February 2017

The 3rd contributor to occupational pension plans
Proposals for optimisation

A study by the SBA «Occupational Pension Plans» task force and the Asset Management Platform
**General information**

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1 Introduction – Pension funds: the road to a future oriented, return focused asset management

Despite the fact that expectations and demands on pension funds are high, their room for manoeuvre is limited. Though people still often like to talk about the Federal Law on Occupational Old-Age, Survivors’ and Disability Pension Plan (LPP) as a framework law, the level of regulatory intervention in the activities of pension funds is immense and continues to increase.

This applies in particular to the investment guidelines set out in the Ordinance on Occupational Old-Age, Survivors’ and Disability Benefit Plans (OOB2). These guidelines are based on a traditional asset classification into categories with designated limits. In principle, the possibility of deviating from these limits exists if there is sufficient justification. However, this possibility is rarely utilised. It would appear that chief investment officers and pension fund boards have become accustomed to this reality and appreciate the security that, even if often only illusory, this brings with it. But the success of asset management should not only be measured in terms of adherence to rules. Instead, it should be measured much more in terms of delivering the most efficient and return-oriented execution possible in the interests of the beneficiaries.

This study shows that the pension funds cannot achieve an efficient portfolio allocation under the restrictive guidelines set out under OOB2. The findings indicate that despite historically low interest rates and an unfavourable outlook, there have been no fundamental changes to asset allocation since the 1980s.

The authors of the study have identified the widespread resistance to non-traditional investments as the key obstacle to such change. In light of this reality, this document also attempts to demystify non-traditional investments, without which a realignment of the 2nd Pillar will hardly be possible. The insistence on adhering to traditional structures entails missed opportunities to generate returns, which the 2nd Pillar and its individual beneficiaries in particular can no longer afford.

The SBA and Asset Management Platform study should therefore be considered a plea for modernised investment policies that are in line with the current needs of the 2nd Pillar institutions. The authors of the study are aware that this is not possible without a change of thinking at all levels; from the individual pension funds and their committees, the industry associations, experts and advisers, through to the government and the media. This study aims to provide the necessary first step to this end.

I hope you find the insights it provides stimulating and look forward to a broad range of reactions.

Herbert J. Scheidt
Chairman of the Swiss Bankers Association
The share of investment returns on the retirement capital of the beneficiaries of the occupational pension plans over the last ten years was just under 40 percent. The ongoing low interest rate environment and macroeconomic developments suggest that this share will decrease in future. Both a study commissioned by the Federal Social Insurance Office (FSIO) and conducted by the research institute BAK Basel in 2014, as well as more recent calculations by the SBA «Occupational Pension Plans» task force suggest that in the medium-term, the pension funds should expect lower investment performance for their investments. The so-called risk-free interest rate has at times fallen to below zero. Despite the fact that due to this environment, target returns have for several years now been significantly lowered (since 2006 from 5 percent to only 3.4 percent at the end of 2015), the pension funds continue to face major challenges in successfully delivering the regulatory benefits; this not least due to the very far-reaching benefits guarantee in Switzerland for pension benefits that have been promised.

This situation is compounded by the continuous rise in life expectancy coupled with a retirement age that has remained unchanged. Since 1984, the life expectancy of a 65 year-old man has risen by 4.5 years, for a woman of the same age it has risen by 3.4 years. This is a significant and historically unprecedented increase. In the past, one favourable factor for occupational pension plans was that with the exception of the early 1990s, interest rates on pension assets were higher than the trend in wages during the same period. Pensions thus increased more than expected when LPP came into force in 1985.

However, the pension funds have often not succeeded in adequately addressing the strong fall in interest rates, with the result that retirement capital is now compounded at a much higher rate than the pension assets of the current pension fund contributors. This situation is unsatisfactory and is one of the reasons for the widespread and justified criticism of the redistribution between generations.

Although the investment environment has changed significantly in the last few decades, a remarkable constancy can be observed in terms of asset allocation. The asset allocation of Swiss pension funds continues to be dominated by bonds, equities and – a Swiss speciality – domestic real estate.

Chapter 3 – Occupational pension plans – Objectives and current challenges
In the past, over one-third of pension assets were generated through investment returns. The developments in financial markets will make it increasingly difficult to maintain the level of contribution made by the so-called 3rd contributor in future. Notwithstanding, the investment strategy (asset allocation) of the pension funds has to date barely reacted to the new realities. It has remained largely unchanged since the 1980s.
Chapter 4 – Expected and required capital market returns

Many government bond yields have fallen to below zero. No inflationary tendencies are in sight. Although equities continue to deliver positive performance, for the medium-term, this performance is likely to fall below past levels.

Capital markets have been affected by the weaker global growth observed since the outbreak of the 2008 financial crisis. Global growth has fallen from the long-term average of 3.5 to 2.5 percent. According to a study by Pictet, this is primarily attributable to the decline in productivity growth, the high debt levels and China’s economic transformation into a service economy.

The authors of this study do not anticipate a significant rise in inflation. Annual inflation rates of 1 to 2 percent are expected over the next five years for developed countries. An interest rate increase in Switzerland is therefore currently not in sight.

Over the next ten years, government bonds from developed countries are expected to yield around zero percent. When this publication was being drafted, 28 percent of all bonds from developed countries were negative-yielding. This is a historic high. Positive yields are only expected for emerging market government bonds. The equity markets paint a more positive picture, although forecasts for equities are likely to be even more difficult and uncertain over the next ten years.

The SBA «Occupational Pension Plans» task force’s forecasts are not good news for Swiss pension funds. They suggest that for traditional asset classes such as Swiss government bonds as well as government bonds from developed countries, negative or at least very low yields in historical comparison should be expected. If the pension funds do not adjust their asset allocation, they will most likely face problems in the coming years caused by low government bond yields.

Chapter 5 – Optimal asset management for pension funds

Markowitz’ portfolio theory highlights how returns can be maximised at a given level of risk, or how risk can be minimized while maintaining the same level of returns. This theory is important because it determines strategic asset allocation and therefore has the biggest influence on the performance of an investment portfolio. An analysis of existing Swiss pension fund portfolios reveals that in terms of asset allocation, the majority thereof are not structured efficiently. One key reason for this is that – with the exception of real estate – non-traditional investments are largely underrepresented. The asset allocation lies below the OOB2 efficient frontier, which points to existing potential for optimisation in asset management.

The insights provided by portfolio theory continue to form the basis for an optimal investment portfolio. This takes advantage of the fact of that there is no perfect correlation between the returns from different asset classes, nor is there a perfect correlation between elements within a specific asset class. As a result, it is possible for a pension fund to reduce the volatility of a portfolio’s returns and therefore the portfolio risk by diversifying using different investments. Because asset allocation is the key determinant for the success of asset management, this fact together with the expected returns should be taken into account when establishing strategic asset allocation.

An analysis of existing Swiss pension fund portfolios conducted by Credit Suisse shows that the vast majority thereof have a suboptimal asset allocation. This means that within the scope of the investment guidelines set out under the OOB2 ordinance, it would be possible to achieve better performance without taking additional risk. It is of note that the permitted exemption limits for asset classes, in particular for non-traditional investments, are generally only exploited in small part, even though doing so could result in portfolios that are more efficient. In practice, the actual efficient frontier is built primarily using the traditional asset classes equities, bonds and Swiss real estate, and therefore lies below the efficient frontier that could be achieved under the OOB2 provisions if they were fully exploited.
Alternative or non-traditional investments are given a hard time when it comes to pension funds. They are generally considered to be opaque, illiquid, expensive and speculative. The regulator has also rejected a number of parliamentary initiatives for an amendment of the highly restrictive guidelines, with the indication that in the vast majority of cases, the existing limits are rarely utilised. In these instances, reference was also made to the possibility of exceeding the limits with an appropriate justification.

It is important to note here that adhering to the existing limits gives portfolio managers, and in particular also boards of trustees, the feeling of remaining within the scope of the accepted rules while not taking unnecessary risks, all the while meeting their responsibilities. This may also be the reason why demands are rarely heard from pension funds for a realignment of the investment guidelines by way of an amendment or broadening of the limits. Not even the outlook for returns, which is becoming visibly and increasingly dissatisfactory, appears to be grounds enough for making such demands.

A new definition of non-traditional investments could be helpful in dispelling the widespread reservations about these investments. This can be achieved by highlighting, among other things, the risk and illiquidity premia that exist in the market for non-traditional investments in contrast to traditional investments. This study also undertakes to demystify the non-traditional segment based on the reality that many non-traditional investments share the same risk factors as traditional asset classes.

A little known fact is that according to the accepted financial definition, real estate, due to its illiquidity, is considered a non-traditional investment. Viewed from this perspective, at 28 percent as at year-end 2015, the Swiss pension funds already have a large share of non-traditional investments in international comparison. More important, however, is that thanks to their real estate investments, pension funds have gained in-depth expertise and experience in dealing with investments with low liquidity spanning decades, and this can be applied in other areas.

Compared to traditional investments, the illiquidity of non-traditional investments is one of the most important sources of returns. This compensates the investor for the fact that this type of investment cannot be divested as quickly as publicly listed investments.

Chapter 6 – Non-traditional investments: demystified and viewed from a new angle

A significantly greater share of non-traditional investments is required in order to enhance the efficiency of portfolios and improve performance within the framework of the OOB2 guidelines. However, there is substantial resistance to this approach. The pension funds’ boards of trustees shy away from the purportedly higher risks, preferring instead to forfeit returns. What is needed is a new attitude towards non-traditional investments.
A greater inclusion of non-traditional investments is also reflected in performance figures. Comparative analyses show that the expected difference in returns between a standard present-day pension fund portfolio and a diversified version thereof is around 0.7 percent annually after costs. According to analyses conducted for this study, an excess return compared to the standard present-day allocation was also achieved in the past. In an historical comparison spanning 15 years, the diversified portfolio achieved just over 0.4 percent higher annual returns after costs. In both cases, historical and expected, the excess return is achieved with comparatively lower risk.

Chapter 7 – Better performance possible with a OOB2 revision

A revision of the OOB2 ordinance is necessary if the efficient frontier is to be increased beyond the efficient frontier achievable under today’s OOB2 guidelines. The approach to non-traditional investments explored in this study could serve as the basis for this. However, in order to take such a step, the support of business and the government is imperative.

In order to truly utilise the potential that lies in increasing the efficiency of pension fund portfolios, it is necessary to amend the current investment guidelines; this in the knowledge that the existing guidelines are rarely fully exploited and in addition, may be exceeded if certain criteria are met.
A fundamental change in investment mentality as well as an adjustment of the OOB2 guidelines requires the support of business and the government. Although the investment guidelines are primarily governed at the ordinance level and amendments through the Federal Council would be relatively easy to initiate, only moderate changes have been undertaken to date. Calls for amendments are increasingly being made, however, by business and by pension funds themselves. It is likely that this pressure will increase, and, depending on financial market developments, even more than expected. The good news is that the issue is timely and it is being discussed. The hope is that occupational pension plan stakeholders will assert themselves in a coordinated manner, with the result that the framework conditions for asset management are improved as soon as possible and the existing potential for optimisation can be exploited.

Chapter 8 – Prudent Investor Rule as the next (but one) step

A comparison of pension fund regulation in Switzerland and comparable countries shows that the traditional categorisation using individual limits, as is the practice in Switzerland, no longer exists in many countries. In recent years, these have all taken a clear step towards the Prudent Investor Rule. According to this rule, the responsibilities of portfolio managers are not fulfilled by adhering to restrictive rules, but rather by executing the investment mandate professionally on behalf of the beneficiaries.

The line of reasoning taken in this study follows this development in three steps. The majority of existing pension fund portfolios, most of which remain below the potential efficient frontier set by the current OOB2 guidelines, have shortcomings. In a first step, therefore, efficiency must be increased using the limited freedom afforded by the current set of investment guidelines under OOB2. The second step is to introduce the amendments described and redefine the investment guidelines. The third step comes as a result of the second step: greater latitude arising from the departure from the traditional category limits also signifies increased accountability, and therefore necessitates the appropriate expertise. These requirements correspond with a stronger and internationally already widely recognised Prudent Investor Rule.
A look at the investment performance of the pension funds in various OECD countries over the past five and ten years shows that both nominally and adjusted for inflation, Switzerland ranks in the middle to lower end of the spectrum. In the last five years, Switzerland ranked a modest 16th out of 26 countries examined in terms of nominal values. In real terms, it performed slightly better, ranking 10th. Looking at the values for the last ten years, Switzerland’s 17th place (nominal) and 10th place (real) rankings are no better.

