

**Master's Thesis in Finance
Stockholm School of Economics**

Capital Insurances

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Abstract

Most people strive to get as high return as possible on their investments and individuals want to have as much money left after taxes and fees as possible. Because of this I have investigated how capital insurances, which are marketed as a tax efficient form of saving, can be used to optimize the net return of an investment. I have looked into this through both theoretical and replicated investments. The thesis shows that for high returns there are significant benefits of using a capital insurance instead of making a direct investment but that the benefits are significantly lower if a high cost broker is used compared to a low cost broker.

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1. Introduction

Most individuals strive to get the highest possible return on their investments, with as little risk as possible involved. One obvious way to increase the after tax return on an investment is to pay less tax. An easy and increasingly common way to achieve this is by making the investments through a capital insurance (Kapitalförsäkring). Since banks and other institutions lately have put a lot of effort into marketing and selling capital insurances this is something that have become increasingly popular. The capital gains tax in Sweden is 30% but if you place your investments in a capital insurance instead of paying a tax on your capital gains you pay a yearly fee on the value of the insurance. This fee is today about 1% of the value of the capital insurance on the first of January each year.

With new internet based low cost brokers like Avanza and Nordnet which have lower costs and removed a lot of the fees surrounding capital insurances in combination with the possibility to make free "partial repurchases", capital insurances have regained popularity over the last years. A partial repurchase is what it is called when you take money out of the insurance without selling it. Earlier the main reason to use capital insurances was to reduce the "inheritance and gift taxation", something that is not necessary now since those taxes have been removed in Sweden since December 17 2004. The original decision was to abolish these taxes on the first of January 2005 but was changed due to the Tsunami disaster in Thailand.

The money invested in capital insurances has increased from about 20 billion SEK in 2006 up to 40 billion in 2007 and in 2008 about 52 billion SEK was invested in capital insurances. In total there are now more than 250 billion SEK invested in capital insurances in Sweden. There are different investment opportunities depending on what broker you use, however it is almost always possible to invest in Swedish stocks and a number of Swedish Mutual funds. In some cases you can even invest in derivatives through the capital insurance. About 40% of the money invested into capital insurances are invested in mutual funds.

1.1. Purpose and contribution

There are five purposes of this thesis. First I describe the regulations of capital gains tax in Sweden. Second I show how it is possible to minimize the costs associated with capital gains. Third I examine the thresholds where it is more advantageous to invest in a capital insurance instead of a direct investment in stocks. Fourth I investigate the long run difference between saving in a capital insurance and a direct investment in stocks, given current regulations and for different investment lengths. Finally I will analyse the changes in value of capital insurances surrounding the day which the annual fee is based on to see if this is a good strategy.

The contribution of this thesis will be that I investigate the threshold for saving in an capital insurance in Sweden and second that I make a historical investigation of the actual difference in tax of a investment in stocks with and without a capital insurance.

1.2. Outline

I will start by explaining the institutional framework surrounding capital insurances. Then I will examine when they are better to use then a direct investment. I will also show the difference of using a capital insurance and direct investment in stocks over the years 2004 - 2008 given today's regulations. Finally I will discuss the findings that I have done when writing this thesis.

2. Institutional framework

2.1 *Background information*

A capital insurance is a type of life insurance and is in tax law regarded as such. It is not possible to deduct the money that you pay into a capital insurance when you do your taxes and hence is money paid out from the capital insurance not a basis for taxation.

What types of investments that is possible to make in a capital insurance varies among different brokers. For most Swedish brokers investments are limited to listed stocks and mutual funds. Other types of investments such as options and unlisted stocks can normally not be purchased through the insurance. There exists possibilities to put unlisted stocks in to capital insurances through foreign listed brokers, but this is almost always regarded as tax evasion by the Swedish tax authorities and will hence not be covered in this thesis.

2.1.1 Fees

There are a number of fees connected with capital insurances, different brokers charge different types of fees, here are some of the most common types of fees:

- Return tax – a template fee that you pay instead of a capital gains tax, this is the one fee that is the same for all capital insurances and is changed each year, the tax is based on last years average government borrowing rate.
- Deposit fee – is a fee you pay for putting money into the insurance, this is a one time fee that exists among high price brokers.
- Capital fee – is a fee charged for the capital you have invested in the insurance, this is not the same as the return tax. It is a fee to the insurance company and is based on how much your insurance is worth at a given point in time.
- Comission (Courtage) – a fee for each transaction you make, this is a fee charged by most brokers and is usually similar for direct investments and

investments in capital insurances, however it is not deductible in the insurance like it is when you invest directly in stocks.

