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The participation exemption: Tax-free synthetic interest in companies[1]

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It is well known from financial theory that certain combinations of shares and/or equity derivatives are a source of synthetic interest income. For a Norwegian company that has such positions, the synthetic interest income will be tax-exempt as a result of the participation exemption[2]. This means that in principal, the company achieves additional returns compared to a bank deposit. In this paper the authors will shed further light on this issue, and discuss possible solutions.

1. Introduction

As a general rule, investment income, such as interest, dividends and gains from the sale of capital assets represents taxable income. However, the so-called participation exemption rule provides an exception from tax liability on typical equity earnings in the corporate sector. The participation exemption is intended to prevent multiple taxation of income. In Norway it was decided to allow income from shares, i.e. both dividends and capital gains, as well as income from equity derivatives to be tax exempt under the participation exemption rule.[3]

The purpose of this article is to point out and highlight a tax loophole that seems to be overlooked in the relevant literature[4] regarding the introduction of the Norwegian

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[2] The participation exemption implies that dividends or capital gains derived from qualifying holdings are tax exempt when received by intermediate companies, i.e. distributed within the corporate sphere, cf. the Norwegian tax code § 2-38.
[3] With effect from 7 October 2008, the tax exemption is limited to 97% of income from equities and equity derivatives. In this article, for simplicity, we have assumed 100% tax exemption. See the tax code § 2-38 6th section letter a.
[4] Sørensen (2005) p. 796, NOU (Norwegian official reports) 2003:9 attachment 1, Ot.prp. nr. 1 (2004-2005).

participation exemption and the shareholder model[5]. We show that a company that owns shares, and uses equity derivatives to manage its risk, can achieve a synthetic interest income that is tax exempt for the company under the participation exemption. Furthermore, we show that synthetic interest income can be achieved by the use of equity derivatives even though the company does not own shares.

This means that the company can achieve a higher return compared to depositing money in the bank or to investing in fixed interest debt securities. This extra return comes at the expense of society in the form of lost tax revenue. In our opinion, the problem can only to a limited extent be dealt with by the application of the Norwegian general anti-avoidance rule or by limiting the participation exemption to income from shares.

2. Point of departure

2.1 The distinction between debt and equity

In Norwegian law, income taxation of interest and dividends has traditionally been determined based on the legal form of the instrument from which the income is derived. For tax purposes, whether the income is derived from a debt or an equity instrument is determined by the instrument's most prominent characteristics.[6]

In tax law, is the central difference between debt and equity is that a debt instrument has a predetermined repayment date contracted between the lender and borrower. There is no repayment right/obligation related to equity. This reflects the risk of losing the invested principal amount; an equity capital contribution has what is often referred to as "loss-absorbing capacity".

Another important difference between equity and debt is related to returns. Typical for the debt instrument is the yield (interest rate) agreed between the parties in advance, and that the obligation to pay/right to receive this is unconditional. The returns on equity (dividends), however, are typically not agreed in advance, and are conditional on, among other things, company profits and corporate decisions to pay dividends.

2.2 Synthetic interest

By synthetic interest income we mean current, virtually risk-free income that derives from a position that could be construed as a loan. A simple example would be as follows: A corporation purchases shares today for NOK100 million. At the same time, the company enters into a forward contract to sell the shares for NOK105 million with settlement in 12 months. For the company, this aggregate position has the same characteristics as a loan: The company invests NOK100 million today and will receive a fixed amount (NOK105 million) at a predetermined time (in 12 months). For the company, this entails a risk-free return that is agreed in advance. We can interpret the income of NOK5 million as *synthetic interest*.[7]

The problem we call attention to is that because of the participation exemption, companies have an incentive to choose alternatives where the taxable income achieves classification as equity income – as in the above example – rather than classification as debt income. In other

[5] The *shareholder model* is the commonly used name of the set of rules that applies to stock income earned by personal taxpayers. See the tax code §§ 10-11 to 10-13.
[6] This follows from a longstanding precedent. See, in particular, Rt. 2001 s. 851.
[7] Because of the role of the clearing-house, the risk of not getting the settlement as agreed is almost zero.

words, the scheme leads to the situation where typical debt instruments are less attractive than alternatives that provide similar economic reality, and which are covered by the participation exemption.

