

## 6.2 Objectives and principles of financial risk management

### Objectives and principles of financial risk management

In the years covered by these Consolidated Financial Statements, the Group was exposed to the following types of financial risk:



### Market risk

The Group is exposed to market risks associated with changes of the exchange rates and interest rates. The objective of the market risk management process is to limit undesirable impact of changes of market risk factors on the cash flows and results in the short- and medium-term. The Group manages the market risk following from the aforementioned factors on the basis of internal procedures which define the rules of measurement of individual exposures, parameters and time horizon.

The principles of market risk management are implemented through assigned organizational units under the supervision of the Parent Company's Management Board. Market risk management is executed based on developed strategies, with partial utilization of derivative instruments. Derivatives are used only to limit the risk of a change in the carrying amount and the risk of cash flow changes. Transactions are entered into only with reliable partners, admitted to participation as a result of application of internal procedures and execution of appropriate documentation.

### Foreign exchange risk management

As at 31 December 2018, the Group was exposed to foreign exchange risk concerning for the most part trade receivables, loan liabilities and lease liabilities denominated in foreign currencies.

As a result of valuation of receivables and liabilities denominated in foreign currencies conducted as at the balance sheet date, and also as a result of ongoing settlements in foreign currencies, there arise positive and negative FX differences. Their values fluctuate during the year, which is caused by changes in exchange rates.

In a long-term perspective, the valuation risk matches the risk of change of cash flows, therefore the Group's cash flows are subject to hedging operations.

For the EUR/PLN exchange rate, there is partial natural hedging due to the fact that sales revenues in EUR are partly balanced out by costs in the same currency. The FX risk management transactions used by the Group are aimed at hedging the net free position exposed to change of the value in PLN. As part of its hedge accounting policy, the Group used applied forward transactions for the currency pair EUR/PLN in 2017–2018 and established hedging relationships between cash flows arising from bank loans denominated in EUR and future highly probable cash flows arising from operating activities denominated in EUR.

### Items in foreign currencies

31/12/2018	EUR/PLN		CZK/PLN		CHF/PLN	
	Total value of items in PLN	in a foreign currency	in PLN	in a foreign currency	in PLN	in a foreign currency
<b>ASSETS</b>						
<b>Non-current assets</b>						
Other assets - forward FX contracts <sup>(1)</sup>	0.8	16.9	0.8	-	-	-

31/12/2018	Total value of items in PLN	EUR/PLN		CZK/PLN		CHF/PLN	
		in a foreign currency	in PLN	in a foreign currency	in PLN	in a foreign currency	in PLN
<b>Current assets</b>							
Trade receivables	202.9	29.8	128.3	440.4	73.7	0.2	0.9
Other assets - forward	2.7	45.5	2.7	-	-	-	-
FX contracts <sup>(1)</sup>							
Cash and cash equivalents	125.7	14.0	60.1	392.2	65.6	-	-
<b>Total</b>	<b>332.1</b>	<b>106.2</b>	<b>191.9</b>	<b>832.6</b>	<b>139.3</b>	<b>0.2</b>	<b>0.9</b>
<b>EQUITY AND LIABILITIES</b>							
<b>Long-term liabilities</b>							
Debt liabilities	526.3	110.2	473.6	314.8	52.7	-	-
Other liabilities	0.7	0.1	0.4	1.9	0.3	-	-
<b>Short-term liabilities</b>							
Debt liabilities	71.4	16.1	69.1	14.0	2.3	-	-
Trade payables	165.5	14.8	63.8	588.9	98.5	0.8	3.2
Other liabilities - forward	0.2	8.8	0.2	-	-	-	-
FX contracts <sup>(1)</sup>							
<b>Total</b>	<b>764.1</b>	<b>150.0</b>	<b>607.1</b>	<b>919.6</b>	<b>153.8</b>	<b>0.8</b>	<b>3.2</b>
<b>Net currency item</b>	<b>(432.0)</b>	<b>(43.8)</b>	<b>(415.2)</b>	<b>(87.0)</b>	<b>(14.5)</b>	<b>(0.6)</b>	<b>(2.3)</b>

