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ABSTRACT AND KEYWORDS	
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Abstract

Latvian employees have to choose a pension fund for the second-pillar of the Latvian pension system. These pension funds invest about 85% in domestic assets. In this paper, we address the question why this strong home bias might exist. Firstly, we conclude that the Latvian pension law is strict on international diversification. However, not to the extent that it can fully explain the home bias. Secondly, our empirical analysis suggests that international diversification lowers investment risks for Latvian (pension) investors. Thus, it seems hard to explain the home bias of Latvian pension funds by lack of diversification benefits. Thirdly, Latvian pension fund managers might have more (private) information about Latvian companies than international companies. Therefore, they might prefer to invest more domestically to add more value for their clients. Finally, Latvian employees might have a strong preference to invest in companies they are familiar with. Since we are not aware of any research on the latter two topics, we can only speculate that currently many investment policies are suboptimal for Latvian employees saving for retirement. We expect the Latvian pension industry to develop new products that reduce risk by allowing for more diversification. In addition, we recommend Latvian employees to pay attention to the investment policy of their pension fund and think carefully about the rewards, risks, and costs that are involved.

JEL classification: G11, G15, G23, G28

Keywords: Emerging markets, Home bias, International investing, Pension funds

1. Introduction

Latvia has, like several European countries, a three-pillar pension system. The first pillar is the state pension that is paid by current tax-payers (a pay-as-you-go system). The second pillar is a (mandatory) funded system, which means that employees individually save part of their 20% social security tax while they are working for their retirement. From 2001 to 2006, 18% of the social security tax is used for the first pillar pensions and only 2% for the second pillar, but after 2006 this slowly changes and from 2010 on 10% is used for both pillars. This increase in second pillar payments makes it of vital importance that Latvian citizens get the opportunity to invest in products that optimally balance risk and reward for long-term pension savings. In the third and last pillar, individuals are given certain tax benefits that give them the incentive to save for their pension in addition to the first two pillars. For a more detailed analysis on the historic developments of the Latvian pension system, see Fox and Palmer (1999) and Müller (2002).

The Latvian Finance and Capital Market Commission (Finanšu un Kapitāla Tirgus Komisija, henceforth FKTK), which is the supervisory authority for pension funds, gives aggregated information about the pension plans each quarter. For example, they indicate that at the end of 2004, 85% of the second pillar (state-funded) pensions are invested in Latvian securities. This is only a slight decrease compared to the end of 2003, when 89% was invested in Latvia. The geographical dispersion of investments for the third pillar (private) is similar to that of the second, as 79% is invested in Latvia at the end of 2004, down from 86% at the end of 2003.¹ In this paper, we would like to investigate the rationale behind such large a fraction of investments staying within the borders of Latvia. We provide arguments that indicate this is not in the best interest for Latvian citizens who aim for a solid retirement income.

The setup of this paper is as follows. In order to get an idea about the Latvian pension system, we start by describing the characteristics of the Latvian pension system in Section 2. In Section 3, we analyze arguments why it would be optimal for Latvian pension funds to be invested so much in Latvian securities. In Section 4, we conclude with policy implications for institutions offering Latvian pension plans as well as Latvian citizens about the optimal choice of their pension plan.

2. Characteristics of the Latvian pension system

The Latvian pension system consists of three distinct pillars. The first pillar is a pay-as-you-go system in which current employees pay for the pensions of current pensioners. In the second and third pillar employees save for their own retirement through individual pension savings accounts. The second pillar is mandatory and currently 2% of 20% social security tax is invested in the second

¹ Source: Financial and Capital Market Commission, "Management of State-funded Pension Scheme Assets, 4th quarter 2004".

pillar. After 2006, the second pillar payments increase as a proportion of income until 10% is reached after 2010. This increase means that the choice of each Latvian citizen in which pension fund to invest becomes more important in the coming years. In this paper, we would like to assess the current choices Latvian citizens have among pension plans and which have the best characteristics for long-term pension investing. Our paper might also be valuable for the Latvian investment community for the development of new pension products.

At the end of 2004, the second pillar has more than 600,000 participants – this is more than 25% of the total Latvian population. These participants may choose among 19 different investment plans², of which 1 is offered by the state treasury and 18 by the asset management industry. From these 19 plans, 7 are considered conservative, 3 balanced, and 9 active. At the end of 2004, the second pillar in total has LVL 48 million (EUR 70 million) assets under management. This means that on average each participant has LVL 80 (EUR 115) of pension savings. While this amount is currently fairly low, this is expected to grow rapidly when the 2% of social security tax invested in these plans is increased to 10% in 2010.

