



**ANNUAL CONSOLIDATED
FINANCIAL STATEMENTS OF THE CAPITAL GROUP
BANK OCHRONY ŚRODOWISKA S.A.**

**FOR THE YEAR ENDED ON 31 DECEMBER 2019
WITH THE INDEPENDENT AUDITOR'S REPORT**

Warsaw, March 2020

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Annual consolidated profit and loss account of BOŚ Group

Continuing operations	Note	for the year ended	
		31-12-2019	31-12-2018
Interest income and similar income, in which:		627,590	628,304
<i>financial assets measured at amortized cost</i>		528,324	516,877
<i>assets carried at fair value through other comprehensive income</i>		95,718	106,889
<i>financial assets carried compulsorily at fair value through profit or loss</i>		3,548	4,538
Interest expense and similar charges, in which:		- 207,603	- 244,189
<i>financial liabilities measured at amortized cost</i>		- 198,831	- 234,505
<i>financial liabilities carried compulsorily at fair value through profit or loss</i>		- 8,772	- 9,684
Net interest income	6	419,987	384,115
Fee and commission revenue		132,065	135,027
Fee and commission expense		- 33,692	- 37,133
Net fee and commission income	7	98,373	97,894
Dividend income	8	6,434	6,069
Result on financial instruments assessed according to their fair value basing on the statement of profit or loss (including receivables from clients)	9	44,957	62,590
Result on investment securities	10	582	2,166
Result on hedge accounting	11	- 42	1,313
Foreign exchange result	12	16,503	24,251
Other operating revenue	13	27,550	23,138
Other operating expenses	14	- 38,266	- 21,676
Result on loss of value for impairment	15	- 104,536	- 134,090
General administrative expenses	16	- 361,354	- 357,243
Gross profit		110,188	88,527
Tax expenses	17	- 38,194	- 24,799
Net profit		71,994	63,728
attributable to:			
<i>shareholders of the parent</i>		71,994	63,728
Profit per share attributable to shareholders of the parent during the period (in PLN)	18		
<i>basic</i>		0.77	0.82
<i>diluted</i>		0.77	0.82

There were no discontinued operations in 2019 and 2018.

Notes presented in pages 12 to 187 constitute an integral part of these consolidated financial statements.

Annual consolidated statement of comprehensive income of BOŚ Group

Continuing operations	for the year ended	
	31-12-2019	31-12-2018
Net profit	71,994	63,728
Items that may be reclassified subsequently to profit or loss:	- 9,599	- 2,310
Fair value of financial assets carried at fair value through other comprehensive income (gross)	- 11,850	- 2,852
Deferred tax	2,251	542
Items that will not be reclassified subsequently to profit or loss:	- 96	48
Fair value of equity instruments carried at fair value through other comprehensive income (gross)	- 16	- 1
Deferred tax	3	-
Revaluation of employee benefit liabilities	- 103	60
Deferred tax	20	- 11
Total comprehensive income	62,299	61,466
attributable to:		
<i>shareholders of the parent</i>	62,299	61,466
<i>non-controlling shareholders</i>	-	-

Annual consolidated statement of financial condition of BOŚ Group

Assets	Note	31-12-2019	31-12-2018
Cash and balances with the Central Bank	19	297,866	186,736
Receivables from other banks	20	165,733	196,104
Financial assets for trade, including:	21	140,344	87,761
<i>equity securities</i>		20,111	9,131
<i>debt securities</i>		44,534	2,903
<i>derivative instruments</i>		75,699	75,727
Investment securities:	22	5,302,078	5,476,293
<i>equity securities measured at fair value through other comprehensive income</i>		85,510	85,027
<i>debt securities measured at fair value through other comprehensive income</i>		3,839,184	4,015,998
<i>debt securities measured at amortized cost</i>		1,377,384	1,375,268
Receivables from clients, including:	23	12,003,794	11,809,527
<i>measured at amortized cost</i>		11,965,509	11,704,874
<i>measured at fair value through profit or loss</i>		38,285	104,653
Intangible assets	25	117,062	120,050
Tangible fixed assets	26	77,743	68,396
Beneficial use - lease	27	79,738	-
Income tax assets:		109,418	99,867
<i>current</i>		390	1,124
<i>deferred</i>	34	109,028	98,743
Other assets	28	193,221	206,291
Assets total		18,486,997	18,251,025

Notes presented in pages 12 to 187 constitute an integral part of these consolidated financial statements.

Liabilities	Note	31-12-2019	31-12-2018
Amounts due to the Central Bank and to other banks	29	595,667	571,784
Financial derivative financial instruments held for trading	21	50,926	54,336
Derivative hedging instruments	42	16,869	18,298
Liabilities due to customers	30	14,914,981	14,799,109
Liabilities related to the issue of bank securities	31	-	46,590
Subordinated liabilities	32	370,731	370,672
Provisions	33	57,705	35,773
Income tax liabilities		9,795	4,972
<i>current</i>		8,410	4,497
<i>deferred</i>	34	1,385	475
Lease liabilities	35	83,349	-
Other liabilities	36	187,044	211,925
Total liabilities		16,287,067	16,113,459

Capital	Note	31-12-2019	31-12-2018
Equity attributable to shareholders of the parent:			
Stated capital:	39	1,461,036	1,461,036
<i>Share capital</i>		929,477	929,477
<i>Treasury shares</i>		-1,292	-1,292
<i>Supplementary capital from share premium</i>		532,851	532,851
Revaluation reserve	40	47,695	57,390
Retained earnings	41	691,199	619,140
Total equity		2,199,930	2,137,566
Total equity and liabilities		18,486,997	18,251,025

Notes presented in pages 12 to 187 constitute an integral part of these consolidated financial statements.

Annual consolidated statement of changes in equity of BOŚ Group

	Attributable to shareholders of the Bank								Total equity
	Share capital	Stated capital Treasury shares	Supplementary capital from share premium	Revaluation reserve	Other supplementary capital	Retained earnings Other reserves	General risk fund	Undistributed financial result	
As at 01-01-2019	929,477	- 1,292	532,851	57,390	624,393	23,605	48,302	- 77,160	2,137,566
Net profit	-	-	-	-	-	-	-	71,994	71,994
Other comprehensive income	-	-	-	- 9,695	-	-	-	-	- 9,695
Total comprehensive income	-	-	-	- 9,695	-	-	-	71,994	62,299
Result on sales of securities reclassified according to IFRS 9	-	-	-	-	-	-	-	65	65
Profit distribution, including:	-	-	-	-	70,010	-	-	- 70,010	-
Transfer of net profit to other capital	-	-	-	-	70,010	-	-	- 70,010	-
Balance as at 12-31-2019	929,477	- 1,292	532,851	47,695	694,403	23,605	48,302	- 75,111	2,199,930

Balance as at 12-31-2017	628,732	-1,292	532,851	10,598	594,874	23,605	48,302	15,167	1,852 837
Impact of implementation of MSSF9 at 01-01-2018	-	-	-	49,054	-	-	-	-127,172	-78,118
As at 01-01-2018	628,732	- 1,292	532,851	59,652	594,874	23,605	48,302	- 112,005	1,774,719
Net profit	-	-	-	-	-	-	-	63,728	63,728
Other comprehensive income	-	-	-	- 2,262	-	-	-	-	- 2,262
Total comprehensive income	-	-	-	- 2,262	-	-	-	63,728	61,466
Result on sales of securities reclassified according to IFRS 9	-	-	-	-	-	-	-	2,223	2,223
Issue of V series shares	300,745	-	-	-	-	-	-	-	300,745
Share issue costs	-	-	-	-	-	-	-	- 1,587	- 1,587
Profit distribution, including:	-	-	-	-	29,519	-	-	- 29,519	-
Transfer of net profit to other capital	-	-	-	-	36,482	-	-	- 36,482	-
Covering of U series shares issuance costs	-	-	-	-	- 6,963	-	-	6,963	-
As at 31-12-2018	929,477	- 1,292	532,851	57,390	624,393	23,605	48,302	- 77,160	2,137,566

Non-controlling interests did not occur in years 2019-2018.

Annual consolidated cash flow statement of BOŚ Group

Indirect method	for the year ended	
	31-12-2019	31-12-2018
OPERATING CASH FLOW		
Gross profit	110,188	88,527
Total adjustments:	- 88,135	96,187
Amortization/ Depreciation	55,658	39,783
Interest on investment activity	- 55,577	-
Profit / loss from investment activity	- 93	- 48,314
Interest on financial activity	22,588	37,368
Dividends received:	- 6,434	- 6,069
<i>on securities held-for-trading</i>	157	137
<i>on investment securities</i>	6,277	5,932
Change in balance:	- 69,794	94,019
<i>receivables from other banks</i>	- 6,400	- 11,387
<i>securities held-for-trading</i>	- 52,611	7,607
<i>assets and liabilities due to valuation of derivative and hedging financial instruments</i>	- 4,811	91,244
<i>investment securities</i>	44,540	215,402
<i>receivables from clients</i>	- 194,267	377,960
<i>other assets and income tax</i>	6,509	103,086
<i>liabilities due to the Central Bank and other banks</i>	23,883	92,250
<i>liabilities due to customers</i>	115,872	- 664,724
<i>provisions</i>	21,829	10,698
<i>other liabilities and in income tax</i>	- 24,338	- 128,117
Income tax paid	- 40,917	- 26,669
Net operating cash flow	22,053	184,714
INVESTMENT CASH FLOW		
Proceeds	54,020	48,203
Sale of property, plant, and equipment	559	140
Interest received on securities measured at amortized cost	53,461	48,063
Expenses	- 38,638	- 283,155
Purchase of securities measured at amortized cost	-	- 251,453
Purchase of intangible assets	- 22,687	- 25,397
Purchase of property, plant, and equipment	- 15,951	- 6,305
Net investment cash flow	15,382	- 234,952

FINANCIAL CASH FLOW		
Proceeds	-	300,745
Proceeds from issue of shares and capital contributions	-	300,745
Expenses	- 83,001	- 1,047,365
Redemption of bonds issued by the BOŚ Group	- 46,000	- 1,000,000
Interest paid on bonds issued by the BOŚ Group, of which:	- 19,184	- 45,778
<i>subordinated bonds</i>	- 17,627	- 27,482
IFRS 16 Lease installments	- 17,817	- 1,587
Net financial cash flow	- 83,001	- 746,620
TOTAL NET CASH FLOW	- 45,566	- 796,858
BALANCE SHEET CHANGE IN CASH AND CASH EQUIVALENTS	- 45,566	- 796,858
OPENING BALANCE OF CASH AND CASH EQUIVALENTS	1,733,481	2,530,339
CLOSING BALANCE OF CASH AND CASH EQUIVALENTS	1,687 915	1,733,481
Restricted access cash and cash equivalents	195,497	197,648

Additional explanatory notes to the annual consolidated financial statements

1. General information - Bank Ochrony Środowiska S.A. and the Bank Ochrony Środowiska S.A. Capital Group

1.1. Bank Ochrony Środowiska S.A.

Bank Ochrony Środowiska S.A., hereinafter referred to as "the Bank", "BOŚ S.A.", "the Company" with a registered office in Warsaw, ul. Żelazna 32, was incorporated based on decision 42 of the President of the National Bank of Poland ('NBP') dated 15 September 1990 and the Notarial Deed of 28 September 1990 on the establishment of the Bank.

The Bank has been entered into the National Court Register of the District Court in Warsaw, 12th Commercial Division, with the National Court Register number KRS 0000015525 and the statistical identification number REGON 006239498.

According to the Polish Classification of Activities (PKD), activity of the Bank has been classified as belonging to category PKD 6419Z.

The Bank has been established for an unlimited period of time.

The key purpose of the Bank is effective management of shareholder capital and cash entrusted by customers, ensuring profitability of operations and safety of the entrusted funds.

The area of activity of the Bank consists of banking activity, including: accumulating cash funds, lending, granting loans, performing cash settlements, providing other banking services, as well as financial advisory and consulting services.

The mission of the Bank is: the Polish Ecological Bank - for people, business, and the environment.

The Bank pursues its mission mainly by:

- 1) providing bank services to retail customers and institutions, especially those customers, who invest in environment-friendly ventures or operate within the environment protection and water management segments and persons who value the environment-friendly lifestyle,
- 2) effective participation in distribution of funds for environment protection investments and sustainable development in Poland.

Starting from 24 January 1997, in accordance with the decision of the Management Board of the Warsaw Stock Exchange (WSE), the Bank's shares were admitted to trading on the Warsaw Stock Exchange and classified to the 'financial/banking sector' category.

These annual consolidated financial statements of BOŚ S.A. Group were authorized by the Management Board of the Parent Entity on 16 March 2020 for publication on WSE on 17 March 2020.

1.2. The list of the BOŚ S.A. Capital Group entities subject to consolidation.

The list of BOŚ Group subsidiaries subject to consolidation in 2019:

Item	Subordinated entities	Registered office	% in share capital as at	% of voting rights as at	Consolidation method
Direct subsidiaries					
1.	Dom Maklerski BOŚ S.A.	Warsaw	100%	100%	Full consolidation method
2.	BOŚ Leasing - EKO Profit S.A.	Warsaw	100%	100%	Full consolidation method
Indirect subsidiary (subsidiary of BOŚ Leasing - Eko Profit S.A.)					
1.	MS Wind sp. z o. o.	Warsaw	100%	100%	Full consolidation method

Dom Maklerski BOŚ S.A. - is a direct subsidiary, which operates on the capital market, in particular, offering brokerage services;

BOŚ Leasing - EKO Profit S.A. - is a direct subsidiary, engaged in leasing activity to finance ecological projects and providing financial and advisory services supplementary to the Bank's offer;

MS Wind Sp. z o.o. - is an indirect subsidiary (a direct subsidiary of BOŚ Leasing - EKO Profit S.A.), operating on the market of performance of wind farm projects.

Additional information on Companies as at 31 December 2019:

Subordinated entities	Number of employees			Profit or loss before tax	Income tax	Financial support received**\
	Income*\	full-time positions	persons			
Direct subsidiaries						
Dom Maklerski Banku Ochrony Środowiska S.A.	74,507	235	240	5,173	1,096	-
BOŚ Leasing - EKO Profit S.A.	11,530	11	13	1,899	1,134	-
Indirect subsidiary (subsidiary of BOŚ Leasing - Eko Profit S.A.)						
MS Wind sp. z o. o.	11,843	0.5	2	8,808	1,892	-

*\ Income defined as net interest income, net commission income, net result on financial instruments, other operating income in PLN thousand.

**\ Financial support from public funds, in particular on the basis of the Act of 12 February 2009 on the State Treasury support to financial institutions (Journal of Laws of 2014 item 158).

1.3. Composition of the Management Board and the Supervisory Board of BOŚ S.A.

Composition of the Bank's Management Board

The composition of the Bank's Management Board as at 31 December 2019 was as follows:

- Bogusław Białowas, President of the Management Board,
- Arkadiusz Garbarczyk, Vice President - First Deputy President of the Management Board,
- Jerzy Zań, Vice President of the Management Board.

The composition of the Bank's Management Board as at 31 December 2018 was as follows:

- Bogusław Białowas, President of the Management Board,
- Arkadiusz Garbarczyk, Vice President - First Deputy President of the Management Board,
- Konrad Raczkowski, Vice-President of the Management Board.

In year 2019, the following changes took place in the composition of the Management Board of the Bank:

- on 18 June 2019, Mr. Konrad Raczkowski submitted a statement of resignation as at this date from the function of the Vice President of the Management Board of the Bank;
- in association with this resignation, during the meeting of 18 June 2019, the Board of Supervisors delegated Mr. Emil Ślęzak, Member of the Supervisory Board, to act temporarily as a Member of the Management Board of the Bank. Mr. Emil Ślęzak performed the functions of a Member of the Management Board until 3 November 2019;
- during the meeting of 11 September 2019, the Board of Supervisors passed a resolution to appoint Mr. Jerzy Zań – as at 4 November 2019 – as a Vice President of the Management Board of the Bank.

Until the date of preparation of this information, composition of the Management Board has not changed.

Composition of the Bank's Supervisory Board

As at 31 December 2019, composition of the Supervisory Board was as follows:

- Wojciech Wardacki – Chairman
- Katarzyna Lewandowska – Vice-Chairman
- Andrzej Matysiak – Secretary

Members of the Supervisory Board

- Iwona Duda
- Janina Goss
- Ireneusz Purgacz
- Radosław Rasala
- Piotr Sadownik
- Paweł Sałek
- Emil Ślęzak

As at 31 December 2018, composition of the Supervisory Board was as follows:

- Wojciech Wardacki – Chairman
- Andrzej Matysiak – Vice-Chairman
- Emil Ślęzak – Secretary

Members of the Supervisory Board

- Iwona Duda
- Janina Goss
- Piotr Sadownik
- Marian Szołucha
- Dariusz Wasilewski

In year 2019, the following changes took place in the composition of the Management Supervisory Board:

The 10th term of office of the Supervisory Board ended on 18 June 2019.

As at this date, the Ordinary General Meeting of the Bank appointed the Supervisory Board for the 11th term of office consisting of ten members:

- Iwona Duda
- Janina Goss
- Katarzyna Lewandowska
- Andrzej Matysiak
- Ireneusz Purgacz
- Radosław Rasąła
- Piotr Sadownik
- Paweł Sałek
- Emil Ślęzak
- Wojciech Wardacki

On 18 June 2019, Mr. Emil Ślęzak, in association with resignation from the function of a Vice President of the Management Board of the Bank submitted by Mr. Konrad Raczkowski, was delegated to act temporarily as a Member of the Management Board of the Bank (until 03 November 2019).

Until the date of preparation of this information, composition of the Supervisory Board has not changed.

2. Information on the accounting policies adopted in the preparation of the annual consolidated financial statements

2.1. Basis for preparation and declaration of compliance

The annual consolidated financial statements of BOŚ Group include:

- 1) a consolidated profit and loss account for the period of 12 months, ended on 31 December 2019, and comparative data for the period of 12 months, ended on 31 December 2018,
- 2) a consolidated statement of comprehensive income for the period of 12 months, ended on 31 December 2019, and comparative data for the period of 12 months, ended on 31 December 2018,
- 3) a consolidated statement of financial condition as at 31 December 2019, and comparative data as at 31 December 2018,
- 4) a consolidated statement of changes in equity for the period of 12 months, ended on 31 December 2019, and comparative data for the period of 12 months, ended on 31 December 2018,
- 5) a consolidated cash flow statement for the period of 12 months, ended on 31 December 2019, and comparative data for the period of 12 months, ended on 31 December 2018,
- 6) Additional explanatory notes

These annual consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) in the version adopted by the European Union (EU) applicable as at the reporting date, that is, 31 December 2019, applying the same accounting principles to each period in accordance with the historical cost principle, except for the items listed below, measured at fair value:

Mode of recognition of changes in fair value through:	
Financial instruments held for trading	financial profit/loss
Fair value hedging derivatives	financial profit/loss
Receivables from clients with cash flows failing to meet the cash flow test requirements	financial profit/loss
Investment debt securities kept in the business model with the purpose of obtaining contractual cash flows or for sale	other comprehensive income
Equity investment securities	other comprehensive income

The IFRS comprise standards and interpretations accepted by the International Accounting Standards Board ('IASB') and the International Financial Reporting Interpretations Committee ('IFRIC').

Dom Maklerski BOŚ S.A., BOŚ Leasing - EKO Profit S.A. and MS Wind Sp. z o.o. prepare their financial statements in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU).

These annual consolidated financial statements have been prepared in Polish zlotys (PLN), rounded up to thousands of PLN (thous. PLN).

2.2. Standards, interpretations and amendments to standards, which were applied for the first time in 2019

IFRS	Nature of amendment	Applicable from	Impact on BOŚ Group
IFRS Leases	<p>The new standard defines the principles of recognition, valuation, presentation and disclosure regarding lease. All lease transactions result in the lessee acquiring the right to use an asset and incurring a liability consisting of the obligation to make payments.</p> <p>Therefore, IFRS 16 cancels classification of operating lease and financial lease in line with IAS 17 and introduces one model to the accounting recognition of the lease by the lessee.</p> <p>The lessee will be obliged to recognize:</p> <p>(a) assets and liabilities for all lease transactions concluded for the period over 12 months, except situations when the given asset has low value; and</p> <p>(b) in the statement of results, amortization of the leased asset takes place separately of the interests on the leasing liability. IFRS 16 mostly repeats regulations of ISA 17 related to the accounting recognition of the lease by the lessor. In consequence, a lessor continues to classify in the category of operating lease and financial lease and appropriately differentiates the accounting recognition.</p>	01 January 2019	A description of implementation of the standard has been presented below
Amendments to IFRS 9 Financial instruments	Amendments to IFRS 9 introduce provisions related to contracts with prepayment option and with the possibility to require approval of the prepayment amount by the lender, this amount being significantly lower than the unpaid amount of principal and interest. Such prepayment amount could be a payment due by the borrower to the lender, and not a compensation to be paid by the borrower to the lender. This financial asset will be measured at amortized costs or at fair value through other comprehensive income, nevertheless negative compensation has to be a justified compensation for early repayment based on the contract.	01 January 2019	The change had no significant impact on the financial statements
Amendments to IAS 28 Investments in associates and joint ventures: measurement of long-term investments	Amendments clarify that the standard IFRS 9 Financial Instruments is to be applied with respect to long-term interests in an associate or joint-venture to which the equity method is not applied and which are a part of net investments in an associate or joint-venture (long-term investments). The above explanation proves that the model of expected credit losses resulting from IFRS 9 is applicable to the above long-term investments. The Board clarifies additionally that by applying IFRS 9, the entity does not take into account any losses of associates, joint-ventures and losses due to losing of receivables resulting from net investments recognized as adjustments of net investments in an associate or a joint-venture that result from application of IAS 28 Investment in associates and joint ventures.	01 January 2019	The change had no significant impact on the financial statements
IFRIC 23 Uncertainty over Income Tax Treatments	The interpretation clarifies how to apply the requirements regarding recognition and measurement included in IAS 12 Income Taxes when there is uncertainty over income tax treatments. In particular, the interpretation of IFRIC 23 specifies, in case of uncertainty over income tax treatments, if the entity is required to analyze uncertain tax items separately and when such an analysis should be performed, what are the entity's assumptions towards the possibility of control by the tax authorities, how the entity defines taxable profit (loss), tax base, unused tax losses, tax rates and how the entity recognizes changes in facts and circumstances. In line with the interpretation, the impact of this uncertainty should be measured using the most likely amount method or the expected value method.	01 January 2019	The change had no significant impact on the financial statements
Amendments to IAS 19 Employee benefits	Amendments to IAS 19 are effective for annual periods beginning on or after 01 January 2019. Amendments to the standard define the requirements related to the accounting recognition of modifications, as well as the limitations or settlements of a defined benefit plan.	01 January 2019	The change had no significant impact on the financial statements
The annual adjustments scheme 2015-2017	<p>Amendments to IFRS 3 "Business Combinations" - measurement of shares in a joint operation upon acquisition of control.</p> <p>Amendments to IFRS 11 "Joint Arrangements" - no measurement in a joint operation upon acquisition of joint control.</p> <p>Amendments to IAS 12 "Income taxes" - recognition of consequences of dividends.</p> <p>Amendments to IAS 23 "Borrowing costs" - qualification of liabilities incurred particularly to acquire the asset being adapted, when activities necessary to</p>	01 January 2019	The change had no significant impact on the financial statements

	prepare the asset for use or disposal have been completed.		
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MSSF 16

The new standard IFRS 16 defines the principles of recognition, valuation, presentation and disclosure regarding lease. All lease transactions result in the lessee acquiring the right to use an asset and incurring a liability consisting of the obligation to make payments. Therefore, IFRS 16 cancels classification of operating lease and financial lease in line with IAS 17 and introduces one model to the accounting recognition of the lease by the lessee.

IFRS 16 was issued by the International Accounting Standards Board on 13 January 2016, approved by the EU on 31 October 2017 and is applicable for annual periods beginning on or after 01 January 2019.

Identification of lease agreements according to IFRS 16 is based on the principle of exercising control. The agreement is classified as a lease when a lessee exercises control on transferred asset in return for a consideration during a defined period of time. IFRS 16 introduces new principles of lease recognition. The main modification is elimination of the lease classification - operational and financial lease. A single model for lease accounting has been introduced instead. The lessor continues to apply two classifications: operational lease and financial lease.

As a lessee, the BOŚ Group recognizes lease in its statement of financial condition as an asset constituting beneficial use and a respective liability on the day when the object of lease is made available for use. Every lease payment is allocated between a decrease in liability and financial cost. Financial cost is recognized in the profit and loss account during the lease period. The beneficial use asset is amortized using the straight-line method.

According to IFRS 16, the BOŚ Group as a lessee recognized in its books as at 01 January 2019 leasing liabilities resulting from the agreements for the amount of PLN 174 thousand, that were previously classified as operational lease according to the principles of IAS 17 Leases. These liabilities were measured at current value of future leasing payments, discounted using the marginal interest rate of the Bank as at 01 January 2019.

The beneficial use of assets according to the lease agreement was measured at the amount of liabilities for leasing, i.e. PLN 74,174 thousand.

When applying IFRS 16 for the first time, the BOŚ Group used the following practical solutions, accepted by the standard:

- 1) using one discount rate to the portfolio of lease contracts with similar features,
- 2) exclusion of initial direct costs in order to measure the value of assets related to the right to use, as at the date of the standard implementation,
- 3) use of judgment in determining the remaining lease period, in case the agreement includes the option to extend or terminate the lease,
- 4) exclusions approved in the standard IFRS 16 regarding:
 - a) using an asset with low value;
 - b) using an asset for the period no longer than 12 months.

Operating lease liabilities booked as at 31-12-2018	87,610
A discount estimated using the marginal interest rate for the BOŚ Group	-10,472
(Decreases): short-term lease recognized on a straight-line basis as a cost	-2,442
(Decreases): low-value lease recognized on a straight-line basis as a cost	-394
Lease liabilities as at 01-01-2019	74,174

Implementation of the new standard IFRS 16, as at 01 January 2019, contributed to the increase of the balance sheet total by the amount of 74.2 million, while it had no impact on retained earnings and on the equity level of BOŚ Group.

2.3. Comparability with data from the previous period

Implementing the IFRS 16, the BOŚ Group used the modified retrospective approach and thus did not restate the comparative data.

As a result of implementation of IFRS 16, new items were introduced in the balance sheet of the BOŚ Group: Beneficial use - lease and Lease liabilities.

2.4. Going concern

Due to the balance sheet loss incurred in 2015 and in relation with requirements of Article 142 of the Banking Law Act, on 30 March 2016, the Bank submitted to the Polish Financial Supervision Authority a Recovery Program (RP) of BOŚ S.A. approved by the Bank's Supervisory Board (in Polish: Program Postępowania Naprawczego - PPN). The Polish Financial Supervision Authority approved the above-mentioned program, provided its remarks and information regarding the RP, sent to the Bank on 14 December 2016.

The Bank increased its share capital in 2016 by PLN 400 million and in 2018 - by PLN 300.7 million.

On 23 February 2018, the Bank submitted to the PFSA an updated version of the RP. The revision of the RP resulted from a failure to meet the boundary conditions of the document accepted by the Financial Supervision Authority in December 2016, which gave rise to re-assessment of assumptions adopted within the business model and of risk costs. The changes concerned mostly modification of the Bank's business model - towards the area of specialization compliant with the Bank's mission, verification of the trail of write-offs in the area of credit risk related to the adjustment of business model and update of elements relating to the capital adequacy.

The PFSA approved the updated version of the RP on 24 May 2018.

The period for implementation of restructuring activities to be carried out by the Bank within the frames of the RP was defined for the years 2018-2021. The Bank prepared a Framework Strategy of Action for BOŚ S.A., consistent with the Recovery Program in terms of its assumptions, directions and objectives to be achieved.

The main assumptions of the Strategy were made public in the form of a current report on 20 April 2016, while the report on modifications to the Main assumptions of the Strategy - on 22 March 2018, and the Current report on the update of Strategy - on 28 November 2018. The starting point for this update were favorable market and macroeconomic conditions, as well as the change of the Bank's business model.

Assumptions of the updated version of the Framework Development Strategy of the BOŚ include:

- evolution of the business model toward concentrating on institutional banking, aimed particularly at small and middle enterprises, while at the same time profiling the offer for individual Clients - specialization in ecology and taking advantage of the potential of the market of financing of environment-friendly ventures,
- after concluding the stage of stabilization and recovery actions that took place in 2016-2018, commencement of the stage of business development linked with implementation of the new business model and the new role of the Bank in government actions for the environment protection,
- using favorable factors of growth regarding eco-friendly investments, through financing of eco-friendly projects and efficient distribution of funds intended to finance activities aiming at environment protection and sustainable development.

In 2019, the Bank achieved higher profitability and capital ratios than planned for this year in the Framework Development Strategy of the BOŚ and the Recovery Program.

Taking into account the described factors, as at the date of the authorization of these financial statements, no circumstances are known that would indicate a threat to the going concern of BOŚ Group within at least months after the balance sheet date due to an intended or compulsory abandonment or limitation of the current activity.

2.5. Consolidation

These consolidated financial statements include financial data of Bank Ochrony Środowiska S.A. and financial data of related entities, prepared for the year ended on 31 December 2019. The financial statements of subsidiaries are prepared based on consistent accounting policies applied to economic transactions and events of a similar nature as well as for the same reporting period as the parent entity's financial statements.

All significant balances and transactions between the entities belonging to the BOŚ Group, including unrealized gains arising from transactions within the BOŚ Group, have been fully eliminated. Unrealized losses are eliminated unless they present evidence of impairment.

Subsidiaries are consolidated in the period starting from the date of the acquisition of control over them by BOŚ Group and cease to be consolidated at the date such control terminates. Control of a parent company takes place when:

- 1) it has power over a given entity,
- 2) it is subject to exposure to variable returns or has rights to variable results due to involvement in a given entity,
- 3) it is able to exercise power in order to shape the level of returns generated.

The BOŚ Group verifies its control over other companies, if a change in one or more conditions of control mentioned above occurs.

If the BOŚ Group holds less than the majority of the voting rights, but the holding rights are sufficient to unilaterally guide the relevant actions of a company, it means that the BOŚ Group exercises authority over the company. When assessing whether the rights to vote in the given entity are sufficient to exercise authority, the BOŚ Group analyzes all the relevant circumstances, including:

- 1) the package of voting rights held in comparison with the shares held and the level of dispersion of voting rights of other shareholders,
- 2) the potential voting rights held by the Company, other shareholders or other parties,
- 3) the rights based on other contractual arrangements, as well as
- 4) additional circumstances, which may prove that the Company either does or does not have the possibility of directing significant activities at the time of decision making, including the voting patterns observed during the previous meetings of shareholders.

As at 31 December 2019, the BOŚ Group does not exercise control over companies, in which the Group has less than the majority of voting rights and at the same time holds control.

Changes in share ownership by the parent entity, which do not result in loss of control over the subsidiary, are recognized as capital transactions. In such cases, the BOŚ Group adjusts the carrying amount of controlling and non-controlling interests in order to reflect the changes in the relative share of the Group in the subsidiary. Any differences between the amount of adjustment of non-controlling shares and fair value of the amount paid or received are presented in equity and attributed to owners of the parent company.

In case the BOŚ Group loses control over the subsidiary, profit or loss shall be recognized in the profit and loss account, calculated as the difference between the aggregated amount of received payment plus fair value of the preserved shares and the initial carrying amount of assets (including goodwill) plus the subsidiary's liabilities as well as non-controlling interests. All amounts connected to this subsidiary, originally recognized as other comprehensive income, shall be settled as if the BOŚ Group had directly disposed corresponding assets or liabilities of the subsidiary (that is, carried to financial result or another equity category in accordance with the relevant IFRS). The fair value of any investment retained in the former subsidiary, at the date when control is lost, is treated as the fair value on initial recognition of a financial asset in accordance with IAS 9.

2.6. Operating segment reporting

An operating segment is a part of BOŚ S.A. is engaged in the following type of economic activity:

- 1) that results in obtaining revenues and incurring costs
- 2) the results of which are regularly reviewed by the main body responsible for making operating decisions in the entity and using these results to make decisions regarding allocation of resources,
- 3) for which separate financial information is available.

Segments reporting has a similar basis as the one adopted for the purposes of the internal reporting purposes.

The BOŚ Group has distinguished the following operating segments:

- 1) institutional customers,
- 2) retail customers,
- 3) treasury and investment activity,
- 4) brokerage activity,
- 5) other (not allocated to individual segments).

The BOŚ Group does not conduct geographically diversified business. A detailed description of the reporting policy by operating segments can be found in Note 48.

2.7. Measurement of items denominated in foreign currencies

Functional currency

Items included in the financial statements are measured using the functional currency of the primary economic environment, in which the BOŚ Group operates ('the functional currency').

The functional currency of BOŚ Group is the Polish zloty (PLN).

Transactions and balances

Transactions denominated in foreign currencies are translated into the functional currency at the rate of the transaction date and the result is recognized in the profit and loss account.

Cash assets and liabilities denominated in/ indexed to foreign currencies are translated at the rate applicable at the end of the reporting period.

Non-pecuniary assets and liabilities measured at fair value are calculated based on the exchange rate applicable at the day of the measurement.

Non-pecuniary assets and liabilities measured at cost are calculated based on the exchange rate applicable at the day of creating these items.

2.8. Interest income and expense

The profit and loss account includes all interest income related to financial instruments measured at amortized cost using the effective interest rate method, financial assets and interest-bearing financial assets measured at the fair value through other comprehensive income or through the financial result.

The effective interest rate method is a method for calculating the amortized initial value of financial assets and liabilities and for allocating interest revenues or expenses over the relevant period. The effective interest rate is the rate that exactly discounts the estimated future cash payments or receipts to the net carrying amount

of a given financial asset or financial liability. When calculating the effective interest rate, the BOŚ Group estimates cash flows considering all contractual terms of the given financial instrument (for example, prepayment options not being separated from the host contract) but does not consider potential future credit losses. This calculation includes all fees paid or received between the parties to the contract that are an integral part of the effective interest rate, as well as transaction costs and all other premiums or discounts.

Once a financial asset, or a group of similar financial assets, has been written down as a result of impairment loss, interest income is recognized at the rate of interest used to discount the future cash flows for the purpose of impairment loss measurement and on the basis of the net value of exposure.

2.9. Fee and commission revenues and expenses

Fee and commission revenues and expenses regarding receivables from clients are recognized as an element of the interest revenue according to the effective interest rate method. Fees and commissions for credit granted, collected before disbursement, are postponed until the date of cash payment to the customer. Fees on account of syndicated loans are recognized as revenue when the syndication has been completed and the BOŚ Group has retained no part of the credit risk for itself or has retained a part of it at the same effective interest rate as other participants.

Other fee and commission revenues are recognized at the moment of the transfer of promised goods or services to the customer. In case of fees and commissions for lines of credit granted, recognition of revenues takes place with the course of time of these lines of credit.

Fee and commission expenses are recognized on accrual basis, i.e. at the moment of receipt of services from the supplier. Expenses for mandatory fees resulting from law provisions are recognized as the payment obligation arises.

2.10. Principles of recognition of revenues and expenses related to bancassurance

The BOŚ Group recognizes and settles revenues and expenses due to insurance products offered in accordance with their economic substance. Based on this economic substance, BOŚ Group distinguishes fees that form:

- 1) an integral part of remuneration resulting from the financial instrument offered additionally,
- 2) remuneration for additional activities after sale of an insurance product,
- 3) remuneration received as a result of insurance mediation.

Remuneration received or receivable by the BOŚ Group from sale of an insurance product including a financial instrument, when the insurance product is directly linked to a financial instrument, constitutes an integral part of the remuneration for the financial instrument offered and is settled over a period of time as an integral part of interest rate and recognized as interest revenues in the profit and loss account.

In particular, a direct link is recognized when at least one of the two prerequisites has been met:

- 1) the financial instrument is offered by the BOŚ Group always in combination with an insurance product, i.e. both transactions have been concluded at the same time, or have been concluded in a sequence in which each subsequent transaction is a result of the previous one,
- 2) the insurance product is offered by the BOŚ Group exclusively in combination with a financial instrument, i.e. there is no possibility to buy from the BOŚ Group an insurance product that would be identical with regard to its legal form, terms and conditions and the economic substance without a linked financial instrument.

If one of these prerequisites is not met, a detailed analysis of economic substance of the insurance product is performed as regards fulfillment of the criteria for independence of insurance contracts from the financial instruments offered. An analysis of the direct link between the insurance product and the financial instrument may result in division of a complex product, i.e. separating of fair value of the financial instrument and fair value of the insurance product sold in combination with this instrument. In such case, the remuneration payable on behalf of the BOŚ Group for sale of the insurance product is split into a part representing an element of the amortized cost of the financial instrument and a part representing the remuneration for insurance mediation services.

The remuneration split is made proportionally to fair value of the financial instrument and fair value of insurance mediation services vs the total of both these values. Fair value of a financial instrument is calculated using the income-based valuation method by recalculating future amounts to the present value, considering the current data on profitability and costs generated by the product. Fair value of insurance mediation is calculated using the market approach based on prices and other relevant information generated by identical or comparable market transactions.

The BOŚ Group recognizes remuneration for insurance mediation as the commission revenues at the time of sale or renewal of the insurance product. Revenues from remuneration for sale of insurance products are reduced by a provision, reflecting the percentage value of returns made in periods after sale of the insurance product, calculated by the BOŚ Group (e.g. resulting from cancellation of insurance by clients). If, during the term of the insurance contract, the BOŚ Group receives a remuneration for services/ activity based on the offered product or performance of such services/ activity is probable, the BOŚ Group settles this remuneration during the term of the contract, taking into consideration the revenue and expense matching principle. The remuneration is recognized in commission revenues, respecting the principle of progress of services/ activities. If it is not possible to determine the exact number of activities of the BOŚ Group within a specified time interval, the BOŚ Group will settle remuneration on a straight-line basis during the insurance product lifetime, unless evidence suggests that any other method will better present the progress of works.

The amount of predicted returns as well as the revenue split proportions depending on economic substance is verified each time after receiving information about important changes in that regard, at least as at the balance sheet date.

Costs linked directly to an insurance product sold in combination with a financial instrument are settled in accordance with the principle of matching revenues and costs:

- 1) as a part of an amortized cost of a financial instrument, if all revenues related to a sale of an insurance product are accounted for using the effective interest method,
- 2) if a split of the remuneration has taken place - in proportion used to separate revenues within calculation of amortized cost and one-off or deferred income.

Overhead costs or expenses not connected directly to the sale of insurance products or financial instruments are recognized in the profit and loss account as incurred.

2.11. Hedge accounting

Hedge accounting is applied in order to compensate for changes in fair value of the hedged and hedging items.

On the basis of the IFRS 9 transition provisions, the BOŚ Group took a decision to continue with the IAS 39 requirements as for the hedge accounting principles to be applied.

Regarding the hedge accounting, the BOŚ Group may take a decision to switch to IFRS 9 requirements at a later date.

