

### From one grill to another

#### Reiterated Neutral, TP up to PLN32.0 from PLN30.0

In 2020 PKO reported loss because of huge CHF provisions, 2021 was low yield environment, 2022 was hedging and one-offs, 2023E is likely to be affected by CHF and election campaign, 2024E could be under pressure of rate cuts, as we see it.

PKO remains relatively cheap but probability of potential negative triggers (election campaign, windfall tax, further CHF provisions) seems higher than probability of positive triggers (Poland addressing CHF saga with a bill, Ukraine winning war with Russia, higher 2024 payout) thus we reiterate our Neutral recommendation.

#### 2022 was painfully affected by PLN3.6bn impact of hedging on NII...

2022 NII in the Polish banking sector was up 76%. 2022 NII at PKO grew "only" 51% y/y as hedging cost PKO PLN3,580mn in 2022 (PLN1,238 in 4Q22 alone).

..., and PLN4.9bn one offs. PKO reported 2022 net income of PLN3.3bn, but excluding one-offs (payment holidays, CHF, GNB resolution, FWK) the net income would be at PLN8.2bn.

We expect PLN10.1bn underlying net income in 2023E... NII should further grow due to maturing hedging and low 1H22 base. Decreasing operating expenses (no FWK, no resolution) should more than offset uptake in cost of risk.

... to be consumed by CHF and windfall tax. Our valuation assumes that PKO would increase CHF provisions by further PLN6.0bn (PLN3.0bn in 2023E and PLN3.0bn in 2024E) to 87% coverage. PKO assumptions on the probability of various scenarios for CHF (50% settlement, 30% lawsuit, 20% do nothing) differ from ours (25% settlements, 65% lawsuits, 10% do nothing). We have additionally guesstimated windfall tax at PLN2.0bn in 2023E conservatively assuming that Polish banks are likely to face similar tax to those introduced in Czech and Hungary.

**Valuation and risk.** Our Dec'23 TP is at PLN32.0 and is a weighted average of DDM pointing to valuation of PLN34.9 and a comparative valuation pointing to PLN36.4 (all per share) reduced by PLN 3.9 related to anticipated further cost related to CHF portfolio. We note risks related to governance, macro, regulations, CHF-mortgages, dividends and equity flows.

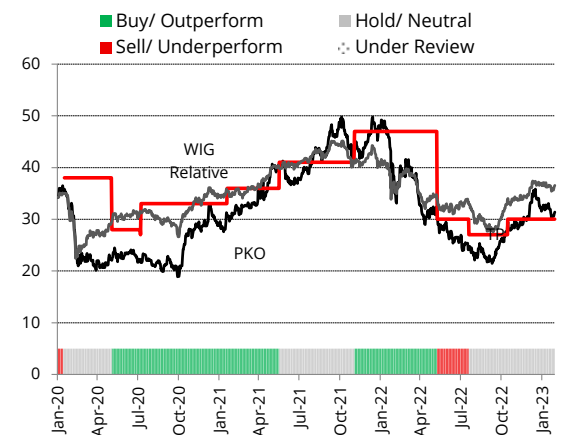
**Fig. 1. PKO BP: Financial summary**

PLNmnn	2021	2022E	2023E	2024E	2025E
P/E (adjusted)	11.2x	4.5x	3.7x	5.3x	6.0x
P/E (reported)	11.2x	11.2x	6.1x	8.2x	6.0x
P/BV	1.45x	1.05x	0.92x	0.84x	0.78x
Dividend Yield	6.1%	4.4%	8.1%	6.1%	8.3%
EPS (PLN)	3.90	6.59	8.08	5.58	4.93
DPS (PLN)	1.83	1.30	2.42	1.82	2.46
BVPS (PLN)	30.2	28.4	32.4	35.6	38.1
Net Income (adj. PLN mn)	4,874	8,239	10,106	6,969	6,157
Net Income (PLN mn)	4,874	3,333	6,056	4,539	6,157

Source: Company data, Santander Brokerage Poland estimates.

