Investments of pension funds in CEE countries

Research Report

This Research has been produced by FI-AD Financial Advisory Ltd.
with the assistance of EWMI.

Budapest
December 2003

Executive Summary

This report contains the findings of a joint FI-AD – EWMI – INPRS – OECD survey into the investment strategies and practices of pension funds in 8 Central and Eastern European countries that are to join the European Union in 2004.

The study concentrated on fully funded separate pension entities, both voluntary and mandatory pillars. The focus of the study was the situation at the end of December 2002, but also included changes since then.

The pension system in most countries started with the introduction of „third pillar" voluntary defined contribution pension entities. Though there are differences between the way these pillars were introduced, with the exception of Lithuania, a number of pension entities were set up in all countries in the past decade. Then some countries introduced a mandatory second pillar" by establishing pension entities with compulsory membership for a certain part of the population. In Estonia, Hungary and Poland there were fully functional second pillar entities, while in Latvia and Slovenia there was one state managed mandatory pension fund at the end of 2002.

Legal regulations in all CEE countries tend to favour overwhelmingly quantitative limitations with elements of prudential rules. In most countries with both pillars, second pillar rules are stricter (the exception is Slovenia, with equal limits for both pillars). There are no countries where legal regulations are overall restrictive or liberal, but there are countries with a tendency towards more liberal legislation. These countries are the Baltic countries, especially Estonia. Countries without a second pillar (or with a restricted version) like the Czech Republic, Slovakia and Slovenia tend to regulate their third pillar more than other CEE countries.

Generally speaking, pension entities in the CEE region are conservative investors. The country of origin of the pension entities is more decisive when actual investments are concerned than the pillar of the pension entity. In other words, second and third pillar pension entities follow similar investment strategies in all countries. There are three main strategies that pension entities implement – in Poland, pension entities have more equity but virtually no foreign investments (domestic risk strategy); in Estonia and to some degree in Latvia, pension entities invest in foreign securities above the average CEE level (foreign risk strategy); in the Czech Republic, Slovenia, Slovakia and Hungary, pension entities tend to avoid market risk to different degrees (risk averse strategy).

Contents

Introduction

The East-West Management Institute Inc. (EWMI) under its ongoing Partners for Financial Stability (PFS) program has approved a grant for FI-AD Financial Advisory Ltd. to cover a portion of the costs of the recent research, which aimed to focus on the investment strategies of the pension funds in 8 CEE countries (the countries covered are: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia).

The purpose of the research was to summarize the regulatory framework of the investment of pension funds in the related countries, the investment styles and strategies of pension funds, as well as the actual investment categories. The comparative study analysed the size of pension funds' assets in relations with the local capital markets and the respective GDPs.

The research was conducted from May 2003 to December 2003.

In order to achieve as broad an information base for the study as possible, we have proceeded the following methods:

- Data collection: Fair comparison requires homogeneous data input. To ensure that, we have created a questionnaire for the countries. The questionnaire was discussed and finalized with EWMI and the OECD, and sent over together with the OECD pension questionnaire.

- Literature review: In order to get a comprehensive view, we have collected and studied the relevant legal materials of the 8 countries as well as the available written materials (reports, studies, etc).

- Internet search: We have visited most of the relevant web sites (i.e. supervision, pension funds, service providers, international sites), in order to get up to date information.

- Clarification, consultation: In case of questions or uncertain information, we have conducted phone calls, conference calls and e-mail communications to clarify the issues further.

- On site visits: We have visited Estonia and Poland, and obviously made specific meetings in Hungary to get deeper insight in the practical issues, and to cover the actual situations.

- Verifications, presentations,: The preliminary findings were occasionally orally presented to the country representatives, while the overall presentation was made in Prague at the 5th INPRS regional seminar.

Hereby we would like emphasise our thanks to all of the organizations and persons who helped us in concluding this report.

Special thanks to the OECD and INPRS for their assistance in conducting the CEE questionnaire, and all of the country representatives for sending us data.

Background

Most CEE countries were faced with the problem of unsustainability of the state-run Pay-As-You-Go system soon after their transition to free market democracies. Due to their different histories, the 8 countries arrived to the point of reform at different times, but all of them have realised the need for pension reform in the last decade.

In each country, the main objective of pension reform was the establishment of private run pension entities, which would invest the savings of individuals to provide pensions for them later in life. This was different from the earlier state system of collecting tax and distributing it to the pensioners.

The new system did not substitute the old, it simply amended it. There was a difference in whether to make participation in the new pension entities compulsory – those countries, that opted for mandatory pension entities have decided on a 3 pillar system. The first pillar is the still existing state PAYG pension, reformed to some degree but still providing the bulk of everyone's future pensions. The second pillar is a mandatory pension fund or plan, where joining is compulsory by law for certain people (every new entry to the workforce or people below a certain age). The third pillar is pension funds that operate similarly to second pillar funds, but joining is a discretional right of any citizen.

Given the relative ease of establishing a separate third pillar, this was at least decided in all of the 8 CEE countries subject to our analysis. Some countries however decided to omit the second pillar, and most countries introduced the third pillar before the second pillar. Some countries, though decided to include second pillar pension entities, have not yet established them.

In summing up, the general pension system in CEE countries is a 3 pillar one:

	1st pillar	2nd pillar	3rd pillar
Hungary	State PAYG	Mandatory DC	Voluntary DC
Estonia	State PAYG	Mandatory DC	Voluntary DC
Latvia	State PAYG	Mandatory DC	Voluntary DC
Poland	State PAYG	Mandatory DC with guarantee	Voluntary DC
Slovenia	State PAYG	Mandatory for certain professions DC with guarantee	Voluntary DC with guarantee
Slovakia	State PAYG	To be established later (2005)	Voluntary DC
Czech Republic	State PAYG	Not to be established	Voluntary DC
Lithuania	State PAYG	Not to be established	To be established later (2004)

In this survey, we have decided to deal with only separate funded pension entities – therefore the reform of first pillar pensions will not be looked at. Also, supplementary savings that individuals are allowed to complement their pensions with, sometimes called 4^{th} pillar, at other times listed under the 3^{rd} pillar – such as bank accounts or pension insurance – will not be the focus of this study either. When certain countries include supplementary pension savings in the relevant legislation, we will mention these, but only pension funds will be subjected to detailed analysis.

Czech Republic

The Czech Republic introduced a third pillar to their pension system in 1994, being (with Hungary) the very first to do so in Central and Eastern Europe. But for different political reasons the second pillar was not established so far, and no plans are known that would establish such pillar in the near future.

The voluntary pension funds had a relatively long history, which led to a consolidation of the market – the number of funds has fallen from 44 to 14 in 2001 and 13 at the end of 2002 (with further decrease in numbers projected) while the total assets of pension funds grew from CZK 1 billion in 1994 to 69 billion in 2002 (54 billion CZKs in 2001). The number of people covered by third pillar pension funds has risen to 2,5 million active members (and an additional 1,5 million passive members), 3,4 million in total from 3,2 million people a year earlier. This consolidation process is similar to that in Hungary, the other country with long enough history of its new pension system.

The level of concentration within the system is best described by the fact, that the largest single fund (Credit Suisse Life & Pensions) owns 27% of the assets of all 13 pension funds, while the 5 largest funds (Komerční banky, České pojištovny, České spořitelny and Českomoravský along with CSLP) together dispose of 73% of all assets.

Estonia

Estonia introduced a new pension system in 1997 adopting a conceptual framework for pension reform, with third level pension funds starting operation in August 1998. Second pillar pension funds were set up 3 years later, by a law passed in September 2001. These new second pillar pension funds started operation in 2002.

There are two types of third pillar pension funds – insurance companies offering pension insurance policies and investment fund type pension funds. Third pillar pension fund members are either holders of pension insurance policies or pension fund units. There are 5 insurance companies (ERGO Life Insurance, Hansa bank Insurance, Sampo Life Insurance, Seesam Life Insurance, Eesti Ühispank Life Insurance) offering 11 insurance policies for third pillar pension. These insurance policies are either risk free or with investment risk. For our study however, we are going to focus on pension funds.

There are 4 third pillar pension funds offered by 4 asset management companies: Hansa Investment Funds offers Hansa V2 Pension Fund, LHV Asset Management (LHV Supplementary Pension Fund), Ühispank Asset Management (Supplementary Pension Fund), Sampo Asset Management (Sampo Pension Fund). The combined assets of these four pension funds increased form 34 million EEKs in December 2001 to 63 million EEK at the end of 2002. Membership in these funds have increased from 1300 members at the end of 2001 to 2300 at the end of 2002. This year, Hansabank has received a licence to start (on November 15 2003) two more voluntary pension funds with different equity exposure than their first. This will bring the number of third pillar pension funds up to 6 in 2004.

Participation in second pillar pension funds is compulsory for new entrants to the labour force since 2001, while voluntary for everybody else. By the end of 2002, 6 pension funds were set up, offering a total of 15 pension plans. The three basic pension plan types are 100% fixed income or deposit, up to 25% equity and up to 50% equity. The law requires all pension fund management companies who want to offer second pillar pension funds to launch a fund with 100% fixed income, while the other funds have to be significantly different. This meant by official decree a 25% equity exposure difference, resulting in the 3 main types above. Three of the six pension fund management companies offer all 3 types and 3 only the first and last. There can be seen no change to the main types or the number of pension funds offered in the future – in this sense, the Estonian pension fund system is stable.

Pension fund management companies however may buy out other pension management companies, which may bring down the number of companies two 5 in the near future. This however will likely leave the number of pension funds unchanged.

The total assets under management at the end of 2002 was 173 million EEKs. Total membership in second pillar pension funds reached 207 thousand persons. By 2003 however, the number of members in pension funds reached 350 thousand. The total assets of mandatory pension funds have grown by 18 % per month on average this year, resulting in over 700 million EEKs by the end of the third quarter 2003.

The least risky type of pension funds was chosen by about a quarter of unit holders, showing a clear preference for more risk in Estonia. Also, with the exception of one fund management company, this type of fund is the least popular amongst the unit holders of all fund management companies. Another fifth of the assets belong to the second type of funds, while more than half of the second pillar pension fund assets belong to the most risky fund type, that which may invest up to 50% in equity.

The concentration of the market is important – the market is dominated with over half of all second pillar pension fund assets by the 3 Hansa Pension Funds. The second largest pension fund manager, Eesti Ühispanga Varahaldus also has more than a quarter of all assets in its two pension funds. The two major players of the market together control over three quarters of the market. The largest single fund has about a quarter of all assets, while the four largest funds have over 70 % of the entire market.

The third pillar fund of Hansa also has more than two fifth of the total market and almost that many of the unit holders. Ühispank also has around two fifth of the total assets and more than third of all pension unit holders. Together, the two fund managers have more than 80 % of the third pillar pension market. For all investment funds (including both mandatory and voluntary pension funds and other investment funds as well), these two fund managers can claim 86% of the market.

Hungary

Pension reform in Hungary began in 1993 with the passing of the law on third pillar called Voluntary Pension Funds. In 1998, second pillar pension funds called Private Pension Funds started operation. Both second and third pillar pension funds in Hungary operate as non-profit organisation owned by their members, and they are legal entities in their own right. As opposed to pension funds in most CEE countries, where the funds are established and managed by pension fund management companies, Hungarian pension funds generally employ separate, outside asset managers, although the law allows pension funds to perform asset management duties (and some pension funds do in fact self-manage their assets).

All second pillar pension funds are open funds, meaning anybody can join any of the funds, while third pillar pension funds can be both open and closed funds. Generally, pension funds are established and operated (though not owned) by either financial groups (banks, insurance companies) or companies or groups of companies (in which case they are called employee pension funds). The first type of pension fund is always open, while many of the second type third pillar funds are closed, and only available for employees of the organising companies.

The number of Voluntary Pension Funds (VPFs) has decreased since 1995 – the first year pension funds were operational – from 217 to 82 by the end of 2002 (with 315 in 1998 the largest number of pension funds in operation at any one time). Their assets on the other hand increased from HUF 6,8 bn to 358 bn (with 291,5 billion HUFs at the end of 2001). The number of VPF members also grew from 195 thousand to 1,180 thousand persons. Further concentration is likely to follow, as shown by an already decreasing number of pension funds (80 VPFs at the end of the second quarter of 2003) and increasing participation in the pension funds (membership was up by 9 thousand at the end of the first quarter).

Another interesting new feature of Hungarian Voluntary Pension Funds is the growing number of major pension funds adopting the policy of so-called „portfolio by choice system". Whereas at the outset, all pension funds offered just one set of investment strategies for their members, the new system basically sets out different pension plans (called portfolios) for members. By the end of 2002, three VPFs have introduced portfolio by choice systems, while during 2003, two more pension funds have offered this scheme and another announced the plan to follow suit.

Second pillar pension funds called Private Pension Funds (PPFs) show a similar concentration to the third pillar. While the number of PPFs decreased since 1998 from 32 to 18 at the end of 2002 (with 39 in 1999), the total assets of all Private Pension Funds increased from HUF 29 billion to 413,1 billion (283,1 billion a year earlier). The number of PPF members reached 2,23 million persons by the end of 2002, up from 1,35 million at the end of 1998. This market can now more or less be called consolidated, though smaller pension funds may still decide to merge with larger funds.

Another index of concentration is the proportion of the total assets in the hands of the biggest pension funds and also the top 5 pension funds. For PPFs, the largest pension fund (OTP) takes up almost a quarter of all pension fund assets, while the top 5 pension funds (OTP, ING, Aegon, Allianz and Credit Suisse) account for almost 79 % of the entire second pillar pension market.

In the case of VPFs, the largest pension fund at the end of 2002 was Allianz Voluntary Pension Fund with more than one tenth of the total assets. The top 5 pension funds (Allianz, OTP, MKB, VIT, Aegon) are responsible for more than 45 % of the second pillar pension market, and they are all open funds, 4 of them backed by financial institutions (banks or insurance companies). Ten of the 82 VPFs have more than two thirds of the market, while the 60 smallest funds account for only 10 %.

Latvia

The new pension system in Latvia was approved by Parliament in 1995, and the third pillar was set up by the Law on Private Pension Funds in 1997. The second pillar was established in July 2001 and during the first one and a half years the funds accrued by the second pillar were managed by the State Treasury only. Thus, by the end of 2002, there was still only one second pillar pension fund (investment plan) which participants were entitled to choose. Since January 2003 several second pillar pension funds have been established and they are managed by investment companies. This in effect established separate second pillar pension funds, but our focus on the end of 2002 allows us only to hint in this direction.

Third pillar pension funds started operation in July 1998. The number of third pillar pension funds totalled at 4 by the end of 2002, a number that hadn't changed from the previous year (and up from only one in 1998) – one of them is a closed pension (Pirmais Slegtais) fund while the other 3 are open (Baltikums, Parekss atklatais and Unipensija). These pension funds offer 9 pension plans, down from 14 a year before (and 16 in 2000, but only 3 in 1998). The total assets of third pillar pension funds on the other hand increased from 9,5 million LVLs to 14 million LVLs (with less than 4 million LVLs at the end on 1999). Total membership in pension plans also increased to 20 thousand from 17 thousand a year earlier – up form just 167 at the end on 1998 and 7 thousand in 2000.

According to the new system, all persons under the age of 30 will become members of the new second pillar mandatorily, while persons up to the age of 49 can voluntarily join. The total number of second pillar pension fund members at the end of 2002 was 335 thousand, up form 275 thousand a year earlier. The total asset under management also increased from 2,85 million LVLs to 12,29 million LVLs. Although by the end of 2002, still only the state treasury was the only mandatory pension fund manager, five investment companies received licences to manage second pillar pension assets from 2003 (Optimus, Hansa, Parekss, Baltikums and Lattvijas Vadoso Apdrosinataju). They offer 10 pension plans to members of second pillar pension. In 2003, one further company (Suprema) received licence.

Lithuania

The new pension reform bill was passed in 1995 in Lithuania. The pension system reform nonetheless allowed for the setting up of new third pillar pension funds from only April 2000. However, to date not one pension fund have started operation given the preference in taxation for life insurance schemes. A new law on pension reform was passed by parliament in November 2001, that states the establishment of voluntary third pillar pension funds from the beginning of 2004. Between 15 September and 1 December 2003, people could subscribe to pension funds with licence to start operations. So far 10 companies received licences for operating pension funds, and they will offer over 22 pension plans starting 2004. By December, more than 439 thousand people signed agreements with pension funds (the strongest fund managers are likely to be VB, Hansa, Commercial Union and Lietuvos draudimo).

A compulsory second pillar was on the agenda until late 2001, but the possibility of a large budget deficit forced the government to abandon plans to introduce it in 2004. It is now seen as possible only in the future.

Poland

In August 1997, the pension reform bill was passed, taking effect in 1999 by establishing both second and third pillar pension funds. The second pillar comprises of mandatory pension funds, called Open Pension Funds (OPFs). Third pillar pension funds are called Employee Pension Funds and are voluntary occupational pension funds.

In Poland, all third pillar pensions centre around the employer – employers have the right to set up employee pension programmes, one for each employer, and employees can opt to participate in the employers' programme or not. Third pillar employee pension programmes (EPPs) can be either a group investment employee life insurance agreement, an agreement to contribute to an investment fund or an employee pension fund. In other words, employers can either establish a programme, by contributing to an insurance company or an investment fund in the name of their employees (as well as employees can contribute further money to the same insurance plan or investment fund) or by establishing their own employee pension fund.

At the end of 2002, 197 employers have established some sort of employee pension programme. Around a fifth of these have decided on a life insurance based programme, two fifth on investment funds and two fifth on employee pension funds. In general terms, smaller employers have tended to use the first two options, while employee pension funds (EPFs) have been set up by larger employers, or in some cases a group of employers jointly. As only EPFs are separate pension entities, these are going to be the focus in this report.

Employers who decide on EPFs will have to first set up an employee pension society, a joint stock company owned by the employers participating in this programme. The society is going to perform the management duties of the employee pension fund. One society can have only one fund, and the investment management of the fund is provided by the pension society. At the end of 2002, 4 pension societies were set up (there was one termination of operation and one new society was set up).

The total number of participants in EPPs at the end of 2002 was 81 thousand people, up from 55 thousand at the end of 2001. Out of the 81 thousand, 49 thousand (or 61 %) were members of employee pension funds – up from 30 thousand a year earlier. The number of EPFs were 4 at the end of 2002, but one started operations only at the end of November (Nestle), therefore data was provided by only 3 pension funds (Telekomunikacji Polskiej, Pekao and Diament). The total assets of pension funds at the end of 2002 was 143 million PLNs (up from only 16 million PLNs a year earlier and 3 million in 2000). The largest of the 3 funds had almost three quarters of the total assets at the end of 2002. In 2003, one more pension fund was registered (Unilever), bringing the number of employee pension funds up to 5.

The second pillar in Poland is mandatory for those born in 1969 or after, and is voluntary for those born between 1949 and 1969. Open Pension Funds operate on a similar basis as EPFs – funds are managed by the pension society, and one society can only manage one fund. The main difference, is the existence of a guaranteed minimal return. Every quarter, the asset weighted average return of all OPFs is calculated by the Supervisory commission, and the fund that did not achieve at least the lower of half of this average or the average minus 4% will have to complement the amount out of the society's own capital. There is also a Guarantee Fund in case the pension society has not the required amount.

Another difference is that unlike voluntary pension contributions, second pillar contributions are collected by the Social Security Office (ZUS), and forwarded to pension societies and funds.

The number of OPFs has fallen since 1999 from 21 to 17 at the end of 2002 (though no change was registered in 2002). In 2003, the number of funds have decreased by one, and further decrease is likely to follow next year, after new changes to the regulations have been passed by parliament. The total membership has increased slightly from 11 million in 2001 to 11,47 million persons at the end of 2002 (with 10,4 million people registered at the end of 1999). The total assets of second pillar pension funds at the end of 2002 was 31 billion PLNs, up from only 19 billion PLNs a year earlier and just 2 billion at the end of 1999.

The concentration of the pension market can also be signified by the fact that the biggest pension fund (Commercial Union) has more than 22% of the members of second pillar pension funds and over 28% of the total assets in sector. The 4 biggest funds (adding ING, PZU „Złota Jesień" and AIG) have a membership totalling almost two third of the second pillar fund members. With regards to the total assets, the 4 biggest funds control more than 73,5% of the total assets (with the two largest funds having over half).

Slovakia

In Slovakia, the second pillar pension funds are set to be established by 2005, but third pillar funds called Supplementary Pension Funds (SPFs) have been in place since 1996. The number of third pillar pension funds at the end of 2002 were 4 altogether (Tatry-Sympatia, Stabilita, CSLP, Pokoj). This number is basically unchanged for years – the highest number at one time was 5 pension funds. The total assets of the four pension funds at the end of 2002 was 7,6 billion SKKs, up from 4,6 billion SKKs a year earlier and around 3 billion at the end of 2000. The pension funds had 457 thousand members, again up from 282 thousand at the end of 2001 and only 183 thousand at the end of 2000.