The BOŚ Group applies hedge accounting, if all of the following criteria as defined in IAS 39 are met:

- 1) upon establishment of the hedge, there is a formal designation and documentation of the hedging relationship, the risk management objective of the BOŚ Group and a strategy for hedge establishment; the documentation identifies the hedging instrument, the hedged item, the nature of risk subject to hedging and how the BOŚ Group will evaluate the effectiveness of the hedging instrument in offsetting the risk by changes in fair value of the hedged item.
- 2) it is expected that the hedge will be highly effective in offsetting changes in fair value, consistently with the originally documented risk management strategy for that particular hedging relationship,
- 3) effectiveness of the hedge can be reliably measured, i.e. the fair value of the hedged item and the fair value of the hedging instrument can be reliably measured,
- 4) the hedge is evaluated on an ongoing basis and has been proven highly effective in all reporting periods for which it has been established.

Hedge accounting is an integral element of the financial risk management in the BOŚ Group.

Financial risk management is carried out in accordance with the existing risk management process of the Group.

The BOŚ Group uses hedge accounting for hedging the fair value of financial instruments. Fair value hedge is a hedge against changes in the fair value of a recognized asset, liability or probable future liability or an identified portion of this recognized asset, liability or probable future liability, which can be attributed to a particular risk and can affect the profit and loss account.

A fair value hedge, which meets the requirements of hedge accounting in a given period, is recognized by the BOŚ Group as follows:

- 1) changes in fair value of a hedging instrument (i.e. derivative instrument designed and qualified as fair value hedge) is recognized in the profit and loss account,
- 2) profit or loss on the hedged item resulting from the hedged risk adjust the carrying amount of the hedged item and are recognized in the profit and loss account,
- 3) interest on hedging derivatives are presented in the same line of the profit and loss account as the interest on the hedged instrument, i.e. the interest result,
- 4) valuation of hedged financial assets classified as fair value through OCI, resulting from factors other than hedged risk, is recognized in the revaluation reserve until disposal or maturity of such assets.

The BOŚ Group ceases to apply hedge accounting in the case of expiry, disposal, termination or realization of the hedging instrument or when the hedging relationship does not meet criteria of hedge accounting application. When ceasing to apply hedge accounting, valuation of hedged items that are submitted to valuation in line with the amortized cost method (without applying the principles of hedge accounting), attributable to the risk hedged and recognized in the periods when hedging was effective, is submitted to be settled in the profit and loss account.

The BOŚ Group does not apply hedge accounting to cash flows.

2.12. Financial assets and liabilities

Initial recognition

The BOŚ Group recognizes a financial asset or liability in the statement of financial condition when the Group becomes bound by contractual provisions regarding this financial instrument. Recognition of financial assets takes place when the BOŚ Group acquires the right to receive the cash flows, and recognition of financial liabilities - when it assumes a contractual obligation to pay the cash flows. In initial recognition, financial assets and liabilities are classified in an appropriate measurement category.

Valuation of financial assets and liabilities at initial recognition is carried out at fair value, which in the case of items not measured at fair value is increased or decreased in the subsequent period by direct transaction costs.

Valuation of financial assets after the period of initial recognition

After the period of initial recognition, the BOŚ Group performs a valuation of financial assets and liabilities according to the principles of classification, using the amortized cost method or at fair value.

Amortized cost is the amount in which a financial asset or liability is measured at the moment of initial recognition, decreased by repayments of the capital and increased or decreased by a determined, applying the effective exchange rate, accumulated depreciation of any differences between the initial value and the value at maturity and decreased by any impairment write-offs. The amortized cost includes penalty interest.

Measurement at fair value is defined as the price that would be received for selling an asset or paying to transfer a liability in an orderly transaction on the main (or the most advantageous) market at the measurement date under the current market conditions (meaning the output price) regardless of whether that price is directly observable or estimated using other valuation techniques.

Classification and measurement of financial assets

According to IFRS 9, financial assets are assigned to an appropriate valuation model upon their initial recognition. Financial assets of the BOŚ Group are assigned to the following valuation categories:

- 1) Financial assets measured at amortized cost,
- 2) Financial assets measured at fair value through other comprehensive income,
- 3) Financial assets measured at fair value through profit or loss.

Allocation to the appropriate valuation category is based on:

- 1) The business model serving as a basis for management of financial assets and
- 2) The test of characteristics of contractual cash flows ("the SPPI test" - Solely Payment of Principal and Interest).

Business models

The existing business models are defined by the Key Management of the BOŚ Group. The business models identified by the Group reflect its operating activity, i.e. the method of managing a specific group of assets and the purpose for which these assets were recognized or were acquired. Particular business models identified are constituted by groups of assets which are jointly managed, evaluated and reported.

When identifying business models for each group of financial assets, the Group considers qualitative aspects and quantitative criteria.

Qualitative aspects

Qualitative aspects include analysis and assessment of:

- 1) the business purpose for which the assets were recognized or were acquired,
- 2) methods for evaluation of results on assets within a given business model and reporting of these results to the Key Management of the BOŚ Group and their presentation as part of external reporting,
- 3) reasons for decisions regarding disposal of financial assets,
- 4) solutions and organizational structures within which specific groups of assets are recognized or acquired,
- 5) type of risk affecting the results achieved on each group of assets,
- 6) manner, in which the managers of individual groups of assets are remunerated, in particular, whether such remuneration is based partly or totally on fair value of the assets managed.

Quantitative criteria

The quantitative criteria used for identification and periodic verification of business models relate to the assessment of materiality and frequency of disposal of assets representing individual models. It is assumed that in the HtC business model, disposal of financial assets is admitted, in particular, in the following cases:

- 1) deterioration of cash flows recoverability assessment, in order to limit the credit risk effects,
- 2) close to the term of contractual maturity,
- 3) sporadic disposal (even if the value of assets sold is significant)
- 4) non-significant value of assets sold.

If the quantitative criteria, such as significant and frequent sale of financial assets with no deteriorated credit risk assessment, are not met, it is necessary to reassign the entire portfolio of financial assets, from which the sale was effected, and thus to change the classification of this portfolio to fair value category.

As result of the analyses performed, financial assets of the BOŚ Group have been assigned to the following business models :

1) HtC Model (Held to Collect)

a model, in which financial assets are held in order to acquire economic benefits, constituting contractual cash flows. Assets held on the basis of the HtC model are financial assets being credits or loans, receivables purchased within factoring services, debt securities acquired for investment purposes.

2) **HtCS Model (Held to Collect or Sale)**

a model, in which financial assets are held in order to generate contractual cash flows and to effect sales. Assets held on the basis of the HtCS model are debt securities acquired to hedge the current financial liquidity needs, as well as the profitability profile.

3) **Other business models**

other business models serve as a basis for acquisition of assets of a commercial character, in order to achieve a financial result on change of the market value or remuneration being a business margin. These business models apply mainly to derivative financial instruments and securities.

The SPPI test

According to the IFRS 9 requirements, financial assets within the model HtC and HtCS are subject to the SPPI test. The objective of the SPPI test is to confirm that contractual cash flows resulting from these financial assets are solely repayments of the principal amount and interest on the outstanding principal amount, given that:

- 1) capital constitutes fair value of the financial asset at the initial recognition date,
- 2) interest constitutes the remuneration for time value of money, the credit risk margin, the liquidity risk margin, the administration costs and the profit margin.

The SPPI test includes in particular the analysis of cash flow characteristic in relation to the conditions of early repayment and extension, a change in currency of the financial asset, conditions that increase variation of cash flows over the average variation resulting from the change of the market interest rates (e.g. leverage), conditions that limit the possibility of financial redress to the debtor's assets.

Principles for assignment of financial assets to valuation categories based on the business model and the SPPI test:

Business models:	The SPPI test	
	Cash flows are solely payments of the principal amount and interest	Cash flows are not solely payments of the principal amount and interest
The HtC Model	measurement at amortized cost	measurement at fair value through financial result
The HtCS Model	measurement at fair value through other comprehensive income	measurement at fair value through financial result
Other business models	The SPPI test is not carried out; compulsory measurement at fair value through profit or loss	

Financial assets by measurement category

1) **Financial assets measured at amortized cost**

This measurement category includes mainly the portfolio of liabilities from individual and institutional customers. This category also includes receivables purchased within factoring services, debt securities from the investment portfolio held to obtain benefits from contractual cash flows, receivables from other banks, including buy-sell back transactions.

2) **Financial assets measured at fair value through other comprehensive income**

This measurement category includes debt securities acquired to hedge the current financial liquidity, as well as the profitability profile, held to obtain benefits from contractual cash flows and for sale, as well as equity investment securities.

3) **Financial assets measured at fair value through profit or loss**

This measurement category includes derivative financial instruments and debt securities acquired for trade purposes. Credits with the interest rate structure containing the multiplier in the formula presented within receivables from clients, are a separate item within this measurement category. Preferential credits, granted with support of the public sector entities, are considered in this item.

Due to the discussions being held on the classification and measurement of financial instruments containing e.g. a multiplier, the above approach may be modified in the future.

Change of the financial instrument measurement category

A change of the financial assets measurement category can occur only as a result of a business model change. A change of business purposes related to the given financial assets or a change in attribution to the given business line are not considered as a change of the business model.

Change of the financial assets measurement category as a result of the business model change is recognized prospectively i.e. from the date of this change.

Financial liabilities cannot be reclassified.

Modification of financial assets

Modification of financial assets is identified by the BOŚ Group in case of changes in the contract that gave rise to the given financial assets, which impact the value and timing of cash flows. Cash flow changes resulting from the initial contract with the customer are not recognized as modifications. Amendment of contractual conditions as regards the payment can be carried out both due to credit risk management and for commercial reasons.

The BOŚ Group makes a distinction between significant and insignificant financial asset modifications.

The quantitative criterion

A significant modification consists of a change in contractual conditions of payment for a given financial asset and gives rise to a difference exceeding 10% between the value of future cash flows resulting from the modified financial asset discounted with the original effective interest rate and the value of future cash flows resulting from the financial asset before modification discounted with the same interest rate. In the case of an insignificant modification, this difference is less than 10%.

In the case of financial assets with an identified impairment indication, a modification, which is significant due to quantitative aspects is identified in the case of increase in the financing amount exceeding 50% of the value of the financial asset as of the modification date.

The qualitative criterion

A modification of financial assets under the circumstances presented below is recognized as a significant modification:

- addition of a feature that violates the SPPI test result
- a change in the credit currency not provided for in the initial contractual conditions,
- a change of the counterparty, which is considered a significant modification

Significant modification

A significant modification results in derecognition of the original asset in the balance sheet, recognition in the profit and loss account of unsettled expenses and commissions and initial recognition of a financial asset resulting from the modification. A new effective interest rate is established for the modified asset.

Insignificant modification

An insignificant modification does not lead to derecognition of the existing financial assets in the statement of financial condition. The result of such insignificant modification is recognized in the profit and loss account.

Impairment of financial assets

IFRS 9 introduced a new approach to estimation of losses on financial assets measured at amortized cost and at fair value through other comprehensive income. This approach is usually based on determination of expected loss.

Recognition of expected loss depends on the risk level change from the initial recognition of the financial asset. The Group recognizes three basic baskets of financial assets as regards the risk level change:

- Basket 1 - comprising exposures, for which no significant increase in credit risk - defined as the increase in the likelihood of insolvency - has occurred since their initial recognition. For such exposures, the expected losses are recognized over the horizon of the next 12 months or on the exposure maturity date if this period is shorter than 12 months.
- Basket 2 - comprising exposures, for which a significant increase in credit risk has occurred since their initial recognition, but the event of non-performance of liabilities has not been substantiated. For such exposures, the expected losses are recognized over the horizon of the remaining lifetime of exposure.
- Basket 3 - comprising exposures, for which events of non-performance of liabilities have been substantiated (impairment indicators have occurred). For such exposures, the expected losses are recognized over the horizon of the remaining lifetime of exposure.

Moreover, the Group identifies POCI (Purchased or Originated Credit Impaired) assets, that is, financial assets subject to impairment loss due to credit risk, at the date of their initial recognition. For exposures classified as POCI, the expected losses are recognized over the horizon of the remaining lifetime of exposure.

For the purpose of estimation of impairment write-offs, the BOŚ Group uses its own estimations of risk parameters, based on internal models compliant with the IFRS 9. The expected credit losses constitute the product of PD, LGD and EAD parameters estimated individually for each exposure, and the final amount of expected losses is the total of expected losses in each period (depending on the basket, over a 12-month horizon or the remaining lifetime) discounted using the effective interest rate. The estimated parameters in accordance with IFRS 9 are subject to adjustment for macro-economic scenarios.

Valuation of allowances for expected credit losses, provisions on financial guarantees and granted liabilities, made in Polish zlotys and in foreign currencies (including the exchange differences) are recognized respectively as expenses or revenues of the BOŚ Group arising from write-offs and provisions.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the balance sheet only when the BOŚ Group has a legally enforceable right to offset the recognized amounts and intends to settle on a net basis, or realize the asset and settle the liability simultaneously.

Financial liabilities

Financial liabilities after the period of their initial recognition are measured at amortized cost using the effective interest rate. The BOŚ Group derecognizes from its balance sheet a financial liability when it is no longer binding, i.e. when the obligation set forth in the contract has been fulfilled, annulled, or has expired.

Liabilities regarding derivative financial instruments are measured at their fair value through the financial result.

Capital Investments

Capital Investments are classified within the category of measurement at fair value through other comprehensive income. Classification of capital investments within this measurement category is irrevocable. Profits or losses resulting from the difference between the sale and purchase prices or from modification of fair value of these investments are not subject to recognition in the income statement, also in the case of their sale. The profit and loss account contains only revenues on dividends received.

Capital investments have been classified within the category of measurement at fair value through other comprehensive income, due to their investment purposes and the mode of achievement of economic benefits through dividends received.

Capital instruments, classified within the category of measurement at fair value through other comprehensive income, are measured based on the capital asset pricing model. The model uses financial forecasts for chosen companies and market parameters such as: capital cost and beta adjustment, calculated on the basis of data from comparable companies, discount and a liquidity premium and a control maintenance premium.

Sale and repurchase agreements

Securities sold subject to repurchase agreements (repo transactions, sell-buy-back transactions) are presented in the financial statements as securities when the entity maintains substantially the whole risk and all the profits connected with the possession of these securities. The counterparty's liability is included in the amounts due to other banks or amounts due to customers, as appropriate.

Securities purchased under agreements to resell (reverse repo transactions, buy-sell-back transactions) are recorded as receivables from other banks or customers, as appropriate. The difference between the selling and repurchase price is treated as interest and is recognized over the term of agreements using the effective interest rate method.

Securities lent to counterparties are not derecognized by the BOŚ Group.

Securities borrowed by BOŚ Group are not recognized in the financial statements, unless these are sold to third parties. In such case the purchase and sale transactions are recognized in the consolidated financial statements and related gains or losses are included in net trading income.

The obligation to return securities lent is recorded at fair value as liabilities due to customers. The risk and rewards concerning securities remain with the counterparty to the transaction.

Trade receivables and contractual assets receivables

For trade receivables and contractual asset receivables, the BOŚ Group carries out a measurement of the expected credit losses in the horizon of these assets' whole life.

2.13. Non-current assets held for sale

Non-current assets are classified as 'held for sale' and measured at the lower of the carrying amount and the fair value net of the costs of preparing the asset for sale, if the carrying amount is realized mainly through the sale transaction and not through on-going use.

There are no assets held for sale in the BOŚ Group.

2.14. Intangible assets

Goodwill

After initial recognition, goodwill is presented according to purchase price reduced by all accumulated impairment write-offs. Impairment testing is performed every year. Additionally, at each reporting date, there is an assessment performed to estimate if there is any evidence of goodwill impairment.

At each reporting date, the BOŚ Group assesses whether there is any evidence indicating that the carrying amount of goodwill is higher than its recoverable amount. The Group performs an annual impairment test on goodwill, regardless of the existence or non-existence of any evidence indicating the impairment. The test is drawn up in accordance with IAS 36.

The recoverable amount is estimated on the basis of the value-in-use of the cash-generating units (hereinafter: CGU) that have been attributed to the goodwill.

The value-in-use is the present estimated value of the future cash flows that the BOŚ Group expects to obtain as a result of the continuing use of CGU. The value-in-use takes into account the residual value of a CGU. The residual value of a CGU is calculated by extrapolating the cash flow projections beyond the forecast period, using the specified rate of growth.

Projections of future cash flows cover a period of years and are based on:

- 1) historical data reflecting the potential for CGU to generate cash flows,
- 2) balance sheet and profit and loss account projections in the forecasting period,
- 3) assumptions contained in the budget of the BOŚ Group,
- 4) analysis of reasons for differences between past cash flow projections and actual cash flows generated.

The present value of future cash flows is calculated using a suitable discount rate, taking into account the risk-free rate, the risk premium, the premium for low capitalization and the specific risk premium.

The present value of future cash flows is compared to the carrying value (as at the date of the test) for the sum of: goodwill and net assets of the CGU excluding the amount related to the deferred tax.

Licenses and software

Licenses for computer software acquired and developed by the Bank are capitalized on the basis of costs incurred to acquire and prepare specific software for use. The capitalized costs are amortized on a straight-line basis over their estimated useful lives.

Outlays related to maintenance of software are recognized as expenses when incurred or as deferred costs.

The economic useful life of intangible assets ranges from 1 to 15 years.

Outlays on intangible assets

The BOŚ Group recognizes incurred expenses of the asset for the outlay on intangible assets at the stage of development works for the venture carried out internally only in case if: there is a possibility and intention to finalize and to use a produced intangible asset, the Group has the proper technical and financial resources to finish the development and to use the asset and has the ability to measure reliably the outlay attributable to the intangible asset during its development. Only those costs are capitalized which can be directly associated to the creation, production and adoption of the intangible asset for use in the manner intended by the management.

The capitalized costs are amortized on a straight-line basis after the completion of development. The estimated useful life is determined on an individual basis.

Testing for impairment

Intangible assets are audited for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. The recoverable amount is the higher of two values: the intangible asset's fair value less costs to sell and the value in use.

2.15. Property, plant and equipment

All property, plant and equipment assets are stated at historical cost less accumulated depreciation. Historical cost includes outlay that is directly attributable to the acquisition of the assets.

Subsequent outlays are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will be transferred to the BOŚ Group and the cost of the given item can be measured reliably. All other repair and maintenance costs are charged to the profit and loss account during the financial period, in which they incurred.

Land is not depreciated.

Fixed assets are depreciated using the straight-line method over their estimated useful lives, as follows:

- 1) 40 years for buildings (depreciation rate 2.5%),
- 2) 2-12 years for leasehold improvements, or shorter depending on the term of the contract (depreciation rate 10 %),
- 3) 3-20 years for equipment and vehicles (depreciation rate 10%-100%).

The residual value and useful life of assets is reviewed and adjusted, as appropriate, at each balance sheet date.

Assets that are subject to depreciation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The carrying amount of an asset is written down immediately to its recoverable amount if the carrying amount of such asset is greater than its estimated recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and the value in use.

Gains and losses on disposals are determined by comparing proceeds from sale with the carrying amounts and recognized in the statement of profit or loss.

Commenced investments pertain to fixed assets under construction or assembly and are recognized according to purchase price or manufacturing cost, reduced by the potential impairment write-offs. Fixed assets under construction are not subject to depreciation until the end of construction and commissioning of such fixed asset for use.

2.16. Lease

The BOŚ Group classifies as a lease all agreements under which fixed assets are used or put into service by the Group, within a definite period in exchange for a remuneration.

The lessor

The BOŚ Group as a lessor classifies the agreements as financial or operating lease.

The BOŚ Group classifies as financial lease all agreements, which provide for a transfer to substantially all risks and benefits resulting from the assets owned subject to the agreement. Other lease agreements are classified as operating lease.

The lessee

On the lease commencement date, the BOŚ Group as the lessee recognizes the asset due to beneficial use and the liability due to lease.

The liability is based on the present value of future cash flows (lease payments based on the lease agreement), discounted using the lease interest rate.

The BOŚ Group applies exclusion from application of IFRS 16 principles with regard to:

- 1) use of low-value assets - the asset value does not exceed PLN 20 thousand,
- 2) using an asset for the period no longer than 12 months.

In the case of excluded agreements, the BOŚ Group does not recognize the beneficial use of the asset and the liability based on the agreement in the balance sheet. Lease payments related to these agreements are recognized by the BOŚ Group as costs in the profit and loss account using the straight-line method during the lease period.

Determining the lease period, the BOŚ Group determines the irrevocable lease period, taking into account the period subject to the extension option, if the Group expects it to be exercised, and the lease termination option, if the Group does not expect it to be exercised.

The BOŚ Group updates the lease period in the case of a change regarding the irrevocable lease period.

After the lease commencement date, the BOŚ Group measures the asset due to beneficial use according to cost:

- 1) less the total depreciation write-offs and total impairment losses and
- 2) the lease liability adjusted due to revaluation.

After the lease commencement date, the BOŚ Group measures the lease liability by:

- 1) increasing the balance sheet value to reflect the interest expenses for the lease liability,
- 2) decreasing the balance sheet value to reflect the lease payments already made,
- 3) revaluating the balance sheet amount to include the latest assessment or change in lease or to include the updated fixed lease payments.

The BOŚ Group recognizes a change in lease as a separate lease if:

- 1) the change increases the scope of lease by granting the beneficial use right for one or more underlying assets and
- 2) the lease remuneration increases by an amount proportionate to unit price per increase in the scope.

In the case of a lease change, which is not recognized as a separate lease, the BOŚ Group revaluates the liability by discounting the updated lease payments using the updated discount rate and recognizes such revaluation by:

- 1) decreasing the balance sheet value of the asset constituting beneficial use to include the partial or whole completion of lease in the case of changes that reduce the scope of lease,
- 2) adjusting the asset constituting beneficial use in relation to other lease changes.

2.17. Deferred income tax

For the purpose of the consolidated financial statements, deferred tax is calculated based on the liability method. The BOŚ Group recognizes the provision and assets for temporary differences resulting from deferred income tax resulting from the difference between the income and expense recognition times according to the accounting principles and corporate income tax regulations.

The main temporary differences arise from revaluation of certain financial assets and liabilities, including derivative contracts, provisions for pensions and other post-retirement benefits and tax losses carried forward.

Deferred tax provisions are recognized in full amount, with the exception of:

- 1) a situation when deferred tax liability arises due to the initial recognition of goodwill or initial recognition of an asset or liability in a transaction other than business combination and at the time the transaction does not influence either gross profit or loss or taxable profit or loss and
- 2) in respect of taxable temporary differences resulting from investments in subsidiaries, associates or joint ventures - except the situation when timing of reversal is under the control of the investor and when it is probable that in the foreseeable future temporary differences will not be reversed.

Deferred tax assets are recognized to the extent that it is probable that future taxable profit will be achieved, against which the temporary differences can be utilized in exception when a deferred tax asset arises from initial recognition of assets or liabilities from a transaction which:

- 1) is not a business combination, and
- 2) does not affect, at the moment of the transaction, neither the accounting profit nor taxable profit (tax loss).

Income tax related to items that are recognized in other comprehensive income is also recognized in other comprehensive income.

Deferred income tax is measured using the tax rates (and regulations) that are expected to apply in the period when the asset is realized or the liability is settled, based on the tax rates (and the tax laws) that have been enacted at the reporting date or that are sure to be enacted in the future at the balance sheet date.

The BOŚ Group compensates assets due to deferred income tax with provisions for deferred income tax only when it has an executable legal title to conduct compensation of receivables and liabilities due to current tax and the deferred income tax is associated with the same tax payer and the same tax authority.

2.18. Foreclosed assets

Foreclosed assets are initially recognized at their fair value. If fair value of foreclosed assets is higher than the debt amount, the difference constitutes a liability to the borrower and is reimbursed to the account of the owner of the foreclosed asset, after deducting the costs of foreclosure, its maintenance and valuation.

If fair value of the foreclosed assets is lower than the debt amount, the difference constitutes a liability of the borrower to BOŚ Group, which may be subject of restructuring or debt recovery.

There are no foreclosed assets in BOŚ Group.

2.19. Prepayments, accrued income, accruals and deferred income

Prepayments are costs incurred in the current financial year, relating to the future periods. Prepayments are recognized in the balance sheet in 'Other assets'.

Accrued expenses related to costs comprise costs incurred in the current period, which will be paid by the BOŚ Group in the future periods. Accrued expenses related to costs are disclosed in the balance sheet in 'Other liabilities'.

2.20. Provisions for employee benefits

The BOŚ Group recognizes provisions for severance payment liabilities determined on the basis of estimation of liabilities of this kind, based on the actuarial model. The actuarial model applied by the entity in order to determine the present value of its defined benefit liabilities and the related current service cost and, where applicable, past service cost, uses the projected unit credit method.

According to the projected unit credit method (sometimes known as the benefit accrued in relation to the years of service method or as the benefit/years of service method), each period of service is viewed as giving rise to an additional unit of benefit entitlement and measures each unit separately to build up the final obligation.

Actuarial gains and losses are fully recognized in other comprehensive income.

2.21. Provisions

Provisions are recognized when the following conditions are met jointly when:

- 1) as at the balance-sheet date, the BOŚ Group has a present, legal or constructive obligation to spend these funds, resulting from the past events, where the existence of such obligation is verified on the basis of a lawyer's opinion,
- 2) it is more likely than not that an outflow of resources will be required to settle the obligation; and
- 3) the outflow amount can be reliably estimated.

Provisions are measured at the present value of the outlays expected to be required to settle the obligation, accounting for the time value of money (if material) and the risks specific to the given obligation.

If the amount of expected outlays is discounted, the increase in the provision due to passage of time is recognized as interest expense.

2.22. Equity

Equity is composed of capital and reserves created in accordance with the legal regulations, i.e. the respective acts and the Bank's Articles of Association.

Items of equity of subsidiaries other than share capital are added to relevant items of equity of the parent entity.

Stated capital

The stated capital comprises the registered share capital of the parent entity and the share premium.

The share capital relates only to the share capital of the parent company. It is recognized at the nominal value according to the amount disclosed in the Articles of Association and in the National Court Register.

Share premium is created on sale of shares at price over their nominal value after covering the costs of issue.

Treasury shares

In case of redemption of own shares the amount of payment charges the equity and is recognized in the balance sheet in a separate line 'Treasury shares'.

Revaluation reserve

The revaluation capital comprises the change in the value of financial assets classified in the category of measurement at fair value through other comprehensive income resulting from their measurement, as well as deferred tax related to the items recognized within revaluation capital, gains or losses relating to the hedging instrument (cash flow hedge accounting) for the effective part of hedge, as well as actuarial gains and losses in the defined benefit plan.

Retained earnings

Retained earnings comprise the undistributed financial result and other capitals, i.e. the remaining reserve capital and other reserves, and the general risk fund.

Other reserves are created from profit appropriations and are set up for purposes specified in the Articles of Association or other regulations.

2.23. Cash and cash equivalents

For the purpose of the consolidated cash flow statement, cash and cash equivalents comprise items maturing within three months of their acquisition date, including: cash and non-restricted balances with central banks, treasury bills and other deposits on the money market, loans and advances granted to other banks, amounts due from other banks and short-term securities of the State Treasury.

2.24. Brokerage activity

Dom Maklerski BOŚ S.A. engages in custody operations in respect of servicing customers' securities accounts. These assets have not been recognized in the consolidated financial statements, because the BOŚ Group does not control them, does not benefit from them and does not incur any risk connected to these assets.

2.25. New standards and interpretations, as well as amendments to standards and interpretations that may be applicable but are not yet binding and were not previously implemented

IFRS	Nature of amendment	Applicable from	Impact on the Bank
Conceptual Framework for Financial Reporting	The conceptual framework was published by the IASB in March 2018. The document presents in a comprehensive manner the issues regarding Financial Reporting, the principles to set standards and guidance for entities that prepare consistent accounting policies. This document also facilitates the understanding and interpretation of standards. The conceptual assumptions include new concepts, updated definitions and criteria for recognizing assets and liabilities and the explanation of significant concepts. The Document consists of 8 chapters. The conceptual assumptions were published together with a justification of the modifications introduced. Moreover, the Board has published a separate document entitled "Amendments to References to the Conceptual Framework in IFRS Standards", which presents changes in standards as an update to the References to the Conceptual assumptions. In most cases, references to the standards were updated in order to reflect the references to the Conceptual assumptions.	On or after 01 January 2020	The change will not have a significant effect on the financial statements
Alterations to IFRS 3 Business Combinations	As a result of the amendments to IFRS 3, the definition of a "venture" has been modified. The current definition has been limited and will probably result in an increase of acquisition transactions qualified as asset acquisitions.	01 January 2020	The change will not have a significant effect on the financial statements
IAS 1 Presentation of financial statements IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors.	The Board has published a new definition of the term "materiality". Amendments to IAS 1 and IAS 8 clarify the definition of "materiality" and make the standards more consistent.	01 January 2020	The change will not have a significant effect on the financial statements
IFRS 17 Insurance	IFRS 17 "Insurance contracts" was issued by the International Accounting Standards Board on 18 May 2017 and is effective for annual periods on or after 01 January 2021. The new IFRS 17 "Insurance contracts" will replace IFRS 4 (currently in force), which allows for diversity in practices regarding settlement of insurance contracts. IFRS 17 will modify the accounting system of all entities that deal with insurance contracts and investment contracts, as this IFRS defines a new approach to recognition, measurement, presentation and disclosure of insurance contracts. The main goal of IFRS 17 is to guarantee transparency and comparability of financial statements of insurance companies.	01 January 2021	The change will not have a significant effect on the financial statements
Amendments to IFRS 10 and IAS 28	Amendments to IFRS 10 and IAS 28 concern sale or contribution of assets between an investor and its associate or joint venture. The amendments solve the problem of the existing inconsistency between IFRS 10 and IAS 28. The accounting recognition depends on whether the non-monetary assets sold or transferred to an associate or a joint venture may be considered as a "business". In case the non-monetary assets are considered as a "business", the investor will recognize a full profit or loss on the transaction. However, in case the assets do not meet the definition of a "business", the investor should recognize a profit or a loss, excluding a part consisting of other investors' shares. Amendments were published on 11 September 2014.	Adoption of the amendment has been postponed by the EU	The change will not have a significant effect on the financial statements
Amendments to IFRS 9 Financial instruments IAS 39 Financial instruments: recognition and measurement and IFRS 9 Financial instruments: disclosures	Reform of the interest rate reference indicator (Amendments to IFRS 9, IAS 39 and IFRS 7), regarding the consequences for financial reporting of the reform of the interest rate reference indicator carried out prior to replacement of the existing reference indicator with an alternative reference rate. The changes introduced provide for temporary and limited departures from the hedge accounting requirements contained in the International Accounting Standard (IAS) 39 Financial Instruments: recognition and measurement and the International Financial Reporting Standard (IFRS) 9 Financial Instruments, which have allowed enterprises to meet the mandatory requirements, assuming that the existing reference indicators of the interest rate are not changed as a result of the reform of interest rates on interbank deposits.	01 January 2020	The change will not have a significant effect on the financial statements

3. Adjustments of the prior period errors

No adjustments of prior period errors were made in the period of twelve months ended on 31 December 2019.

4. Significant accounting estimates and judgments

The preparation of the BOŚ Group's consolidated financial statements requires to apply judgment, estimates and assumptions, which have impact on the presented revenues, expenses, assets and liabilities, and the related notes and disclosures regarding contingent liabilities. The uncertainty regarding these assumptions and estimates may cause adjustments to the carrying amount of assets and liabilities in the future. It also requires exercising professional judgment in the process of applying the adopted accounting policies.

The BOŚ Group has adopted assumptions and estimates concerning the future based on historical data and the knowledge held at the date of the preparation of these consolidated financial statements. Estimates and assumptions are subject to the current reviews. These assumptions and estimates may change as a result of future market changes or other changes outside the control of the Group. Changes of assumptions and estimates are recognized within the period in which the change was performed or within this period and within future periods if the change in assessment and assumption concerns the current period and future periods.

The BOŚ Group recognizes and measures current and deferred tax assets and liabilities in accordance with the requirements of IAS 12 Income taxes based on the tax profit (tax loss), taxable base, carry-forward of unused tax losses and tax credits, and tax rates, while considering the assessment of uncertain tax treatment. Where uncertainty exists as to whether and to what extent the tax authority will accept tax treatment of a given transaction, the BOŚ Group recognizes such treatment after considering the uncertainty, if any.

4.1. Financial assets

Impairment of receivables from clients

On a monthly basis, the BOŚ Group performs a loan exposure review including: identification of loan exposures at impairment risk, assessment of the impairment. Impairment valuation is based mainly on assessing probability of the impairment indicator based on historical analysis, assessing potential losses (the LGD parameter) and assessing the macroeconomic environment, in which the BOŚ Group operates.

Models intended to assess the write-offs for expected credit losses built in line with IFRS 9 are composed of elements, determined by the BOŚ Group by using all available historical information and forecasts. With these models, BOŚ Group assesses the level of credit risk with the highest possible accuracy. Expected credit losses are calculated on the basis of the model of survival in monthly granularity, using the PG, LGD and EAD parameters, determined individually for each exposure, taking into account its expected duration. The final expected credit losses constitute the sum total of expected losses in each period (depending on the stage over a 12-month horizon of lifetime for basket 1 and the remaining lifetime for basket 2) discounted using the effective interest rate.

The structure of models used in order to evaluate expected credit losses takes into account modeling for the following parameters:

- PD (probability of default) - assessment of probability regarding default in a given time horizon (12 months or during the whole lifetime of the exposure),
- LGD (loss given default) - a part of exposure which would not be recovered in case of default,
- EAD (exposure at default) - expected exposure value at the moment of default.

For the assessment of write-offs, the component of macroeconomic forecasts is used in the model. Given the fact that there is a significant part of specific credit exposures in the BOŚ Group portfolio, and their characteristics and construction indicate a slight connection between this risk and the macroeconomic environment, the historically observed impact of forecasts was not significant for the measurement. The above factors show that sensitivity of the level for assessed loss in terms of impact on changes of macroeconomic forecasts is highly limited.

Greater volatility of allowances is expected in individual periods due to the changes in classification of exposures between Basket 1 and 2, which is a result of different time horizons for recognition of expected losses. Assessment of losses during the whole lifetime of the exposure is subject to greater uncertainty as regards the assessments, compared to the loss assessed over a 12-month horizon, which, in principle, is due to a longer period, in which unexpected factors impacting the exposure risk can occur.

Theoretical reclassification of 1% of exposure from basket 1 with the highest risk level to basket 2 for each type of exposure would result, as at the end of December 2019, in an increase of allowances by PLN 49.77 million.

In December 2019, sensitivity analysis of the level of impairment allowances to changes of LGD portfolio parameters was performed. In case of changes in recovery rates by +/-10 p.p., the estimated value of Impairment write-offs on receivables from clients valued using the group method, would decrease by PLN 27.8 million or increase by PLN 22.9 million, respectively.

The SPPI test

The SPPI test is an assessment of whether cash flows resulting from the financial assets held in HtC and HtC&S models are solely payments of principal and interest on the principal. This assessment (apart from the business model) determines classification of financial assets to the measurement category at amortized cost or respectively at fair value through other comprehensive income.

Given the above, this assessment is crucial for determining a correct principle of measurement for credit and loan agreements and other financial contracts that are the core activity of the BOŚ Group.

According to IFRS 9, the principal amount is a fair value of financial assets as at the initial recognition date. Interest is a payment for the time value of money, a margin for the credit risk carried and other types of risk carried due to the maintenance of the principal and the profit margin.

The SPPI test includes an analysis of concluded contracts/agreements in terms of determining cash flow characteristics resulting from these contracts/agreements. The SPPI test is considered to allow for classification to the measurement category at amortized cost or at fair value through other comprehensive income, if no cash flow characteristics were identified, for which the timing or the formula of defining the value depends on other factors than those meeting the definition of principal and interest from principal.

Characteristics deciding that this definition is not met:

- leverage,
- wages and salaries depending on conditions not linked with the time value of money or with the risk carried
- earlier repayment option; however, early repayment in the amount equal to the unpaid part of the principal amount and the interest, taking into account a justified fee for early repayment, is considered to meet the requirements of the SPPI test.

The BOŚ Group performs SPPI tests for all financial assets that are subject to this requirement, while for assets resulting from standard documentation, this test is performed at the level of groups of products. As regards assets that can be negotiated with individual clients, tests are performed based on individual contracts. As result of the SPPI test, a number of credit contracts were identified with the interest rate based on the multiplier formula (financial leverage). These are some of the preferential credits granted with the support of the National Fund for the Environment Protection. Given the above, they were reclassified to the category of measurement at fair value through financial result.

The Business Model

Valuation of a business model is a significant assessment; according to IFRS 9, it is one of the elements deciding on correct allocation of the financial assets valuation category. The BOŚ Group defines business models, which are used for the purpose of management of financial assets, mainly based on their business goals and the way of achieving financial results. A business model can be changed only in case of significant internal and external changes in activity of the BOŚ Group and is decided upon by the Group management. Business models are expected to be changed rarely. In particular, the change of business purposes regarding financial assets is not considered to be a change of the business model.

4.2. Fair value of financial instruments

Fair value of financial instruments not quoted on active markets is determined using valuation models accepted on the market. These take into consideration, among other things, the estimated future cash flows discounted to their present value (using the zero-coupon curve with a margin), comparable transaction prices (if they exist), and they refer to similar instruments quoted on active markets. In rare cases, when use of such models is not possible and there is no possibility to estimate the fair value in a reliable manner, financial instruments are carried at cost. Information on sensitivity of financial instruments is included in Note 46.

4.3. Provision for retirement benefits

The right to the retirement severance pay is available to any employee who has reached retirement age. Retirement severance pay relating to pre-retirement benefits or allowances and retirement within collective redundancies are not included in the calculations and in the case of their occurrence in the future, such provisions should be calculated separately.

An employee, who became permanently disabled and entitled to disability allowance paid from the social insurance, is entitled also to the disability pay.

The basis of both retirement and disability pension is calculated on the basis of the employee's salary, calculated as a holiday compensation at the time of vesting conditions to pay.

Amount of severance pay depends on seniority at the Bank Ochrony Środowiska S.A. in relation to the base:

up to 10 years of work	-	100%
more than 10 years of work	-	200%
more than 15 years of work	-	250%

Employee remuneration as of 31 December 2019 was used for the purposes of calculation. The provision for retirement and similar benefits is calculated with actuarial method.

4.4. The scope of consolidation

The BOŚ Group estimates that it does not have a significant influence on the WODKAN S.A. company. The Group's share in WODKAN S.A. capital accounts for 29.48%, giving assurance to exceed 20% of votes during General Meeting of Shareholders; however, it is not reflected by a significant impact of BOŚ Group on the company, as the City of Ostrów Wielkopolski - together with its subsidiary Centrum Rozwoju Komunalnego S.A. holds in total 58% of the share capital and votes during the General Meeting, which constitutes the controlling interest.

The BOŚ Group estimates that it does not have a significant influence on Kemipol Sp. z o.o. company. The BOŚ Group holds 15% of the share capital of Kemipol Sp. z o.o., which is equivalent to 15% of votes during the General Meeting of the Company. The controlling interest, constituting of 51% of the share capital and voting rights, is held by KEMIRA KEMI AB.

The BOŚ Group estimates that it does not have a significant influence on Polskie Domy Drewniane S.A. The BOŚ Group holds 1% of share capital of Polskie Domy Drewniane S.A., which is not sufficient to allow for exercising control over the Company.