If Switzerland is compared only to countries where pension assets are in similar proportion to economic output, it emerges that in the last five years, each of these countries outperformed Switzerland in nominal terms. The pension funds in the UK generated annual returns that were more than twice as high as Switzerland’s. In real terms, all of the comparison countries with the exception of the US also outperformed Switzerland. A similar picture emerges over a ten-year horizon.

It appears, therefore, that asset allocation, in particular as regards non-traditional investments, was a decisive factor for performance. Both Canada and the Netherlands, for example, increasingly reallocated assets to non-traditional investments.
3 Occupational pension plans – objectives and current challenges

The occupational pension plan system is based on the cumulative saving of individual pension assets, which are managed by pension funds. The system currently faces two main challenges: rising life expectancy coupled with an unchanged retirement age, and the historically low interest rates on assets. As a consequence, the pension funds are obliged to adjust the technical interest and conversion rates to the changed conditions. But a realignment is also necessary on the investment side if the level of benefits is to be maintained.

In combination with Old Age and Survivors’ Insurance (AHV), the occupational pension system aims to ensure that pensioners are able to maintain their accustomed standard of living to a reasonable extent. The terms «accustomed standard of living» and «reasonable», are not specified in the law. The general view is that a pension of around 60 percent of the last annual salary is necessary in order to be able to maintain the accustomed standard of living.

3.1 The three contributors

In contrast to the 1st Pillar, which is financed through a defined benefit plan (inter-generational contract), the employees in the 2nd Pillar save capital individually for their future pensions. The retirement capital is composed of wage contributions from employees, employer contributions, which must at least match the employee’s contribution, and the returns generated on the accumulated savings. Both a singularity and advantage of the so-called defined contribution plan system is that each employee saves for him or herself, and that unlike for AHV, the system is not directly dependent on demographic developments.

Between 2005 and 2014, investment returns accounted for almost 40 percent of the total contributions to pension funds. In the longer-term, this share is expected to be about one-third. When performance decreased significantly in 2015, this share accounted for only 17 percent. The significant importance of the so-called 3rd contributor, however, also underscores the fact that even a return contribution of just 0.1 percent on pension fund assets of over CHF 800 bn result in capital growth of approx. CHF 800 m.
Second Pillar retirement credits are based on the current salary at that point in time. However, as long as the interest rate on pension assets at least corresponds with wage growth, an earlier retirement credit on a lower salary will maintain the same value as a later retirement credit on a higher salary. The assumption that interest rates correspond with wage growth is called the «golden rule». This rule held true for only a short period at the beginning of the 1990s (Figure 3.2). Since then, interest rates have regularly exceeded wage growth, which has led to higher than expected retirement benefits.

A historical comparison of nominal wage growth with the development of the LPP minimum interest rate shows that with the exception of the early 1990s, interest rates on pension assets rose more than wage growth. Pensions therefore increased more than was initially foreseen.

If the retirement age is not increased, this trend alone results in the need to continuously grow pension assets. The level of disbursement for current pensions can only be reduced under very restrictive conditions. The increase in life expectancy requires reserves of between 0.3 percent and 0.5 percent of retirement capital.
Due to current interest rate levels, it is, however, becoming increasingly difficult to generate an adequate return. The investment returns achieved in the past will likely be very difficult to achieve in future. Despite significant turbulence in the capital markets, for example the 2008 financial crisis, in recent years, the 3rd contributor has delivered an annual average return of 4.25 percent. The rate is likely to be significantly lower in future (see explanations in Chapter 4).

As a result, the target return has been significantly lowered over the last ten years (Figure 3.5). Demanding higher contributions to offset this would be very difficult to push through. In the interests of safeguarding the financial equilibrium, the pension funds therefore lower the technical interest rate and the conversion rate. Lowering the technical interest rate means that the amount of retirement capital required to achieve a defined pension benefit increases, which results in a lower coverage ratio.

### 3.3 Stable asset allocation despite a changed environment

On the investment side, the pension funds have to date reacted very little to the new conditions. A slight reduction in bond positions can be observed. The average asset allocation as at year-end 2015, however, differs strikingly little from past allocations (Figure 3.6). The questions and opportunities this brings with it are the focus of the following chapter.
The SBA «Occupational Pension Plans» task force and BAK Basel have both made forecasts for capital market performance, which is a decisive factor for the pension funds. The SBA «Occupational Pension Plans» task force’s most recent data indicate that even lower returns should be expected than those forecast by BAK Basel. The reason for this is the ongoing low interest rate level. Weakening global economic growth and low to in some cases negative inflation rates are fuelling this trend. For Switzerland, this is compounded by the effect of the strong franc. The conclusion is that if the Swiss pension funds do not change their asset allocation, they will face yield-related problems in the coming years caused by low government bond yields.

Pictet Asset Management has been publishing indices that measure the average theoretical performance of representative pension fund portfolios since 1985. These indices are calculated for three target equity allocations with a 25 percent, 40 percent and 60 percent equity component (LPP-25, LPP-40, LPP-60), and were expanded in 2005 and 2015.
In a recent study, Pictet Asset Management forecasts a structural weakening of global growth potential and suggests that this trend will continue far beyond the next five years. This results in a weak growth outlook both for developed and emerging countries in historical comparison.

Key reasons for this slowdown in growth are:

- **Declining productivity growth**
  In the US, labour productivity has risen only 0.5 percent in the last five years; such low-level growth has not been seen since the 1980s. This trend can be observed in most economies. This is primarily attributable to the low level of investment activity in the private sector since 2008.

- **High debt levels**
  The global economy is more indebted today than it was at the end of the financial crisis in 2008. Developed economies and companies in emerging markets in

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### Historical 10-year returns LPP Indices

#### Historical risks and returns LPP indices, January 1994–December 2014, in percent

<table>
<thead>
<tr>
<th>Index</th>
<th>LPP-25</th>
<th>LPP-40</th>
<th>LPP-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return</td>
<td>4.75</td>
<td>4.90</td>
<td>4.84</td>
</tr>
<tr>
<td>Risk/Return</td>
<td>1.03</td>
<td>1.08</td>
<td>0.98</td>
</tr>
<tr>
<td>Recovery period, in months</td>
<td>12</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Pictet LPP Indices, Pictet Asset Management, January 2015 (10-year monthly rolling)

Figure 4.1 clearly shows that the returns on portfolios with a greater equity allocation (LPP-60) were higher. The higher volatility of such investments, however, requires an increased risk appetite.

### 4.1 Lower expected returns

The global economy has not yet found its way back to its pre-2008 financial crisis growth path. Over the last five years, the global economy grew a mere 2.5 percent per year, which is significantly below the long-term average of 3.5 percent. This growth slowdown occurred in all major economies and was also seen in Switzerland.

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**Fig. 4.2**

Average real GDP growth rate over the next 5 years in percent

<table>
<thead>
<tr>
<th>Region</th>
<th>0 %</th>
<th>1 %</th>
<th>2 %</th>
<th>3 %</th>
<th>4 %</th>
<th>5 %</th>
<th>6 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2.3 (-0.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eurozone</td>
<td>1.5 (-0.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>1.0 (-0.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emerging markets</td>
<td>4.3 (-0.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1.8 (-0.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>2.0 (-0.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.9 (-0.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>3.8 (-0.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia ex-Japan</td>
<td>5.8 (-0.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>4.8 (-0.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outlook until year-end 2020, change compared to last outlook in brackets

Source: A Secular Outlook, Pictet Asset Management, June 2016

In a recent study, Pictet Asset Management forecasts a structural weakening of global growth potential and suggests that this trend will continue far beyond the next five years. This results in a weak growth outlook both for developed and emerging countries in historical comparison.

Key reasons for this slowdown in growth are:

- **Declining productivity growth**
- **High debt levels**

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growth outlined previously, the structural excess supply of commodities as well as ongoing low energy prices. A sustainable rise in interest rates is currently not in sight in Switzerland. The low economic growth below potential will result in a continuation of the expansive monetary policy of most central banks.

The results of the economic framework outlined are modest expected returns in historical comparison and a significant difference on the one hand between returns on equities and government bonds, and between the returns from emerging economies and developed economies on the other. This is confirmed by the ten-year return outlook published by UBS AG at the end of June 2016. The long-term return forecasts made by the UBS economists are significantly below past levels.

Over the next ten years, UBS expects to see very low yields of around 0.0–0.5 percent on government bonds from developed countries. When this publication was being drafted, 28 percent of all bonds from developed countries were negative yielding. Positive yields are only expected for emerging market government bonds. Attractive returns are expected for the equity markets that the Swiss pension funds traditionally invest in. For the Swiss equity market, UBS economists predict a return of +7.6 percent annually. The outlook for global equities is also positive (+7.5 %). A strong rebound for commodities appears unlikely in the next few years. The expected modest global economic growth will primarily take place in the service sector and will provide little momentum for commodities markets (+2.3 %). Clearly positive ten-year returns are expected for private equity (+9.9 %), which comes under the alternative investment category. This asset class has historically generated additional returns of around 5 percent per year compared to listed stocks. Real estate continues to be an attractive alternative asset class, in particular compared to bonds from developed markets (global real estate +3.4 %).
4.2 Expected future returns based on the Pictet LPP indices

Applying UBS’ expected ten-year returns to the current, representative LPP indices Pictet LPP-25 and Pictet LPP-40, results in expected annual returns of 2.2 percent and 3.2 percent respectively over the next ten years.

If costs are taken into account, in particular the asset management fees of 0.44 percent per year, a net return of around 1.7 percent can be expected over the next ten years for the LPP-25 portfolio and 2.7 percent per year for the LPP-40 portfolio. Irrespective of the inclusion of fees, there is a significant difference between these expectations and historical returns.

4.3 Foreseeable yield-related problems

At the heart of the upcoming LPP revision is the reduction of the minimum conversion rate from 6.8 percent to 6.0 percent. The latter rate is based on the assumption of around 4 percent annual investment returns (technical interest rate), which is not realistic based on the expected capital market returns.

The SBA «Occupational Pension Plans» task force’s growth forecasts and expected returns are not good news for Swiss pension funds. They mean that for fundamental asset classes such as Swiss franc-denominated government bonds as well as government bonds from developed countries, negative or at least very low yields in historical comparison are to be expected. If the pension funds do not adjust their asset allocation, they will most likely face yield-related problems in the coming years.

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Fig. 4.4

**Pictet LPP-25: expected returns 2016-2026 in CHF**

<table>
<thead>
<tr>
<th>Asset class</th>
<th>LPP-25 allocation %</th>
<th>Expected annual return 2016–26</th>
<th>Contribution to annual return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equities Switzerland</td>
<td>10.0 %</td>
<td>7.6 %</td>
<td>0.8 %</td>
</tr>
<tr>
<td>Equities global</td>
<td>13.5 %</td>
<td>7.5 %</td>
<td>1.0 %</td>
</tr>
<tr>
<td>Equities emerging markets</td>
<td>1.5 %</td>
<td>8.3 %</td>
<td>0.1 %</td>
</tr>
<tr>
<td>Bonds CHF</td>
<td>60.0 %</td>
<td>0.5 %</td>
<td>0.3 %</td>
</tr>
<tr>
<td>Bonds EUR</td>
<td>10.0 %</td>
<td>0.3 %</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Bonds global</td>
<td>5.00 %</td>
<td>0.0 %</td>
<td>0.0 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0 %</strong></td>
<td><strong>2.2 %</strong></td>
<td></td>
</tr>
</tbody>
</table>

Return net of asset management fees of 0.5 % p.a. 1.7 %

Source: Based on UBS AG’s expected returns, 2016

Fig. 4.5

**Pictet LPP-40: expected returns 2016-2026 in CHF**

<table>
<thead>
<tr>
<th>Asset class</th>
<th>LPP-40 allocation %</th>
<th>Expected annual return 2016–26</th>
<th>Contribution to annual return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equities Switzerland</td>
<td>15.0 %</td>
<td>7.6 %</td>
<td>1.1 %</td>
</tr>
<tr>
<td>Equities global</td>
<td>22.5 %</td>
<td>7.5 %</td>
<td>1.7 %</td>
</tr>
<tr>
<td>Equities emerging markets</td>
<td>2.5 %</td>
<td>8.3 %</td>
<td>0.2 %</td>
</tr>
<tr>
<td>Bonds CHF</td>
<td>45.0 %</td>
<td>0.5 %</td>
<td>0.2 %</td>
</tr>
<tr>
<td>Bonds EUR</td>
<td>10.0 %</td>
<td>0.3 %</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Bonds global</td>
<td>5.0 %</td>
<td>0.0 %</td>
<td>0.0 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0 %</strong></td>
<td><strong>3.2 %</strong></td>
<td></td>
</tr>
</tbody>
</table>

Return net of asset management fees of 0.5 % p.a. 2.7 %

Source: Based on UBS AG’s expected returns, 2016

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1 Mean asset management fees 2015 in % of investments with transparent costs according to Swisscanto Schweizer Pensionskassenstudie 2016.
5 Optimal asset management at pension funds

Strategic asset allocation is the key determinant for the expected return on a portfolio. The insights provided by Markowitz’ portfolio theory are central when determining optimal asset allocation. This theory shows that maximum return can be achieved at a given risk capacity, and how a targeted return can be achieved with a lower level of risk. An examination of the existing portfolios of Swiss pension funds shows that the level of risk taken is generally too high for the returns generated, or that with the existing level of risk, they could achieve higher returns. This means that there is potential for optimisation. Even higher returns could be achieved through an amendment to the restrictions in place under OOB2. Undertaking such a revision, however, only makes sense if the pension funds are prepared to take advantage of the potential that already exists today. This could in particular be accomplished through a greater inclusion of non-traditional investments in their portfolios.