For third pillar investments, there are 5 pension plans available to Latvian citizens. At the end of 2004, about 39,000 people participated in this voluntary pension savings. The total assets under management of the third pillar is LVL 27 million (EUR 39 million), or LVL 700 (EUR 1,000) per individual. We expect that people who are saving voluntarily are among the higher paid and therefore the per individual amount is substantially higher than for the second pillar savings.

An overview of the available pension plans can be found in Table 1. The pension plans are divided into three risk levels. The safest mix – conservative – contains 8 plans. These plans mainly invest in Latvian fixed-income securities. The 4 plans with medium risk are considered to have the balanced style. Generally, these plans are allowed to take small equity positions and invest a small part outside of Latvia. 10 plans have the most risky investment style – active. Generally, these funds can take more equity positions and invest more internationally. On average, the active plans have higher fund management costs (average: 1.70% per annum) than balanced and conservative plans (averages: 1.46% and 1.40% per annum, respectively). The state-run pension fund has the lowest management cost of 0.75% per annum. Table 1 also shows that within most asset management companies, the funds with the highest management costs are the most popular among pension investors.³

² At the end of 2004, the total number of pension plans was 19. Since three new plans opened in the first quarter of 2005, the total has increased to 22. See www.manapensija.lv.

³ According to the annual report of the State Social Insurance Agency (Valsts Sociālās Apdrošināšanas Aģentūra, VSAA) the number of participants in the state-run pension fund has decreased from 52% in 2003 to 34% in 2004. On the other hand, the number of participants in the category active pension funds has increased from 36% to 52% from 2003 to 2004.

We can also see that 14 out of the 22 plans have total assets-under-management below LVL 1 million. For such relatively small pension plans it might be much more costly to diversify their portfolio over different securities. When investors are aware that the size of a pension plan might cause suboptimal asset allocation, they might choose for a large pension plan that is able to better match their preferences.

Table 1: Overview of Latvian pension plans

The bonds/equity and domestic/foreign proportions contain the quoted prospectus information rather than actual investment behavior. The prospectus quotes often refer to these allocations as maximum in equities or maximum in foreign securities. The costs are the quoted fees from the prospectus as a percentage of assets under management. The style refers to one of the three investment styles required by the FKTK. The safest style is “conservative”, the most risky style is “active”, and in between these two is “balanced”. The fund size refers to the assets under management (in LVL million) as published by www.manapensija.lv on 12 July 2005.

	Bank name	Plan name	Bonds/Equities	Domestic/Foreign	Costs	Style	Size
1	Astra	Classic	100/0	70/30 [#]	1.395	Conservative	0.71
2	Astra	Extra	70/30	70/30	1.895	Active	0.58
3	Baltikums	Conservative	100/0	70/30	1.460	Conservative	0.12
4	Baltikums	Universal	70/30	70/30	1.710	Active	0.17
5	Hansa	Stability	100/0	70/30 [#]	1.480	Conservative	3.67
6	Hansa	Dynamics	70/30	70/30 [#]	1.930	Active	20.85
7	LVA	Daugava	100/0	70/30	1.375	Conservative	0.67
8	LVA	Venta	85/15	70/30	1.450	Balanced	0.06
9	LVA	Gauja	70/30	70/30	1.500	Active	0.10
10	Nord/LB	Conservative	100/0	70/30*	1.480	Conservative	0.01
11	Nord/LB	Balanced	85/15	70/30*	1.580	Balanced	0.12
12	Nord/LB	Active	70/30	70/30	1.780	Active	0.28
13	Parekss	Universal	100/0	70/30	1.250	Conservative	1.66
14	Parekss	Active	70/30	70/30	1.500	Active	8.22
15	SEB	Latvia	85/15	100/0	1.300	Balanced	0.38
16	SEB	Balanced	85/15	70/30	1.500	Balanced	2.29
17	SEB	Europe	70/30	70/30	1.700	Active	1.80
18	SEB	Active	70/30	70/30	1.700	Active	8.56
19	Suprema	Riviera	70/30	70/30	1.630	Active	0.03
20	Suprema	Jurmala	100/0	90/10	1.380	Conservative	0.00
21	Suprema	Safari	70/30	70/30	1.630	Active	0.05
22	Government	Treasury	100/0	100/0	0.750	Conservative	15.59

[#] at least 50% and at most 70% is invested in Latvia

* at least 70% invested in Latvia, European Union or European Economic Zone countries

Most noticeable in these plans is that Latvian citizens that would like to benefit from international diversification have limited opportunity to do so. The FKTK indicates that at the end of 2004 about 85% of second pillar pension investments were in Latvian securities. This favor for domestic securities is different in many other countries. In Lithuania, for example, the pension schemes invest about

74% in international securities.⁴ Estonian mandatory pension funds invest about 15% in Estonian securities and 22% in the Baltic area.⁵ Thus, pension funds in the other Baltic countries have substantially different asset allocations.⁶ In the next section, we would like to investigate why Latvian pension funds tend to invest more in their home country.