Recommendation	Neutral
Dec'23 Target Price (PLN)	32.0

Current price (PLN, 10 Mar 2023)	29.78
Market cap. (PLNbn)	37.2
Avg. daily turnover (PLNmnn)	99.4
Number of shares (mn)	1,250



The chart measures performance against the WIG index.

Main shareholders	% of votes
Republic of Poland Ministry of State Treasury	29.43%
NN OFE	8.28%
Aviva OFE	7.26%

Source: Stooq.pl, Santander Brokerage Poland

#### Analyst

**Kamil Stolarski, PhD, CFA,**  
head of Equity Research  
Equity Analyst

+48 22 586 100 kamil.stolarski@santander.pl

Fig. 2. Valuation summary (PLN/share)

Recommendation	Neutral
<b>Dec'23 Target Price (PLN)</b>	<b>32.00</b>
Current price (PLN)	29.78
Prospective upside (%)	7

\*Our Target Price is calculated as rounded average of DDM Valuation (50% weight) and Comp (50% weight) less estimated impact of CHF-mortgages.

DDM valuation (PLN/share)	34.9
Discounted dividends (PLN/share)	10.1
Terminal value (PLN/share)	25
Terminal ROE (%)	13.37
g (%)	3.00
CoE (%)	14.80
RFR (%)	12.80
Beta (x)	1.30
ERP (%)	6.0

Comp. Valuation PLN/share	36.4
Net Income (PLN mn, next 12 months)	10,106
Applied P/E (x)	4.5
P/E peers (x)	6.0
<b>CHF impact</b>	<b>-3.9</b>

Fig. 3. DDM Valuation sensitivity (PLN/share)

ROE->	9.4%	11.4%	13.4%	15.4%	17.4%
<b>1.0%</b>	26.7	30.7	34.6	38.6	42.5
<b>2.0%</b>	26.1	30.4	34.7	39.1	43.4
<b>3.0%</b>	25.3	30.1	34.9	39.6	44.4
<b>4.0%</b>	24.4	29.7	35.0	40.3	45.6
<b>5.0%</b>	23.2	29.2	35.2	41.2	47.2

Fig. 4. DDM Valuation sensitivity (PLN/share)

ERP->	4.0%	5.0%	6.0%	7.0%	8.0%
<b>4.0%</b>	53.8	44.8	38.5	33.9	30.4
<b>4.5%</b>	49.9	42.1	36.6	32.4	29.3
<b>5.0%</b>	46.6	39.8	34.9	31.1	28.2
<b>5.5%</b>	43.7	37.7	33.3	29.9	27.3
<b>6.0%</b>	41.2	35.9	31.9	28.8	26.4

Fig. 5. Our forecast vs Bloomberg consensus

	Bloomberg consensus			Our assumptions vs cons.		
	2023E	2024E	2025E	2023E	2024E	2025E
Net income	5,900	6,264	6,681	3%	-28%	-8%
DPS (PLN)	1.38	1.89	2.69	-6%	28%	-33%
ROE (%)	15.6	15.3	16.2	0.4 pp	-4.6 pp	-2.8 pp

Fig. 6. Comps Valuation sensitivity (PLN/share)

Fair P/E (x)	1.0x	2.0x	3.0x	4.5x	8.0x	12.0x
vs. peers (%)	-83	-67	-50	-25	33	100
Sensitivity	8.1	16.2	24.3	36.4	64.7	97.0

