4 MANAGEMENT OF FINANCIAL RISKS

This note explains the Group's exposure to financial risks and how these risks could affect the Group's future financial performance.

4.1 Financial risk factors

In its business operations, the Group is exposed to several types of financial risks: foreign-currency, interest, financing and liquidity, counterparty and credit risks. The objective of financial risk management is to protect the Group from unfavorable changes in the financial market and thus contribute as much as possible to guaranteeing the Group's profitability and equity, and to guarantee sufficient liquidity in a cost-efficient manner. Management of financial risks has been centralized with the Group's financial department, which is responsible for identification and evaluation of, and protection against, the Group's financial risks. Furthermore, the financial department is responsible, in a centralized fashion, for funding of the Group, and it provides the management with information about the financial situation of the Group and the business units.

4.1.1 Foreign-currency risk

Foreign-currency risk related to different currencies comes about as a result of foreign-currency-denominated commercial transactions and from translation of foreign-currency-denominated balance sheet items into the reporting currency.

(a) Transaction risk
The majority of the Group's business operations are handled in the currency of the project country of the respective group company. This means that both sales and costs are in the same currency. In the period under review, the Group did not have significant transaction risks generated from the currency flow in foreign currencies. The Group did not take steps to protect itself against transaction risks during the review period.

(b) Translation risk
The Group is exposed to a translation risk caused by fluctuations in foreign currency exchange rates, when it translates balance sheet items of subsidiaries based outside the euro area into its reporting currency. Main risk is with goodwill booked in Swedish Krona (SEK). The goodwill booked in SEK at December 31, 2018 was EUR 22,009 thousand (2017: EUR 22,928 thousand).

A sensitivity analysis of the effect of reasonable potential changes in exchange rates on the Group's profit for the financial year, equity and goodwill at balance sheet date is presented in the table below. In the analysis, the change in exchange rates has been estimated to be +/- 10 per cent from reporting date, and other factors are estimated to remain unchanged.

2018 (EUR 1,000)	Effect in profit for the financial year	Effect in other equity items	Effect in goodwill
EUR/SEK exchange rate 10% increase	-151	-411	-2,001
EUR/SEK exchange rate 10% decrease	184	503	2,445
EUR/PLN exchange rate 10% increase	-23	-155	0
EUR/PLN exchange rate 10% decrease	28	190	0
EUR/CNY exchange rate 10% increase	-124	17	-169
EUR/CNY exchange rate 10% decrease	151	-20	207

2017 (EUR 1,000)	Effect in profit for the financial year	Effect in other equity items	Effect in goodwill
EUR/SEK exchange rate 10% increase	-166	-358	-2,084
EUR/SEK exchange rate 10% decrease	203	437	2,548
EUR/PLN exchange rate 10% increase	-15	-145	0
EUR/PLN exchange rate 10% decrease	18	177	0
EUR/CNY exchange rate 10% increase	-39	56	-171
EUR/CNY exchange rate 10% decrease	48	-68	208

4.1.2 Interest risk

The Group is exposed to interest risk in two ways: because of changes in value for balance sheet items (i.e. a price risk) and cash flow risk caused by changes in market interest rates.

On the balance sheet date, the total amount of interest-bearing debt excluding leasing liabilities was EUR 33,243 thousand (2017: EUR 32,350 thousand) covered with contracts in which the interest range is between 0.65 and 2.0 per cent (2017: between 0.9 and 2.0 per cent). All of the Group's loans have variable interest rates.

The Group monitors the interest risk by calculating the effect of one percentage point change in interest rates on the Group's next twelve months' interest expenses. The sensitivity of the interest position to changes in interest rates is determined by calculating how much an equal one percentage point change in interest rates throughout the Group's interest rate range would change yearly interest expenses. Interest bearing loans from financial institutions excluding finance lease liabilities are included in the calculation. At the balance sheet date the Group's sensitivity to an increase in interest rates of one percentage point was approximately EUR 255 thousand (2017: EUR 252 thousand).

4.1.3 Financing and liquidity risk

The Group aims to guarantee solid liquidity in all market conditions through efficient cash management. Credit limits tied to cash pool arrangements are used for short-term financing. On the balance sheet date, the Group had EUR 12,092 thousand (2017: EUR 10,433 thousand) of available credit limits, of which EUR 2,163 thousand (2017: EUR 1,766) was in use. Refinancing risk is attempted to be minimized by applying a balanced maturity schedule for its loan portfolio, ensuring sufficient maturity of loans, and using several banks as sources of financing.

The Group has financial covenants, which are tied to the equity ratio of the Group and to the debt/EBITDA ratio of the Group. In case the Group's equity ratio at the time of the Financial Statement is below 25% or the debt/EBITDA ratio is higher than 3.5, the financer has the right to demand immediate payment of all the Group's loans. According to Consolidated Financial Statements in 2018 the terms of these covenants were not breached. Applying IFRS 16 will increase the interest-bearing debt of the Group and therefore, changes to the covenants will most likely be made in the future.