	EUR/PLN		CZK/PLN		CHF/PLN	
	Total value of items in PLN	in a foreign currency	in PLN	in a foreign currency	in PLN	in a foreign currency
31/12/2017						
<b>ASSETS</b>						
<b>Non-current assets</b>						
Other assets - forward FX contracts <sup>(1)</sup>	2.6	19.2	2.6	-	-	-
<b>Current assets</b>						
Trade receivables	212.8	33.6	140.0	434.9	71.0	0.5
Other assets:						
forward FX contracts <sup>(1)</sup>	9.5	37.9	9.5	-	-	-
other assets	1.1	0.3	1.1	-	-	-
Cash and cash equivalents	163.1	21.8	90.9	442.1	72.1	0.1
<b>Total</b>	<b>389.1</b>	<b>112.8</b>	<b>244.1</b>	<b>877.0</b>	<b>143.1</b>	<b>0.5</b>
<b>EQUITY AND LIABILITIES</b>						
Long-term liabilities						

	31/12/2017	EUR/PLN		CZK/PLN		CHF/PLN	
		Total value of items in PLN	in a foreign currency	in PLN	in a foreign currency	in PLN	in a foreign currency
Debt liabilities	576.4	125.4	523.1	326.6	53.3	-	-
Short-term liabilities							
Debt liabilities	93.6	21.7	90.5	18.9	3.1	-	-
Trade payables	187.9	21.6	90.0	580.9	94.8	0.9	3.1
<b>Total</b>	<b>857.9</b>	<b>168.7</b>	<b>703.6</b>	<b>926.4</b>	<b>151.2</b>	<b>0.9</b>	<b>3.1</b>
<b>Net currency item</b>	<b>(468.8)</b>	<b>(55.9)</b>	<b>(459.5)</b>	<b>(49.4)</b>	<b>(8.1)</b>	<b>(0.4)</b>	<b>(1.2)</b>

<sup>(1)</sup> For financial assets/other financial liabilities in the tables above, the currency column (EUR) presents the Group's exposure amount in forward transactions, while the currency column (PLN) corresponds to the fair value measurement of derivatives in PLN.

## Sensitivity to FX risk

The Group is exposed mainly to the foreign exchange risk regarding the currency pairs EUR/PLN, CHF/PLN and CZK/PLN in connection with its operating and financing activities. Deviations in exchange rates were calculated on the basis of the average volatility of each currency exchange rate in the period under analysis. Sensitivity of financial Instruments to foreign exchange risk has been calculated as the difference between the original carrying amount of the financial Instruments and their potential value while assuming changes to foreign exchange rates. The tables below present the Group's exposure to foreign exchange risk in 2017-2018.

Currency risk										
31/12/2018	value of the item in PLN	EUR/PLN				CZK/PLN CHF/PLN				
		impact on the result		impact on other comprehensive income		impact on other comprehensive income		impact on the result		
		6%	-6%	6%	-6%	4%	-4%	9%	-9%	
<b>ASSETS</b>										
<b>Non-current assets</b>										
Other assets - forward FX contracts	0.8			(4.4)	4.4	-	-	-	-	
<b>Current assets</b>										
Trade receivables	202.9	7.2	(7.2)	-	-	2.9	(2.9)	0.1	(0.1)	
Other assets - forward FX contracts	2.7	-	-	(11.8)	11.8	-	-	-	-	
Cash and cash equivalents	125.7	3.6	(3.6)	-	-	2.6	(2.6)	-	-	
<b>EQUITY AND LIABILITIES</b>										
<b>Long-term liabilities</b>										
Debt liabilities	526.3	(2.8)	2.8	(25.6)	25.6	(2.1)	2.1	-	-	
Other liabilities	0.7	-	-	-	-	-	-	-	-	
<b>Short-term liabilities</b>										
Debt liabilities	71.4	(1.6)	1.6	(2.5)	2.5	(0.1)	0.1	-	-	
Trade payables	165.5	(3.8)	3.8	-	-	(3.9)	3.9	(0.3)	0.3	