The shares of Wodkan S.A., Kemipol Sp. z o.o. and Polskie Domy Drewniane S.A. have been classified as financial investments and measured at fair value through other comprehensive income.

4.5. Taxes

The laws on corporate income tax, personal income tax, tax on goods and services or social security contributions applicable in Poland are subject to frequent changes, which results in the lack of a well-established practice, as well as vagueness and inconsistency of regulations. This situation leads to possible discrepancies in the interpretation of tax regulations by the State authorities and taxpayers. Tax settlements and other settlements (e.g. customs duties) may be subject to control for a period of up to 6 years. The competent control bodies are authorized to impose significant penalties along with interest. There is a risk that control bodies will adopt a different position than the Company as far as the interpretation of regulations is concerned, which could significantly affect the amount of public law liabilities disclosed in the financial statements.

The BOŚ Group recognizes deferred tax assets based on the assumption that in the future, income tax will be generated, allowing to use the deferred tax asset. Deterioration of tax results in the future could make this assumption unreasonable.

4.6. Provision for legal risk concerning the portfolio of mortgage loans denominated in foreign currencies

As at 31 December 2019, the BOŚ Group included in the consolidated financial statements a provision for legal risk concerning the pending and future disputes with regard to the portfolio of mortgage loans denominated in CHF, EUR and USD, granted to individual customers. The provision was established in accordance with IAS 37 on the basis of specific assumptions with regard to outflow of funds in the future periods in the amount of PLN 23.2 million. In relation to ongoing disputes, this provision amounts to PLN 7.8 million. For the legal risk associated with potential disputes concerning denominated mortgage loan agreements, the BOŚ Group has established a provision in the amount of PLN 15.4 million. As at 31 December 2018, the provision amounted to PLN 2.0 million.

The model of establishment of the provision for legal risk concerning the portfolio of mortgage loans denominated in foreign currencies has been based on a financial loss calculation in accordance with the scenarios applied, which take into account the probability of disputes being subject to a final and binding court decision unfavorable to the BOŚ Group. The unfavorable decision scenarios are based on legal opinions and past experience of the BOŚ Group, and they include recognition of the agreement as invalid, conversion of currency to PLN, reimbursement of the margin applied to conversion of the loan amount payment and the repayments received. In the model used to establish the provision, an assumption was also made with regard to the projected increase in the number of claims made by customers over the 5-year horizon, the probability of occurrence of the scenarios adopted and the court judgment dates. To estimate the financial loss, it is also important to consider the date when the loan was granted.

At the time of publication of these consolidated financial statements, the number of court cases concluded with a final and binding judgment was still quite low and thus unreliable. Therefore, estimation of the provision for legal risk related to pending and future disputes concerning the portfolio of mortgage loans denominated in foreign currencies is uncertain, and the provision amount may change in the future. The provision will be subject to periodic monitoring and possible updates as at the subsequent reporting dates.

The BOŚ Group has performed an analysis of sensitivity of the provision amount estimation due to changes in parameters related to probability of the Bank losing the court cases and probability of materialization of the scenario of recognizing loan agreements as invalid.

in PLN million

MODEL SENSITIVITY	PARAMETER CHANGE		
	-25%	BASE SCENARIO	+25%
PROBABILITY OF LOSING THE CASE IN COURT	17.5	23.2	28.9
PROBABILITY OF MATERIALIZATION OF THE INVALIDATION SCENARIO	16.2	23.2	29.0

4.7. Provision for reimbursement of loan costs in the case of early repayment

On 11 September 2019, the Court of Justice of the European Union issued a ruling in the case C-383/18, on the basis of which the consumer is entitled to reduction in the total loan cost proportionally to the period of use of the loan amount in the case of repayment prior to the contractual maturity date. This right is applicable to all costs incurred by the consumer, including the one-time commission fees.

On this basis, the BOŚ Group has modified its approach to reimbursement of one-time commissions received for granting a loan. In relation to the portfolio of loans unpaid as at 31 December 2019, the BOŚ Group established a provision for the expected reimbursements of commission fees received (note 36 Other liabilities) on the basis of estimation of loan and credit repayments prior to their contractual maturity dates in the amount of PLN 3,489 thousand, reducing the revenues from interest. In addition, in relation to loans and credits repaid prior to their contractual maturity dates before 31 December 2019, the Bank has established a provision for potential reimbursements in the amount of PLN 1,183 thousand (note 33 Provisions). The provision level will be subject to periodic reviews as at the subsequent reporting dates.

5. Risk management

Risk management is concentrated directly in the Bank, taking into account that Bank's financial assets constitute the majority of assets of the BOŚ Group as at 31 December 2019. Due to aforementioned, the description of the methodology applicable to the process of credit risk management is related to the Bank.

5.1. Credit risk

Definition of credit risk

Credit risk is identified as the risk of potential loss stemming from a failure to settle an obligation on the part of a client or a contracting party within a contractual deadline.

Credit risk management methods

The Bank pursues an individual (credit transaction) and portfolio-based policy of credit risk management considering the level of risk appetite.

The level of risk appetite was determined within the limits set by the practice of sound and prudent risk management and adopted at a moderate level.

The process of credit risk management in the Bank included in particular:

- 1) the procedure for assessing the credit risk of each single transaction, for setting collaterals and for loan granting,
- 2) monitoring of the risk level, limiting it and conducting stress tests,
- 3) the rating and scoring models applied in assessment of individual and institutional client risk,
- 4) the principles of responsibility in the process of assessment of credit risk,
- 5) the portfolio credit risk assessment,
- 6) the principles of managing mortgage-secured exposures,
- 7) the principles of identifying impaired exposures and determining impairments,
- 8) the system of reporting to the Bank's executives,
- 9) the information systems, supporting the above tasks.

Management of single-transaction risk is implemented in line with the following rules:

- 1) each credit transaction required a comprehensive credit risk assessment, which resulted in an internal rating or scoring assessment,
- 2) creditworthiness of the client constituted a basis for the credit decision,
- 3) measurement of credit risk of prospective and concluded loan transactions was performed at the stage of loan granting and monitoring,
- 4) the loan granting process assured independence of the credit risk assessment from the sales forces,
- 5) credit decisions were taken by authorized persons,
- 6) the loan transaction conditions offered to clients depended on the level of risk connected to the client and/or the transaction.

Financing of a single transaction was based on:

- 1) creditworthiness of the borrower to repay the proposed debt at times agreed upon with the Bank,
- 2) providing a collateral in the form and amount accepted by the Bank, if required by the internal regulations,
- 3) meeting of other criteria for taking financing such as, in particular, the results of the relationship between the client and the Bank, as well as assessment of credit history of the client in the banking sector.

Portfolio credit risk management was executed using various methods of credit risk measurement and valuation, among which:

- 1) the probability of default,
- 2) the expected credit loss,
- 3) the migration matrix between periods of delays and classes of risk,
- 4) the analysis of loan origination (loans granted in a given period),
- 5) the share and structure of non-performing loans,
- 6) the share and structure of exposures meeting the conditions for individual impairment.

The Bank has its Credit Risk Management Committee. The Committee's aim is to develop the principles of credit risk management and risk monitoring within the framework established by the appropriate strategies, policies or rules adopted by the Management Board or Supervisory Board.

The Committee operates in the following areas:

- 1) credit risk management and credit process,
- 2) valuation of assets,
- 3) models and methodologies of credit risk evaluation.

In addition, the Risk Committee is to support the Bank's Supervisory Board in the oversight of risk area. The Risk Committee is composed of the members of Supervisory Board. In particular, the Committee's objective is : to give opinions on the

overall, current and prospective readiness of the Bank to undertake the risk, to give opinion related to the risk management strategy of the Bank, give support to the Supervisory Board while implementing this strategy, verify whether the assets and liabilities prices offered to the clients reflect fully the business model of the Bank and its strategy regarding the risk.

Processes established for the purpose of risk management

In year 2019, as a part of the commenced restructuring of the functioning risk management processes aimed at improvement of their effectiveness and maintaining of quality of the credit portfolio, the Bank performed activities aimed at optimization of the monitoring process, enhancing of effectiveness of the decision-making process in granting of loans and handling of loans applications, as well as at limiting the level of concentration of the credit portfolio.

The Bank performed assessment of the risk before taking the decision on the given exposure and during the whole period covered by the credit transaction, as a part of the monitoring process. The risk assessment principles have been described in the part Tools/techniques used in risk measurement.

The frequency and scope of monitoring have been determined by the level of identified risk. Monitoring was performed by a separate organizational unit within the structures responsible for credit risk assessment and management. The unit was dedicated to monitoring of the credit portfolio and to measurement of individually significant exposures.

The risk of untimely debt servicing or default repayment, and the risk of loss or decrease in the value of the accepted collateral, were mitigated using the early warning system, managed by the unit responsible for monitoring.

If the Bank identified a situation that could jeopardize timely repayment, the Bank undertook admonition and restructuring procedures using the appropriate IT tools.

In the process of risk assessment and monitoring, the Bank used information from internal databases and external sources, including the Credit Information Bureau S.A. ("Biuro Informacji Kredytowej") and the National Register of Debts ("Krajowy Rejestr Długów") and the Central Database - Bank Register ("Centralna Baza Danych - Bankowy Rejestr").

The Bank carried out the credit risk assessment using rating and scoring models. Models were created, developed and supervised in the Risk and Planning Area taking into account internal and external requirements. Significant models were subject to periodical validation at least annually, performed by an independent validation unit.

The Bank has put in place a multi-level system of credit decision-making, the basis of which is the rule that the higher the risk of the transaction due to its complexity, the amount of exposure or the financial and economic condition of the client, the higher decision-making level is authorized to make the decision. The decision-making level with highest clearance level are the Credit Committee of Headquarters and the Management Board of the Bank. Credit decisions are made upon prior verification of risk made by the person specialized in risk assessment and mitigation, i.e. an expert from a separate organizational unit in the Bank's Headquarters, independent from the sales forces.

In making credit decisions on transactions with members of the Bank or persons occupying management positions at the Bank or entities related to the Bank through capital or structure, the Bank was taking into account the requirements of the Banking Law.

The Bank preferred collateral-based transactions, provided that a maximum level of unsecured transactions has been determined for the retail segment, considering the specific product features and the impact of these transactions on the results of the Bank and the potential loss.

The collateral level depended on the level of risk generated by the transaction, in particular - the type and length of transaction.

Setting the value of collateral, the Bank admitted the rule of prudent valuation.

When choosing the type of collateral, the Bank considered:

- 1) due protection of the Bank's interests,
- 2) costs associated with the establishment of a given collateral,
- 3) the possibility to quickly liquidate a given collateral.

When assessing and monitoring a value of a collateral the Bank uses external databases, including those of AMRON and Cenatorium Sp. z o.o. for the purposes of verification and updating of the real property value.

In 2019, the Bank implemented the policy for management of non-performing exposures, including a strategy of action making it possible to achieve a time-specific reduction of non-performing exposures and an operational plan to support implementation of the strategic tasks. The policy and the plan emerged as implementation of the EBA/GL/2018/06 Guidelines on management of non-performing exposures (NPE) and restructured exposures, issued on 31 October 2018.

Tools/techniques used in risk measurement

The customer and the transaction were subject to a comprehensive credit risk assessment taking into account the supervisory requirements in this regard.

Risk assessment models were differentiated by the Bank depending on the client and credit transaction type.

The credit risk assessment model for individuals applying for funding for purposes unrelated with economic activities included a quantitative analysis - consisting in determining of the amount and stability of the sources of repayment of the credit obligation - and a qualitative analysis, consisting in evaluation of characteristics of a retail client, which have a significant impact on the customer's ability to repay the debt within the deadlines specified in the contract, including a scoring and assessment on the basis of information from the "Credit Information Bureau". In the evaluation process, T and S Recommendations of PFSA were taken into account, in particular, implementation of the appropriate levels of Dtl and LtV ratios and the possibility to use a simplified assessment of creditworthiness.

The credit risk assessment model for individuals applying for funding related to running a business or statutory activity (municipal entities) focused on two areas: assessment of client and assessment of transaction (rating).

Assessment of the client was performed on the basis of quantitative and qualitative elements. The quantitative assessment concerned basic, from the point of view of net profit generation and keeping liquidity, areas of activity of the client. The qualitative assessment included in particular: assessment of development plans, experience and skills of managers, quality of the relation between the client and the external environment, including the Bank.

Assessment of the client was performed taking into account the economic situation in the industry, the local market and the country. Additionally, the evaluation concerned the scale of the client's exposure to adverse effects of changes in interest rates and exchange rates and the client's security policies against the exchange rate and interest rate risk.

The risk assessment model applied to local government units consisted of analysis of the Client based on assessment of basic budget indicators, debt ratios and analysis of the transaction on the basis of assessment of the planned debt ratios, quality of the collateral and the transaction length.

In the case of funding being granted to a client functioning in the group of entities that were related in terms of their capital or organization, the Bank assessed the credit risk taking into account the influence of the condition of related parties.

Transaction assessment was performed in particular on the basis of the purpose of funding, length of the credit period and value of the repayment collateral. The Bank established the financing structure to provide risk-sharing between the borrower and the Bank, mainly by the exposure of the borrower's own funds adequate to the scale of the risk.

Credit risk valuation tools

In order to measure credit risk, the Bank uses various tools/ applications, which incorporate, among others, the binding rating/ scoring models and methodology for credit capacity assessment.

Diversification of used applications relates to customer segmentation and/ or types of credit transactions.

Currently, the Bank is continuing implementation of the program, including:

- optimization of credit processes, including all significant elements, such as: the offer stage, the risk assessment, the decision to execute the transaction, monitoring and remedial actions in case of identification of a threat to timely repayment and
- implementation of new process solutions in the modernized “workflow” tool, which will be used in all segments of clients served by the Bank.

In order to measure credit risk, the Bank uses various tools/ applications, which incorporate, among others, the binding rating/ scoring models and methodology for credit capacity assessment.

Description of particular concentration risks, their valuation and monitoring

The Bank performed the risk concentration management in accordance with the policies described in the “Policy for risk concentration management”.

The Bank identified, measured, monitored and reported the concentration risk on the following levels:

- 1) individual client/transaction and
- 2) credit portfolio.

On the customer and transaction level, the engagement concentration risk was managed by compliance with the supervisory limits of engagement, especially those related to Regulation (EU) of the European Parliament and the Council No. 575/2013 of 26 June 2013 or the Banking Law and by application of the principle that the risk assessment process and risk monitoring depends on the amount of credit exposure.

On the loan portfolio level, engagement concentration management was performed by complying with internal limits or warning values, approved by the Bank's Management Board or Supervisory Board for limits, through which the Bank sets the acceptable level of the credit risk appetite.

In particular, the Bank applied the following limits:

- geographical limit - setting exposure toward other countries;
- limits referring to product parameters (e.g. maximum LTV);
- limits referring to the portfolio of mortgage loans and loans financing real property - resulting from PFSA recommendations,
- limits related to the share of foreign currency loans in the Bank's loan portfolio,
- limits of the acceptable total exposure in equity-related or organizationally related parties/ group of related parties, which exceeds 10% of the Bank's recognized capital;
- limits of the acceptable total exposure to equity-related or organizationally related parties/ group of related parties, depending on rating awarded to the parent entity or entity with highest exposure;
- industry limits;
- limits on credit exposures towards the Bank's subsidiaries.

In the concentration risk management process, the Bank used a system of early warning indicators for internal limits. The system is based on distinguishing of three levels of limit usage and gradual implementation of actions mitigating the risk of exceeding the limit, depending on the level of the limit usage.

The level of limits usage was periodically monitored and reported to the authorities of the Bank in accordance with the internal regulations of the Bank.

5.1.1. Description of the methodology for recognition of impairment on loan exposures

For every reporting day, the Bank performs a review of credit exposures by identifying credit exposures with threat of value loss and exposures, for which a significant increase of credit risk has been noted from the moment of their initial recognition - taking into account rational and documentable information, including data concerning the future. Then the allowance for expected credit losses is recognized, based on the breakdown into three Baskets, depending on changes in terms of credit quality. By principle, all exposures recently granted except POCl assets are classified as Basket 1 exposures.

In order to do so, the Bank divides its credit exposures, taking into account the amount of engagement and the risk features. Exposures are valued individually and using the group method and assessed with respect to the potential evidence of impairment.

Apart from POCl assets, the Bank considers impaired exposures, for which impairment indicators have emerged, resulting from one or more events occurring after the initial recognition of the exposure in the Bank's ledgers, if such loss event has an impact on the expected cash flows from this exposure and the cash flows can be reliably estimated.

The Bank regards in particular the following factors as evidence for impairment:

- a delay in repayment of capital or interest installments over 90 days, excluding loans granted to banks, in the case of which payments delayed over 7 days are classified as past due,
- deterioration of the economic and financial standing of a client, which causes a reclassification of the debtor to the rating classes 14 and worse, reflecting a threat to the repayment of the loan,
- granting to the Client a credit facility (concluding a restructuring agreement) due to the economic or legal aspects resulting from financial and economic difficulties of the client,
- deterioration of financial indicators relating to, among others: customer liquidity and debt service ability,
- declaration of bankruptcy, high probability of bankruptcy or another reorganization resulting in deterioration of financial standing and solvency of the debtor,
- any other event being equivalent to entering a client into a state of insolvency that prevents timely debt repayment.

To supplement to the above, in the case of credit exposures arising from financing of wind farm projects, an additional impairment indicator is considered, that is, a cash deficit occurring over the period of the term of the loan, as well as bad will under a potential debt restructuring scenario in the Bank-modeled perspective to the end of the period of financing.

The impairment allowance for individual loan exposures is measured on the basis of calculation of the present value of the estimated future cash flows discounted using the original effective interest rate. In the case of credits for which a collateral has been established, the present value of the expected future cash flow includes cash flows that could be obtained from enforcement of the collateral, less the cost of enforcement and sale of the collateral. In the case of credit exposures arising from financing of wind farm projects, the present value of the expected future cash flows is estimated based on the developed valuation model, which allows for simulation of individual cash flows that can be generated under individual projects with the adopted, modifiable, valuation parameters. As result of reduction of the present value of realizable cash flows, an impairment allowance is recognized that corresponds to the expected credit loss because of the failure to meet the obligations towards the Bank.

Individual impairment assessment is applied with reference to:

- 1) individually significant credit exposures:
 - meeting the condition of individual impairment or in the 'quarantine' period or
 - regarding a client that holds other loans, towards which the Bank has recognized an individual impairment indicator (impairment propagation) or
- 2) individually insignificant credit exposures, towards which the Bank has recognized evidence for impairment, or which are in the 'quarantine' period, if they were material at the moment of impairment recognition and they fulfilled additional requirements specified by the Bank,
- 3) individual insignificant credit exposures, including non-typical credit risk characteristics.

The level of impairment write-offs for receivables defined as individually immaterial, for which evidence of impairment has been identified, is performed based on the impairment parameters valuation, assessed with statistical methods using historical data for chosen portfolios, selected for the purpose of valuation of collective impairment, divided into groups with similar credit risk characteristics. One-off items are excluded from the analysis.

For collective valuation purposes, the Bank applies division into 8 homogeneous risk portfolios, for two segments of clients (individual and institutional):

- retail customer mortgage loans (portfolio segmented by level of LTV and loan currency),
- retail customer cash loans,
- retail customer mortgage loans,
- retail customer credit exposures to micro-enterprises (excluding mortgage loans), except for micro-enterprises applying the accounting principles arising from the Accounting Act (maintaining full accounting), classified as retail clients,
- retail customer credit exposures to micro-enterprises applying the accounting principles arising from the Accounting Act (maintaining full accounting), classified as retail customers,
- other retail customers,
- corporate clients, including financial institutions and environmental funds,
- public finance portfolio clients.

Reversal of loss, which means reclassification of the credit as non-impaired, is possible after disappearance of impairment evidence and after a certain period of quarantine, in which the evidence is not identified.

For non-default exposures, the Bank recognizes a write-off for the expected credit losses calculated using the group/collective method.

For the purposes of verifying whether from the moment of initial recognition of the financial asset a significant increase of risk has occurred, the Bank compares the level of risk of failure to meet the obligation within the expected time of the funds' granting as at the reporting date and the date of initial recognition. The Bank assumes that a significant increase of credit risk is identified for a given asset, when a quantitative or a qualitative criterion is met, or an overdue exceeding 30 days occurs. Any of these criteria are verified at the exposure level.

Quantitative criteria

The reference underlying the classification to basket 2 for retail customer exposures is calculated by the Bank as a difference in:

- 1) the current credit risk assessment defined as a lifetime PD in time horizon from the reporting date to the maturity date, determined on the basis of characteristics applicable at the reporting date,
- 2) the initial credit risk assessment defined as a lifetime PD in the time horizon from the reporting date to the maturity date, determined on the basis of characteristics applicable at the date of initial recognition.

Assessment of a significant deterioration in credit risk is performed by comparison of the observable value of relative change in risk assessment with the theoretical value, being a threshold, above which the Bank considers that a significant deterioration in credit risk has occurred.

The allocation threshold at the level of individual exposure is defined using the statistical model based on information regarding the credit risk assessment at the date of initial recognition and for the period from the date of initial recognition for the given exposure.

Classification to basket 2 for the exposures regarding institutional clients takes place in the case of deterioration of the debtor's economic and financial standing during the credit period. This deterioration is expressed by classification to 12 or 13 rating class or reclassification to class 9-11, if the rating at the moment of financial recognition was lower than 6.

Qualitative criteria

The Bank classifies exposures to basket 2 in the following cases:

- 1) there is a payment delay (above a defined materiality threshold) over 30 days as at the reporting date or at least once taking into account last three reporting dates,
- 2) restructured credit exposures with impairment indicators, after completion of the quarantine period without the impairment indicator being identified,
- 3) forborne status.

Apart from the above-mentioned criteria, the Bank defined other specific qualitative criteria, e.g.: specific for customers from a given segment, identified during monitoring of institutional clients (high-risk exposures - "a watch list") or identified as a result of a multifactorial and comprehensive credit risk analysis.

In accordance with Paragraph 5.5.10 of the Standard IFRS 9, the Bank distinguishes exposures with low credit risk. Credit exposure is linked with a low risk of default regarding a given liability, in case the borrower has a high short-term ability to fulfill contractual obligations, and adverse changes of economic and business conditions in the long term can - but do not necessarily have to - limit the borrower's ability to fulfill their obligations resulting from the cash flow agreement.

The Bank applies low credit risk criteria to those exposures from the public finance clients portfolio, which do not meet the qualitative criteria of classification for basket 2 and for those, for which no impairment indicators have been identified.

To estimate the expected impairment write-offs (expected losses), the Bank continues to use own estimations of risk parameters based on internal models, taking into account the IFRS 9 requirements (such as estimation of parameters over the lifetime horizon or consideration of the lifetime horizon or consideration of the future macro-economic conditions). The Bank has developed a methodology for model parameters and has built models, which are compliant with IFRS 9. The expected credit losses constitute the product of values for each exposure of PD, LGD and EAD parameters estimated individually for each exposure, and the final amount of expected losses is the sum total of expected losses in each period (depending on the basket over a 12-month horizon or the remaining lifetime), discounted using the effective interest rate. The estimated parameters in accordance with IFRS 9 are subject to adjustment due to expectations resulting from macro-economic scenarios. The Bank adjusts risk parameters in order to take into account the future macro-economic information (such as: the Gross Domestic Product, the unemployment rate, WIBOR, foreign exchange rates, inflation) for portfolios, for which correlations have been identified. Internally developed scenarios have been used. Forecasts prepared by economic analysts of the Bank are the source of information about the values of macroeconomic factors.

The value of impairment write-offs (for expected credit losses), provisions on financial guarantees and granted liabilities, made in Polish zloty and in foreign currencies (including the exchange differences) are recognized respectively as expenses or revenues of the Bank arising from these write-offs and provisions.

The methodology and assumptions adopted by the Bank for valuation of impairment are analyzed on a regular basis to reduce the discrepancies between the assessed and actual losses. In order to assess the adequacy of impairment provisions, back testing is carried out both as part of collective and individual analysis, the results of which are taken into account when determining actions having impact on improvement of the process quality.

5.1.2. Receivables from other banks

The table below presents gross amounts of receivables from other banks, divided into groups based on the Moody's, Fitch and Standard & Poor's (S&P) ratings.

Specification	31-12-2019	31-12-2018
Moody's		
A1	46,281	27,879
A2	63,495	41,917
A3	2,030	1,150
Aa1	9,664	18,565
Aa2	417	496
Aa3	12,622	48,567
Baa1	5,898	31,583
Baa3	683	43
Fitch		
A-	10,090	4,200
BBB+	-	245
BBB	516	-
S&P		
A	-	9,149
no rating		
	14,037	12,310
Total	165,733	196,104

Internal rating	Respective Moody's rating	31-12-2019	31-12-2018
E	Ba3, B1	14,037	-
G	B3	-	12,310
Total		14,037	12,310

5.1.3. Receivables from clients

Specification	31-12-2019	31-12-2018
Receivables from clients measured at amortized cost		
Receivables from clients without impairment indicator, including:	11,128,284	10,314,827
<i>exposures without significant credit risk increase from the moment of initial recognition (Basket 1)</i>	8,691,476	8,291,717
<i>Basket 2 - exposures with significant increase of credit risk from the moment of initial recognition, in which:</i>	2,436,808	2,023,110
<i>wind farms</i>	1,290,953	1,039,500
Receivables from customers with impairment indicator (basket 3) but with no impairment identified, in connection with estimated cash flows, in which:	402,594	772,254
<i>wind farms</i>	252,616	603,282
Receivables from clients having evidence of impairment and with identified impairment (Basket 3), in which:	1,601,327	1,656,193
<i>wind farms</i>	13,553	124,874
Total of receivables from clients - measured at amortized cost (gross)	13,132,205	12,743,274
Impairment loss write-offs for:		
<i>receivables from clients - (Basket 1)</i>	- 79,182	- 59,012
<i>receivables from clients - (Basket 2), in which:</i>	- 124,948	- 107,416
<i>wind farms</i>	- 32,837	- 36,867
<i>receivables from clients - (Basket 3) with no impairment identified, in which:</i>	- 11,511	- 23,346
<i>wind farms</i>	- 9,633	- 21,378
<i>Receivables from clients - (Basket 3) with impairment identified, in which:</i>	- 955,372	- 853,659
<i>wind farms</i>	- 8,790	- 31,876
Total impairment loss write-offs	- 1,171,013	- 1,043,433
Total of receivables from clients measured at amortized cost (net)	11,961,192	11,699,841
Receivables from clients measured at fair value through financial result		
Fair value, in which:	38,285	104,653
<i>wind farms</i>	-	53,083
Total receivables from clients measured at fair value through financial result	38,285	104,653
Security deposits	4,317	5,023
Other receivables	-	10
Total of receivables from clients	12,003,794	11,809,527

Classification of receivables from clients by measurement method, by segment:

31-12-2019	Institutional clients	Individual customers	Individual customers - mortgage loans	Individual customers - other loans	Total
Receivables from clients measured at amortized cost					
Receivables from clients without impairment indicator, including:	7,658,540	3,469,744	2,826,680	643,064	11,128,284
<i>exposures without significant credit risk increase from the moment of initial recognition (Basket 1)</i>	5,445,050	3,246,426	2,647,037	599,389	8,691,476
<i>Basket 2 - exposures with significant increase of credit risk from the moment of initial recognition, in which:</i>	2,213,490	223,318	179,643	43,675	2,436,808
<i>wind farms</i>	1,290,953	-	-	-	1,290,953
Receivables from customers with impairment indicator (basket 3) but with no impairment identified, in connection with estimated cash flows, in which:	400,153	2,441	1,561	880	402,594
<i>wind farms</i>	252,616	-	-	-	252,616
Receivables from clients having evidence of impairment and with identified impairment (Basket 3), in which:	1,246,411	354,916	212,400	142,516	1,601,327
<i>individually assessed</i>	1,169,017	96,062	77,074	18,988	1,265,079
<i>wind farms</i>	13,553	-	-	-	13,553
Total of receivables from clients - measured at amortized cost (gross)	9,305,104	3,827,101	3,040,641	786,460	13,132,205

31-12-2019	Institutional clients	Individual customers	Individual customers - mortgage loans	Individual customers - other loans	Total
Impairment loss write-offs for:					
<i>Receivables from customers - (Basket 1)</i>	- 61,245	- 17,937	- 5,883	- 12,054	- 79,182
<i>receivables from clients - (Basket 2), in which:</i>	- 98,136	- 26,812	- 16,790	- 10,022	- 124,948
<i>wind farms</i>	- 32,837	-	-	-	- 32,837
<i>receivables from clients - (Basket 3) with no impairment identified, in which:</i>	- 11,500	- 11	- 6	- 5	- 11,511
<i>wind farms</i>	- 9,633	-	-	-	- 9,633
<i>Receivables from customers - (Basket 3) with impairment identified, in which:</i>	- 725,286	- 230,086	- 129,270	- 100,816	- 955,372
<i>individually assessed</i>	- 664,909	- 48,082	- 39,742	- 8,340	-712,991
<i>wind farms</i>	- 8,790	-	-	-	- 8,790
Total impairment loss write-offs	- 896,167	- 274,846	- 151,949	- 122,897	- 1,171,013
Total of receivables from clients measured at amortized cost (net)	8,408,937	3,552,255	2,888,692	663,563	11,961,192
Receivables from clients measured at fair value through financial result					
Fair value, in which:	36,347	1,938	648	1,290	38,285
<i>wind farms</i>	-	-	-	-	-
Total receivables from clients measured at fair value through financial result	36,347	1,938	648	1,290	38,285
Security deposits	4,317	-	-	-	4,317
Total of receivables from clients	8,449,601	3,554,193	2,889,340	664,853	12,003,794

31-12-2018	Institutional clients	Individual customers	Individual customers - mortgage loans	Individual customers - other loans	Total
Receivables from clients measured at amortized cost					
Receivables from clients without impairment indicator, including:	6,720,296	3,594,531	2,993,105	601,426	10,314,827
<i>exposures without significant credit risk increase from the moment of initial recognition (Basket 1)</i>	4,858,511	3,433,206	2,861,987	571,219	8,291,717
<i>Basket 2 - exposures with significant increase of credit risk from the moment of initial recognition, in which:</i>	1,861,785	161,325	131,118	30,207	2,023,110
<i>wind farms</i>	1,039,500	-	-	-	1,039,500
Receivables from customers with impairment indicator (basket 3) but with no impairment identified, in connection with estimated cash flows, in which:	769,676	2,578	1,756	822	772,254
<i>wind farms</i>	603,282	-	-	-	603,282
Receivables from clients having evidence of impairment and with identified impairment (Basket 3), in which:	1,306,307	349,886	210,919	138,967	1,656,193
<i>individually assessed</i>	1,202,614	90,124	72,419	17,705	1,292,738
<i>wind farms</i>	124,874	-	-	-	124,874
Total of receivables from clients - measured at amortized cost (gross)	8,796,279	3,946,995	3,205,780	741,215	12,743,274

31-12-2018	Institutional clients	Individual customers	Individual customers - mortgage loans	Individual customers - other loans	Total
Impairment loss write-offs for:					
receivables from clients - (Basket 1)	- 47,684	- 11,328	- 4,420	- 6,908	- 59,012
receivables from clients - (Basket 2), in which:	- 100,351	- 7,065	- 4,026	- 3,039	- 107,416
<i>wind farms</i>	- 36,867	-	-	-	- 36,867
receivables from clients - (Basket 3) with no impairment identified, in which:	- 23,341	- 5	- 3	- 2	- 23,346
<i>wind farms</i>	- 21,378	-	-	-	- 21,378
Receivables from clients - (Basket 3) with impairment identified, in which:	- 632,300	- 221,359	- 126,550	- 94,809	- 853,659
<i>individually assessed</i>	- 569,833	- 44,436	- 37,190	- 7,246	- 614,269
<i>wind farms</i>	- 31,876	-	-	-	- 31,876
Total impairment loss write-offs	- 803,676	- 239,757	- 134,999	- 104,758	- 1,043,433
Total of receivables from clients measured at amortized cost (net)	7,992,603	3,707,238	3,070,781	636,457	11,699,841
Receivables from clients measured at fair value through financial result					
Fair value, in which:	101,552	3,101	904	2,197	104,653
<i>wind farms</i>	53,083	-	-	-	53,083
Total receivables from clients measured at fair value through financial result	101,552	3,101	904	2,197	104,653
Security deposits	5,023	-	-	-	5,023
Other receivables	10	-	-	-	10
Net total receivables from clients	8,099,188	3,710,339	3,071,685	638,654	11,809,527

Receivables from clients measured at amortized cost (gross value), which are not past due and not impaired

Receivables measured at amortized cost which are not past due (for even one day) are considered as not impaired if there is no other evidence of impairment. Receivables from such loans come from clients with good financial and economic standing and regular payments, with no evidence of impairment and allowances were made for incurred but not identified losses.

General characteristics of the rating classes are as follows:

Rating 1 Best-quality loans

Rating 2 Very high loan quality

Rating 3 High loan quality

Ratings 4-5 Very good loan quality

Ratings 6-7 Good loan quality

Ratings 8-9 Acceptable loan quality

Ratings 10-11 Average and poor loan quality

Ratings 12-13 Very poor loan quality

Ratings 14-16 No creditworthiness (loan quality does not exist).

Gross amounts of loans and advances, which were not past due and not impaired, analyzed by customer class, are presented below.

Specification	Rating	31-12-2019	31-12-2018
Receivables from institutional clients	(1-3)	5,329	4,123
	(4-5)	249,216	304,114
	(6-7)	1,279,628	1,213,136
	(8-9)	2,447,471	1,722,978
	(10-11)	2,235,995	2,361,148
	(12-13)	1,297,370	905,575
	no rating	97,495	143,899
Total receivables from institutional clients		7,612,504	6,654,973
Receivables from individual customers	no rating	3,333,194	3,463,811
Total of receivables from individual customers		3,333,194	3,463,811
Total		10,945,698	10,118,784

Rating classes are presented as at the reporting date.

*\ The ratings are consistent with the internal classification of the Bank, where "1" means the best and "16" - the worst classification.

Receivables from clients measured according to amortized cost (gross amount), which are past due, but not impaired, divided into client classes and days past due together with general characteristics

Past-due exposure is the total of receivables from clients of the Bank in arrears for one or more days. In respect of receivables from clients past due for less than 90 days, no impairment is recognized unless other available information stipulates otherwise.

Gross amounts of receivables from clients measured at amortized cost which were past due but not impaired, analyzed by customer class are presented below.

31-12-2019 Delay in payment	Institutional clients	Individual customers	Total
From 1 to 30 days	22,609	108,826	131,435
From 31 to 60 days	607	20,012	20,619
From 61 to 90 days	264	7,708	7,972
above 90 days	3,254	4	3,258
Total	26,734	136,550	163,284

31-12-2018 Delay in payment	Institutional clients	Individual customers	Total
From 1 to 30 days	25,522	100,838	126,360
From 31 to 60 days	10,394	24,094	34,488
From 61 to 90 days	4,407	5,788	10,195
Total	40,323	130,720	171,043

Receivables from clients measured at amortized cost, for which impairment has been shown, according to client class along with the general characteristics

Presented below is measurement of receivables from clients at amortized cost, for which impairment has been shown, according to segment.

Specification	31-12-2019	31-12-2018
Receivables from institutional clients	1,246,411	1,306,307
Receivables from individual customers	354,916	349,886
Total	1,601,327	1,656,193

Structure of the portfolio of receivables from clients of the BOŚ Group (gross amount), according to rating/scoring, by client segment:

Specification	Rating	31-12-2019	31-12-2018
Receivables from institutional clients	(1-3)	5,329	4,123
	(4-5)	287,532	351,254
	(6-7)	1,318,577	1,225,210
	(8-9)	2,492,557	1,964,472
	(10-11)	2,427,806	2,867,509
	(12-13)	1,672,842	1,396,826
	(14-16)	965,851	864,944
	no rating	170,957	223,493
Total receivables from institutional clients		9,341,451	8,897,831
Receivables from individual customers	no rating	3,829,039	3,950,096
Total of receivables from individual customers		3,829,039	3,950,096
Total		13,170,490	12,847,927

Rating classes are presented as at the reporting date.

*\ The ratings are consistent with the internal classification of the Bank, where "1" means the best and "16" - the worst classification.

Description of collaterals for credits and loans

The Bank accepted material and personal guarantees as collaterals. The rules for establishing transaction collateral assume that a collateral is adequate to the level of risk generated by the transaction.

The bank favored collateral for loans:

- 1) that enabled reduction of the write-offs,
- 2) that were easily transferable, giving the possibility of acquiring a price covering the Bank's receivables.

When selecting the form of collateral, the Bank verifies the main criteria, which are decisive for efficiency of the collateral, including:

- 1) marketability of the collateral, i.e. the ability to sell the collateral without a significant decrease in its price in the period of time that does not enforce a change by the Bank of the value of the collateral due to price fluctuations specific to the given collateral item,
- 2) recoverable value during the course of the possible debt recovery procedure, after considering the legal, economic and other restrictions that may affect the real possibility of satisfying the Bank's debt from the collateral,
- 3) access and possibility to control the collateral during the term of the exposure.

The principle applied in the Bank was to establish a legal collateral, if it was required, before initiation of the loan.

The Bank adjusted the collateral value using adjustment ratios established individually for each collateral type. As a rule, collaterals are monitored throughout the entire financing period.

Regarding the mortgage collateral, the Bank was in compliance with Recommendation S on the maximum LTV levels and the required own contribution.

In the process of monitoring of real estate value, the Bank used, among others, portfolio revaluation using statistical methods.

In the case of real estate collaterals, the basis for determining the value of the accepted collateral pricing was prepared by a person with the necessary qualifications and experience in the evaluation of real estate. The Bank verified the valuation, using data inter alia from the AMRON System (Analysis and Monitoring System of Real Estate Transactions) and the Cenatorium Database.

Assets foreclosed

The Bank classifies the seized collaterals as 'assets foreclosed' and measures them in accordance with the accounting policies specified in the Note 2.18 of the consolidated financial statements.

Prior to the collateral seizure, it is mandatory to create a concept of management of the collateral seized. The document that depicts the concept of management includes all information necessary to make a decision about the seizure, including:

- 1) the estimated costs of potential surveillance, warehousing, insurance and taxes, etc.;
- 2) information on a potential buyer, the negotiated price and payment terms - in case of a planned sale of the collateral;
- 3) profitability of the transaction.

In most cases, collaterals seized by the Bank have already had a buyer and the sale transactions were profitable for the Bank. In such cases, the debt was reduced by the amount of the collateral sale price, and not the value of the collateral specified by an appraiser (usually, the sale price on sale is lower than the value specified by the appraiser).

One of the forms of debt recovery is sale of receivables. The selling price of receivables depends, among other things, on the material collateral on such receivables. Where sale of loans (where debt was collateralized by property assets) is more profitable for the Bank than foreclosure of assets with a view of selling them, the Bank enters into sales agreements, which include the underlying collateral.

As at 31 December 2019 and as at 31 December 2018, the Bank did not have assets constituting foreclosed collaterals.

Credit exposure of the BOŚ Group due to wind farms

The Group's total exposure to wind farm funding as at 31 December 2019 amounted to PLN 1,557.1 million.