Slovenia

At the end of 1999, a law to reform the existing pension system in Slovenia was passed, allowing for the setting up of private pension companies from the year 2000. This in effect established a third pillar to the system – privately owned companies providing pension schemes to individuals.

In Slovenia, the number of pension schemes is calculated with the collection of all companies to provide such services. These can be insurance companies, pension companies or pension funds, but for our purpose, insurance companies that offer pension insurance are overlooked. We are therefore left with pension companies and mutual pension funds. The latter are generally similar to other pension funds in the region – a mutual pension fund managed by the fund manager. The two main differences are the use of a guaranteed rate of return (that we have also seen in Poland), and the number of pension plans offered by pension funds. All funds offer two pension plans (or schemes) – one individual and one occupational. These two schemes are identical in all respects, the only difference is the mode of joining – as the names suggest, if the employee joins through his workplace, s/he joins the occupational scheme, whereas if s/he joins separately, it is the individual scheme they join. By law the two pension plans of the same pension fund have to have exactly the same investment strategies, costs and guaranteed returns.

At the end of 2002, there were 5 mutual pension funds (Kapitalski vzajemni, Banke Koper, LEON, DELTA and Abanke), their total assets were 5,8 billion SITs (up from 1,1 billion a year earlier) and the membership of these funds were at 32 thousand people (the figure doubled since the end of 2001).

Pension companies on the other hand may offer a number of pension plans that are different from one another. Pension companies are private companies with the sole responsibility to collect and invest pension savings. The investment and guarantee rules are the same for all pension entities, for companies and funds as well. At the end of 2002, there were 6 pension companies (Skupna, A, Prva, Moja nalozba, Druga penzija and SKB) that offered 14 plans. The total investments of these pension companies were at 13 billion SITs at the end of December 2002, up from around 4 billion at the end of 2001. The membership of these pension company pension plans was 104 thousand on 31 December 2002. This figure has also doubled in one year.

Slovenia also has a second pillar, for certain hazardous occupations membership in private pension funds is mandatory by law. This second pillar however is constituted by one pension fund alone, which is managed by the state. At present, there is no other private second pillar pension fund, and it is not encouraged to be set up either. This in effect is the only country in the region with a fully funded, partly compulsory but not private second pillar. The investment rules are the same for this fund as for all the third pillar funds (another interesting difference from the other countries in the region).

The total assets under management for the second pillar fund at the end of 2002 was 9,3 billion SITs. More than 25 thousand persons participated in the second pillar at the time.

Summary

The pension reform in the 8 CEE countries covered have some similarities. All of these reforms started in the last decade of the 20th century, while generally voluntary pension schemes were set up first.

	2nd pillar	3rd pillar
Czech Republic		1994
Estonia	2002	1998
Hungary	1998	1994
Latvia	2001	1998
Lithuania		2000
Poland	1999	1999
Slovakia	2005	1996
Slovenia	2000	2000

In the following tables, we try to demonstrate the levels of development of the pension markets of the CEE countries. First, the number of pension entities established and still operating at the end of 2002 are shown:

	number of pension entities		number of pension plans	
	2nd pillar	3rd pillar	2nd pillar	3rd pillar
Hungary	18	82	18	90
Poland	17	4	17	4
Estonia	6	4	15	4
Slovenia	1	11	1	19
Latvia	1	4	1	9
Czech Republic	0	13	0	13
Slovakia	0	4	0	4
Lithuania	0	0	0	0

(source: OECD questionnaire, FI-AD collection)

Pension entities are to be understood differently in different countries – as are pension plans. In Hungary for example, pension funds are legal entities and count as separate pension entities. Portfolios by choice in third pillar funds are calculated as separate pension plans. In Poland, all pension funds are pension entities, and although third pillar employee funds are separately listed by different employers as separate employee pension schemes (79 in all), they are just one pension plan each. In Estonia, pension entities are fund management companies, offering 1, 2 or 3 pension funds (plans). In Slovenia, for second pillar pension funds, this in not even a real pension fund, while for third pillar, we used mutual pension funds and pension companies for the calculation. In Latvia, at the end of 2002 there was only 1 second pillar fund, but starting 2003 the number was increased. The system however is similar to that in Estonia. In the Czech Republic and Slovakia, the system is similar, and all pension funds are both pension entities and offer one pension plan. In Lithuania, pension funds will start operating in December 2003.

One way to demonstrate the level of development of pension system is to see the total assets under management of pension plans (and pension entities). The middle three columns in the next table show the assets invested by second and third pillar pension entities, and their total. As total assets are a factor of not only the level of development, but the size of the market as well (i.e. in a larger market like Poland, there are more people, and the contributions more people pay make up a larger portion of assets). Therefore it is not surprising, that the three largest markets (both in term of population and GDP) have pension funds with the most assets under management.

			2nd pillar	3rd pillar	PFs	2nd pillar	3rd pillar	PFs
	GDP per capita	GDP	AUM			AUM/GDP		
Czech Republic	6,507	66,368	0	2,181	2,181	0.00	3.29	3.29
Estonia	4,359	6,103	11	4	15	0.18	0.07	0.25
Hungary	6,151	62,744	1,753	1,521	3,274	2.79	2.42	5.22
Latvia	3,483	8,010	20	23	43	0.25	0.29	0.54
Lithuania	3,760	13,159	0	0	0	0.00	0.00	0.00
Poland	4,637	178,984	7,704	36	7,740	4.30	0.02	4.32
Slovakia	4,185	22,599	0	183	183	0.00	0.81	0.81
Slovenia	10,060	20,120	40	83	123	0.20	0.41	0.61
	(Euros/person)	(million Euros)				(%)		

(source: OECD questionnaire, World Bank)

We can also see that the level of maturity is only one factor in terms of total assets to GDP (older pension systems have had more contributions paid and more time for investment returns and are therefore larger than younger systems), it is also important to distinguish between systems with second pillar and systems without (or in the case of Slovenia, systems with only partial second pillars). Second pillars, as they are mandatory, usually involve a lot more people (and contributions) in a shorter time than third pillars. In this was, second pillars in the same amount of time usually amass more assets than third pillar funds (as can be seen in Estonia or Poland and even in Hungary). In Latvia, the same thing was true by the first quarter of 2003. The question of membership is further explored in the following table.

	membership 2nd pillar	membership 3rd pillar	labour force	2nd pillar	3rd pillar
Czech Republic		2,597,364	5,200,000		49.95
Estonia	207,200	2,309	646,000	32.07	0.36
Hungary	2,225,400	1,180,000	4,109,400	54.15	28.71
Latvia	335,037	20,064	1,425,100	23.51	1.41
Lithuania		0	2,000,000		0.00
Poland	11,468,446	49,298	17,097,000	67.08	0.29
Slovakia		457,432	2,628,300		17.40
Slovenia	25,645	136,129	781,932	3.28	17.41
	(persons)			(%)	

(source: OECD and FI-AD questionnaire, 'The Red Book')

The table above shows what is generally termed penetration ratio. The number of persons who are members of either second or third pillar pension as a percentage of the labour force. Generally speaking, the penetration ratio of second pillar (mandatory) pension entities is higher than of third pillar entities. In Estonia and Latvia, this ratio has increased significantly this year, as their second pillar plans have just started in 2001 and 2002. In Estonia, it has surpassed 50 % in 2003. In Slovenia, as mandatory pension funds are only available for a small portion of the population, the penetration ratio is lower.

The only country with a significantly high penetration of the voluntary pension pillar is the Czech Republic, where almost half of the working population have joined a pension fund – but it is also one of the oldest pension pillars in any CEE countries (with Hungary, the other country with a relatively high penetration). Also interesting to note is the relatively low penetration of voluntary pension entities in countries with a strong second pillar (with the exception of Hungary).

Another important feature of these system is the existence of competing pension savings, such as pension insurance policies with tax incentives (such as in Estonia or Poland). This competition for third pillar pension entities effects their size in terms of membership and assets as well.

We have also tried to describe the concentration of the pension markets in the Central and Eastern European region. The following tables will introduce measurements of this market concentration.

2nd pillar	Number of pension entities	AUM	Share of the largest entity	Share of the top 25 % of entities
Estonia	15	11	25.1%	71.9%
Hungary	18	1,753	24.4%	78.9%
Latvia	1	20	100.0%	100.0%
Poland	17	7,704	28.6%	73.5%
Slovenia	1	40	100.0%	100.0%
3rd pillar				
Czech Republic	13	2,181	26.5%	51.6%
Estonia	4	4	42.7%	42.7%
Hungary	82	1,521	11.3%	88.3%
Latvia	4*	23	73.4%	73.4%
Poland	4	36	73.7%	73.7%
Slovakia	4	183	55.0%	55.0%
Slovenia	11	83	24.8%	69.8%

In the table above, we have tried to distinguish between pension entities as much as possible, using separate pension funds as the basis. In Latvia however, we only had information on pension fund management companies, therefore the concentration shows concentration of these pension entities. In Slovenia, we have used a conceptual comparison of pension funds and pension entities. We only had the total asset under management for the 6 pension companies, and used the share of total membership and the share of premiums as the basis for a notional share of assets for each company. That we have used together with the actual share of assets of the 5 pension funds to create a concentration measurement of all 11 pension entities. It may also be of interest, that the concentration within the pension funds is very high, the largest fund has more than 80 % of the assets. For pension companies, our notional share for the largest company is 35 %.

The share of the total assets of the largest pension entity shows how much the system is dominated by just one player. The top 25 % of entities is the top quarter of pension entities (1 in a system of 4, 4 in a system of 16, etc.) already accounts for the larger size of the pension market in terms of participants. The concentration is rather high, as even in systems with more than 10 pension entities, the largest fund has around a quarter of the total assets (with the exception of the numerous participant Hungarian third pillar market), while the top quarter of pension entities have mostly above 70 % of the total assets. The real exception is the Czech Republic, and smaller systems in Slovakia and Estonian third pillar.

2nd pillar	Number of pension entities	50 % of assets X % of funds	HI
Estonia	15	20%	0.15
Hungary	18	16%	0.14
Latvia	1	-	1.00
Poland	17	12%	0.17
Slovenia	1	-	1.00
3rd pillar			
Czech Republic	13	23%	0.14
Estonia	4	50%	0.36
Hungary	82	7%	0.06
Latvia	4*	25%	0.57
Poland	4	25%	0.58
Slovakia	4	25%	0.38
Slovenia	11	27%	0.19

We have also calculated market concentration using two additional methods. Firstly, the question was asked what percentage of the number of pension entities possess 50 % of the total pension assets. This shows us how many really small pension entities are there in the system – the closer this number is to 50 %, the more we can talk about pluralistic systems. In case of a strong oligopoly, it would be a much smaller number. What we see from the numbers is that the more pension entities operate in a system, the more oligopolistic these systems are (i.e. there are only a small number of entities with the majority of the assets).

The Herfindahl index (HI) on the other hand describes the concentration of the market – the main difference here, is a market with a smaller number of participants is more concentrated even if they are almost equally strong. This of course shows Hungarian third pillar as the least concentrated market (given the large number of pension entities), and countries with a single second pillar fund (Latvia and Slovenia) as the most concentrated. The HI for Slovenian pension funds would be 0,66, the strongest in multi-player systems, followed by Polish and Latvian third pillar systems. Second pillar markets are similarly concentrated. In summary, the Hungarian third pillar system has a large number of participants but is dominated by a few large pension entities, whereas Estonia on the other hand had only few pension entities, but they were more similar in size.

The legal framework of Pension Fund investments

Most CEE countries passed laws describing the legal background that outline the way pension funds are to operate. These laws can be divided into separate groups:

- laws describing the pension fund system
- laws setting compulsory criteria for operation (minimum capital, service providers to be used, etc)
- laws setting compulsory limits in investment

Previously, we have tried to draw up a picture of the general pension system, and a summary of its operation. In this section, we will deal with the legal limits on investment of pension funds. Firstly, all pension funds in the CEE are subject to laws setting limits to certain investments and disallowing others. This is generally in addition to an enforcement of prudent person rules, or similar local regulations.

The general view of pension fund investment in the Central and Eastern European countries is that risks should be avoided as much as possible, since the pensions of people is not something to gamble with. A part of this is pure politics – voters will have to have their pensions (no matter what), which means legal limits on risks. Another is economical common sense – in capital markets still developing, such as CEE markets are, pension funds should not be allowed to invest most of their portfolio in such volatile environment. There is also the question of the limited nature of domestic markets – stock exchange in most of these countries is relatively small, there is no room for diversification. And in some countries the defence of local markets also plays a part, disallowing or severely limiting foreign investments to keep pension fund assets in the country.

The general rule on the investment limitations is that risks should be minimized, and this was explained by the informational asymmetry between pension funds managers and members, the importance to minimize loss and maximize future pensions and the lack of experience of the markets and its actors.

One immediately recognizable fact is that in countries, that have both mandatory and voluntary pension funds, the legal limitations on mandatory funds are much stricter than on voluntary funds. The reason for this is either given by the role of the second pillar in the pension system or the mandatory nature of participation – that members have a right to expect that the state protects their investments, after all, it was the state that decided they had to join.

Out of the 8 countries in the CEE region, 5 claimed to have second pillar pension funds, though in Slovenia it was only partially mandatory. In Latvia, the second pillar is complete since 2003, and in the legal limitations table we refer to those limitations in the law for the new pension funds, even though a separate set of rules apply to the State Treasury that managed the assets until the end of 2002. What we could deduce from the legal framework of second and third pillar pension funds is a view of more liberal third pillar pension funds (in the cases of Poland, Latvia and Estonia) and slightly more liberal third pillar pension funds (in the case of Hungary). In Slovenia, there are one set of regulations for second and third pillar.

At the end of each sub-chapter, we have tried to place regulations of the CEE countries on a restrictionist to liberal scale. This of course is subjective and debatable, but in our view, a liberal set of regulations is one that allows numerous options for the pension funds in their investments. Therefore not only the quantitative limits, but also other types of limitations were analysed.

Second Pillar Pension Entities

As previously referred to, second pillar pension funds are more strictly regulated than those of the third pillar. In this section, some of these regulations are going to be analysed more closely, namely the limits on foreign investments, equity-type investments, derivatives, mutual funds and real estate type investments. In a separate section, other questions, such as self-investment, prudential rules, diversification issues and other investment regulations are going to be dealt with. Finally, composites will be set up to identify countries with liberal vs. strongly regulated systems.

Foreign investments

There are three ways foreign investments can be limited:

1. limiting the foreign markets available for pension fund investments
2. limiting the foreign instruments available for pension fund investments and
3. limiting the amount of the pension fund assets available for foreign investments.

The first option in CEE countries generally means disallowing investments in countries that do not belong to the OECD, the EU or the European Economic Area. Slovenia and Latvia are two countries that limit foreign markets this way (Slovenia allows investments only in EU and OECD countries, Latvia only in EU, EFTA, OECD or Baltic countries).

For the second option, there is no example in second pillar pension funds other than general limitations.

The third option is the most widely used. For mandatory pension funds, only Slovenia does not use any kind of limitation on the share of assets allowed for foreign investments. The two Baltic countries opted for currency matching limits rather than a direct limit on the ratio of assets. In Estonia, where the Estonian Kroon is pegged to the Euro, currency matching does not apply to Euros. For other currencies, the limit on not matched currencies is 30%. In Latvia, the currency matching limit is 70% (the same as Estonia), but there is also a 10% limit on each non-matching currency. There is a direct limit on foreign investments in Poland (5 %) and Hungary (30 %). The regulations are to be changed effective from 2004 in Hungary, switching to currency matching limits as well. The limits will remain at 30 %.

The most common legal regulation on foreign investments for CEE second pillar pension funds is a mix of the first and third option. In Hungary, the direct limit on foreign investments is supplemented by a further limit on non-OECD country investments (set at 20% of all foreign investments). In Estonia, there is a direct limit on investments in countries outside the EEA and OECD – for companies registered in such countries, 30% of pension fund assets may be invested in their securities, for instruments traded only in such countries, 20% of pension fund assets may be invested in those securities. In Latvia, there is both a currency matching limit and a limit on foreign markets.

Generally speaking, Poland has the strictest rule on foreign investments – only 5% of pension fund assets are to be used for such instruments. The reason for this, according to Polish regulators is that second pillar pension funds are part of the social security system and public finance. Also, the historically higher returns in Poland compared to Western countries influenced their decision to limit foreign investments.

Slovenian regulators have regarded both second and third pillar pension funds the same, thus Slovenian second pillar funds are generally more liberally regulated than in other countries. One of the reasons for this can be that second pillar funds are only compulsory for a small portion of the population, and are small in membership and assets as well. Also, currently only the state manages (one) second pillar fund, therefore even without stricter rules, second pillar funds are conservative investors.

In CEE countries today, pension funds almost exclusively cater for members of their own public. This in effect means, that all liabilities arise in domestic currencies. To this effect, we can say that currency matching is similar to direct limitations on foreign investment. This will change with the introduction of the Euro, after the EU membership, when currency matching will receive a real meaning, while direct limitations will probably ease. But at the end of 2002, what we can say is that Poland is the least liberalized pension market. Hungary, Estonia and Latvia all have a 30% limit, but Estonia is the most liberal of the three, since investments in Euros are not limited at all, while Latvia is the least liberal, not allowing certain foreign investments at all.

Strongly regulated → liberal

Poland — Latvia — Hungary — Estonia — Slovenia

<u>Equity investments</u>

The five CEE countries with mandatory second pillar pension funds all limit equity risk exposure – the difference is only the rate of direct limitation. In Slovenia and Latvia the limit is 30%, in Poland 40%, while in Hungary and Estonia pension funds are allowed to invest in shares up to 50% of their assets. Most of the equity investments are prescribed to take place on the relevant stock exchange markets (including those of foreign countries, as permitted in the previous section), while OTC stocks have separate limits, ranging from 5% in Slovenia to 10% in Hungary and Poland. In Latvia, only stocks listed on the stock exchange can be used for investment, while in Estonia, the limitation on equities prescribes stocks traded on regulated markets, which is a similar notion than that of limiting OTC risk (transparent trading, pricing and information on the traded securities).

Another issue for equities is the limit on mutual funds. In Slovenia, Hungary and Estonia, units of mutual funds investing in equities are also included in the limits for equities. In Latvia, equities include all equity related investments, so mutual fund units are also limited by the 30 % rule. In Poland, there is a 60% limit for all equity and mutual fund unit investments in total.

Other limits on equity investments include limiting certain issuers (in Poland, 20% limit for bank shares), certain types of shares (in Latvia, 20% limit for initial private offerings) or prudential, self-investment rules (which will be dealt with later).

Strongly regulated → liberal

Latvia — Slovenia — Estonia — Hungary — Poland

Derivatives

Another question closely linked with equities is the regulation of derivatives. The reason that it is discussed in a separate section is that if unregulated, financial derivatives can be an additional source of risk for pension funds, over and above the risk of the instruments they are related to. The general view of CEE countries as regards to derivatives in pension funds investments is no. It is either outright forbidden (as in the cases of Poland and Slovenia) or allowed only for hedging purposes (as in Estonia, Latvia and Hungary).

In Hungary, repo is mentioned separately – only government bond based passive repo is allowed, up to 20 % of the total assets.

Real Estate

In two countries, Poland and Latvia, second pillar pension funds are prohibited from investing in real estate. In Hungary, this was the case for years, than investment in investment funds investing in real estate was allowed, but only up to 10 % of the total assets can be used for such investments. It may be of interest that since 2003, direct real estate investments are also allowed.

Only two countries, Estonia and Slovenia allow direct real estate investments. Both countries have limited the amount allowed for real estate investments though – 10 % in Estonia, 30 % in Slovenia. There is another limit on the rate a single piece of real estate can be compared to the total investments of the pension fund – this is 2% in the case of Estonia and 10 % in Slovenia.

Strongly regulated			liberal →
Poland, Latvia	Hungary	Estonia	Slovenia

Mutual (investment) funds

There are countries among our CEE sample of 5 (with second pillar pension funds) that limit investment in mutual funds only in case those mutual funds invest in shares. Other countries use overall maximisation on all investments in mutual fund units. Then there are countries, where a difference is made between open ended and close ended investment funds, prescribing a stricter limit on close ended funds. Another differentiation between mutual funds is based on the ratio of shares vs. fixed income in the mutual fund's portfolio.

Keeping these in mind, the 5 CEE countries regulate pension fund investments in mutual fund units in different ways. In Latvia, there is no overall limit on mutual funds, but the limit on equity investments effects all mutual fund investments with shares in their portfolio. There is also a limit of 5 % allowed for investment in one mutual fund.