	value of the item in PLN	Currency risk									
		EUR/PLN				CZK/PLN CHF/PLN					
		impact on the result		impact on other comprehensive income		impact on other comprehensive income		impact on the result			
31/12/2018		6%	-6%	6%	-6%	4%	-4%	9%	-9%		
Other liabilities - forward FX contracts	0.2	-	-	(2.3)	2.3	-	-	-	-	-	-
Total	11.1	0.1	(0.1)	(0.2)	(0.2)	0.2	(0.2)	(0.2)	(0.2)	0.2	0.2

31/12/2017	value of the item in PLN	Currency risk							
		EUR/PLN				CZK/PLN CHF/PLN			
		impact on the result		impact on other comprehensive income		impact on other comprehensive income		impact on the result	
5%	-5%	5%	-5%	5%	-5%	5%	-5%	5%	-5%
<b>ASSETS</b>									
<b>Non-current assets</b>									
Other assets - forward FX contracts	2.6	-	-	(7.3)	(7.3)	-	-	-	-
<b>Current assets</b>									
Trade receivables	212.8	7.0	(7.0)	-	-	3.5	(3.5)	0.1	(0.1)
Other assets:									
forward FX contracts	9.5	-	-	(12.0)	12.0				
other assets	1.1	0.1	(0.1)	-	-	-	-	-	-
Cash and cash equivalents	163.1	4.5	(4.5)	-	-	3.6	(3.6)	-	-
<b>EQUITY AND LIABILITIES</b>									
<b>Long-term liabilities</b>									
Debt liabilities	576.4	(1.7)	1.7	(22.7)	22.7	(2.7)	2.7	-	-
<b>Short-term liabilities</b>									
Debt liabilities	93.6	(1.7)	1.7	(2.8)	2.8	(0.2)	0.2	-	-
Trade payables	187.9	(4.5)	4.5	-	-	(4.7)	4.7	-	-
<b>Total gross effect</b>		<b>3.7</b>	<b>(3.7)</b>	<b>(44.8)</b>	<b>44.8</b>	<b>(0.5)</b>	<b>0.5</b>	<b>0.1</b>	<b>(0.1)</b>

## FX forward transactions

To manage the foreign exchange risk in 2018 and 2017, FX forward transactions were applied on the EUR/PLN currency pair (sale and purchase of currency).

## List of unrealized FX forward contracts

AS AT 31 DECEMBER 2018

Company	Transaction type	Transaction date	Contract settlement date	Currency pair	Amount in the base currency	Amount in the volatile currency	Fair value of assets	Fair value of liabilities
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Company	Transaction type	Transaction date	Contract settlement date	Currency pair	Amount in the base currency	Amount in the volatile currency	Fair value of assets	Fair value of liabilities
Santander	forward	05/2017 - 12/2018	01/2019 - 02/2020	EUR/PLN	9.2	40.3	0.3	-
mBANK	forward	01/2017 - 12/2018	01/2019 - 12/2020	EUR/PLN	16.9	75.0	0.9	0.1
Pekao	forward	06/2017 - 12/2018	01/2019 - 08/2020	EUR/PLN	16.4	72.3	0.8	-
PKO BP	forward	01/2017 - 11/2018	01/2019 - 11/2020	EUR/PLN	25.5	112.7	1.3	0.1
Credit Agricole	forward	02/2017 - 07/2018	01/2019 - 06/2020	EUR/PLN	3.2	14.2	0.2	-
<b>Total</b>					<b>71.2</b>	<b>314.5</b>	<b>3.5</b>	<b>0.2</b>