In 2019, the Group did not grant any new financing in the wind farm sector.

Relevant risks in terms of the financing of the wind farm portfolio clients by the BOŚ Group

Risks identified by the BOŚ Group, associated with credits granted in the previous years for financing of wind farm projects, described below, are taken into account in the process of individual exposure valuation, conducted by the Bank in one-month intervals. Valuation is performed based on the basis of a dedicated model that allows for simulation of individual cash flows for specific projects by applying the defined and modifiable valuation parameters (variable and periodically updated), among which:

- 1) project productivity (volume of electricity produced and green certificates),
- 2) the projected pricing paths for electricity and green certificates, adopted by the Bank on the basis of internal analysis, using reports prepared by independent external entities,
- 3) weighted average capital cost (WACC),
- 4) valuation scenarios defining, individually for each project, the probability of regular debt servicing, debt restructuring and debt recovery.
- 5) amount of the calculated real property tax

The BOŚ Group assesses risk for clients in the wind farming industry, using such indicators as impairment of credit exposures, emergence of a potential money deficit (a financial gap) and bad will (equity value) for the scenario of a potential debt restructuring in the modeled long-term perspective, encompassing the project lifetime.

Risk of a decline in prices of green certificates

The risk of variability of market prices of electricity and green certificates has been addressed in the model for valuation of individual exposures from the wind farm portfolio through implementation of pricing lists projected by the BOŚ Group for the mid- and long-term perspective. The pricing paths are determined and updated cyclically on the basis of reports of renowned independent external experts that the Group has cooperated with since 2016.

Despite the favorable conditions in the sector of wind farms in year 2019, which were appreciated by manufacturers as a result of maintenance of relatively high market prices of energy and ownership rights, the BOŚ Group applied the principle of prudence in valuation of exposures from the wind farm portfolio in estimation of future cash flows, assuming the price of green certificates in the forecast period below the current market level.

Another factor mitigating the reduction in revenues generated by clients as a result of a periodic drop in prices of green certificates, are funds collected on the reserve accounts, used to support day-to-day credit management; the appropriate contractual provisions obligate the clients to replenish funds on their accounts, if these must be used to repay debts.

Risk arising from amendments related to the basis for real property tax calculation

On 29 June 2018, the Act on amendment to the act on renewable energy sources and certain other laws was published. Amendment of the Act on RES introduced a change in the definition of a wind farm, thus making it possible to restore retrospectively, from 01 January 2018, the earlier provisions, more favorable for wind farm investors, on the principles of taxation of wind farms with real estate tax, applicable before 01 January 2017.

From the other hand, the Amendment to the Act on RES did not eliminate doubts related to adequacy of the rules with respect to calculation of real property tax for 2017, leaving the final determination of individual cassation appeals made by taxpayers to the Supreme Administrative Court. Therefore, it was impossible to rule out the risk of confirmation by the Supreme Administrative Court of the stance presented earlier by provincial administrative courts (wojewódzki sąd administracyjny - WSA), which in most cases ruled in favor of the local governments. In the light of the above, most clients financed by the Bank, not waiting for the ruling of the Supreme Administrative Court, entered into agreements with commune authorities to settle underpaid tax for year 2017 or to pay the difference in installments.

The risk of a legal dispute of the Bank's clients with Energa-Obrót S.A.

Activity of Energa - Obrót S.A. in September 2017, which resulted in cessation of performance of twenty two CPA framework agreements for takeover of property rights based on renewable energy certificates (green certificates) and initiation at proper courts of appropriate civil action against the contract partners and banks for recognition of unconditional invalidity of the agreements concluded, was initiated in relation to 8 clients financed by the Bank. In two cases brought by Energa Obrót S.A., BOŚ S.A. and the clients acted as defendants; however, once the Bank and the clients signed refundable assignment agreements regarding PPL agreements, as the legal interest being the cause of the proceedings ceased to exist, Energa withdrew its claims against the Bank.

Currently, BOŚ S.A. does not act directly as co-defendant in any ongoing court litigation. Therefore, the Group does not expect any additional expenses resulting from the disputes run by the clients.

As at 31 December 2019, 6 clients are in court litigations, for the total engagement of the BOŚ Group amounting to PLN 113 million, i.e. 7.3% of the total engagement for exposures linked with the wind farm portfolio. The Bank is conducting ongoing monitoring of status of the ongoing court proceedings, also remaining in touch with the Shareholders and the project Sponsors. Six court disputes initiated by Energa Obrót S.A. have been settled positively for the Group's clients, that is, by dismissal of the claims made by Energa Obrót S.A. two of these pronounced by the common court (1st instance) and the third - by the decision of the Court of Arbitration (Polish: Sąd Arbitrażowy).

All liabilities of these clients due to loans have been settled timely so far.

Risk arising from abolition of the obligatory energy (re)purchase

Amendments of to the Act on RES dated 22 June 2016 and of some other Laws, starting from 01 January 2018, have limited the obligatory purchases by the obliged seller of energy produced using a RES installation for the price published by the Polish Energy Regulatory Authority (Urząd Regulacji Energetyki), exclusively to installations that started their operations before 01 July 2016 and with thermal input lower than 0.5 MW. Abolishment of the repurchase obligation under long-term contracts with the obliged seller, has resulted in dependence of the RES producers' revenue on contractual terms of energy sales contracts (PPA), which are concluded with the entity acting as an obliged seller or with other companies in the market. This risk has been addressed by the valuation model for each exposure by implementing the price paths for black energy forecast by the Group in a middle-term and long-term perspective, adopted on the basis of current reports of renowned external firms.

Another important fact is that the market has started to conclude PPA agreements that guarantee prices at least at a one-year perspective. Prices guaranteed in the agreements are higher than the price paths prudentially adopted by the Bank.

Taking into account the identified risks related to financing of the wind farm portfolio, the Group has adopted mitigation measures, by ongoing monitoring of the financial situation of its clients and changes in the legal and regulatory environments, impacting the operations of the RES industry, jointly with the Group's actions, focused on:

- 1) encouraging customers to optimize operating and financial costs incurred by companies, in particular costs of service and maintenance and project management - the majority of customers have already negotiated O&M contracts by achieving considerable cost savings,
- 2) obtaining additional support for projects from Shareholders/Sponsors by recapitalizing companies in the form of: additional allocations to capital, granting subordinated loans, credit repayment, conversion of the existing loans to capital, granting additional sureties/guarantees and/or extension of the existing sureties/guarantees granted by Sponsors - among other things, as a result of these activities, it is possible to supplement funds on debt reserve accounts, assist in timely payment of trade liabilities, fulfill the contractual covenants (remark: at present, there is no need to supplement the funds for ROD, most companies have deposited reserves in full and settle their liabilities in a timely manner),
- 3) inserting additional clauses to loan contracts obliging clients to prepay a debt using the current surplus funds generated by the project (cash sweep),
- 4) introducing the obligation of current sale of property rights accumulated as stocks to improve current liquidity,
- 5) introducing additional conditions limiting the possibility of distributing the funds to Sponsors,

The recognized write-downs for the wind farm portfolio have been presented in the table below:

Specification	31-12-2019	31-12-2018
Receivables from clients measured at amortized cost		
Receivables from clients without impairment indicator:		
<i>Basket 2 - comprising exposures for which significant increase in credit risk since initial recognition has occurred.</i>	1,290,953	1,039,500
Receivables from clients having evidence of impairment, (Basket 3) with no impairment identified due to value of expected cash flows,	252,616	603,282
Basket 3 - Receivables from clients having evidence of impairment and with impairment indicator	13,553	124,874
Gross total of receivables from clients	1,557,122	1,767,656
Impairment write-offs:		
<i>Receivables from clients - Basket 2</i>	- 32,837	-36,867
<i>Receivables from clients - Basket 3 showing no impairment</i>	- 9,633	-21,378
<i>Receivables from clients - Basket 3 showing impairment</i>	- 8,790	-31,876
Total impairment write-offs	- 51,260	-90,121
Total receivables from clients measured at amortized cost net	1,505,862	1,677,535
Receivables from clients measured at fair value through financial result		
Fair value	-	53,083
Total receivables from clients measured at fair value through financial result	-	53,083
Total receivables from clients WIND FARMS	1,505,862	1,730,618

The share of the wind farm portfolio in the institutional credit segment of the Group amounted (gross) as at 31 December 2019 to 16.7%, which accounted for 11.9% of credits portfolio. In terms of value, the portfolio of wind farms amounted to PLN 1,557.1 million as at 31 December 2019.

The level of impaired credits coverage as at 31 December 2019 in the segment of institutional credits amounts to 57.9%, including 64.9% for the wind farms portfolio.

5.1.4. Debt securities

The tables below present the rating assigned to debt securities, by issuer:

31-12-2019	State Treasury	NBP	Banks	Public finance	Other financial institutions	Corporate	Total
AAA	-	-	-	-	49,518	-	49,518
A	3,652,141	-	-	-	-	-	3,652,141
BBB+	-	-	49,546	-	-	-	49,546
None	-	1,319,835	-	188,613	-	1,449	1,509,897
Total	3,652,141	1,319,835	49,546	188,613	49,518	1,449	5,261,102

31-12-2018	State Treasury	NBP	Banks	Public finance	Other financial institutions	Corporate	Total
AAA	-	-	-	-	49,391	-	49,391
A	3,650,490	-	-	-	-	-	3,650,490
BBB+	-	-	-	10,248	-	-	10,248
None	-	1,439,760	-	241,376	-	2,903	1,684,039
Total	3,650,490	1,439,760	-	251,624	49,391	2,903	5,394,168

The tables present a unified rating scale, as listed below.
If the issuer has received a rating of more than one agency, the highest rating has been presented.

Moody's	S&P	Fitch	Unified rating
Aaa	AAA	AAA	AAA
A2	A	A	A
A3	A-	A-	A-
Baa1	BBB+	BBB+	BBB+
Ba2	BB	BB	BB
Ba3	BB-	BB-	BB-

In case of municipal bonds, for which no active market exists, the internal rating system is used in accordance with the following categories:

- 5 Very good loan quality
- 6-7 Good loan quality
- 8-9 Acceptable loan quality
- 10 Average and poor loan quality

The risk classes for issuers of municipal bonds handled by Bank Ochrony Środowiska S.A. are assigned in accordance with the methodology adopted by the Bank for assessing creditworthiness of local government units:

Public finance		
Internal rating	31-12-2019	31-12-2018
5	9,819	12,327
6	3,838	4,975
7	39,021	69,642
8	79,272	159,995
9	56,663	-
10	-	4,685
Total	188,613	251,624

5.1.5. The structure of concentration of exposure by industry and geographical area, including exposure risk assessment

Analyzing the share of individual industries in the loan portfolio of the BOŚ Group as at the 31st of December 2019, it is noticeable that the dominant industry is: "Production and supply of electricity, gas, steam, hot water and air conditioning supply" - 12.9% and "Activity related to real estate services" - 12.0%.

Exposure per industry:

Industry	Credit risk exposure	31-12-2019 Share (%) in the total amount
Production and supply of electric energy, gas, water vapor, hot water and air to air conditioning systems	1,696,052	12.9%
Activities related to real estate services	1,581,662	12.0%
Wholesale trading, excluding cars	900,221	6.8%
Public administration, national defense, compulsory - social security	872,409	6.6%
Construction works connected to development of buildings	701,998	5.3%
Accommodation	442,904	3.4%
Production of groceries	265,647	2.0%
Sports activities and amusement and recreation activities	251,312	1.9%
Manufacture of chemicals and chemical products	243,784	1.9%
Manufacture of fabricated metal products, except machinery and equipment	211,385	1.6%
Other sectors, including:	6,003,116	45.6%
<i>individual customers</i>	3,829,039	29.1%
Gross total of receivables from clients	13,170,490	100.0%
Impairment write-offs	- 1,171,013	
Security deposits	4,317	
Net total receivables from clients	12,003,794	

Industry	Credit risk exposure	31-12-2018 Share (%) in the total amount
Production and supply of electric energy, gas, water vapor, hot water and air to air conditioning systems	1,928,142	15.0%
Activities related to real estate services	1,296,577	10.1%
Public administration, national defense, compulsory - social security	1,126,393	8.8%
Construction works connected to development of buildings	705,006	5.5%
Wholesale trading, excluding cars	646,715	5.0%
Accommodation	381,004	3.0%
Financial service activities, excluding insurance and pension funds	225,969	1.8%
Manufacture of chemicals and chemical products	237,872	1.9%
Production of groceries	244,116	1.9%
Manufacture of fabricated metal products, except machinery and equipment	178,283	1.4%
Manufacture of goods using non-metallic mineral products	130,674	1.0%
Production of basic pharmaceutical ingredients and medicines and other pharmaceutical products	125,789	1.0%
Other sectors, including:	5,621,387	43.8%
<i>individual customers</i>	3,950,096	30.7%
Gross total of receivables from clients	12,847,927	100.0%
Impairment write-offs	- 1,043,433	
Security deposits	5,023	
Other receivables	10	
Net total receivables from clients	11,809,527	

5.1.6. Concentration structure by individual entities and capital groups

Exposures, which are equal to or exceeding 10% of the Bank's own funds in relation to one entity, together with entities related by capital or organization as at 31 December 2019, occurred in two cases and totaled PLN 562,505 thousand, which accounted for 23.5% of the Bank's eligible capital.

Exposure to the largest entities or groups of entities related by capital or by organization is presented below:

Item	Exposure*\\	31-12-2019
1		293,512
2		268,993
Total		562,505

Item	Exposure*\\	31-12-2018
1		316,473
2		288,597
Total		605,070

*\\ The exposure of the given entity includes gross credit exposures, contingent liabilities i.e. open credit lines and guarantees, debt securities issued by the entity and concluded FX Spot, FX Forward and FX Swap transactions.

Ten clients with the largest exposure:

				31-12-2019
Item	Principal + off-balance liabilities	Principal	Off-balance liabilities*\	Share in the Bank's exposure in total
1	293,867	293,867	-	1.90%
2	268,731	268,731	-	1.70%
3	198,309	82,907	115,402	1.30%
4	195,000	194,692	308	1.20%
5	188,526	188,526	-	1.20%
6	184,355	184,355	-	1.20%
7	165,400	121,339	44,061	1.00%
8	156,544	127,371	29,173	1.00%
9	144,074	144,074	-	0.90%
10	138,254	97,058	41,196	0.90%

				31-12-2018
Item	Principal + off-balance liabilities	Capital	Off-balance liabilities*\	Share in the Bank's exposure in total
1	314,020	313,928	92	2.20%
2	284,826	284,826	-	2.00%
3	200,742	200,742	-	1.40%
4	197,871	197,871	-	1.40%
5	172,487	115,435	57,052	1.20%
6	150,000	150,000	-	1.00%
7	127,268	127,268	-	0.90%
8	118,669	66,823	51,846	0.80%
9	112,698	45,049	67,649	0.80%
10	103,112	103,112	-	0.70%

*\ The off-balance sheet exposures include the following items: credit lines, guarantees granted, open import letters of credit, accepted losses, accepted export letters of credit and other liabilities granted.

5.1.7. Maximum credit risk exposure

The table below presents the credit exposure arising from financial assets.

Specification	Gross balance sheet value	31-12-2019	
		Write-downs	Maximum credit risk exposure
Receivables from other banks	166,770	-1,037	165,733
Financial assets held for trading	140,344	-	140,344
<i>equity securities</i>	20,111	-	20,111
<i>debt securities</i>	44,534	-	44,534
<i>derivative instruments</i>	75,699	-	75,699
Investment securities	5,302,185	-107	5,302,078
<i>equity securities measured at fair value through other comprehensive income</i>	85,510	-	85,510
<i>debt securities measured at fair value through other comprehensive income</i>	3,839,184	-	3,839,184
<i>debt securities measured at amortized cost</i>	1,377,491	-107	1,377,384
Receivables from clients	13,174,807	-1,171,013	12,003,794
Measurement at amortized cost	13,132,205	-1,171,013	11,961,192
<i>from institutional clients</i>	9,305,104	-896,167	8,408,937
<i>from individual customers</i>	3,827,101	-274,846	3,552,255
Measured at fair value through profit or loss	38,285	-	38,285
<i>from institutional clients</i>	36,347	-	36,347
<i>from individual customers</i>	1,938	-	1,938
Other receivables	4,317	-	4,317
Other financial assets* \	172,664	-8,836	163,828

*\ The item mainly consists of: cash surplus and receivables from transactions concluded on financial instruments.

Specification	31-12-2018		
	Gross balance sheet value	Impairment write-offs	Maximum credit risk exposure
Receivables from other banks	198,868	-2,764	196,104
Financial assets held for trading	87,761	-	87,761
<i>equity securities</i>	9,131	-	9,131
<i>debt securities</i>	2,903	-	2,903
<i>derivative instruments</i>	75,727	-	75,727
Investment securities	5,476,398	-105	5,476,293
<i>equity securities measured at fair value through other comprehensive income</i>	85,027	-	85,027
<i>debt securities measured at fair value through other comprehensive income</i>	4,015,998	-	4,015,998
<i>debt securities measured at amortized cost</i>	1,375,373	-105	1,375,268
Receivables from clients	12,852,960	-1,043,433	11,809,527
Measurement at amortized cost	12,743,274	-1,043,433	11,699,841
<i>from institutional clients</i>	8,796,279	-803,676	7,992,603
<i>from individual customers</i>	3,946,995	-239,757	3,707,238
Measured at fair value through profit or loss	104,653	-	104,653
<i>from institutional clients</i>	101,552	-	101,552
<i>from individual customers</i>	3,101	-	3,101
Other receivables	5,033	-	5,033
Other financial assets* \	207,996	-8,807	199,189

*\ The item mainly consists of: cash surplus and receivables from transactions concluded on financial instruments.

Credit risk exposure for individual contingent liability items:

Specification	Maximum credit risk exposure	Maximum credit risk exposure
	31-12-2019	31-12-2018
Contingent financial liabilities, of which:	2,538,723	1,477 738
- <i>open credit facilities, of which:</i>	2,513,639	1,461 556
- <i>revocable</i>	2,267,427	1,206 274
- <i>irrevocable</i>	246,212	255,282
- <i>open import letters of credit</i>	5,839	14,065
- <i>commitments to grant loans, of which:</i>	19,245	2,117
- <i>irrevocable</i>	19,245	2,117
Guarantees and pledges	308,145	328,933
Foreign currency and interest rate transactions*\	6,672,254	5,746 956

*\ In 2019, the items include

Currency exchange transactions and currency derivatives transactions in the amount of PLN 1,227,723 thousand.

Transactions of interest rate swap amounted to PLN 4,997,978 thousand.

Transactions of interest rate secured swap amounted to PLN 468,000 thousand.

*\ In 2018, the items include

Currency exchange transactions and currency derivatives transactions in the amount of PLN 821,807 thousand.

Transactions of interest rate swap amounting to PLN 4,389,149 thousand.

Transactions of interest rate secured swap amounting to PLN 536,000 thousand.

According to the Bank's policies, contingent liabilities are subject to the same collateral requirements and monitoring procedures as other balance-sheet transactions.

The frequency of monitoring of institutional clients (Corporate sector) depends mainly on the level of credit exposure and economic and financial standing of the client (client's rating).

Monitoring of institutional clients includes the verification of:

- 1) client's rating (including verification of chosen external databases),
- 2) capital group rating,
- 3) assessment of the transaction (monitoring of collaterals, contract terms (covenants) and investments co-financed by the Bank).

The frequency and scope of monitoring of institutional clients (micro-enterprises, housing communities) are dependent on the amount of exposure to the particular client.

Monitoring of micro-enterprises, housing communities includes:

- 1) monitoring of events covered by monitoring,
- 2) monitoring of the economic and financial standing.

In case of micro-enterprises, an additional verification of the client is performed in chosen external databases.

5.1.8. Forbearance practices

The forbearance status is assigned to these exposures, for which the terms of agreement, liabilities or investments measured at amortized cost have been restructured, if this restructuring results from:

- 1) financial difficulties of debtor or issuer or
- 2) if lack of change of the terms of the agreement would lead to cessation of repayment of loans, which would not be granted by BOŚ Bank if the debtor were not in a difficult financial situation.

In particular, the Bank defines forbearance practices as:

- 1) granting a grace period for repayment of capital and / or incidental dues
- 2) reducing capital and / or incidental dues,
- 3) extending the term of the loan,
- 4) reduction in the interest rate,
- 5) accepting not to execute the agreement while the borrower is not meeting the financial forecasts,
- 6) permission of the BOŚ Group to repay the liability through realization of the collateral,
- 7) capitalization of interest,
- 8) change of debtor, acquisition of debt or debt accession by third parties.

As a result of conclusion and timely management of a forbearance agreement, the receivables become unmatured.

Restructuring constitutes an impairment trigger.

Regarding the individually significant exposures, the event of entering into a forbearance agreement that modifies the terms of the agreement due to financial difficulties of the debtor, results in a necessity to analyze the level of impairment allowances.

Regarding the exposures, which are not individually significant, entering into a forbearance agreement that modifies the terms of the agreement due to financial difficulties of the debtor, results each time in the recognition of impairment allowance.

Reversal of loss (reclassification to a non-default portfolio) is possible after the impairment trigger is no longer present and after the 12-month quarantine period. Restructured transactions with impairment indicator after the quarantine period without the impairment indicator being identified and for which impairment is not recognized, are classified in Basket 2. For such exposures, the expected losses are recognized over the horizon of the remaining lifetime of exposure.

Restructuring agreements are constantly monitored for fulfillment of contractual obligations included in the agreements.

An exposure is no longer classified as forborne (forbearance status is removed), when all the following conditions have been met:

- 1) a loan agreement is considered as non-risk, where the exposure was reclassified from the "at risk" category, after assessment of the debtor's financial standing, which has confirmed sustainable improvement of debtor's financial standing,
- 2) at least 24 months have passed (trial period) since the date of identification of the exposure as "not at risk", during at least a half of which no delays in principal and interest repayment of more than 30 days have been identified,
- 3) at the end of the trial period, none of the exposures of a given debtor is past due for more than 30 days.

The accounting policies with respect to the financial assets subject to forbearance practices do not differ from the policies used in reference to the other assets of the BOŚ Group. The Group values its loans and receivables at amortized cost using the effective interest rate. In case of renegotiation of terms of a loan, a receivable or an investment measured at amortized cost, due to difficult financial standing of the debtor or issuer, such exposure is valued using the original effective interest rate determined before the change of the terms.

The table below presents the credit risk exposure of individual forborne transactions (where Forbearance was used).

31-12-2019	Gross balance sheet values	Write-offs for expected credit losses	Maximum credit risk exposure	Gross balance sheet values	Write-offs for expected credit losses	Maximum credit risk exposure
Receivables from clients, including:	699,791	-437,314	262,477	98,571	-4,047	94,524
Receivables from individual customers, in which:	168,241	-108,208	60,033	24,771	-2,218	22,553
individually assessed *\\	60,806	-28,727	32,079	-	-	-
Receivables from institutional clients, in which:	531,550	-329,106	202,444	73,800	-1,829	71,971

individually assessed *\\	517,445	-317,368	200,077	-	-	-
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31-12-2018	Receivables impaired			Receivables unimpaired		
	Gross balance sheet values	Write-offs for expected credit losses	Maximum credit risk exposure	Gross balance sheet values	Write-offs for expected credit losses	Maximum credit risk exposure
Receivables from clients, including:	714,234	-413,236	300,998	71,641	-1,894	69,747
Receivables from individual customers, in which:	173,183	-109,445	63,738	35,493	-1,414	34,079
individually assessed *\\	58,369	-27,109	31,260	-	-	-
Receivables from institutional clients, in which:	541,051	-303,791	237,260	36,148	-480	35,668
individually assessed *\\	525,158	-291,508	233,650	-	-	-

*\\ Receivables from clients having evidence of impairment, with no impairment identified due to value of expected cash flows, are valued in groups.

5.1.9 Effects of a possible regulatory solution of the issue of housing loans expressed in CHF and in other foreign currencies

As of the date of publication of this report, the final wording of amendments to legal regulations offering a unified solution to the issue of housing loans denominated in foreign currencies was unknown.

5.2. Techniques of financial risk measurement (in the trading and banking books) and limits

The financial risk in BOŚ Group is concentrated mainly in BOŚ S.A. and in DM BOŚ S.A. and includes:

- 1) liquidity risk,
- 2) market risk, including:
 - interest rate risk (in banking and trading book);
 - currency risk (mainly in the trading book; currency risk from the banking book is transferred to the trading book),
 - other risks (general risk and separate risks regarding prices of equity instruments, as well as the risk of commodity prices).

Liquidity risk and interest rate risk are applicable mainly to the Bank, while the currency risk - to DM BOŚ S.A. (in the trading and non-trading book) and in the Bank (in the trading book; the currency risk from the banking book is transferred to the trading book), DM BOŚ S.A. also faces the risk caused by equity instrument items and the risk of commodity prices.

The basic rules of risk management for the Bank, as well as the BOŚ Group with regard to financial risk are specified in the Strategy for banking risk management. The Strategy constitutes an integral part of the valid Strategy of action of the Bank.

The risk management system at the BOŚ Group includes examination of various types of risks, associated with activity of the Bank, as well as the Group Companies. As the parent entity, the Bank supervises the Group's risk management system. The risk management process is subject to periodic reviews, which are aimed at adapting this process to changes taking place in the environment, as well as in the Bank and the Group.

Risk management at the Bank is conducted on the basis of the risk appetite and tolerance levels determined by the Supervisory Board of the Bank, using a set of internal limits. The Bank has put in place policies applicable to the management of liquidity risk, interest rate risk in the banking book and market risk. The policy sets, among others, maximum levels of financial risk, according to the risk appetite adopted by the Bank's Supervisory Board. These have served as a basis for establishment of an early warning system, which focuses on identification, measurement, monitoring, controlling and reporting of risk.

Transactions in the banking book represent the core business of the Bank, which means that they result from commercial operations, including acquisition of sources of financing and efficient management of financial liquidity. The banking book includes positions, which are not included in the trading book, in particular:

- 1) credits granted, guarantees, advances, term deposits and deposits received,
- 2) transactions, which secure liquidity and interest rate risk of operations included in the banking book,
- 3) purchase of securities with purpose other than trading.

In line with the strategy of the BOŚ Group, activities in the trading book compensate activities in the banking book. The trading book contains transactions that were performed on the Bank's own account with the aim of trading, i.e. of gaining financial profits in short-term periods due to real or expected differences between bid and offer prices in the market, as well as other deviations of prices or price parities, including especially: interest rates, exchange rates and stock exchange indices. Sale of transactions held in the trading book is not used to maintain liquidity. The function of the trading book is to provide the Bank's customers with the highest quality of services. In order to achieve this, the Bank and DM BOŚ S.A. maintain open positions, within the binding risk limits.

The aim of risk management of the BOŚ Group is to maintain the individual risk types at the approved tolerance and appetite levels, making it possible to protect the value of shareholder capital, maintain security of deposits of clients and achieve proper effectiveness of operations of the BOŚ Group, including the ability to adapt activity of the BOŚ Group to the changing market conditions, competences and commitment of the managerial and employee staff and quality of the managerial information systems.

The level and profile of financial risk is regularly monitored in the Department for Financial and Operational Risk of the Bank (the second line of defense department) and in DM BOŚ S.A. and reported to: The Bank's Supervisory Board, the Supervisory Board of DM BOŚ S.A., the Risk Committee (at the Supervisory Board), the Management Board of the Bank, the Management Board of DM BOŚ S.A., the Committee of Assets and Liabilities Management (ALCO) and the ALCO Liquidity and Market Risk Committee (ALCO LMRC).

5.2.1. Liquidity risk

The BOŚ Group's purpose of liquidity management is to maintain the Group's ability to finance assets and pay liabilities in a timely manner and to maintain a sustainable structure of assets and liabilities, which ensures a safe liquidity profile in specific periods of time, split into liquidity in PLN and the main foreign currencies, but mostly - for the total liquidity position. The liquidity risk is mainly generated by the Bank.

The strategy and processes in liquidity risk management are adapted to the profile and scale of operations of the Bank. The liquidity risk management strategy is defined in the Liquidity Strategy of BOŚ S.A., approved by the Supervisory Board. The strategy defines the Bank's risk appetite and sets out the main directions and quantitative targets for the selected positions and is an integral part of the Bank's Framework Strategy of Action. Liquidity risk tolerance adjusted to the adopted risk appetite was determined in the Liquidity Risk Management Policy approved by the Supervisory Board and realized through the system of internal limits and warning or monitory values, obligatory in the Bank.

The structure and organization of the liquidity risk management function includes all levels of the Bank's organizational structure and operates within the three lines of defense. A particular role in the liquidity risk management process is played by the Management Board of the Bank and the Committee of Assets and Liabilities Management.

Liquidity in the Bank is analyzed over the following time horizons:

- intra-day liquidity - during the day;
- current liquidity - in the period up to 7 days;
- short-term liquidity - in the period up to 1 month;
- mid-term liquidity - in the period of above 1 month to 12 months;
- long-term-term liquidity - in the period of more than 12 months.

To measure the liquidity and intra-day, current and short-term liquidity risk, the Bank introduced the following measures and tools:

- 1) the intra-day liquidity limit - reflects the level of funds necessary to be maintained on the NBP account, for settlement of the Bank's obligations during the day, in normal and stress situation.
- 2) liquid assets (excess liquidity) - as a buffer for expected and unexpected outflows in a horizon of 30 days;
- 3) liquidity stock - measures the level of liquid assets, less the expected, unexpected outflows of liquidity defined in 30 days, including the mark-up on the concentration;
- 4) stability of deposit ratio assessment;
- 5) short-term liquidity gap (PLN, EUR, CHF, USD) - shows the level of mismatch in the financing structure in foreign currencies, the gap includes mainly cash flows from derivative and interbank transactions;
- 6) stress tests (i.e. allowing for the verification of the ability to maintain liquidity as defined in the Bank's term in different scenarios).

In order to measure liquidity and liquidity risk in medium- and long term, Bank sets and monitors:

- 1) the contractual liquidity gap and liquidity gap in real terms (which is supplemented by a systematically carried out analysis: the stability of the deposit base, concentration of the deposit base, the size of prepayment of credits and the level of deposits' withdrawals);
- 2) coverage ratio of long-term assets by long-term liabilities;
- 3) coverage ratio of loans used to finance long-term needs of customers as the most stable sources of funding;
- 4) forecasts of the LCR, NSFR, liquid assets and long-term liquidity measures (such as the NSFR).

In order to evaluate effectiveness of the process of managing liquidity risk, for the majority of above- mentioned measures, limits or warning values are determined within the set of internal limits of liquidity risk. They are hierarchical, which means that they are determined at the level of the Supervisory Board, Management Board and the Committee of Assets and Liabilities Management. The applicable limits and warning values are regularly reviewed in order to ensure effective monitoring of liquidity. The limits and warning values set the framework for the tolerance of the Bank's liquidity and are consistent with the appetite for risk adopted by the Bank. Developing the appropriate liquid risk profile is supported by taking into account the cost of liquidity in the Bank's current transfer pricing system.

Measures and tools used by the Bank are regularly reviewed and updated, which allows for a better mapping of the liquidity profile. The process of monitoring liquidity and liquidity risk in the Bank is supported by a dedicated information system (particularly in terms of generating contractual and actualized liquidity gap and reporting supervisory liquidity measures, internal limits and preparing mandatory reporting). At least once a year, the Bank elaborates a review of the Internal Liquidity Adequacy Assessment Process (ILAAP), according to the guideline EBA/GL/2016/10 regarding information on ICAAP and ILAAP, gathered for the purposes of the Supervisory Review and Evaluation Process (SREP). This review is to be subject to an opinion performed by the ALCO Committee and to be approved by the Management Board and the Supervisory Board of the Bank. The ILAAP review conducted by the Bank as at 31 December 2019 showed compliance of the process with the Bank's internal regulations and guidelines.

Liquidity risk reports are presented mainly to the Bank units participating in the risk management process. Results of the risk analysis, the degree of utilization of supervision standards and internal limits, as well as results of stress tests are presented in reports prepared for the ALCO Liquidity and Market Risk Committee (in weekly cycles), the Management Board of the Bank and the Committee of Assets and Liabilities Management (in monthly cycles) and for the Supervisory Board of the Bank and the Risk Committee at the Supervisory Board (in quarterly cycles). These reports are a part of the Managerial Information System (MIS), which is aimed at supporting management of the Bank, improving the efficiency of performance of its tasks and ensuring security and stability of functioning.

The general liquidity risk profile

The primary source of financing for the Bank remains a systematically built, diversified deposit base with a large share of stable deposits from retail customers (supplemented with deposits of corporate customers and the public sector) and additionally, loans received from international financial institutions (which, along with long-term bilateral interest swap contracts secured by debt securities and FX Swap transactions, are also a source of funding liquidity in foreign currencies). The Bank exercises ongoing monitoring of the deposit base concentration risk. The internal liquidity measures take into account the additional mark up on sustainable funds due to concentration, measured on the basis of deposit balances for large deposits and deposits of big clients (classified in accordance with the definitions used by the Bank).

Liquid assets (excess liquidity) owned by the Bank, are held mainly in the NBP bills characterized by high liquidity (as at 31 December 2019 representing 40% of the portfolio of liquid unencumbered securities) and State Treasury bonds (as at 31 December 2019 - 60%), with low specific risk. The portfolio of these securities is supplemented by cash and deposits held with NBP (above the declared level of reserve requirement) and nostro accounts with other banks. As at 31 December 2019, liquid assets amounted to PLN 3,429 million. Liquid assets are the buffer to protect liquidity in possible emergency situations, i.e. there is a possibility of a lien, liquidation through repo transactions or sales at any time, without significant loss of value. The possibilities of selling liquid assets (liquidity risk of the product) are systematically monitored. In these

analyses, the Bank takes into account primarily the following: size of issue, market turnover and volatility of the price of purchase/ sale.

In accordance with the recommendations of the Polish Financial Supervision Authority and the National Bank of Poland, the Bank has the ability to use additional sources of financing in the form of technical and lombard credits at the NBP, the Bank can as well apply for obtaining a refinancing loan.

Internal capital to cover the liquidity risk, which is considered to be a significant constant risk, is determined in the Bank in accordance with the applicable process of internal capital estimation. This capital is estimated on the basis of the cost of restoring supervisory and internal measures and liquidity limits under the conditions of stress test scenarios.

The liquidity risk measures

The Bank determines supervisory measures of liquidity in accordance with the following regulations: Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 and Delegated and Execution Regulations referring to the above-mentioned Regulation with regard to liquidity and Resolution No. 386/2008 of Polish Financial Supervision Authority of 17 December 2008 on setting liquidity standards which are binding for banks.

The currently applicable norms regarding short-term liquidity include the liquidity coverage requirement - LCR (ratio of liquid assets to net outflows (i.e. difference between net outflows and net inflows) through the period of extreme conditions, it is 30 calendar days). The LCR is calculated for all currencies in total (in conversion to PLN) and separately for significant currencies: PLN and EUR. For the ratio in EUR, the Bank identifies the currency mismatch associated with the mode of financing of long-term loans granted in this currency.

In accordance with EBA/GL/2017/01 Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 of Regulation (EU) No 575/2013, the Bank presents in the Information on BOŚ Group, disclosed in accordance with part eight of the Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 "Disclosure by Institutions", quantitative and qualitative data on the liquidity coverage ratio. The above information is disclosed in accordance with instructions provided by the European Banking Authority.

The long-term standards include the following ratios: M3 (illiquid assets coverage by own funds - ratio) and M4 (illiquid assets and those with limited liquidity coverage by own funds and not-owned fixed funds - ratio). The Bank determines and reports to the Polish Financial Supervision Authority the level of net stable funding ratio (NSFR) and introduced an internal warning value for this ratio at the level of target supervisory limit, i.e. 100%. As at 31 December 2019, the value of this ratio amounted to 109%. Moreover, the Bank, in accordance with Commission Implementing Regulation (EU) 2016/313 of 1 March 2016 amending Implementing Regulation (EU) No 680/2014 with regard to additional monitoring metrics for liquidity reporting, prepared the ALMM reports and submitted them to the National Bank of Poland, as part of its statutory reporting. According to Resolution No. 386/2008 of the Polish Financial Supervision Authority, the Bank also performs an in-depth analysis of long-term liquidity. The results of analyses performed are used to manage the Bank's liquidity. At the same time, the process of preparing short- and long-term financial plans of the Bank includes an assessment of liquidity, to ensure an adequate financing structure and compliance with the supervisory liquidity measures.

In 2019, as in 2018, the supervisory liquidity measures, i.e. LCR and M3-M4, were determined daily (i.e. every working day), and remained at a safe level, significantly above the regulatory levels. As at 31 December 2019, these measures were as follows:

Ratio	31-12-2019	31-12-2018
LCR	131%	132%
M3	81.26	99.33
M4	1.30	1.33

The Bank has an action plan approved by the Management Board, for maintaining liquidity in emergency situations, which determines the potential sources of deterioration / loss of liquidity, rules of conduct and competences required in emergency situations, in order to estimate the horizon of survival, as well as the possibility and the cost of restoring the stable liquidity condition. Apart from the scenario-based analysis of liquidity in emergency situations (the assumptions of which are consistent with the stress tests that were carried out), the plan also includes certain measurable and immeasurable symptoms leading to emergency situations, allowing for the systematic monitoring of the source of crisis regarding liquidity.

The scenario analysis of liquidity in emergency situations and stress tests include three types of scenarios:

- 1) internal crisis - its source is a loss of trust to the bank by market participants (a so-called "run on the bank"), a reduced availability of financing, materialization of concentration risk and downgrading of the Bank's rating;
- 2) external crisis - assumes materialization of currency risk, rise of interest rates, crisis in financial markets and a possible second-round effects, and;

3) mixed crisis - combines elements of both internal and external crisis.

The stress tests performed help to identify some factors that can have impact on liquidity risk in case of their materialization. They also allow to develop measures to be taken in the event of emergencies.

As a part of its analyses, the Bank also performs the sensitivity analysis of the Bank's individual factors generating liquidity risk and reversed tests. The plan of action for maintaining liquidity in emergency situations is regularly reviewed and updated, so as to guarantee the operational preparation of the Bank to launch potential actions in the event of a liquidity threat. The scenario analysis of liquidity in emergency situations is prepared semi-annually, and the stress tests - on a monthly basis. The assumptions adopted for stress tests are regularly reviewed in line with conclusions of the scenario-based analysis of liquidity in emergency situations. The conclusions of the tests performed are taken into account in the current liquidity management and liquidity risk management, as well as when building the structure of assets and liabilities.

In its developed analyses, the Bank also takes into account the possibility of unfavorable changes in the foreign exchange rates, particularly CHF and EUR, potentially causing an increase in liquidity needs.

In accordance with annexes to the security framework agreements signed with contractors (Credit Support Annex, CSA), Credit Support Annex for Variation Margin (CSA VM) the Bank, in case of adverse market changes (i.e. exchange rates), is obliged to submit additional collaterals; in the case of positive changes - the Bank receives additional collaterals from contractors. This documentation does not include decisions changing the amount of the collateral submitted because of a rating change. This means that reducing the level of creditworthiness does not affect the amount and method of calculation of collaterals.