In Slovenia, there is a 40 % limit on investment in the units of mutual funds with more than 50 % of their portfolio in fixed income instruments, while 30 % can be invested in units of those mutual funds with more than 50 % of their portfolio in shares. In the same mutual fund, 5 % of the total assets of a pension fund can be invested.

In Hungary, there is a single overall limit on mutual fund investments of 50 %, but an additional rule prohibits pension funds the circumvention of other quantitative limits with the purchasing of mutual fund units. This rule basically means, that all instruments in a mutual fund's portfolio whose units are bought by a pension fund are subject to the same rules – if the fund invests mostly in foreign assets, the pension fund will have to include the fund units in the foreign instruments, and similarly, if the fund invests in domestic equity, the units will have to be included when calculating in the total equity exposure of the pension fund. A separate rule limits the investment in units of mutual funds investing in real estate to 10 %. Additionally, the pension fund is allowed to invest only 30 % in the units of funds managed by the same mutual fund manager (and 10 % in the units of the same mutual fund).

In Estonia, the overall limit is 30 %, and similarly to Hungary, real estate investment funds are limited to 10 %. Also like Hungary, mutual funds investing in equities and foreign securities are to be calculated when assessing total exposure of the pension fund to said instruments.

In Poland, there are two limits for mutual funds – one for open ended pension funds, which is 15 %, and one for close ended funds, which is 10 %. The amount allowed to be invested in a single fund is 5 % and 2 % maximum respectively.

Strongly regulated				liberal
Poland	Estonia	Hungary	Slovenia	Latvia

Other investment regulations

In this section, other quantitative regulations will be dealt with first concerning deposits and fixed income investments. Prudential and diversification rules will also be analysed.

The pension funds are allowed to use cash, deposits and other money market instruments as investments to a varying degree. Hungary and Latvia are the only countries, where deposits are not limited (only the amount invested in deposits at a single bank at 20 and 15 %), although cash at hand is limited in Hungary to 500.000 HUF at closing on every day. For all other countries, there is differing limits for deposits: 20 % in Poland, 30 % in Slovenia and 35% in Estonia. There is also limits as to the ratio of deposits in a single bank or group (7,5% and 5% in Poland, 10 % in Slovenia, 5% in Estonia and 10 % in Latvia). Slovenia also limits the amount invested in cash or deposits at sight to 3% of the total assets, while in Estonia all money market instruments are limited to 25%.

There is no maximum limit for fixed income instrument in general in CEE countries, but there are certain fixed income instruments that are regulated. The general differentiation between fixed income instruments is made by their issuer, but there is also in some countries a differentiation by investment rating (Estonia limits the investment to securities with investment rating below investment-grade level or without investment rating to 30% of total assets).

In state issued or guaranteed securities Estonian second pillar pension funds are allowed to invest up to 35% of their assets – leaving Estonia as the only country to limit investments in state issued fixed income instruments. Similarly in Poland, Treasury or National Bank guaranteed or backed securities are also regulated – all bonds, loans, deposits and credits cannot exceed 10% a kind of the pension fund's assets. Local government issued bonds are limited in Poland and Hungary (to 30% and 10% respectively). Corporate bonds cannot exceed 10% in Hungary (not counting bank issued securities).

It has to be mentioned here, that in Hungary, all the numbers are separately valid for Hungarian and foreign securities that add up (so the maximum level of investments in corporate or local government bonds is in fact 20%, but only 10% for Hungarian local government or corporate bonds). Mortgage bonds is Hungary are also limited – 25% of all assets can be used to invest in such instruments.

There are other quantitative rules concerning investments – for example in Hungary, all OTC stocks and corporate and local government issued bonds (both foreign and domestic) cannot take up more than 10 % of the pension fund assets individually, but cannot exceed 30 % altogether. In Poland, National Investment Fund shares are limited to 10%.

Whereas in previous sections, liberalism versus restrictionism was measured by the lack of regulations or the higher ratios allowed for investment in more risky instruments, in this section, fixed income and other low risk instruments (deposits and cash) are the focus. Countries with more restrictions on low risk instrument force pension funds to expose themselves more to the capital market, therefore we can call them more liberal with some justification.

Strongly regulated				liberal
Hungary	Latvia	Slovenia	Poland	Estonia

Another issue is the rules CEE countries set up to facilitate diversification in pension funds. This is achieved by establishing limits as to the amount of pension fund assets allowed to be invested in a single security or instrument. There are two general ways these rules are set – although it is set in all CEE countries. First, there can be a general limit for all securities. And second, the regulators may have decided on different limits for different securities either based on the relative level of risk different securities entail or on the different limits already set for the types of securities.

In Hungary, Estonia, Poland and Slovenia, the general rule is the first one: for all securities, there is one limit (10 % in Hungary and 5 % in the other three countries of the total pension fund assets) for securities issued by the same entity (usually excluding central government issued securities). In Hungary, an additional rule allows only investments in securities up to 10 % of all securities issued by the same entity (excluding government bonds).

In Latvia, the second rule applies: separate limits are set for different issuers. For higher risk issuers such as local governments the limit is lower (5 %). For other issuers, limits are higher – 10 % in the case of corporate securities, 15 % for banks and 35 % for government or multinational organisation issued securities. The Latvian system mixes the two diversification regulations, limits for issuers and security classes. The maximum limit for investment in equities of a single issuer is 5 %, and the same is true for investment fund units. Of the two conflicting limits (for example equities issued by a bank) the lower is the one to abide by (in our case, the pension fund could buy 15 % of the securities issued by Bank X, but only 5 % of the shares issued by said bank). The previously mentioned regulations on deposits also compose a part of the overall diversification limit, therefore 10 % in deposits at one bank and 5 % in shares of the same bank means bonds issued by the same bank cannot be purchased by the pension fund.

In Slovenia, there is the general rule for 5 % investment limit in a single issuer, but certain asset classes are limited further. Securities not traded on organised markets, such as OTC stocks are limited to 1%, while loans to a single borrower to 2 %.

Prudential rules were introduced in all CEE countries as part of the pension reform. This includes general references to prudent person rules or similar local regulations (mainly a commitment for all fund management to invest other people's money as they would theirs). But another facet of prudential rules is a list of quantitative limitations as to what pension funds cannot do with their money. The overall rule here is a maximalisation of investments in companies that are somehow linked to the pension fund management or its service providers.

These rules are very different of course, given the different legal status of pension funds in different countries. In Hungary for example, pension funds are owned by their members, but their names are regularly borrowed from „sponsors", and the asset managers in these cases are companies from the same group as the sponsor.

In Estonia, the rules are rather straight forward: pension funds are managed by a pension fund management company, and the assets of pension funds may include up to 5 % in units and shares of the same management company, while up to 30 % in units and shares of a company belonging to the same group as the management company.

In Poland, all securities issued or managed by a company belonging to the same company as the pension fund management company are prohibited as investments for pension funds.

<u>Summary</u>

In this chapter, we have attempted an overview of different legislations concerning asset classes in the CEE countries that have decided to set up second pillar pension entities. Although in constant change, the general tendency in most countries is to use mostly quantitative regulations amended by prudential rules to regulate pension fund investments. It is also generally true, that limitations on investment of certain asset classes follow a similar pattern in all 5 countries. There is some sort of limit on foreign investments, equity exposure, real estate and derivatives. Some countries regulate more, and with the exception of Slovenia, there are separate, stricter rules for second pillar pension entities (as opposed to other, third pillar pension entities).

<table>
<tr><th></th><th>Foreign investments</th><th>Equity</th><th>Derivatives</th><th>Mutual Fund</th><th>Real Estate</th><th>Other</th></tr>
<tr><td rowspan="5">From least to most liberal --------></td><td>Slovenia</td><td>Poland</td><td rowspan="2">Estonia, Latvia</td><td>Latvia</td><td>Slovenia</td><td>Estonia</td></tr>
<tr><td>Estonia</td><td>Hungary</td><td>Slovenia</td><td>Estonia</td><td>Poland</td></tr>
<tr><td>Hungary</td><td>Estonia</td><td>Hungary</td><td>Hungary</td><td>Hungary</td><td>Slovenia</td></tr>
<tr><td>Latvia</td><td>Slovenia</td><td rowspan="2">Poland, Slovenia</td><td>Estonia</td><td rowspan="2">Poland, Latvia</td><td>Latvia</td></tr>
<tr><td>Poland</td><td>Latvia</td><td>Poland</td><td>Hungary</td></tr>
</table>

Although overall liberal or restrictive countries we did not find, it seems that different asset classes are regulated differently by countries – in Poland, equity investments are relatively liberally regulated, while foreign investments are strictly limited. In Slovenia on the other hand, foreign investments are not limited by a quantitative limit at all, but in terms of equity exposure, regulators were strict.

Third Pillar Pension Entities

As with second pillar pension funds, in this section the legal limitations concerning foreign investments, equities, derivatives, mutual fund units, real estate and other questions with regards to third pillar pension funds will be analysed. Similar composites will also be set up.

Foreign investments

The same three ways foreign investments can be limited mentioned about second pillar pension funds is also available for third pillar:

1. limiting the foreign markets available for pension fund investments
2. limiting the foreign instruments available for pension fund investments and
3. limiting the amount of the pension fund assets available for foreign investments.

The first option is used in the Czech Republic, Estonia, Latvia, Lithuania and Slovenia. The foreign markets available for investment in these countries are OECD countries (Czech Republic), with Euro countries (Lithuania), EU countries (Slovenia), EU, EEA and Baltic countries (Latvia) and European Economic Area and IOSCO member countries (Estonia).

The second option is used only in the Czech Republic, allowing investment in foreign government bonds and central bank issued bonds only. This rule, together with the previous limitation of allowing investment only in OECD member countries reduces foreign country and foreign security risks to a minimum. Although there are no quantitative limits, in our view this reduction in foreign investment options makes Czech regulation the least liberal.

The third option is used in many countries (though, unlike in the case of second pillar pension funds, not all). Poland is the strictest in this sense, allowing only 5 % of pension fund assets to be invested abroad. Slovakia drew their limit at 15 % of total assets, while Hungary and Lithuania have decided on a 30 % limit. In Latvia, there is currency matching limit of 30 % similarly to the second pillar regulations. There is no quantitative limit at all on foreign investments in Estonia, Slovenia and the Czech Republic. We have described the country specific limits applied in these countries previously.

In Hungary, similar rules apply to third pillar pension funds as was detailed in the previous part about second pillar regulations. The amount invested in non-OECD countries cannot exceed 20 % of the total foreign investment. In Poland, it is important to mention that in the year 2003 the foreign investment limit was elevated from 5 to 30% for EU countries. Thus Poland decided also to mix first and third option limits.

Summing up, there is some kind of limit to foreign investments in all CEE countries. The most liberal country (Estonia) allows almost all foreign investments (there are 102 member countries in the International Organization of Securities Commissions). The least liberal (Czech Republic) only OECD government or central bank issued bonds.

Strongly regulated → liberal

Czech Republic   Poland   Slovakia   Lithuania   Hungary   Latvia   Slovenia   Estonia

Equity investments

Some of the CEE countries have decided against limiting equity investment for voluntary, third pillar pension funds. In these countries (Estonia, Latvia, Poland) domestic equities could make up the entire portfolio of a pension fund. We will see in the next chapter how pension funds use that freedom allowed by their legislation.

In all the other 5 countries, some sort of quantitative maximum limit is set by the relevant laws and regulations. The range of these limits is wide: from only 20 % in Slovakia to 60 % in Hungary (with 25 %in the Czech Republic, 30 % in Slovenia, 40 % in Lithuania).

The issue of mutual funds also arises regarding third pillar regulations. In Slovakia and the Czech Republic shares and mutual fund units are regulated as one, therefore the maximum limit cannot be exceeded by the combination of shares and mutual fund units. This is in fact an even more restrictive approach. A similar view was taken by regulators in Slovenia. In Hungary, the same rule is applied for third pillar pension funds as was described for second pillar pension funds (the equity investments of mutual funds are calculated for the pension fund equity ratio, but fixed income investments of mutual funds are not).

The Baltic countries and Poland do not regulate mutual funds as relevant to equity risk in the case of third pillar pension funds.

Strongly regulated → liberal

Slovakia — Czech Republic — Slovenia — Lithuania — Hungary — Poland — Latvia, Estonia

Derivatives

There are countries in the CEE region to explicitly disallow derivatives, such as Slovenia, and by not mentioning them amongst the available investment instruments, like the Czech Republic and Slovakia.

In some countries, only hedging is allowed for the use of derivatives, when the instruments (generally shares) are in the possession of the pension fund. These countries include Poland, Hungary, Latvia and Estonia. In Lithuania, an additional 10 % limit is placed on derivative financial instruments.

In Latvia, repurchase or reverse purchase transactions cannot result in obligations exceeding 50 % of the pension fund assets. Hungarian regulations list a number of other types of derivative transactions (such as repo, swap) with other quantitative limits (20 and 10 %). The general rule here is that investment in derivatives is only allowed with actual securities held – passive repo, swap of securities, stock exchange futures and options that do not create „short" positions.

Strongly regulated → liberal

Slovakia, Czech Republic, Slovenia — Lithuania — Hungary — Latvia, Estonia, Poland

Real Estate

Real estate investment is prohibited in Poland and Lithuania. In all other CEE countries, the investment in real estate is allowed for third pillar pension funds, but with the exception of the Czech Republic, there are limitations as to the maximum ratio of the total fund assets allowed to be used for real estate investments.

These limitations range from 10 % in Slovakia and Hungary to 30 % in Slovenia. In Estonia, the maximum percentage allowed is 20 %, in Latvia 15 %. There are also limitations as to the maximum amount invested in one piece of real estate. In the Czech Republic and Estonia this is 5 %, in Slovenia and Latvia 10%. In Slovakia and Hungary, the total amount allowed is only 10 %, therefore a separate rule for a single piece was not deemed vital.

Additionally, investment in mutual fund units, where the mutual fund primarily invests in real estate, are considered real estate investments in Hungary. This in effect means that real estate investments and investments in units of real estate mutual funds combined are limited to 10 %.

Strongly regulated → liberal

Poland, Lithuania — Hungary — Slovakia — Latvia — Estonia — Slovenia — Czech Republic

Mutual (investment) funds

In the Baltic countries and Poland, there is no regulations as to the maximum share of the total assets allowed to be invested in units of mutual funds. This is a parallel lack of regulation in three of the countries with the rules on equity.

In Hungary and Slovenia, the rules on mutual funds are the same for second and third pillar pension funds, therefore all that was described in the previous chapter could also be reiterated here. In the Czech Republic and Slovakia, the equity limits are set in combination with units of mutual funds, thus the limits of 20 and 25 % are also limits on mutual funds.

In summary, there is no limit on the investment in units of mutual funds in 4 of the 8 CEE countries, while the other four set such limits. It is 20 %, 25 %, 50 % and 40+30 % respectively in Slovakia, the Czech Republic, Hungary and Slovenia.

There is also limits to the ratio of units a pension fund can invest in the same mutual fund. In Estonia, this is 5 %, in Hungary 10 %, and in Poland 2 % for closed end funds (though no limit is set for open ended funds).

Strongly regulated → liberal

Slovakia — Czech Republic — Hungary — Slovenia — Estonia, Latvia, Lithuania, Poland

Other investment regulations

As was in the case of second pillar funds, most of the countries limit fixed income and deposits. The examples of this rule are Estonia, with the same limitation on government bonds at 35 %, Slovenia, again keeping to the second pillar rule of 30 % for deposits, Hungary, also in parallel with second pillar regulations concerning local government, commercial and mortgage bonds, Poland, similar 10 % limit on government or central bank guaranteed bonds and Lithuania, where certificates of deposit are limited to 10 % while non-negotiable deposits to 25 %. Lithuania also limits government and local governments bonds to 30 % and corporate bonds to 15 %. Debit notes are limited to 20 % in Slovakia.

Securities not traded on organised markets (such as OTC shares) are limited in some CEE countries. In Hungary, OTC shares are limited to 10 % (the same as in second pillar cases), while in Slovenia (again the same rules as for second pillar) all OTC securities to 10 %.

As in the case of second pillar pension entities, other investment regulations are the hardest to categorise. In our view, limiting more risky investments while leaving those deemed "risk free" (such as government bonds) unregulated constitutes a more conservative approach.

Strongly regulated → liberal

Hungary Czech Republic Slovakia Poland Slovenia Latvia Estonia Lithuania

Diversification rules are in place for all CEE pension funds. Most countries have general rules for all securities, while lower limits are set for certain categories of instruments. The general single issuer limit is 5 % in Lithuania and Slovenia, and 10 % in the Czech Republic, Slovakia, Poland, Hungary, Latvia and Estonia.

Additionally, investments are also limited in the same issuer by maximising the ratio a pension fund can own of the total securities issued. This ratio is 10 % in Lithuania and Latvia (for equities), 20 % in the Czech Republic and 25 % in Latvia.

The special limits are used in Slovenia – 1 % for OTC securities and 2 % for loans by a single issuer or to the same borrower. Different, more rigorous rules for single real estate investments were discussed earlier in the cases of Estonia and the Czech Republic. Deposits in the same bank have also different regulations in Estonia (10 %), Slovenia (10%), Slovakia (25 % and 40 % of the bank's equity capital – with the exception of the depository bank) and Hungary (20 % including all bank issued securities but not cash).

Prudential requirements are very much affected by the legal status of the pension entity – as mentioned earlier about second pillar pension funds. When pension funds are de facto investment funds managed by a pension fund management company, the rules are stricter (as in Estonia). When the pension fund is a non-profit organisation owned by its member, the rules are more relaxed (as in Hungary).

In Estonia, the mutual fund units issued by the company that manages the pension fund cannot exceed 50 % of the pension fund assets. This is – easy to see – a much less strict rule than the one for second pillar pension funds in Estonia. In Lithuania, securities issued by persons controlling the pension fund cannot exceed 25 %. In Latvia, investment in the same group the pension fund belongs to is limited to 5 %. In Poland, shares of the employee society or its affiliates (i.e. self-investment of the fund) cannot exceed 5 % of the total assets, if those shares are not traded on organised markets. If they are, the limit is 12,5 %.

Summary

<table>
<tr><th></th><th>Foreign investments</th><th>Equity</th><th>Derivatives</th><th>Mutual Fund</th><th>Real Estate</th><th>Other</th></tr>
<tr><td rowspan="8">From least to most liberal ----------></td><td>Estonia</td><td rowspan="2">Estonia, Latvia</td><td rowspan="3">Estonia, Poland, Latvia</td><td rowspan="4">Estonia, Latvia, Lithuania, Poland</td><td>Czech Rep</td><td>Lithuania</td></tr>
<tr><td>Slovenia</td><td>Slovenia</td><td>Estonia</td></tr>
<tr><td>Latvia</td><td>Poland</td><td>Estonia</td><td>Latvia</td></tr>
<tr><td>Hungary</td><td>Hungary</td><td>Hungary</td><td>Latvia</td><td>Slovenia</td></tr>
<tr><td>Lithuania</td><td>Lithuania</td><td>Lithuania</td><td>Slovenia</td><td>Slovakia</td><td>Poland</td></tr>
<tr><td>Slovakia</td><td>Slovenia</td><td rowspan="3">Czech Rep, Slovakia, Slovenia</td><td>Hungary</td><td>Hungary</td><td>Slovakia</td></tr>
<tr><td>Poland</td><td>Czech Rep</td><td>Czech Rep</td><td rowspan="2">Lithuania, Poland</td><td>Czech Rep</td></tr>
<tr><td>Czech Rep</td><td>Slovakia</td><td>Slovakia</td><td>Hungary</td></tr>
</table>

Using the table above, it is obvious that there are no „all liberal" or „all restrictionist" countries with regard to pension fund regulations. There are however countries with mostly liberal attitudes towards third pillar pension fund investments (Estonia in particular, but also Latvia) and countries with mostly restrictive attitudes (the Czech Republic or Slovakia).

Interestingly however, some countries are using a mixed approach (liberal in cases of some instruments, conservative in others). Poland for example is amongst the liberal countries in issues of equity related instruments, but when it comes to foreign investments or real estate, they are amongst the least liberal. Slovenia is the other way around – liberal on foreign investment and real estate issues, not so on equity and related issues.

Hungary and Lithuania are consistently in the middle – neither liberal nor conservative when compared to other CEE countries. With the exception of the least well-defined or measurable category, other investments, both Hungary and Lithuania are in the centre of the liberal versus restrectionist scale. Although all other countries tend to move along this scale, we can in general establish three main categories of pension regulation of investment issues of third pillar pension entities.

The first category is the most restrecionist regulators, that on most issues tend to regulate pension entities more than other countries. As mentioned earlier, the Czech Republic and Slovakia are the best examples.