To balance the cash effect of the long payment terms typical to design business, the Group sells a part of its key customer receivables to a finance institution. There is no credit risk related to the sold receivables and these receivables are not included in the Consolidated Statement of Financial Position.

4.1.4 Counterparty and credit risk

Financing contracts have the associated risk of the counterparty being unable to fulfill its obligations under the contract. To minimize the counterparty risk financing contracts are concluded with leading Nordic banks that have a good credit rating.

Credit risk related to business operations arises out of a customer's inability to perform its contractual obligations. A considerable proportion of the Group's business operations focus on large, financially solid companies that operate internationally. Credit risk is also reduced by the customer companies being divided among several different sectors of operation. The Group aims to ensure that services are sold only to such customers that have an appropriate credit rating. Credit risk is controlled systematically, and overdue sales receivables are assessed on a weekly basis. The Company strives to control the effects of increased financial uncertainty by actively monitoring its receivables and by an efficient debt collection process. The maximum customer credit risk exposure at the end of the financial year is the book value of accounts receivable.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets ('Work in progress') including amounts not due. To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The measurement of the expected credit losses includes forward looking information in the form of the estimated growth of the EU gross domestic product. The Group also recognizes a case by case estimated credit loss allowance according to judgment exercised by the management. Generally, the Group recognizes a 50 per cent allowance for receivables that are more than 60 days past due and a 100 per cent reservation for receivables that are more than 90 days past due. The lifetime expected credit loss allowance and the case by case credit loss allowance are presented as net. The total deduction in trade receivables related to expected credit losses at December 31 is determined as follows:

2018				Past due		
EUR 1,000	**Not due**	**0-30 d**	**31-60 d**	**61-90 d**	**Over 90 d**	**Total**
Expected loss rate	0.1 %	0.1 %	1.4 %	3.8 %	7.3 %	
Trade receivables	23,764	3,000	782	367	965	28,879
Contract assets	20,503	0	0	0	0	20,503
Lifetime expected loss allowance	44	3	11	14	70	143
Case by case loss allowance	0	0	0	0	312	312
Loss allowance net						**312**

2017				Past due		
EUR 1,000	**Not due**	**0-30 d**	**31-60 d**	**61-90 d**	**Over 90 d**	**Total**
Trade receivables	25,381	3,130	701	377	1,316	30,905
Contract assets	19,246	0	0	0	0	19,246
Case by case loss allowance	0	0	0	0	251	251
Loss allowance net						**251**

Movements of the allowance for impairment:	**2018**	**2017**
Case by case loss allowance Jan 1	-251	-167
Loss allowance calculated under IFRS 9	-162	0
Loss allowance recognized Jan 1	**-251**	**-167**
Payments received	115	14
Provision for impairment of receivables, decrease (+) / increase (-)	-175	-99
Loss allowance Dec 31	**-312**	**-251**

Trade receivables and contract assets are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the Group.

4.2 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets.

Consistent with others in the industry, the Group monitors capital on the basis of the net gearing ratio. This ratio is calculated as net debt divided by equity. Net debt is calculated as total gross interest-bearing debt less cash and cash equivalents. To ensure sufficient flexibility, the goal is to keep the net gearing ratio within 30-100%. The following table sets out the Group's net gearing ratio:

EUR 1,000	**2018**	**2017**
Gross interest-bearing debt	36,252	34,963
Less: cash and cash equivalents	-16,115	-10,074
Net debt	20,137	24,889
Total equity	67,527	57,923
Net gearing ratio	**29.8%**	**43.0%**

Maturity analysis of financial liabilities

2018

EUR 1,000	Less than 1 year	1-5 years
Borrowings	10 943	22 300
Finance lease payments	1 204	1 803
Interest payments	211	278
Liabilities from acquisitions	860	2 000
Trade and other payables	9 641	29
Financial liabilities total	**22 859**	**26 410**

2017

EUR 1,000	Less than 1 year	1-5 years
Borrowings	14 050	18 300
Finance lease payments	1 279	1 334
Interest payments	280	148
Liabilities from acquisitions	715	653
Trade and other payables	9 312	39
Financial liabilities total	**25 637**	**20 474**

Non-monetary changes in interest-bearing liabilities in the financing cash flow

EUR 1,000 EUR	2018	2017
Interest-bearing liabilities Jan 1	**34 963**	**34 269**
Financing cash flow	-847	-1 890
Non-monetary changes		
New finance leases	*2 170*	*2 733*
Exchange differences	*-35*	*-148*
Non-monetary changes, total	2 136	2 585
Interest-bearing liabilities Dec 31	**36 252**	**34 963**