- Repurchase fee – a fee you pay for selling the insurance or making a “partial repurchase “ (take out your money). This fee usually gets lower the longer you have had the insurance, and low cost brokers do not charge anything for it.
- Cupon tax on dividends – if the insurance company that owns the insurance is registered in a country where this is applicable according to the double taxation agreement between Sweden and the country in question, this fee is charged on paid out dividends. This tax can if it exists often be deducted against the return tax (depends on the double taxation agreement).
- Risk fee – is a fee you pay because the insurance pays out more than the nominal amount. The fee increases with age and is negligible for young persons.

Comparison of fees between high cost / low cost broker (fees on 091016):

<u>Fee type</u>	<u>Fee with Svenska Handelsbanken</u>	<u>Fee with Avanza</u>
Return tax 2009	1,05 % / year	1,05% / year
Deposit fee	0,5% / deposit	0%
Capital fee	0,125% / quarter	0%
Account fee	0,09-0,45%	0%
Repurchase fee	0,5% – 1%	0%
Comission	0,09% (min 99 SEK /trans.)	0,055-0,085% (min 99 SEK / trans.)
Cupon tax on dividends	15% of dividend	0%
Risk fee	0	11-1891 SEK / year
Final payment	99%	101%

Tabel 1, Comparison of fees for capital insurances between Avanza and Handelsbanken

Even thou Handelsbanken has notably higher fees then Avanza they are not the most expensive broker, rather they were chosen because their fees are somewhere in the middle of the more expensive brokers. As an example of higher fees is

Länsförsäkringar with a deposit fee of 0,75% and yearly fee of 0,75% as well as an account fee of 240 SEK.

2.1.2 Requirements

Depending on which broker you use there are different requirements regarding minimum amounts that you are allowed to invest and also when you are allowed to make a partial repurchase. Some also have requirements regarding a minimum amount that you are allowed to keep in the insurance.

Avanza and other low cost brokers usually have less or no requirements regarding initial deposits and repurchases. The big brokers usually have a minimum initial investment in the range of 1.000 SEK – 1.000.000 SEK and a minimum deposit of 1.000 SEK – 1.000.000 SEK.

A common requirement for the larger brokers is that you are allowed to make free withdrawals first after 5-6 years while the smaller, low cost brokers only have a minimum level of capital (1.000 SEK – 11.000 SEK) that is necessary to keep in the insurance over the end of the first year you own the insurance.

2.1.3 Mortgage a capital insurance

It is with most brokers possible to use your insurance as a security for borrowing to additional investments. With most brokers the interest rates are not very favorable and costs about as much as an account credit (approximately 5%). However Avanza have now introduced a possibility to mortgage up to 35% of the capital insurance for an interest rate that is as low as 0,93% (091016 if at least 1.000.000 in account) which is lower than most house mortgages that costs 1,29% (SBAB, 091016). This open up the possibility to get a cheap leverage on your capital insurance. However is the interest rate high as soon as you exceed the 35% limit on the low interest rate (the interest rate on exceeding mortgage with Avanza is 3,8-5,3%).

2.1.4 Why do capital insurances exist?

The Capital insurance is a type of life insurance and it is under these regulations that the insurance form has been created. This is also the reason for the somewhat strange payout rules and risk fees that are connected with the insurances.

2.1.5 The insurance part

Capital insurance is a type of life insurance usually pays out 101% of the insurance value to a beneficiary. For this the broker charges a small fee. If you are below 50 years old it is about 20 SEK per year. The rules for this vary among brokers and some of them pay less than 100% of the value as well.

Risk fees at Avanza for different ages with 1 million SEK in insurance value.

<u>Age</u>	<u>Monthly fee</u>	<u>Yearly fee</u>
20	0,91 SEK	10,92
40	1,52 SEK	18,24
60	6,88 SEK	82,56
80	53,79 SEK	645,48
90	157,55 SEK	1890,6

Table 2, Risk fees at Avanza when 1 million is invested.

That the fee increases rapidly with age is of course because the risk that you die increase with age and in the example above the insurance pays out 10.000 SEK more than the nominal value.

The reason why it pays out an amount that is different than the invested capital is that has to, in order for the capital insurance to be regarded as a life insurance. The requirement for this is that there is a risk for the insurance company involved. According to a verdict (RÅ 1994 not. 19 and 20) in Regeringsrätten it is enough that the risk is 1% of the capital and hence has this construction with risk fees been constructed by Avanza and other brokers. Other brokers have solved the risk part in different ways but all pay out a different amount than the holdings of the insurance.

2.1.6 The insurance company as an owner

Since it is the insurance company and not a person who owns the shares the you are not allowed to vote for your shares at the annual shareholders meetings if you own shares through a capital insurance. This is most likely not a big problem for most individuals, but have the potential of becoming a big problem especially for small companies in Sweden. This because in many cases the owners do not vote for their shares in order not to be forced to bid for small companies. Due to the bidding duty that exists for owners with more than 30% of the shares in a publicly traded company. In the extreme case like for the company Guideline Oil Drilling Technology the two relatively small brokers Avanza and Nordnet owns 16% of the shares which hollows out the ownership of the company.