AS AT 31 DECEMBER 2017

Company	Transaction type	Transaction date	Contract settlement date	Currency pair	Amount in the base currency	Amount in the volatile currency	Fair value of assets
BZ WBK	forward	06/2016 - 10/2017	01/2018 - 10/2019	EUR/PLN	2.6	11.5	0.7
mBANK	forward	11/2016 - 12/2017	01/2018 - 12/2019	EUR/PLN	12.9	56.9	2.1
Pekao	forward	06/2016 - 10/2017	01/2018 - 10/2019	EUR/PLN	15.1	67.0	3.4
PKO BP	forward	05/2016 - 12/2017	01/2018 - 12/2019	EUR/PLN	20.9	93.6	4.8
RCB	forward	10/2016 - 11/2016	01/2018 - 11/2018	EUR/PLN	1.0	4.5	0.3
Credit Agricole	forward	01/2017 - 12/2017	07/2018 - 12/2019	EUR/PLN	4.6	20.5	0.8
<b>Total</b>					<b>57.1</b>	<b>254.0</b>	<b>12.1</b>

## Interest rate risk management

As at 31 December 2018, the Group is exposed to the risk of volatility of interest rate cash flows following from bank loans and lease agreements based on variable interest rates. Interest on lease agreements was accrued according to the reference rates increased by the financing party's margin. The reference rate for lease contracts denominated in EUR is EURIBOR 6M, and for agreements signed in PLN the reference rate is WIBOR 1M. Interest on loan agreements was accrued at the WIBOR 1M and 3M, EURIBOR 3M and PRIBOR 3M reference rates plus the banks' margins. Interest rate risk in loan and leasing agreements is executed through revaluation of instalments in monthly, quarterly and semi-annual periods, depending on the agreement.

Until May 2018, the Group used interest rate risk management transactions (IRS) to hedge against fluctuations of interest rates for some of the finance lease liabilities.

The cash held by the Group as at 31 December 2018 was mainly in the form of fixed rate bank deposits which were concluded with time horizons depending on the Group's liquidity needs. In future periods, as a result of changes in the deposit interest rates, the cash position may be exposed to interest rate risk.

## Financial instruments by interest rate type

Financial assets	31/12/2018			31/12/2017		
	Interest rate					
	at a fixed interest rate	at a fixed interest rate	at a variable interest rate			Total
Loans granted	-	0.8	0.3			1.1
Bank deposits	201.1	253.8	-			253.8

	31/12/2018	31/12/2017	
	Interest rate		
Financial assets	at a fixed interest rate	at a fixed interest rate	at a variable interest rate
Cash and cash equivalents	447.3	516.8	-
<b>Total</b>	<b>648.4</b>	<b>771.4</b>	<b>0.3</b>

  

	31/12/2018	31/12/2017	
	Interest rate		
Financial liabilities	at a fixed interest rate	at a variable interest rate	Total
Derivatives	-	-	-
Debt liabilities	75.6	1,351.4	<b>1,427.0</b>
Liabilities on the purchase of fixed assets	235.1	-	<b>235.1</b>
<b>Total</b>	<b>310.7</b>	<b>1,351.4</b>	<b>1,662.1</b>

## Interest rate fluctuation sensitivity

The sensitivity analyses presented below are based on the level of exposure of financial instruments to interest rate risk as at the balance sheet date. In the case of liabilities with variable interest rates, for the needs of the analysis it is assumed that the amount of outstanding liabilities as at the balance sheet date will be unpaid for the whole year. The Group identifies the exposure to interest rate risk mainly for WIBOR, EURIBOR and PRIBOR. Interest rate deviations are calculated on the basis of observations of average interest rate fluctuations. The sensitivity analysis presented below does not comprise the interest accrued as at the balance sheet date. The analysis results are presented in gross terms (before tax).