3. Why don't Latvian pension funds diversify more internationally?

The central question in this paper is the empirical observation from the previous section that an unusually high percentage of Latvian pension investments are domestic. In this section, we investigate four possible explanations. These are (A) strict pension fund regulation, (B) small international diversification benefits, (C) local fund manager expertise, and (D) investor preference. We analyze each of these four possible explanations in detail below.

A. "Latvian regulation does not allow substantial international investments"

Latvian second-pillar pension funds are subject to the regulation from the Law on State-Funded Pension Funds, which is supervised by the Latvian Financial and Capital Markets Commission. The regulation with respect to investments has changed on 1 July 2005. Before this date, Article 12 sub 3 (1) of the law stated that the pension fund could only invest up to 30% of their portfolio in currencies other than the one in which the pensions are to be paid:

"the funds of the scheme may be invested in currencies unmatched to the obligations if total amount of such investments does not exceed 30 per cent of the assets of the investment plan".⁷

Since Latvian pension funds receive contribution and promise payments in Latvian Lats, this law effectively restricted investment abroad to 30% of the portfolio.⁸

After July 2005, this law has been amended. Article 12 now states that the Euro is considered to be equivalent to the Lat. This seems a natural step forward, since Latvia has joined the EU in 2004 and the Latvian Central Bank has pegged

⁴ Source: Lithuanian Securities Commission, "Investment portfolios managed by management companies: Overview as of 29 April 2005".

⁵ Source: Finantsinspektion, "Geographical breakdown of mandatory pension funds investments, 30.06.2005".

⁶ The observation that the home bias is substantially less severe in Estonia and Lithuania could be the outcome of different paths towards the current pension system in these countries. Tavits (2003) explains why it might be optimal for similar countries to choose different policies for reforms and illustrates this by a comparison of the pension reform in Latvia and Estonia.

⁷ According to Article 18 sub 5(b) of 2003/41/EC European pension fund regulators are not allowed to restrict pension funds to invest more in domestic markets than 70%.

⁸ The limitation is apparently not designed just to eliminate currency risk, as foreign investments with a currency hedge to the Latvian Lat are still considered foreign investments and fall within the 30% limit.

the Latvian Lat to the Euro at the end of 2004, eliminating a substantial part of the currency risk relative to the Euro. This amendment to the law means that there are no more restrictions to the Euro zone markets and thus new opportunities for international diversification open up.

This new pension fund regulation is more European style in the sense that it relies more on the “prudent person rule” than pure quantitative restriction on investment categories. This is in line with the European directive for pension funds (2003/41/EC):

“As very long-term investors with low liquidity risks, institutions for occupational retirement provisions are in a position to invest in non-liquid assets such as shares as well as in risk capital markets within prudent limits. They can also benefit from international diversification. Investments in shares, risk capital markets and currencies other than those of the liabilities should therefore not be restricted except on prudential grounds.”

The new regulation opens up opportunities for international diversification in second-pillar pension products, which was limited in the past. However, by looking purely at the data we can see that pension funds failed to fully diversify their portfolios internationally to the limits set in the law. While the limit on international investing was 30% of the portfolio, foreign investments made up only 15% of the portfolio. The conclusion to draw here is that even though the regulation seemed to be restrictive, it was the actual investment policies of the pension funds themselves that limited international diversification.⁹ So the answer to the question why pension funds do not invest more internationally must lie in a different argumentation than the pension fund regulation.