The purpose of the participation exemption was not to favour the asset class shares at the expense of the asset class debt instruments, but to avoid multiple taxation. In addition to detecting the different aspects of the problem through the use of examples, we therefore consider whether we can see solutions that can help avoid this unintended incentive to invest in shares.

3. Synthetic interest when the taxpayer owns shares

In the following two sections we show some examples of how different combinations of shares and/or equity derivatives result in synthetic interest which is basically tax-free for the company.

Example A: Risk management using a forward contract

Consider a company that owns equities. As part of its risk management, suppose the company wants to reduce its risk exposure to shares by NOK 100 million for a shorter or longer period, for example one year.

One alternative is to sell the shares for NOK100 million and deposit the money into a bank account, with the aim that this amount including return is invested in shares at a later date. Assume an interest rate of 5%. The bank deposit provides a return of NOK5 million. With 27% in tax, in one year the company will have NOK103.65 million available, which can be invested in shares (table 1). The risk-free rate of return after tax is thus 3.65%.

Table 1: Bank deposit

Value (NOK million):	*period 0*	*period 1*
Bank deposit	100	100 + 5
– Tax (27%)		–1.35
=*Bank deposit after tax*	100	103.65

Another alternative is to retain the shares to be secured and instead, reduce risk by way of an equity derivative. For simplicity, we shall assume that the shares do not pay dividends the following year. The current value of the shares to be secured is NOK100 million, while the value of these shares in one year's time, NOK S_1 million, is uncertain viewed from today. Suppose now that the company enters into a forward contract for the sale of the shares with settlement in one year (table 2). The value of the contract today is null, while the agreed payment for the shares in one year is NOK105million.[8] The value of the contract in one year's time thus corresponds to the difference between the agreed payment and the value of the shares in a year, i.e. NOK $(105 - S_1)$ million. We assume that the forward contract is settled financially, i.e. that the net gain/loss on the contract is settled in cash. This means that in one year's time, the company owns shares of NOK S_1 million as well as a receivable/payable amount of NOK $(105 - S_1)$ million, i.e. financial assets totalling NOK105 million. This implies a risk-free return of 5% for the period.

[8] The forward price of 105 can be explained as the current equity value of 100 carried forward with the interest rate of 5%, i.e. 105 = 100 * (1+5%). See, for example, Hull (2012) p. 104.

Table 2: Retain shares and enter into a forward contract		
Value (NOK million.):	*period 0*	*period 1*
Shares	100	S_1
+ Sell shares on settlement date	0	$105 - S_1$
= *Synthetic bank deposit*	100	105

We can interpret the company's overall position in table 2 as a synthetic bank deposit and the returns as synthetic interest income. The participation exemption implies that the company has tax exemption for income from shares and the equity derivative, such that the transactions have basically no tax implications for the company. This means that when the company uses a forward contract to reduce risk in its investment portfolio, the company simultaneously achieves a risk-free rate of return after tax that is higher than the company can achieve by depositing money in the bank. [9]

Example B: Risk management using a total return swap
Now let us extend the example above to include a longer period (*T* years). We assume bonds with annual interest payments due in year *T* that currently trade at face value, and shares paying an annual dividend. Current income, start and end value of having NOK100million invested respectively in interest-bearing bonds and shares are shown in table 3 where NOK D_t million is paid out as dividend in year t, $t = 1, \cdots, T$, and NOK S_T million is the value of the shares in year *T*.

Table 3: Investment respectively in bonds and shares in *T* periods				
Value /current income (NOK mill.)	*Start value period 0*	*Current income/final value*		
		period 1	*...*	*period T*
Bonds	100	5	...	5 + 100
Shares	100	D_1	...	$D_T + S_T$

Consider a company that owns shares. Suppose, as part of its risk management, the company wants to reduce its risk exposure to shares by NOK100 million for a longer period of time – for example T years.