In 2019, the Bank signed the Global Master Repurchase Agreement (GMRA), containing provisions extending the catalog of "infringements" by adding a clause on the Bank's rating. If the rating drops below "BB-" or verification by Fitch is discontinued, the contractual party may indicate an early settlement date to take place through sale of bonds on the interbank market, while the funds in CHF would remain in the Bank (settlement of the difference would take place in cash in EUR).

The stress tests performed in the 2019, similarly as in 2018, show a stable liquidity position of the Bank and that its liquid assets (excess liquidity) allow for the survival of the assumed stress test scenarios, in which the Bank envisages survival in a defined time horizon.

In 2019, similarly as in 2018, the BOŚ Group's liquidity situation was systematically monitored and remained at a safe level.

The following tables present liquidity gap in real terms (carrying amounts):

31-12-2019	1M	1-3M	3-6M	6-12M	1-5Y	above 5Y	Total
Liquidity gap ratio	2.75	1.63	1.17	0.92	0.87	1.00	
Assets total	3,650,856	427,684	508,154	1,091,424	6,245,052	6,563,827	18,486,997
<i>in which receivables from clients</i>	102,363	316,067	502,732	1,015,861	5,262,754	4,804,017	12,003,794
Total liabilities	1,326,971	1,171,816	1,429,101	2,239,257	7,478,520	4,841,332	18,486,997
<i>in which liabilities to clients</i>	992,940	1,106,625	1,291,615	2,122,847	6,784,833	2,616,121	14,914,981
Gap	2,323,885	-744,132	-920,947	-1,147,833	-1,233,468	1,722,495	-
Accumulated gap	2,323,885	1,579,752	658,805	-489,028	-1,722,495	-	-

31-12-2018	1M	1-3M	3-6M	6-12M	1-5Y	above 5Y	Total
Liquidity gap ratio	3.04	1.67	1.19	0.99	0.89	1.00	
Assets total	3,207,946	439,799	798,528	1,353,727	5,646,546	6,804,479	18,251,025
<i>in which receivables from clients</i>	123,494	327,446	611,709	1,273,608	4,752,654	4,720,616	11,809,527
Total liabilities	1,053,574	1,135,355	1,551,055	2,147,690	6,909,539	5,453,812	18,251,025
<i>in which liabilities to clients</i>	818,905	1,132,973	1,361,549	2,061,765	6,459,509	2,964,408	14,799,109
Gap	2,154,372	-695,556	-752,527	-793,963	-1,262,993	1,350,667	-
Accumulated gap	2,154,372	1,458,816	706,289	-87,674	-1,350,667	-	-

Derivative instrument cash flows (gross settlements)

A breakdown of maturity of derivative instruments according to contractual deadlines as at 31 December 2019 and 31 December 2018 has been presented in the tables below (undiscounted values):

31-12-2019	1M	1-3M	3-6M	6-12M	above 1Y	Total
Receipts, in which:	463,507	255,003	244,865	314,277	134,822	1,412,474
FX forward	48,870	41,189	8,822	18,031	17,095	134,007
FX Spot	210,983	-	-	-	-	210,983
FX Swap	197,183	207,543	225,444	252,563	-	882,733
IRS	6,471	6,271	10,599	43,683	117,727	184,751
Outflows, in which:	463,183	255,128	240,049	301,324	139,166	1,398,850
FX forward	48,405	40,818	8,708	18,575	17,810	134,316
FX Spot	210,979	-	-	-	-	210,979
FX Swap	195,512	205,781	219,294	245,057	-	865,644
IRS	8,287	8,529	12,047	37,692	121,356	187,911

31-12-2018	1M	1-3M	3-6M	6-12M	above 1Y	Total
Receipts, in which:	332,956	284,156	179,952	105,940	146,808	1,049,812
FX forward	29,730	48,753	26,073	1,290	-	105,846
FX Spot	129,786	-	-	-	-	129,786
FX Swap	168,978	226,690	133,185	57,323	-	586,176
IRS	4,462	8,713	20,694	47,327	146,808	228,004
Outflows, in which:	332,770	272,791	178,661	103,295	145,689	1,033,206
FX forward	29,613	48,491	26,121	1,321	-	105,546
FX Spot	129,753	-	-	-	-	129,753
FX Swap	168,221	214,526	133,581	57,249	-	573,577
IRS	5,183	9,774	18,959	44,725	145,689	224,330

31-12-2019	1M	1–3M	3–6M	6-12M	above 1Y	Total
Receipts, in which:	73	179	71	19,862	-	20,185
Futures	12	97	4	-	-	113
Forward contracts	61	82	67	-	-	210
CFD	-	-	-	19,862	-	19,862
Outflows, in which:	71	761	53	1,300	-	2,185
Futures	31	691	51	-	-	773
Forward contracts	40	70	2	-	-	112
CFD	-	-	-	1,300	-	1,300

31-12-2018	1M	1–3M	3–6M	6-12M	above 1Y	Total
Receipts, in which:	137	43,442	8,213	208,390	-	260,182
Futures	137	12,798	320	539	-	13,794
Forward contracts	-	30,644	7,893	440	-	38,977
CFD	-	-	-	207,411	-	207,411
Outflows, in which:	-	52,684	8,373	237,035	-	298,092
Futures	-	21,358	8,060	549	-	29,967
Forward contracts	-	31,326	313	601	-	32,240
CFD	-	-	-	235,885	-	235,885

5.2.2. Interest rate risk

The interest rate risk is a possible negative influence of interest rates changes on forecast financial result as well as on the economic value of equity and the current value of BOŚ Group's owned debt securities. The interest rate risk is mostly generated in the Bank, both in the banking book and trading book.

The interest rate risk in the banking book

The main purpose of interest rate risk management in the banking book is to seek stabilization and optimization of net interest income ('NII') while limiting the negative influence of market interest rate changes on economic value of equity ('EVE').

To achieve this, the Bank uses two tools: the investment portfolio held and derivative transactions performed under hedge accounting. The investment portfolio, built in the banking book, should help to, among others, secure net interest income generated in Bank's equity and to secure core deposits in current account insensitive to variations of interest rate. On the other hand, this portfolio results in volatility of the revaluation reserve.

The Bank uses fair value hedging. Its aim is to hedge the fair value of State Treasury fixed-rate bonds which represent a part of the portfolio of bonds within the HtCS model and constitutes a liquidity buffer for the Bank. The IRS hedging transactions carried out limit the capital fluctuations relating to changes in interest rates.

Monitoring of interest rate risk in the banking book is supported by a dedicated IT system, by means of which the Bank sets/performs in particular:

- 1) the repricing gap that represents values of assets, liabilities and balance items sensitive to the exchange rates changes in periods of maturity or of revaluation;
- 2) a simulation of interest income - a dynamic analysis, reflecting WO projection in pre-set time intervals, based on assumed scenarios of Bank's development and assumptions regarding market factors' development;
- 3) a simulation of the current value (net present value, NPV), representing discounted values, according to the pre-set market parameters, for all cash flows; NPV analyses are the basis for setting the measures BPV and WEK;
- 4) various price shocks underlying the basis risk, which aim to assess the impact the diversified change of rates on products on the interest result. These product rates are based on different basis rates;
- 5) the yield curve risk analysis, which aims to assess the impact of non-parallel changes of the yield curve on the economic value of equity;
- 6) the risk of client options' analysis, which aims at assessing the impact of options realized by clients and embedded in interest products on the financial result of the bank;
- 7) stress tests, including reversed tests and the Supervisory Outlier Test (STS), which is carried out to determine overall changes of market factors that result in a determined impact on the measurement of the interest rate risk in the banking book;
- 8) the internal capital level to the interest rate risk in the banking book.

The interest rate risk ratios in the banking book

In order to control the interest rate risk in the banking book, the Bank uses two measures: net interest income sensitivity (NII) to interest rate changes by +/- 100 b.p. and economic value of equity sensitivity (EVE) to interest rate change by +/- 200 b.p. The interest rate risk measurement in the banking book is performed on the basis of characteristics of products (capital movement schedules, revaluation of interest rates, embedded options) resulting from agreements signed with contractual partners. For current products, in which the client has the freedom of shaping e.g. the repayment schedule or availability of funds, the Bank builds the so-called replicating portfolios, which reflect the economic terms of capital movements. In the replicating portfolios applied, the average maturity of deposits with undetermined maturity is 6 months, and the maximum maturity is 12 months. Moreover, the Bank takes into account client behaviors, such as: early credit repayment levels or deposit breakage levels, which are estimated as defined by the internal regulations of the Bank. The assumptions made are consistent with BA/GL/2018/02 Guidelines on the management of interest rate risk arising from non-trading activities.

The table below presents a comparison of NII and EVE values between 31 December 2019 and 31 December 2018:

	ΔNII		ΔEVE	
	-100 b.p	+100 b.p	-200 b.p	+200 b.p
31-12-2019	-43,737	33,718	29,975	-66,589
31-12-2018	-50,171	36,338	19,631	-58,542
The change	6,434	-2,620	10,344	-8,047

In 2019, as in 2018, the above measures were within the limits/ warning limits. The asymmetrical impact of interest rates fluctuations on NII and EVE results from the characteristics of interest rates for individual items sensitive to interest rates fluctuations, including, among others, restrictions of decrease in individual sources of finance to 0 level, with negative market interest rates. The changes in values of NII and EVE are to a certain degree cyclical, which is associated with the regular nearing of the date of revaluation of variable interest items and maturity dates of fixed interest items.

In 2019, the Bank implemented the EBA/GL/2018/02 Guidelines on the management of interest rate risk arising from non-trading activities, in particular, by implementing the Supervisory Outlier Test (SOT), reviewing the principles of determination of internal equity for the interest risk rate in the banking book, analysis of sensitivity of products to changes in interest rates, assumptions used for risk measurement and model validation principles, applied to the process of management of the risk under concern.

Results of the Supervisory Outlier Test (SOT) for 6 standard shock scenarios for the interest rate risk, specified in the Guidelines, have been presented in the table below.

	ΔEVE in a given SOT scenario					
	parallel shock increase	parallel shock decrease	curve steeping	curve flattening	shock increase for short-term rates	shock decrease for short-term rates
31-12-2019	-53,584	17,877	7,251	-37,277	-52,785	12,520
30-06-2019*\	-34,942	16,564	-1,421	-15,969	-25,777	2,523
The change	-18,642	1,313	8,672	-21,308	-27,008	9,997

*\ SOT analysis has been conducted and reported since June 2019

The results of the Supervisory Outlier Test for outliers indicate that the Bank is most exposed to decrease in economic value of equity (EVE) as a result of the scenario of parallel increase in interest rates. Despite the increase in sensitivity of economic value of equity between June and December 2019, the level of this ratio is clearly below the supervisory warning limits, which proves moderate exposure to the interest rate risk.

On a monthly basis, the Bank performs a stress-test analysis by examining the development of the interest rate risk level in the banking and trading books in case of materialization of extreme changes in risk factors.

In the banking book, the impact of unfavorable changes is primarily examined with regard to:

- 1) interest rates on:
 - a) net interest result (NII),
 - b) economic value of equity (EVE),
 - c) portfolio in the banking book: securities under hedge accounting, debt securities, IRS and FX swap transactions:
 - scenarios of parallel shifts in interest rate curves by ± 100 b.p., ± 500 b.p.,
 - scenarios of flattening, bending and steep running of interest rate curves,
 - 2) exchange rates on the net interest income (NII) and economic value of equity (EVE) - the scenarios of exchange rates fluctuations by $\pm 5\%$, $\pm 10\%$ and $\pm 25\%$,
 - 3) interest rates and exchange rates, jointly on NII and EVE - the scenarios of total fluctuations in exchange rates of $\pm 10\%$ and $\pm 25\%$ and in interest rates of ± 100 b.p. (for NII), ± 200 b.p. (for EVE) and ± 500 b.p.
 - 4) interest rates on sensitivity of economic value of equity (EVE) of the Bank under strictly defined scenarios of interest rate changes, based on the Supervisory Outlier Test.

The results of stress tests as at 31 December 2019 show that where extremely unfavorable market conditions and increased Bank's positions in the instruments sensitive to the interest rate risk occur, the activities of the Bank in the banking portfolio remain at a safe level.

Due to the nature of activity of the Bank and the structure of its securities portfolio, the interest rate risk in the banking book is constantly significant; the Bank estimates the internal capital for this risk. Accordingly with supervisory and internal regulations, the internal capital for the interest rate risk in the banking book refers both to potential changes in economic value of equity and the net interest income due to unfavorable changes in interest rates and is adapted to the structure and nature of operations of the Bank.

The results of the interest risk rate monitoring conducted in the banking book are presented in reports prepared for the ALCO Liquidity and Market Risk Committee (in weekly cycles), in reports prepared for the ALCO Committee and the Management Board of the Bank (in monthly cycles) and for the Risk Committee and the Supervisory Board of the Bank (in quarterly cycles).

The interest rate risk in the trading book

The purpose of the interest rate risk management in the trading book is to achieve financial performance, which is assumed in the financial plan for this area, with an acceptable Bank's exposure to this risk and minimizing its negative effects on instruments sensitive to interest rate fluctuations held in the trading book.

The interest rate risk ratios in the trading book

In order to monitor the interest rate risk in the trading book, the Bank applies:

- 1) the Value at Risk model (VaR) calculated with the confidence level of 99% based on daily volatility of interest rates from the last 250 working days that precede the analysis date,
- 2) BPV (i.e. sensitivity of securities and derivatives generating interest rate risk, in case of the interest rate fluctuation by ± 1 b.p.),
- 3) the system of limits,

4) stress tests.

In 2019, there were no significant changes in techniques of measuring interest rate risk in the trading book.

The value of interest rate VaR in the trading book and the impact of the stress test - parallel shift of IRS and BOND yield curves by ± 200 b.p. on the Bank's result on an annual basis, was as follows (provided are the following: the maximum, minimum and average values, and the value at the reporting date):

	10-day VaR			Stress tests ± 200 b.p.	
	average	Max.	Min.	as at	as at
31-12-2019	422	612	177	355	-2,389
31-12-2018	361	1,082	41	351	-1,911

In order to verify the VaR model, the Bank performs a monthly back-testing calculated by comparing maximum losses arising from the model to actual gains and losses and theoretical performance fluctuations arising from revaluation of items. The results of back-testing on a monthly basis are presented in the reports prepared by the management.

The system of limits for interest rate risk in the trading book includes:

- 1) limit of the 10-day VaR,
- 2) the BPV limit for instruments generating interest rate risk in the trading book applicable both through the day and at the end of the day, separately for debt securities items and IRSs, and jointly for these two instruments,
- 3) the maximum, two-day and retained monthly loss limits on assets in the trading portfolio.

Calculation and monitoring of the level of individual limits utilization is performed as per the balance of each working day, and with respect to the BPV limits - also during the day, and systematically reported to the management.

On a monthly basis, the Bank performs a stress-test analysis by examining the development of the interest rate risk level in the banking and trading books in case of materialization of extreme changes in risk factors.

In trading book, an impact of extreme situations is tested regarding: changes in market interest rates on Bank's result and volatility in interest rates during the 250-working-day period or correlation between the volatilities of interest rates on VaR results using both the historical and parametric methods.

For the purpose of stress tests, the following scenarios are applied by the Bank:

- 1) historical:
 - a) parallel shifts in interest rate curves (including fat tails and spread),
 - b) the bending of the interest rate curves,
 - c) change in the slope of the interest rate curves,
- 2) parametric:
 - a) parallel shifts in interest rate curves,
 - b) increase in volatility of interest rates,
 - c) extremely adverse changes in correlation of interest rates.

Stress test scenarios are also performed under the assumption of changes in market liquidity and inability to close the position.

The results of this analysis show that where extremely unfavorable market conditions and increased Bank's positions in the instruments sensitive to the interest rate risk occur, the activities of the Bank in the banking and trading portfolio remain at a safe level.

The results of interest rate risk monitoring in the banking and in the trading books, along with the results of performed stress tests, are presented in the reports prepared for the Management Board and the ALCO on a monthly basis, and - on a quarterly basis - for the Supervisory Board of the Bank and the Risk Committee. In addition, results of the interest rate risk analysis in the trading book in the form of daily reports are provided to Members of the Bank's Management Board and ALCO and are presented on a weekly basis in reports prepared for the Liquidity and Market Risk Committee.

Derivative financial instruments

The tables below contain the breakdown of derivatives on the basis of underlying instruments - in order to demonstrate their sensitivity to changes in interest rates (nominal values):

31-12-2019	1M	1–3 M	3–6M	6-12M	above 1Y	Total
Assets						
FX forward	48,870	41,189	8,822	18,031	17,095	134,007
FX Spot	210,983	-	-	-	-	210,983
FX Swap	197,183	207,543	225,444	252,563	-	882,733
IRS	1,049,122	685,219	1,292,787	829,321	1,588,082	5,444,531
Futures	-	96,356	447	-	-	96,803
Forward contracts	6,860	8,334	4,172	-	-	19,366
CFD	-	-	-	229,039	-	229,039
Total	1,513,018	1,038,641	1,531,672	1,328,954	1,605,177	7,017,462
Liabilities						
FX forward	48,405	40,818	8,708	18,575	17,810	134,316
FX Spot	210,979	-	-	-	-	210,979
FX Swap	195,512	205,781	219,294	245,057	-	865,644
IRS	401,121	818,778	1,319,004	873,797	2,031,831	5,444,531
Futures	8,365	7,430	4,285	-	-	20,080
Forward contracts	-	5,751	322	-	-	6,073
CFD	-	-	-	436,308	-	436,308
Total	864,382	1,078,558	1,551,613	1,573,737	2,049,641	7,117,931
Balance	648,636	-39,917	-19,941	-244,783	-444,464	

31-12-2018	1M	1–3M	3–6M	6-12M	above 1Y	Total
Assets						
FX forward	29,730	48,753	26,073	1,290	-	105,846
FX Spot	129,786	-	-	-	-	129,786
FX Swap	168,978	226,690	133,185	57,323	-	586,176
IRS	976,080	862,594	1,022,426	263,882	1,800,166	4,925,148
Futures	-	176	65	-	-	241
Forward contracts	-	209	8	2	-	219
CFD	-	-	-	8,567	-	8,567
Total	1,304,574	1,138,422	1,181,757	331,064	1,800,166	5,755,983
Liabilities						
FX forward	29,613	48,491	26,121	1,321	-	105,546
FX Spot	129,753	-	-	-	-	129,753
FX Swap	168,221	214,526	133,581	57,249	-	573,577
IRS	231,331	958,773	1,129,726	269,989	2,335,329	4,925,148
Futures	-	64	8	-	-	72
Forward contracts	-	300	16	4	-	320
CFD	-	-	-	350	-	350
Total	558,918	1,222,154	1,289,452	328,913	2,335,329	5,734,766
Balance	745,656	-83,732	-107,695	2,151	-535,163	

5.2.3. Foreign exchange risk

The foreign exchange risk is understood as the risk of impairment of assets, increase in the level of liabilities or a change in the financial result of the BOŚ Group due to sensitivity to changes in currency exchange rates. This risk is generated by DM BOŚ S.A. (in the trading and non-trading book) and in the Bank (mainly in the trading book).

The objective of the Bank with regard to foreign exchange risk management in the banking book is to abstain from keeping open individual positions. Foreign exchange exposures due to operations conducted within the framework of the banking book are systematically transferred to the trading book on the same day or on the following working day at the latest.

The main foreign exchange positions of the Bank are positions in PLN, USD, EUR and CHF.

The foreign exchange risk in the non-trading portfolio of DM BOŚ S.A. is due to depositing by DM BOŚ S.A. of funds in foreign currencies in accounts of foreign brokers, who engage in financial instrument purchase and disposal transactions on foreign stock exchanges as instructed by clients of DM BOŚ S.A. The foreign exchange risk in the non-trading book is also implied by positions related to operations of DM BOŚ S.A. at the Branch in the Czech Republic, which are not positions included in the trading portfolio. DM BOŚ S.A. has open foreign exchange positions in USD, EUR and CZK in the non-trading portfolio, and the foreign exchange risk in this portfolio is managed within the framework of the total foreign exchange position limit for the trading book and the non-trading book jointly.

The foreign exchange position based on activity of the Bank in the banking book, which has not been transferred on a given day to the trading book, is subject to control using limits for open foreign exchange positions in the banking book at the end of the day.

Foreign exchange risk in the trading book is generated both by the Bank and by DM BOS S.A. The foreign exchange risk in the trading book applied mostly to DM BOŚ S.A. and to a lesser extent - to the Bank. Open foreign exchange positions in the trading book of DM BOŚ S.A. are due to services rendered on behalf of clients in trade in derivatives and performance of services on the regulated market.

There is a standardized system for management of foreign change risk in the BOŚ Group, and the risk is calculated separately for the Bank and for DM BOŚ S.A.

The foreign exchange risk measures

To monitor the foreign exchange risk on open foreign exchange positions in the trading book (balance sheet and off-balance sheet positions) at the Bank, like in the case of the interest rate risk in the trading book, the following are applied:

- 1) the Value at Risk (VaR) calculated with the confidence level of 99% based on daily volatility of foreign exchange rates from the last 250 working days that precede the analysis date,
- 2) the system of limits,
- 3) stress-tests results,

The values of foreign exchange VaR in the trading book of the Bank, DM BOŚ S.A. and the BOŚ Group and impact of the stress test scenario - decrease in foreign exchange rates of all currencies to PLN by 30% to the result of the BOŚ Group in annual periods were shaped as follows (providing the maximum, minimum and average value and the value as at the reporting date):

	10-day VaR						Stress tests of the BOŚ Group increase/decrease of foreign exchange rates by 30% as at
				Bank	DM	BOŚ Group	
	average	max	min	as at	as at	as at	
31-12-2019	213	575	5	133	3,804	3,767	-25,289
31-12-2018	184	820	6	35	1,657	1,672	-19,421

To verify the value at risk model, the Bank performs monthly back-testing analyses by comparing the maximum losses set using the VaR model with actual gains and losses and with theoretical fluctuations of the result arising from the positions' revaluation. The results of back-testing on a monthly basis are presented in the reports prepared by the management.

The system of limits concerning the foreign exchange risk in the trading book includes:

- 1) limit of the 10-day VaR,
- 2) limits of the amounts of total and individual positions in main foreign currencies (applicable both through the day and at the end of the day),
- 3) limits of the daily and continuous monthly loss due to foreign exchange transactions.

Limit utilization control is performed on every working day and with respect to the limits for the overall position and individual positions for the main currencies of the Bank also during the day. As part of value limits for foreign exchange positions, additional limits for client transaction handling are also monitored in the Bank during the day. Information on the level of utilization of limits is regularly reported to the management of BOŚ S.A.

Analyses show that the BOŚ Group's foreign exchange risk during the audited period remained at the moderate level.

Stress tests analysis is performed by the Bank on a monthly basis and it covers formation of the foreign exchange risk level in the event of materialization of extreme changes in risk factors. The Bank tests mainly the impact of extremely unfavorable changes in the exchange rates against PLN and cross currency pairs EUR/ USD and EUR/CHF on foreign exchange result and changes in exchange rates volatility during the 250-working-day period and correlation between the volatility of exchange rates on the level of VaR, using both historical and parametric methods.

For the purpose of stress tests, the following scenarios are applied by the Bank:

- 1) historical:
 - a) historical increase/decrease in exchange rates against PLN (including fat tails),
 - b) increase/decrease in exchange rates of cross currency pairs EUR/CHF and EUR/USD.
- 2) parametric:
 - a) increase/decrease in exchange rates against PLN by 30%,
 - b) increase in exchange rate volatility,
 - c) extremely adverse change in exchange rates correlation.

Stress test scenarios are also performed under the assumption of changes in market liquidity and inability to close the position.

The results of the stress test analysis show that in case of extremely unfavorable market conditions and increased exposure, the activities of the Bank in the field of foreign exchange risk remain at the safe level.

The results of the analysis of the foreign exchange risk in the trading book in the form of daily reports are provided to the Members of the Bank's Management Board and ALCO and are presented on a weekly basis in reports prepared for the Liquidity and Market Risk Committee, on a monthly basis in reports prepared for the Bank's Management Board and ALCO and on a quarterly basis - for the Supervisory Board of the Bank and Risk Committee.

Open foreign exchange positions as at 31 December 2019 and as at 31 December 2018 are presented in the tables below:

Foreign exchange risk (net carrying amounts)

31-12-2019	PLN	EUR	USD	CHF	Other	Total
Assets						
Cash and balances with the Central Bank	289,140	7,347	593	451	335	297,866
Receivables from other banks	32,485	82,055	20,910	5,693	24,590	165,733
Securities held-for- trading	64,488	135	22	-	-	64,645
Derivative financial instruments	56,096	4,344	14,546	-	713	75,699
Receivables from clients	9,161,456	1,782,316	154,731	905,289	2	12,003,794
Investment securities	5,302,078	-	-	-	-	5,302,078
<i>measured at the fair value through other comprehensive income</i>	3,839,184	-	-	-	-	3,839,184
<i>measured at amortized cost</i>	1,377,384	-	-	-	-	1,377,384
<i>equity instruments measured at fair value through other comprehensive income</i>	85,510	-	-	-	-	85,510
Other assets*\	570,511	1,892	3,084	848	847	577,182
Assets total	15,476,254	1,878,089	193,886	912,281	26,487	18,486,997
Off-balance sheet items that create the foreign exchange position		304,775	267,090	13,781	98,297	

*\ the item includes the following: intangible assets, property, plant and equipment, income tax assets and other assets

31-12-2019	PLN	EUR	USD	CHF	Other	Total
Liabilities						
Amounts due to the Central Bank and to other banks	39,744	73,832	608	481,483	-	595,667
Liabilities due to customers	13,366,497	1,282,305	159,877	65,790	40,512	14,914,981
Derivative financial instruments	49,208	123	1,273	-	322	50,926
Derivative hedging instruments	16,869	-	-	-	-	16,869
Subordinated liabilities	370,731	-	-	-	-	370,731
Provisions	55,447	2,185	73	-	-	57,705
Other liabilities	265,610	7,646	5,874	-	1,058	280,188
Total liabilities	14,164,106	1,366,091	167,705	547,273	41,892	16,287,067
Off-balance sheet items that create the foreign exchange position		794,985	432,207	377,677	66,067	
On-balance sheet position		511,998	26,181	365,008	-15,405	
Off-balance sheet position		-490,210	-165,117	-363,896	32,230	
Open foreign exchange position of the Group		21,788	-138,936	1,112	16,825	

31-12-2018	PLN	EUR	USD	CHF	Other	Total
Assets						
Cash and balances with the Central Bank	174,856	9,894	768	605	613	186,736
Receivables from other banks	19,117	94,546	36,140	1,599	44,702	196,104

Securities held-for- trading	12,035	-	-	-	-	12,035
Derivative financial instruments	67,741	2,297	4,890	-	798	75,726
Investment securities, in which:	5,476,136	136	21	-	-	5,476,293
<i>measured at fair value through other comprehensive income</i>	4,100,868	136	21	-	-	4,101,025
<i>measured at amortized cost</i>	1,375,268	-	-	-	-	1,375,268
Receivables from clients	9,050,026	1,542,715	227,185	989,601	-	11,809,527
Other assets*\	486,728	2,500	3,464	1,082	830	494,604
Assets total	15,286,639	1,652,088	272,468	992,887	46,943	18,251,025
Off-balance sheet items that create the foreign exchange position		317,712	240,122	20,802	61,922	

*\ the item includes the following: intangible assets, property, plant and equipment, income tax assets and other assets

31-12-2018	PLN	EUR	USD	CHF	Other	Total
Liabilities						
Amounts due to the Central Bank and to other banks	2,413	44,161	11,580	513,630	-	571,784
Derivative financial instruments	53,775	244	253	-	64	54,336
Derivative hedging instruments	18,298	-	-	-	-	18,298
Liabilities due to customers	12,954,524	1,606,332	154,191	45,123	38,939	14,799,109
Liabilities related to the issue of bank securities	46,590	-	-	-	-	46,590
Subordinated liabilities	370,672	-	-	-	-	370,672
Provisions	35,262	276	235	-	-	35,773
Other liabilities	188,406	19,889	7,811	-	791	216,897
Total liabilities	13,669,940	1,670,902	174,070	558,753	39,794	16,113,459
Off-balance sheet items that create the foreign exchange position		219,420	335,170	448,198	81,606	
Net balance sheet position		-18,814	98,398	434,134	7,149	
Net off-balance sheet position		97,752	-95,048	-427,396	-19,684	
Open foreign exchange position of the BOŚ Group		78,938	3,350	6,738	-12,536	

The off-balance sheet foreign exchange position results in particular from concluded fx swap transactions that are used by the Bank to cover the liquidity mismatch in foreign currencies.

5.2.4. Other market risks

Other market risks are the general risk and separate risks regarding prices of capital instruments, as well as the risk of commodities prices. These risks result from the impact of changes in prices of capital instruments and of commodities on the risk of asset impairment and the risk of increase in liabilities or a change in the Bank's financial result.

These risks occur mainly in the activity of DM BOŚ S.A. in the trading books.

Transactions on capital instruments carried out in DM BOŚ S.A. account relate to the activity of DM BOŚ S.A. as a market animator and in majority of cases they are closed at the end of day. Significant engagement in capital instruments is only noted in hedged transactions opened by DM BOŚ S.A. (arbitrage transactions), including those within short selling. Hedged (arbitrage) transactions consist of using a temporary price imbalance between two markets (i.e. between prices of derivative financial instruments and prices of underlying instruments). This risk is limited by total exposure limits for hedged (arbitrage transactions) and unhedged transactions. Monitoring of these limits is performed on the daily basis.

The risk of commodity prices occurs mainly within the OTC market, for transactions with customers of DM BOŚ S.A. and hedging transactions with Saxo Bank A/S, X-Trade Brokers Dom Maklerski S.A. or Interactive Brokers (UK) Ltd.

5.3. Capital management

For capital adequacy purposes, the BOŚ Group has decided to apply transitional arrangements, during the transitional period for mitigating the impact of the introduction of IFRS on own funds based on Article 1 (9) of the Regulation (EU) 2017/2395 of the European Parliament and the Council dated 12 December 2017 (Regulation) amending Regulation (EU) No 575/2013. In addition, it was decided not to apply Article 1 (4) of the Regulation (EU) 2395/2017.

Taking into account the impact of IFRS 9 implementation with and without the use of transitional arrangements, the BOŚ Group meets the applicable capital requirements as at 31 December 2019.

Due to the decision on the use of transitional provisions starting from 01 February 2018, the BOŚ Group will disclose its own funds, capital ratios and leverage ratio, both using and not using the transitional arrangements resulting from Article 473a of the Regulation (EU) no.575/2013.

The levels of capitals, risk-weighted assets, capital ratios, leverage ratios and internal capital in the BOŚ Group, are presented below:

Specification	31-12-2019	31-12-2018
Available capital		
Tier I core capital	2,115,730	2,094,575
Tier I stated capital - without transitional provisions of IFRS 9	2,018,553	1,985,965
Tier I capital	2,115,730	2,094,575
Tier 1 capital - without transitional provisions of IFRS 9	2,018,553	1,985,965
Own funds	2,444,537	2,453,560
Own funds- without transitional provisions of IFRS 9	2,347,360	2,344,951
Risk-weighted assets		
Total amount of risk-weighted assets	14,914 877	13,671,845
- Credit risk and counterparty credit risk	13,430 895	12,423,510
- Operational risk	1,049 826	996,100
- Market risk	418,027	231,851
- CVA Risk	16,128	20,384
Total amount of risk-weighted assets - without transitional provisions of IFRS 9	14,830 847	13,559,014
Capital ratios		
Tier I stated capital ratio	14.19	15.32
Tier I capital ratio - without transitional provisions of IFRS 9	13.61	14.65
Tier I capital ratio	14.19	15.32
Tier I capital ratio - without transitional provisions of IFRS 9	13.61	14.65
Total capital ratio	16.39	17.95
Total capital ratio - without transitional provisions of IFRS 9	15.83	17.29
Leverage ratio		
The value of exposure	20,347 365	19,439,206
Leverage ratio	10.4	10.8
Leverage ratio - without transitional provisions of IFRS 9	10.0	10.3
Internal capital		
Internal capital	1,931 352	1,414 652

Increase in the value of assets due to recognition of beneficial use assets pertaining to lease agreements has resulted in increase in capital requirements as at 01 January 2019 by PLN 5.9 million. This resulted in reduction as at 01 January 2019 of the Tier I capital ratio by around 8 b.p. and of the total capital ratio by about 10 b.p.

The value of own funds and capital requirements was determined in accordance with Regulation (EU) no. 575/2013 on prudential requirements for credit institutions and investment firms, hereinafter referred to as CRR.

In order to minimize the risk of the decrease of capital ratios, the BOŚ Group monitors the range and the structure of the Group's operations and factors that may result in the decrease of the Group's own funds.

On a quarterly basis, the BOŚ Group calculates internal capital in order to cover:

- 1) Pillar I risks:
 - for credit risk and counterparty credit risk - on the basis of the regulatory requirement taking into account an additional mark up for non-performing exposures (NPE) / non-performing loans (NPL),
 - for specific types of risk within the market risk and for operating risk - based on the regulatory requirements,
- 2) Pillar II risks:
 - for risks, the level of which has been assessed as significant.

In accordance with Article 92 of CRR, the Group is required to maintain the capital ratio at a minimum level of 8%. Tier I capital ratio should amount to at least 6% and Tier I core capital ratio should amount at least to 4.5%.

According to the CRR Resolution, and the Law of 5 August 2015 on macro-prudential oversight of the financial system and crisis management of the financial system, financial institutions are required to maintain additional capital buffers for capital ratios. Since 1 January 2019, the buffer amounts to 2.5 p.p. The systemic risk buffer is at the level of 3 p.p. and the anti-cyclical buffer is 0 p.p. The BOŚ Group has not been subjected to any buffers of other institutions of systemic significance.

On 13 November 2019, the Polish Financial Supervision Authority recommended maintaining by the BOŚ Group of its own funds to cover additional capital requirements to hedge against the risk arising from foreign currency mortgage credits and loans for households at the level of 0.52 p.p. above the TCR ratio referred to in Article 92 (1) letter c) of the CRR Regulation, which should be composed of, at least, 75% of the Tier I capital (which corresponds to the capital requirement at the level of 0.39 p.p. above the value of Tier I capital which is referred to in Article 92 (1) letter b) of the CRR Regulation) and of at least 56% of the Tier I core capital (which corresponds to the capital requirement at the level of 0.29 p.p. above the value of Tier I core capital ratio referred to in Article 92 (1) letter a) of the CRR Regulation).

As a result, on 31 December 2019, the minimum capital ratio recommended by the Commission for the BOŚ Group, amount to: 11.89% for the Tier I capital ratio and 14.02% for the total capital ratio TCR.

The capital adequacy ratio of the BOŚ Group as at 31 December 2019 was above the levels recommended by the Polish Financial Supervision Authority, both with application of IFRS 9 transitional solutions and without them.

In the letter of the Bank Guarantee Fund ("BGF") of 28 October 2019, the Bank was informing of an update of the MREL level. The target MREL level, specified on the basis of consolidated data as at 31 December 2018, amounts to 18.30 of the total risk exposure amount (RWA) or 13.74% of the total of own funds and liabilities.

The Bank is obliged to fulfill the requirement of the minimum level of own funds and liabilities subject to redemption or conversion in the consolidated statements starting from 01 January 2023.

At the same time, the letter indicated a path for reaching of the target MREL level, according to which, as at 31 December 2019, the MREL level for the Bank using the consolidated approach is equal to the TCR ratio (total capital ratio).

5.4. Operational risk

Operational risk management in the BOŚ Group focuses on the Bank and those Companies, which, according to the internal standards, have been identified as significant in terms of the operational risk generated. As at 31 December 2019, operational risk identified as significant, apart from the Bank, was confirmed for Dom Maklerski BOŚ S.A.

In the BOŚ Group, the Bank aims at developing a unified system for operational risk management, including identification, measurement, monitoring, reporting and control of operational risk. The standardized approach is aimed, among other things, at defining and introduction in the BOŚ Group of instruments for organization of operational risk management, based on instruments applied by the Bank. The Bank analyses information on operational risk within BOŚ Group, in particular, with regard to the associated losses, gives opinions on the related internal regulations of the subsidiaries and provides recommendations concerning systemic management of operational risk.

Operational risk is defined as a risk related to the loss resulting from inadequate or failed internal processes, people and systems, or from external events, including also legal risk, taking into account operational risk events characterized by low frequency but high losses; operational risk does not cover the reputation risk and strategic risk.

The Bank applies the operational risk management system where responsibility for current management of operational risk is borne by all the employees of the Bank, in particular, by managers of operational units/headquarters offices and Business Centers and Branches of the Bank - in line with the scope of responsibility and duties.

Information on significant operational risk events are collected in the Bank in the operational risk event database, in the dedicated IT application. The Bank also collects information on significant operational risk events in its subsidiaries, identified as significant in terms of the operational risk generated.

This information is used to:

- 1) monitor the level of operational risk on a current basis,
- 2) monitor the actions of organizational units in connection with the events occurred,
- 3) assess or estimate losses arising from the operational risk,
- 4) generate reports concerning the operational risk events having occurred, including reports for the needs of external institutions.

The Bank sets basic limits for operational risk, in particular the operational risk tolerance limit and operational risk appetite for the entire Bank, and the target operational risk profile. The level of use of the adopted operational risk tolerance and appetite is controlled through periodic monitoring of the amounts of losses incurred due to the operational risk events.

Measurement of operational risk level is made using quantitative, qualitative and mixed methods, including by:

- 1) calculation of operational risk capital requirements according to the standardized approach,
- 2) calculation and monitoring of key risk indicators (KRI),
- 3) reviews of operational risk (self-assessment of potential operational risk),
- 4) conducting stress tests.

Stress tests for operational risk are conducted in the Bank using three methods: sensitivity analysis, reversed analysis, scenario-based analysis. Stress tests are conducted once a year. As a result of stress tests conducted to date, the value of losses adopted in the scenarios confronted with the value of available capital in the form of operational risk tolerance limit and capital requirement has confirmed the ability to absorb losses due to the operational risk by limits set for this risk.

In order to limit exposure to operational risk, the Bank applies the following instruments (methods, techniques and tools):

- 1) organization of work ensuring limitation of operational risk by, among other things, separation of executive functions from controlling, setting limits concerning the decision-making or effecting operations in the Bank, managing the rights of access to rooms and systems in order to limit the possibility of actions by unauthorized persons,
- 2) the HR policy,
- 3) internal control,
- 4) strategic internal limits for operational risk, i.e. tolerance and appetite limit,
- 5) periodic reviews of operational risk based on self-assessment process,
- 6) risk maps built to identify the sources of potential threats and assessment of related risk level,
- 7) operational risk stress testing,
- 8) thresholds of key risk indicators (KRI),
- 9) clauses limiting the operational risk in the agreements with external entities,
- 10) insurance of bank property with specialized firms,
- 11) documenting the methodological, process, organizational and IT solutions applied by the Bank,
- 12) automation of activities following the use of IT solutions and increasing the quality of activities by the use of specialized software,
- 13) continuity plans and contingency plans developed for the critical business processes of the Bank,
- 14) analysis of adequacy of the operational risk capital requirements to the actual operational risk faced by the Bank,
- 15) internal training for the Bank's employees aimed at raising their awareness and understanding the role, impact and ways of conduct with respect to operational risk.