Fig. 7. Ratios, Assumptions and Forecasts

P&L (PLN mn)	2021	2022	2023E	2024E	2025E
NII	9,882	14,924	17,912	13,673	13,051
F&C	4,431	4,951	5,052	5,178	5,308
Trading Income	718	310	195	194	192
Total Revenue	15,079	20,383	23,320	19,205	18,711
Cost	-6,174	-7,850	-6,890	-7,268	-7,620
NLLP	-1,345	-1,564	-2,079	-1,507	-1,548
one-offs	0	-5,025	-5,000	-3,000	0
Pre-tax Profit	7,591	6,015	9,390	7,470	9,583
Banking tax	-1,079	-1,266	-1,268	-1,287	-1,318
<b>Net Income</b>	<b>4,874</b>	<b>3,333</b>	<b>6,056</b>	<b>4,539</b>	<b>6,157</b>
Net Income (adj.)	4,874	8,239	10,106	6,969	6,157

PLN bn	2021	2022	2023E	2024E	2025E
Total Assets	420	431	440	452	464
Bonds	135	136	142	149	154
Loans	236	232	235	240	246
Loans growth (%)	6	-2	1	2	2
Deposits	322	340	344	352	361
Equity	38	35	41	45	48
Mortgage loans	115	105	103	106	109
CHF mortgages	20	17	14	11	9
Other retail loans	31	32	34	35	36
Corporate loans	92	104	106	108	110

NIM ratios (%)	2021	2022	2023E	2024E	2025E
Asset yield (%)	2.82	4.97	6.74	3.83	3.38
Funding cost (%)	0.22	1.41	2.68	0.63	0.37
NIM (%)	2.64	3.77	4.43	3.29	3.06

Risk ratios (%)	2021	2022	2023E	2024E	2025E
Stage 3 ratio (%)	3.9	3.7			
Stage 3 coverage (%)	61.3	61.8			
Cost of risk (%)	0.59	0.67	0.89	0.63	0.64

Du Pont (%)	2021	2022	2023E	2024E	2025E
NII/assets	2.48	3.51	4.11	3.06	2.85
CoR/assets	-0.34	-0.37	-0.48	-0.34	-0.34
F&C/assets	1.11	1.16	1.16	1.16	1.16
Other rev/assets	0.20	0.14	0.09	0.09	0.09
Costs/assets	-1.55	-1.85	-1.58	-1.63	-1.66
Taxes&other/assets	-0.68	-1.81	-1.91	-1.33	-0.75
ROA	1.22	0.78	1.39	1.02	1.34
Leverage (x)	10.3	11.6	11.5	10.5	9.9
ROE (reported)	12.55	9.11	15.94	10.68	13.37

Capital & dividends	2021	2022	2023E	2024E	2025E
Tier-1 (PLN bn)	38.2	40.8	42.5	45.5	47.8
Tier-2 (PLN bn)	2.7	2.7	2.7	2.7	2.7
TCR (PLN bn)	17.5	17.2	17.4	17.9	18.3
RWA (PLN mn)	202.9	199.1	201.7	206.5	211.4
CT1 ratio (%)	17.4	18.9	19.5	20.4	20.9
CAR ratio (%)	18.6	20.2	20.7	21.6	22.1
Div. payout (%)	46.9	50.0	50.0	50.0	50.0
Dividend (PLN mn)	0	2,288	1,625	3,028	2,270
No. of shares (mn)	1,250	1,250	1,250	1,250	1,250

Source for all tables: Company data, Bloomberg, Santander Brokerage Poland estimates

NOTE: historical valuation ratios based on eoY prices.

## Quarterly Earnings summary - Consensus beat on F&C and CoR

PKO reported 4Q22 net income of PLN1.7bn.