The size of the liabilities for existing and future pensioners depends to a high degree on politically-influenced parameters. Accordingly, a number of political initiatives for an appropriate definition of liability structures for pension funds have been submitted in recent years.

However, this study focusses primarily on asset management-related aspects. Biometric factors such as longevity, the structure of the pension fund with regards to the age of its members and political processes, which also influence the coverage ratio, are only taken into account insofar as they have a direct influence on asset management. This study highlights the asset management-related factors that pension funds can influence themselves. To this end, it makes sense to revisit the key principles of asset management and examine them from a new angle.

5.1 Strategic asset allocation

Asset allocation is the most important aspect when creating new investment portfolios or optimising existing portfolios. The key principles for developing an allocation strategy are therefore explained hereafter. This section also presents future expectations for returns, risk and the correlation between the major asset classes.

One of the singularities of asset management for the 2nd Pillar is the OOB2 Ordinance, which among other things, defines which asset classes are permitted and sets out their limits. Although these restrictions interfere with optimal asset management, the problem is a more fundamental one, as many pension funds interpret the OOB2 limits as a recommendation or benchmark. As a result, they do not utilise the room for manoeuvre that is foreseen. Even if the specific requirements of the individual pension funds, in particular the liquidity requirements, are taken into consideration, there is still potential for optimisation.

Among other factors, strategic asset allocation establishes which asset classes, regions and currencies the assets should be invested in for the longer-term. It is of key importance, which is reflected in the influence it has on performance. In comparison to the share of returns generated by stock selection and tactical allocation (short-term deviations from strategic allocation), strategic asset allocation accounts for around 80 percent and more of portfolio returns. Concrete asset allocation is determined primarily based on the target return and risk tolerance of a pension
fund. The tolerable level of risk can largely be derived from the investment horizon and liquidity requirements.

When establishing strategic asset allocation, it is necessary to take the future liabilities and therefore the liabilities side of the balance sheet into account. Asset liability management aims to achieve the greatest possible return at a given risk capacity (often measured in terms of a pension fund’s coverage ratio), while at the same time ensuring that all liquidity requirements can be met.

There is general consensus on the principles according to which assets must be invested if (liquidity) constraints are set aside. For an optimal investment portfolio, the conclusions reached by Nobel Prize winner Harry Markowitz in his portfolio theory continue to form an important foundation for achieving the most efficient portfolio possible. This kind of portfolio minimises the risk at a given return or maximises the return at a given level of risk.

Figures 5.1 and 5.2 illustrate the current expectations of the SBA «Occupational Pension Plans» task force in terms of return, risk and correlation for the major asset classes over the next ten years per year. The combination of investments with a low correlation (green to yellow) increase the effect of diversification in a portfolio, as the overall portfolio risk is lower than the sum of the risks of the individual asset classes. This makes it possible for an investor to reduce the volatility of a portfolio’s return and mitigate the portfolio risk. How future returns and thereby also correlations and risks will effectively develop cannot be known beforehand.
5.2 Optimisation of asset allocation under OOB2

This study defines two different levels of potential for optimisation from a portfolio theory perspective, which are illustrated in the risk-return diagram in Figure 5.3. The first level relates to strategic asset allocation, which should aim to achieve the greatest efficiency possible under the current regulatory requirements (Level 1: on and below the «Current OOB2 efficient frontier»). The second level indicates the possible optimised efficient frontier without OOB2 restrictions (Target efficient frontier).

Even though it is possible to exceed the limits in the OOB2 guidelines (see Figure 2.2) with proper justification, in reality this potential is only rarely utilised. In practice, the OOB2 guidelines represent the existing parameters and the efficient frontier within these parameters (Current OOB2 efficient frontier). The best possible portfolios within these parameters achieve this efficient frontier. Using the risk profile of the pension funds as a basis, the objective must be to bring the portfolios as close as possible to this efficient frontier (arrow 1). Not doing so means returns are forfeited or unnecessary risk is taken.

The permitted exemption limits for asset classes, particularly for non-traditional investments, are seldom utilised, despite the fact that if they were exploited, portfolios would become more efficient. In practice, the actual efficient frontier is built primarily using the traditional asset classes equities, bonds and Swiss real estate (see Figure 3.6), and therefore lies below the «Current OOB2 efficient frontier».

Figure 5.3 shows a clear difference between the «Current portfolio» and the «Target OOB2 portfolio». This can occur as a result of suboptimal asset allocation or portfolio construction, for example due to the choice and weighting of asset classes, foreign currency management or management style. The SBA «Occupational Pension Plans» task force works on the assumption that as a result of not utilising the existing OOB2 exemption limits, in particular for alternative investments, portfolios fall below the «Current OOB2 efficient frontier».

Investment portfolios (Current portfolio) generally have potential for improvement. The potential for optimisation that exists here can be exploited by pension funds primarily by means of asset allocation (portfolio construction) in accordance with the OOB2 guidelines. This shifts portfolios from Level 1 to the Current OOB2 efficient frontier, thus optimising them. Without the OOB2 guidelines, additional potential opens up for optimal asset allocation from Level 2 towards the Target efficient frontier.

The second step in optimising asset management for occupational pension plans is to further increase the attainable efficient frontier (shift from Current OOB2 efficient frontier to Target). This requires a loosening or complete lifting of the OOB2 investment guidelines. In order for the potential that this creates to be utilised, however, there must be a change in the way investors think.

5.3 Optimisation of asset allocation: empirical evidence

As the foundation of optimal asset management, Markowitz' portfolio theory should be the norm for pension funds. Credit Suisse examined to what extent pension fund portfolios apply this efficiency approach. The results (see Figure 5.4) clearly
show that pension funds have potential for improvement in the portfolio construction process. This confirms the difference between the Current portfolio and the Current OOB2 efficient frontier in Figure 5.3.

If and to what extent the OOB2 restrictions hinder optimal asset management (Level 2: Current OOB2 and Target efficient frontiers), is illustrated in Figure 5.5. The fact that an unrestricted choice of asset classes and their allocations (including permitted short selling) holds significant potential for optimisation is confirmed here as well.

However, everything is much simpler in theory than it is in practice for pension funds, because the effective efficient frontier on which efficient portfolios lie is not known in advance. The future return, the risk and the correlation between the individual investments must be estimated. This is often done using historical data spanning a longer period of time and in the hope that the risk-return ratio will develop similarly in future. In a rapidly-changing market environment, however, this approach is problematic. Due to the capital market expectations outlined in this study, there are many indications that future returns on equities, bonds and real estate are likely to be lower than in the past.
5.4 Unused return potential due to lack of alternative investments
There are a number of reasons for the difference between the efficient frontier (incl. the OOB2 restrictions) and today’s portfolios seen in Figure 5.3 (Level 1) and Figure 5.4. Efficient portfolios are characterised by their high share of investments with particularly attractive risk-return ratios and correlation properties. These include alternative investments, for example real assets such as real estate investments and infrastructure, but also private equity (unlisted equity) and private debt (private loans/bonds). Surprisingly, however, today’s already strict 15 percent cap on non-traditional investments is utilised only in the rarest of cases. This is often explained as follows:

- low risk appetite on the part of chief investment officers
- lack of transparency and insufficient expertise for these investments
- high costs
- limited liquidity

Real estate is an asset class that Swiss pension funds typically invest in. They have longstanding experience in this area, and are thus familiar with it. In contrast, there is an absence of familiarity with non-traditional investments. One of the reasons for this is probably the lack of investment opportunities within Switzerland itself, such as a Swiss private equity market.

Increasing the allocation of non-traditional investments is a decisive factor when looking to optimise pension fund portfolios. The opening of Level 2 illustrated in figures 5.3 and 5.5 that creates potential for more efficient portfolios, among other things through the elimination of the OOB2 restrictions, would likely have no effect under the present circumstances. Only when pension funds recognise the potential for improvement through changes in strategic asset allocation and the greater inclusion of non-traditional investments does it make sense to raise the potential efficient frontier.

5.5 Secured liquidity thanks to a growing capital base
Due to their investment horizon, pension funds would seem predestined to optimally exploit the return potential in financial markets. In reality, however, the situation is not so clear-cut. The actual length of the investment horizon depends in particular on liabilities and therefore on structural and pension fund-specific factors (e.g. age structure and coverage ratio). This differs from pension fund to pension fund and must therefore be assessed on an individual basis.

Asset liability management, which is the balancing of liabilities and the existing assets, represents one of the characteristics of the 2nd Pillar that can significantly restrict the investment horizon. The financial solidity of the employer plays a central role here. For example, the pension funds of cyclical companies are subject to substantially greater workforce fluctuations than pension funds that are expected to have a long-term or so-called perennial workforce. Generally speaking, the latter are public sector employees. This reality can mean that the situation on the liabilities side and thus also for the investment horizon can differ, and each pension fund must therefore ultimately decide on the right balance between investment horizon and safeguarding their assets.

A report by the Federal Council, however, highlights that for the pension fund market as a whole, it expects that in the long-term (beyond 2035), the expenditures of occupational pension plans will on average not exceed the employee and employer contributions, and the capital of occupational pension plans will further accrue.

Figure 5.6 shows the most probable scenario contained in the report by the Federal Council, which explores a variety of possible developments. Migration flows are important for understanding these figures. According to estimates, net migration in 2030 will be around 60,000 and in 2045 around 30,000 people per year (reference scenario). The key insight provided by these forecasts is that for a majority of pension funds, liabilities are expected to represent little to no restrictions for liquidity, and therefore little to no restrictions for a long investment horizon.
5.6 Ideal basis thanks to long investment horizon

The value of a long investment horizon can be highlighted by simulating investment performance over various periods of time. Using Monte Carlo simulations⁴, figures 5.7 and 5.8 show that for both equity and bond-heavy portfolios, the risk of loss decreases as the investment period progresses. While, for example, the equity-heavy portfolio will generate annual returns above negative 1.2 percent after ten years with a likelihood of 95 percent, after 30 years this figure becomes plus 1.2 percent per year with the same level of probability. After around 16 years, the more aggressive of the two portfolios achieves the statistical point in time when in all likelihood, performance will not be negative. In comparison, the same point in time for the more defensive portfolio is around 12 years.

However, a long investment period not only generally reduces the risk of an investment portfolio, it also leads to an alignment between more aggressive and more defensive allocations. In the event of an extremely negative development (5% confidence interval), the bond-heavy portfolio performs significantly better at minus 5 percent after ten years than the equity-heavy portfolio at minus 11 percent. After 30 years, however, both portfolios exhibit almost the same return for their negative scenarios (1.3 percent and 1.2 percent per year respectively).

This revenue and expense account may not, however, be considered an assessment of the financial situation of each individual pension fund. One way to determine financial solidity is by looking at the coverage ratio. However, a coverage ratio of above but also below 100 percent does not provide fundamental information regarding a pension fund’s liquidity situation. If sufficient liquidity is at hand, it can make sense to take advantage of the liquidity premium by investing in illiquid investments in the interests of improving the coverage ratio, even in the case of a shortfall. This, however, requires a long-term horizon, also as regards shortfall periods.