The level and profile of operational risk, the level of the use of operational risk limits and amount of losses arising from the operational risk events are regularly monitored in the Department for Financial and Operational Risk and reported to: the Supervisory Board, the Risk Committee, the Management Board of the Bank and the Operational Risk Committee.

5.5. Non-compliance risk

Non-compliance risk is defined as a risk of effects of failure to comply with laws, internal regulations and market standards. The Bank ensures compliance of its operations with legal provisions, internal regulations and market standards through the control function (applying control mechanisms and monitoring of compliance with these mechanisms) and non-compliance risk management that comprises identification, assessment, control and monitoring of the non-compliance risk and reporting on these matters to the Management Board and Supervisory Board.

The basic principles to ensure compliance in the Bank as a part of the control and non-compliance risk management process have been defined in the Compliance Policy of Bank Ochrony Środowiska S.A., elaborated by the Management Board and approved by the Supervisory Board, as well as in the executive acts to this policy, including the following:

- 1) Principles regarding non-compliance risk management in the Bank Ochrony Środowiska S.A.,
- 2) Principles of carrying out internal control in Bank Ochrony Środowiska S.A.

The Bank has a separate and independent compliance unit that reports directly to the President of the Management Board of the Bank, which is responsible for fulfillment of duties within the control function and for organization of the non-compliance risk management process.

The goals of non-compliance risk management in the Bank:

- 1) identification, assessment and control of the possible negative effects resulting from non-compliance with laws, internal regulations and market standards, in particular including legal sanctions, financial losses or loss of reputation which might be the consequence of non-compliance with laws, internal regulations and market standards,
- 2) strengthening of the Bank's image as an institution that acts in accordance with law, honest, reliable, environmentally friendly, reliable and business responsible.

The Bank distinguishes the following key areas to ensure compliance:

- 1) preventing any activity non-compliant with the law in the Bank, including counteracting of money laundering and financing of terrorism,
- 2) information protection,
- 3) implementation and monitoring of compliance with ethical standards,
- 4) accepting or giving benefits and gifts,
- 5) carrying out advertising and marketing activities,
- 6) offering products,
- 7) customer complaints,
- 8) managing conflicts of interest.

In 2019, no events that would significantly affect the level of non-compliance risk were noted, the Bank focused its operations on preventing the risk of non-compliance.

5.6. Model risk

The model risk in the BOŚ Group is concentrated in the Bank. As at 31 December 2019, Dom Maklerski BOŚ S.A and BOŚ Leasing – EKO Profit S.A. do not use models in their activity.

Model risk is defined in the Bank in accordance with the supervisory requirements as a potential loss, which may be incurred as a result of decisions based on data obtained in the internal model application processes due to errors related to the development, implementation or application of such models (point 11 of Article 3 (1) of CRD IV).

The process of model risk identification, assessment and monitoring covers areas related to:

- 1) the risk of using incorrect and incomplete data,
- 2) the risk of erroneous assumptions of models, which are inadequate to the estimated process,
- 3) the methodological risks resulting from the use of inappropriate estimation methodologies and techniques in the model construction process,
- 4) the risk of insufficient monitoring, validation and update of models, also the risk of applying an incorrectly implemented but correct model.

Due to the widespread use of models supporting basic processes in BOŚ S.A. such as: the credit process, the capital management processes, the credit risk and market risk management processes, the risk of models is considered in the Bank as a constant risk. Internal capital has been estimated and established for the purpose of model risk.

Model risk is managed in the Group in line with internal regulations, for instance, the principles of estimation and allocation of internal capital, the model risk management policy and significant model validation methodologies. Activities in this regard are coordinated by an independent unit of the Model Validation Office and the Team for Operational Risk at the

Department of Financial and Operational Risk, reporting directly to the Vice President of the Bank, responsible for organizational coordination of performance of tasks in the Risk Area.

In order to identify the risk in the Bank quickly and precisely, there is a standardized, complex model management process in the Bank that comprises:

- 1) the model life cycle,
- 2) the principles of giving significance assessment to models in place in the Bank,
- 3) the principles of operation of model logs, which contain information regarding the models in place, sets of their parameters, changes introduced to models, their updates and reviews conducted. These logs form an information database concerning significance of models, monitoring results, validation and levels of risks implied by the models,
- 4) the standards and principles of model risk monitoring and reporting - in case of significant models, the assessment of quality of the monitoring is made on a quarterly basis, for other models on an annual basis. Reporting is conducted on a quarterly basis. In addition, implementation of the Policy is assessed on an annual basis and the assessment results are approved by the Supervisory Board of the Bank,
- 5) the principles of model validation - model validation is carried out by the independent Model Validation Office, at least once a year for significant models. For some types of significant models, if it is based directly on the specific nature of their functioning, validation can take place less frequently than on an annual basis (however, at least once in every three years). Other models are validated as part of the ad hoc validation at the request of the Management Board, the relevant Committee or the model owner.

As at 31 December 2019, there were 6 significant models in the Bank, out of 17 models in operation.

Risks related to the Bank's models are evaluated on a periodic basis, in accordance with the standards adopted in the Bank's internal regulations, considering the calculation of internal capital related to the Bank's hedging against the model risk. Reporting to the Management Board concerning the status of actions in the area of model management and their validation comprises the model risk assessment, tolerance level and related level of capital allocated to the model risk. Reports on validation for significant models are presented and approved during the Meeting of the appropriate Committees appointed by the Management Board of the Bank.

The aggregated risk assessment for significant models as at 31 December 2019 is moderate. In addition, none of the individual significant models generate high-level risk. The aggregated model risk level is within the tolerance level for a given risk, determined and approved by the Supervisory Board.

6. Net interest income

Specification	01-01-2019 31-12-2019				01-01-2018 31-12-2018			
	Interest income		Income similar to interest	Total	Interest income		Income similar to interest	Total
	Financial assets measured at amortized cost	Assets carried at fair value through other comprehensive income	Financial assets carried compulsorily at fair value through profit or loss		Financial assets measured at amortized cost	Assets carried at fair value through other comprehensive income	Financial assets carried compulsorily at fair value through profit or loss	
Receivables from banks and the Central Bank	3,673	-	-	3,673	4,256	-	-	4,256
Receivables from institutional clients	367,912	-	2,723	370,635	349,069	-	3,939	353,008
Receivables from individual customers	122,011	-	37	122,048	132,449	-	61	132,510
Investment debt securities not held for trading	34,728	95,718	659	131,105	31,103	106,889	-	137,992
Financial instruments held for trading	-	-	129	129	-	-	-	-
Hedge transactions	-	-	-	-	-	-	538	538
Total	528,324	95,718	3,548	627,590	516,877	106,889	4,538	628,304

Specification	01-01-2019 31-12-2019			01-01-2018 31-12-2018		
	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Total	Financial liabilities measured at amortized cost	Financial liabilities measured at fair value through profit or loss	Total
Interest expense and similar charges from:						
Bank accounts and deposits from banks	1,023	-	1,023	1,328	-	1,328
Bank accounts and deposits of institutional clients	47,038	-	47,038	55,395	-	55,395
Bank accounts and deposits of individual customers	126,988	-	126,988	138,495	-	138,495
Bank loans and borrowings	-	-	-	320	-	320
Client loans and borrowings	818	-	818	1,135	-	1,135
Cash from funds designated for credits (JESSICA)	261	-	261	418	-	418
Financial instruments- issue of own debt securities	18,656	-	18,656	37,394	-	37,394
Hedge transactions	-	8,772	8,772	-	9,684	9,684
Lease liabilities	3,933	-	3,933	-	-	-
Other	114	-	114	20	-	20
Total	198,831	8,772	207,603	234,505	9,684	244,189

7. Net fee and commission income

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Fee and commission revenue		
Brokerage service fees	59,555	62,504
Fees for maintaining customer accounts and other domestic and international settlement transactions	34,791	39,648
Commissions on loans	32,139	27,740
Commissions on guarantees and letters of credits	5,071	4,636
Fees related to the portfolio management and other fees related to the management	496	497
Other fees	13	2
Total	132,065	135,027
Fee and commission expense		
Fees related to brokerage activity, in which:	21,235	21,859
- <i>fiduciary services</i>	358	1,849
Payment card fees	7,656	7,456
Current account fees	1,039	2,198
ATM handling fees	1,134	1,225
Commissions for receivables from customers	617	858
Commissions paid to other banks for cash transactions	1	277
Other fees	2,010	3,260
Total	33,692	37,133

8. Dividend income

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Securities held for trading measured at fair value through profit or loss	157	137
Securities measured at fair value through other comprehensive income	6,277	5,932
Total	6,434	6,069

The dividend amount for year 2019 includes dividends from:

- Kemipol Sp. z o.o. in the amount of PLN 5 447 thousand (in 2018 - PLN 5,796 thousand)
- WODKAN Przedsiębiorstwo Wodociągów i Kanalizacji S.A. in the amount of PLN 830 thousand (in 2018 - PLN 136 thousand)
- other companies in the amount of PLN 157 thousand (in 2018 - PLN 137 thousand)

9. Result on financial instruments assessed according to their fair value basing on the statement of profit or loss (including receivables from clients)

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Securities held-for- trading	- 5,494	- 11,946
Derivative financial instruments	48,802	57,699
Receivables from clients	1,649	16,837
Total	44,957	62,590

10. Result on investment securities

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Result on sale of securities measured at fair value through other comprehensive income	582	2,166
Total	582	2,166

11. Result on hedge accounting

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Result on fair value measurement of transactions hedging fair value	457	- 2,366
Result on measurement of treasury bonds subject to fair value hedge accounting in the part subject to hedging	- 499	3,679
Total	- 42	1,313

12. Foreign exchange result

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Realized result on valuation operations	15,309	20,959
Non-realized result on valuation operations	1,194	3,292
Total	16,503	24,251

13. Other operating revenue

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Release of provisions for liabilities, of which:	5,157	3,649
<i>provisions for liabilities and claims</i>	812	2,581
<i>other provisions</i>	4,345	1,068
Revaluation of fixed assets	-	2,804
Revenues from release of write-offs on receivables	1,587	2
Revenues from recoveries prescribed, remitted and uncollectible	1,873	140
Revenues from sale or liquidation of fixed assets, intangible assets	103	537
Revenues from recovery of collection costs	1,235	6,739
Revenues from sale of goods and services	8,432	448
Interest adjustment to terminated deposits from previous years	379	43
Revenues due to compensations	151	1,927
Other	8,633	6,849
Total	27,550	23,138

14. Other operating expenses

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Liquidation of property, plant and equipment, and intangible assets	429	375
Donations given	960	1,146
Provisioning for liabilities and claims, in which:	24,023	2,578
<i>provisions for court proceedings and claims due to legal risk associated with mortgage loans in foreign currencies</i>	21,221	1,609
<i>provisions for reimbursement of commission fees due to early loan repayment</i>	1,183	-
<i>provisions for other liabilities and claims</i>	1,619	969
Revaluation write-offs for receivables	1,622	1,896
Costs of debt collection	4,347	7,181
Interest and commissions adjustment on loans from previous years	1,794	1,107
Costs of maintenance or administration of own premises rented	120	360
Costs of compensation, penalties and fines	1,155	771
Costs of incorrect brokerage transactions	130	-
Other	3,686	6,262
Total	38,266	21,676

15. Result on loss of value for impairment

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Securities measured at fair value through other comprehensive income	9	333
Securities measured at amortized cost	- 2	- 105
Receivables from banks	1,727	- 2,764
Receivables from clients and off-balance liabilities, in which:	- 106,270	- 131,554
balance sheet receivables	- 99,597	- 137,952
<i>from individual customers</i>	- 43,092	- 45,894
<i>from institutional clients</i>	- 56,505	- 92,058
off-balance sheet liabilities:	- 6,673	6,398
<i>from individual customers</i>	497	326
<i>from institutional clients</i>	- 7,170	6,072
Total	- 104,536	-134,090

Result on impairment write-offs for receivables from clients

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Individual assessment	- 85,902	- 117,418
Group assessment	- 13,695	- 20,534
Total	- 99,597	-137,952

16. General administrative expenses

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Employee benefits	157,053	161,269
Administrative expenses, in which:	148,643	156,191
<i>material expenses</i>	100,158	115,600
<i>taxes and charges</i>	5,452	5,518
<i>contribution and payments to the BGF</i>	39,986	32,394
<i>contribution and payments to the PFSA</i>	2,819	2,271
<i>contribution to cover operating costs of the Financial Ombudsman</i>	119	106
<i>contribution to the Chamber of Brokerage Houses (Izba Domów Maklerskich, IDM)</i>	91	91
<i>other</i>	18	211
Amortization/ depreciation, including:	55,658	39,783
<i>fixed assets</i>	12,587	14,240
<i>intangible assets</i>	25,675	25,543
<i>beneficial use rights</i>	17,369	-
Total	361,354	357,243

As a result of implementation of IFRS 16 in year 2019, general administrative expenses did not include the total of net lease installments in the amount of PLN 17,817 thousand. The costs of lease installments were allocated to amortization expenses in the amount of PLN 17,369 thousand and to interest expenses in the amount of PLN 3,933 thousand.

Employee benefits

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Remuneration, in which:	132,771	136,740
<i>retirement compensation</i>	400	742
Social insurance premiums	24,282	24,529
Total	157,053	161,269

The BOŚ Group does not finance retirement benefits based on defined benefit plans except retirement benefits defined in the Statutes.

Amortization of the right to use assets:

Specification	31-12-2019	31-12-2018
Real estate property	16,968	-
Vehicles	428	-
Total	17,396	-

17. Tax expenses

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Current tax	- 45,294	- 30,783
Deferred tax	7,100	5,984
Total	- 38,194	- 24,799
Gross profit	110,188	88,527
Income tax at 19% tax rate	- 20,936	- 16,820
Permanent differences between profit before tax and tax base	- 16,467	- 7,979
- <i>decreasing:</i>	2,371	2,336
<i>released impairment allowance</i>	615	631
<i>dividends received</i>	1,223	1,101
<i>other</i>	533	604
<i>increasing:</i>	- 19,020	- 10,445
<i>recognition of impairment allowance</i>	- 1,858	- 2,327
<i>provisions for future liabilities</i>	- 4,340	- 489
<i>contributions to the BGF</i>	- 7,576	- 6,144
<i>other</i>	- 5,246	- 1,485
<i>deductions from revenue:</i>	182	130
<i>donations</i>	182	130
Tax charges of the current year result	- 37,403	- 24,799
Changes in charges on the current year result referring to previous years	- 791	-
Total tax charges	- 38,194	- 24,799
Effective tax rate	35%	28%

Detailed information on deferred income tax has been presented in Note 34.

18. Earnings per share

Basic earnings per share are calculated as profit/loss of the Bank's shareholders divided by the weighted average number of ordinary shares during the year.

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Net profit	71,994	63,728
Weighted average number of ordinary shares (in thousands)	92,910	77,831
Basic earnings per share (expressed in PLN, /100 PLN)	0.77	0.82

The diluted earnings per share are equal to the basic earnings per share in the presented periods.

19. Cash and balances with the Central Bank

Specification	31-12-2019	31-12-2018
Cash in hand	26,610	29,569
Cash and balances with the Central Bank	271,256	157,167
Total	297,866	186,736

20. Receivables from other banks

Specification	31-12-2019	31-12-2018
Deposits placed in other banks, recognized as cash equivalents	70,214	106,985
Deposits placed in other banks for less than 3 months	5,962	18,151
<i>including: Deposits in other banks for less than 3 months (cash of clients of Dom Maklerski BOŚ S.A.)</i>	5,962	-
Deposits placed in other banks for above than 3 months	-	-
Receivables due to hedging of derivatives	75,520	58,658
Debts securities included in the portfolio of receivables from other banks	15,074	15,074
Gross total	166,770	198,868
Impairment write-offs for debt securities included in the portfolio of receivables from other banks	- 1,037	- 2,764
Net total	165,733	196,104

Receivables from other banks by maturity are presented in note 24.

Change in the gross carrying value of receivables from other banks:

Specification	Receivables from banks - gross value				
	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2019	198,868	-	-	-	198,868
Change of gross value resulting from acquisition of financial assets	66,788	-	-	-	66,788
Change of gross value for the existing portfolio	- 1,880	-	-	-	-1,880
Change of gross value resulting from derecognition of a financial asset	- 97,006	-	-	-	- 97,006
Change of gross value resulting from transfers of the financial asset to another Basket	-15,074	15,074	-	-	-
<i>Reclassification to Basket 2</i>	-15,074	15,074	-	-	-
At the end of the period 31-12-2019	151,696	15,074	-	-	166,770

Specification	Receivables from banks - gross value				
	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2018	375,748	-	-	-	375,748
Change of gross value resulting from acquisition of financial assets	65,358	-	-	-	65,358
Change of gross value for the existing portfolio	- 95,021	-	-	-	- 95,021
Change of gross value resulting from derecognition of a financial asset	- 147,217	-	-	-	- 147,217
At the end of the period 31-12-2018	198,868	-	-	-	198,868

21. Financial assets and liabilities held-for-trading

Specification of assets	31-12-2019	31-12-2018
Derivative financial instruments, of which:	75,699	75,727
<i>currency exchange transactions and currency derivatives transactions</i>	13,635	15,494
<i>transactions using interest rate derivatives</i>	43,380	51,206
<i>futures and options</i>	94	9,027
<i>other</i>	18,590	-
Securities held-for- trading	64,645	12,034
<i>debt securities</i>	44,534	2,903
<i>equity securities</i>	20,111	9,131
Financial assets held-for-trading in total	140,344	87,761

Specification of liabilities	31-12-2019	31-12-2018
Derivative financial instruments, of which:	50,926	54,336
<i>currency exchange transactions and currency derivatives transactions</i>	3,139	5,546
<i>transactions using interest rate derivatives</i>	45,836	48,049
<i>futures and options</i>	690	741
<i>other</i>	1,261	-
Total financial liabilities held-for-trading	50,926	54,336

Securities held-for- trading by maturity are presented in note 24.

22. Investment securities

Specification	31-12-2019			31-12-2018		
	Measured at fair value through other comprehensive income	Measurement at amortized cost	Total	Measured at fair value through other comprehensive income	Measurement at amortized cost	Total
Debt securities	3,839,184	1,377,384	5,216,568	4,015,998	1,375,268	5,391,266
<i>State Treasury bonds</i>	2,281,190	1,327,866	3,609,056	2,324,613	1,325,877	3,650,490
<i>NBP money bills - recorded as cash equivalents</i>	1,319,835	-	1,319,835	1,439,760	-	1,439,760
<i>bonds of local authorities</i>	188,613	-	188,613	251,625	-	251,625
<i>deposits of other banks</i>	49,546	-	49,546	-	-	-
<i>bonds from other financial institutions</i>	-	49,518	49,518	-	49,391	49,391
Equity securities	85,510	-	85,510	85,027	-	85,027
<i>quoted</i>	18,543	-	18,543	18,543	-	18,543
<i>non-quoted</i>	66,967	-	66,967	66,484	-	66,484
Total	3,924,694	1,377,384	5,302,078	4,101,025	1,375,268	5,476,293

Investment securities by maturity dates are presented in note 24.

Change in the gross carrying value and impairment write-offs for investment securities:

Specification	Debt securities measured at fair value through other comprehensive income	Debt securities measured at amortized cost	Debt securities measured at fair value through financial result	Equity securities measured at fair value through other comprehensive income	Total
At the beginning of the period 01-01-2019	4,015,998	1,375,373	-	85,027	5,476,398
Increase (due to purchases)	77,618,901	-	-	499	77,619,400
Increase (due to) capitalization of interest, discounts, bonuses	132,977	55,837	-	-	188,814
Valuation Increase of the value	154,468	492	-	1	154,961
Decrease due to sale and purchase	77,777,627	-	-	-	77,777,627
Decrease (due to) realized interests, bonuses	138,991	53,461	-	-	192,452
Valuation Decrease of the value	166,603	750	-	17	167,370
Other changes	61	-	-	-	61
At the end of the period 31-12-2019	3,839,184	1,377,491	-	85,510	5,302,185

Specification	Debt securities measured at fair value through other comprehensive income	Debt securities measured at amortized cost	Debt securities measured at fair value through financial result	Equity securities measured at fair value through other comprehensive income	Total
At the beginning of the period 01-01-2018	4,414,147	1,123,682	-	35,229	5,573,058
Increase (due to purchases)	94,612,364	251,453	6,440,503	21,732	101,326,053
Increase (due to) capitalization of interest, discounts, bonuses	146,846	51,706	382	-	198,934
Valuation Increase of the value	149,953	1,157	3,124	33,273	187,507
Decrease due to sale and purchase	95,017,807	3,726	6,440,503	-	101,462,036
Decrease (due to) realized interests, bonuses	142,997	48,063	382	-	191,443
Valuation Decrease of the value	146,415	836	3,124	5,207	155,582
Other changes	94	-	-	-	94
Gross total at the end of the period 31.12.2018	4,015,998	1,375,374	-	85,027	5,476,398

Specification	Debt securities measured at amortized cost	Total
At the beginning of the period 01-01-2019	105	105
Creation of write-offs	3	3
Release of write-offs	- 1	- 1
At the end of the period 31-12-2019	107	107

Specification	Debt securities measured at amortized cost	Total
At the beginning of the period 01-01-2018	-	-
Creation of write-offs	105	105
Release of write-offs	-	-
At the end of the period 31-12-2018	105	105

Investment securities constituting a collateral:

Specification	31-12-2019		31-12-2018	
	measured at fair value through other comprehensive income	measured at amortized cost	measured at fair value through other comprehensive income	measured at amortized cost
Hedging of loan agreements receivables from banks and from Financial International Organizations	513,193	592,154	790,201	424,309
<i>up to 1 year</i>	10,431	-	-	-
<i>above one year</i>	502,762	592,154	790,201	424,309
Security of the Fund for Protection of Guaranteed Assets	5,056	70,998	41,678	35,806
<i>up to 1 year</i>	-	-	36,615	-
<i>above one year</i>	5,056	70,998	5,063	35,806
Security of liabilities in the form of contributions to the Guarantee Fund	7,292	8,455	4,050	7,730
<i>above one year</i>	7,292	8,455	4,050	7,730
Security of liabilities in the form of contributions to the Compulsory Restructuring Fund	16,891	8,744	6,075	8,694
<i>above one year</i>	16,891	8,744	6,075	8,694
Securing REPO transactions	86,989	447,013	286,975	320,429
<i>below one year</i>	58,411	-	-	-
<i>above one year</i>	28,578	447,013	286,975	320,429
Total	629,421	1,127,364	1,128,979	796,968

23. Receivables from clients

Specification	31-12-2019			31-12-2018		
	Gross receivables from clients	Impairment write-offs	Net receivables from clients	Gross receivables from clients	Impairment write-offs	Net receivables from clients
Valuation at amortized cost	13,132,205	1,171,013	11,961,192	12,743,274	1,043,433	11,699,841
Receivables from individual customers	3,827,101	274,846	3,552,255	3,946,995	239,757	3,707,238
loans in current accounts	2,705	1,343	1,362	1,765	1,271	494
cash loans	445,405	77,921	367,484	335,927	60,252	275,675
mortgage loans	3,040,641	151,949	2,888,692	3,205,780	134,999	3,070,781
other credits and loans	338,350	43,633	294,717	403,523	43,235	360,288
Receivables from institutional clients	9,305,104	896,167	8,408,937	8,796,279	803,676	7,992,603
working capital facilities	669,517	138,973	530,544	558,336	108,530	449,806
term credits and loans	7,959,333	736,388	7,222,945	7,450,853	677,853	6,773,000
factoring receivables	521,821	10,477	511,344	412,687	9,927	402,760
lease receivables	103,166	9,537	93,629	61,162	5,628	55,534
purchased receivables	51,267	792	50,475	69,595	804	68,791
commercial securities	-	-	-	243,646	934	242,712
Measurement at fair value through financial result	-	-	38,285	-	-	104,653
Receivables from individual customers	-	-	1,938	-	-	3,101
housing credits and loans	-	-	648	-	-	904
other credits and loans	-	-	1,290	-	-	2,197
Receivables from institutional clients	-	-	36,347	-	-	101,552
working capital facilities	-	-	195	-	-	181
term credits and loans	-	-	36,152	-	-	101,371
Total	-	-	11,999,477	-	-	11,804,494
Security deposits made	-	-	4,317	-	-	5,023
Other receivables	-	-	-	-	-	10
Total of receivables from clients	-	-	12,003,794	-	-	11,809,527

Receivables from customers by maturity are presented in note 24.

Receivables from customers include preferential loans with subsidies for interest on loans from NFEPWM and VFEPWM, which in the presented periods amount to (nominal value):

Specification	31-12-2019	31-12-2018
Preferential loans with subsidies, in which:	136,575	187,238
<i>measured at amortized cost</i>	102,031	142,117
<i>measured at fair value through profit or loss</i>	34,544	45,121

Change in the gross carrying value and impairment write-offs for receivables from customers:

Specification	Receivables from individual customers - gross value					Receivables from institutional clients - gross value				
	Basket 1	Basket 2	Basket 3	POCI	Total	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2019	3,433,206	161,325	352,464		3,946,995	4,858,511	1,861,785	2,075,983	-	8,796,279
Change of gross value resulting from acquisition of financial assets	315,562	-	-	-	315,562	1,501,542	7,023	181	-	1,508,746
Change of gross value for the existing portfolio	- 227,371	- 13,631	6,410	-	- 234,592	277,093	- 117,473	- 70,787	-	88,833
Change of gross value resulting from derecognition of a financial asset	- 164,178	- 5,509	- 31,491	-	- 201,178	- 855,675	- 126,180	- 106,585	-	- 1,088,440
<i>including: change in the gross value resulting from financial instruments that were written off from the statement of financial condition</i>	-	- 34	- 20,931	-	- 20,965	-	-	- 6,575	-	- 6,575
Change of gross value resulting from transfers of the financial asset to another Basket	- 110,838	81,152	29,686	-	-	- 336,422	588,331	- 251,909	-	-
<i>Reclassification to Basket 1</i>	16,851	- 15,876	- 975	-	-	218,167	- 217,714	- 453	-	-
<i>Reclassification to Basket 2</i>	- 108,477	118,712	- 10,235	-	-	- 439,124	857,416	- 412,783	-	5,509
<i>Reclassification to Basket 3</i>	- 19,212	- 21,684	40,896	-	-	- 115,465	- 51,371	161,327	-	- 5,509
Other changes	45	- 19	288	-	314	1	4	- 319	-	- 314
At the end of the period 31-12-2019	3,246,426	223,318	357,357	-	3,827,101	5,445,050	2,213,490	1,646,564	-	9,305,104

Specification	Write-offs on receivables from individual customers					Write-offs on receivables from institutional clients				
	Basket 1	Basket 2	Basket 3	POCI	Total	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2019	11,328	7,065	221,364	-	239,757	47,684	100,351	655,641	-	803,676
Change of write-offs resulting from acquisition of financial assets	4,269			-	4,269	19,340	279	38	-	19,657
Change in measurement of write-offs	3,071	19,456	34,080	-	56,607	- 5,520	- 265	113,902	-	108,117
Change of write-offs resulting from derecognition of financial assets	- 864	- 466	- 24,559	-	- 25,889	- 5,901	- 5,952	- 23,328	-	- 35,181
<i>change of write-offs resulting from financial instruments that were written off from the statement of financial condition</i>	-	- 34	- 20,931	-	- 20,965	-	-	- 6,575	-	- 6,575
Change of write-offs resulting from transfers of financial asset to other Baskets	-	757	- 890	-	-	5,905	3,432	- 9,337	-	-
Reclassification to Basket 1	888	- 663	- 225	-	-	16,944	- 16,823	- 121	-	-
Reclassification to Basket 2	- 507	4,278	- 3,771	-	-	- 7,442	23,038	- 15,479	-	117
Reclassification to Basket 3	- 248	- 2,858	3,106	-	-	- 3,597	- 2,783	6,263	-	- 117
Other changes	-	-	102	-	102	- 263	291	- 130	-	- 102
At the end of the period 31-12-2019	17,937	26,812	230,097	-	274,846	61,245	98,136	736,786	-	896,167

Specification	Receivables from individual customers - gross value					Receivables from institutional clients - gross value				
	Basket 1	Basket 2	Basket 3	POCI	Total	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2018	3,645,652	166,986	326,503	-	4,139,141	4,786,847	1,541,667	2,542,250	-	8,870,764
Change of gross value resulting from acquisition of financial assets	196,887	190	-	-	197,077	1,131,378	31,982	-	-	1,163,360
Change of gross value for the existing portfolio	- 200,605	- 7,269	13,007	-	- 194,867	- 68,863	- 197,772	- 92,400	-	- 359,035
Change of gross value resulting from derecognition of a financial asset, in which:	- 165,620	- 5,105	- 23,400	-	- 194,125	- 590,839	- 197,345	- 88,420	-	- 876,604
<i>change in gross value resulting from financial instruments that were written off from the statement of financial condition</i>	-	-	- 18,071	-	- 18,071	-	-	- 47,229	-	- 47,229
Change of gross value resulting from transfers of the financial asset to another Basket	- 42,895	6,540	36,355	-	-	- 400,907	685,851	- 284,944	-	-
Reclassification to Basket 1	21,356	- 20,829	- 527	-	-	243,817	- 228,843	- 14,974	-	-
Reclassification to Basket 2	- 40,034	59,606	- 19,572	-	-	- 510,995	1,090,180	- 579,185	-	-
Reclassification to Basket 3	- 24,217	- 32,237	56,454	-	-	- 133,729	- 175,486	309,215	-	-
Other changes	- 213	- 17	- 1	-	- 231	895	- 2,598	- 503	-	- 2,206
At the end of the period 31-12-2018	3,433,206	161,325	352,464	-	3,946,995	4,858,511	1,861,785	2,075,983	-	8,796,279

Specification	Write-offs on receivables from individual customers					Write-offs on receivables from institutional clients				
	Basket 1	Basket 2	Basket 3	POCI	Total	Basket 1	Basket 2	Basket 3	POCI	Total
At the beginning of the period 01-01-2018	14,704	9,286	174,013	-	198,003	42,427	87,695	592,302	-	722,424
Change of write-offs resulting from acquisition of financial assets	4,092	16	-	-	4,108	16,636	1,052	-	-	17,688
Change in measurement of write-offs	- 6,818	- 2,630	68,344	-	58,896	- 14,492	16,862	130,413	-	132,783
Change of write-offs resulting from derecognition of a financial asset, in which:	- 1,474	- 215	- 19,561	-	- 21,250	- 6,325	- 7,432	- 55,464	-	- 69,221
<i>change of write-offs resulting from financial instruments that were written off from the statement of financial condition</i>	-	-	- 18,072	-	- 18,072	-	-	- 47,229	-	- 47,229
Change of write-offs resulting from transfers of financial asset to other Baskets	827	605	- 1,432	-	-	9,329	2,282	- 11,611	-	-
Reclassification to Basket 1	1,292	- 1,121	- 171	-	-	20,182	- 19,774	- 408	-	-
Reclassification to Basket 2	- 254	6,300	- 6,046	-	-	- 8,494	31,390	- 22,896	-	-
Reclassification to Basket 3	- 211	- 4,574	4,785	-	-	- 2,359	- 9,334	11,693	-	-
Other changes	- 3	3	-	-	-	109	- 108	1	-	2
At the end of the period 31-12-2018	11,328	7,065	221,364	-	239,757	47,684	100,351	655,641	-	803,676

24. Financial assets by maturity dates

31-12-2019	up to 1 month	above 1 month up to 3 months	above 3 months up to 6 months	above 6 months up to 12 months	above 1 year up to 5 years	above 5 years	with undefined maturity date	Total
Receivables from other banks (note 20)	150,658	-	75	-	-	15,000	-	165,733
Securities held for trading (Note 21)	-	-	-	21,560	43,085	-	-	64,645
Securities measured at fair value through other comprehensive income (note 22)	1,319,834	228	52,352	331,731	1,483,681	651,358	85,510	3,924,694
Securities measured at amortized cost (note 22)	-	-	-	-	649,666	727,718	-	1,377,384
Receivables from clients (note 23)	175,737	270,571	458,921	1,165,420	4,649,319	5,283,826	-	12,003,794
Total	1,646,229	270,799	511,348	1,518,711	6,825,751	6,677,902	85,510	17,536,250

31-12-2018	up to 1 month	above 1 month up to 3 months	above 3 months up to 6 months	above 6 months up to 12 months	above 1 year up to 5 years	above 5 years	with undefined maturity date	Total
Receivables from other banks (note 20)	183,794	-	75	-	-	12,235	-	196,104
Securities held for trading (Note 21)	12,034	-	-	-	-	-	-	12,034
Securities measured at fair value through other comprehensive income (note 22)	1,439,760	763	216,486	214,766	1,540,720	603,503	85,027	4,101,025
Securities measured at amortized cost (note 22)	-	-	-	-	212,585	1,162,683	-	1,375,268
Receivables from clients (note 23)	225,671	318,209	569,520	1,436,295	3,915,546	5,344,286	-	11,809,527
Total	1,861,259	318,972	786,081	1,651,061	5,668,851	7,122,707	85,027	17,493,958

25. Intangible assets

Specification	31-12-2019	31-12-2018
Goodwill	973	973
Licenses and software, in which:	86,833	96,788
<i>software developed internally</i>	4,291	1,149
Assets under development	29,192	22,222
Other	64	67
Total	117,062	120,050

Fully depreciated intangible assets still in use:

31-12-2019	119,785
31-12-2018	98,511

The goodwill is due to the acquisition of the brokerage enterprise Elimar by DM BOŚ.

As at 31 December 2019, there were no indicators for impairment losses, as indicated below.

As at 31 December 2019, the BOŚ Group performed tests for impairment.

The fundamental elements of these tests are as follows:

- 1) The forecast of future cash flows for a 5-year period, based on:
 - a) historical data reflecting the potential for CGU to generate cash flows,
 - b) balance sheet and profit and loss account projections in the forecasting period,
 - c) assumptions contained in the budget of Dom Maklerski,
 - d) analysis of reasons for differences between past cash flow projections and actual cash flows generated.
- 2) growth rate after the period of cash flow projections at the level of 3%.
- 3) The cost of capital of 10.5%, taking into account the risk-free rate (2.5%), the risk premium (7%), the premium related to the lack of direct support of international financial institution (1%).

The present value of future cash flows is compared to the carrying value (as at the date of the test) of goodwill and net assets of the CGU (PLN 742 thousand).

Based on the review of the outlays incurred for intangible assets under construction, no impairment indicators were noted as at 31 December 2019 and 31 December 2018.

Specification	Goodwill	Licenses and software	Assets under development	Other	Total
As at 01-01-2019					
Gross balance sheet value	973	322,663	22,222	86	345,944
Depreciation		-225,875	-	-19	-225,894
Net balance sheet value	973	96,788	22,222	67	120,050
Period ending 31-12-2019					
Net carrying value at the beginning of the year	973	96,788	22,222	67	120,050
Increases	-	15,717	18,803	-	34,520
<i>purchases</i>	-	3,884	18,803	-	22,687
<i>reclassification from investments</i>	-	11,833	-	-	11,833
Decreases	-	-	-11,833	-	-11,833
<i>reclassification from investments</i>	-	-	-11,833	-	-11,833
Depreciation charge		-25,672		-3	-25,675
Net carrying value as at 31-12-2019	973	86,833	29,192	64	117,062
As at 31-12-2019					
Gross balance sheet value	973	338,380	29,192	86	368,631
Depreciation		-251,547	-	-22	-251,569
Net carrying value as at 31-12-2019	973	86,833	29,192	64	117,062

Specification	Goodwill	Licenses and software	Assets under development	Other	Total
As at 01-01-2018					
Gross balance sheet value	973	303,228	17,392	86	321,679
Depreciation	-	-200,336	-	-15	-200,351
Net balance sheet value	973	102,892	17,392	71	121,328
Period ending 31-12-2018					
Net carrying value at the beginning of the year	973	102,892	17,392	71	121,328
increases	-	19,435	23,255	-	42,690
<i>purchases</i>	-	2,141	23,255	-	25,396
<i>reclassification from investments</i>	-	17,294	-	-	17,294
decreases	-	-	-18,425	-	-18,425
<i>reclassification from investments</i>	-	-	-18,425	-	-18,425
Depreciation charge	-	-25,539	-	-4	-25,543
Net carrying value as at 31-12-2018	973	96,788	22,222	67	120,050
As at 31 December 2018					
Gross balance sheet value	973	322,663	22,222	86	345,944
Depreciation	-	-225,875	-	-19	-225,894
Net carrying value as at 31-12-2018	973	96,788	22,222	67	120,050

26. Tangible fixed assets

Specification	31-12-2019	31-12-2018
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Fixed assets, of which:	73,916	67,076
<i>land</i>	764	203
<i>buildings and premises</i>	20,977	18,793
<i>improvements in third party assets</i>	27,247	25,866
<i>computer equipment and technical equipment</i>	23,057	19,922
<i>Vehicles</i>	232	265
<i>Other fixed assets</i>	1,639	2,027
Fixed assets in progress	3,827	1,320
Total	77,743	68,396

As at 31 December 2019, there were no assets withdrawn from active use and intended for sale.

As at 31 December 2018, assets withdrawn from active use and intended for sale amounted to PLN 69 thousand.
There were no temporarily unused assets with significant carrying amount in the presented periods.