The second category is those countries that follow a mixed approach to investment regulation. They include Poland and Slovenia, and also Hungary.

The third category is those countries with generally more liberal attitudes to investment regulations. This category includes all Baltic countries, but the best example is probably Estonia.

Summary

When referring to legal limits on investment, we practically meant three issues:

1. Prudent person rules and regulations on group-related investments
2. Diversification rules and maximum limits on single issuers
3. Quantitative limits on individual asset classes and risks

Our main focus was on the third issue, trying to identify countries with less risk tolerance and more open regulatory frameworks. Our first observation was that regulations for second pillar pension funds are stricter than those of third pillar funds. The only exception is Slovenia, where there is a single set of regulations. Nonetheless it is generally true in the cases of countries with private second pillar pension funds, and while in Hungary, the difference is less obvious, in the other three countries mandatory second pillar pension funds are much more regulated than third pillar funds.

The second observation was that there are no countries with an all-out liberal or conservative regulatory system. We have chosen six aspects of legal regulations and looked at both second and third pillar pension funds. The general conclusion is that some countries are more liberal concerning one aspect (foreign investments for example) and more conservative regarding others (like equity investments). The most that can be said is that there are countries with a generally less restrictive system than other CEE countries – and these are Estonia and Latvia.

The third observation was that countries without second pillar pension funds (in some cases due to a lack of political initiative, in other words, a less liberal view of the pension system) have generally more regulated third pillar funds. This is especially true for the Czech Republic and Slovakia.

second pillar	equities	Mutual funds	derivatives	foreign investment	real estate	Cash and deposits	other
Poland	Quoted: 40% (OTC: 10%) NIF shares: 10% (bank shares: 20%) {all equity investments, including equities, NIF shares and mutual funds: 60%}	Close-ended: 10% Single closed fund: 2% Open ended: 15% Single open fund: 5%	Not allowed	5%	Not allowed	Bank deposits (incl. bank securities): 20% same bank: 7,5% for first and 5% for others	For all securities: same issuer: 5% Treasury or National Bank guaranteed bonds, loans, credits, deposits: 10% Local government bonds: 15%
Hungary	50% (*OTC: 10%)	50% same fund: 10% same fund manager: 30%	Only for hedging or arbitrage purposes	30% non-OECD countries: 20% of foreign investments *OTC stocks: 10% *Corporate bonds (excl. bank issued): 10% *Local government bonds:10%	Only real estate investment fund units: 10%	Single bank (incl. bank securities): 20% Cash: 500000 HUF	For all securities: same issuer: 10% and 10% of total issued *Corporate bonds (excl. bank issued): 10% *Local government bonds: 10% Mortgage bonds :25% Repo: only passive: 20% Those marked * : 30% altogether
Slovenia	30% (incl. units of mutual funds) same issuer: 5% OTC: 5% Same issuer: 1%	With more than 50% of assets in fixed income: 40% With more than 50% of assets not in fixed income: 30%	Not allowed	EU and OECD countries only	30% single investment: 10%	Deposits: 30% Single bank: 10% Cash or deposit at sight: 3%	For all securities: same issuer: 5% Securities not traded on the organised market: 10% same issuer: 1% Collateralised loans: 5% (single borrower: 2%)

second pillar	equities	Mutual funds	derivatives	foreign investment	real estate	Cash and deposits	other
Estonia	50% (incl. units of mutual funds)	30% single fund: 5% real estate funds: 10%	Only for hedging purposes	Currency matching: 70% (no limit for Euros) Non-OECD or EEA countries: 30% Traded only in non-OECD and EEA countries: 20% (incl. investment funds with foreign investments)	10% same piece: 2%	Deposits: 35% Single bank: 5%	For all securities: same issuer: 5% Shares and units issued by the same fund as the pension management company: 5% Shares and units issued by the same group as the pension management company: 30% Money market: 25% Securities issued or guaranteed by state: 35% Low-rate debt: 30%
Latvia[1]	30% single issuer: 5% IPO: 20%	Single fund: 5%	Only for hedging purposes	currency matching: 70% non-matching currencies: 10% OECD, EU, EFTA and Baltic countries only	Not allowed	Single bank: 10%	For all securities: single issuer: government or multinational organisation: 35%, banks 15%, corporations: 10%, municipalities: 5% Single issuer: 10% Loans not allowed

[1] Until 31 December 2002, the Treasury alone was managing 2nd pillar pensions, investing in bank deposits and government securities only.

third pillar	equities	Mutual funds	derivatives	foreign investment	real estate	Deposit	other
Czech Republic	25% (incl. participation certificates of investment funds)	25% (including shares)	Not allowed	OECD countries only Only government or bank issued bonds	single investment: 5%	Deposits: same bank: 10%	For all securities: same issuer: 10% and 20% of the total nominal value
Slovakia	20% (incl. participation certificates of investment funds)	20% (including shares)	Not allowed	15%	10%	Deposits: same bank: 25%, 40% of the equity capital of the bank	For all securities: same issuer: 10% Debit notes: 20%
Poland	Self-investment: OTC: 5% Partially traded: 12,5%	Single closed fund: 2%	Only for hedging purposes	5%	Not allowed	Deposits: same bank: 7,5% for group and 5% for one bank	For all securities: same issuer: 5% Treasury or National Bank guaranteed bonds, loans, credits, deposits: 10%
Hungary	60% (*OTC: 10%)	50% same fund: 10% same fund manager: 30%	Only for hedging or arbitrage purposes	30% non-OECD countries: 20% of foreign investments *OTC stocks:10% *Corporate bonds (excl. bank issued): 10% *Local government bonds:10%	10% (incl. real estate investment funds)	Same bank (incl. bank issued securities but excl. cash): 20%	For all securities: same issuer: 10% *Corporate bonds (excl. Bank issued): 10% *Local government bonds: 10% Mortgage bonds :25% Repo: only passive: 20% Swap: 10% Those marked * : 30% altogether

third pillar	equities	mutual funds	derivatives	foreign investment	real estate	deposit	other
Slovenia	30% (incl. units of mutual funds) same issuer: 5% OTC: 5% Same issuer: 1%	With more than 50% of assets in fixed income: 40% With more than 50% of assets not in fixed income: 30%	Not allowed	EU and OECD countries only	30% single investment: 10%	Deposits: 30% Single bank: 10% Cash or deposit at sight: 3%	For all securities: same issuer: 5% Securities not traded on the organised market: 10% same issuer: 1% Collateralised loans: 5% single borrower: 2%
Estonia	same issuer: 10%	single fund: 5%	Only for hedging purposes	EEA and IOSCO countries only	20% single investment: 5%	Deposits: same bank: 5%	For all securities: same issuer: 10% Securities issued or guaranteed by state: 35% Shares or units issued by a fund in the same group as the pension management company: 50%
Latvia	same issuer: 10% and 10% of total issued	single fund: 10% and 10% of total issued	Only for hedging purposes	currency matching: 70% each non-matching currency: 10% OECD, EU, EEA and Baltic countries only	15% single investment: 10%	Deposits: same bank: 25%	For all securities: same issuer: government or multinational organisation: 35%, banks 20%, corporations: 10%, group of companies: 25% Securities issued by the same group as the pension management company: 5% Loans not allowed
Lithuania	40%		only for risk management 10%	30% Euro and OECD countries only	Not allowed	Certificate of Deposit: 10% Non-negotiable deposit: 25%	For all securities: same issuer: 5% and 10% of total value of securities of issuer Government bonds: 30% Local government bonds: 30% Corporate bonds: 15% Short-term loans only: 10% Securities issued by persons controlling the fund: 25%

The actual investment portfolio of pension funds

As explained in the previous chapter, investment of pension funds are regulated by legal limits to how much of what they are allowed to keep in their portfolios. In this chapter, we will analyse the way these limits are met, and also other – self-imposed – limits to investment will be looked at.

Some of the previous chapter's reasons are of course further limiting the actual investment portfolios – the lack of diversity, the fear of more risks (exchange rate risks or foreign country risks) or the overpoliticized nature of pension fund operations all push towards a more risk-averse attitude towards investment.

As mentioned earlier as well, in some countries, minimal rates of return are set, which also advances a less risky attitude in pension funds.

In the following chapter, data gathered in the joint questionnaire with OECD, as well as other data sources (interviews with pension fund managers and service providers, supervisors and other data collected and published by supervisory authorities) will be combined to give the best possible estimate as to the actual portfolios of second and third pillar pension funds in the 7 CEE countries. Seven only, since in Lithuania at the end of 2002 no pension funds operated, therefore no information could be analysed.

Second Pillar Pension Entities

The following is a table listing the actual investments of second pillar pension funds at the end of 2002. This was the result of the OECD survey conducted amongst pension fund regulators. All data are derived from the answers for this survey – when left blank, it means there were no reply for that certain type of pension funds.

	TOTAL INVESTMENT	Cash and Deposits	Bills and bonds issued by public administration	Corporate bonds	Shares	Mutual funds (CIS)	Other investments
Estonia	11,082.19	1,606.41	4,408.20	2,167.10	965.96	1,923.80	10.72
Hungary	413.10	16.60	280.90	17.20	36.80	29.30	32.30
Latvia	12.29	3.03	9.26				
Poland	30,971,847,034.38	1,287,449,776.61	20,697,156,439.62	367,258,724.51	8,613,319,593.64		6,662,500.00
Slovenia	9,304.30	2,729.15	4,630.47	1,623.02	262.37	59.29	

(source: OECD questionnaire, currency as in the replies – thousand EUR, billion HUF, million LVL, PLN, million SIT)

After further research, we have been able to distinguish between domestic and foreign securities, we have tried to find out more about „other investments" when they constituted a larger portion of investments and had a further look at mutual funds – to see if investment in mutual fund units could be seen as foreign investment, equity investment or neither. After all this, we came up with the following table.

	Cash and deposits	Domestic government bonds	Other domestic fixed income	Domestic shares	Foreign shares	Foreign fixed income	Other investments
Estonia	14.5%	2.4%	11.1%	5.0%	13.3%	53.7%	0.1%
Hungary	4.0%	68.1%	13.7%	10.3%	3.7%	0.3%	
Latvia	24.7%	75.3%					
Poland	4.2%	66.8%	1.0%	26.6%	1.2%	0.2%	
Slovenia	29.3%	49.8%	17.4%	2.8%			0.6%

An interesting point could be the level legal limitations are made use of. In other words, how much of the allowed ratio of equities for example do pension funds actually invest in. This will tell us if the levels of investment in risky instruments are due to considerations of the pension fund or the pension regulators.

The next table lists two important aspects of legal limitation on investments – equity investments and foreign investments.

second pillar	actual		limit		**limit utilisation**	
	equity	foreign	equity	foreign	equity	foreign
Hungary	14.0%	3.9%	50%	30%	28%	13%
Poland	27.8%	1.4%	50%	5%	56%	28%
Estonia	20.4%	67.0%	50%	100%	41%	67%
Latvia	0.0%	0.0%	30%	30%	0%	0%

In the case of Latvia, by the date of our data collection (end of 2002) the Treasury was still the only manager of second pillar pension, allowed only to invest in deposits and government bonds. This accounts for the discrepancy in the level allowed for pension funds (from next year) and the level actually invested in (last year) the instruments above.

In Estonia, there is another caveat – since pension fund managers are prescribed by law to operate one fund the portfolio of which consists entirely of fixed income instruments, and pension fund unit holders choose the fund they desire, the limit is valid for only one type of fund (the up to 50% equity funds, 6 of the 15 mandatory pension funds), while the actual equity exposure is for all 15 funds. Given the previously shown preference for types of pension funds, the limit is brought down to 32 %. This in effect is a 64 % usage. Estonian second pillar funds are therefore relatively aggressive in their investments – using up to two third of the allowed room to risk.

For the other two countries, it is obvious that there would still have been room to expand – neither of the countries in either of the categories have reached even 60 % of the amount allowed by law. In the case of Poland, it is interesting that the minimum return rule pushed toward more equity risk, while foreign risks are further discouraged by issues of cost.

It could be said, that although legal regulations are set to discourage pension funds from too adventurous investments, pension funds themselves are even less likely to take risks than regulators would think. This is sometimes due to „hidden" limitations, such as the presence of minimum rates of return, taxation issues or the short-term view taken by regulators and the general public as well.

third pillar	actual		limit		**limit utilisation**	
	equity	foreign	equity	foreign	equity	foreign
Czech Republic	6.2%	4.6%	25%	100%	25%	5%
Estonia	19.6%	38.4%	100%	100%	20%	38%
Hungary	11.7%	4.6%	60%	30%	20%	15%
Latvia	5.9%	11.8%	100%	30%	6%	39%
Poland	26.7%	0.0%	100%	5%	27%	0%
Slovakia	1.3%	7.2%	20%	15%	7%	48%
Slovenia	2.9%	0.0%	30%	100%	10%	0%

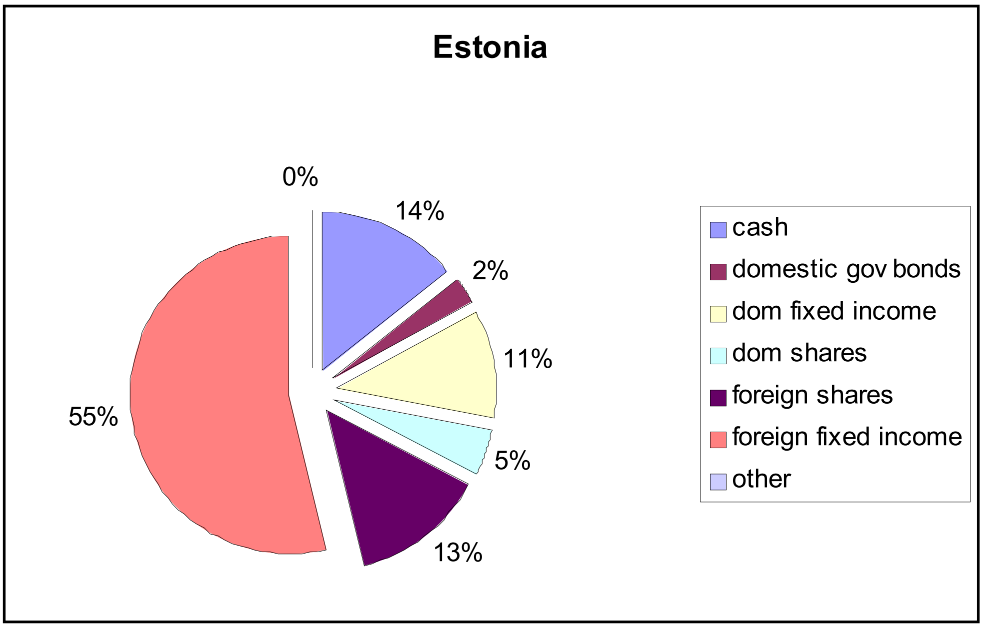
As for second pillar funds, the table describing the level pension funds make use of the room allowed by legal limitations to invest in risky instruments are drawn up. Again, the conclusions are similar.

Given that legal limitations of third pillar pension funds are less rigorous than those of second pillar funds, we would expect third pillar funds to invest more willingly in risky instruments. Instead, the difference in investment attitudes is not so obvious. The wider rooms to move are used to a smaller extent, thus the 7 countries do not even reach 50 % of the legally allowed ratio of either equity or foreign investments. On average, this ratio is even less than 25 %.

Summing up the factors that encourage more conservative investment strategies, the quantitative limits set by law are only one of a list of examples. The others may include:

- Other („covert") limitations, such as guaranteed rate of return rules or the Polish example of limiting foreign investments together with cash and other off portfolio instruments.
- The psychological effect of legal limitations. By which we mean the view taken by pension fund managements that anything limited by law is better avoided.
- The short term view of market participants. This regards to members, who judge their funds on their quarterly or annual returns, management, who do the same, but regulators as well, who in same cases issue counterproductive statements.
- The role of supply. In CEE countries, capital markets are generally small. It is hard to diversify in domestic equity, as the domestic equity markets are small, there are only few stocks that are liquid and the same is true for fixed income instruments.
- The investment in foreign markets are limited by issues of cost, the limited nature of information and knowledge about foreign markets and the limit to diversification posed by small portfolios.
- The small size of pension fund portfolios are generally a limit to diversification, not only preventing pension funds from going abroad, but also a burden to diversification in local assets. Thus we see a further factor to influence conservative investment.

<u>Estonia</u>



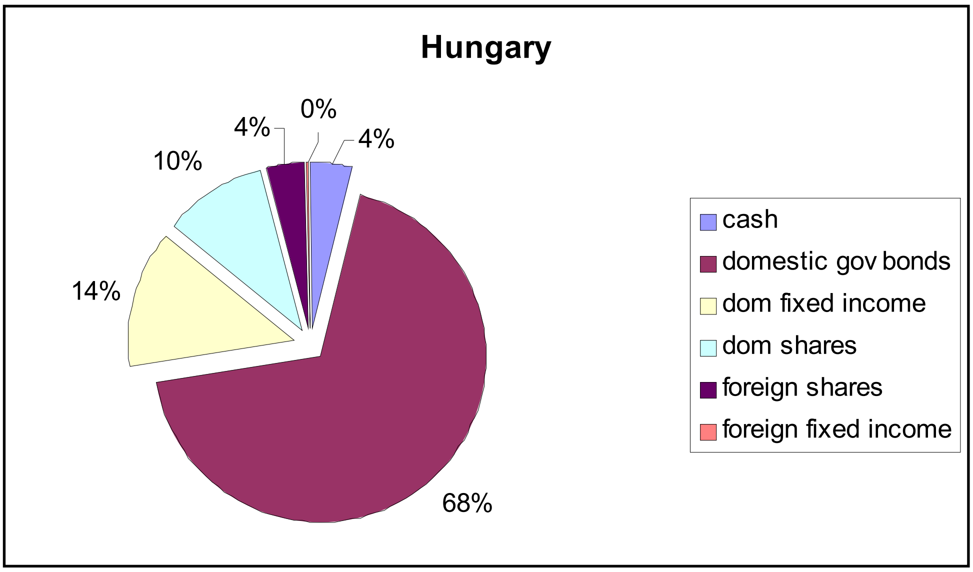
The most varied portfolio of the average second pillar pension funds can be found in Estonia. Although fixed income instruments take up 82 % of the entire portfolio, more than two third of this is foreign fixed income investments.

Total equity exposure at 18 % – although direct equity investment is only 9 % – two third of this is foreign equity investments.

Estonia has the highest foreign exposure of any of the CEE countries, with 68 % of all assets in foreign instruments. Although – as in Hungary – some of the foreign investments are executed through the purchase of units of investment funds, unlike Hungary, the general approach in Estonia is to buy units of foreign investment funds. Around 88 % of the investments in investment funds are foreign investments (and more than half is foreign equity investments), and almost a quarter of the foreign investments is done through mutual funds.

Of the foreign investments, almost 75 % goes to EU member countries, and another 15 % to the US. Only 6 % is invested in other Baltic countries and around 4 % elsewhere.

Hungary

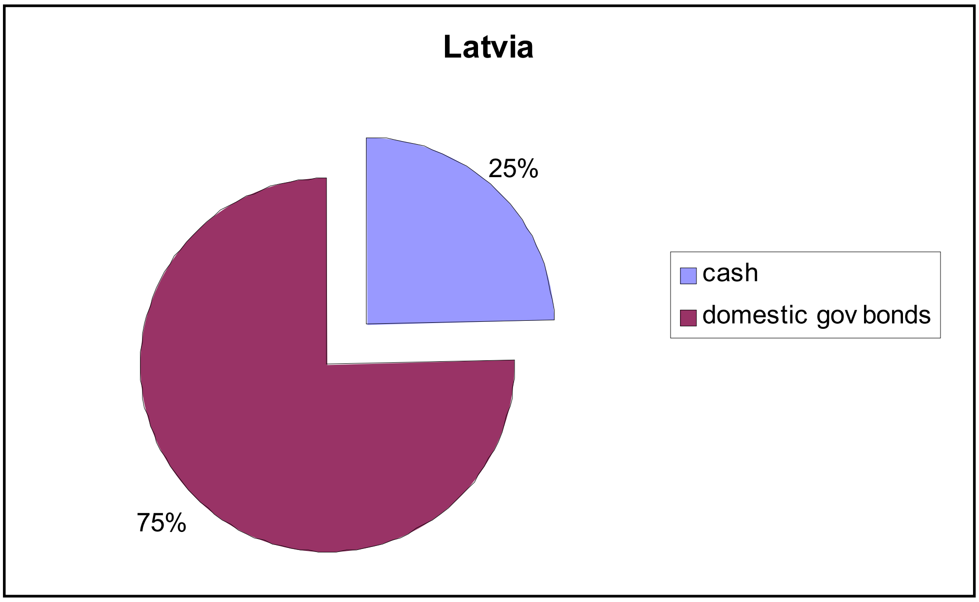


The 86 % of the average Hungarian second pillar pension fund portfolio that is invested in fixed income or cash clearly refers to a risk averse attitude – that 79 % of fixed income investments is kept in Hungarian government bonds only reinforces this point. Foreign fixed income investment is virtually non-existent in Hungary. Another interesting point is that more than half of the domestic fixed income investments (outside government bonds) are mortgage bonds, an instrument of growing popularity among Hungarian pension funds. Traditional commercial bonds take up only 4 % of the portfolio, while another 2 % is domestic fixed income investments through investment funds.