An alternative is to sell the shares for NOK 100 million and invest the amount in bonds, with a view to investing in shares later (table 4). The annual interest income from the bonds is taxed at 27%, so the interest paid after tax is NOK 3.65 million per year. The final value of the bonds corresponds to the start value so that the transaction does not trigger capital gains tax for the company on the horizon. Upon redemption, the company thus receives NOK100

[9] As a result of the shareholder model (see footnote 5) some of this extra return of NOK1.35 million could become taxable as ordinary income in the personal shareholder's hands. Assume that the company's shares correspond to a shielding basis of NOK100 million with a private shareholder and the shielding interest rate (post-tax risk-free rate) is 3.65%. If the company sells the shares and deposits the money in the bank, NOK3.65 million can be distributed as tax-free dividends. If the company retains the shares and reduces the risk with equity derivatives, NOK5 million can be distributed as dividends. The excess dividend return of 5-100*3.65% = NOK1.35 million will be taxed at 27%, so the dividend after tax will be 5-1.35*27% = NOK4.6355 million. At the same time, this example illustrates that the shareholder model does not close the tax loophole covered in this article.

million, which can then be invested in shares. In this case, the company achieves a risk-free rate of return after tax of 3.65% per year.

Table 4: Investment in bonds				
Value/current income (NOK mill.)	*Start value period 0*	*Current income/final value*		
		period 1	...	*period T*
Bonds	100	5	...	5 + 100
– Tax (27%)		–1.35	...	–1.35
= *Bonds after tax*	100	3.65	...	3.65 + 100

Suppose now that the company is able to enter into a total return swap with a nominal NOK100 million and duration *T* years. This represents a contract where the company relinquishes the return from investing NOK100 million in shares in the period and receives the return from investing the same amount in interest-bearing bonds. Returns for each of the instruments consist of current income and estimated gains/losses on the horizon. The value of this contract is null today and gives the company a current income as shown in table 5, where NOK $(5 - D_t)$ million is the difference between annual interest payment and annual dividend, while NOK $(S_T - 100)$ million is the capital gain/loss on the underlying shares for the period.

Table 5: Investment respectively in bonds, shares and total return swap in *T* periods				
Value/current income (NOK mill.)	*Start value period 0*	*Current income/final value*		
		period1	...	*period T*
Bonds:	100	5	...	5 + 100
* return (1)		5	...	5 + (100–100)
Shares:	100	D_1	...	$D_T + S_T$
* return (2)		D_1	...	$D_T + (S_T - 100)$
Total return swap (1) – (2)	0	$5 - D_1$	...	$5 - D_T - (S_T - 100)$

Another option for the company is then to retain the shares to be secured and instead reduce risk by using an equity derivative until time *T*. The current value of the shares to be secured is NOK100 million, dividend in year *t* is NOK D_t million, and the value of the shares on the horizon is NOK S_T million. Further assume that the company enters into a total return swap where the company switches equity returns (annual dividends and capital gain/loss for the period) at an annual interest rate of return, cf. table 5, above. We assume that the contract is calculated annually and is settled financially. By combining the shares to be secured with a suchlike equity derivative, the company achieves an annual risk-free current income of NOK5million (table 6). On the horizon, the calculated capital gain/loss on the contract's underlying shares is settled. This means that on the horizon, the company owns shares of NOK S_T million and an asset/liability of NOK $(100 - S_T)$ million. In total, this represents financial value of NOK100million. Thus, the company achieves a risk-free return of 5 % per year.

Table 6: Retain shares and enter into a total return swap				
Value/current income (NOK mill.)	*Start value period 0*	*Current income/final value*		
		period 1	...	*period T*

Shares	100	D_1	...	$D_T + S_T$
+ Total return swap	0	$5 - D_1$	...	$5 - D_T - (S_T - 100)$
= *Synthetic bond*	100	5	...	5 + 100

We can interpret the overall position in table 6 as a synthetic bond and the return as synthetic interest. The participation exemption implies that the company has tax exemption for income from the shares and from the equity derivative[10], such that the transactions have basically no tax implications for the company. This means that when the company uses a total return swap to reduce risk in its investment portfolio, the company simultaneously achieves a risk-free rate of return after tax that is higher than the company can achieve by investing in fixed income securities.