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Fig. 5.6

| Accounts and outlook for occupational pension plans 1995–2035 |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                             | 1995           | 2005           | 2015*          | 2020*          | 2025*          | 2030*          | 2035*          |
| Revenues                    | 40,807         | 49,805         | 69,228         | 77,408         | 83,965         | 90,450         | 97,090         |
| Employee and employer       | 25,637         | 35,721         | 50,952         | 56,598         | 60,618         | 64,565         | 68,581         |
| Government contributions    | –              | –              | –              | –              | –              | –              | –              |
| Investment returns**        | 15,171         | 13,894         | 18,131         | 20,666         | 23,202         | 25,740         | 28,364         |
| Other revenues              | –              | 190            | 145            | 145            | 145            | 145            | 145            |
| Expenditures                | 24,330         | 34,760         | 47,505         | 52,933         | 58,578         | 64,613         | 68,656         |
| Social security benefits    | 14,139         | 25,357         | 35,666         | 41,165         | 47,651         | 54,422         | 58,793         |
| Other expenditures          | 10,192         | 9,403          | 11,838         | 11,768         | 11,017         | 10,191         | 9,864          |
| Balance                     | 16,477         | 15,045         | 21,723         | 24,475         | 25,386         | 25,836         | 28,434         |
| Capital                     | 311,100        | 545,500        | 754,209        | 859,364        | 962,729        | 1,065,720      | 1,174,332      |

Historical data is based on current prices. Years with * refer to the base scenario A-17-2010 and are based on 2013 prices. ** no further breakdown


⁴ The Monte Carlo simulation generates random asset developments based on assumed key risk and return figures. The simulation of a variety of developments provides an approximation of the bandwidth and thus the probability of future developments and final outcomes.
While the long-term horizon to a certain extent diversifies away risk, it also has a favourable effect on the upwards potential in positive scenarios. In this example, the expected returns for the equity-heavy portfolio increase significantly more than for the bond-heavy portfolio. The return potential becomes even clearer when comparing the upper confidence intervals or very positive market developments. A long investment horizon therefore allows more aggressive portfolios not only to mitigate risk (individually, but also in comparison to more defensive portfolios), but also leads to higher upwards potential in positive markets.

Portfolios require significantly higher returns if they are subjected to an annual dividend payment of 3 percent. In a very bad scenario (5 % confidence interval), both portfolios would lose value and would not be able to recover. After 15 years, the LPP-40 portfolio, for example, would have lost around 44 percent. The fact that such simulations are highly dependent on the underlying assumptions can also be seen when the data set for the assumed risks and returns is extended back to 1990. Under these assumptions and the significantly longer investment horizon, it can be expected that after 15 years, the LPP-40 portfolio would only lose 25 percent in the same scenario.

### 5.7 Stability through a longer recovery period

In principle, defined contribution plans generally have the advantage that financing is ensured at all times and the coverage ratio is always at 100 percent under exclusion guaranteed benefits. In today’s Swiss system, however, the LPP minimum interest rate reduces the investment risk for the employee, whose assets are in exchange exposed to some volatility. The same applies for the conversion rate, which is also a partial transfer of risk from employees to the pension fund. These legal parameters ultimately lead to what are sometimes significant deviations from the target coverage ratio of 100 percent.

One way of determining a pension fund’s coverage ratio and financial situation is to consult its annual report. Pension funds are required to report shortfalls to their supervisory authority and inform employers, employees and pensioners thereof. The causes and scale must be indicated and concrete corrective measures for eliminating the shortfall must be taken. Preventing a shortfall from the outset is therefore a priority.
In addition to the extension of the recovery period, a fundamental change in thinking is required in order to encourage greater acceptance of temporary shortfalls on the condition, however, that the problem is not due to an insufficient financial base or a structural problem, but rather a shortfall caused by financial market developments. The assessment of a shortfall as well as the quality of the asset allocation during a shortfall would continue to be the individual remit of the pension funds and the occupational pension plan experts.

Today’s guidelines make sense insofar as the greatest priority must be to sustainably guarantee occupational benefits. The intention behind the urgency created by the five to seven years for eliminating a shortfall is certainly also to underscore the importance of financially sound pension funds. However, upon closer inspection, it is precisely this aspect that should be questioned. Because the term «sustainable» would suggest taking a step away from the short-term need for control towards a longer-term approach. A high level of professionalism and expertise are indispensable, fundamental requirements to this end.

Experience shows that shortfall periods or negative equity markets often lead to active interventions in strategic allocation, which in the majority of cases results in penalties in terms of target returns. Riskier investments are divested when a certain level of (usually bigger) losses arise. This often happens at an inopportune time, prior to or during a recovery. However, particularly in crisis situations, it is important to continue to follow the strategic and tactical allocation and not make emotionally-driven decisions.

Although there is no legal maximum duration for a shortfall, the LPP requires pension funds to introduce measures in such an event to resolve the issue within a reasonable period of time. Pursuant to a Federal Council directive, this period is five to seven, but maximum ten years. However, the period over which 19 of 20 LPP-40 portfolios would record no losses is approximately 12 years (see Chapter 5.6). Based on this benchmark, the current period for eliminating a shortfall is insufficient, in particular taking into consideration the required target return, which is one of the parameters used to determine the coverage ratio. A doubling of the five-to-seven years currently envisaged for eliminating a shortfall would therefore be preferable from an investment perspective.

6 «Weisungen über Massnahmen zur Behebung von Unterdeckungen in der beruflichen Vorsorge; 27. Oktober 2004.»
6 Alternative investments: demystified and viewed from a new angle

When it comes to alternative investments, Swiss pension funds are in a unique international position in two respects. They have by far the largest share of real estate investments measured in terms of their total investments. At the same time, however, they rank among the lowest in terms of investments in other categories of alternative investments. It should be added that according to financial terminology, real estate is considered an alternative investment due to its low liquidity. This opens up new perspectives, because it means that the pension funds already have decades of experience with illiquid investments, experience that can by all means be carried over to other categories. What is needed is a demystification of alternative investment in order to dispel the reigning unease about this segment, which results in both the loss of potential returns for the pension funds and unutilised diversification benefits. It goes without saying that sufficient expertise and a suitable structure are necessary for an expansion into this segment.

The previous chapter examines how alternative investments (including real estate) are an important component of portfolios with high risk-adjusted returns. The primary reason for this lies in the low correlation to traditional investments and comparatively attractive returns. These characteristics are generally well-known. Notwithstanding, only a very small number of investors can benefit from them, because they either do not have the necessary investment horizon or the discipline to stick to it. Thanks to their risk capacity, long investment horizon and liquidity requirements (which are probably generally overestimated), the necessary conditions are in place at the majority of pension funds. They should therefore make increased efforts to put these advantages to use.

At present, pension funds utilise less than half of the OOB2 allocation limit of 15 percent for alternative investments. As outlined, this is one of the primary reasons for which portfolios are significantly below the potential efficient frontier. However, an increase of the efficient frontier through an adjustment of the recommended allocation under OOB2 alone is not likely to result in the permitted share of alternative investments actually being exploited. This chapter focuses on further measures that could lead to a less rigid approach and a more objective attitude towards alternative investments.

This study undertakes to redefine alternative investments to this end. This can be achieved by highlighting, among other things, the risk and liquidity premia that exist in the market for non-traditional investments in contrast to traditional investments. This study also aims to demystify alternative investments based on the reality that many non-traditional investments share the same risk factors as traditional asset classes. Following the theoretical segment of this chapter, two practical examples are provided. A typical pension fund portfolio is used to illustrate the historical and expected added value that can be achieved through a diversification away from traditional investments. At the end of the chapter, the idea that alternative investments hold many and often not evident risks is relativised by providing an example of a clearly defined due diligence process.
6.1 Higher returns thanks to additional risk premia

At the end of 2015, around 28 percent on average of pension fund investments were in alternative investments and real estate\(^7\). Contrary to the prevailing view in the Swiss pension fund market, all real estate is considered an alternative investment in financial terms due to its illiquidity.

The Swiss peculiarity of regarding real estate separately also has to do with the OOB2 guidelines. Under OOB2, alternative investments as an asset class are much more broadly diversified than the real estate category due to the many different asset classes it comprises, such as private equity, commodities and hedge funds. However, OOB2 places a 15 percent cap on alternative investments compared to a 30 percent limit for real estate investments. The fact that Switzerland is a nation of tenants and therefore also landlords is probably why the importance of residential properties as investments has also grown over time for pension funds. Due to the current interest rate environment, investments in this segment are bigger than ever. The scope of these investments stands in contrast to other countries.

Two conclusions can be drawn from this. Firstly, according to the financial definition, alternative investments are not uncharted territory for pension funds, even if their experience is based on their strong overweight in real estate. Secondly, the regulator deviates from the traditional financial classification of traditional and alternative investments, giving greater importance to real estate investments than to other alternative investments.

Within the alternative investments category, real estate often represents a concentration risk, particularly in today’s market environment and not least due to the OOB2 guidelines. Even if this situation is by no means ideal from a diversification perspective, it highlights that in principle, the pension funds not only have the risk capacity, but also the risk appetite for alternative investments. As a result of their long-standing experience with real estate, the pension funds are very well acquainted with one of the key characteristics of alternative investments, namely illiquidity. They have thus created a good basis from which to expand or diversify their investments using the alternative investment asset class.

\(^7\) Swisscanto Schweizer Pensionskassenstudie 2016.

In contrast to traditional investments, the liquidity premium for alternative investments is one of a number of additional sources of returns. It compensates the investor for the fact that these investments cannot be divested as quickly as publicly listed securities. Limited liquidity is not, however, necessarily only a disadvantage. Particularly in periods of crisis, it can often make sense to remain invested in long-term investments. In extreme cases, trading can be temporarily fully restricted due to gating, which means that a sale at an inopportune time, often emotionally driven, can be averted.

Figure 6.1 provides an overview of the risk premia for alternative investments including the liquidity premium.

**Fig. 6.1**

**Expected risk premia by category**

<table>
<thead>
<tr>
<th>Category</th>
<th>Annual Premia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private equity</td>
<td>2–4 % p.a.</td>
</tr>
<tr>
<td>Private debt</td>
<td>1–3 % p.a.</td>
</tr>
<tr>
<td>Infrastructure (equity)</td>
<td>1–3 % p.a.</td>
</tr>
<tr>
<td>Real estate global</td>
<td>1–3 % p.a.</td>
</tr>
<tr>
<td>Real estate Switzerland</td>
<td>0–1 % p.a.</td>
</tr>
</tbody>
</table>

Over the next 10 years p.a.
Premia vs. listed investments in the same category

6.2 Demystification of alternative investments

Alternative investments (excluding real estate) play a secondary role in the asset allocations of today’s pension fund portfolios, despite a scarcity of investment opportunities and the insufficient expected returns. A survey conducted by Swisscanto (see Figure 6.3), suggests that this is not going to change in the near future. Only just under one-quarter of all pension funds surveyed expect to increase their share of alternative investments in the coming years.

Portfoliomanagers often have a variety of possibilities for outperforming the market or peers. They can take advantage of opportunities such as the fact that pricing for non-public markets can be less efficient, or the manager is subject to fewer restrictions, for example when financing debt. Such opportunities, however, also hold significant risks and a professional selection of alpha-oriented investments is important for achieving success. An example of how such a process could be carried out is outlined in Figure 6.9.

Compared to traditional investments, alternative investments are more complex and hold additional risks. One other fact, however, is just as important: as one would expect, these additional risks are compensated for by the higher returns arising from the additional risk and liquidity premia. In the end, the question that must be asked is whether or not these investments can be of benefit to the investor. For example: even if a private equity investment has a much higher Sharpe Ratio (risk-adjusted return) than all other asset classes, a pension fund with a high percentage of pensioners, a limited lifespan, high liquidity outflows and a lack of expert knowledge about alternative investments cannot take advantage of such an investment.

### Table: Risk premia by market

<table>
<thead>
<tr>
<th>Risk premium</th>
<th>Returns generated through public, easily accessible markets</th>
<th>Returns generated through alternative markets</th>
<th>Returns generated through less liquid markets</th>
<th>Returns generated through the abilities of the portfolio manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>public markets</td>
<td>Example: investments in the US equity market</td>
<td>Example: investments in private US companies</td>
<td>Investments with a long investment horizon and limited tradability</td>
<td>Selection of the best investments</td>
</tr>
<tr>
<td>alternative markets</td>
<td>Less accessible markets (private markets or hedge funds)</td>
<td>Investments with a long investment horizon and limited tradability</td>
<td>Investments with a long investment horizon and limited tradability</td>
<td>Selection of the best investments</td>
</tr>
<tr>
<td>(ill)liquidity</td>
<td>Example: equity or debt-funded investments in infrastructure projects</td>
<td>Example: equity or debt-funded investments in infrastructure projects</td>
<td>Example: equity or debt-funded investments in infrastructure projects</td>
<td>Example: investments in the best private equity funds</td>
</tr>
</tbody>
</table>

Source: The SBA «Occupational Pension Plans» task force, 2016

In Figure 6.4, the asset classes are broken down into four categories according to their intended purpose. Debt and equity are categorized according to a company’s forms of financing and are part of the liabilities side of the balance sheet. In a second step, the capital is broken down into listed or private. This is important because it represents the primary difference between traditional asset classes (listed or regularly traded equities and bonds), and their alternative counterparts private equity and private debt (unlisted or private). The distinction between listed and unlisted capital can be illustrated by putting the two categories in the context of the different forms.