Of course do you give up that right when investing in eg. a mutual fund as well, but then you have chosen someone who looks after your interests. If you invest in stocks through an capital insurance you simply give up the right.

Another risk involved is the probability that the insurance company goes bankrupt which would result in a loss of liquid assets, the historical risk for this is however very small.

2.2. Advantages with capital insurances

A capital insurance is an insurance where you can invest in stocks and funds but instead of paying a tax of 30% on capital gains you pay a return tax of 27% on last years average government borrowing rate ("statslåneränta"), which in 2009 corresponds to 1,05 %. Because of this difference in taxation it is possible that you pay less taxes if you own shares through a capital insurance instead of owning them direct.

Another advantage of using capital insurance instead of direct investment in stocks is that it becomes easier to do your taxes since you do not have to report to the tax authorities what stocks you have sold and how much you have gained. This in combination with the tax advantage, is why this type of construction have become

very popular among day traders. You also get rid of the lock in effect that is associated with direct investments due to the tax credit. The lock in effect comes from that value increases are taxed first when they are realized which means a money outflow when selling a directly owned share that have increased in value.

People who according to the regulations of the exchange are regarded as insiders have the possibility to trade their stocks through a capital insurance and through that avoid showing people how they invest or use their possible insider information. According to the Finance authority's (Finansinspektionen) you do not have to report the trades you do through a capital insurance since in theory it is the insurance company who buys and sells the stocks and not the individual. However it is still illegal to trade based on insider information, but it at least give insiders the possibility not to have their trades noted in the insightsregister (insynsregistret) a register of trades by insider registered persons).

An additional reason why capital insurances have become increasingly popular is most likely due to the regulations regarding private pension savings. An individual is now only allowed to save a maximum of 12.000 SEK in a private retirement plan without being double taxed for the income. This makes the capital insurance a good substitute for a person who would like to save money for their pensions but do not have the ability to do so through a private retirement plan, or at least not in a tax efficient way.

2.3. Disadvantages with capital insurances

There are a couple of downsides on owning stocks via capital insurances as well. The largest downside is that since you do not pay any tax on capital gains you can not deduct your losses either. Earlier there existed a possibility to sell the capital insurance with a loss and deduct it against capital gains, however this possibility was shut in 2008. Another downside is that since it is not you but the insurance company who own the stocks you are not entitled to vote for them on the annual shareholder meetings.

The trading fees at low cost brokers are almost the same for direct investment in stocks and capital insurances. The differences are for small portfolios and very active traders who can have slightly lower trading fees for stocks when trading directly. However when you buy stocks the trading fees are deducted when calculating the capital gains tax which means that they after tax are only 70% of the fees compared to capital insurances.

The fact that it is not possible to deduct your losses means that you lose up to 30% of the value of losses, which is the tax that you could have decreased your capital gains with when realized. But that only becomes a problem if you intend to realize your losses.

More than 250 billion SEK are invested in capital insurances in Sweden, this means that about 2.6 billion SEK are being paid in return taxes in 2009. This even thou the market value of the stock markets decreased notably in 2008. If the money had been invested directly into stocks it would have resulted in people realizing losses and hence a negative tax effect for the government. This now instead resulted in a tax inflow from the same investments.

2.4 The future of Capital insurances

A lot speaks in favor of the future for capital insurances. The biggest risk for their future is if legislators impose higher fees or change the rules.

The organization Aktiespararna are lobbying for a new type of investment possibility called "allemanskonto" which should be similar to the capital insurances from a tax perspective but with other rules regarding ownership and voting rights.

There is a probability that the government will change the rules regarding the return tax, most likely by charging it on several occasions during the year in order to prevent people from avoiding tax on their investments completely by repurchasing (selling) all the content of the insurance just before the taxation date which is the first of January. However this critique has only come up recently because of the low cost

brokers, earlier no legislators complained when the banks took out so high fees for such transactions.

3. Data & Methodology

In this part I look into the differences between brokers and ways of investing. First I calculate some basic differences between capital insurance and a direct investment assuming that there are no transaction costs and no dividends. Then I make a theoretical investment in order to show the difference between brokers as well as investment types. Finally I recreate an investment to show the difference between the investments for the last years.

In order to show the difference in return, I will if not other is mentioned use the trading fees of Avanza.