Specification	Land and buildings	improvements in third party assets	Plant and machinery, vehicles and others	Fixed assets in progress	TOTAL
As at 31 December 2019					
Gross balance sheet value	31,394	75,042	114,983	1,320	222,739
Depreciation	-9,631	-45,729	-92,769	-	-148,129
Impairment	-2,767	-3,447	-	-	-6,214
Net balance sheet value	18,996	25,866	22,214	1,320	68,396
Period ending on 31 December 2019					
Net carrying value at the beginning of the year	18,996	25,866	22,214	1,320	68,396
Increases	712	1,726	11,515	9,064	23,017
<i>purchases</i>	<i>100</i>	<i>70</i>	<i>6,717</i>	<i>9,064</i>	<i>15,951</i>
<i>reclassification from investments</i>	<i>29</i>	<i>1,656</i>	<i>4,798</i>	<i>-</i>	<i>6,483</i>
<i>balance transfers</i>	<i>583</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>583</i>
Decreases	-	-6,492	-13,057	-6,557	-26,106
<i>liquidation/sale</i>	<i>-</i>	<i>-6,492</i>	<i>-13,057</i>	<i>-24</i>	<i>-19,573</i>
<i>reclassification from investments</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-6,533</i>	<i>-6,533</i>
<i>impairment</i>	<i>2,767</i>	<i>3,447</i>	<i>-</i>	<i>-</i>	<i>6,214</i>
Depreciation charge	-734	-3,522	-8,331	-	-12,587
Reversal of depreciation due to liquidation/sale		6,222	12,587	-	18,809
Net balance sheet value as at 31 December 2019	21,741	27,247	24,928	3,827	77,743
As at 31 December 2018					
Gross balance sheet value	32,106	70,276	113,441	3,827	219,650
Depreciation	-10,365	-43,029	-88,513	-	-141,907
Net balance sheet value	21,741	27,247	24,928	3,827	77,743

Specification	Land and buildings	Improvements in third party assets	Plant and machinery, vehicles and others	Fixed assets in progress	RAZEM
As at 01-01-2018					
Gross balance sheet value	31,394	74,550	118,024	2,107	226,075
Depreciation	-8,910	-43,509	-91,936	-	-144,355
Impairment	-2,767	-6,233	-	-	-9,000
Net balance sheet value	19,717	24,808	26,088	2,107	72,720
Period ending 31-12-2018					
Net carrying value at the beginning of the year	19,717	24,808	26,088	2,107	72,720
Increases	-	3,501	5,435	1,105	10,041
Purchases	-	190	5,117	1,105	6,412
<i>reclassification from investments</i>	-	1,146	318	-	1,464
<i>consolidation adjustments</i>	-	2,165	-	-	2,165
Decreases	-	-2,991	-8,475	-1,892	-13,358
<i>liquidation/sale</i>	-	-2,991	-8,475	-55	-11,521
<i>reclassification from investments</i>	-	-	-	-1,837	-1,837
Impairment adjustment	-	2,787	-	-	2,787
Depreciation charge	-721	-4,414	-9,105	-	-14,240
Reversal of depreciation due to liquidation/sale	-	2,987	8,271	-	11,258
consolidation adjustments	-	-812	-	-	-812
Net carrying value as at 31-12-2018	18,996	25,866	22,214	1,320	68,396
As at 31-12-2018					
Gross balance sheet value	31,394	75,060	114,984	1,320	222,758
Depreciation	-9,631	-45,748	-92,770	-	-148,149
Impairment	-2,767	-3,446	-	-	-6,213
Net balance sheet value	18,996	25,866	22,214	1,320	68,396

27. Beneficial use - lease

Specification	31-12-2019	31-12-2018
Real estate property	78,986	-
Vehicles	752	-
Total	79,738	-

Change in the state of beneficial use - lease

Specification	Real estate property	Vehicles	Total
As at 01-01-2019			
Gross balance sheet value	72,811	1,363	74,174
increases	23,255	328	23,583
decreases	- 1,898	-892	- 2,790
Gross carrying value as at 31-12-2019	94,168	799	94,967
Depreciation	- 15,182	- 47	- 15,229
Net carrying value as at 31-12-2019	78,986	752	79,738

28. Other assets

Specification	31-12-2019	31-12-2018
Costs to be paid in advance	8,120	4,307
Settlements due to excess of cash	1,978	1,780
Interbank settlements	904	506
Settlements due to payment cards	252	236
Different debtors	8,618	8,151
Settlements due to WSE and OTC market transactions	140,596	164,491
Right of perpetual usufruct of land	-	584
Public and legal settlements	15,697	10,662
Accrued income	13,150	11,735
Fixed assets for sale	820	69
Other	3,086	3,769
Total	193,221	206,291

29. Liabilities due to the Central Bank and to other banks

Specification	31-12-2019	31-12-2018
Deposits of other banks	114,184	58,154
Repurchase Transactions	481,483	513,630
Total	595,667	571,784

Liabilities to the Central Bank and other banks by maturity:

Specification	31-12-2019	31-12-2018
up to 1 month	50,271	15,311
above 1 month up to 3 months	63,868	-
above 3 months up to 6 months	137,246	186,908
above 6 months up to 12 months	109,004	34,475
above 1 year up to 5 years	235,278	335,090
Total	595,667	571,784

30. Liabilities due to customers

Specification	31-12-2019	31-12-2018
Individual clients	8,891,460	8,825,702
<i>current/settlement accounts</i>	3,967,906	3,983,914
<i>term deposits</i>	4,923,554	4,841,788
Institutional clients	5,116,946	4,942,446
<i>current/settlement accounts</i>	3,099,678	3,081,552
<i>term deposits</i>	2,017,268	1,860,894
Other clients	63,607	92,448
Credits and loans from international financial institutions	777,758	881,593
Fund resources intended for lending	65,210	56,920
Total	14,914,981	14,799,109

In 2019 and 2018, the BOŚ Group recorded no delays in payment of principal amounts or interest and violated no other contractual provisions related to their liabilities.

Liabilities due to customers by maturity:

Specification	31-12-2019	31-12-2018
up to 1 month	8,475,589	8,387,066
above 1 month up to 3 months	1,984,100	2,117,622
above 3 months up to 6 months	1,549,159	1,749,941
above 6 months up to 12 months	1,381,269	831,048
above 1 year up to 5 years	1,385,764	1,621,121
above 5 years	139,100	92,311
Total	14,914,981	14,799,109

31. Liabilities related to the issue of bank securities

Specification	Currency	Interest rate terms	Date of maturity/redemption	31-12-2019		31-12-2018	
				Face value	Balance of liabilities	Face value	Balance of liabilities
Debt securities:				-	-	46,000	46,590
U - series bonds				-	-	46,000	46,590
Total				-	-	46,000	46,590

32. Subordinated liabilities

Series	Currency	Interest rate terms	Date of maturity/redemption	31-12-2019		31-12-2018	
				Face value	Balance of liabilities	Face value	Balance of liabilities
AA1-Series	PLN	WIBOR 6M + margin (6-months coupons)	7 years (repurchase option after 5 years)	34,214	35,096	34,214	35,086
AA2-Series	PLN	WIBOR 6M + margin (6-months coupons)	7 years (repurchase option after 5 years)	65,786	66,414	65,786	66,403
P-Series	PLN	WIBOR 6M + margin (6-months coupons)	10 years (repurchase option after 5 years)	150,000	152,897	150,000	152,886
R1-Series	PLN	WIBOR 6M + margin (6-months coupons)	10 years (repurchase option after 5 years)	83,000	83,896	83,000	83,896
W-Series	PLN	WIBOR 6M + margin (6-months coupons)	7 years (repurchase option after 5 years)	32,500	32,428	32,500	32,401
Total				365,500	370,731	365,500	370,672

33. Provisions

Specification	31-12-2019	31-12-2018
Provisions for contingent liabilities, of which:	27,461	20,798
<i>open lines of credit</i>	19,225	11,573
<i>warranties</i>	8,236	9,225
Provision for employee benefits (retirement and pension benefits)	3,322	3,076
Provisions for court proceedings and claims due to legal risk associated with mortgage loans in foreign currencies	23,181	2,033

Provisions for reimbursement of commission fees due to early loan repayment	1,183	-
Provisions for other liabilities and claims	2,558	9,866
Total	57,705	35,773

Changes in the balance of provisions:

Specification	31-12-2019	31-12-2018
Provisions for contingent liabilities granted		
Opening balance	20,798	10,577
<i>Adjustment of value of provisions as at 31-12-2017 due to introduction of IFRS 9</i>	-	16,616
Opening balance	20,798	27,193
<i>creation of a provision for impairment of off-balance sheet liabilities</i>	70,752	44,916
<i>release of provisions for impairment of off-balance sheet liabilities</i>	-64,079	-51,314
<i>other</i>	-10	3
At the end of the period	27,461	20,798
Provisions for employee benefits		
Opening balance	3,076	2,652
<i>creation of provisions</i>	499	723
<i>utilization of provisions</i>	-253	-238
<i>release of provisions</i>	-	-61
Closing balance	3,322	3,076
Provisions for court proceedings and claims due to legal risk associated with mortgage loans in foreign currencies		
Opening balance	2,033	747
<i>creation of provisions</i>	21,221	1,662
<i>release of provisions</i>	-73	-376
Closing balance	23,181	2,033
Provisions for reimbursement of commission fees due to early loan repayment		
Opening balance	-	-
<i>creation of provisions</i>	1,183	-
Closing balance	1,183	-
Provisions for other liabilities and claims		
Opening balance	9,866	11,159
<i>creation of provisions</i>	1,619	916
<i>utilization of provisions</i>	-8,188	-
<i>release of provisions</i>	-739	-2,209
Closing balance	2,558	9,866
Total provisions at the end of the period	57,705	35,773

The present value of future liabilities for retirement and disability benefits for employees with valid contracts of employment as at 31 December 2019:

Specification	31-12-2019	31-12-2018
Salary growth rate	2.5% (0% in 2019)	2.5% (0% in 2018)
The future liabilities interest rate for:		
<i>retirement and disability benefits</i>	2.00%	3.00%
Amounts recognized in comprehensive income in relation to the defined benefit plans discussed		
Cost of benefits:		
Current employment cost	226	212
Net interest cost	61	65
Components of the defined benefit plan recognized in the financial result	287	277
Revaluation of net liabilities arising from defined benefit plans:		
Actuarial profits and losses arising from changes in financial assumptions	143	35
Actuarial profits and losses arising from experimental adjustments	-40	-96
Components of the defined benefit plan recognized in other comprehensive income	103	-61
Total	390	216

Amounts recognized in comprehensive income in relation to the defined benefit plans discussed:

Specification	31-12-2019	31-12-2018
Amounts recognized in comprehensive income in relation to the defined benefit plans discussed:		
Liabilities due to defined benefits, opening balance	3,076	2,652
Current benefit cost	335	658
interest cost	61	65
Revaluation (profit)/loss:		
Actuarial profits and losses arising from changes in financial assumptions	143	35
Actuarial profits and losses arising from experimental adjustments	-40	-96
Paid benefits	-253	-238
Liabilities due to defined benefits, closing balance	3,322	3,076

Calculations of the present value for future employee retirement and disability benefits relate to the current population of employees of Bank Ochrony Środowiska S.A. and do not account for the employees who will be hired in the future. These calculations rely on determining the employee's right vested in the year following the date of the calculation, to a certain part of employee allowance in accordance with the „Projected Unit Credit” method, i.e. the actuarial method of calculation of the present value of future liabilities. The value of employee vested right to a certain part of employee benefit, which is to be paid out in the future, was calculated on the assumption that the employee would remain in service at the Bank until the benefit payment date, discounting upon calculations performance.

The vested right to a part of employee benefit is the quotient of the current length of service (seniority) and the length of service required to obtain retirement and disability benefit.

Disability benefits are calculated as the sum of the products of probabilities of incurring disability in future years by a person at a certain age and their vested rights to a part of benefits in each year over the entire forecast period, and discounted at the time of valuation. The vested right to a part of disability benefit in each year is calculated as the quotient of the current length of employee service and the length of service in a given subsequent year.

The present value of vested rights is calculated on the assumption of an increase in benefit calculation base to benefit payment base in accordance with the salaries growth rate.

As at 31 December 2019, a 2.0% discount rate was assumed for the estimation of employee benefits liabilities. With the 2.25% discount rate, employee benefit liabilities would amount to PLN 2,730 thousand as at 31 December 2018, while with the 1.75% discount rate - these liabilities would amount to PLN 2,805 thousand.

As at 31 December 2018, a 3.0% discount rate was assumed for the estimation of employee benefits liabilities. With the 3.25% discount rate, employee benefits liabilities would amount to PLN 2,594 thousand as at 31 December 2018, while with the 2.75% discount rate - these liabilities would amount to PLN 2,666 thousand.

The Bank estimates that the outflows of economic benefits from realization of these provisions will be affected in the following periods:

Specification	31-12-2019	31-12-2018
within 1 year	685	598
above 1 year up to 5 years	837	894
from 5 to 10 years	769	619
from 10 to 20 years	813	784
above 20 years	218	181
Total	3,322	3,076

Provisions for court proceedings and claims and for reimbursement of commission fees were recognized based on expected outflows of economic benefits in the following periods:

Specification	01-01-2019 31-12-2019		01-01-2018 31-12-2018	
	Amount	Expected outflow of benefits	Amount	Expected outflow of benefits
Provision for liability with regard to brokering the sale of the closed-end investment funds			600	up to 1 year
Provision for negative balances in customer accounts resulting from settlement of market transactions	50	up to 1 year	50	up to 1 year
Provisions for court proceedings and claims and for commission fee reimbursements	26,872		11,249	
	6,550	up to 1 year	9,189	up to 1 year
	20,322	above one year	2,060	above one year
Total	26,922		11,899	

The total value of pending litigation proceedings in the presented periods:

	31-12-2019	31-12-2018
- the BOŚ Group is the defendant	46,469	37,075
- the BOŚ Group is the claimant	221,605	80,491

According to the Bank's Management Board, the risk associated with these proceedings, except for those for which provisions for claims have been recognized, is estimated as non-substantiating cash outflows. Any risks referred to the ongoing proceedings before the court or public administration bodies are secured by appropriate provisions.

In the consolidated financial statements for year 2018, the value of pending proceedings was reflected by the following amounts: The BOŚ Group as the defendant - PLN 80,491 thousand; the BOŚ Group as the claimant - PLN 37,075 thousand. In the above table, data has been presented upon the proper adjustment.

34. Deferred income tax

Deferred income tax is calculated for all provisional differences using the tax rate of 19%.

The following changes have been recorded with regard to deferred income tax:

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Opening balance	98,268	74,411
Opening Balance (OB) adjustment	-	17,342
Balance after OB adjustment	98,268	91,753
Change in the balance, in which:	9,375	6,515
<i>write-offs on receivables</i>	3,490	3,346
<i>valuation of assets</i>	- 692	- 71
<i>accrued expenses</i>	4,150	- 7,629
<i>received interest on securities purchased previously by the Bank</i>	- 227	933
<i>other differences</i>	- 1,526	11,760
<i>tax loss</i>	870	- 2
<i>commission fees settled according to EIR</i>	1,944	1,908
<i>fixed assets covered by investment tax relief not yet depreciated</i>	1,827	- 7,844
<i>provisions for non-personnel costs and employment costs</i>	1,067	437
<i>accrued income</i>	- 1,777	5,169
<i>IBNR included in tax expenses</i>	249	- 1,492
Closing balance	107,643	98,268

The deferred tax amount of PLN 107,643 thousand consists of deferred tax assets in the amount of PLN 109,028 thousand, reduced by deferred tax liabilities in the amount of PLN 1,385 thousand, disclosed in the statement of financial condition of the BOŚ Group (pages 6-7).

Deferred tax recognized in revaluation reserve

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Opening balance	- 13,461	- 2,486
Opening Balance (OB) adjustment	-	- 11,506
Balance after OB adjustment	- 13,461	- 13,992
Change in the balance due to revaluation of assets	2,274	531
Closing balance	- 11,187	- 13,461

Deferred income tax assets and liabilities are recognized as follows:

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Deferred tax liabilities in respect of:		
<i>accrued income</i>	38,493	35,836
<i>increases in respect of valuation of assets</i>	32,152	33,395
<i>fixed assets covered by investment tax relief not yet depreciated</i>	12,689	23,858
<i>Lease receivables</i>	11,893	-
<i>commission paid to be settled according to EIR</i>	3,619	3,882
<i>IBNR included in tax costs in previous years</i>	1,244	1,492
<i>other temporary differences</i>	516	2,641
Total:	100,606	101,104

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Deferred income tax assets in respect of:		
<i>Write-downs on receivables</i>	115,013	110,924
<i>commission received to be settled according to EIR</i>	16,871	15,025
<i>fixed assets related to lease agreements</i>	14,163	-
<i>provisions for non-personnel costs and employment costs</i>	6,347	5,288
<i>accrued expenses</i>	22,519	18,369
<i>received interest on securities purchased previously by the Bank</i>	8,450	8,677
<i>decreases in respect of valuation of assets</i>	15,776	17,711
<i>tax loss</i>	1,348	477
<i>other temporary differences</i>	7,762	22,901
Total:	208,249	199,372

Change in the balance of deferred tax in the period:

Specification	01-01-2019 31-12-2019	01-01-2018 31-12-2018
Opening balance	98,268	74,411
OB adjustment related to introduction of IFRS 9	-	17,342
Opening balance after adjustment based on IFRS 9	98,268	91,753
Change in deductible temporary differences	8,325	- 9,220
Change in taxable temporary differences	1,050	15,735
Total change in balance, of which:	9,375	6,515
<i>change in revaluation reserve</i>	2,274	531
<i>change in balance recognized in the profit and loss account</i>	7,100	5,984
Closing balance	107,643	98,268

35. Lease liabilities

As a lessee, the BOŚ Group recognizes lease in its statement of financial condition as an asset constituting beneficial use and a respective liability on the day when the object of lease is made available for use. Every lease payment is allocated

between a decrease in liability and financial cost. Financial cost is recognized in the profit and loss account during the lease period. The beneficial use asset is amortized using the straight-line method. Lease liabilities were measured at current value of future leasing payments, discounted using the marginal interest rate of the Company as at 01 January 2020.

The BOŚ Group, as lessee, concluded contracts for lease of vehicles and property.

Lease agreements are usually concluded for periods of 1 year to 10 years. Lease terms are negotiated individually. Lease agreements impose no liabilities, but assets subject to lease cannot be used as a collateral to incur loans or obtain other forms of external funding.

Maturity date of lease liabilities:

Specification	Real estate property	Vehicles	Total
within 1 year	4,361	182	4,543
above 1 year up to 5 years	11,072	487	11,559
above 5 years	67,082	165	67,247
Total	82,515	834	83,349

Liabilities due to real estate lease agreements pertain mainly to space used by the Bank as a part of its operating activity.

For all Euro-based agreements, the amount of net monthly lease installment is equivalent to the sum of payments for a defined type of leased space denominated in PLN (translated using the average NBP exchange rate) calculated as the product of Euro-based net price for one square meter of the given type of leased space and the area of effectively leased space, increased by VAT due.

For PLN-based agreements, the amount of net monthly lease installment is equivalent to the sum of payments for a defined type of leased space, calculated as the product of net price for one square meter of the given type of leased space and the area of effectively leased space, increased by VAT due.

Monthly lease installments are subject to indexation (adjustment) based on the agreed ratio and schedule determined in the lease contract. The Euro-based lease contracts are updated using the indexes applicable in the EU. The value of PLN-based lease contracts is updated by the Consumer Price Index (CPI) for the prior period announced by the President of Central Statistical Office of Poland.

The concluded lease contracts do not provide for the possibility of post-lease acquisition of leased property.

Lease contracts are concluded for a fixed period of time; some of lease contracts do not provide for the possibility of their termination, while some contain a clause on early contract termination or expiry on the condition of branch liquidation, in which case a 6- or 12-month termination notice applies. Some of lease contracts provide for the possibility of contract extension based on the existing terms and conditions upon a written declaration of intent of the lessor, submitted six or eighteen months before the contract termination date.

The BOŚ Group applied to its lease contracts the exclusions approved in the IFRS 16 standard with regard to:

- using an asset of low value;
- using an asset for the period no longer than 12 months.

Agreements, in which the value of the underlying asset is low, that is, up to PLN 20 thousand, have been classified as low value lease agreements.

Payments associated with excluded agreements are recognized on a straight-line basis as a cost in the profit and loss account.

Future minimum fees due to excluded agreements as at 31 December 2019:

Specification	Real estate property	Vehicles	Total
low value	78	747	825
short-term	1,373	-	1,373
Total	1,451	747	2,198

36. Other liabilities

Specification	31-12-2019	31-12-2018
Inter-bank settlements	17,308	32,160
Liabilities due to DM BOŚ counterparties	30,463	74,921
Accruals and deferred income	25,320	21,929
Public law settlements	8,525	8,635
Trade liabilities	62,169	36,774
Deferred commissions	5,237	5,287
Settlements due to payment cards	10,986	1,403
Provisions for reimbursement of commission fees due to early loan repayment	3,489	-
Other	23,547	30,816
Total	187,044	211,925

37. Conditional assets and liabilities

Specification	31-12-2019	31-12-2018
Contingent liabilities:	2,846,868	1,806,671
Financial, in which:	2,538,723	1,477,738
<i>open lines of credit, including:</i>	2,513,639	1,461,556
<i>revocable</i>	2,267,427	1,206,274
<i>irrevocable</i>	246,212	255,282
<i>open import letters of credit</i>	5,839	14,065
<i>commitments to grant loans of which:</i>	19,245	2,117
<i>- irrevocable</i>	19,245	2,117
Guarantees, including:	308,145	328,933
<i>loan repayment sureties and guarantees</i>	12,909	14,833
<i>performance bonds</i>	295,236	-
<i>guarantee for a subsidiary</i>	-	314,100
Contingent assets:	480,132	611,322
Financial, in which:	85,170	193,500
<i>open lines of credit</i>	85,170	193,500
Guarantees	381,445	405,854
Other	13,517	11,968
Total contingent assets and contingent liabilities	3,327,000	2,417,993

Information on pending court proceedings concerning credits and loans denominated in foreign currencies

As at 31 December 2019, the BOŚ Group has had a portfolio of 8 423 retail mortgage loans and credits linked to foreign currencies (CHF, EUR, USD), mainly CHF in the variant of denominated credits and loans of the value of PLN 1,608 million.

As at 31 December 2019, there were 94 pending court cases against the Bank, concerning credits and loans denominated mainly in CHF, in which the value of the object of litigation amounts to PLN 15.6 million. In relation to this portfolio, there are no proceedings against the Bank based on the act of 17 December 2009 on pursuing claims in collective proceedings.

So far, 8 litigations have been concluded by a final and binding court ruling, in half of the cases favoring the clients.

Provisions for legal risk related to ongoing litigations have been established for the amount of PLN 7.8 million, on the basis of legal risk assessment and estimation of cash outflow (see description in Note 4 Significant accounting estimates and judgments).

Claims made in lawsuits based on agreements for denominated credits and loans, in general, pertain to recognition of such credit/ loan agreements as invalid, alternatively to recognition of abusiveness of denomination (conversion) and insurance clauses, regulating the bridge financing security (low down payment insurance and credit insurance until the mortgage is established).

Rulings of courts of common law, issued so far in litigations related to foreign currency-denominated credit and loan agreements are diversified, and the courts:

- 1) found no inconsistency with the law or rules of social conduct in the credit agreements and dismissed claims against banks,
- 2) found no grounds for recognition of conversion clauses as abusive, which resulted in dismissal of claims against banks,
- 3) found the conversion clauses abusive and ruled that the agreements could remain in force to the extent not subjected to abusiveness; such rulings implied the following:
 - assumption that abusiveness of a norm, which provides for credit indexation with a foreign currency exchange rate and the exchange rate norm (referring to exchange rate tables of banks), resulted in cancellation of such indexation and defining of the borrower's liability as a credit in PLN with an interest rate equal to LIBOR rate applicable to CHF. On the

basis of these rulings, the banks were required to reimburse the differences between the principal and interest installment totals calculated and paid on the basis of agreements and those, which were calculated disregarding the clauses considered to be abusive; moreover, the rulings resulted in further settlement of credit agreements based on the assumption that the credits were granted in PLN and subjected to the LIBOR rate applicable to CHF;
or

- interpretation of the contract on the basis of general rules of civil law and “filling” of the gap arising from disregarding of provisions considered to be abusive with another dispositive standard or a standard functioning as a legal rule. In several rulings, the Supreme Court opted for application, instead of the exchange rate standard referring to the exchange rate tables of banks, considered to be abusive, the average exchange rate of the National Bank of Poland. As a result of these rulings, the banks were required to pay the exchange rate differences between the exchange rate applied to credit settlement by the banks concerned and the average exchange rate of the National Bank of Poland. Exchange rate differences are of value similar to the value of foreign exchange spread.
- 4) ruled the credit agreements to be invalid due to their inconsistency with the law or rules of social conduct. These rulings resulted in cancellation of the agreement and the obligation of both parties to mutual reimbursement of benefits.

On 03 October 2019, the Court of Justice of the European Union issued a ruling in case C-260/18, concerning an indexed credit granted in 2008 by another bank. In the ruling, the Court confirmed that both assessment of the contractual provisions in terms of their abusiveness and the possibility of maintaining the credit agreement as valid after the provisions considered to be abusive have been removed will be left to domestic courts.

Undoubtedly, this ruling of the Court of Justice of the EU will exert significant impact on judicial practice of domestic courts; it should also be taken into account that every litigation with a borrower is subject to individual assessment by the court.

The BOŚ Group conducts ongoing monitoring of rulings issued by courts in association with credits linked to exchange rates of foreign currencies in terms of trends emerging in judicial practice.

38. Brokerage activity

Brokerage operations refer to the activities of Dom Maklerski BOŚ S.A.

Data concerning financial instruments kept in security accounts of the customers and are presented at their fair value:

Specification	31-12-2019	31-12-2018
Dematerialized securities traded on the regulated stock exchange		
Stock traded and subscription rights for traded shares recorded on securities accounts	5,263,162	4,808,395
Other securities recorded on customers' securities accounts	417,346	370,047
Other financial instruments of clients	206,883	264,206
Property rights traded on Polish Power Exchange (PPE)	552,416	552,615
Materialized securities		
Shares	307,067	202,368
Bonds	1,031,017	1,244,557
Total securities belonging to the clients	7,777,891	7,442,188

39. Stated capital

Registered share capital

As at 31 December 2019 the share capital of the Bank amounted to PLN 929,477 thousand and it has not changed compared to 31 December 2018.

Series/issue	Type of shares	Type of preference	Number of shares	Value of series/Issue at nominal value in KPLN	Method of payment of share capital	Registration date	Right to dividend (since when)
A	O	ordinary	236,700	2,367	paid up	09-01-91	01-01-92
B	O	ordinary	1,263,300	12,633	paid up	11-03-92	01-01-93
C	O	ordinary	477,600	4,776	paid up	30-12-92	01-01-93
C	O	ordinary	22,400	224	contribution in kind	30-12-92	01-01-93
D	O	ordinary	1,300,000	13,000	paid up	30-12-93	01-01-94
E	O	ordinary	647,300	6,473	paid up	30-06-94	01-01-95
E	O	ordinary	15,500	155	contribution in kind	30-06-94	01-01-95
E	O	ordinary	37,200	372	contribution in kind	30-06-94	01-01-95
F	O	ordinary	1,500,000	15,000	paid up	30-12-94	01-01-95
G	O	ordinary	1,260,000	12,600	paid up	30-06-95	01-01-96
H	O	ordinary	670,000	6,700	paid up	30-06-95	01-01-96
I	O	ordinary	70,000	700	paid up	30-06-95	01-01-96
J	O	ordinary	1,055,000	10,550	paid up	21-06-96	01-01-96
K	O	ordinary	945,000	9,450	paid up	21-06-96	01-01-96
L	O	ordinary	1,200,000	12,000	paid up	29-11-96	01-01-96
M	O	ordinary	2,500,000	25,000	paid up	07-05-98	01-01-97
N	O	ordinary	1,853,000	18,530	paid up	6/7/2013	1/7/2001
O	O	ordinary	1,320,245	13,202	contribution in kind	6/10/2025	1/10/2001
P	O	ordinary	6,500,000	65,000	paid up	6/12/2015	1/11/2001
U	O	ordinary	40,000,000	400,000	paid up	7/17/2012	1/16/2001
V	O	ordinary	30,074,426	300,744	paid up	7/18/2004	1/18/2001
Total number of shares			92,947,671				
Total share capital at nominal value				929,477			
Total share capital				929,477			

Par value of one share is PLN 10.

As at 31 December 2019, the total number of votes resulting from all issued shares by the Bank amounted to 92,947,671, and it had not changed in comparison to 31 December 2018.

One share gives right to one vote at the General Shareholders Meeting.

Other shareholders hold in total 27.8% of shares in the Bank's share capital.

As at the date of preparation of the consolidated financial statements, changes in the ownership structure of large block of shares are not known.

The structure of shareholders holding directly or indirectly (through subsidiaries) at least 5% of the total number of votes at General Meeting of the Bank:

Shareholder	31-12-2019		31-12-2018	
	Number of number of votes at the AGM (shares)	% share in total number votes at the AGM (in share capital)	Number of number of votes at the AGM (shares)	% share in total number votes at the AGM (in share capital)
National Fund for Environmental Protection and Water Management	53,951,960	58.05	53,951,960	58.05
Fund for Investments of Polish Enterprises Closed-End Fund for Non-Public Assets	8,000,000	8.61	8,000,000	8.61
Directorate General of State Forests	5,148,000	5.54	5,148,000	5.54

One share gives right to one vote at the General Shareholders Meeting.

Other shareholders hold in total 27.8 % of shares in the Bank's share capital.

As at the date of preparation of the consolidated financial statements changes in the ownership structure of large blocks of shares are not known.

Treasury shares

As at 31 December 2019, the Bank held 37,775 own shares, which represent 0.04% of the share capital and 0.04% of the total number of votes at the General Meeting of the Bank, including:

- 33,095 shares, which the Bank acquired in 2012 as part of stabilization activities related to the issuance of shares of P series. The shares listed above represent 0.035% of the share capital of the Bank and the overall number of votes at the General Meeting of the Bank; at the same time, according to provisions of the Code of Commercial Companies, the Bank is not authorized to exercise the voting right based on these shares,
- 4,680 shares, which represent 0.005% of the Bank's share capital and total number of votes at the General Meeting of the Bank, acquired by the Bank in the period between 22 June and 06 July 2015 during trading sessions on the prime market of WSE. These shares were acquired on the basis of Resolution 34/2015 of the General Meeting of BOŚ S.A. dated 10 June 2015 regarding share repurchase Program of BOŚ S.A., in order to offer them to the Bank's employees holding managerial positions and having a material impact on the risk profile of the Bank.

Due to the existence of circumstances defined in PFSA's resolution no. 258/2011, and the variable remuneration components policy concerning employees holding managerial positions at BOŚ S.A., the Supervisory Board decided not to grant the members of the Management Board the variable remuneration for 2014, while variable remuneration for other employees holding managerial positions did not reach the threshold above which a part of the variable remuneration is paid out in shares.

As a result, the shares acquired for this purpose were not allocated.

In accordance with provisions the Code of Commercial Companies, the Bank is not entitled to exercise the voting rights related to its own shares.

Supplementary capital from share premium

Supplementary capital from share premium is recorded in the amount of the surplus earned upon issue of shares after accounting for the costs of share issue.

As at 31 December 2019 and 31 December 2018 the supplementary capital amounted to PLN 532,181 thousand.

40. Revaluation reserve

Specification	31-12-2019	31-12-2018
Revaluation of financial assets carried at fair value through other comprehensive income	55,087	66,953
Revaluation of employee benefit liabilities	3,795	3,898
Deferred income tax	-11,187	-13,461
Revaluation reserve, total	47,695	57,390

Changes in revaluation reserve

As at 01 January 2019	57,390
Increase due to:	172,454
<i>valuation of investment securities</i>	172,454
Decrease due to:	-184,423
<i>valuation of investment securities</i>	-184,320
<i>revaluation of employee benefit liabilities</i>	-103
Deferred income tax	2,274
As at 31 December 2019	47,695

As at 01 January 2018	59,653
Increase due to:	162,947
<i>valuation of investment securities</i>	162,887
<i>revaluation of employee benefit liabilities</i>	60
Decrease due to:	-165,741
<i>valuation of investment securities</i>	-165,741
Deferred income tax	531
As at 31 December 2018	57,390

41. Retained earnings

Retained earnings include: other supplementary capital, the general risk fund and undistributed financial result.

Specification	31-12-2019	31-12-2018
Other supplementary capital:	694,403	624,393
statutory	44,000	44,000
formed in accordance with the Statutes above the regulatory required (minimum) level	646,078	576,068
other	4,325	4,325
Other reserves:	23,605	23,605
Brokerage activity fund	22,249	22,249
Other	1,356	1,356
General risk fund	48,302	48,302
Undistributed financial result	- 75,111	-77,160
retained earnings	- 147,105	-140,888
net profit/ (loss) for the current year	71,994	63,728
Undistributed financial result - total	691,199	619,140

Supplementary capital is created from annual profit appropriations amounting to at least 8% of the net profit, until such time as the total balance reaches at least one third of the share capital. A portion of the supplementary capital amounting to one-third of the share capital may be used exclusively for offsetting losses recorded in the financial statements.

Other reserves are created by appropriating the net profit for the year, irrespective of the supplementary capital, and are earmarked for covering specific losses and expenses.

The General Shareholders' Meeting makes decisions concerning the use of supplementary capital and other reserves.

The general risk fund designated for unidentified risks in activity of the Bank is created by appropriating the net profit for the year, in accordance with the provisions of banking law.

On 18 June 2019, the Ordinary General Meeting of BOŚ S.A. adopted the Resolution on distributing the net profit of the Bank for 2018.

The net profit of the Bank for year 2018 amounted to PLN 65,012 and was intended as a capital reserve of the Bank.

According to PPN, the net profit for 2019 is intended to increase the equity.

42. Hedge accounting

Hedge accounting principles applied

Among the BOŚ Group entities, hedge accounting was applied only by the Bank.

Hedge accounting is an integral element of the financial risk management in BOŚ S.A. The interest risk in the banking book is a hedged risk. The Bank uses fair value hedges to hedge the fair value of State Treasury fixed-rate bonds.

Cash flow hedge accounting

As at 31 December 2019, the BOŚ Group did not apply cash flow hedge accounting.

Fair value hedge accounting

During the hedging period, the Bank hedges the fluctuation of fair value of fixed rate bonds depending on changes in market interest rates. The hedged item is the part of State Treasury bonds held in Ht&S business portfolio. The hedging instrument is Interest Rate Swap (IRS) transactions, in which the Bank makes payments on the basis of a fixed interest rate and receives a coupon based on floating rate (6-month WIBOR).

By establishing a hedging relationship, the netting effect of changes in the fair value of the hedging instrument and the hedged item is obtained in the profit and loss account. Only one type of risk (i.e. interest rate volatility risk) is hedged. The spread between the quotation of treasury bonds and IRS transactions is excluded from the hedge.

The hedge is expected to be highly effective in offsetting fair value changes resulting from the hedged risk. The effectiveness of the hedge is verified by using prospective and retrospective effectiveness tests. The prospective tests are based on the analysis of BPV measures of hedged item and hedging instrument. The retrospective test is performed on the basis of the direct compensation method in which the changes of value of hedging transactions and hedged item resulting from hedged risk condition are compared. Retrospective tests give positive results when the efficiency rating factor is within the range <0.8;25>. The tests are carried out on a quarterly basis. The Bank does not identify significant sources of inefficiency for hedging of fair value.

The change in fair value of the hedged item resulting from fluctuation of market interest rates is recognized in the statement of profit or loss. Changes in fair value of bonds, which are not resulting from fluctuation of hedged risk condition, are recognized in the revaluation reserve. The changes in valuation of the hedging instrument are recognized in the profit and loss account.

As at 31 December 2019, the Bank had two fair value hedge accounting arrangements - hedging established in July 2012 and hedging established on 20 October 2015.

The hedged item according to the hedge accounting arrangement established in:

- 2012 covers the State Treasury bonds: DS1020 maturing in October 2020 of nominal value of PLN 172 million; the State Treasury bonds DS1019 of nominal value of PLN 77 million, maturing in October 2019 and;
- in 2015 covering PLN 240 million for the State Treasury bonds DS0725 with maturity in July 2025.

As at 31 December 2019, the amount of PLN 4,753 thousand resulting from changes in fair value of bonds due to interest rate risk and the fair value of IRS transactions was recognized in the profit and loss account. The amount of PLN -9,077 thousand was recognized in the revaluation reserve. It represented the sum of the impact of bonds on equity established at the date of hedge relationship establishment (PLN -11,345 thousand) and change in the fair value of bonds resulting from the unhedged part of the risk (spread between bonds and IRS quotations).

Specification	31-12-2019			31-12-2018		
	carrying amount	nominal value	fair value*\	carrying amount	nominal value	fair value*\
Hedging instruments						
Interest Rate Swap (IRS) - negative valuation	16,869	468,000	13,237	18,298	536,000	13,694
Hedged position						
State Treasury bonds - positive valuation	439,183	412,000	17,990	520,571	489,000	18,489
Total impact on result			4,753			4,795

*\for hedged bonds it is an adjustment of the fair value

43. Share-based payments

The remuneration policy for managers in the BOŚ Group.

In order to meet the requirements defined in the Regulation of the Minister of Development and Finance of 6 March 2017 on the system of risk management and internal control system, remuneration policy and detailed method of calculating internal capital in banks as well as in accordance with the Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, BOŚ Group implemented remuneration policy for managers approved by the Supervisory Board of BOŚ S.A.

The Remuneration Committee appointed by the Supervisory Board of the Bank evaluates remuneration Policy, gives opinion on and develops the principles of remuneration of the Management Board and gives opinion on and monitors the variable remuneration of persons occupying managerial positions in the Bank responsible for risk management at the second level, persons responsible for managing the compliance unit and internal audit unit.

The remuneration policy assumes, among others:

- payment of minimum 50% of established variable remuneration in shares of Bank Ochrony Środowiska S.A., of value estimated as the weighted average price of shares of the Bank in trading sessions on the Warsaw Stock Exchange in the period from 1 December of the year preceding the grant date to 31 January of the year of the grant date,

Shares shall mean:

- shares of Bank Ochrony Środowiska S.A. listed on the Warsaw Stock Exchange,
- phantom shares, at a value corresponding to the share price listed on the Warsaw Stock Exchange,
- deferral in payment of 40% of variable remuneration in the three equal annual installments, with the proviso that at least 50% of each tranche is paid in shares of the Bank and the remaining part is paid in cash. The deferred part may be suspended, reduced or not paid nor realized at all, i.a. when the Bank's results differ significantly from the approved financial plan for a given year, or when conditions specified in Article 142.1 of the Act - Banking Law have been met.
- assessment of the 3-year period results, so that the amount of performance or result-based remuneration took into account the business cycle (trade cycle) of the Bank and the risk associated with this business. The results shall mean the results of the tasks in the area of effectiveness, finance, sale and individual goals set forth in the Bank's strategy or financial plan for the given year.

The maximum level of variable remuneration for employees that occupy managerial positions does not exceed 100% of fixed remuneration. The General Shareholders Meeting of BOŚ S.A. may agree to increase the maximum level of variable remuneration to 200% of fixed remuneration, in accordance with the procedure provided in § 25.2 4), letter b) and c) of the Regulation of the Minister of Development and Finance. The increase of the maximum level of variable remuneration specified in the preceding sentence does not apply to Members of the Bank's Management Board.

In the reporting period, variable remuneration for year 2018 were determined for managers exerting substantial impact on the Bank's risk profile. The expected total cost of variable remuneration for results in year 2018 in this group amounts to PLN 1,137 thousand.

Out of the total amount:

- payments in phantom shares were awarded, constituting a short-term benefit to be paid upon the end of the retention period, that is, 6 months from the date of awarding of the variable remuneration component, at the exchange rate constituting the arithmetical mean of closing exchange rates established during the first five sessions after the end of the retention period - 46,790 shares worth PLN 341 thousand;
- payment of PLN 455 thousand, constituting a long-term benefit, has been deferred (including: PLN 277 thousand in cash and PLN 227 thousand in shares); the deferred tranches will be paid - when awarded - in the 3 subsequent years, that is, 2020, 2021 and 2022 in equal parts, and payment of each tranche may be suspended or limited, for instance, if the Bank's results depart significantly from the approval financial plan for a given year or the conditions referred to in art. 142 item 1 of the Banking Law Act have been fulfilled;
- the amount of PLN 341 thousand in cash, constituting a short-term benefit, has been paid.

The variable remuneration for 2019 results have not been settled and not granted yet.