### Change in allocation to alternative investments

![Graph showing change in allocation to alternative investments]

Source: Swisscanto Pensionskassen Studie 2016
of financing used during the various stages in the life cycle of a company. Every company is founded with private capital and then generally transitions into a period of growth. From a certain size onwards, it is either traded on the stock market or remains privately-owned. In principle, the typical life cycle from start-up to growth and then saturation/restructuring, applies to both listed companies as well as companies that remain privately-owned.

Listed companies, however, often move between the growth and saturation phases, while investments in private companies are primarily made during the start-up phase (venture capital\(^8\) in the case of equity), the initial growth phase that follows, and the saturation/restructuring phase (buyout\(^9\)/distressed securities\(^10\)).

Viewed in terms of their intended purpose, listed and unlisted investments within the debt and equity categories should be considered largely equivalent, so irrespective of whether they are made on private markets (private equity or private debt) or on the stock market (listed equities and regularly traded bonds). This line of thinking becomes more important as the investment horizon increases, because it means that the differentiating characteristics illiquidity and tradability become less relevant.

The next category in Figure 6.4 is so-called real asset investments, which include investments in real estate and infrastructure. Strictly speaking, the latter also belongs to «real estate investments» and includes roads, bridges, electricity plants, airports and hospitals. Under OOB2, however, it is defined as a separate asset class. Like real estate, infrastructure investments are necessary for the proper functioning of an economy. Water, electricity, hygiene and healthcare are indispensable and form the basis of every society’s hierarchy of needs. It therefore makes sense to round out the real estate category with infrastructure investments and to designate the stand-alone group «real asset investments», for example.

The last category comprises trading strategies (in particular hedge funds) as well as commodities. As it is difficult to assign an economic purpose to these areas, they should actually be regarded as the real alternative asset class(es). Further types of investments that are not contained in the other categories could be ascribed to this category. «Insurance-linked securities» would be such a sub-category. Theoretically, this niche category could also be classified under debt or equity, because sooner or later, almost every investment appears on a company’s balance sheet. In this case, however, only a specific area of business (e.g. reinsurance for natural disasters) within

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\(^8\)Start-up capital for a company that involves increased risk due to its early stage in the business life cycle.
\(^9\)Takeover of a company or parts thereof either by taking a public company private or by means of a private to private takeover. There are a number of different reasons for such a takeover, for example the new owners have better opportunities for raising or restructuring capital, existing potential for improving a company’s management or how the business is managed.
\(^10\)Securities or strategies that finance companies in economic difficulty either using equity, debt or both.
an individual sector (insurance) using special purpose vehicles is financed. It therefore has too many characteristics for it to be assigned to one of the major categories outlined.

The idea behind the classification of the asset classes as depicted in Figure 6.4 is that seen from an economic standpoint, a large part of the investments currently designated as alternative are on par with traditional asset classes and therefore just as relevant for the continuity of the economic cycle. Significant potential lies in better understanding private debt, private equity, infrastructure and hedge fund strategies in particular (see crosses), as this means that the opportunities in these areas can be better leveraged in parallel with the remaining investments (see check marks).

This approach can help to make clear that the purpose of most alternative investments does not differ from traditional asset classes, in particular for the first three categories debt, equity and real assets. However, what must be taken into consideration is the fact that as investments, they have differing characteristics that give rise to the risk premia outlined previously.

### 6.3 Optimisation potential for pension funds

Figure 6.5 quantifies the added value of non-traditional asset classes for a well-diversified pension fund by comparing two portfolio allocations using the key risk-return figures forecast by the SBA «Occupational Pension Plans» task force for the next ten years per year. The «current» portfolio reflects the current average pension fund asset allocation according to Swisscanto. By means of comparison, the «target» portfolio represents a recommendation for a broadly-diversified asset allocation with a stronger focus on unlisted investments as well as real asset investments.

<table>
<thead>
<tr>
<th>Bond</th>
<th>Current portfolio</th>
<th>Target portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds CHF</td>
<td>31.5 %</td>
<td>20.0 %</td>
</tr>
<tr>
<td>Bonds foreign currency</td>
<td>11.0 %</td>
<td>12.0 %</td>
</tr>
<tr>
<td>Equities</td>
<td>32.0 %</td>
<td>35.5 %</td>
</tr>
<tr>
<td>Equities Switzerland</td>
<td>13.5 %</td>
<td>7.0 %</td>
</tr>
<tr>
<td>Equities global</td>
<td>17.0 %</td>
<td>21.0 %</td>
</tr>
<tr>
<td>Private equity</td>
<td>1.5 %</td>
<td>7.5 %</td>
</tr>
<tr>
<td>Real estate Switzerland</td>
<td>20.0 %</td>
<td>15.0 %</td>
</tr>
<tr>
<td>Real estate global</td>
<td>1.5 %</td>
<td>5.0 %</td>
</tr>
<tr>
<td>Infrastructure investments</td>
<td>0.0 %</td>
<td>7.5 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Current portfolio</th>
<th>Target portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading &amp; resources</td>
<td>4.0 %</td>
<td>5.0 %</td>
</tr>
<tr>
<td>Hedge funds</td>
<td>2.0 %</td>
<td>5.0 %</td>
</tr>
<tr>
<td>Commodities</td>
<td>2.0 %</td>
<td>0.0 %</td>
</tr>
<tr>
<td>Total</td>
<td>100.0 %</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key figures</th>
<th>Current portfolio</th>
<th>Target portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected 10-year return p.a.</td>
<td>3.0 %</td>
<td>3.9 %</td>
</tr>
<tr>
<td>Expected 10-year volatility p.a.</td>
<td>5.5 %</td>
<td>6.1 %</td>
</tr>
<tr>
<td>Expected Sharpe Ratio</td>
<td>0.48</td>
<td>0.58</td>
</tr>
</tbody>
</table>

*CHF hedged

Source: The SBA «Occupational Pension Plans» task force, 2016

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11 Swisscanto Schweizer Pensionskassenstudie 2016.

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12 The asset classes are approximated with the following indices/portfolios (current portfolio/target portfolio): 31.5 %/20 % SBI AAA-BBB TR, 11 %/12 % Barclays Global Aggregate (hCHF), 0 %/7.5 % Infrastructure (hCHF), 17 %/21 % MSCI World, 13.5 %/7 % SPI, 1.5 %/7.5 % CAPE US Private Equity Index (hCHF), 2 %/5 % HFRI Fund of Funds Composite (hCHF), 10 %/7.5 % KGAST Immo Schweiz TR (corresponds to half of the Swiss real estate share), 10 %/7.5 % SIX Real Estate Funds (ditto), 1.5 %/5 % NCREIF Property Index (hCHF), 3 %/0 % Dow Jones UBS Commodity Index.
The private equity, infrastructure and global real estate allocations have in particular been increased in comparison to the current allocation. The allocation to Swiss bonds and Swiss real estate were decreased. Although this results in a reduction of more defensive asset classes, the expected risk for the target portfolio increases to a lesser degree than the target rise in expected returns thanks to improved diversification of the overall portfolio. This should result in a higher risk-adjusted return (Sharpe Ratio) and thus a more efficient portfolio.

If one looks at the possible developments of the two portfolios over a longer period of ten years as illustrated in Figure 6.6, it can be seen that, despite the higher level of risk, even in a pessimistic development scenario (lower limit of the 90% confidence interval of a Monte Carlo simulation\(^\text{14}\), meaning 95 percent of all the other scenarios considered are better), the target portfolio performs better than the more defensive current portfolio. This is attributable to the higher expected returns that can be achieved with relatively low additional risk.

The current average target return of 3.4 percent\(^\text{15}\) is more likely to be achieved with the target portfolio than with the current portfolio. While for the current portfolio, the expected return is below the target return, the target portfolio benefits from its expected return of almost 4 percent, in particular with the increase of the investment horizon.

If the asset management fees of 0.44 percent per year on the expected returns are also included in the calculation, the expected net return of 2.5 percent on the current portfolio is significantly below the target return of 3.4 percent. Even if the costs for the target portfolio are likely to be higher than the 0.44 percent for traditional pension fund portfolios due to the greater share of non-traditional investments, this changes only very little in terms of the final outcome\(^\text{16}\): the likelihood of achieving the target return with the target portfolio is significantly higher than with the current portfolio.

The historical development of the current and target portfolios between 2000 and 2016 corresponds to the expected characteristics of the investments. Figures 6.7 and 6.8 illustrate the excess return generated by the target portfolio compared to the current portfolio over different periods of time. Figure 6.7 shows that these excess returns arising from the interest rate effect are generated primarily over a longer period of time. The historical calculations, however, also highlight that the target portfolio was subject to greater fluctuations (risk), which is also reflected in the maximum losses during the respective periods. What must also be taken into account is that for the more illiquid investments, volatility as the measure of risk reflects the additional risk characteristics of the more illiquid investments only in part (including limited tradability and possibilities for valuation).

\(^{13}\) The Monte Carlo simulation produces random investment scenarios based on assumed key risk and return figures. The simulation of a variety of developments provides an approximation of the bandwidth and thus the probability of future developments and final outcomes.

\(^{14}\) Based on the assumption that each asset allocation is adjusted back to the original allocation on a monthly basis and all returns are reinvested; no transaction costs, management or asset management fees or taxes are included in the simulation.

\(^{15}\) Swisscanto Schweizer Pensionskassenstudie 2016.

\(^{16}\) Examples of additional costs for the target portfolio due to the 13% higher allocation in non-traditional investments (assumed total expense ratio (TER) for traditional investments 0.25%, TER for non-traditional investments 2.5%, both average values): 13% x 2.25% = 0.29% p.a.
The positive characteristics of unlisted, less liquid investments are confirmed both by the expectations of the SBA «Occupational Pension Plans» task force as well as by the historical simulations. Because the findings indicate that the additional risk premia for investments from alternative markets do in fact pay off, it is very important that this be taken into account when determining or optimising an investment strategy.

6.4 Due diligence process for alternative investments

The investment triangle consisting of security, liquidity and return is the basis of all asset management. It also forms the basis for the management of pension fund assets in articles 50 to 52 of OOB2. The return potential of various investments has been demonstrated using different examples. The fact that alternative investments...
nevertheless still rarely find their way into pension fund portfolios must therefore also be related to the security and liquidity aspects, which in this context likely overlap. Liquidity is key for pension funds, but for many of them, it currently plays a secondary role, because contribution payments as a rule more than compensate for liquidity outflows (see Chapter 5).

Under OOB2, security is primarily understood to be the guaranteed fulfilment of the pension funds’ purpose. OOB2 expressly calls for an assessment of all assets as well as appropriate risk distribution of the investments. In terms of the asset classes themselves, OOB2 caps alternative investments at 15 percent. The fact that this limitation is not ideal has already been demonstrated in the practical examples. In comparison to other countries, Switzerland’s position in this regard is highly conservative.

Before outlining a potential new allocation by asset class and weight/restrictions under OOB2 in Chapter 7, it is important to provide a general overview of the due diligence processes for alternative investments.

The key parameters of due diligence recommended by the CFA Institute\(^\text{17}\) for the alternative investments selection process can be helpful here. Although processes can differ significantly, these parameters provide a good overview of which additional elements should be considered for alternative investments in comparison to traditional investments. Properly implementing the individual steps allows for the key risks of an investment to be identified and assessed.

A process such as outlined in Figure 6.9 cannot resolve the concrete problems that arise when choosing a new asset class or individual investments. Dealing with additional or even new risks will continue to be one of the key responsibilities of portfolio managers and may even take on greater importance in future. Also, informing the CEO and in particular the board of trustees gives rise to inevitable, additional work. Acquiring investment-specific expertise and product information, and the

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\(^{17}\) The CFA Institute is a global non-profit organisation consisting of financial analysts, portfolio managers and other investment professionals. Its mission is to lead the investment profession by promoting the highest standards of ethics, education, and professionalism in the interests of society (https://www.cfainstitute.org/).
Interview with Martin Roth, Managing Director of the Manor pension fund

«The OOB2 guidelines are no longer up to date»

SBA: Mr. Roth, in your opinion, what are the biggest challenges right now for the 2nd Pillar overall and for the individual pension funds?

Martin Roth: The demographic developments with the baby boomer generation and the continuous rise in life expectancy are without a doubt very big challenges. This is compounded by the fact that we cannot assume that future financial and capital market returns will solve the problem. On the contrary, I expect investments to contribute less in the coming years than what we have been accustomed to until now.