4. Synthetic interest without the taxpayer owning shares

Above we have shown examples of how a company that owns shares and that uses equity derivatives to reduce risk in its investment portfolio, at the same time achieves a synthetic interest income which is basically tax exempt. In the following we show that synthetic interest can come into being in the derivative market without the company even owning shares.

Example C: Combination of forward contracts with different delivery prices

Suppose bonds that do not pay coupon interest and have redemption at period 2, and shares that pay dividends at period 1 and period 2. Further assume three forward contracts on shares with settlement at period 2 and with different delivery prices to be paid upon delivery. The settlement of the contracts can be either physical (delivery of shares and payment of the agreed price) or financial (net settlement). In the example, the market forward price is 105 (current market value of this contract is null). Thus, the current market value of a contract with a delivery price that is lower (higher) than 105 will be positive (negative). We assume that a potential positive/negative market value is paid/received in cash upon signing the contract. Table 7 shows the initial value, current income and final value of the instruments in question.

Table 7: Investment respectively in bonds, shares and three forward contracts

Value	*Start value period 0*	*Current income/final value*	
		Period 1	*period 2*
Bonds	100		110.25
Shares	100	D_1	$S_2 + D_2$
Buy forward at delivery price 100.59	4		$S_2 - 100.59$
Buy forward at delivery price 105	0		$S_2 - 105$
Buy forward at delivery price 111.615	-6		$S_2 - 111.615$

If the company invests in bonds, the realized interest return of 10.25% during the two-year period will be taxed at 27%.

Suppose now that the company buys shares forward at the lowest delivery price. The company must prepay 4 at the start of this contract and is obligated to pay 100.59 when the shares are received. Further assume that the company *sells* the same shares forward at the

[10] Cf. statement "Equity swap in relation to the participation exemption" from the Ministry of Finance dated 29.06.2005.

highest delivery price. The company must prepay 6 at the start of this contract and will receive 111.615 upon delivery of the shares. Table 8 shows the position this gives the company.

Table 8: Buying and selling forward		
Value	*Start value period 0*	*Final value period 2*
Buy shares forward at delivery price 100.59	4	$S_2 - 100.59$
+ Sell shares forward at delivery price 111.615	6	$111.615 - S_2$
= *Synthetic bond*	10	11.025

We can interpret the overall position in table 8 as a synthetic bond and the risk-free return of 10.25% (= (11.025 − 10)/10) during the two-year period as a synthetic interest rate. The participation exemption implies that the company basically has tax exemption for income from equity derivatives.

What is needed to achieve a synthetic interest is to combine contracts for the same shares with the same settlement date but with different delivery prices. The strategy is to buy forward at low delivery price and sell forward at high delivery price. In the example there are three forward contracts and thus three pair combinations (strategies) which give similar results. The essential point in this example is that the discount/premium in the delivery prices is balanced at period 0, i.e. when entering into the contract.

In principle, it is possible to create synthetic forward contracts using options, which in turn can be combined as shown in the examples above. A variation is to use the *put-call parity* known from option pricing theory: A synthetic forward purchase of shares can be achieved by entering into a buy option (call) for the shares and simultaneously issuing a sell option (put) for the shares with the same strike price and expiry date. A synthetic forward sale of the shares can be achieved by taking the opposite positions. The company can achieve the same position as in table 8 as follows: Enter into a call option and issue a put option both with strike price 100.59, and simultaneously issue a call option and enter into a put option both with strike price 111.615.