3.1 Basics properties

Because of the different ways of taxation it is possible to for a general case calculate a cut-off point between the investments. The Cut-off point is where it becomes more profitable to invest through a capital insurance and can be calculated by:

$$0,3 * \text{Investment} * \text{return} = \text{Return tax} * \text{Investment} * (1 + \text{return})$$

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	average
SLR, pr year	4,89%	5,33%	4,96%	5,15%	4,41%	4,30%	3,24%	3,62%	4,14%	3,88%	4,39%
Return tax	1,32%	1,44%	1,34%	1,39%	1,19%	1,16%	0,87%	0,98%	1,12%	1,05%	1,19%
Cut-off point	4,60%	5,04%	4,67%	4,86%	4,13%	4,02%	2,99%	3,38%	3,88%	3,63%	4,13%

Table 3, Cut-off points for when it is better to use capital insurance then direct investments for different years

The advantage is that if the value of your investment has increased with more than 3,63% (for 2009) you will have paid less tax if you invest through a capital insurance (given that you end your investment after one year and only pay the capital gains tax or the return tax of the capital insurance).

Without dividends or transaction costs the tax credit you have when investing directly into stocks would make the direct investment more tax efficient for long term investments.

The value of the capital insurance is calculated by:

$$((1 + \text{return}) - \text{return tax})^{\text{Number of years}}$$

The value of the direct investment is calculated by:

$$((1 + \text{return})^{\text{Number of years}} - (1 + \text{return})^{\text{Number of years} - 1}) * 0,3$$

Return tax: 1,19%

Return: 5%

<u>Years</u>	<u>Direct investment</u>	<u>Capital insurance</u>
5	1,19	1,21
10	1,39	1,40
15	1,69	1,69
20	2,07	2,03
25	2,56	2,45
30	3,18	2,96

Table 4, Return comparison without dividends or transaction costs.

In the table above it can be seen that a direct investment will because of the tax credit after 15 years give a higher net return given you do not receive any dividends during the period. This cut-off point comes from the return on the tax credit in a direct investment. The higher the return, the more profitable it is to use a capital insurance instead of making a direct investment.

Return tax: 1,19%

Rate of return	Number of years before profitable with Direct investment
5%	16
6%	23
7%	27
8%	29
9%	31

Table 5, Table over how many years it takes before a direct investment is better when no dividends or other transaction costs

This means that if you have an average return in line with the stock market of Sweden (about 8%) it takes about 30 years for the tax credit to make it better to use a direct investment instead of a capital insurance and that is without dividends.

3.1.1 Construction of theoretical portfolio

In order to show how the fees affect the after taxes and fees result of an investment I will make a comparison between capital insurances that are bought through Handelsbanken, which is one of Sweden's larger banks and have fees accordingly and Avanza.

To show how differences in fees affect the net result of an investment, I will compare the costs of a one year investment of 1.000.000 SEK which is invested in one stock that has a dividend of 3% and increases in value by 1% per quarter. This corresponds to a yearly return of approximately $3+4,15=7,15\%$

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	Avanza	balance	Handelsbanken	balance	Direct investment	balance
Start value	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000	1 000 000
Deposit fee	-	-	5 000	995 000	-	-
Risk fee	- 20	999 980	-	995 000	-	-
Comission	- 550	999 430	- 896	994 105	- 550	999 450
value increase Q1	9 994	1 009 424	9 941	1 004 046	9 995	1 009 445
Capital fee Q1	-	1 009 424	- 1 255	1 002 790	-	-
Dividend Q2	29 983	1 039 407	29 823	1 032 614	29 984	1 039 428
Cupon tax on dividend	-	1 039 407	- 4 473	1 028 140	-	1 039 428
Reinvestment comission	- 99	1 039 308	- 99	1 028 041	- 99	1 039 329
Value increase Q2	10 393	1 049 701	10 280	1 038 421	10 393	1 049 722
Capital fee Q2	-	1 049 701	- 1 298	1 037 123	-	1 049 722
Value increase Q3	10 497	1 060 198	10 371	1 047 494	10 497	1 060 220
Capital fee Q3	-	1 060 198	- 1 309	1 046 184	-	1 060 220
Value increase Q4	10 602	1 070 800	10 462	1 056 646	10 602	1 070 822
Capital fee Q4	-	1 070 800	- 1 321	1 055 325	-	1 070 822
Return tax	- 11 243	1 059 557	- 11 081	1 044 245	-	1 070 822
Cupontax deducted	-	1 059 557	4 473	1 048 718	-	1 070 822
Sales Comission	- 583	1 058 974	- 944	1 043 301	- 589	1 070 233
Repurchase fee	-	1 058 974	- 10 433	1 032 868	-	1 070 233
C G tax, dividend	-	1 058 974	-	1 032 868	- 21 070	1 049 163
C G tax, value increase	-	1 058 974	-	1 032 868	- 14 749	1 034 414

Table 6, One year development of theoretical investment with different brokers

These results are for a short term investment and because of that it looks very expensive for Handelsbanken and can be considered unfair since most people have an investment horizon that exceeds one year. If you calculate the long term returns you will have an after tax return that looks like this:

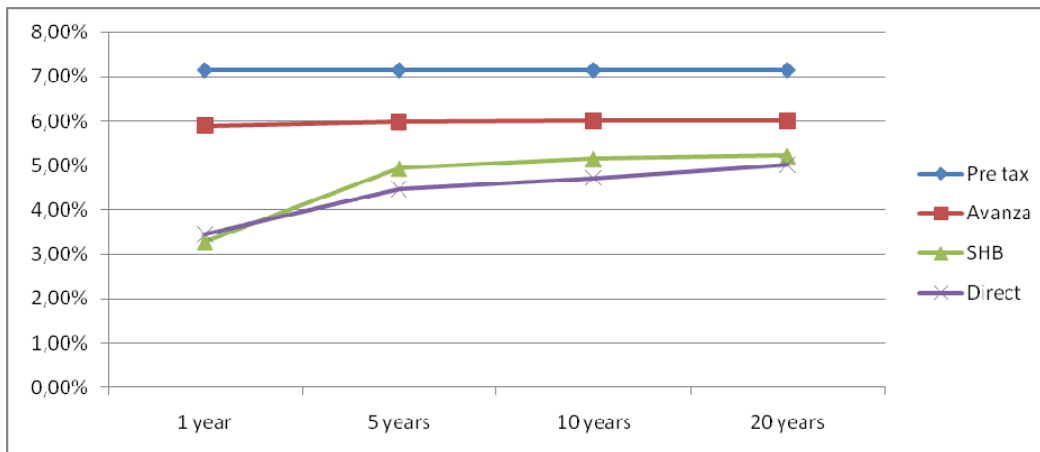
	Avanza	%	Handelsbanken	%	Direct investment	%
1 year	1.058.974	5,89%	1.032.868	3,29%	1.034.414	3,44%
5 years	1.337.812	33,78%	1.272.798	27,28%	1.243.582	24,35%
10 years	1.792.190	79,22%	1.651.729	65,17%	1.584.272	58,43%
20 years	3.215.706	221,57%	2.765.524	176,55%	2.660.006	166,00%

Table 7, Development of theoretical investment with different brokers for various investment periods.

And looking at the corresponding compounded rates of return after taxes and fees gives the following result:

	Pre tax return	After taxes & fees return Avanza	After taxes & fees return Handelsbanken	After taxes and fees return Direct investment
1 year	7,15%	5,89%	3,29%	3,44%
5 years	7,15%	5,99%	4,94%	4,46%
10 years	7,15%	6,01%	5,15%	4,71%
20 years	7,15%	6,01%	5,22%	5,01%

Table 8, Compounded rates of net return for different investments



Graph 1, Graph over compounded rates of net return for different investments

As can be seen by the graph and table above there is a significant advantage to use a low cost broker. The fees for a high prices broker is almost 70% higher then those for a low cost broker. And for a 20 year investment with a 7,15% gross return you will have paid more than 450.000 extra in fees with the high cost broker compared to a low cost broker.

The after taxes and fees return for a direct investment will in the long run and for larger investments get closer and closer to pre tax return times 0,7. And the after taxes and fees return for an capital insurance will in the long run and for large investments get close to the above calculated total fees & taxes. Given this it is possible to calculate a cut off point there it is more profitable to invest directly in the stocks compared to investing through the capital insurance for fees with different brokers.

$$0,3 * \text{Investment} * \text{return} = \text{Return tax} * \text{Investment} * (1 + \text{return})$$

	Return tax	Long run fees for large investments	Total fees	Cut off point
Avanza	1,05%	0,09%	1,14%	3,95%
Handelsbanken	1,05%	0,88%	1,93%	6,86%

Table 9, Difference in fees and cut-off points between brokers.

The table above shows how high return you need to have on your investment for it to be profitable to use an capital insurance instead of making a direct investment in the stocks.