As the person in charge, what can you do for your approximately 12,000 beneficiaries? Are there measures for improvement that you can introduce on your own account, in other words, without the involvement of business and the government?

Our 2nd Pillar is subject to many political parameters: the minimum interest rate, convergence rate, coverage ratio and the investment guidelines. Changing these is difficult. In light of these restrictions, as managing director I therefore place a strong focus on asset management in order to take the best possible advantage of the financial markets as the 3rd contributor.

In concrete terms, I am concerned that the traditional asset classes that the pension funds invest in, so equities, bonds and Swiss real estate, will no longer generate high enough returns to achieve our required net 2.8 percent annual target return. A substantial addition of alternative sources of returns can and must be part of the solution to the extent that the liquidity requirements allow for this and the necessary investment horizon exists. For me it’s clear that with a recommended upper limit of 15 percent for alternative investments, the OOB2 guidelines are no longer in line with the times. What’s more is that asset classes such as private equity, infrastructure investments or selected hedge fund strategies, for example, have become far too important to be tossed together into one big pot labelled «alternative investments».

In your view, what are the advantages of alternative investments?
What are the disadvantages?

Alternative investments are usually unlisted investments, which means they cannot be traded on publicly accessible markets. This limitation is compensated for in the long-term by higher returns. The limited tradability also has a positive side effect, which is that these investments are subject to less fluctuation than listed securities. This has a positive effect on the risk-return characteristics of the overall portfolio.
OOB2 calls for the conscientious management of pension assets. In my opinion, that means not only that liquidity and security aspects have to be observed, but also that pension benefits must be secured sustainably. Pension funds are responsible for ensuring that the return potential in financial markets is exploited for their beneficiaries.

Better incentives on the OOB2 side are also very important. The big pot of alternative investments is often still taboo. Clarity and transparency could disentangle the contents of this pot, for example by separating private investments along the lines of traditional investments or even categorising them under traditional investments and giving them higher limits. In my opinion, this would send a very strong signal.

About Martin Roth
Martin Roth has been responsible for the Manor pension fund for three years. Combined with his earlier role as a portfolio manager at UBS, he has over 20 years of experience in asset management. Roth is also a financial analyst and portfolio manager/CIIA® (AZEK). He completed his Diploma of Advanced Studies in Pension Fund Management at the Lucerne University of Applied Sciences and Arts, and his CAS in General Management at the University of St. Gallen.

About the Manor pension fund
The Manor pension fund manages around CHF 1.7 bn in assets. Its coverage ratio is currently 111 percent and has increased an average of 2 percent over the last five years. The pension fund covers 8,900 employees and 3,300 pension recipients. The average age of employees is 41. As at 30.9.2016, the asset allocation consisted of 14.5 percent fixed income investments, 31 percent equities, 26 percent real estate and 16.5 percent alternative investments.

These investments also have the advantage that the investment characteristics are better reflected and are not subject to the influences of a listing on the stock exchange. This gives rise to attractive correlation properties in addition to lower volatility, both compared to traditional as well as other alternative investments.

However, many pension funds are concerned about the limited tradability and liquidity. This is not a problem in our case, as we manage and monitor the overall liquidity of the assets systematically. We also hold a large share of liquid investments that could be divested at any time.

Despite the difficult framework conditions and the advantages of alternative investments, the latter are currently generally of secondary importance for pension funds. Why is this?

The bad experiences in the past are probably still an issue. As a result, there is a lot of scepticism towards more complex products with higher costs. Also, it’s easier to justify negative developments in traditional asset classes than it is for individual hedge fund strategies or private equity fund of funds, for example.

The fact that the regulator throws alternative investments into one collective pot and puts a 15 percent cap on them is probably also not very helpful in terms of encouraging trust.

What will it take to change or improve the status quo?

First and foremost, there needs to be awareness about the fact that investment returns make an important contribution to the growth of the 2nd Pillar assets. They play a key role in helping to overcome the problems created by the structural changes. And these investment returns, at least in part, are in the hands of the pension funds themselves.
Better performance possible with an OOB2 revision

Although the investment guidelines under OOB2 offer as yet unexploited potential for improved efficiency for the majority of pension fund portfolios, amendments to the guidelines are urgently needed in light of the growing need for higher returns. Such amendments should focus on more liberal parameters for the use of non-traditional investments. To this effect, the following chapter proposes and examines a broadened version of the guidelines contained in OOB2.

The earlier chapters on Markowitz' portfolio theory and alternative investments highlight the optimisation potential for the pension funds that would allow them to make better use of the financial markets as the 3rd contributor. Most of these opportunities for improvement can be assessed and implemented with a reasonable amount of effort. The proposed measures can to a large extent be implemented by the pension funds without the involvement of the government or business, as they generally relate only to portfolio management.

This study has shown that in portfolio construction, there is a level that can be achieved under the OOB2 guidelines and a second level that exceeds this (see Chapter 5). In a next step, the key differences and similarities between traditional and non-traditional investments were outlined and an attempt was made to demystify alternative asset classes. This step is important because a broadening of the OOB2 guidelines only makes sense if the room for manoeuvre that is created is also utilised. A change in thinking would already be beneficial today, because many pension funds could construct their portfolios in a more efficient manner under the existing OOB2 parameters.

A proposal for revised OOB2 guidelines

Under OOB2, investments that cannot be attributed to the typical asset classes equities, bonds or real estate are categorised as alternative investments. At present, these may not exceed 15 percent of total assets. This results in the following two key specifications: on the one hand, which investments are permitted and how they are categorised (OOB2, Art. 53), and on the other hand, their respective limits (OOB2, Art. 55). Both of these elements are important because they are key for the strategic allocation of a portfolio and therefore have the greatest influence on the success of asset management.

Figure 7.1 presents a basis for realigning articles 53 and 55 OOB2. These are orientated along the categorisation of asset classes proposed in Chapter 6.2. The recommended amendments are based on previously outlined measures according to which

a) asset classes are categorised as debt, equity, real asset investments, and trading & resources (reorganisation within Article 53 OOB2). These are then broken down in a way that brings them closer to their listed counterparts, thus creating a greater alignment with the intended financial purpose of the investment and
b) the category limits (Article 55 OOB2) are amended or relaxed in line with the adjustments in a).
The restrictions for single positions under OOB2 (Article 54), which would be the final step in the amendments to the investment guidelines, are not explored here, as they are of secondary importance for strategic asset allocation and could largely be adopted in their current form.

Figure 7.1 implies further adjustments to OOB2 similar to the previous examples. However, a more detailed exploration thereof is beyond the scope of this study. The objective is nevertheless clear: more room for manoeuvre will give pension funds the opportunity to generate higher returns on their portfolios as well as improve diversification (Chapter 5). This is achieved primarily through the addition of non-traditional investments as a result of their attractive investment characteristics (Chapter 6).

Under the proposed new guidelines, a portfolio could theoretically consist of 60 percent investments that at present are designated as alternative investments (e.g. 15 % private debt, 15 % private equity, 15 % infrastructure, 15 % hedge funds). This may appear to be going too far, and it is indeed an extreme example. However, even though it could be absolutely viable, pension funds would hardly be able to implement such an allocation immediately. The revised exemption limits have an added advantage that they would send a signal that would promote equality between traditional and what are today alternative investments.

A realignment based on Figure 7.1 would have concrete implications for the OOB2 guidelines, in particular for Article S3. For example, letter e) of Article S3 «alternative investments» would have to be redefined as «trading & resources», and of its current categories, would then only contain hedge funds, insurance linked securities and commodities. The infrastructure category and real estate would be classified together under «real asset investments», for example under the letter c), which today covers only real estate. As a final example, private equity would be accepted under d) «equity». At present, participations in unlisted companies are categorised as «alternative investments» under e).

Adjusting the investment guidelines has been discussed for some time, and due to the situation in capital markets and the developments in the 2nd Pillar, these discussions are intensifying. Opinions about the elimination of the guidelines are increasingly moving in the direction of a strong Prudent Investor Rule (see Chapter 8), that is to say, a call for greater direct responsibility for the pension funds. This proposal for restructuring OOB2 is an attempt to initiate an important intermediate step in order to reduce the investment restrictions step-by-step.

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### Proposal for an update to the categorisation and limits for investments in accordance with OOB2

<table>
<thead>
<tr>
<th>Sub-investment classes</th>
<th>Limit</th>
<th>OOB2-Article</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>new</td>
<td>existing</td>
</tr>
<tr>
<td><strong>Debt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listed</td>
<td>100 %</td>
<td>100 %</td>
</tr>
<tr>
<td>Bonds CHF and foreign currency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>50 %</td>
<td>50 %</td>
</tr>
<tr>
<td>Mortgage titles CH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private debt (new)</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
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<tr>
<td>Listed</td>
<td>75 %</td>
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<tr>
<td>Equities domestic and foreign</td>
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</tr>
<tr>
<td>Private</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td>Private equity (new)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Real asset investments (equity capital)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listed</td>
<td>50 %</td>
<td></td>
</tr>
<tr>
<td>Real estate domestic and foreign</td>
<td></td>
<td></td>
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<tr>
<td>Private</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td>Real estate domestic and foreign (new)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trading &amp; resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trading</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td>Hedge funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td>Commodities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>15 %</td>
<td></td>
</tr>
<tr>
<td>Insurance linked securities etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unhedged foreign currencies</td>
<td>30 %</td>
<td>30 %</td>
</tr>
</tbody>
</table>

*Asset class subject to the current total 15 % limit for alternative investments under OOB2.

Source: The SBA «Occupational Pension Plans» task force, 2016

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For example Roland Kriemler: Anlagestiftungen: Investieren nach BVV2 und ASV (Investment foundations: investing according to OOB2 and the Ordinance on Investment Foundations), 2016.
Case study: best in class – the Yale Investments Office

This study highlights numerous advantages of adding or increasing the allocation of alternative investments in a traditional pension fund portfolio. The authors are, however, aware that this measure cannot be the sole solution for the situation currently faced by the 2nd Pillar, and that there are certainly also reasons that speak against this asset class. Especially important is awareness of the risk factors, particularly in comparison to traditional investments.

Ultimately, however, this study seeks to find possibilities for optimising asset management, with the final goal of increasing the expected returns of current pension fund portfolios. Alternative investments are definitely one of those possibilities, in particular for pension funds with a long investment horizon. The fact that pension funds in other countries are already benefiting significantly from alternative investments is explained in Chapter 9.

A useful comparison can be made with investment foundations of a perennial nature, and which, in addition to seeking to preserve value, may also have to generate income for specific purposes. These characteristics make such foundations comparable to pension funds in the most important aspects.

Many of the best-known foundations of this type are affiliated with top-ranking universities around the world and therefore also have enormous financial and investment expertise. Yale University in the US has one of the most successful of these endowment funds. As at mid-2015, the fund managed over USD 25 bn and generated returns over the last ten years up to and including June 2015 of 10 percent per year. In other words, the endowment fund’s assets increased by a factor of around 2.6 despite the financial crisis. During the same period, global equities (MSCI World, in USD) achieved 7 percent annual returns and global bonds (Barclays Global Aggregate, in USD) 3.5 percent per year, presumably with significantly higher risk (volatility).
According to Yale, the current allocation has a higher current and expected return while maintaining the same level of volatility as in 1985 due to the higher return potential that at the same time has improved diversification characteristics. In concrete terms, the Yale portfolio managers expect a long-term return of 6.7 percent per year at a volatility of 13.3 percent per year.

The example of the Yale Endowment Fund in the US should not and can in no way be applied one-to-one to the Swiss pension funds. Differences in terms of mentality, specific characteristics of the pension fund markets and the situations of the individual pension funds mean that the possibility for a generalisation is limited. This comparison should, however, provide an impetus to place increased focus on addressing a departure from traditional investments towards alternative asset classes and more importantly, to do so in a timely manner. The Yale example shows that the world’s best portfolio managers already initiated this process some time ago.

### 7.2 Support required from business and government

A fundamental change in the investment mentality and an adjustment of the OOB2 guidelines require the support of business and the government. Although the investment guidelines are primarily governed at the ordinance level and amendments through the Federal Council would be relatively easy to initiate, only moderate changes have been undertaken to date.

The last OOB2 revision was conducted in 2014. Although the role of alternative investments was discussed, no major changes were made, as the primary focus of the revision was risk. There have been a number of motions put forward by members of the parliament in recent years to promote investments in unlisted companies\(^{20}\), infrastructure investments\(^{21}\) and venture capital (private equity)\(^{22}\).

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\(^{20}\) Motion put forward on 9.6.2016, Claude Béglé: Investitionen von Pensionskassen in nichtbörsenkotierte Unternehmen (Pension fund investments in unlisted companies).