Another variant is exploit the fact that an option with very high exercise probability (deep in-the-money) gives approximately the same future payment as a forward contract. A call option with a very low strike price represents an approximate forward purchase of shares at a very low delivery price. Suppose that the company simultaneously enters into the deep in-the-money call option and a forward sale of shares at the market forward price. The company will then achieve a virtually risk-free future payment that amounts to the difference between the market forward price and the very low strike price. [11] The cost of this strategy today is the call option premium.

A put option with a very high strike price represents an approximate forward sale of shares at a very high delivery price. Suppose that the company simultaneously enters into a forward purchase of shares at the market forward price and the deep in-the-money put option. The company will then achieve a virtually risk-free future payment that amounts to the difference

[11] Should the shares be worth less than the very low strike price of the call option, the company will receive a higher future payment.

between the very high strike price and the market forward price. [12] The cost of this strategy today is the put option premium.

5. Tax law assessment

Equity derivatives are financial contracts of which character is derived from stocks. Concerning which derivatives are included in the participation exemption, the preparatory works states that "crucial to whether the participation exemption is applicable will be whether the gain or loss on the underlying shareholding would have been covered by the participation exemption, if the ownership had been realized at the time the gain or loss on the derivative is realized."[13]

An equity derivative is a financial contract of which the return is determined by the return on one or more shares. In the above examples we have seen that different combinations of shares and/or equity derivatives provide a total return that is *risk-free* and *detached* from equity returns. It is obvious that a financial contract with such a financial reality (loan) would not be considered an equity derivative in relation to the participation exemption, and as such, that income (interest) would be taxed as capital income according to ordinary rules. The central tax law question is whether positions in equities and/or equity derivatives are within the scope of the non-statutory general anti-avoidance rule, when the correlated positions create a financial reality that does not have the character as derived from shares. According to case law, there are two conditions that must be met for the general anti-avoidance rule to apply: The primary purpose of the transactions must have been to save taxes and, the positioning must have been disloyal in relation to the tax rules.[14]

In examples A and B, the need for risk management is the taxpayer's primary goal behind the transactions. However, it is possible to achieve the same by selling shares and buying bonds. But the buying and selling of shares and bonds is costly; it incurs fees to brokers and other transaction costs, such as bid-ask spread. Moreover, the taxpayer will normally lose both dividend and voting rights on the shares if he sells the shares to buy a bond.

Given that rational actors would have chosen the derivative alternative even though the tax rules treat both alternatives equally, the primary purpose of the transaction cannot have been to save taxes. Thus, the basic condition of the general anti-avoidance rule is not met, and it is not necessary to decide whether the additional condition is met.

All the same, it is natural to mention the potential importance of dividends and voting rights, in that disloyalty assessment takes the intrinsic value of the transaction into account. The most salient aspect of ownership of shares is normally dividend and voting rights. Thus a most natural assumption is that the more short-lived the ownership of the shares, the less intrinsic value is represented in ownership. It is nevertheless conceivable that the specific timing of the brief ownership implies a certain intrinsic value. It is, for example, possible to imagine that an actual utilization of the voting right may affect the assessment.

In example C, it is difficult to see any rational purpose beyond saving tax: When the starting position is that the taxpayer does not own shares, there is no risk to manage, and no

[12] Should the shares be worth more than the very high strike price of the put option, the company will receive a higher future payment.
[13] Translated from Ot.prp. No. 1 (2004-2005) paragraph 6.5.2.4.
[14] See for example Rt. 2006 s. 1232 (Telenor) paragraph 47.

transaction costs to reduce. It is also difficult to see that the positioning means that the taxpayer speculates on his own market view. Therefore, the probable motive behind this kind of positioning is solely to convert ordinary equity income to tax-free interest income. In such cases, the basic condition of the general anti-avoidance rule could probably be considered as met.

It is not inconceivable that a positioning as in example C will also be considered disloyal in relation to the taxation rules, such that additional criteria are also met: The purpose of the exemption from taxation that the participation exemption provides is that, to avoid multiple taxation, only ordinary equity income is to be covered by the tax exemption. Ergo, applying the general anti-avoidance rule, with taxation of income such as interest – could potentially be the result.