Most of the foreign investments of the pension funds – given the small proportion they mean in pension fund portfolios, and the lack of room for diversification that entails – are realized through investment funds. Only about 0,5 % of the average second pillar pension fund portfolios are direct foreign investments. On the other hand, almost half of all investment fund units are foreign investment, while about 2-2 % of the 7 % in investment funds are domestic fixed income and domestic equity. The rest is real estate investment funds and foreign fixed income investments, but they are virtually non-existent.

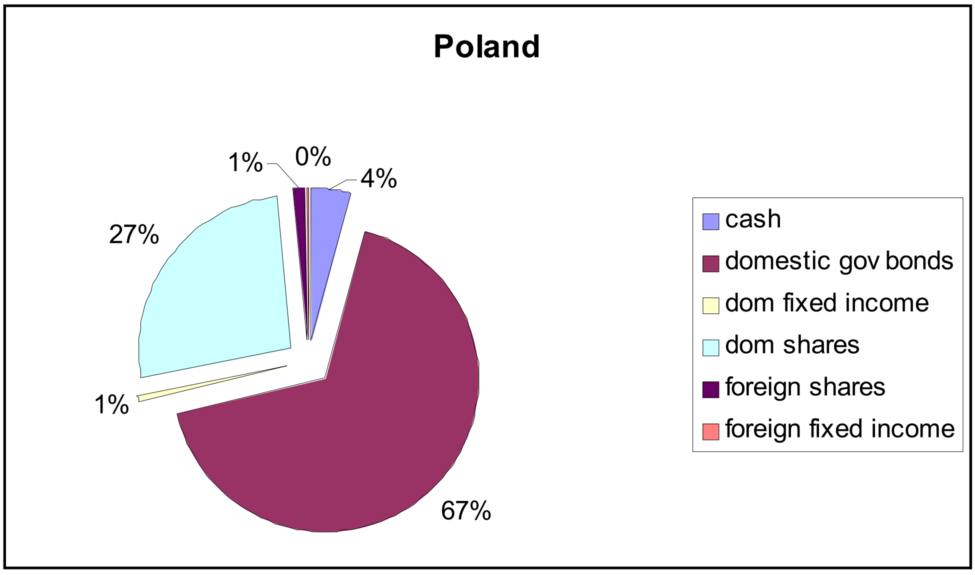
Equity exposure at 14 % is relatively low, and most of this is domestic shares. The bulk of Hungarian equity investments are direct, more that 8 %. Direct equity investments altogether approximate 9 %.

<u>Latvia</u>



Though mentioned here, Latvia is not a real focus in this section of the report. Since by the end of 2002, Latvian second pillar pensions were still managed by the state Treasury, and were only allowed to be invested in domestic government bonds and deposits, no wonder the above diagram was the result. It will be of more interest to look at Latvian pension funds next year.

<u>Poland</u>



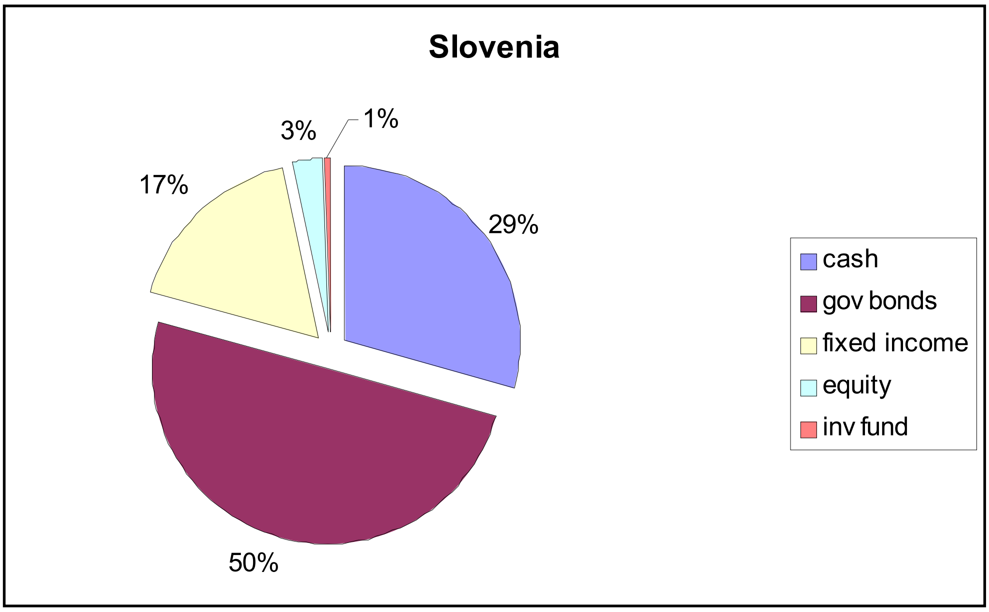
In Poland, 72 % of all investments are fixed income instruments (including bonds and deposits), while 28 % are equity investments. This is a generally more risk taking attitude than what we have seen in Hungary, but still less than the average European pension fund. It is also important to see that the bulk of fixed income investments are Polish government bonds (93 % of all fixed income investments). And as in Hungary, foreign fixed income investments virtually do not exist.

Direct foreign investments are slightly higher in Poland than in Hungary, but there is no foreign investment through other investment funds, leaving the average Polish second pillar pension fund with only 1 % foreign exposure. Even though foreign investments were severely limited in Poland, this rate is lower still than the 5 % secured by law. As described earlier, this is due in part to other limitations (the 5% foreign limit also includes „out of portfolio assets such as cash, which is an indirect limit on foreign investment, one that is planned to be removed, bringing the limit to 10%, with foreign investment limit still at 5%), to tax in foreign countries – a cost issue, to the „follow the leader" attitude of funds resulting from the minimum guaranteed return.

Foreign investments (the little there are) go entirely to Europe, and over 96% of it to Euro countries – mostly Germany and France. More than 77% of foreign investments is in euros (the difference is Polish bonds issued in Luxemburg in PLNs).

Polish equity investments make up almost all of the total equity exposure. Again, this is entirely direct equity investments.

Slovenia

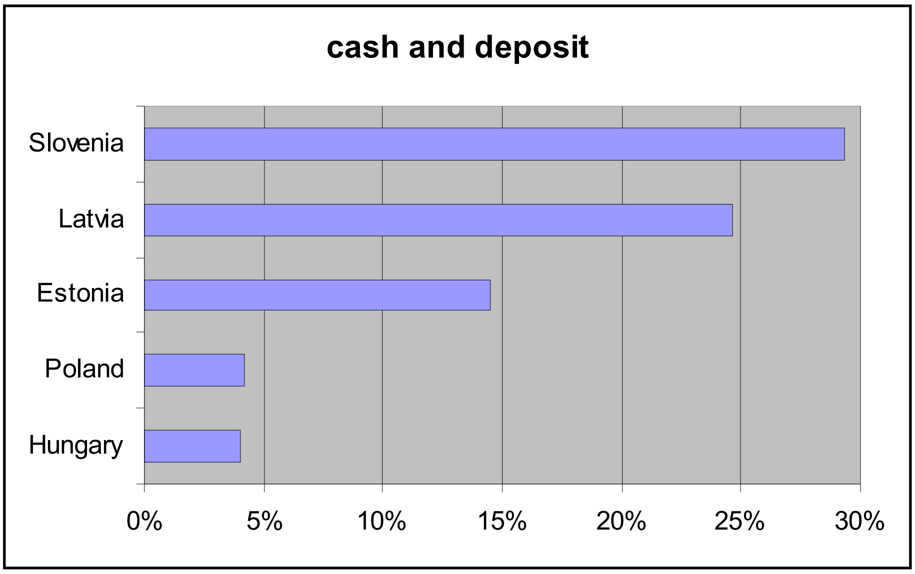


As mentioned earlier, the single mandatory pension fund in Slovenia is managed by the State of Slovenia, but the limits are similar to those of private pension funds. Again, we see a second pillar pension fund with 96% in fixed income instruments, half in government bonds and almost 30% in bank deposits and cash. The level of risk is hardly present, only 4% in equities and none in foreign instruments.

Direct equity investments re 3%, and an additional percent is invested in units of mutual funds, which is in general a domestic equity exposure. The total equity risk is still below 4 %, with no foreign investments at all.

<u>Cash and deposits</u>

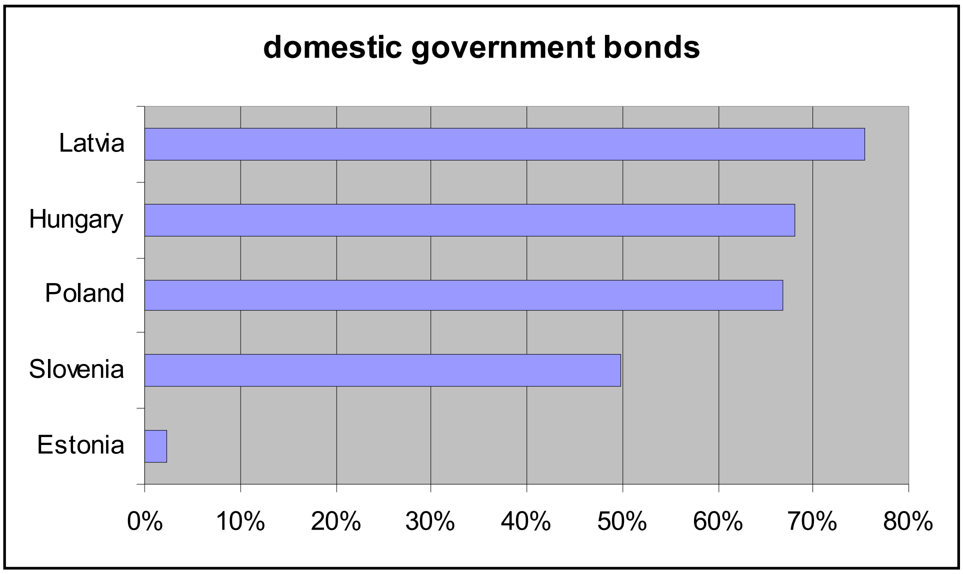
In the following section, we will look at certain asset classes (from the least market risk upward) and see how much of their total assets pension funds in different CEE countries invested in these instruments. Firstly, the investments in cash and bank deposits will be looked at.



The use of cash and deposits may serve two purposes. It is either a way to provide for liquidity or to avoid market risk. With cash and deposit ratios under 5%, it can be said that Poland and Hungary are on one end of the spectrum, where cash is only used before investment or payment. This is similar to the general trend in the EU, where cash and deposit are only used for liquidity reasons.

On the other hand, Slovenia with almost 30 % in deposits are definitely looking for a way to avoid market risk and provide for „risk-free" returns. This is not without precedent in the EU either – with equity performance down for the year 2002, some countries have opted for short-term deposits rather than investing their assets. In Spain, deposits made up 18 % of the average pension fund portfolio, but it was 15 % in Portugal and 8 % in Belgium as well. The Baltic countries acted similarly – almost 15 % in Estonia, and although the case of Latvia is different, the ratio is almost 25 %.

Domestic government bonds

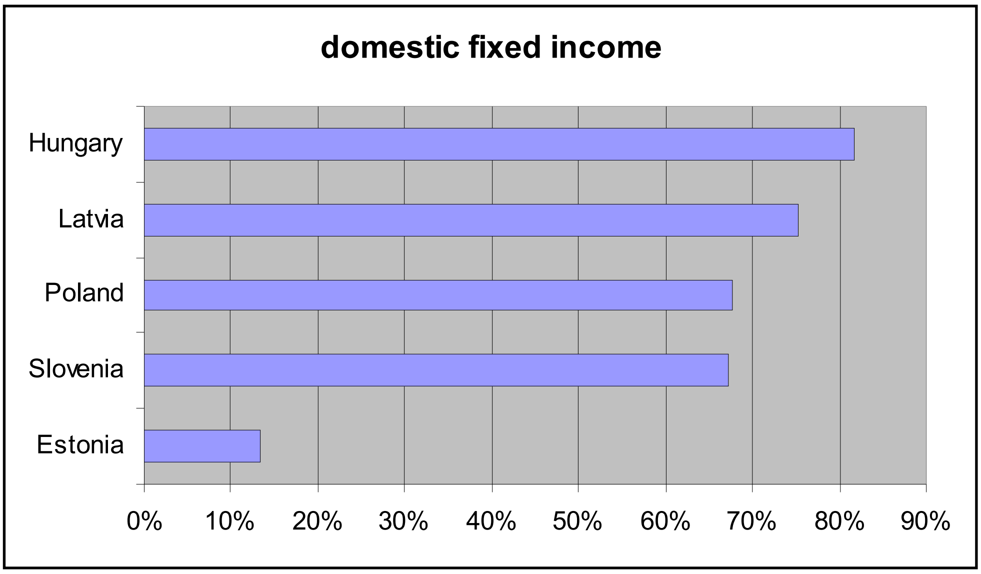


The generally used vehicle to stay out of market risk in Central and Eastern Europe for pension entities is to buy domestic government bonds. Although it is not entirely true, most believe that government bonds are risk-free, therefore a sizeable portfolio of government bonds of one's own country (therefore eliminating country risks) is a safeguard against negative real returns.

Of the graph above, we have to discount Latvia, for all that has been said before, and Estonia. The latter is an exception, as there is virtually no government debt in Estonia, therefore hardly any government bonds were issued. We cannot know if the lack of this instrument in pension fund portfolios is because they could not find it, or it would be the same if there were government bond, since the foreign orientation in Estonia may be a result of this lack of domestic bonds, but may be a separate issue, as seen in regulations and equity investments.

For the other three countries, it is obvious that the desire for minimising risk is an important issue. The proportion of domestic government bonds as a percentage of total investments varies between 50 and 70 %. If we add the amount in cash and deposits, this proportion is between 70 and 80 %. In effect, around three quarters of the portfolio of second pillar pension funds in CEE countries (with the exception of Estonia) is in supposedly risk-less instruments.

Domestic fixed income instruments

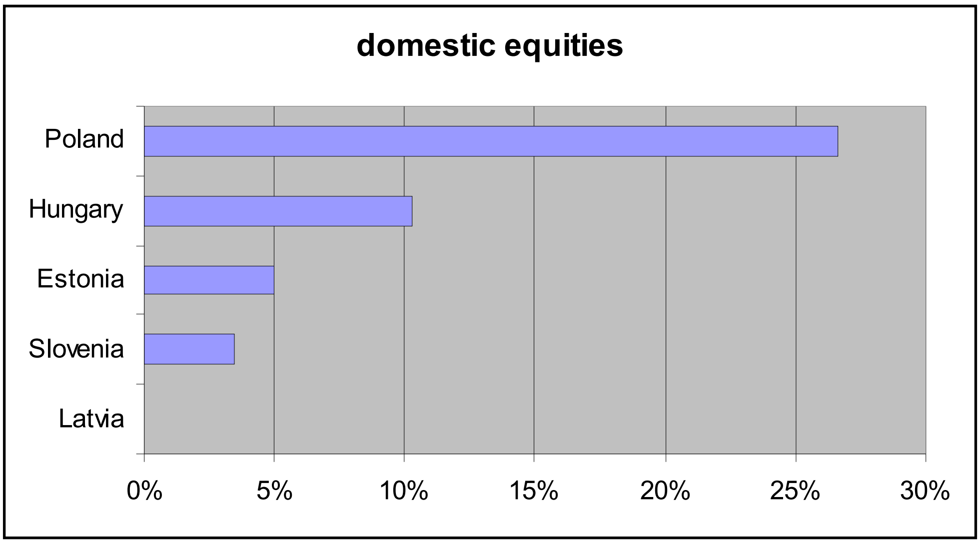


In some countries, fixed income instruments other than government bonds are also popular. These may be commercial or bank issued bonds, or mortgage bonds. It can also be fixed income instruments purchased through mutual fund units. For Estonia, Hungary and Slovenia, these instruments make up between 10 and 20 % of the portfolio. In Poland, it is only 1 %.

The graph above shows the aggregated domestic fixed income portfolios, including government and non-government issued domestic bonds. The deductions are similar as with the previous graph. Since the majority of domestic fixed income instrument are government bonds (74 % in the case of Slovenia, 83 % in Hungary, 99 % in Poland) with the exception of Estonia, the risk in domestic fixed income instruments is minimal. The less risky portfolio made up of domestic fixed income instruments in these countries is between 65 and 85 %. Although we have no exact data comparison to make, this ratio in Europe (by which we mean for this report the EU countries plus Switzerland) is less than 50 %.

The total risk averse portfolio of pension funds in CEE countries (domestic fixed income instrument and cash and deposits) are between 72 % in Poland and 97 % in Slovenia (with 86 % in Hungary. As previously explained, this conservative approach is due to a number of reasons, but Estonia is again an exception with only 28 %.

Domestic equities

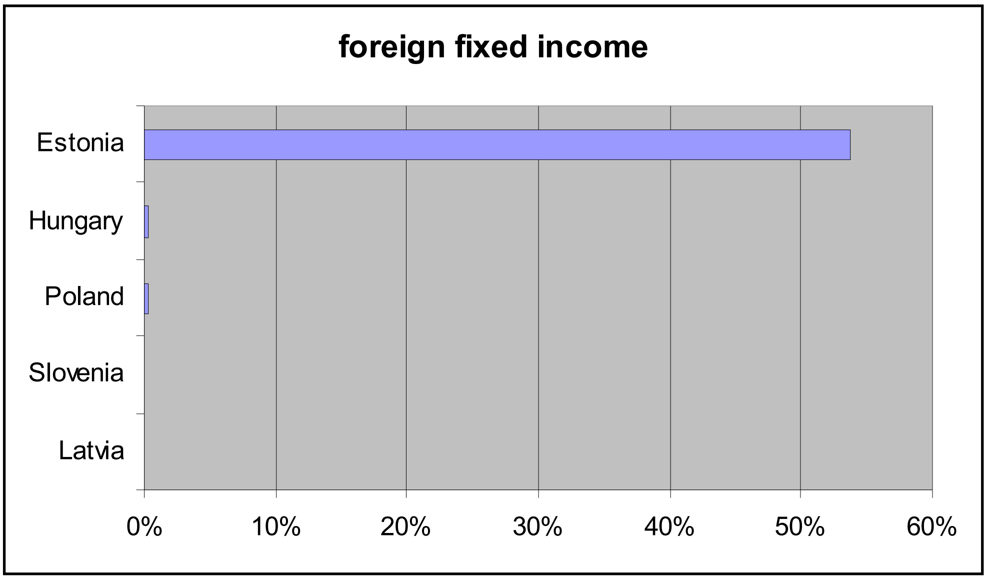


Our last category involving domestic assets are domestic equity type investments. As previously explained, these can be direct equity investments or investments made through mutual funds. The total domestic equity exposure of mandatory pension funds in the region is limited by the size of the equity markets of the region. This was also explained earlier, as one of the reasons to limit equity investments. With the exception of Poland, the investments in domestic shares is around 5 to 10 %.

Poland is the only country in the region, where equity investments of pension funds have a significant impact on their equity market. The level of domestic equity exposure is high (over 25 %), and in terms of the domestic equity market capitalization, it is almost 8 %. As the proportion of domestic shares within the investment portfolio of the average Polish pension fund approaches the average level in the EU, we can define Polish fund strategies as a separate one from those in other countries, and can call it „domestic risk strategy”. By this we mean a preference for domestic risky instruments (equities in this case) that is common for pension funds in the EU, but uncommon in this region. The reasons are in part the follow the leader attitude of Polish funds pursuant of the guaranteed rate of return rule, as well as the discouragement of investment abroad and the relatively high returns of Polish equity markets.

Of the other countries, Hungary has an average, in CEE terms relatively high level of equity exposure, while much smaller local markets in Estonia and Slovenia result in around 5 % domestic equity holdings.