\(^{21}\) Motion put forward on 23.9.2015, Thomas Weibel: Infrastrukturinvestlagen für Pensionskassen attraktiver machen (Making infrastructure investments more attractive for pension funds).

\(^{22}\) Motion put forward on 12.12.2013, Konrad Graber: Langfristanlagen von Pensionskassen in zukunftsträchtige Technologien und Schaffung eines Zukunftsfonds Schweiz (Long-term investments by pension funds in viable future technologies and creation of a venture capital fund for Switzerland).

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The Federal Council saw no need to make any changes in any of these instances. The arguments were identical in each case, and it purported that on the one hand, the current guidelines provide sufficient room for manoeuvre for investments in the asset classes outlined and on the other hand, the risks were too big to justify giving the asset classes greater significance.

Calls for amendments are increasingly being made, however, by business and by pension funds themselves\(^{23}\). It is likely that this pressure will increase, and, depending on financial market developments, even more than expected. The issue is therefore timely and offers plenty of material for discussion. The hope is that occupational pension plan stakeholders will assert themselves in a coordinated manner, with the result that the framework conditions for asset management are improved as soon as possible.

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See Case study: Interview with Martin Roth, Managing Director of the Manor pension fund.
8 Prudent Investor Rule as the next (but one) step

The quantitative regulation of investments according to OOB2 that has applied since LPP entered into force is no longer up to date. The US, the UK and other countries have amended their guidelines to the changed conditions and more closely aligned them with the Prudent Investor Rule. The measures for optimisation recommended in this study take a similar approach. Defining an optimal strategic asset allocation requires a fundamental change in thinking and increased freedoms with regards to OOB2. Fewer restrictions and more room for manoeuvre, however, also mean more responsibility. OOB2 does contain such elements, but the guidelines should be fundamentally expanded in terms of responsibilities and the necessity for more efficient portfolios.

The regulatory framework for pension fund asset management continues to build for the most part on listing the permitted investments, setting investment restrictions and safeguarding these restrictions. According to the explanations for the revision of articles 49 to 59 OOB2, which came into force on 1 January 2009, a stronger emphasis on individual responsibility and the principle of prudence in line with the Prudent Investor Rule were also objectives of the revision. The detailed investment guidelines, however, strongly limit the practical implementation of the Prudent Investor Rule, meaning that the legislator’s objectives were only achieved in part.

8.1 The concept of pension fund portfolio management using the US and the UK as an example

Over the last few decades, both the US and the UK have amended the laws for the management of pension fund assets in line with the changed conditions. As part of this process, they did away with specific investment guidelines and restrictions and replaced them with rules of conduct (Prudent Investor Rule). These rules of conduct apply for the managers of the pension funds as well as any external asset managers working for them.

In the US, for example, the fiduciary duties of pension fund committees are set out in the Employee Retirement Income Security Act (ERISA). Complementary to this is the Uniform Prudent Investor Act (UPIA), which governs asset management. In the UK, pension funds are governed by the Pension Fund Law, while foundations are subject to Trust Law. The guidelines in place for pension fund committees set out rules of conduct according to which their responsibilities must be met and duties carried out.

The Prudent Investor Rule is based on the concept that the people responsible for investing the assets of the pension fund manage these as if they were their own. The measures for optimisation recommended in this study take a similar approach. Defining an optimal strategic asset allocation requires a fundamental change in thinking and increased freedoms with regards to OOB2. Fewer restrictions and more room for manoeuvre, however, also mean more responsibility. OOB2 does contain such elements, but the guidelines should be fundamentally expanded in terms of responsibilities and the necessity for more efficient portfolios.
8.2 Basic principles of the Prudent Investor Rule

The following elements form the basic principles of the Prudent Investor Rule (based on the Uniform Prudent Investor Act, drafted by the National Conference of Commissioners on Uniform State Laws for the United States of America in 1994 and the Trustee Guidance):

Due diligence guidelines
Pension fund assets are to be invested carefully. The pension fund’s financial situation must form the basis for investments. Implementation of investment decisions is to be conducted diligently, professionally and carefully.

Asset allocation
Investments must not be made on an individual basis, but should instead be made taking into consideration the overall portfolio. Further to this, asset allocation must be in line with the pension fund’s asset liability management.

Risk and return guidelines
The assets must be managed in accordance with modern portfolio theory. Risk and return guidelines are to be defined and must be in line with asset allocation. Investment restrictions are set according to the investment objective. The success of investment activities is regularly assessed and monitored, deviations from the guidelines are reviewed and if necessary, escalated. Activity reports are produced regularly.

Diversification of assets
An appropriate diversification must be striven for in order to reduce investment risk. Implementation in the portfolio depends on the asset allocation, the potential investment restrictions as well as the risk and return guidelines. No quantitative guidelines are contained in the standard, only indications regarding diversification and the qualitative requirements thereof.

Responsibilities
The governing body is responsible for the management of the assets. Targeted, prudent investing within the framework of asset allocation and the risk-reward guidelines are just as much a part of these responsibilities as ensuring the appropriate monitoring of investments and activities. The governing body is liable for any potential misconduct in the exercise of its responsibilities.

Loyalty
The pension fund’s governing body must ensure that asset management in conducted in the interests of the pension fund and its beneficial owners (beneficiaries, employees and recipients). Own interests and third party interests must be treated as secondary to the interests of the beneficial owners. Proprietary trading by the committees, persons related to them or by third parties with a mandate from the pension fund may not lead to conflicts of interest with the investment activities or the investments of the pension fund (e.g. front running, insider trading). The execution of investment decisions in the market must be conducted at standard market conditions.

Protection of interests
The pension fund’s assets must be managed in such a way that ensures the interests of all beneficial owners to the same degree. The interests of an individual beneficial owner or a group of beneficial owners may not be placed above the interests of the others.

Investment fees
The fees for the management of the pension fund’s assets and the individual investments must be in line with standard market prices. The governing bodies are obliged to keep the costs that are passed on to the beneficial owners to a minimum. Excessive costs incurred through the management of the assets at the expense of the beneficial owners are considered an unfaithful execution of duties.

Verification and monitoring of adherence
Adherence to the code of conduct and the asset allocation strategy as well as the risk-return guidelines are to be monitored in an appropriate manner.

Delegation of tasks to third parties
Asset management and other tasks may be delegated to third parties. The selection and ongoing monitoring of service providers must be conducted in a diligent, competent and careful manner. The governing body remains responsible vis-à-vis the beneficial owners for any work that has been outsourced.
The organisational requirements should be set in a way that minimises operational risk when responsibilities are allocated appropriately within the pension fund. A clear division between those individuals who define the asset allocation, those who invest the assets of the beneficial owners, and those who oversee the investment activities and adherence to the investment guidelines should be striven for. Whenever possible, conflicts of interest must be avoided or minimised. If this is not possible, they must be disclosed both internally and externally. Delegations to third parties must be conducted according to standard practices (e.g., such as at fund management companies) and the service provider must be bound by contract to adhere to the same rules of conduct that the delegator is subject to. In order for the pension funds in Switzerland to continue to operate successfully and thus be able to generate long-term added value for the beneficial owner, an up-to-date regulation and modern supervision is needed.

OOB2 has already embedded the basic concept of rules of conduct for pension funds at the ordinance level. The possibility thus exists for supervision to be conducted more on the basis of the pension fund, its committees, and its organisational set-up, and less on adherence to the legal investment guidelines. The organisation-specific supervisory approach as already applied by FINMA for fund management companies could also be applied to pension funds and investment foundations.

The elements of the Prudent Investor Rule can also be found in OOB2. Swiss law does not, however, lay down any explicit, definitive rules of conduct, but rather gives a certain amount of room for interpretation. In comparison to the US and the UK, Switzerland’s necessary guarantee of diligent, competent and careful management of the business combined with guidelines for permitted investments and investment restrictions goes much further. In addition to this, there is a risk that the guarantee cannot be sufficiently met by the governing bodies because the limits or restrictions do not allow for it. For example, a targeted asset allocation that is carefully aligned with the asset liability management cannot be implemented.

8.3 Up-to-date formulation of the guidelines for asset management at pension funds

In order for the governing bodies to be able to meet their responsibilities and invest the assets of the beneficial owners in a targeted, prudent manner and using up-to-date portfolio theories, legislation is required that regulates not the portfolios, investments, vehicles or products, but the pension funds and their committees. For pension funds with limited professional expertise, it can therefore make sense to establish standardised requirements for portfolio construction that define investment restrictions. Such a concept already exists in banking legislation, where for example, for the identification of risks, standardised calculations or model-based calculations can be applied.

Accordingly, investment guidelines and restrictions should be replaced by clear requirements for the governing bodies of a pension fund and its organisational set-up. This requires pension funds to establish structures and extend expertise, which offer a guarantee of irreproachable business conduct. In Switzerland, this approach is already being successfully applied for banks, fund management companies and asset managers. The result is that pension fund committees also become more accountable, because with this kind of approach, it is no longer possible to shift the responsibility for not reaching targets or not meeting requirements to the legal investment guidelines.

The organisational requirements should be set in a way that minimises operational risk when responsibilities are allocated appropriately within the pension fund. A clear division between those individuals who define the asset allocation, those who invest the assets of the beneficial owners, and those who oversee the investment activities and adherence to the investment guidelines should be striven for. Whenever possible, conflicts of interest must be avoided or minimised. If this is not possible, they must be disclosed both internally and externally. Delegations to third parties must be conducted according to standard practices (e.g., such as at fund management companies) and the service provider must be bound by contract to adhere to the same rules of conduct that the delegator is subject to. In order for the pension funds in Switzerland to continue to operate successfully and thus be able to generate long-term added value for the beneficial owner, an up-to-date regulation and modern supervision is needed.

OOB2 has already embedded the basic concept of rules of conduct for pension funds at the ordinance level. The possibility thus exists for supervision to be conducted more on the basis of the pension fund, its committees, and its organisational set-up, and less on adherence to the legal investment guidelines. The organisation-specific supervisory approach as already applied by FINMA for fund management companies could also be applied to pension funds and investment foundations.
9 Comparison with other countries: Switzerland lags behind

International comparisons of the performance of occupational pension plans should be treated with some caution. Nevertheless, such comparison is useful in that it shows that Switzerland lags behind in comparison to other countries with similarly well-developed 2nd Pillars. A detailed analysis highlights the significant differences in regulatory requirements between the individual countries. Although their effect on performance is not easy to determine, a number of characteristics that influence the targeted returns can be identified. In addition to real estate, these include in particular the investment guidelines and the share of non-traditional investments.

A look at the investment performance of the pension funds in various OECD countries over the past five and ten years shows that both nominally and adjusted for inflation, Switzerland ranks in the middle to lower end of the spectrum (Figure 9.1). In the last five years, Switzerland ranked a modest 16th out of 26 countries examined in terms of nominal values. In real terms, it performed slightly better, ranking 10th. Looking at the values for the last ten years, the result was comparable.

Whether the reported returns are presented in a way that allows for a meaningful comparison between the countries, and how pension fund performance would generally best be measured, is something that experts have long sought to establish. Discrepancies in reporting and the regulatory requirements as well as different applicable periods and the varying characteristics of the individual pension fund systems make comparisons difficult. For example, a difference in retirement age can lead to longer or shorter periods of cumulative saving and therefore have a strong influence on performance. Further to this, regulatory requirements such as the achievement of a minimum guaranteed return make an optimal, balanced portfolio allocation more difficult. Also not to be underestimated are the varying methods used for calculating returns as well as the difference in how management fees are taken into account.

In terms of giving an initial impression, however, the reported investment returns provide important insights.
For this analysis, the study limits itself to countries with pension fund assets of comparable size as a percentage of GDP. According to OECD data, for 2014, pension fund assets in Switzerland as a percentage of GDP were 120 percent. Comparable are the Netherlands (159%), Australia (110%), the UK (96%), the US (83%) and Canada (76%). Due to their relatively small size of pension fund assets, countries such as Denmark (48%), New Zealand (20%), Norway (8.8%) and Belgium (5.7%) are not taken into further consideration.

A ranking of this comparison group according to nominal values shows that each of these countries outperformed Switzerland in the last five years. The pension funds in the UK generated annual returns that were more than twice as high as Switzerland's. In real terms, all of the comparison countries with the exception of the US outperformed Switzerland. A similar picture emerges over a ten-year horizon.

Three areas are of key importance when looking for the causes of these discrepancies: the differences in performance between the various countries can primarily be attributed to the varying developments in the domestic bond, equity and real estate markets, and secondly to differences in asset allocation. Thirdly, asset allocation is in part determined by regulatory guidelines as well as the characteristics of the different pension fund systems.