	31/12/2018	Value of the item in PLN	Interest rate risk					
			WIBOR			EURIBOR		
			impact on the result			impact on the result		impact on the result
<b>EQUITY AND LIABILITIES</b>			+ 50 bps	- 50 bps		+ 50 bps	- 50 bps	+ 50 bps - 50 bps
<b>Long-term liabilities</b>								
Debt liabilities		1,106.2	(3.2)	3.2	(2.1)	2.1	(0.4)	0.4
<b>Short-term liabilities</b>								
Debt liabilities		244.5	(1.0)	1.0	(0.2)	0.2	-	-
<b>Total gross effect</b>			<b>(4.2)</b>	<b>4.2</b>	<b>(2.3)</b>	<b>2.3</b>	<b>(0.4)</b>	<b>0.4</b>
 <b>ASSETS</b>								
	31/12/2017	Value of the item in PLN	Interest rate risk					
			WIBOR			EURIBOR		
			impact on the result			impact on the result		impact on the result
			+ 50 bps	- 50 bps		+ 50 bps	- 50 bps	+ 50 bps - 50 bps

31/12/2017	Value of the item in PLN	Interest rate risk					
		WIBOR		EURIBOR		PRIBOR	
		impact on the result + 50 bps	impact on the result - 50 bps	impact on the result + 50 bps	impact on the result - 50 bps	impact on the result + 50 bps	impact on the result - 50 bps
Other assets	0.3	-	-	-	-	-	-
<b>EQUITY AND LIABILITIES</b>							
<b>Long-term liabilities</b>							
Debt liabilities	1,332.0	(4.2)	4.2	(2.3)	2.3	(0.3)	0.3
<b>Short-term liabilities</b>							
Debt liabilities	269.8	(1.0)	1.0	-	-	-	-
<b>Total gross effect</b>		<b>(5.2)</b>	<b>5.2</b>	<b>(2.3)</b>	<b>2.3</b>	<b>(0.3)</b>	<b>0.3</b>

## Credit risk management

The table below presents the items of the consolidated statement of financial position exposed to credit risk by financial instrument class:

	31/12/2018	31/12/2017
Trade receivables	685.3	688.8
Cash and cash equivalents	447.3	516.8
Bank deposits over 3 months	201.1	253.8
Other financial assets	-	1.1
<b>Total</b>	<b>1,333.7</b>	<b>1,460.5</b>

Conducting its commercial activity the Group sells services to business entities with a deferred payment date, which may lead to the risk of counterparties defaulting with meeting the deadlines for payment of the amounts due for the provided services. To minimize the credit risk, the Group manages the risk through a prevailing client creditworthiness assessment procedure. This assessment is carried out for all clients who use a deferred payment date. As part of its internal policy, the Group makes application of the deferred term of payment conditional on acceptability of the counterparty's condition and positive history of cooperation.

Concentration of risk associated with trade receivables is limited due to the large number of business partners with commercial credit dispersed among different sectors of economy.

## Structure of trade receivables in terms of entity types

	31/12/2018	31/12/2017
Group of entities related to the biggest external counterparty	7.4%	8.8%
PKP Group related parties	0.8%	0.7%
Other State Treasury related parties	25.6%	22.3%
Other entities	66.2%	68.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

In addition, to reduce the risk of problems with recovery of trade receivables, the Group accepts from its customers securities in the form of, among others: receivables insurance, bank / insurance guarantees, assignment of contracts, blockage on bank accounts, and promissory notes. As at 31 December 2018, 12.0% of trade receivables were secured.

The credit risk associated with cash and bank deposits is perceived as low. All entities in which the Group invests free cash operate in the financial sector. These include domestic banks, foreign banks and branches of foreign banks with a high creditworthiness. The concentration of risk involving cash and bank deposits with a maturity longer than 3 months is presented in the table below.

Bank	Credit rating agency	Rating	31/12/2018
Bank A	Fitch	A-	27.9%
Bank B	Moody's	A2	21.9%
Bank C	Moody's	Baa1	15.5%
Bank D	Moody's	Baa1	7.9%
Bank E	Moody's	Baa2	7.8%
Bank F	Moody's	A2	7.7%
Other			11.3%
<b>Total</b>			<b>100.0%</b>