the relevant figure is only 27% for covered short call writings.

[8] Article 12 of the implementing ordinance No 2 to the federal law on occupational old age, survivors and disability plan ("OPP 2").

[9] This possibility is granted by articles 47 and 48 of the OPP 2 and articles 957 to 964 of the Swiss Code of Obligations.

[10] The investment limits for pension funds set forth in the OPP 2 have been partially relaxed as from January 1, 1993, and are as follows: a maximum of 30% of the total assets may be invested in Swiss stocks, 25% in foreign stocks (as compared to 10% before January 1, 1993), 50% in Swiss real estate, 5% in foreign real estate (as compared to 0%), 100% in bonds issued by Swiss debtors, 30% in Swiss franc bonds issued by foreign debtors and 20% in foreign currency bonds. In addition, the following general limits apply: 50% in stocks (as compared to 30%), 50% in real estate, 70% in "real" assets (stocks and real estate), 30% in bonds issued by foreign debtors (whether in Swiss francs or in foreign currency) and 30% in foreign currency assets other than real estate (as compared to 20%). Article 59 of the OPP 2 allows deviations from the above limits, provided they are justified by special circumstances and the plan's benefits are not jeopardized.

[11] This high average share is paradoxically low in comparison with the limit fixed for pension funds in article 57 of the OPP 2, which allows unsecured investments with the employer up to a maximum of 20% of the total assets in addition to secured investments.

[12] Article 57 of the OPP 2.

[13] As much as 18% of the surveyed private pension funds holding less than CHF 200 million allocate even more than 80% of their total assets to bonds.

[14] This high stake can also be explained by the fact that insurance companies often grant mortgage loans to their life insurance policyholders.

[15] See article 52 of the OPP 2 for pension funds and article 11a of the federal ordinance on supervision of private insurance companies.

[16] In the case of pension funds, for instance, this share amounted to 3.3% in 1978, 6.8% in 1987 (see FEDERAL OFFICE FOR STATISTICS (1992), p. 24) and can be estimated on the basis of our empirical study at 10.1% in 1991.

[17] The proportion allocated to stocks by pension funds in some other countries is significantly higher than 10.1% (see note 16): at the end of 1991, the figure was 83% for the U.K., 48% for the U.S. and 25% for the Netherlands, three countries in which pension funds are well-developed (see Financial Times (May 7, 1992)).

[18] As a result, a large number of smaller institutions have decided not to enter the real estate market. 24% of the private pension funds holding less than CHF 200 million in assets, for example, do not hold any real estate at all.

[19] For instance, ANDERSON/HOESLI (1991) report the following weights for the 1978-1989 period: 6% for stocks, 78% for bonds and 16% for real estate, for an average annual return of 4.2%.

[20] Defined contributions pension plans are plans which do not guarantee any specified level of retirement benefits, so that benefits depend entirely upon the returns achieved on the investment of contributions. By contrast, defined benefits pension plans guarantee a specified level of retirement benefits. Higher returns could therefore enable the latter plans to reduce the contributions without jeopardizing the guaranteed retirement benefits.

[21] For an empirical investigation of long-term returns offered by the various Swiss asset classes, see WYDLER (1989) and HOESLI (1993).

[22] Swiss cash managers allocate a much higher stake than the average figure to foreign assets. In particular, the foreign asset stake of the largest Swiss banks exceeds 75%. As the figures pertaining to cash managers only represent a small proportion of our data, they only marginally impact on the average figure of 88.7%.

[23] Study published in Neue Zürcher Zeitung (May 4, 1992).

[24] Two reasons can be given to explain the reluctance of Swiss institutions to switch from Swiss to foreign bonds. First, many institutions value bonds at nominal value and do not book capital gains or losses unless the bonds are sold. Second, the relative lack of pressure on return mentioned in Section 3 hereabove did not give them any incentive to operate such a switch.

[25] In particular, as of December 31, 1991, the OPP 2 did not allow any investments in foreign real estate.

[26] As mentioned in note 10, the legal ceiling has been relaxed as from January 1, 1993, and is now 30%.

**References**

AMMANN, D. (1989): "Anlagestrategien für Pensionskassen", Verlag Paul Haupt, Bern.
ANDERSON, M. and T. HERTIG (1992): "Institutional Investors in Switzerland: Their Behavior and Influence on Financial Markets and Public Companies", Schulthess Polygraphischer Verlag, Zürich.
ANDERSON, M. and M. E. HOESLI (1991): "The Performance of the Major Swiss Real Estate Mutual Funds, 1978-1989", Finanzmarkt und Portfolio Management 5, pp. 39-52.
FEDERAL OFFICE FOR STATISTICS (1992): Statistique suisse des caisses de pension 1990, Berne.
HEPP, S. W. (1990): "The Swiss Pension Funds - An Emerging New Investment Force", Verlag Paul Haupt, Bern und Stuttgart.
HOESLI, M. (1993): "Investissement immobilier et diversification de portefeuille", Economica, Paris.
HOESLI, M. E., B. GACEM and A. R. BENDER (1993): "Estimating the Value of Swiss Residential Real Estate", Schweizerische Zeitschrift für Volkswirtschaft und Statistik 129, pp. 673-687.
LUSENTI, G. (1991): "Les institutions de prévoyance en Suisse, au Royaume-Uni et en Allemagne", Georg, Genève.
ODIER, P., B. SOLNIK and J. M. MIVELAZ (1991): "International Diversification for Swiss Pension Funds", Finanzmarkt und Portfolio Management 5, pp. 20-38.
WYDLER, D. (1989): "Swiss Stocks, Bonds, and Inflation, 1926-1987", Journal of Portfolio Management 15, No. 2, pp. 27-32.
WYDLER, D. (1992): "Einige grundsätzliche Gedanken zu Schweizer Pensionskassen", Finanzmarkt und Portfolio Management 6, pp. 169-178.