### 9.1 Regulatory environment and performance

Investment restrictions can either follow the Prudent Investor Rule, come in the form of quantitative rules for portfolios, or be based on a combination of the two. Establishing quantitative rules can limit the choice of asset classes as well as their weighting for asset allocation.

Pension funds in Anglo-Saxon countries generally follow the Prudent Investor Rule, while Latin American and Central and Eastern European countries tend to opt for a quantitative approach as the regulatory mechanism. In addition to restrictions relating to instruments and maximum allocations, the latter countries often have defined minimum guaranteed returns. Experts have identified a connection between

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24 Source: OECD Global Pension Statistics.

25 A comparison of returns should not be viewed in isolation from the risks taken. There are, however, no internationally comparable data available for this.

the development of capital markets and investment regulation. Pension funds in countries with better-developed capital markets tend to have a more flexible regulatory framework (Prudent Investor Rule). In countries where cumulative saving for retirement is mandatory and more responsibility therefore lies with the state or a company (as in the case for occupational pensions), a stricter regulatory framework tends to be in place. Pension funds with defined contribution plans for which the pension income depends to a high degree on performance are also more strictly regulated.

Figure 9.2 compares the investment guidelines of the countries under review. It shows that only Switzerland has defined maximum limits at the asset class level. However, it should be mentioned that in the case of Switzerland, the investment guidelines are not fully binding. With appropriate justification, pension funds can exceed the maximum limits. Security and the diversification of risk must, however, continue to be adhered to and the deviation from the limits must be disclosed in the annual report.

### Fig. 9.2

#### Investment restrictions

<table>
<thead>
<tr>
<th>Equities</th>
<th>Real estate</th>
<th>Bonds</th>
<th>Retail investment funds</th>
<th>Private investment funds</th>
<th>Mortgages/lending</th>
<th>Cash</th>
<th>Alternative investments</th>
<th>Commodities</th>
<th>Foreign assets</th>
<th>Foreign currency exposure</th>
<th>Derivative exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>100% (limit on direct investments: 25%)</td>
<td>50% (total exposure, incl. indirect investments)</td>
<td>30% (total exposure)</td>
<td>Not applicable (class level limit relevant)</td>
<td>10% (max. 30% of market value of property)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Individual concentration limits (5% of investment guidelines since 2020)</td>
<td>10% for real estate</td>
</tr>
<tr>
<td>Australia</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Granting credit to employees not permitted; diversification required; no amendments since 2002</td>
<td>n/a</td>
</tr>
<tr>
<td>Canada</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Individual concentration limits (5%)</td>
<td>100% (30% limit abolished in 2005)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Max. 5% of shares of employer; diversification required</td>
<td>50% for real estate</td>
</tr>
<tr>
<td>UK</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Granting credit to employees not permitted; diversification required</td>
<td>n/a</td>
</tr>
<tr>
<td>US</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>Granting credit to employees not permitted; diversification required</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Note: limits in the table relate only to direct investments unless otherwise indicated.

Annual Survey of Investment Regulation of Pension Funds, OECD 2014

The remaining five countries do not limit investments in traditional or non-traditional asset classes. Nevertheless, in all countries with the exception of Canada, sufficient diversification in terms of asset classes is required. In addition, there are separate concentration limits for individual counterparties in Canada and Switzerland, and lending by employers is not permitted in the UK or US in order to avoid potential conflicts of interest.

Switzerland is also the only country to limit foreign investments (foreign assets). In the case of real estate, only 10 percent of total assets may be foreign. Canada had a limit of 30 percent for total foreign assets, but did away with this in 2005. The picture is similar for foreign currency-related guidelines. Investments in foreign currency are also only limited in Switzerland, by a cap of 30 percent. None of the other countries under review has defined floors (minimum limits). Switzerland is
again an exception in terms of requirements for achieving a specific return. According to a comparison conducted in 2008, pension funds in the US, the UK, the Netherlands, Australia and Canada do not have to provide any minimum guarantee.27

There is no clear-cut answer to the question of whether there is a connection between regulatory requirements and performance. With the exception of the US, all of the countries in the comparison group that do not have regulatory investment restrictions outperformed Switzerland. Countries outside the comparison group with relatively high returns, such as Denmark, also only have low to no investment restrictions. There is therefore reason to assume that a certain relationship exists between the lack of restrictions on investments and performance.

9.2 Asset allocation and performance

Investment performance is determined to a large extent by the combination and weighting in the asset allocation. Because regulatory restrictions cannot fully explain differences in asset allocation, it is clear that in the US, the UK, the Netherlands, Australia and Canada, investment decisions and not portfolio restrictions resulted in added-value in the investment strategy. In the case of Switzerland, the effects cannot be separated, as it is unclear to what extent asset allocation was influenced by portfolio restrictions.

In a study published in 2015, the OECD explored how asset allocation changed in individual countries between 2004 and 2014, and how this was influenced by regulatory measures.28

Figure 9.3 shows the asset allocation for the equity and alternative investments asset classes in 2014. Switzerland had a below average allocation for both classes. Once again, no clear connection between the allocation to individual asset classes and performance can be identified here. Certain tendencies do exist, however. Figure 9.3 shows that countries with a relatively high component of alternative investments also tend to report higher returns (see Figure 9.1). For this assessment, it must be mentioned that according to the OECD definition, alternative investments comprise primarily lending, land and real estate, mutual funds, insurance contracts, hedge funds, private equity and structured products. To facilitate comparison, the graph shows the share of alternative investments excluding real estate and lending, which are not normally considered alternative investments in Switzerland. It is also questionable whether the mutual funds class is part of the alternative investments category. Due to the lack of a more in-depth description, however, this study does not attempt to further separate them.

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28 OECD, Pension Markets in Focus, 2015.
The UK enjoyed the highest real and nominal returns over the last five and ten years, and at the end of 2014, had allocated 35 percent to alternative investments. It thus had the highest share of non-traditional assets within the comparison group. From 2004 until 2014, the biggest reallocations (just under 13 %) were made in favour of alternative investments, which led to a reduction primarily in the equity allocation. Countries such as Canada and Australia, which have a relatively high quota of alternative investments, also enjoyed above average performance. The US and Switzerland brought up the rear, both in terms of returns as well as the share of alternative investments. Within the comparison group, only Switzerland is subject to regulatory restrictions for alternative investments.

The combination of alternative investments plays an important role here, which is also self-evident due to the heterogeneity of the asset class. Many investments are bundled into the «other investments» category, making the identification of a clear relationship between asset class and performance very difficult.

On the other hand, the equity components per se had a mixed impact on performance. With a share of equity of just under 50 percent at the end of 2014, the US reported significantly weaker performance than for example Australia, which had a similarly high allocation to equities. At 29 percent, Switzerland’s equity component was relatively low. Even if one goes back further in time, the equity allocation of the various countries changes very little. This raises the question of how much influence the differing developments in domestic financial markets had on the performance of the pension funds.

### 9.3 Financial market developments and performance

Figure 9.4 shows the ten-year real returns of the pension funds in the countries under review and compares these to the local equity and bond markets. A number of trends can be identified here as well. Strong equity market performance had a positive impact on pension fund performance in the case of Australia, Canada, the Netherlands and the UK. Switzerland and the US, on the other hand, are the anomalies. Despite good returns on equities and bonds in Switzerland, its total return is lower than that of other countries. This trend is even more extreme in the US, which ranks at the bottom of the comparison group. Despite a high equity component and above average performance, the US pension fund market is lagging behind. The reason for the weak performance must therefore lie in other asset classes.

The returns in the UK cannot be explained only by the equity (around 25 %) and bond components (around 35 %) in the asset allocation. It is likely that alternative asset classes (real estate, hedge funds, private equity, insurance linked securities) led to this performance thanks to a high excess return.

Due to the lack of data, it is very difficult to conduct analyses that compare the individual alternative investment markets to the corresponding alternative investment allocations. However, the previous statements would indicate that the combination of alternative investments in a portfolio have a significant influence on the performance of the domestic pension fund markets.
10 Conclusions and recommended action

1. The returns from asset management as the 3rd contributor play a key role in securing occupational pension benefits
   • The financial contribution generated by asset management above and beyond the contributions paid by employees and employers reached almost 40 percent over the last ten years. It is therefore important to ensure efficient and return-focused asset management.
   • Achieving an investment return that is commensurate with the level of risk is one of the factors that largely falls within the remit of the pension funds. It is important to the authors of the study that they receive continued support in their activities to this end.

2. In the long-term, it will likely become difficult for pension funds to achieve the desired target returns using traditional investments.
   • The changed economic reality (incl. stagnating productivity growth and high levels of debt) are leading to lower expected returns.
   • The circumstances in financial and capital markets have also changed fundamentally. Some buzzwords here are low interest rate policies and the dominance of the central banks in economic policy. The majority of pension funds have to date hardly reacted to these challenges. Their portfolios have changed very little since the 1980s.
   • Continuing to generate the same returns as to date in financial markets is becoming a challenge. Willingness to tap new sources of returns by means of new asset classes and forms of investment, and thus break new ground, is therefore necessary.

3. Asset allocation is a key factor in the level of contribution made by asset management
   • At present, the majority of pension funds are not invested efficiently. This means they could achieve a higher return at the current level of risk, or they could take less risk for the same return.
   • In order to take advantage of the potential for returns, the significance attributed to asset allocation as the primary driver for successful investing, and thus the importance of determining the risk-return profile of a pension fund must be taken better into account.
   • By virtue of their nature, pension funds have a long investment horizon, which, despite asset-liability restrictions is not limited by excessive liquidity requirements. This fact should be taken advantage of when investing.
   • Significantly more relevant than the impediment to the investment horizon posed by the liabilities side is the current coverage ratio requirement and the prescribed periods for eliminating shortfalls. These are based on parameters set by the government and cannot be influenced by the pension funds. Analysis shows that an extension of the recovery period would give the pension funds a significantly greater ability to take advantage of investment opportunities.

4. The importance of non-traditional investments is underestimated
   • The greater inclusion of asset classes that go beyond the traditional categories in order to increase the risk-adjusted return (Sharpe Ratio) is a central factor for the optimisation of a portfolio, in particular considering the current outlook for capital markets.
   • At present, it is primarily the widespread scepticism, often however, also the lack of transparency, the presumed high costs as well as the lack of willingness to deal with non-traditional investments that prevents the greater inclusion of such investments.
   • Taking into consideration an investment’s intended economic purpose can open new horizons for the use of non-traditional investments. The financing of a company across a typical life cycle can serve as a basis for this: for example, while equity often comes from private sources at the beginning and towards the end of a life cycle, financing between these two phases usually comes in the form of listed shares. Using equity to grow the company, however, does not depend on whether it’s at the beginning, in the middle or at the end of the company’s life cycle.
5. **Amendments to the OOB2 investment guidelines are necessary for optimal asset allocation**
- In a first step, implementation of the proposals for optimisation outlined in this study require that the pension funds better utilise the potential that exists under the current investment guidelines.
- Further to this, the possible amendment of these guidelines must be seriously considered, as they collide fundamentally with the asset allocation of those pension funds that intend to broaden their investment horizon by means of non-traditional investments. The strategy-related OOB2 articles that contain the category limits must in particular be adjusted.

6. **Greater direct responsibility in the form of the Prudent Investor Rule leads to more room for manoeuvre, but also increased demands**
- The existing OOB2 guidelines allow for the limits to be exceeded if justification is provided. This means that room for manoeuvre exists, even though in practice, it is rarely utilised.
- It is undeniable that the existing system offers seeming security for the pension fund committees, and that this would only be relinquished with reluctance.
- It should be noted that responsibility towards the beneficiaries applies not only to risk aspects, but also to opportunities.
- Realising these opportunities ultimately requires a departure from the existing system of categories and limits, and replacing this with defined responsibilities as set out in the Prudent Investor Rule.
- One of the consequences of such a step is that the duties of the boards of trustees, executive boards and chief investment officers become more demanding. Practical experience, theoretical knowledge and thus basic training and further education will become even more important in future.

7. **A comparison with other countries confirms these findings and corroborates the recommendations for action presented in this study**
- In terms of returns, the Swiss market for occupational pension plans ranks in the lower middle range.
- A look at allocations shows that Swiss pension funds hold a significant share of bonds vis-à-vis comparable countries, but relatively few equities.
- In terms of non-traditional investments, the Swiss pension funds are the clear leaders in real estate, while they are at the bottom end in terms of the other non-traditional investments.
- Switzerland remains one of the few countries with a restriction on non-traditional investments.
- Notwithstanding the limited comparability, the disadvantage of the Swiss investment model vis-à-vis other countries is evidenced by the tendencies it displays.
Vergleich mit dem Ausland: Die Schweiz liegt zurück