B. “Diversification benefits from international investing are small”

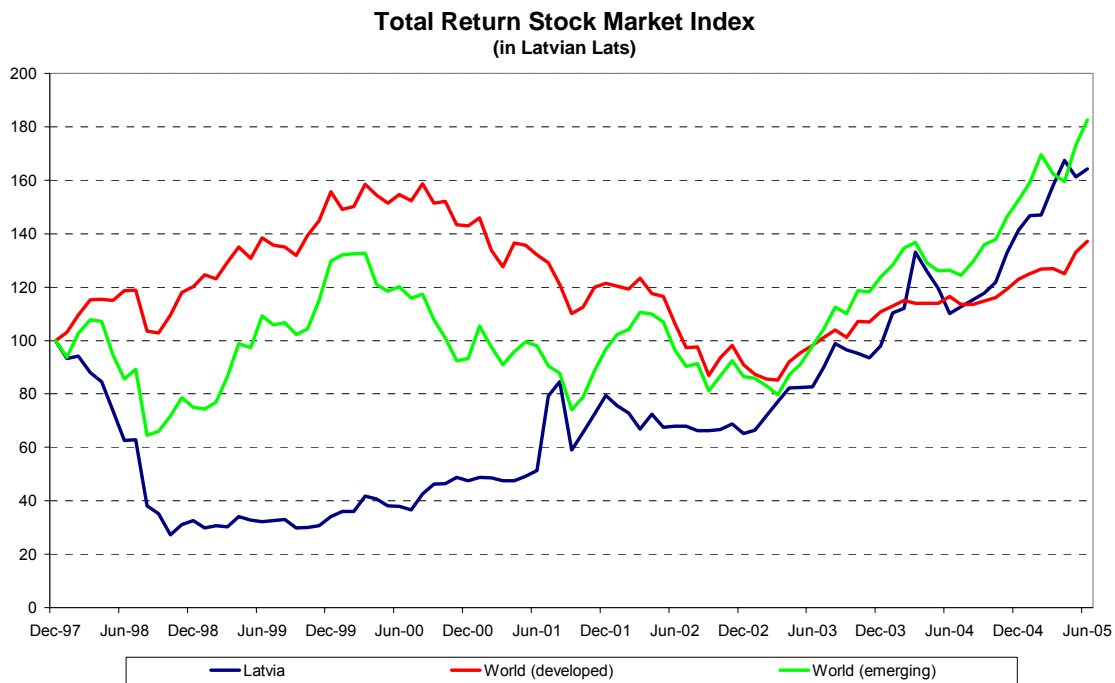
The classical work by Markowitz (1959) indicates that investors should diversify their investment portfolio in order to reduce risk while maintaining the same level of expected future investment returns. Since then, many academics have urged investors to also diversify their investment portfolio internationally. If the domestic stock or bond market index declines, the investor might still profit from well-performing international markets. In a recent paper, Goetzmann, Li and Rouwenhorst (2005) analyze the opportunities for international diversification since 1850. While possible diversification benefits have eroded in the last 30 years because of globalization, they conclude that it still pays off to spread an investment portfolio geographically. Driessen and Laeven (2003) conclude that

⁹ This result is not driven by the state-run pension fund that only invests in Latvian government bonds. An assets-under-management weighted average of the maximum foreign investment limits indicates that 23% of assets could be invested outside Latvia, while we observe only 15% in practice. This latter percentage indicates that on average, private pension funds that are allowed to invest 30% abroad take positions of 20%. Because of the volatility in stock and bond markets, fund managers are likely to invest somewhat below the maximum of 30%. However, we believe that the 10%-points difference is too large to be fully explained by this reason.

international diversification is most beneficial for investors from developing countries.¹⁰ They emphasize that idiosyncratic country risk is usually high and correlation of the local stock market with the world market is relatively low.

Figure 1: Total return stock indices 1998-2005

The Latvian and World emerging markets stock index is the S&P/IFC Latvia and S&P/IFC Emerging markets total return index and the developed world market is the MSCI World total return index. All indices are converted to Latvian Lats.



In order to investigate the diversification benefits empirically, we use international equity return data. For the Latvian stock market, we use the S&P/IFC Index. For equity returns of worldwide developed equity markets, we use the MSCI World total return index. The S&P/IFC Emerging markets index represents global emerging markets investment returns. Figure 1 shows the path these indices followed over the sample period 1998-2005. In Table 2 below, some statistics from these return data are displayed.

We observe that Latvia had a higher return over the period 1998-2005 than Europe, North America, and the Pacific with 6.8% per annum. Global emerging markets performed slightly better than Latvia. We observe that the risk associated with investing in the Latvian stock market is high if we look at the volatility and maximum quarterly loss. The volatility of the Latvian stock market over the period 1998-2005 was 34.8%, almost double the 19.3% of the world

¹⁰ Gilmore and McManus (2002) indicate that US investors can obtain substantial diversification benefits from investing in Eastern European equity markets. If we take the perspective of an investor from Eastern Europe, we expect this implies that investing in the US gives diversification benefits.

equity markets. The maximum quarterly loss in the Latvian stock market was 44.1% (3rd quarter of 1998), substantially more than any of the other assets listed in Table 2. We observe that correlation with developed equity markets is low with 0.17 for correlation with the world market. This indicates that substantial gains can be expected from international diversification. The highest correlation is with emerging markets, 0.43. The Latvian stock market, being an emerging stock market itself, is influenced by the general appetite for investing in emerging countries.