Foreign fixed income instruments

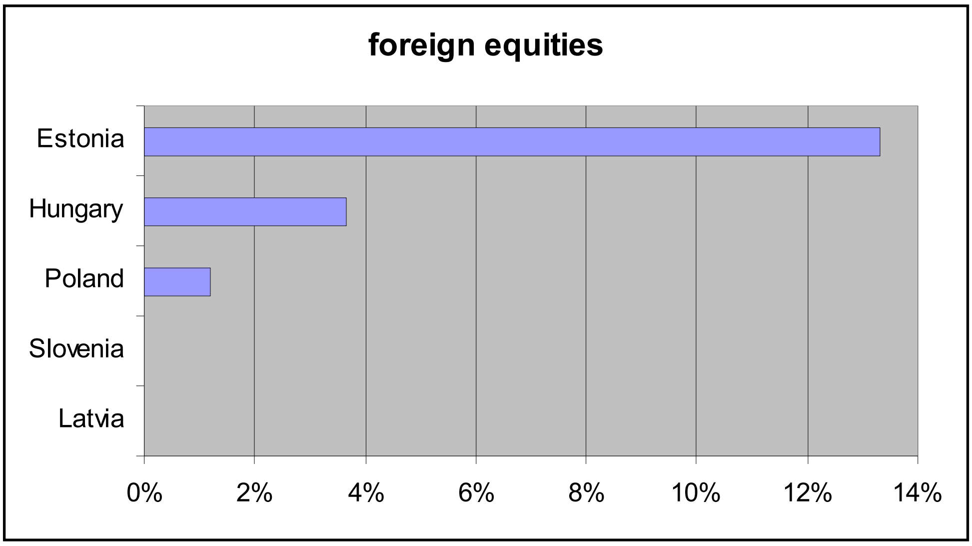


Foreign fixed income investments include both government and non-government bonds issued in a country outside of the pension entity's own country. With less than 1 % in Poland and Hungary and none in Slovenia and Latvia, the only country where pension entities have turned to this type of investment was Estonia. As referred to earlier, we do not know, whether Estonian pension funds have turned to foreign bonds as a substitute for Estonian government bonds or whether they have had a true desire to diversify across countries their fixed income risk. But as the law requires a certain degree of rating for bonds pension funds can invest in, and as the bulk of these foreign investments are made to the EU (and with the Estonian Kroon pegged to the Euro, there is hardly any currency risk involved), one thing is for sure: foreign fixed income investments of Estonian pension funds are the best strategy they have to minimise risk.

The importance of Estonia in this respect is that all CEE countries will – in the near future – have a currencies pegged to the Euro, therefore a situation that is partially similar to the one in Estonia. Whether they will use this decrease in foreign risk (the elimination of currency risk) to diversify their portfolios in a much larger (European) market, or if they will continue to invest in domestic fixed income only, is a question that the Estonian case may shed some light on.

As all the other countries would now have currency risk, and there is a supply of domestic government bonds, there is virtually no investments made in foreign bonds. Their least risky portfolio is therefore the same as was previously cited. In Estonia however, the least risky portfolio (all fixed income and deposits) take up 82 % of the total assets, which means Estonian pension funds behave similarly in this respect to their CEE counterparts.

Foreign equities



The generally accepted view is that the most risky asset class for pension funds is foreign equity, containing currency, market and country risks as well. In Estonia, as explained earlier, currency risks do not occur for Euro nominated foreign equities, thus their risk is lower. This accounts for the difference in the size of the foreign equity portfolio of an average Estonian pension fund as opposed to the rest of the CEE countries. Latvia is different again, as the Latvian pension fund at the end of 2002 was not allowed to invest in foreign securities.

The amount invested in foreign equity by CEE second pillar pension funds in minimal – none in Slovenia, less than 2 % in Poland, less than 4 % in Hungary. As these countries had virtually no foreign fixed income investments, the total foreign exposure is also very low. We have no data on how pension funds in more mature pension systems deal with foreign risks, but some country specific information are available (courtesy of IPE). In Spain, foreign equity holdings make up 8 % of the total assets, in Portugal it is 10 %. Most of this however we can assume to be EU investments (in Portugal 4 % is non-EU foreign equity investment). In the UK and Switzerland (both countries have currency risk in the EU) foreign equity investments are more than 20 %.

Third Pillar Pension Entities

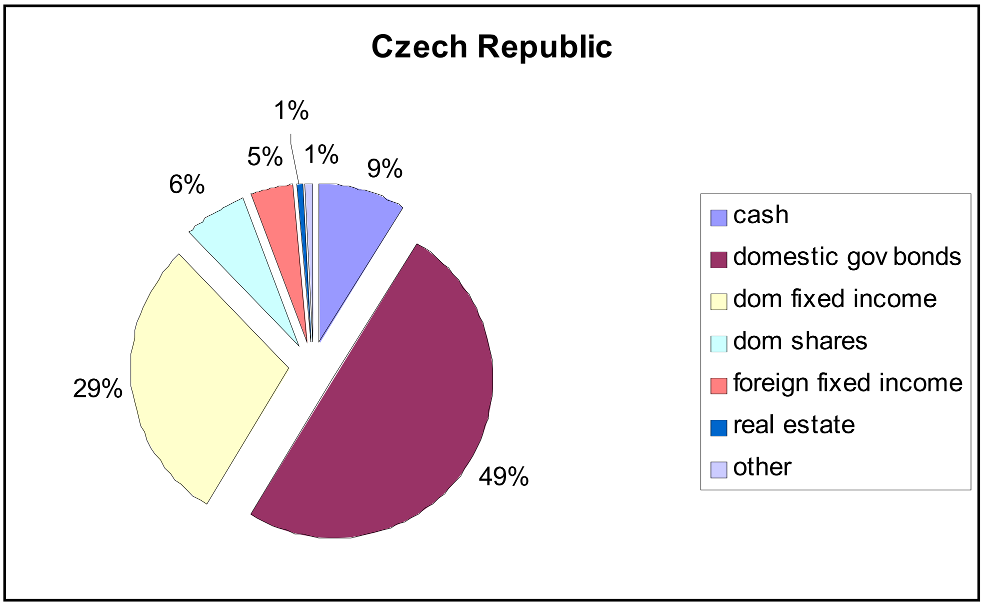
	TOTAL INVESTMENT	Cash and Deposits	Bills and bonds issued by public administration	Corporate bonds	Loans	Shares	Land and Buildings	Mutual funds (CIS)	Other investments
Czech Republic	68,927,478.00	10,181,268.00	34,371,269.00			4,297,287.00	644,514.00		19,433,140.00
Estonia	4,022.96	637.07	728.69	1,769.07		761.79		116.15	10.18
Hungary	358.29	17.10	244.60	22.70		30.40		15.50	28.00
Latvia	14.00	4.88		8.03		0.82			0.27
Poland									
Slovakia	182,895.91	63,361.37	73,137.82	20,695.05	1,268.83	2,404.75	4,794.45	2,540.63	14,693.02
Slovenia	19,110.97	5,225.25	9,654.09	3,445.02		552.10		234.51	

(source: OECD questionnaire, currency as in the replies – thousand CZK, thousand EUR, billion HUF, million LVL, PLN, thousand EUR, million SIT)

	Cash and deposits	Domestic government bonds	Other domestic fixed income	Domestic shares	Foreign shares	Foreign fixed income	Real estate	Other investments
Czech Republic	8.8%	49.9%	29.2%	6.2%		4.6%	0.6%	0.7%
Estonia	15.8%	5.8%	26.8%	12.9%	6.7%	31.7%		0.3%
Hungary	4.8%	68.3%	13.7%	7.3%	4.5%	0.2%	1.4%	
Latvia	34.8%		51.2%	0.3%	5.6%	6.2%		1.9%
Poland	7.2%	12.1%	54.1%	26.7%				
Slovakia	34.6%	40.0%	11.3%	1.3%		7.2%	2.6%	3.0%
Slovenia	27.3%	50.5%	18.0%	2.9%				1.2%

In the following section, a brief look will be taken at the seven countries, mentioning detailing some of the information in the above table. Following that a list of comparative graphs will introduce the portfolios of the pension funds of the CEE countries.

Czech Republic

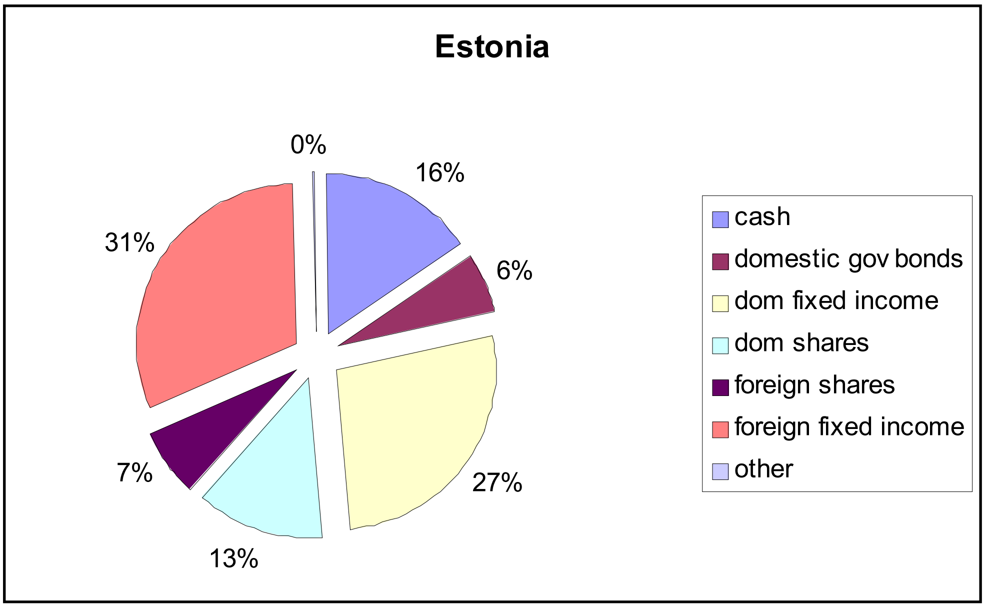


With 87 % of the average third pillar pension fund portfolio in domestic fixed income instruments, pension funds in the Czech Republic are as risk averse as those in Hungary. An additional 5 % is kept in foreign fixed income instruments, bringing the total investments in less risky fixed income instruments to 92 %. Unlike Hungary though, only 53 % of the fixed income portfolio is kept in Czech government bonds – meaning a bigger willingness to invest in other domestic bonds.

Since foreign investments are limited to foreign government bonds, the 5 % of foreign exposure in Czech third pillar pension fund portfolios are entirely foreign fixed income.

Equity exposure at 6 % is direct domestic equity investments alone, a relatively low ratio, even given the level allowed by legal limitations. The Czech Republic is one of only 3 countries with any real estate investments at all (the other two are Slovakia and Hungary). The less than 1 % share of real estate investments is slightly lower than in Hungary.

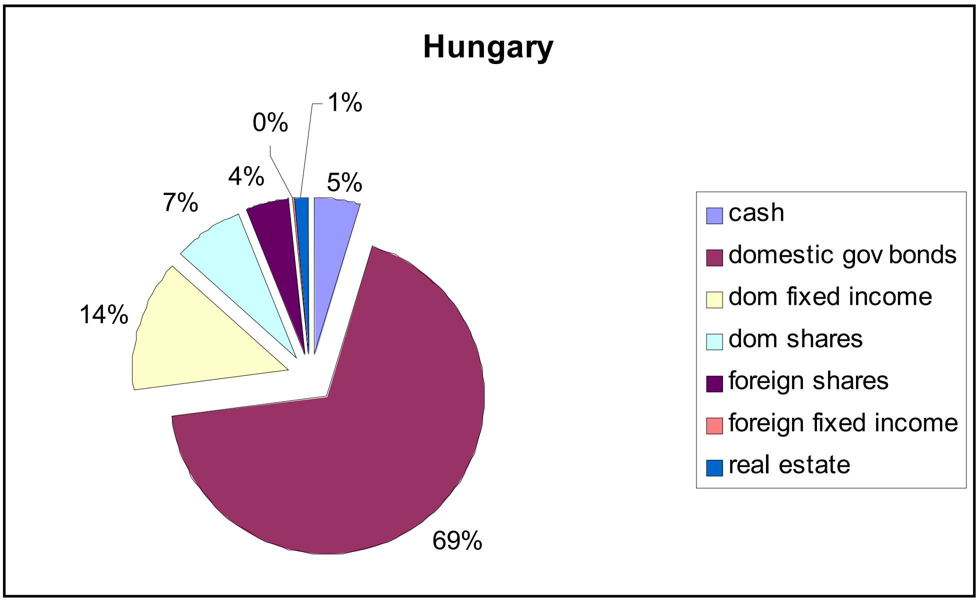
Estonia



As in the case of second pillar funds, Estonian third pillar funds are well above the rest of the CEE countries in their willingness to expose themselves to foreign risks. The most diverse portfolio of any central or eastern European country, the average third pillar fund in Estonia invests only 80% in fixed income instruments (and over 38% of fixed income investments are made abroad). Equity investments are at 20%, second only to Poland, while direct equity investments are 19%.

Third pillar funds invested 3 % in units of investment funds, most of which are domestic investments, but more than a third of it is foreign investments. Of the 38 % foreign investments, only 1% is through units of investment funds, the rest is direct investments. Unlike in the case of second pillar funds, other Baltic countries feature significantly as the target of foreign investments, with 20% of all outside investments going to Latvia and Lithuania. The main aim on the other hand is still the EU, with almost 65 % of the foreign instruments in EU countries. Around 11 % is invested in the US and another 4 % in the rest of the world.

Hungary

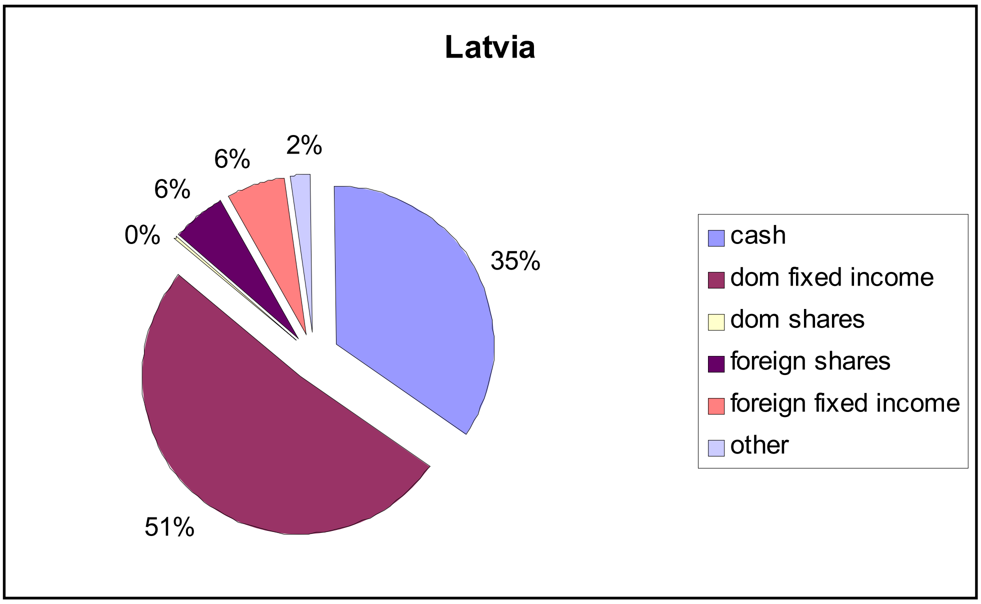


The diagram above demonstrates the average portfolio of Hungarian third pillar pension funds. The first thing that is obvious from the picture is the overwhelming proportion of what is deemed to be less risky fixed income bonds or cash (88 % of the overall portfolio) and of Hungarian government bonds within the fixed income portfolio (78 % of all fixed income is domestic government bond). This is a very much risk averse portfolio.

Another fact is that given the relatively small amount used for foreign investments, generally this foreign investment is realized through investment funds. More than half of all investment fund investments of pension funds are foreign equity investments, while the rest is Hungarian fixed income, equity, real estate and foreign fixed income investments. Real estate investments are either direct real estate holdings or – to a lesser, but growing extent – real estate investment fund units.

Almost all the foreign investments are foreign equity, and almost exclusively through mutual fund units. The majority of domestic equity exposure on the other hand is realised directly.

Latvia

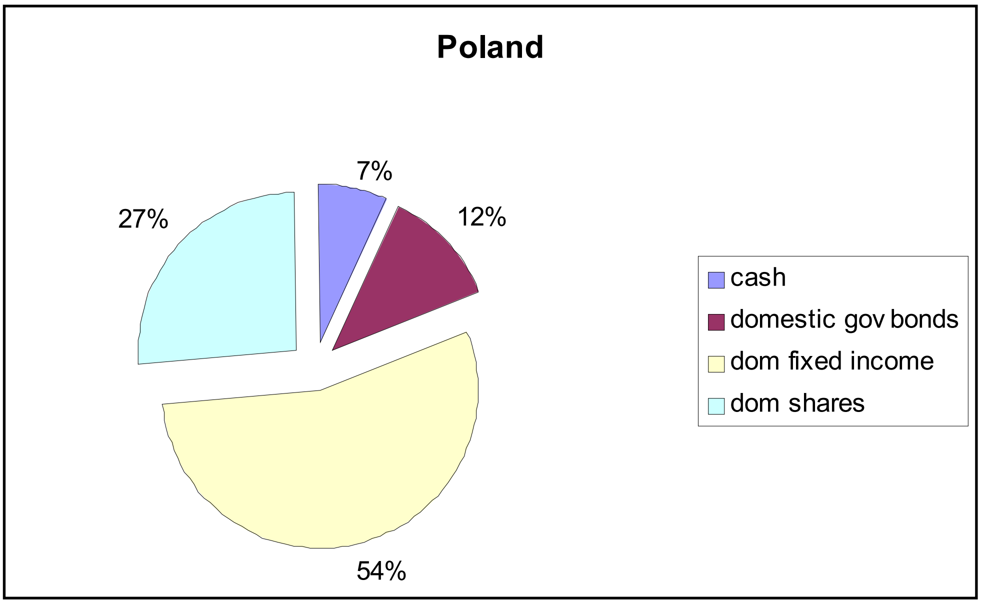


As in the Czech Republic, third pillar pension funds in Latvia invested on average 92 % of their portfolio in fixed income instruments, 6 % in foreign fixed income instruments and 86 % in domestic bonds and deposits. This is again a very risk averse portfolio, even though the ratio of domestic government bonds is not known – the ratio at the end of the third quarter of 2003 was 76 %, so our assumption is that the majority of domestic bonds in pension fund portfolios are government bonds.

Total equity risk exposure is only 6 % realized through direct equity investments. Most of the equity investments are in fact foreign equity due to the small size of the domestic market. Of the total foreign investments about half is equity and half fixed income investments.

The foreign investment level is relatively high at 12 %, most of which is investment in other Baltic countries (38 % in Lithuania and 26 % in Estonia). The European Union is also an important investment target, with 16 % of the total foreign investments going to EU countries (and 12 % to Euro countries). Investments in Poland are at 11 %, in the US 9 %.

Poland

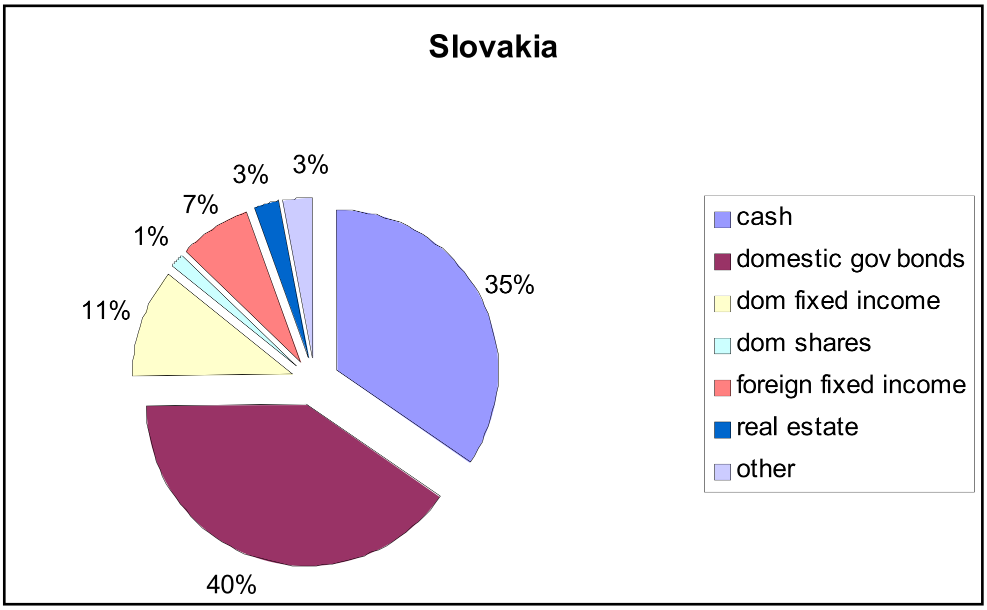


As described earlier, in Poland we try to introduce employee pension funds. As some of them invest the whole portfolio in the units of investment funds, it is less clear as to what is the real investment risk taken by these funds. Roughly though it can be said, that around a quarter of the total investments are equity investments (and only around 4 % are direct equity investments), which is similar to the Polish second pillar, and above any other country.