44. Notes to the cash flow statement

Cash and cash equivalents

For the purpose of the cash flow statement, cash and cash equivalents include the following highly liquid balances with the maturity period shorter than three months.

Specification	31-12-2019	31-12-2018
Cash and balances with the Central Bank (Note 19)	297,866	186,736
Deposits placed in other banks, recognized as cash equivalents (Note 20)	70,214	106,985
Investment securities (Note 22)	1,319,835	1,439,760
Total	1,687,915	1,733,481

Cash and cash equivalents include the amount of obligatory reserve held with the NBP by the Bank.

On 21 June 2018, the Management Board of the National Bank of Poland (NBP) decided on exemption of the Bank from maintaining the 55% of the required minimum reserve. This exemption will apply from 02 July 2018 to 31 December 2021. In accordance with Paragraph 12 of the NBP Resolution No. 40/2015, the Bank may use the funds held in the obligatory reserve for current cash settlements.

The obligatory reserve declared to be maintained in December 2019 amounted to PLN 195,497 thousand (in December 2018 it amounted to PLN 197,648 thousand). The Bank has to maintain an average balance of cash and cash equivalents above the declared obligatory reserve during each month.

Explanation of differences between the balance sheet changes and the cash flow statement (operating activities) of these items:

Specification	for the year ended	
	31-12-2019	31-12-2018
Change in receivables from other banks	30,371	179,644
Deposits placed in other banks, recognized as cash equivalents	- 36,771	- 191,031
Change of deposit balance held in other banks and receivables from other banks in total	- 6,400	- 11,387
Change in investment securities	174,215	63,428
Change in investment securities classified as cash and cash equivalents	- 119,925	- 159,792
Purchase of securities measured at amortized cost	-	251,453
Interest received on securities measured at amortized cost	- 53,461	- 48,063
Reclassification of interest from securities measured at amortized cost to interest from investing activities	55,577	48,197
Revaluation of financial assets carried at fair value through other comprehensive income	- 11,866	60,179
Change in investment securities in total	44,540	215,402
Change in other assets and income tax	3,519	81,714
Deferred income tax presented in the profit and loss account	7,100	5,984
Deferred income tax on valuation of investment securities	2,339	17,890
Non-cash changes in intangible assets and tangible fixed assets	- 6,449	- 2,502
Total change in other assets and income tax	6,509	103,086
Changes in balance of provisions	21,932	10,638
Actuary's valuation impact on the revaluation reserve	- 103	60
Total change in provisions	21,829	10,698
Change in other liabilities and in income tax	- 20,058	- 124,003
Current income tax charge	- 45,294	- 30,783
Income tax paid	40,917	26,669
Other changes	97	-
Total change in other liabilities	- 24,338	- 128,117

Change in liabilities relating to banking securities issued and subordinated liabilities	46,531	1,008,410
Redemption of bonds, in which:	- 46,000	- 1,000,000
<i>subordinated bonds</i>	-	- 220,000
<i>ordinary</i>	- 46,000	- 780,000
Interest paid on bonds issued by the Bank, of which:	- 19,184	- 45,778
<i>on subordinated bonds</i>	- 17,627	- 27,482
<i>ordinary</i>	- 1,557	- 18,296
Accrued interest on bonds issued by the Bank, of which:	18,653	37,368
<i>on subordinated bonds</i>	17,686	22,461
<i>ordinary</i>	967	14,907
Change in liabilities relating to banking securities issued, total	-	-

45. Description of derivative financial instruments and foreign exchange transactions

Currency exchange transactions and currency derivatives transactions

31-12-2019		31-12-2018		31-12-2019		31-12-2018		31-12-2019		31-12-2018	
INSTRUMENT		FX Swap		FX Forward				FX Spot			
Instrument description	A transaction which requires both parties of the contract to make an initial currency exchange within a specified date and at a specified price and returnable (final) exchange at a specific date in the future (other than the so-called “first leg” settlement) and at the rate agreed at the inception of transactions (mostly different from the initial exchange rate). The currency, in which one of the contracting parties shall be obliged to pay to the other as a result of the final exchange is the same currency, which the contractor received during the initial exchange.			A forward exchange transaction of a specified currency amount into another currency at a specified date, according to a specified forward rate. The instrument is characterized as forward outright, i.e. with delivery. All transaction conditions are determined on its execution date.				Exchange transaction of a specified currency amount into another currency, at a forward rate agreed at the time of the transaction. Settlement of the transaction usually occurs within two working days from the date of conclusion.			
Purpose of acquisition or issue	for trading/liquidity			for trading				for trading			
Number of transactions	44	31		95	114			122	170		
Nominal value of instruments (in PLN thousand)	869,957	562,555		133,027	105,623			210,980	157,211		
Fair value (in PLN thousand)	10,263	9,601		227	468			1	-121		
- positive	12,526	14,839		763	560			117	95		
- negative	-2,263	-5,238		-536	-92			-116	-216		
Future revenues/ payment	Variables			Variables				Variables			
Average maturity	5/2/2020	3/18/2019		5/3/2020	2/28/2019			1/2/2020	1/2/2019		
Possibility of earlier settlement	None			On the client's request				None			
Possibility of exchange or replacement with another asset/liability	None			None				None			

Other terms	None	None	None
Type of risk that is related to a given derivative	Operating risk market risk, counterparty risk	Operating risk market risk, counterparty risk	Operating risk market risk, counterparty risk

Currency exchange transactions and currency derivatives transactions

	31-12-2019	31-12-2018
Instruments at nominal value	1,213,964	825,389
Total currency exchange transactions and currency derivatives transactions:		
<i>assets</i>	13,406	15,494
<i>liabilities</i>	-2,915	-5,546

Transactions using interest rate derivatives:

31-12-2019		31-12-2018		31-12-2019		31-12-2018		31-12-2019		31-12-2018	
INSTRUMENT		Interest rate swaps (IRS)		Interest rate swaps (IRS to hedge PLN)		Interest rate swaps (IRS to hedge EUR)		Forward transactions for bonds			
Instrument description	A transaction requiring both parties to exchange periodic interest payments on certain nominal amount during an agreed period. The interest payments are denominated in the same currency and are calculated according to the interest rate fixed for each of the parties (one rate may be fixed and the other may be variable, or both may be variable, but dependent on the different indexes). This category also includes the IRS transactions, for which the nominal amount varies over time - amortized swaps. This category also includes the IRS transactions, for which the nominal amount varies over time - amortized swaps.		A transaction requiring both parties to exchange periodic interest payments on certain nominal amount during an agreed period. The interest payments are denominated in the same currency and are calculated according to the interest rate fixed for each of the parties (one rate may be fixed and the other may be variable, or both may be variable, but dependent on the different indexes).		A transaction requiring both parties to exchange periodic interest payments on certain nominal amount during an agreed period. The interest payments are denominated in the same currency and are calculated according to the interest rate fixed for each of the parties (one rate may be fixed and the other may be variable, or both may be variable, but dependent on the different indexes).		A forward purchase/sale transaction for a specified amount of securities in a defined time period on the basis of an established forward rate. All transaction conditions are determined on its execution date.				
Purpose of acquisition or issue	for trading		as hedge (fair value hedge accounting)		as hedge (cash flow hedge accounting)		for trading				
Number of transactions	180	158	7	8	-	-	5				
Nominal value of instruments (in PLN thousand)	4,976,531	4,389,148	468,000	536,000	-	-	80,000				
Fair value (in PLN thousand)	-1,924	5,230	-16,869	-18,298	-	-	120				
- positive	41,988	51,206	-	-	-	-	120				
- negative	-45,826	-48,049	-16,869	-18,298	-	-	-				
Future revenues/ payment	Variables		Variables		Variables		Variables				

Average maturity	6/29/2022	9/3/2021	5/31/2023	12/2/2022	-	-	12/12/2023	-
Possibility of earlier settlement	There is no such possibility in general, but there is a possibility in the case of non-banking clients in the cases specified in the agreements. Possible, rarely used		None		None		None	
Possibility of exchange or replacement with another asset/liability	None		None		None		None	
Other terms	None		None		None		None	
Type of risk	Operating risk market risk, counterparty risk		Operating risk market risk, counterparty risk		Operating risk market risk, counterparty risk		Operating risk market risk, counterparty risk	

Transactions using interest rate derivatives:

	31-12-2019	31-12-2018
Instruments at nominal value	5,524,531	4,925,148
Total interest rate derivatives transactions:		
<i>assets</i>	42,108	51,206
<i>liabilities</i>	-62,695	-66,347

Futures and options:

31-12-2019			31-12-2018		31-12-2019			31-12-2018		31-12-2019			31-12-2018	
INSTRUMENT	Future contracts on shares, stock indexes and exchange rates			Forward contracts on stock index, exchange rates, commodities				Contract for Difference (CFD)						
Instrument description	A futures share/stock market indexes contracts is a standardized transaction that requires cash settlement in the future or the underlying asset's delivery, depending on the share price or the value of index of foreign exchange and position.			Forward contracts for sale and purchase of various currencies with determined future settlement date. Such instruments allow to earn based on differences in interest rates between the currency pairs. Standard forward contracts concern transactions in which given settlement period is longer than two days, which is typical for spot transactions.				Contract for Difference (CFD) constitute the group of the so-called derivatives. This means that their value depends directly on the value of an underlying instrument they are worth. The underlying instruments may be either spot market instruments (such as currency pairs, gold and silver) as well as a futures/forward instruments (e.g. forward contracts on stock indexes all over the world, commodity derivatives traded on commodity markets etc.). CFDs make it possible to take a long or a short position and the result is calculated only on the basis of the exchange rate differences. CFD trading is not associated with a physical settlement of the position.						
Purpose of acquisition or issue	for trading			for trading				for trading						
Number of transactions	7,616		8,731	63		186		280,472			87,885			
Nominal value of instruments (in PLN thousand)	116,883		43,760	25,439		71,217		665,347			443,296			
Fair value (in PLN thousand)	-659		169	98		-100		18,562			8,217			
- positive	114		241	210		219		19,862			8,567			
- negative	-773		-72	-112		-319		-1,300			-350			
Future revenues/ payment	Variables			Variables				Variables						
Maturity	Variable			Variable				Variable						
Possibility of earlier settlement	Yes			Yes				Yes						
Price/ Price range	None			None				None						
Possibility of exchange or replacement with another asset/liability	None			None				None						
Additional hedging	None			None				None						
Other terms	None			None				None						
Type of risk	Operational risk, equity price risk, currency risk			Operational risk, currency risk, equity price risk, commodity price risk				Operational risk, currency risk, interest rate risk, commodity price risk, equity price risk						

Futures and options:

Specification	31-12-2019	31-12-2018
Instruments at nominal value	807,669	558,273
Total futures and options:		
<i>assets</i>	20,185	9,026
<i>liabilities</i>	-2,185	-741

Total derivative financial instruments:

Specification	31-12-2019	31-12-2018
Instruments at nominal value	7,546,164	6,308,810
Total derivative financial instruments:		
<i>assets</i>	75,699	75,726
<i>liabilities</i>	-67,795	-72,634

Offsetting of financial assets and financial liabilities

The BOŚ Group does not offset its own financial instruments value, in the financial assets and financial liabilities recognized in its consolidated financial statements .

46. Fair value of financial assets and liabilities

The carrying amount and the fair value of financial assets and liabilities other than measured at fair value in the consolidated financial statements are presented below:

Specification	Carrying value as at 31-12- 2019	Fair value as at 31-12-2019	Carrying value as at 31-12- 2018	Fair value as at 31-12-2018
FINANCIAL ASSETS				
Receivables from other banks	165,733	169,153	196,104	197,639
Receivables from clients including:	12,003,794	11,965,167	11,809,527	11,734,365
<i>receivables denominated in Polish zloty</i>	9,161,456	9,136,066	9,050,026	8,980,787
<i>receivables denominated in foreign currencies</i>	2,842,338	2,829,101	2,759,501	2,753,578
Investment securities - measured at amortized cost	1,377,384	1,423,814	1,375,268	1,409,156
Debt securities, in which:	1,377,384	1,423,814	1,375,268	1,409,156
<i>State Treasury</i>	1,377,384	1,423,814	1,375,268	1,409,156
FINANCIAL LIABILITIES				
Amounts due to Central Bank and other banks	595,667	595,667	571,784	571,784
Amounts due to customers, of which:	14,914,981	14,924,644	14,799,109	14,805,470
<i>institutional clients</i>	5,182,156	5,182,596	4,999,366	5,000,003
<i>individual customers</i>	8,891,460	8,899,773	8,825,702	8,829,997
<i>other clients</i>	63,607	63,607	92,448	92,448
<i>international financial institutions</i>	777,758	778,668	881,593	883,022
Liabilities related to the issue of bank securities	-	-	46,590	46,612
Subordinated liabilities	370,731	348,503	370,672	444,568

Receivables from other banks

Amounts due from other banks comprise inter-bank deposits, nostro accounts and loans and advances. Due to the short maturity period of inter-bank deposits (up to 6 months, inter-bank deposits have fixed interest rate), their fair value is equal to the carrying value. Bonds issued by banks were measured at fair value, after accounting for a change in the credit spread calculated on the basis of comparable issues by similar banks.

Receivables from clients

Receivables from clients are presented net of impairment allowance. In the balance sheet, receivables from clients are mainly stated at amortized cost and using the effective interest rate (99% of the carrying value of credits).

The fair value of loans is calculated based on the present value of future cash flows arising from the capital and interest (separately for loans granted in Polish zloty and other currencies) calculated on the basis of the effective interest rate for each loan (except for loans without a schedule set or non-performing loans, for these the carrying amount is taken for the fair value) discounted using the average effective rate of loans granted in the last twelve months. For mortgage loans, advance payments were taken into account. In case of loans in foreign currencies, which have been discontinued by the Bank, the effective interest rate of the corresponding loans in PLN was applied, adjusted with the difference between the levels of interest rates in the different currencies and PLN.

Investment securities measured at amortized cost

Investment securities measured at amortized cost include State Treasury bonds assigned to the HtC business model. Fair value of the bonds is assumed as the current valuation from the market quotation, increased by accrued interests.

Liabilities due to Central Bank and other banks

Liabilities due to the Central Bank as well as liabilities related to repo transactions were reported at carrying amount. Liabilities related to repo transactions were recognized at the carrying amount due to the lack of available market data necessary to calculate the fair value of basic repo transactions of the Bank with a customer.

Being short-term deposits, interbank deposits were recorded at carrying amount, and the outstanding loans (principal and interest) were discounted using the average effective interest rate of liabilities towards banks incurred in 2018.

Liabilities due to customers

Liabilities in the balance sheet are stated at amortized cost using the effective interest rate method. As the fair value of liabilities, the Bank takes the value resulting from discounting of principal and interest for all deposits by applying weighted average interest rate that was in force for deposits taken in September 2019. Current accounts, due to the lack of schedules, are stated at carrying amount.

Liabilities (capital and interest) to international financial institutions were discounted using the average effective interest rate of incurred liability (for EUR) or the last transaction made in the given currency (for PLN).

Liabilities arising from the issue of securities

Liabilities arising from the issue of securities are valued at fair value including credit spread of bonds in PLN calculated on the basis of the most recent issue of the Bank.

Subordinated liabilities

Subordinated debt is measured at fair value, after considering the difference in credit spread calculated on the basis of the Bank's issue in 2017.

47. Breakdown of financial instruments measured at fair value by the valuation model

The fair value in accordance with IFRS 13 is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction on the main (or most advantageous) market at the measurement date in the current market conditions (meaning the output price) regardless whether that price is directly observable or estimated using other valuation techniques. In estimating the fair value, the Group takes into account the adjustment for counterparty credit risk.

As at 31 December 2019 and as at 31 December 2018, the Group classified its financial assets and financial liabilities measured at fair value into three categories (levels), according to the valuation method:

- 1) Level 1: mark-to-market valuation method, directly from available market quotations of instruments. This applies to quoted equity and debt securities and NBP bills (quotations based on reference rate),
- 2) Level 2: mark-to-model valuation method with model parametrization based on quotations from an active market for the given type of instruments or prices obtained in transactions made on the date close to the balance sheet date on an arm's-length basis. Fair value is determined as well as based on reference to other, similar instruments, by analysis of discounted cash flows and other valuation methods commonly used by market participants and in the case of financial instruments whose valuation is not possible - at acquisition cost. This applies to non-quoted bank securities, equity securities and derivatives (including forward transactions on securities) except for those that fall under level 3. Additionally in the portfolio of assets available for sale, DM BOŚ holds shares of an economic entity for which there is no active market. Due to the above, fair value of these securities is based on the valuation model developed by the Company, including the comparable values for entities listed on the Warsaw Stock Exchange,
- 3) Level 3: mark-to-model valuation method with model parametrization based on quotations from an active market for the given type of instruments and model parametrization based on estimated risk factors. This applies to municipal securities (valuation based on discounted cash flows when the credit spreads used for valuation are calculated on the basis of internal ratings), securities of other banks (valuation is based on the securities margins quoted on the market at the moment of price determination, issued by carefully selected issuers), unlisted equity securities and low liquid capital securities (valued using the discounted cash flows method). In case of DM BOŚ, those are financial instruments acquired with the intention of bringing them to a regulated market. Fair value is determined based on an analysis of the financial situation of the company, taking into account impairment allowance.

Breakdown of financial instruments by level:

31-12-2019	Level 1	Level 2	Level 3	Total
Financial assets held for trading	64,598	47	-	64,645
Debt securities	44,534	-	-	44,534
Equity securities	20,064	47	-	20,111
Derivative financial and hedging instruments	113	75,586	-	75,699
Measured at fair value through other comprehensive income	3,619,568	-	305,126	3,924,694
Debt securities	3,601,025	-	238,159	3,839,184
Equity securities	18,543	-	66,967	85,510
Receivables from other banks	-	-	169,153	169,153
Receivables from clients	-	-	11,965,167	11,965,167
Investment securities measured at amortized cost	1,423,814	-	-	1,423,814
Total	5,108,093	75,633	12,439,446	17,623,172

31-12-2019	Level 1	Level 2	Level 3	Total
Financial liabilities for trade	347	67,448	-	67,795
Derivative financial and hedging instruments	347	67,448	-	67,795
Liabilities due to other banks	-	-	595,667	595,667
Liabilities due to clients	-	-	14,924,644	14,924,644
Liabilities related to the issue of bank securities	-	-	-	-
Subordinated liabilities	-	-	348,503	348,503
Total	347	67,448	15,868,814	15,936,609

Changes in securities measured at fair value through other comprehensive income				Level 3
At the beginning of the period 01-01-2019				318,109
Purchase				50,035
Sale and redemption				-60,967
Total profit or loss				
<i>in profit or loss</i>				-8,846
<i>in other comprehensive income</i>				6,795
At the end of the period 31-12-2019				305,126

31-12-2018	Level 1	Level 2	Level 3	Total
Financial assets held for trading	11,988	47	-	12,035
Debt securities	2,903	-	-	2,903
Equity securities	9,085	47	-	9,132

Derivative financial and hedging instruments	240	75,486	-	75,836
Measured at fair value through other comprehensive income	3,782,916	-	318,109	4,101,025
Debt securities	3,764,373	-	251,625	4,015,998
Equity securities	18,543	-	66,484	85,027
Receivables from other banks	-	-	197,639	197,639
Receivables from clients	-	-	11,734,365	11,734,365
Investment securities measured at amortized cost	1,409,156	-	-	1,409,156
Total	5,204,300	75,643	12,250,113	17,530,056

31-12-2018	Level 1	Level 2	Level 3	Total
Financial liabilities for trade	72	72,562	-	72,634
Derivative financial and hedging instruments	72	72,562	-	72,634
Liabilities due to other banks	-	-	571,784	571,784
Liabilities due to clients	-	-	14,805,470	14,805,470
Liabilities related to the issue of bank securities	-	-	46,612	46,612
Subordinated liabilities	-	-	344,400	344,400
Total	72	72,562	15,868,434	15,941,068

Changes in securities measured at fair value through other comprehensive income				Level 3
At the beginning of the period 01-01-2018				462,367
Purchase				-
Sale and redemption				-143,371
Total profit or loss				
<i>in profit or loss</i>				-15,125
<i>in other comprehensive income</i>				14,238
At the end of the period 31-12-2018				318,109

Reclassifications of financial instruments between Level 1 and Level 2 take place based on the availability of quotations from an active market at the reporting date.

Reclassifications of financial instruments from Level 2 to Level 3 take place where in the process of instrument measurement, the observable inputs are changed to the unobservable ones, or where in financial instruments measurement the use of the unobservable inputs has material impact on financial instrument measurement.

Reclassifications of financial instruments from Level 3 to Level 2 take place where in the process of financial instrument measurement, the unobservable inputs are changed to the observable ones, or where the impact of unobservable inputs on financial instrument measurement is no longer material.

Transfers between valuation methods are made at the reporting date according to the balance at the end of the reporting period.

In the period from 01 January 2019 to 31 December 2019, there were no reclassifications of financial instruments between the levels. In the case of instruments classified to Level 3, their measurement does not have any impact on the profit and loss account. The re-measurement to fair value of Level 3 financial instruments was accounted for in other comprehensive income. The financial result includes interest accrued, interest paid, discount or premium, FX differences and released provisions (relates to equity securities).

As at 31 December 2019, the analysis of the sensitivity of municipal bonds classified to the Level 3 shows that with +/- 1 b.p. fluctuations in credit spread (unobservable model parameter), their value was PLN 69 thousand (as at 31 December 2017 - PLN 94 thousand).

48. Segment reporting

According to the requirements set by IFRS 8, operating segments were determined based on the internal management reports regarding components of the entity that is evaluated regularly by the chief operating decision maker.

IFRS 8 defines operating segment as a part of the entity's operations that meets three criteria:

- 1) the component engages in business activities from which it may earn revenues and incur expenses,
- 2) the results of operations of the component are regularly reviewed by the main body responsible for making operating decisions in the entity and using these results to make decisions regarding allocation of resources,
- 3) discrete financial information is available for the component.

Segment reporting principles per operating segment for the periods ended 31 December 2019 and 31 December 2018 are split into the following types of business activities:

- 1) institutional customers,
- 2) retail customers,
- 3) treasury and investment activity,
- 4) other (not allocated to individual segments).

The activity carried out in the institutional segment involves transactions performed by Business Centers, service branches and the Head Office of the Bank with corporate customers, small and middle enterprises, and micro-enterprises. Activity of the Bank related to individual customers, on the other hand, consists of transactions with customers being natural persons. Treasury and investment activities comprise activities on the inter-bank, debt securities and derivatives markets as well as capital investments. Treasury and investment activities embrace liquidity management, foreign currency and interest rate risk management of the Bank and settlements of transfer prices in transactions between funds and other business segments.

The type 'other' (non-allocated to any of the segments) includes parts of statement of profit or loss, which were not allocated to any of the segments mentioned in sub-item a-d types of activities, in particular income and costs generated from non-classified clients.

Financial data for BOŚ Leasing – EKO Profit S.A. and MS Wind Sp. z o.o. companies is classified as belonging to the segment of institutional clients.

Products of divisions and areas of activities specified in items sub-item a-c above have been described in the "Management Report of the Group of Bank Ochrony Środowiska S.A. in the 2019", Item II sub-item 6.

Products of the segment of treasury and investment activities comprise financial instruments, current and term inter-bank deposits and ALM clients, loans from other banks and loans granted to other banks, equity and debt securities, as well as derivatives.

Assets and liabilities of the segments specified in sub-items a-b above were separated based on the Bank's credit and deposit base.

Net interest income includes the transfer settlements between divisions of individual customers and institutional clients versus treasury and investment area. Transfer valuation of the funds is based on reference rates, additional funding rates and variable transfer rates, including currency, stability of funds and terms, which are referenced to yield curve. All relevant

assets and interest-bearing liabilities, as well as off-balance sheet items that generate demand for liquidity shall be a subject of transfer rates measurement. The valuation is carried out on a monthly basis and is based on the average (daily) individual transactions of interest attributable to each segment separately for each currency.

The result from the operating activity of institutional division and individual division is the result from bank activities of these divisions decreased by the administration costs allocated directly to the transactions or units of the given division, as well as allocated costs and impairment losses write-offs. The financial result also includes mutual settlements relating to the customer service for the institutional segment by operating bank branches (allocated to the individual customer segment).

The financial results of the above-mentioned segments represent the sum of the following components:

- 1) Net interest income - i.e. the sum of the difference between the interest income on loans and customer municipal bonds, and the costs for the funds received from ALM (treasury and investment activities) and income from the transfer of funds to the ALM, reduced by interest expense paid to the Bank's clients.
- 2) Net fee and commission income - calculated as the difference between revenues from fees and commissions and costs associated to the transaction allocated to the segment. The result includes one-off revenues and expenses, as well as those settled over time on a straight-line basis, while revenues and expenses settled in time with attributed transactions according to the effective interest rate method are recognized in net interest income.
- 3) The foreign exchange result, i.e., income from negotiated currency exchange transactions (forwards and SPOTs) and income from currency exchange according to the Bank's exchange rate table. The item includes the result from derivative transactions.
- 4) Net impairment losses and measurement of receivables at the fair value through the financial result, i.e. the result of changes in value of impairment losses for credits and municipal and corporate bonds, as well as the result on credits and municipal and corporate bonds measured at their fair value and allocated to the given activity area. The result includes changes due to exchange rate fluctuations of foreign currency loan impaired portfolio.

The financial result of treasury and investment activities comprises the total of the results on the treasury activities and in the area of equity investments of the Bank, which consists of the following elements:

- 1) Net interest income - calculated as total of net interest income from transactions with external clients and the result from the settlements with other segments regarding transfer prices. External interest income and expense relate to transactions on inter-bank market (deposits and loans) as well as debt securities purchased and issued. The result on settlements concerning transfer prices is calculated as the difference between income from financing other segments' assets and expense on deposits received from other segments.
- 2) The foreign exchange result includes the result of speculative currency exchange transactions, revaluation of hedging items that hedge FX loans and changes in the valuation of items hedging active FX forwards. The item includes foreign exchange result not allocated to other segments.
- 3) The hedge accounting result includes the result from transactions hedging the cash flows and the fair value.
- 4) The result on financial instruments measured at the fair value through profit or loss, result on activity registered in the trading book as well as on financial instruments' operations, including FX Swap operations.
- 5) The result on investment securities - relates to stock, shares and debt securities and the valuation of financial instruments.
- 6) Dividend revenues
- 7) The difference in value of impairment write-offs; the result concerns shares and stocks and interest held in financial institutions assigned to the area of treasury and investment activities.

The table below presents the financial results of the BOŚ S.A. Capital Group for the periods ended 31 December 2019 and 31 December 2018 attributable to reporting segments.

No.	Statement presenting components of the profit and loss account for the period of 12 months ended 31 December 2019	INSTITUTIONAL CLIENTS	INDIVIDUAL CUSTOMERS	TREASURY AND INVESTMENT ACTIVITY	BROKERAGE ACTIVITY	OTHER (NON-ALLOCATED TO THE SEGMENTS).	BOŚ GROUP
I.	Net interest income	204,683	87,238	122,356	6,955	-1,245	419,987
1.	Interest income and similar income, in which:	483,441	303,848	-154,633	9,736	17	642,409
	<i>transactions with external clients</i>	378,530	121,686	126,375	999	-	627,590
	<i>transactions with other segments</i>	104,911	182,162	-281,008	8,737	17	14,819
2.	Interest expense and similar charges, in which:	-278,758	-216,610	276,989	-2,781	-1,262	-222,422
	<i>transactions with external clients</i>	-46,887	-126,248	-33,214	-1,201	-53	-207,603
	<i>transactions with other segments</i>	-231,871	-90,362	310,203	-1,580	-1,209	-14,819
II.	Net fee and commission income	53,433	7,518	1	38,816	-1,395	98,373
III.	Dividend income	-	-	6,277	157	-	6,434
IV.	Result on financial instruments assessed according to their fair value through the financial result	1,428	221	13,817	29,491	-	44,957
V.	Result on hedge accounting	-	-	-42	-	-	-42
VI.	Result on investment securities	-	-	582	-	-	582
VII.	Foreign exchange result	11,538	3,313	1,918	-166	-100	16,503
VIII.	Net banking income	271,082	98,290	144,909	75,253	-2,740	586,794
IX.	Net income on other operating revenues and expenses	2,692	-22,071	-	-939	9,602	-10,716
X.	Result on loss of value for impairment	-62,943	-42,650	1,057	-	-	-104,536
XI.	Result on financing activities	210,831	33,569	145,966	74,314	6,862	471,542

1.	Direct costs	-27,497	-27,215	-	-55,919	-1,175	-111,806
	Result after direct cost	183,334	6,354	145,966	18,395	5,687	359,736
2.	Indirect costs and mutual services	-66,783	-65,952	-12,670	-	-	-145,405
	Result after direct and indirect cost	116,551	-59,598	133,296	18,395	5,687	214,331
3.	Amortization/ Depreciation	-20,226	-24,045	-2,102	-7,896	-1,389	-55,658
5.	Other costs (taxes, BFG, PFSA)	-24,257	-20,547	-157	-3,180	-344	-48,485
XII.	Gross financial result	72,068	-104,190	131,037	7,319	3,954	110,188
XIII.	ALM result allocated	62,037	65,407	-127,444	-	-	-
XIV.	Gross financial result after allocation of ALM result	134,105	-38,783	3,593	7,319	3,954	110,188
XV.	Tax expenses						-38,194
XVI.	Net financial result						71,994
	Segment assets	8,647,982	3,553,302	5,773,494	249,353	262,866	18,486,997
	in which receivables from banks and clients	8,445,284	3,553,302	153,235	17,706	-	12,169,527
	Segment liabilities	4,827,108	8,377,446	1,848,704	928,332	2,505,407	18,486,997
	in which liabilities to banks and clients	4,813,405	8,377,446	1,438,635	816,508	64,654	15,510,648
	Capital outlays on fixed assets and intangibles	14,890	15,345	1,661	6,661	1,116	39,673

No.	Statement presenting components of the profit and loss account for the period of 12 months ended 31 December 2018	INSTITUTIONAL CLIENTS	INDIVIDUAL CUSTOMERS	TREASURY AND INVESTMENT ACTIVITY	BROKERAGE ACTIVITY	OTHER (NON-ALLOCATED TO THE SEGMENTS).	BOŚ GROUP
I.	Net interest income	190,220	106,645	82,151	6,327	-1,228	384,115
1.	Interest income and similar income, in which:	480,180	339,255	-187,544	8,569	13	640,473
	<i>transactions with external clients</i>	363,535	131,963	131,830	976	-	628,304
	<i>transactions with other segments</i>	116,645	207,292	-319,374	7,593	13	12,169
2.	Interest expense and similar charges, in which:	-289,960	-232,610	269,695	-2,242	-1,241	-256,358
	<i>transactions with external clients</i>	-55,336	-137,809	-50,220	-824	-	-244,189
	<i>transactions with other segments</i>	-234,624	-94,801	319,915	-1,418	-1,241	-12,169
II.	Net fee and commission income	51,031	8,252	-811	41,142	-1,720	97,894
III.	Dividend income	-	-	5,932	137	-	6,069
IV.	Result on financial instruments assessed according to their fair value through the financial result	17,019	-176	19,040	26,707	-	62,590
V.	Result on hedge accounting	-	-	1,313	-	-	1,313
VI.	Result on investment securities	14	-	2,152	-	-	2,166
VII.	Foreign exchange result	8,203	4,377	10,760	853	58	24,251
VIII.	Net banking income	266,487	119,098	120,537	75,166	-2,890	578,398
IX.	Net income on other operating revenues and expenses	5,283	178	-	1,687	-5,686	1,462
X.	Result on loss of value for impairment	-86,206	-45,085	-2,805	-	6	-134,090
XI.	Result on financing activities	185,564	74,191	117,732	76,853	-8,570	445,770

1.	Direct costs	-30,691	-28,390	-	-63,104	-1,820	-124,005
	Result after direct cost	154,873	45,801	117,732	13,749	-10,390	321,765
2.	Indirect costs and mutual services	-65,339	-74,911	-12,613	-	-	-152,863
	Result after direct and indirect cost	89,534	-29,110	105,119	13,749	-10,390	168,902
3.	Amortization/ Depreciation	-14,064	-16,465	-2,088	-5,990	-1,177	-39,784
4.	Other costs (taxes, BFG, PFSA)	-18,896	-16,949	-110	-3,750	-886	-40,591
XII.	Gross financial result	56,574	-62,524	102,921	4,009	-12,453	88,527
XIII.	ALM result allocated	38,481	62,017	-100,498	-	-	-
XIV.	Gross financial result after allocation of ALM result	95,055	-507	2,423	4,009	-12,453	88,527
XV.	Tax expenses						-24,799
XVI.	Net financial result						63,728
	Segment assets	8,352,748	3,708,555	5,790,326	256,834	142,562	18,251,025
	in which receivables from banks and clients	8,094,151	3,708,555	175,517	27,398	10	12,005,631
	Segment liabilities	4,697,152	8,351,083	4,109,266	878,275	215,249	18,251,025
	in which liabilities to banks and clients	4,695,824	8,351,083	1,510,297	721,241	92,448	15,370,893
	Capital outlays on fixed assets and intangibles	11,523	12,461	1,349	6,448	1	31,782

49. Transactions with related entities

As at 31 December 2019, Bank Ochrony Środowiska S.A. acted as the parent entity for the following entities: Dom Maklerski BOŚ S.A., BOŚ Leasing - EKO Profit S.A., as well as MS Wind Sp. z o.o.

National Fund for Environmental Protection and Water Management (NFEPWM) was the parent entity in relation to BOŚ S.A.

Key management personnel is treated as related party as well.

Description of transactions with the principal shareholder of the Bank, that is, NFEPWM

As at 31 December 2019, as part of the Prosument program relating to financing purchase and assembly of installations for renewable energy sources, the National Fund for Environmental Protection and Water Management (NFEPWM) entrusted funds for preference loans for the amount of PLN 23,966 thousand, while as at 31 December 2018 they amounted to PLN 31,991 thousand.

The NFEPWM granted subsidies to loan interests for the clients, which in the 12-month period ended 31 December 2019 amounted to PLN 232 thousand, and PLN 552 thousand in 2018.

The NFEPWM is an entity related to the State Treasury. The Bank concludes transactions with related parties of the State Treasury - mainly from the public finance sector entities. Transactions with the NFEPWM were conducted under general public offer conditions of the Bank.

Information on loans and deposits of Management Board and Supervisory Board Members of the BOŚ Group

As part of the operating activities, the transactions concluded with members of the management body and the key management personnel comprise mainly loans and deposits. The balances of individual balance sheet items at 31 December 2019 and 31 December 2018, and the related costs and revenues for the 12-month periods ended 31 December 2019 and 31 December 2018 are presented below:

Key management personnel:

Specification	31-12-2019	31-12-2018
Balance of credits	2	3
Loans granted in form of lines of credit	-	31
Balance of deposits	2,118	1,645
Total	2,120	1,679
Specification	31-12-2019	31-12-2018
Interest expense on deposits	24	24

The key management personnel uses the loans and deposits on the general terms of the Bank's offer to the public.

Remuneration of the key management personnel of BOŚ S.A.

Supervisory Board of the Bank	Remuneration		For performance of functions in managerial bodies of subordinated entities	
	paid for year 2019	paid for year 2018	paid for year 2019	paid for year 2018
Janina Goss	120	113	-	-
Oskar Kowalewski ¹	-	13	-	-
Andrzej Matysiak	135	127	-	-
Paweł Mzyk ¹	-	13	-	-
Piotr Sadownik	121	109	-	-
Marian Szolucha ²	55	111	-	-
Emil Ślęzak	82	127	-	-
Wojciech Wardacki	169	160	-	-
Iwona Duda	119	98	-	-
Ireneusz Purgacz ³	62	-	-	-
Radosław Rasala ³	63	-	-	-
Paweł Sałek ³	64	-	-	-
Katarzyna Lewandowska ³	73	-	-	-
Dariusz Wasilewski ²	57	98	-	-
Total ⁴	1,120	969	-	-

¹ member of the Supervisory Board until 13 February 2018

² member of the Supervisory Board until 18 June 2019

³ member of the Supervisory Board since 18 June 2019

⁴ all payments were short-term employee benefits.

The total amount of remuneration of the Members of the Bank's Supervisory Board paid in 2019 includes: remuneration of the Members of the Bank's Supervisory Board, return of overpaid social security contributions reimbursement of cost of tickets, petrol, accommodation, subscription fees for Employee Capital Plans paid by BOŚ S.A.

Management Board of the Bank	Remuneration		For performance of functions in managerial bodies of subordinated entities	
	paid for year 2019	paid for year 2018	paid for year 2019	paid for year 2018
Anna Milewska ¹	-	104	-	-
Bogusław Białowas	744	569	-	-
Dariusz Grylak ¹	-	62	-	-
Konrad Raczkowski ²	423	389	-	-
Arkadiusz Garbarczyk	670	498	-	-
Emil Ślęzak ³	177	-	-	-
Jerzy Zań ⁴	77	-	-	-
Total	2,091	1,622	-	-

including:				
- short-term employee benefits	1,981	1,536	-	-
- long-term employee benefits	-	-	-	-
- post-employment benefits	110	86	-	-
- benefits due to termination of employment	-	-	-	-

¹ member of the Management Board until 21 February 2018

² member of the Management Board until 18 June 2019

³ member of the Management Board from 18 June to 03 November 2019

⁴ member of the Management Board from 04 November 2019

The total amount of remunerations to the Members of the Bank's Management Board paid in 2019 includes remuneration resulting from contracts concluded for providing management services, benefits due to termination of employment, subscription fees for Employee Capital Plans paid by BOŚ S.A.

50. Business disposal, liquidation and business combinations

There were no business disposal, liquidation or combination events in the BOŚ Group in year 2019.

51. Dividends paid and declared

No dividends were paid or declared in year 2019.

On 18 June 2019, the Ordinary General Meeting of Bank Ochrony Środowiska S.A. allocated the net profit of the Bank generated in the period from 01 January until 31 December 2018 in the amount of PLN 65,012,670.65 in full to supplementary capital.

52. Events after the balance sheet date

On 18 February 2020, the Bank received the decision of the General Inspector for Financial Information on initiation of ex officio proceedings in association with the inspection conducted between 25 and 29 March 2019 to impose an administrative penalty due to a failure to meet the obligations based on the act of 01 March 2018 on counteracting money laundering and financing of terrorism (Journal of Laws of 2019 item 115 as amended). As at the date of preparation of the financial statement, the proceedings of the General Inspector for Financial Information have not been concluded and thus the result of the proceedings remains unknown.

Due to the recorded cases of the coronavirus infection, the BOŚ Group conducts an ongoing analysis of the economic conditions in Poland and other countries. Proper action depending on the scale of spreading of the coronavirus and its effect on the economic situation will be taken by the BOŚ Group in the subsequent reporting periods.

Signatures of Members of the BOŚ S.A. Management Board

Date	First name and surname	Position/function	Signature
16.03.2020	Bogusław Białowas	President of the Management Board.
16.03.2020	Arkadiusz Garbarczyk	Vice President - First deputy of the President of the Management Board
16.03.2020	Jerzy Zań	Vice President of the Management Board

Signature of the person in charge of bookkeeping

16.03.2020	Andrzej Kowalczyk	Director of the Accounting Department
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