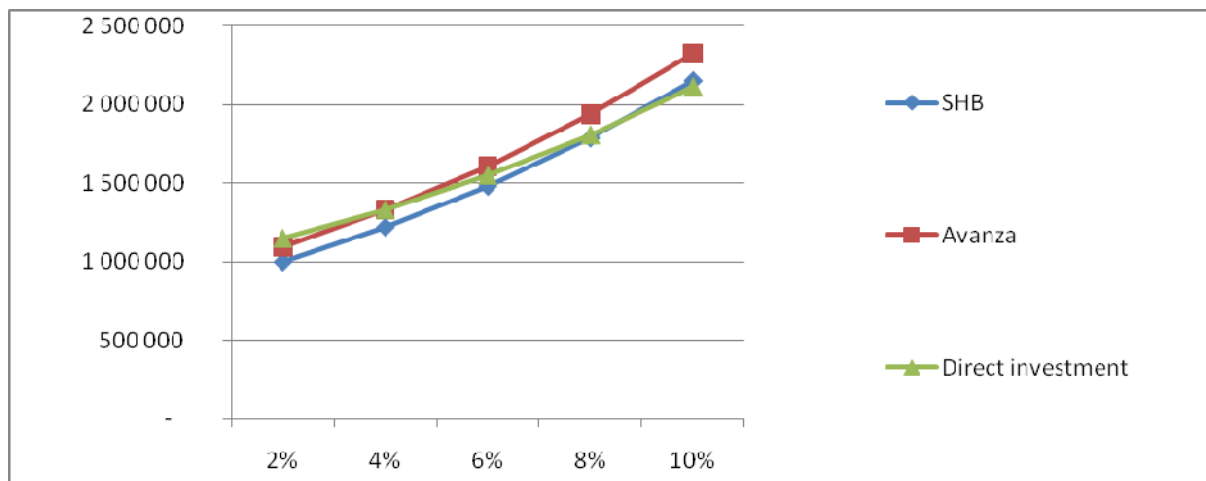
3.1.2 Value increase for different rates of return

To see how the end value of different investments change with the gross return I have replicated a 10 year investment of 1.000.000 SEK.

For a 10 year investment with the respective rates of return (compounded interest rates) and no dividends the outcome would look like this

Return (compounded)	Avanza	Handelsbanken	Direct investment
2%	1.093.984	1.003.548	1.150.917
4%	1.330.651	1.223.042	1.335.033
6%	1.609.525	1.481.855	1.551.985
8%	1.937.847	1.786.741	1.807.404
10%	2.328.222	2.149.447	2.111.097

Table 10, Net return of a 10 year investment for different gross returns



Graph 2, Net return of a 10 year investment for different gross returns

As can be seen in the table above there is a significant advantage to use a low cost broker and a capital insurance already for quite short investment periods and low rates of return.

3.1.3 Investment with loss probability

In some cases you are not allowed to deduct your entire loss in a direct investment. Because of this a loss in a direct investment can be worth less than 30% of the loss, which is what it would have been worth if losses were fully deductible. If you do not have any capital gains to meet your capital losses you are only allowed to deduct 70% of the loss against other taxes that you have paid. Which makes the value of the loss 21% (70% of 30%). If your total capital deficit exceeds 100.000 SEK you are only allowed to deduct 70% of 70% of the loss. Which means that losses over 100.000 SEK might only be worth 14,7% of the loss. This is however only true if you have other tax payments to meet the losses with. So if you have large tax deductions from deductible interest rates or renovation deductions ("ROT-avdrag") it is possible that you are not allowed to use any of the capital losses that you have made in a direct investment.

	Can be met by capital gains	No capital gains but other tax payments	No capital gains and no tax payments
Value of loss	30%	14,7% - 21%	0%
Loss 100.000	30.000 SEK	21.000 SEK	0
Loss 200.000	60.000 SEK	35.700 SEK	0

Table 11, Value of capital losses that can not be met by capital gains.

If you weigh in the probability of making a loss that can not be fully deductible during the investment period, the expected return for an investment does not need to be as high as the cut-off point to make it profitable to use a capital insurance. This is the case because losses are not fully deductible.

3.2. Recreated investment

3.2.1 Constructed portfolio

In order to investigate what actually happens with an investment in stocks versus a capital insurance I construct a portfolio of the 10 largest companies (highest market value) of the OMX index in the beginning of 2004 and examines how the different investment types develops. These stocks represent more than 67% of the total value of the shares on the A list of OMX and more than 61 % of the turnover of the stocks on that list.

The calculations are based on that all stocks are bought on the first trading day in 2004 and sold on the first trading day after the period has ended. The reason for this is because of the requirement to hold money in the capital insurance over the year end and to get a fair comparison between the different types of investment.

The reason for constructing the portfolio in this way is that I want a manageable number of stocks at the same time as I want a reasonable well diversified portfolio.

<u>Stock</u>	<u>MARKET CAP (MSEK)</u>	<u>Weight in portfolio</u>
Ericsson B	199,641	1/10
TeliaSonera	175,789	1/10
Nordea	157,465	1/10
AstarZeneca	130,538	1/10
SHB A	95,543	1/10
FöreningsSparbanken A	74,685	1/10
SEB A	71,421	1/10
Volvo B	66,642	1/10
Sandvik	64,160	1/10
SCA B	57,182	1/10

Table 12, Table over stocks in constructed portfolio and their market cap

Year	2004	2005	2006	2007	2008
Return tax	1,19%	1,16%	0,87%	0,98%	1,12%

Table 13, table over return tax for capital insurances 2004-2008

3.2.2 Single period investment 1 year

If you have made equally large investments in the constructed portfolio above in January 2004 and then terminated your investment after 12 months, that is sold all the stocks and taken the money out of the capital insurance or sold all stocks in the portfolio and realized the gains / losses made during the period the outcome would look like this:

	Gross	Capital insurance	Direct investment	<i>Difference</i>
Value	1.190.372	1.176.217	1.133.267	42.950
Gain/loss	190.372	176.217	133.267	42.950
%	19,0%	17,6%	13,3%	4,3%
% / year	19,0%	17,6%	13,3%	4,3%

Table 14, return for 1 year replicated investment

Since the return in 2004 was 19% for the stocks there would have been a clear advantage to use a capital insurance instead of making direct investments in the stocks of the portfolio. You would for this period have had an after tax return that was 4,3% higher by investing in the capital insurance which corresponds to 42.950 SEK more in after tax return.

3.2.3 Single period investment 2,5 years

For the investment period between January 2004 and June 2006, a 2,5 years investment in the same stocks as above the return would have been like this:

	Gross	Capital insurance	Direct investment	<i>Difference</i>
Value	1.572.866	1.540.807	1.410.079	130.728
Gain/loss	572.866	540.807	410.079	130.728
%	57,3%	54,1%	41,0%	13,1%
% / year	19,9%	18,9%	14,7%	4,2%

Table 15, return for 2,5 years replicated investment

The gross return corresponds to an annual return of 19,9% and it is hence obvious that the capital insurance would have been to prefer for this investment period as

well. With the initial investment being 1.000.000 SEK you would have had an entire 130.728 SEK more when investing through the capital insurance instead of making the direct investment, which corresponds to a 4,2% higher annual cumulated return.

3.2.4 Single period investment 5 years

If you had kept the investment for an additional 2,5 years the returns would have looked like this:

	Gross	Capital insurance	Direct investment	<i>Difference</i>
Value	1.110.940	1.027.006	1.055.304	-28.298
Gain/loss	110.940	27.006	55.304	-28.298
%	11,1%	2,7%	5,5%	-2,8%
% / year	2,13%	0,53%	1,08%	-0,55%

Table 16, return for 5 years replicated investment

For this investment period the direct investment would have been to prefer, this is because of the huge drop in the stock market for the period. For the entire period the gross return was 2,13% which is lower than the previous calculated cut-off points and hence would the direct investment have been a wiser choice if investing only during this period.

The value of both investment types consists of paid out dividends and a current value of the stocks. Since the current value of the stocks is lower by the end of the period the direct investment includes a loss of 22.353 SEK compared to the value if the loss would have been fully deductible. This loss exists because the calculations assume that all stocks are sold on the morning of the first trading day in 2009 and you can hence not use the dividend payouts from 2008 to meet the loss. If you would have been able to deduct the loss fully it would have meant that the direct investment would have been 50.651 SEK better then the capital insurance instead of only 28.289 SEK.

3.3. Completing Trading strategies

3.3.1. Gain by selling late December and buy early January?

Since the tax is based on the value of the capital insurance on the 1:st of January is it possible to gain money by selling on the last trading day of the year, make a partial repurchase and then invest again on the 1:st trading day of the year?

In theory you would gain from selling the stocks in your capital insurance if:

$$V * TT > 2 * n * (1/n) * c$$

V = value of capital insurance, TT = Template tax, n = number of stocks in portfolio, c = trading fee as part transaction value

As seen by the following table it would be possible to eliminate almost the entire return tax by selling the stocks and make a partial repurchase of the major part of money in the insurance. You need to keep at least 30% of a prisbasbelopp (40300 X 30% = 12.090) in order to “keep it alive”, this gives a tax minimum of 135 SEK.

V	100 000	1 000 000	10 000 000
Gain if 20 stocks	-2 840	7 240	101 000
Gain if 5 stocks	130	10 100	101 000
Gain if 1 stock	1 022	10 100	101 000
<i>Return tax</i>	<i>1 120</i>	<i>11 200</i>	<i>112 000</i>

Table 17, gain of making a partial repurchase before time of taxation

However given that we are looking at individuals who invest we have to take into consideration that it is not possible to buy and sell in the blink of an eye. When you take this into consideration the gain is not as obvious.

If you also take the seasonal effects of the market, which due to investment behaviour often makes the stock markets increase in value just after a year shift, as

well as that you lose a couple of trading days there is rather evidence of this being a losing strategy.

However there is of course no gain in keeping a large cash balance on the 1:st of January which is the day the fee is based on.

By using the stocks in my constructed portfolio and looking at the closing value of the last trading day and comparing it with the closing value of the first trading day of the year it becomes obvious that, of course it would be theoretically possible to optimize more then in my example simply by buying stocks immediately when the markets open, however looking at an individual investor it is not likely that he or she could buy immediately especially since the strategy makes it necessary to withdraw the money from the capital insurance and then transfer them back again.