In summary, the rule of thumb probably is that when the purpose of the specific choice of transaction alternative has been risk management, speculation or reduction in transaction costs, the basic condition in the anti-avoidance rule is normally not met.

Our examples are, however, simplified with the intention of clearly presenting the purest of motives and course of events. An example of a significant simplification we have assumed is that it is clear what financial realities a taxpayer's positions represent. But before avoidance can be assessed, extensive effort is usually needed to ascertain the situation. This not made simpler because equity derivatives are often settled financially (net settlement) and there is then no demonstrable correlation in time between the settlement of the derivative and the potential realization of the underlying shares.

Furthermore, we have assumed a clear relationship between the returns from equity derivatives and shares. Suppose now that the company has a share portfolio with a composition similar to the OBX index.[15] A combination of this equity portfolio and the sale of an OBX index forward contract will give the company a virtually risk-free interest income. How much must the composition of the company's equity portfolio differ from the OBX index for the transaction to have sufficient "commercial intrinsic value" for tax purposes?

6. Tax on equity derivatives?

Suppose now that the tax exemption for income from equity derivatives was repealed and that gains and losses are treated symmetrically. Let us first go back to table 2 in example A above, where the company which offloaded share price risk with a forward contract achieved a synthetic tax-free return. With tax on the return from the forward contract, the company must take a somewhat stronger position in this contract, i.e. $\frac{1}{1-0.27}$ instead of 1, to achieve the desired risk relief.

Table 9: Retain the shares and enter into a forward contract – with taxable equity derivative

Value (NOK mill.)	*Start value Period 0*	*Final value period 1*
Shares	100	S_1

[15] The OBX index lists the 25 most liquid companies that are traded on the Oslo Stock Exchange. In the market, both futures and options are traded on this index.

+ Sell $\frac{1}{1-0.27}$ shares forward	0	$(105 - S_1) \cdot \frac{1}{1-0.27}$
= *Synthetic bank deposit before derivative tax*	100	$S_1 + (105 - S_1) \cdot \frac{1}{1-0.27}$
– Tax (27%) on forward returns		$-(105 - S_1) \cdot \frac{0,27}{1-0.27}$
= *Synthetic bank deposit after derivative tax*	100	105

By comparing table 9 with table 2, we see that even with the introduction of tax on income from equity derivatives, the company achieves the same risk-free position. This means that even if the participation exemption is restricted to only include income from shares, it will still be possible for the company to achieve a tax-free synthetic interest return. It can be shown that the same applies in example B above.

Finally, let us consider example C. In this example, we showed that the company can achieve a synthetic interest return by combining forward contracts. With tax on returns from equity derivatives, we must expand table 8 above, and the return will be as shown in table 10.

Table 10: Buying and selling forward – with tax on equity derivatives

Value (NOK mill.)	*Start value period 0*	*Final value period 2*
Buy shares forward at delivery price 100.59	4	$S_2 - 100.59$
+ Sell shares forward at delivery price 111.615	6	$111.615 - S_2$
= *Synthetic investment before derivative tax*	10	11.025
– Tax (27%) on forward at delivery price 100.59		$-(S_2 - 100.59 - 4) \cdot 0.27$
– Tax (27%) on forward at delivery price 111.615		$-(111.615 - S_2 - 6) \cdot 0.27$
= *Synthetic investment after derivative tax*	10	$11.025 - 1.025 \cdot 0.27$

We see from table 10 that the realized two-year return before tax of 10.25% from the synthetic investment is now taxed in the same manner as interest returns from a two-year bank deposit.

The examples illustrate that the problems are not necessarily eliminated by limiting the participation exemption to stock income.

7. Conclusion

The Norwegian participation exemption, with different tax treatment of equity and interest income, allows for tax arbitrage. In our opinion, the problem can, only to a limited extent, be dealt with by the application of the general anti-avoidance rule or by limiting the participation exemption to income from shares. We see no simple solutions to the tax loophole that is pointed out in this article. There is good reason to believe that the problem will persist as long as the participation exemption is retained.

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