Of the total investments, more than three quarters are in the units of investment funds, most of which is domestic fixed income type investments. The 12 % domestic government bonds are direct investments, and most of the domestic fixed income investments through investment fund units are probably also government bonds.

There are no foreign exposure in the case of third pillar funds in Poland at all.

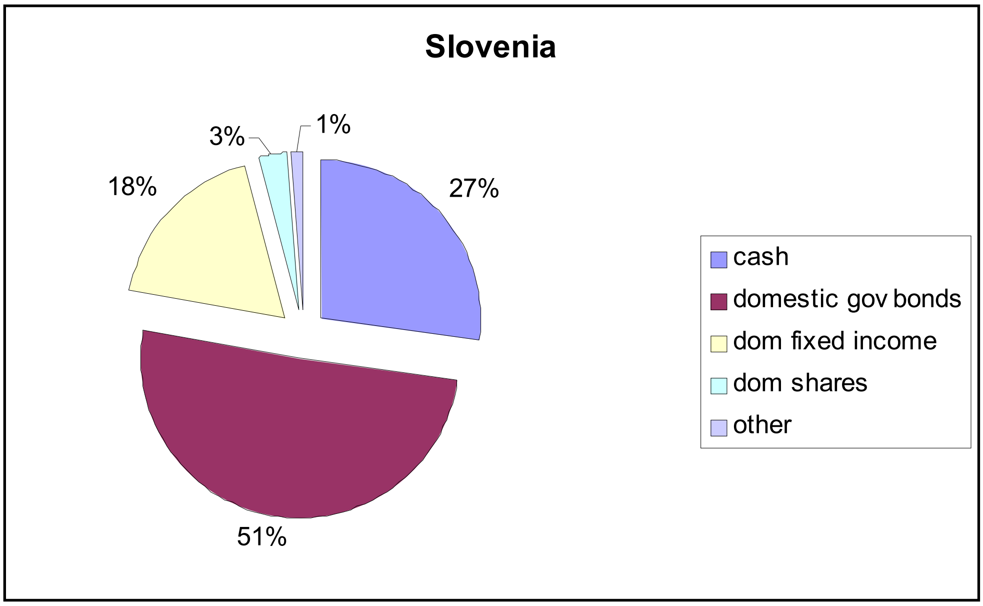
Slovakia



The four Slovakian pension funds share with their Slovenian counterparts a preference for risk-less investments. More than third of the portfolio is kept in bank deposits and cash, while two fifth of all assets is used to purchase domestic government bonds. With an additional 11 % in other domestic bonds, 86 % of the portfolio is in less risky instruments.

Equity exposure is around 1 %, but it is amended by the only significant real estate investment in any CEE country – almost 3 % on average. Unfortunately we could not yet find out what sort of risk foreign investments and investment fund unit investments represent, but we are lead to believe, that the majority of foreign investments are fixed income investments, while mutual fund investments are only 3 % of the portfolio. Therefore equity and real estate exposure combined should still be less than 8 %.

Slovenia



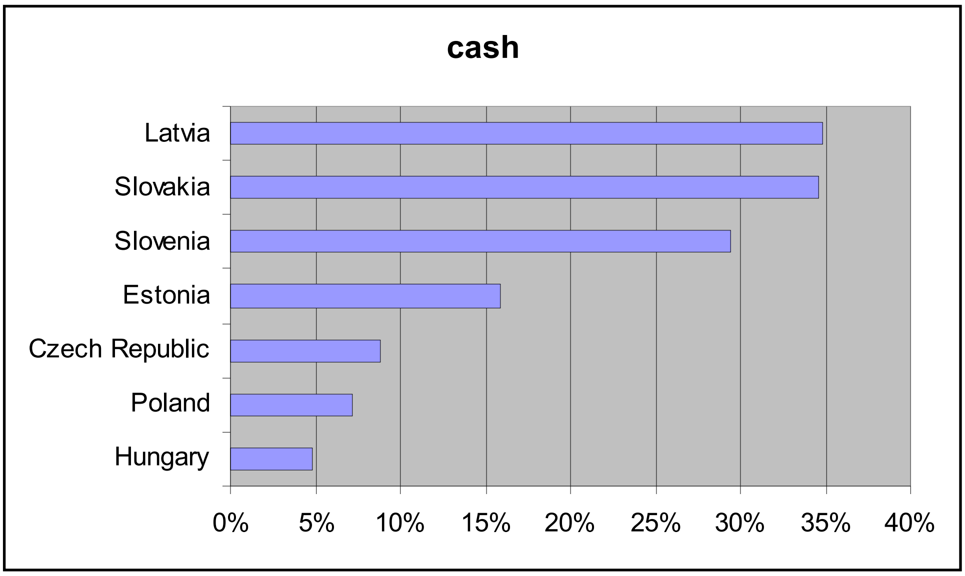
The average portfolio of third pillar pension entities in Slovenia looks very much similar to that of the second pillar pension fund. There is only 4% in equity related instruments, while 96% is domestic fixed income. Furthermore, more than half of the total assts are in domestic government bonds, and more than a quarter in deposits and cash.

Direct equity investments are around 3%, and an additional percent is equity investments through units of mutual funds. There are no foreign investments at all in Slovenian pension entities.

The difference in the investments of pension companies and pension funds is negligible. The only significant difference is the larger proportion of mutual fund units in pension fund portfolios (2,6%) compared to pension company portfolios (0,6%). Pension funds also invest less in government bonds and more in other domestic equities, but the difference is within five percentage points for government bonds and 2 for other fixed income instruments.

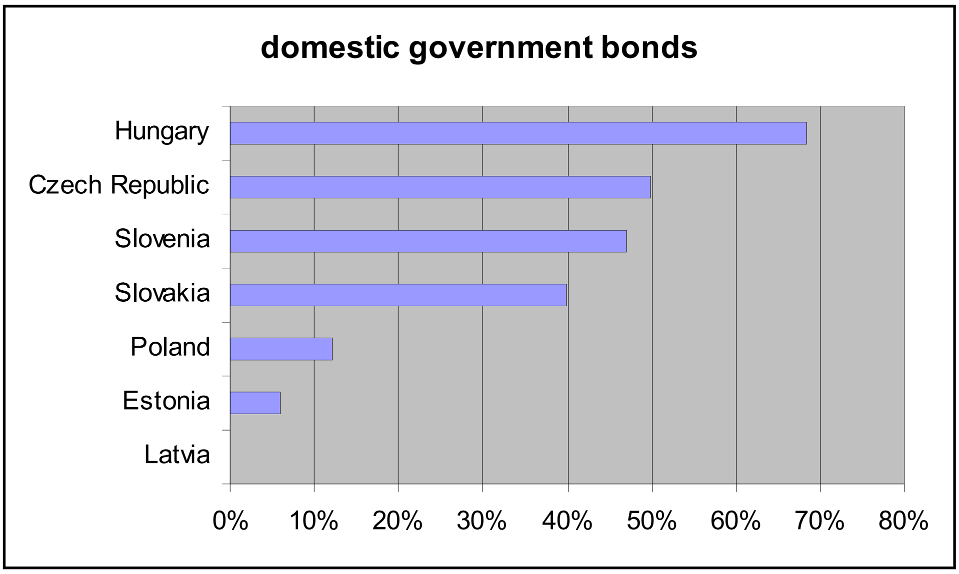
Cash and deposits

As with second pillar pension entities, we will compare the investments in certain asset classes made by third pillar pension entities in different CEE countries. Again, we start with the least risky instruments, cash and bank deposits.



What we have argued in the case of second pillar funds is also relevant for third pillar pension entities. With cash and deposit below 10 %, Hungary, Poland and the Czech Republic could generally be said to use these instrument for liquidity reasons. To a varying degree, but all other countries (and especially Latvia, Slovakia and Slovenia) use deposits as an investment option. And their level is significantly higher than the level in EU countries previously cited.

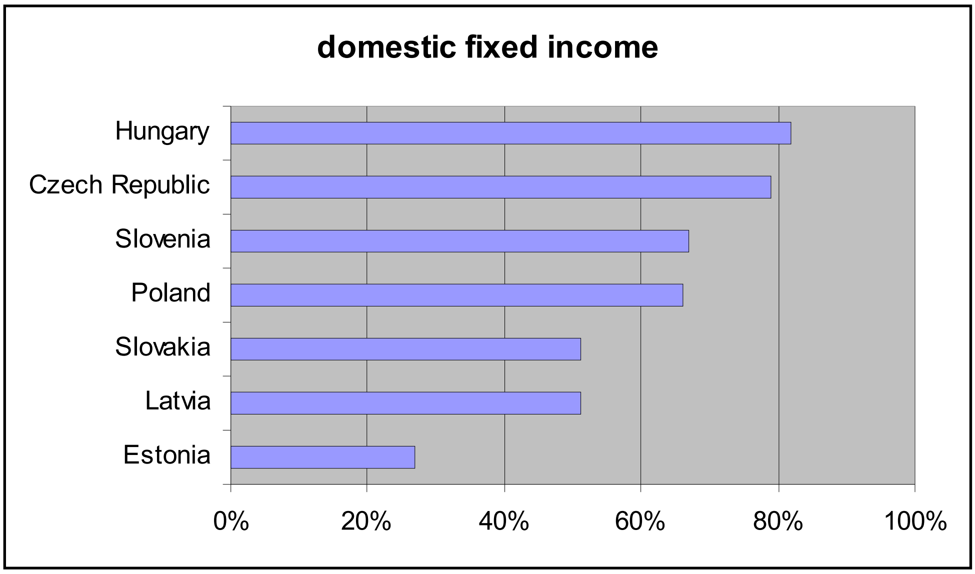
Domestic government bonds and other fixed income instruments



The proportion of domestic government bonds in the portfolio shows us the level of risk averseness and „guaranteed" return expected by a pension fund. As we have seen with at least

3 countries though, in some countries bank deposits are used as replacements for government bonds (either because there is a lack of this type of assets, as in Estonia, or for other reasons). There are also other problems with the table above. In Poland, much of the portfolio of third pillar pension funds is invested in mutual fund units, therefore direct government bond investment is low. In Latvia on the other hand, there was no distinction between government and non-government issued domestic bonds at the end of 2002, but as 76 % of the domestic bond portfolio consisted of domestic government bonds at the end of the third quarter of 2003, an assumption could be made, that the level at the end of 2002 was around 39 %.

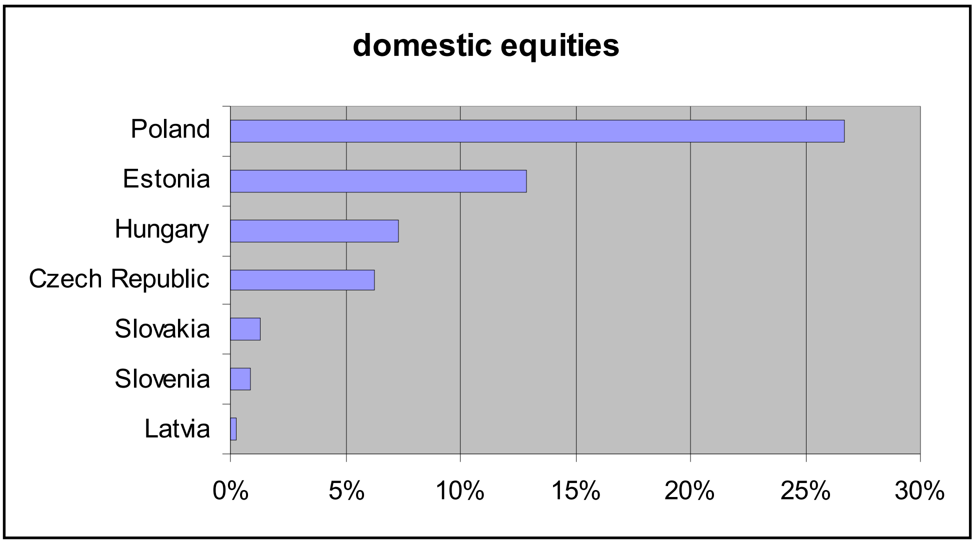
A better way to judge the size of risk averse portfolios is by using the total domestic fixed income share of the investments (as most of this is government bonds, where available, anyway).



As described in earlier sections, the total domestic fixed income portfolios include both government and non-government issued bonds, and they represent the less risky market portfolios of pension entities. From the graph it is obvious, that with the exception of Estonia, this share is above 50 % for all CEE countries. The uniqueness of Estonia in the CEE circumstances has been covered when detailing the second pillar funds. It is also true for third pillar funds, and therefore will be excluded from the analysis here. The six countries can be grouped into 3 categories.

Hungary and the Czech Republic have a huge proportion of domestic bonds (around 80 %), and – especially in Hungary – the majority of this is government bonds. This group can be called „market conservative”. Although the domestic fixed income portfolio of Latvia and Slovakia is only around 50 %, and of Slovenia is a little over 60 %, these countries have over 30 % of their assets in bank deposits and cash, therefore of the total investments, over 80 % is the risk averse portfolio (similar amount to the previous group), and a significant part of this is even outside the capital market. Therefore the strategy of this group can be called „overall conservative”. Poland is the only country, with an average proportion of assets in fixed income instruments (66 %, mostly through mutual fund units), and a cash and deposit ratio of less than 10 %. Therefore the risky portfolio to be detailed next is almost twice the size of the previous countries.

Domestic equities



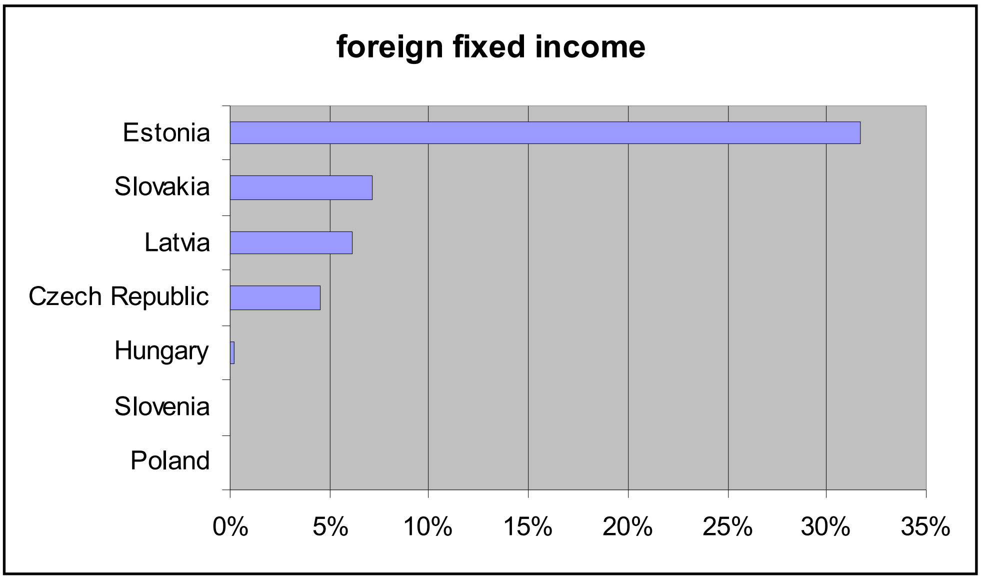
Domestic equity investments take up around 10 % of the portfolio of pension funds in the CEE region on average. As we have previously seen with second pillar funds, Poland has a (for the region unusually) high proportion of domestic equity exposure, therefore joining second pillar Polish funds in the „domestic risk strategy" group. Since there is no guaranteed return rule for third pillar pension entities, there is no follow the leader attitude either. This preference for large equity portfolios have to be explained by other factors.

In Latvia, Slovenia and Slovakia, the amount of domestic equity risk is very limited. Although somewhat higher, the Czech Republic and Hungary also has a very small equity portfolio (especially if compared to more developed pension markets). The reason for this is in part due to the small equity markets (specifically the first three countries), and also to the small size of the pension funds.

Estonian third pillar funds have more domestic equity exposure in terms of proportion to total assets, but somewhat smaller in terms of Euros. The difference is due to the size of funds and also (as we will see later) the considerably smaller foreign equity portfolios. On the whole however, Estonian third pillar funds have an average equity exposure in the region. The already mentioned pegged currency changes the adjudication of foreign equity risks, and therefore may increase what we may call domestic equity risk for Estonian pension funds, this will not however change the above graph significantly.

Summing up, Poland has third pillar funds with above average domestic risk exposure, with Estonia second (neither countries have limits on equity holdings). The other five countries have very limited (less than 8 %) domestic equity exposure, a fact that cannot be explained simply by the quantitative limits in place, as the actual investments never even surpass a quarter of the limit. On the other hand, a note of caution is issued by such limitations (in four countries, although Latvia is different, with no limit on equities and only a very small investment in shares).

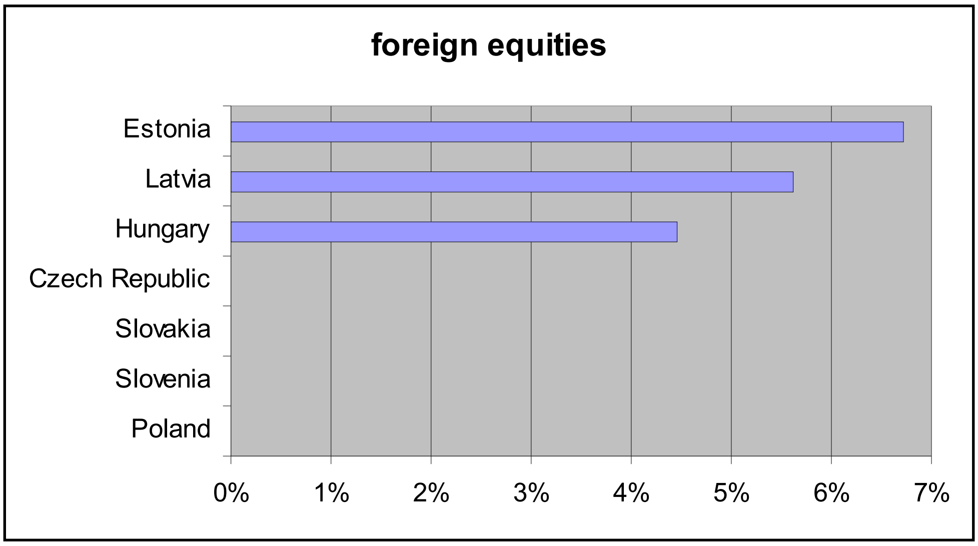
Foreign fixed income instruments



For third pillar voluntary pension entities, a similar warning is due when considering foreign fixed income investments, as was issued at the time second pillar pension funds were analysed. The obvious difference between Estonia and the rest of the CEE countries has to be understood within the circumstances of a pegged Estonian currency to the Euro, with all other CEE currencies not. Therefore foreign fixed bonds (most of them issued by EU member states or banks and commercial institutions in the EU) are less risky – mostly without currency risk – for Estonian pension funds than for others.

Even though there is a difference between countries with virtually or literally no foreign fixed income exposure (Hungary, Poland and Slovenia) and countries with around 5 % of foreign bonds (the Czech Republic, Latvia and Slovakia).

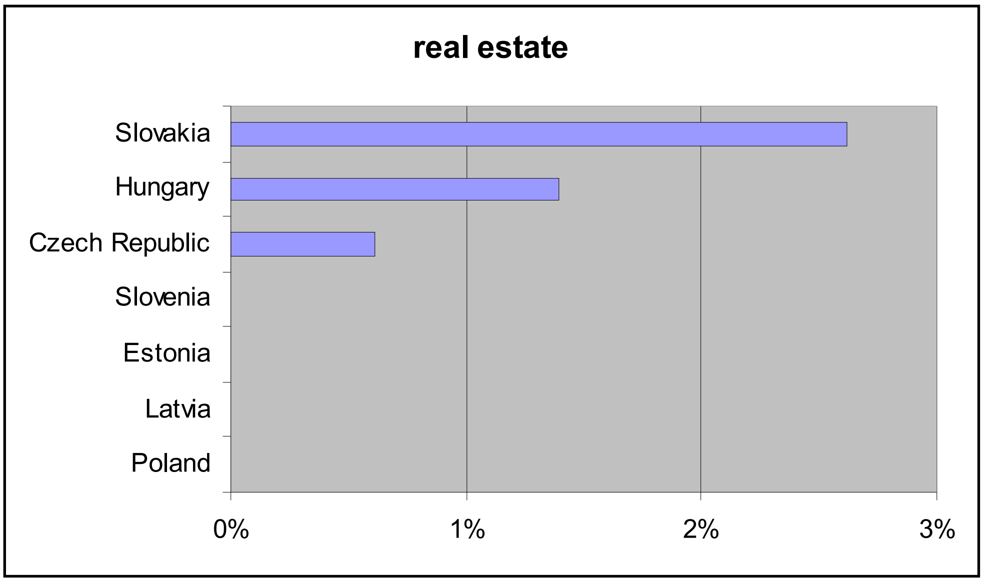
Foreign equities



As far as asset classes go, foreign equities are regarded as containing the most risks for pension funds – alongside the equity risk, there is also the risks of foreign markets (currency risk, country risk). Our of the seven CEE countries therefore have pension entities that have avoided this asset class. The Czech Republic have introduced rules to prevent investments of pension funds in foreign shares, but Slovenia and Poland also have pension funds that do not invest in foreign securities at all. In Slovakia, we have no clear information on foreign investments, therefore zero foreign equity exposure is just an assumption that is not necessarily the case.