**Fig. 8. Results review (year to December)**

PKO BP (PLN mn)	4Q21	1Q22	2Q22	3Q22	4Q22	q/q	y/y	4Q22E	vs. E	cons.	vs. cons.
Net Interest Income	2,669	3,200	3,639	3,927	4,158	6	56	4,100	1	4,087	2
Fees & commissions	1,195	1,179	1,249	1,282	1,241	-3	4	1,224	1	1,238	0
Trading Income	133	80	14	150	66	-56	-50	48	38		
Other (Net)	-24	50	52	55	41	-25	-271	40	2		
<b>Total Revenue</b>	<b>3,973</b>	<b>4,509</b>	<b>4,954</b>	<b>5,414</b>	<b>5,506</b>	<b>2</b>	<b>39</b>	<b>5,412</b>	<b>2</b>	<b>5,454</b>	<b>1</b>
Personnel Costs	-837	-799	-854	-851	-947	11	13	-1,000	-5		
General Expenses	-492	-800	-1,249	-780	-538	-31	9	-480	12		
D&A	-253	-247	-256	-260	-267	3	6	-263	1		
<b>Operating Expenses</b>	<b>-1,582</b>	<b>-1,846</b>	<b>-2,359</b>	<b>-1,891</b>	<b>-1,752</b>	<b>-7</b>	<b>11</b>	<b>-1,743</b>	<b>1</b>	<b>-1,742</b>	<b>1</b>
<b>Operating Income</b>	<b>2,391</b>	<b>2,663</b>	<b>2,595</b>	<b>3,523</b>	<b>3,754</b>	<b>7</b>	<b>57</b>	<b>3,668</b>	<b>2</b>		
Net Loan Loss Provisions	-528	-504	-226	-460	-374	-19	-29	-400	-6	-411	-9
Other (Net)	0	0	-1,176	-3,111	-738			-738	0	-738	0
Associate income	10	14	14	33	10	-70	0	33	-70		
<b>Pre-tax Profit</b>	<b>1,873</b>	<b>2,173</b>	<b>1,207</b>	<b>-15</b>	<b>2,652</b>	<b>-17778</b>	<b>42</b>	<b>2,563</b>	<b>3</b>		
Corporate Income Tax	-377	-451	-466	105	-604	-675	60	-550	10		
Minority interests	1	1	0	1	-2	-300	-300	0			
Banking tax'	-294	-307	-319	-328	-312	-5	6	-330	-6		
<b>Net Income</b>	<b>1,203</b>	<b>1,416</b>	<b>422</b>	<b>-237</b>	<b>1,732</b>	<b>-831</b>	<b>44</b>	<b>1,683</b>	<b>3</b>	<b>1,698</b>	<b>2</b>
NI excl. one-offs	1,203	1,416	2,195	2,377	2,252	-5	87	2,120	6		

Balance Sheet (PLN bn)	4Q21	1Q22	2Q22	3Q22	4Q22	q/q	y/y	4Q22E	vs. E
Net client lending	234.3	236.7	234.6	235.0	231.7	-1	-1	232.6	0
Bonds	135.4	133.5	129.6	129.4	135.6	5	0	130.2	4
Customer deposits	322.3	321.9	326.3	340.4	339.6	0	5	343.0	-1
Total assets	418.1	421.6	428.8	438.5	430.7	-2	3	441.1	-2
Equity ex minorities	37.7	35.7	31.0	31.7	35.4	12	-6	35.0	1

Key Ratios (%)	4Q21	1Q22	2Q22	3Q22	4Q22	q/q	y/y	4Q22E	vs. E
Net Interest Margin	2.78	3.29	3.73	3.97	4.16	19 bp	149 bps	4.09	7 bp
Cost to Income	-40	-41	-48	-35	-32	3 pp	8 pp	-32	0 pp
Cost of risk [bps]	-91	-86	-38	-78	-64	14 bp	27 bps	-68	4 bp
Loans to deposits ratio	73	74	72	69	68	-1 pp	-4 pp	68	0 pp
ROE	12.1	15.4	5.1	-3.0	20.6	23.7 pp	8.5 pp	20.2	0.4 pp

Source: Company data, Santander Brokerage Poland estimates.