Table 2: Descriptive statistics of stock return indices 1998Q1-2005Q2

The indices are so-called total return indices, which means they are inclusive of dividend returns. All returns are converted to Latvian Lats. The average returns are geometric and annualized. Volatility is estimated using (non-overlapping) quarterly data, and then annualized. The minima and maxima are quarterly. Correlation with the Latvian stock market is estimated using (non-overlapping) quarterly data.

Market	Average	Volatility	Minimum	Maximum	Correlation
Latvia	6.8%	34.8%	-44.1%	36.0%	1.00
Europe	5.5%	21.6%	-22.9%	21.3%	0.13
North America	4.1%	20.0%	-18.3%	18.0%	0.15
Pacific	3.5%	20.7%	-20.5%	21.5%	0.24
World developed	4.3%	19.3%	-18.4%	18.1%	0.17
World emerging	8.4%	30.4%	-24.5%	30.6%	0.42

In order to show the potential benefits from international diversification, we formed several portfolios and analyzed their historical return behavior. To keep things simple, we assume that expected equity returns for developed stock markets are 8% in the future, while emerging markets equities have an expected return of 9%. This “emerging markets premium” of 1% could be a reward for investors bearing undiversifiable emerging markets risk.

Figure 2: Relation between volatility and expected return

We assume that developed and emerging equity markets have an expected return of 8% and 9%, respectively. The volatilities of the portfolios are estimated using quarterly data over the period 1998-2005.

Relation between volatility and expected return

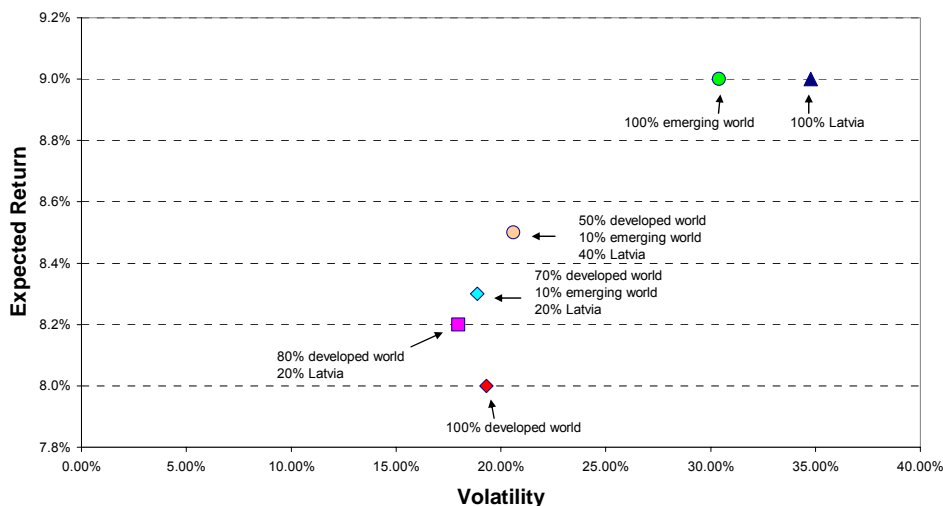
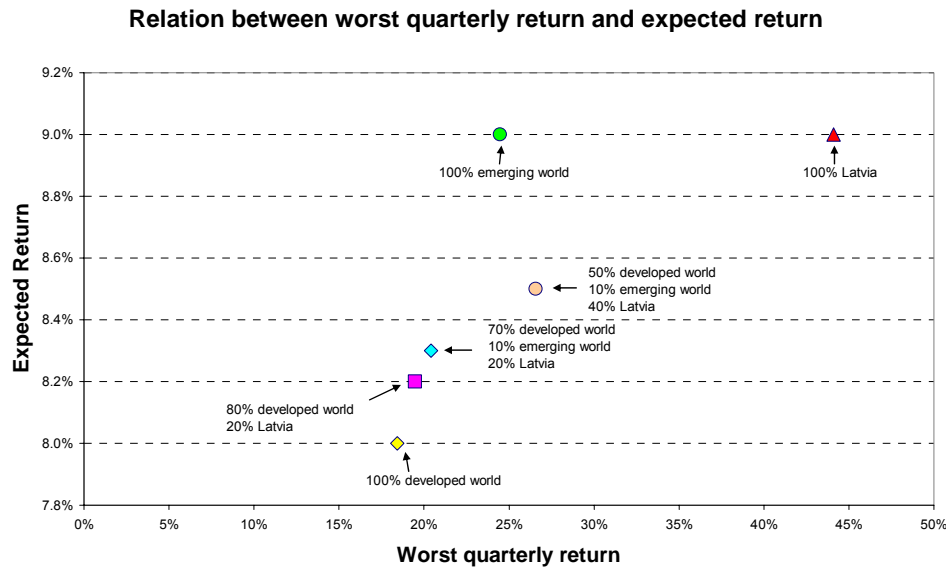