On the other hand, Hungary and the Baltic states are relatively open to foreign equity exposure. In the case of Estonia, it has been said that most of the foreign investments are made to EU countries, and these have no currency risk. In Hungary, it is also mainly EU investments made through mutual funds. In Latvia, the majority of the investments is made in other Baltic states as well as EU countries.

Real estate investments



In the CEE region, pension fund investments in real estate are very limited. In some countries (Poland and Lithuania) it is not allowed, and in Latvia, it is only allowed for third pillar funds. In Hungary, real estate investments for second pillar funds were only allowed through specialised mutual funds. And with the exception of the Czech Republic, all countries have introduced quantitative limits ranging from 10 to 30 %. Given all that has been said previously about limit utilisation, it is no surprise that even with moderately liberal regulations, actual investments in real estate is almost absent in the region.

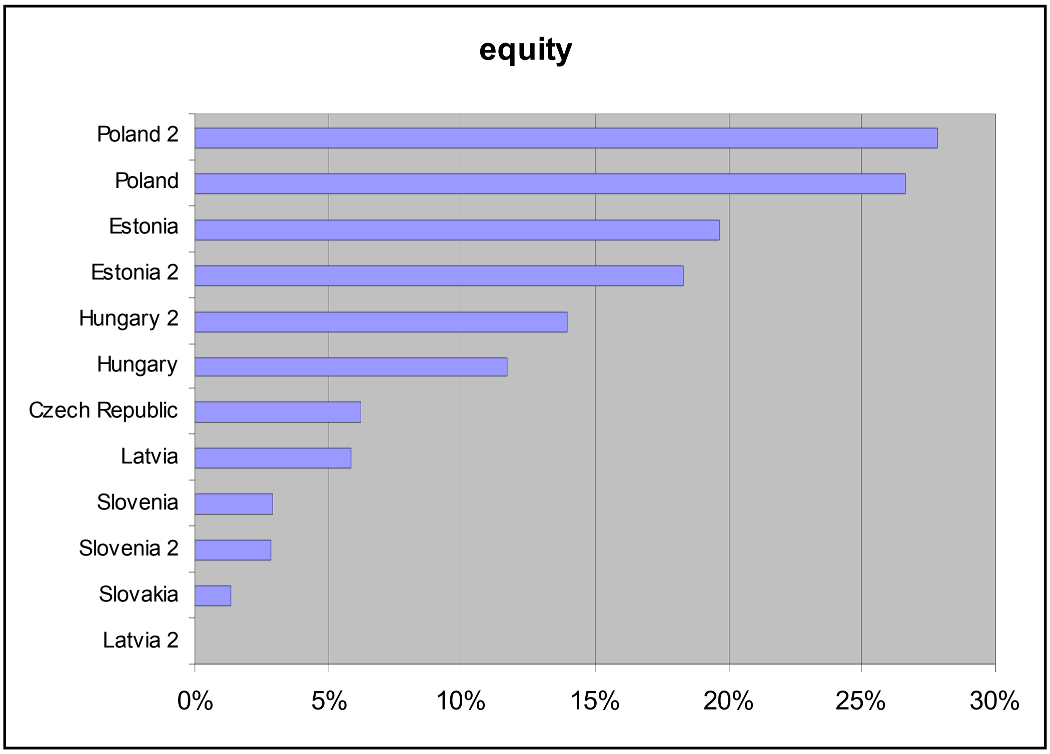
There were no second pillar pension funds at the end of 2002, and there are no third pillar funds in the Baltic countries, Poland and Slovenia to invest in real estate. Only 3 countries can boast third pillar pension funds with any real estate investments at all – the Czech Republic, Slovakia and Hungary. But even in Slovakia, the most active in this field, total real estate investments are less than 3 % of the total assets of pension funds.

Summary

In the final part, we have looked at actual investment portfolios of pension funds in the Central and Eastern European region. The main conclusion was an overwhelming preference for a more conservative approach to investment, even compared to the quantitative regulations described in the previous chapter. There are a number of reasons for this, and some of these were also listed in this chapter.

The question of Estonia as a country where pension funds follow a separate strategy as opposed to the rest of the CEE countries arose. The reasons for this different direction are dual – for one, the Estonian Kroon is pegged to the Euro, therefore basically eliminating currency risk for EU investments. The second reason is the virtually non-existent government debt, which results in an almost zero supply of domestic government bonds.

As a general rule, we have concluded that Estonian difference is important since in its present state (pegged currency) it foreshadows how all CEE countries will be within two to five years. Although not entirely the same, we have looked at foreign (EU) instruments in the case of Estonia as domestic, and have concluded that a predominantly conservative (fixed income) portfolio is characteristic of both second and third pillar pension pillars in all seven CEE countries.



The graph above shows the total equity exposure (domestic and foreign) of both second and third pillar pension funds in the region. It is not hard to notice that for the level of equity exposure it is more important to see the country than the pillar of the pension funds. There is minimal difference between the level of equity in pension fund portfolios with regards to which pillar they belong to.

By countries on the other hand, there are significant differences – Poland has equity between 25 and 30 % of the total investments, Estonia between 15 and 20 %, Hungary between 10 and 15 %, the Czech Republic and Latvia between 5 and 10 % and Slovenia and Slovakia less than 5 %. Latvian second pillar is a separate issue, as usual. Using three clusters to describe average pension fund strategies, less than 10 % of the total portfolio is in shares (and real estate) in the Czech Republic, Latvia, Slovakia and Slovenia, which are countries where pension funds are more risk averse that the average. Not surprisingly, 3 of the 4 countries have legal regulations that are stricter (at least for third pillar funds) than in the rest of the region.

The second cluster is Hungary and Estonia, with around 15 % of risky asset classes. Poland is the only country with above average share of equity risk in the portfolio of pension funds. According to data from Investments and Pensions Europe, the average equity exposure in 2002 in the EU was 32 %, an average higher than even the level in Poland. The minimum in the EU was the level registered in Iceland, 11 %. There are 4 countries in the CEE region with equity levels below the one in Iceland.

It has been alluded to before, that low level of equity risk taken may not be simply a decision by the pension funds or the pension regulators. The point that there is a strong correlation between the level of development of capital markets and of pension entities has been made by many analysts. Although there is a difference of opinion, as to the question of dependent and independent variables – some argue, that pension markets are a factor of a developed capital market, therefore without a capital market already in place, no pension market can survive; others claim that a pension market will bolster the capital market, thus arguing that first should come the development of the pension entities, and that will influence the capital market.

For our study, all we can positively state is that there is a strong interdependence between the two markets, therefore a look at the level of capital market development in CEE countries is worth examining. It is also an interesting question to ask, that if an underdeveloped capital market is a risk to participants (pension entities in our case), how can regulators confront that problem.

In the next table, we will try to exemplify capital market development with the equity markets of the 8 CEE countries.

	Market Capitalisation	GDP	MC / GDP
Czech Republic	15,128	66,368	23
Estonia	2,315	6,103	38
Hungary	12,508	62,744	20
Latvia	686	8,010	9
Lithuania	2,915	13,159	22
Poland	27,502	178,984	15
Slovakia	2,516	22,599	11
Slovenia	5,249	20,120	26
Total	68,820	378,087	18
	(million Euros)		(%)

It should come as no surprise that we are talking about small markets. The combined market capitalisation of all eight CEE countries is less than 69 billion Euros, which is less than the equity market capitalisation of Greece or Denmark (and less than a sixth of Italy and Spain, and around 4 % of the UK market). It can be partly attributed to the fact that these countries are generally less mature than their EU counterparts. To overcome this problem, we have proportioned the equity market capitalisation to the gross domestic product of these countries. On average, equity market capitalisation was measured at 18 % of the GDP – with Latvia's mere 9 % showing virtually no equity market activity and Estonia's 38 % going above most other countries. To compare these ratios we have selected some EU countries: in Spain, this ration is 68 %, while in Finland or the UK it is around 120 %.

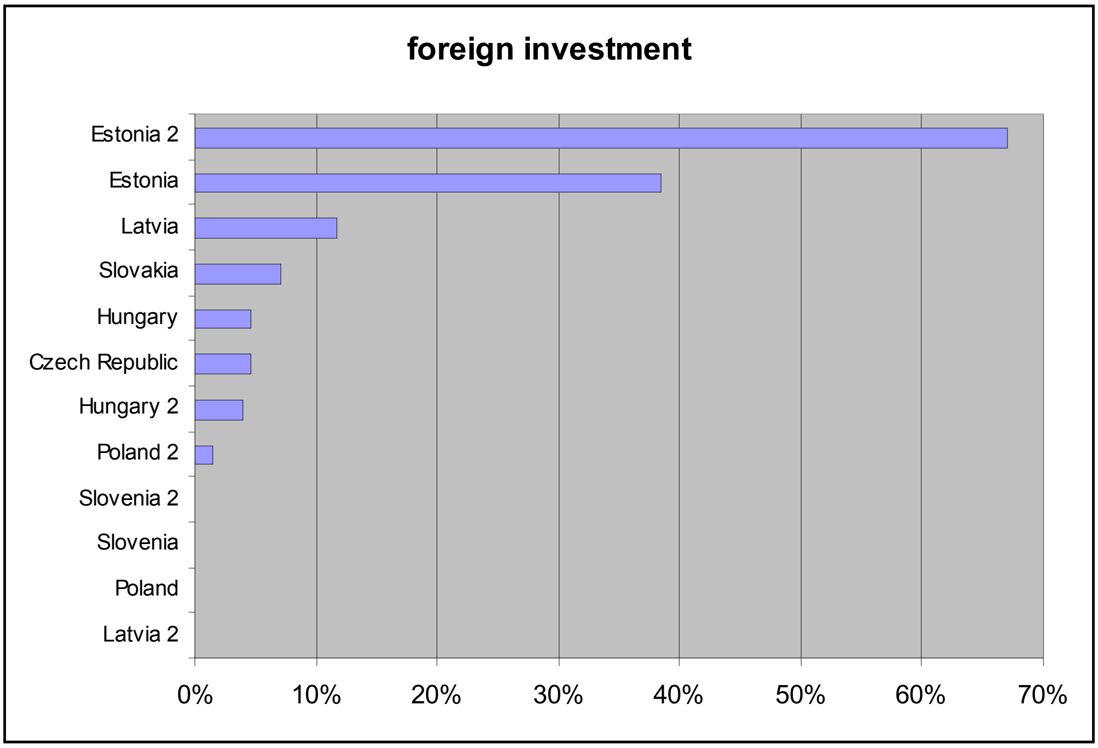
The premature nature of the local capital markets may discourage pension entities from investing in local equities (or commercial bonds). The next table we have tried to gather direct equity investments of pension funds (from the OECD questionnaire) and contrast it with the total equity market capitalisation.

	direct equity investments	market capitalisation	
Czech Republic	135,990	15,127,794,304	0.0009%
Estonia	1,727,760	2,315,458,492	0.0746%
Hungary	285,201,360	12,508,116,780	2.2801%
Latvia	1,350,548	685,803,279	0.1969%
Poland	2,142,510,222	27,502,363,067	7.7903%
Slovakia	2,405	2,516,201,303	0.0001%
Slovenia	217,957	5,249,307,809	0.0042%
	(Euros)		(%)

It is important to note, that only a small portion of the total market capitalisation in most CEE countries are freely tradable, liquid shares. Still, with the exception of Poland and a lesser extent Hungary, the rest of the CEE countries have pension entities with insignificant investments in local equity markets. In Latvia and Estonia, direct equity investments are both executed in local and international markets, therefore the percentages above are even lower.

Coming back to the previously posed question, we have to separate the two opinions on the correlation between capital and pension markets. If we believe, that a developed capital market should be the prerequisite to pension markets, we could only have two choices: either give up hope for a significant growth of the pension markets in this region, or turn them towards foreign capital markets. If on the other hand, we believe that pension markets will help in developing capital markets, we should encourage pension entities to invest in the capital market. As it stands, pension regulators in most CEE countries try to discourage pension entities (by setting up limits) from investing abroad as well as in domestic equity markets. The problem is, limiting local equity investments causes less demand on the market, which in turn will cause more volatility and higher risk. And risk is exactly what pension regulators would want to avoid.

The other side of the problem is investing abroad.



This graph is similar to the previous – it tells us the ratio of foreign investments (both equity and fixed income) to total investments in both pension sectors of all CEE countries. The chart tells us two things instantly. Firstly, that with the exception of Baltic countries, foreign investment is well under 10 % for all CEE countries. Secondly, that there is a difference in the proportion of foreign investment between pillars in most countries, but that it does not change the generally similar pattern for countries.

The first observation is further refined by the previous explanations on Estonia – if EU investments are considered less risky by Estonian pension funds because they contain no currency risks, the ratio of non-EU foreign investments is 17 and 15 % for second and third pillar funds. This is considerably lower level of risk, but is still above of those in other CEE countries. It is still valid therefore to say that foreign currency risk (as well as other foreign market risks such as country risks) for most CEE pension funds are around 5 %, while in the Baltic States it is over 10 %.

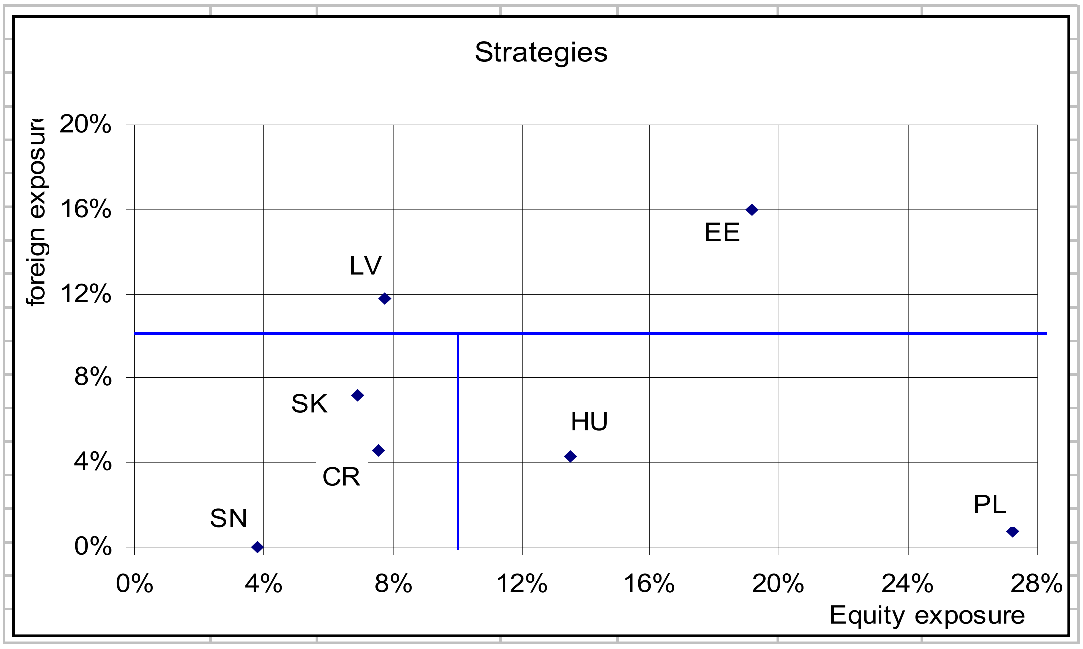
The second observation is underscored by the fact, that although Latvian second pillar funds (as always) are a separate issue, in Estonia, the sectors are both different from the rest of the region, regardless of their different nature. In the other countries with both pillars, Slovenia have no foreign risk in either pillar, while in Hungary and Poland the two sectors are different by around 1 – 1,5 percentage points.

Conclusions

In summary, when defining pension fund strategies in the Central and Eastern European region, both second and third pillar pension entities of these countries behave similarly. The Czech Republic, Slovakia and Slovenia have pension funds that operate within the most strictly regulated environment, and they are the pension entities that have tried to limit their market risk furthest as well. These 3 countries followed what we called an „overall risk averse strategy".

As we have previously concluded, Polish pension funds follow what we have called a „domestic risk strategy". The amount of domestic equity risk is high, but foreign exposure is very limited. To a lesser extent, Hungarian pension funds can be classified in this group – or somewhere between this group and the previous.

Estonian and to some extent Latvian pension funds have followed a „foreign risk strategy". They have above average foreign exposure compared to other CEE countries, due to the limited domestic markets. Estonia also has a relatively high equity exposure as well, while Latvian pension funds are more risk averse on that front. Latvian pension funds are – similarly to Hungarian pension entities – are between the overall risk averse and the foreign risk strategies.



These three types of strategies are to be understood within relatively young market conditions, with both market actors and regulators lacking the benefits of a long history of market activity. This accounts for some regulations and also market practice that may be seen as overly conservative from the point of view of an outside analyst. The constraints of small markets and limited experience are offset by the initial enthusiasm for a new system (both in the case of members and managers of pension plans). We are still in the accumulation period, asset growth is high (contributions are relatively high compared to total assets) and in a DC system, this is a moderately safe period for the pension market.

These emerging markets however have some drawbacks for analysts – our attempt to collect data on long term investment strategies, investment policies and benchmark related issues were less successful, as were some enquiries regarding service providers in the sector. The level of transparency in the sector has some room for improvement in most of the CEE countries, and on the eve of EU accession, we are quite optimistic.

Appendix

Here is a list (incomplete) of the people we would like to thank for helping us with their expertise and of literature (web sites and publications) that we used to compile all the information in this report.

'The Red Book' – International Pension Funds and their Advisors 2002, Aspire - IPE Investment & Pensions Europe

www.imf.org
www.worldbank.org
www.inprs.org
www.sourceoecd.org

Some country specific sites and contacts:

The Czech Republic:
www.apfcr.cz
www.pse.cz

Petr Benes (CSOB Pension Fund)
Michal Stuchlik (HVB Bank)
Arjen van Zanten (ING Bank)
Kamila Horackova (Credit Suisse Asset Management)
Peter Svoboda (Generali)

Estonia
www.pensionikeskus.ee
www.fi.ee
www.hex.ee

Kadi Oorn (Ministry of Finance)
Angelika Koha (Estonian Financial Supervision Authority)
Priit Kilemit (Estonian Financial Supervision Authority)
Kaidi Oone (Estonian CSD)
Robert Kitt (Hansa Investment Funds)
Tönno Vahk (LHV)

Hungary
www.pszaf.hu
www.bet.hu

Zoltán Vajda (HFSA)
Mihály Erdős (HFSA)
Péter Holtzer (OTP Fund Management)
Zsolt Kovács (ING Investment Management)
Péter Schuszter (Generali Fund Management)
Lilla Jurányi (ING Bank)

Latvia
www.fktk.lv
www.rfb.lv

Ludmila Vojevoda (Financial and Capital Market Commission)
Irina Ivanova (Financial and Capital Market Commission)
Kristians Mikelsons (IS Hansa Fund Management)

Lithuania
www.lsc.lt
www.socmin.lt
www.nse.lt

Vilija Nausedaite (Securities Commission)

Poland
www.knuife.gov.pl
www.wse.com.pl

Slawomir Solarz (KNUiFE)
Wojciech Wyszynski (KNUiFE)
Jaroslaw Jamka (ING Pension Fund)
Radek Ignatowicz (BPH PBK)

Slovakia
www.uft.sk
www.bsse.sk

Július Tomka (Financial Market Authority)
Julia Steflikova (Financial Market Authority)
Andrej Koleda (Ministry of Finance)
Arjen van Zanten (ING Bank)
Zuzana Horakova (HVB Bank)

Slovenia
www.uvi.si/eng/slovenia/background-information/pension-system/
www.a-tvp.si
www.a-zn.si
www.ljse.si

Jasna Stankovic (Securities Market Agency)
Jurij Goriek (Insurance Supervision Agency)
Branko Miklavic (Bank Austria Creditanstalt)