## Forecast changes

**Fig. 9. PKO – Forecast changes – balance sheet**

PLN bn	2022E				2023E				2024E			
	New	Old	%	PLN bn	New	Old	%	PLN bn	New	Old	%	PLN bn
Total Assets	430.7	437.9	-2	-7	440.2	442.6	-1	-2	452.3	453.7	0	-1
Bonds	135.6	129.2	5	6	142.1	134.0	6	8	148.7	140.1	6	9
Loans	231.7	234.6	-1	-3	234.8	234.4	0	0	240.4	239.4	0	1
Loans growth (%)	-2	0			1	0			2	2		
Deposits	339.6	339.8	0	0	344.1	339.6	1	4	352.3	346.9	2	5
Equity	35.4	31.7	12	4	40.4	36.6	10	4	44.4	40.4	10	4
Mortgage loans	105.5	112.1	-6	-7	103.5	110.1	-6	-7	106.5	112.7	-6	-6
CHF mortgages	16.7	18.3	-9	-2	13.6	16.9	-19	-3	11.1	15.6	-29	-4
Other retail loans	32.3	30.6	5	2	33.6	31.9	5	2	35.0	33.2	5	2
Corporate loans	103.7	99.6	4	4	105.8	101.6	4	4	107.9	103.6	4	4
Risk ratios (%)	New	Old	%		New	Old	%		New	Old	%	
Cost of risk (%)	0.67	0.65	0.02		0.89	1.00	-0.11		0.63	0.61	0.03	
Capital & dividends	New	Old	%		New	Old	%		New	Old	%	
Tier-1 (PLN bn)	40.8	40.8	0.0		42.5	42.8	-0.3		45.5	47.5	-2.0	
Tier-2 (PLN bn)	2.7	2.7	0.0		2.7	2.7	0.0		2.7	2.7	0.0	
TCR (PLN bn)	17.2	17.4	-0.2		17.4	17.4	0.0		17.9	17.8	0.1	
RWA (PLN mn)	199.1	201.6	-2.4		201.7	201.4	0.3		206.5	205.7	0.8	
CT1 ratio (%)	18.9	18.7	0.2		19.5	19.6	-0.2		20.4	21.4	-1.0	
CAR ratio (%)	20.2	20.0	0.2		20.7	20.9	-0.2		21.6	22.6	-1.0	
Div. payout (%)	50.0	50.0	0.0		50.0	50.0	0.0		50.0	50.0	0.0	
Dividend (PLN mn)	2,288	2,288	0		1,625	1,997	-372		3,027	4,738	-1,711	
No. of shares (mn)	1,250	1,250	0		1,250	1,250	0		1,250	1,250	0	