Figure 2 shows the expected portfolio returns versus the empirical volatilities measured as standard deviations from the return series. Figure 3 uses the worst quarterly return as a measure of downside risk. These figures indicate that given our assumptions investing only in the Latvian stock market is inefficient. Risk can be reduced while maintaining the same expected return by investing in global emerging markets equity. Risk can be reduced even further by diversifying in developed equity markets. For example, the portfolio with 80% invested in the developed world equity portfolio and 20% in Latvian equity has the lowest volatility in Figure 2. The worst quarter of the developed world equity portfolio has been less distressed than all other portfolios displayed in Figure 3. The conclusions that can be drawn from these figures is that risk can be reduced substantially by investing abroad. Thus, we find no evidence that Latvian investors would not benefit from geographical diversification.

Figure 3: Relation between worst quarterly return and expected return

We assume that developed and emerging equity markets have an expected return of 8% and 9%, respectively. The worst quarterly returns of the portfolios are estimated using quarterly data over the period 1998-2005.

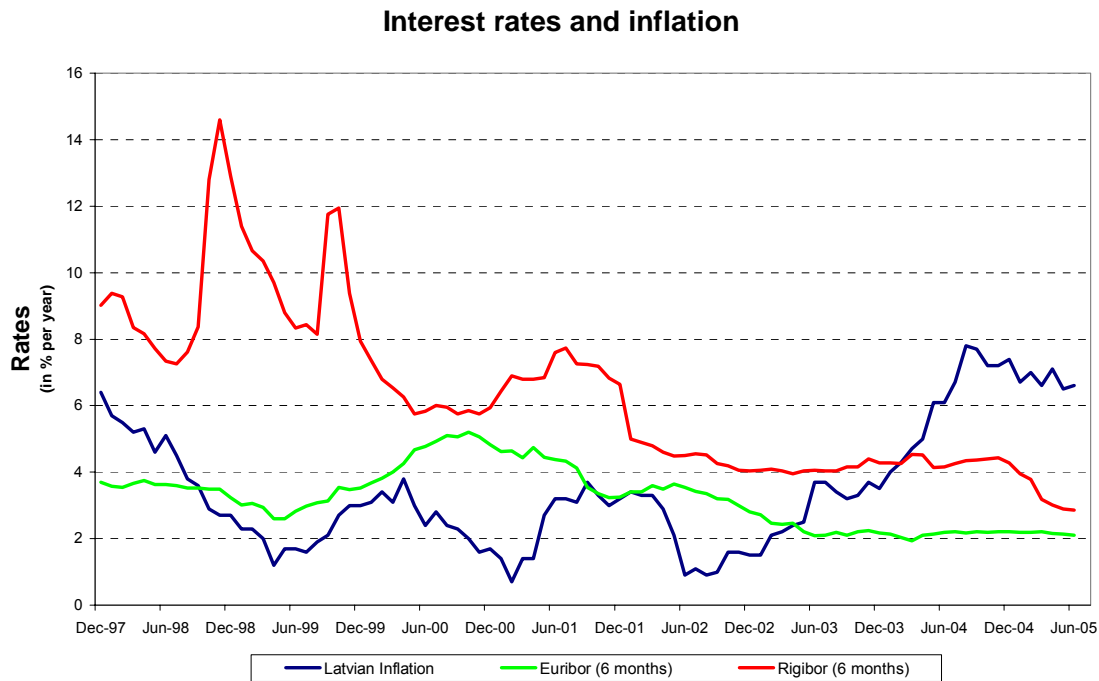


Above we have seen that based on historical data investing in international securities is in general less risky than investing in one country or region. In addition to these quantitative arguments, we would also like to emphasize a qualitative or economic line of reasoning. If – due to whatever unforeseen circumstance – the Latvian economy will perform poorly in the future, this would probably imply that many Latvian companies are in difficulty and some would probably default. In such occasion, many Latvian citizens would not only lose their jobs, they would also lose much of their pension savings because the Latvian security market as a whole would render little return. This situation can be compared with the employees from Enron, an energy company from the United States that defaulted in 2001. Many employees bought equities of Enron with the money they received for their pension savings. When Enron defaulted because of an accounting scandal, many lost their jobs and entire pension savings; see, e.g., Kaplan (2004). These employees learned the hard way that lack of diversification in retirement savings can be hazardous to your financial wealth.¹¹

¹¹ Latvian and European regulation does not allow large investments in one specific company in pension funds, as this is generally not considered to be in line with the 'prudent person rule'. For details on the Latvian regulation, see Article 12 sub 2.