Looking at the value change over the year shift it becomes obvious that the strategy is not as optimal as it looked at first sight, but timing the market is always difficult and it does not reduce the fact that it in theory is possible, and quite easy, to reduce the marginal tax rate of capital gains in Sweden close to 0.

Year	Portfolio development	Tax	Gain / loss
98/99	2.00%	1.75%	-0.25%
99/00	0.26%	1.34%	1.08%
00/01	0.11%	1.32%	1.21%
01/02	-1.51%	1.44%	2.95%
02/03	4.63%	1.34%	-3.29%
03/04	0.98%	1.39%	0.41%
04/05	1.01%	1.19%	0.18%
05/06	-0.01%	1.16%	1.17%
06/07	1.54%	0.87%	-0.67%
Average	1.00%	1.31%	0.31%

Table 18, Table of year end development for stockmarket

3.3.2. Selling losing stocks into a capital insurance

A strategy is to sell losing stocks and buy them into a capital insurance. This example presupposes that you own stocks that have decreased in value, that you are interested to keep and do not have capital gains you want to use.

By selling the losing stocks you get a tax reduction from 70% of the loss up to 100.000 SEK and as little as 70% of that on exceeding amounts. When the stocks later hopefully increase in value you get a tax free gain, but if you would have held on to them without selling them into a capital insurance you would have received nothing.

4. Results

4.1 Result from Theoretical investment

In the theoretical investment of one million SEK that had a return of 7,15% per year the advantage of using a capital insurance instead of making a direct investment is 1% per year (6,01% compounded return instead of 5,01%). For an investment period of 20 years this corresponds to 555.700 SEK more in after tax return when using a capital insurance instead of making a direct investment. It was also shown that you can gain 0,79% per year in a theoretical investment of 1.000.000 SEK by using a low cost broker instead of a high cost broker. For a 20 year investment with 7,15% annual return this corresponds to a difference of 450.182 SEK.

4.2 Results from Recreated investment

If you had made an investment in the 10 largest stocks in 2004 you would have been better off with a capital insurance than with a direct investment for investment periods of 1 and 2,5 years. The increase in after tax return would have been 4,3% or 4,2% higher for the capital insurance respectively. If you however had chosen to terminate the investment after 5 years it would have been better to do direct investments into the stocks. This is because the stock markets fell in the end of the period and you would because of this have had an annual return that was 0,55% lower if you had made your investment through a capital insurance rather than direct investments.

4.3 Results from completing trading strategies

I have examined if it is a profitable strategy to sell the stocks in your capital insurance and make a partial repurchase in order not to avoid the return tax that is associated with capital insurances and concluded that it was on average not a profitable strategy since it is associated with high transaction costs and you forfeit a possible value increase during the period.

5. Conclusions

This basic purpose of this thesis was to investigate if it is possible to decrease the costs associated with capital gains by investing through a capital insurance. I have in this thesis concluded that it in most cases is better to make an investment through a capital insurance instead of making a direct investment. Direct investments are only to prefer if the average value increase is low or negative. However, someone who expects to lose money on their investments probably should consider a regular savings account instead of stocks or mutual funds.

I compared a high cost broker and a low cost broker and concluded that the benefits of using a capital insurance quickly decreases if you buy your capital insurance from a broker who have only slightly higher fees.

The fact that the larger banks have the ability to take out so high fees is a sign of market imperfection. And I find it strange that banks are not forced to communicate how their costs affect the final return in a clearer way. This is something they are forced to do when it comes to lending out money to consumers, then they are forced to write the effective rent costs. But when it comes to investing there are no regulations at all. Even when looking through the price lists at the banks web pages it is difficult to get a good picture of the total costs

Even though capital insurance are a tax effective way of saving and something that can optimize the after tax return for most individuals I think that they are an unnecessary complicated construction that exists mainly because of asymmetries in the tax system. And because of this it would be very easy for the tax authorities to make them uninteresting for most people. This is something I think should be done, and it can be done either by making the rules for owning through a capital insurance less favourable or making direct investments more favourable.

One way to make it less favourable to use capital insurances could be to change the way the return tax is charged, either by calculating it each quarter or using an average of the yearly value of the capital insurance. This only affect those who invest

in a way that they can gain from this strategy, but since it is mentioned as a problem in media this is a solution to get rid of the problem.

There are plenty of ways of making direct investments more favourable, which in my opinion is a better way of ownership. One obvious way is to lower the capital gains tax and thereby increasing the cut-off point where capital insurances are more favourable which means that you would need a higher average return for capital insurances to be a more tax efficient way of investing. Another thing would be to allow carrying losses forward or making them fully deductible and thereby getting rid of the asymmetry of the tax system.

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