Figure 4: Comparison of Latvian and European interest rates and inflation

In this graph we plot the six-month Rigibor interest rate. The data is taken from the website of the Bank of Latvia, www.bank.lv. The European interest rate is before 1999 the German interest rate, both are taken from Thomson Financial Datastream. The inflation rate is the harmonized inflation as published by Eurostat.



For investments in domestic bonds versus international bonds, the situation is slightly different than for stock markets. Firstly, domestic bonds might be a better hedge against domestic risks such as inflation pressure. The aim of retirement savings is to be able to maintain consumption while labor income is not present. Therefore, robustness with respect to local inflation is important for an investment strategy. There is, however, not a clear relation between inflation-protected benefits and the local interest rate. For example, in Figure 4 we plot the Latvian interbank interest rate and Latvian price inflation. It can be seen that correlation between these two is far from perfect. In the beginning of the sample, interest rates move up while inflation goes down. This can be explained by the banking crisis that hit Latvia in 1995 and the negative market sentiment after the Russian financial crisis in 1998. In the middle of the sample, Latvian inflation and interest rates move together. After joining the European Union, inflation in Latvia has gone up rapidly, while interest rates have converged to the lower European average. Thus, solely investing in Latvian bonds does not protect the pension investor against adverse movements in purchasing power.

Secondly, the Latvian government's credit rating allows for a higher yield on Latvian government bonds than European government bonds. However, this higher bond yield reflects a higher default risk for the investor. Therefore, geographical diversification in government bonds with similar credit rating decreases issuer-specific credit risk while maintaining the same yield. Again, this

argument does not seem to be convincing to restrict pension investments to local bonds only.

C. *“Fund managers have more information about local stocks”*

In many countries, mutual fund or pension fund managers have a strong home bias; see French and Poterba (1991) and Davis (2002). This can be rational for at least two reasons. First, the Latvian stock market as a whole might have a higher (risk-adjusted) expected return than international stock markets. Second, within the Latvian stock market, Latvian pension fund managers are better able to select the companies that will outperform in the future.

The expected (risk-adjusted) performance of the Latvian stock market as compared to international and/or developed stock markets might be higher than international stock markets. This could be due to the higher undiversifiable risk involved with investing in Latvian stocks. When this return expectation is high, the risk-return tradeoff might favor a large proportion in Latvian stocks. As we learned from Section 3.B, the expected additional return should be high in order to compensate for the additional risk that is taken by investing only domestically.

Fund managers might also have a close connection to the local companies and therefore have superior information about future investment returns. Coval and Moskowitz (1999) investigate the behavior of investment managers in the US and conclude that within the US mutual fund managers have a preference for stocks of companies with a nearby headquarter. Ivkovic and Weisbenner (2005) suggests that private investors in the US also invest more in stocks from companies with a nearby headquarter. They find these investors are able to invest successfully in these local companies, recording an abnormal 3.2% per annum excess return. Their results indicate that this bias towards local firms is even larger for firms that are not followed by many analysts.

Since international fund managers know less about the Latvian market, it could very well be that Latvian mutual funds or pension funds can add more value to their clients by actively trading Latvian companies instead of international companies. As far as we know, little is known about the investment performance of Latvian mutual or pension fund managers in comparison with foreign managers operating in the Latvian stock market. This could be a fruitful area for future research.

D. *“Latvian employees favor investments in familiar Latvian companies”*

Several authors have claimed that investors prefer to invest in local companies rather than far away companies; see e.g. Huberman (1999). He states that people tend to like what is familiar to them. For example, they cheer for the local sports team and invest in companies they see when driving around in their neighborhood. Kalsson and Norden (2004) investigate the determinants of

Swedish individuals preferring domestic investors for their pension assets. Their results suggest that individuals that are male, not-wealthy, older, work for the government, and have no experience with risky investments before choosing the pension plan are most likely to favor domestic investments above foreign ones. Grinblatt and Keloharju (2001) investigate the investment behavior of the Finnish population and conclude that Fins are more likely to invest in firms located near them.

Since we are not aware of any study investigating the preferences of Latvian (pension) investors, we cannot claim that Latvian investors prefer investments in companies that are located near them. However, we can examine the revealed preference of Latvian pension investors. In other words, we can compare the assets under management for the existing funds. We conclude that the most popular pension funds (excluding the state-run pension fund) are the Hansa Dynamics fund (LVL 20.5 million), the SEB Active fund (LVL 8.1 million), and the Parekss Active fund (LVL 8.1 million). While there might be other reasons for investors to prefer these three funds over the other funds, we note that these three funds are allowed to invest up to 30% of their capital in foreign markets. This observed behavior indicates that Latvians are not adverse against investing at least part of their long-term pension savings internationally to protect them against an economic or financial crisis in Latvia.

Hence, it seems that the most popular pension funds are among the ones with the highest international exposure. Perhaps new pension products that are even more internationally diversified, to give Latvian citizens the opportunity to fully benefit from geographical diversification, will become more popular in the future.

4. Conclusion and policy implications

In this paper we investigate why Latvian pension funds are seeking relatively little international exposure in their choice of assets. We analyze four hypotheses that might explain this behavior. First, we show that the Latvian regulator is not restricting Latvian pension funds to invest more internationally. Second, our empirical findings suggest that equity portfolios that are diversified internationally exhibit less risk than all-Latvian portfolios. This rules out the explanation that diversification benefits are too small. This leaves open two possible explanation that are hard to estimate given the data available to us. Perhaps Latvian pension fund managers have much more knowledge about local companies and therefore are superior investors in the Latvian stock market compared to international markets. Last but not least, Latvian citizens might favor pension funds that invest more in companies they are familiar with. This last argument seems hard to reconcile with the observation that the most popular pension funds among the most internationally diversified funds currently available to Latvian citizens.

This last observation might give the incentive to the Latvian investment community to bring new pension plans that are more internationally diversified.

The next step for Latvian pension funds would be to offer funds that in addition to geographical diversification, also invest in alternative asset classes such as commodities, hedge funds, high yield bonds, or private equity. In any case, we would advise Latvian employees to carefully examine the investment policy and managing costs of pension funds before choosing the one that suits them best. History has shown that ignorance on investment policies might lead to financial discomfort at the desired retirement age.

References:

Coval, J.D., and Moskowitz, T.J., 1999, "Home bias at home: Local equity preference in domestic portfolios", *Journal of Finance*, 54(6), 2045-2073.

Davis, Ph., 2002, "Pension fund management and international investment – A global perspective", *Pensions Institute Discussion Paper*, PI-0206.

Driessen, J., and Laeven, L., 2003, "International Portfolio Diversification Benefits: Cross-Country Evidence", in *Globalization and National Financial Systems*, J. Hanson, P. Honohan, and G. Majnoni (eds.), Chapter 7, World Bank, Oxford University Press.

Fox, L., and Palmer, E., 1999, "Latvian pension reform", *World Bank Social Protection Discussion Paper Series*, No 9922.

French, K.R., and Poterba, J.M., 1991, "Investor diversification and international equity markets", *American Economic Review*, 81(2), 222-226.

Gilmore, C.G., and McManus, G.M., 2002, "International portfolio diversification: US and central European equity markets", *Emerging Markets Review*, 3(1), 69-83.

Goetzmann, W., Li, L., and Rouwenhorst, K.G., 2005, "Long-term correlations", *Journal of Business*, 78(1), 1-38.

Grinblatt, M., and Keloharju, M., 2001, "Distance, language, and cultural bias: The role of investor sophistication", *Journal of Finance*, 46, 1053-1073.

Huberman, G., 2001, "Familiarity breeds investment", *Review of Financial Studies*, 14(3), 659-680.

Ivkovic, Z., and Weisbenner, S., 2005, "Local does as local is: Information content of the geography of individual investor's common stock investments", *Journal of Finance*, 60(1), 267-306.

Kaplan, R.L., 2004, "Enron, pension policy, and social security privatization", *Arizona Law Review*, 46(1), 53-90.

Karlsson, A., and Norden, L., 2004, "Home sweet home: Home bias and international diversification among individual investors", *EFA 2004 Maastricht Meetings Paper*, 3363, <http://ssrn.com/abstract=559947>.

Markowitz, H., 1959, *Portfolio selection: Efficient diversification of investments*, John Wiley, New York, United States.

Müller, K., 2002, "Old-age security in the Baltics: Legacy, early reforms, and recent trends", *Europe-Asia Studies*, 54(5), 725-748.

Tavits, M., 2003, "Policy learning and uncertainty: The case of pension reform in Estonia and Latvia", *Policy Studies Journal*, 31(4), 643-660.

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