Source: Company data, Santander Brokerage Poland estimates

**Fig. 8. PKO – Forecast changes – P&L**

P&L (PLN mn)	2022E				2023E				2024E			
	New	Old	%	PLN mn	New	Old	%	PLN mn	New	Old	%	PLN mn
NII	14,924	14,923	0	1	17,909	18,119	-1	-210	13,672	13,272	3	400
F&C	4,951	4,934	0	17	5,052	4,934	2	118	5,178	5,055	2	123
Trading Income	310	292	6	18	195	195	0	0	194	194	0	0
Total Revenue	20,383	20,346	0	37	23,316	23,408	0	-92	19,204	18,681	3	523
Cost	-7,850	-7,729	2	-121	-6,890	-6,792	1	-98	-7,268	-7,121	2	-147
NLLP	-1,564	-1,521	3	-43	-2,079	-2,341	-11	262	-1,507	-1,439	5	-67
One-offs	-5,025	-4,335	16	-690	-5,000	-481	939	-4,519	-3,000	0		-3,000
Pre-tax Profit	6,015	6,854	-12	-839	9,387	13,833	-32	-4,446	7,469	10,161	-26	-2,692
Banking tax	-1,266	-1,281	-1	15	-1,268	-1,314	-3	45	-1,287	-1,330	-3	43
Net Income	3,333	3,995	-17	-662	6,053	9,476	-36	-3,423	4,539	6,595	-31	-2,056
Net Income (adj.)	8,240	9,742	-15	-1,502	10,103	9,866	2	237	6,969	6,595	6	374
NIM ratios (%)	New	Old	%		New	Old	%		New	Old	%	
NIM (%)	3.77	3.78	-0.01		4.43	4.51	-0.08		3.29	3.24	0.05	
Du Pont (%)	New	Old	%		New	Old	%		New	Old	%	
NII/assets	3.51	3.49	0.02		4.11	4.12	0.00		3.06	2.96	0.10	
CoR/assets	-0.37	-0.36	-0.01		-0.48	-0.53	0.05		-0.34	-0.32	-0.02	
F&C/assets	1.16	1.15	0.01		1.16	1.12	0.04		1.16	1.13	0.03	
Other rev/assets	0.14	0.14	0.00		0.09	0.09	0.00		0.09	0.09	0.00	
Costs/assets	-1.85	-1.81	-0.04		-1.58	-1.54	-0.04		-1.63	-1.59	-0.04	
Taxes&other/assets	-1.81	-1.68	-0.13		-1.91	-1.10	-0.81		-1.33	-0.80	-0.53	
ROA	0.78	0.93	-0.15		1.39	2.15	-0.76		1.02	1.47	-0.45	
Leverage (x)	11.6	12.3	-0.7		11.5	12.9	-1.4		10.5	11.6	-1.1	
ROE (reported)	9.1	11.5	-2.4		16.0	27.7	-11.8		10.7	17.1	-6.4	

Source: Company data, Santander Brokerage Poland estimates

# Santander Brokerage Poland

Jana Pawła II Avenue 17

00-854 Warszawa

fax. (+48) 22 586 81 09

## Equity Research

Kamil Stolarski, PhD, CFA, <i>Head of Equity Research Banks, Insurers, Strategy</i>	tel. (+48) 22 586 81 00	kamil.stolarski@santander.pl
Paweł Puchalski, CFA, <i>Equity Analyst Telecommunications, Metals &amp; Mining, Power</i>	tel. (+48) 22 586 80 95	pawel.puchalski@santander.pl
Tomasz Krukowski, CFA, <i>Equity Analyst Oil&amp;Gas, Pharma &amp; Biotech, CEE Non-Financials</i>	tel. (+48) 22 586 81 55	tomasz.krukowski@santander.pl
Adrian Kyrzcz, <i>Equity Analyst Construction, Real Estate, IT</i>	tel. (+48) 22 586 81 59	adrian.kyrzcz@santander.pl
Tomasz Sokołowski, <i>Equity Analyst Consumer, E-commerce</i>	tel. (+48) 22 586 82 36	tomasz.sokolowski@santander.pl
Michał Sopieli, <i>Equity Analyst Industrials, Chemicals, Quantitative Analysis</i>	tel. (+48) 22 586 82 33	michal.sopiel@santander.pl
Piotr Zielonka, CFA, <i>Equity Analyst Gaming, Strategy</i>	tel. (+48) 22 534 16 10	piotr.zielonka@santander.pl
Marcin Działek, <i>Analyst Technical Analysis</i>	tel. (+48) 22 782 93 09	marcin.dzialek@santander.pl

## Sales & Trading

<b>Kamil Kalemba, <i>Head of Institutional Equities</i></b>	tel. (+48) 22 586 80 84	kamil.kalemba@santander.pl
Mateusz Choromański, CFA, <i>Head of Sales Securities Broker, Investment Advisor</i>	tel. (+48) 22 586 80 82	mateusz.choromanski@santander.pl
Alex Kamiński	tel. (+48) 22 586 80 63	alex.kaminski@santander.pl
Błażej Leśków, <i>Securities Broker</i>	tel. (+48) 22 586 80 83	blazej.leskow@santander.pl
Michał Stępkowski, <i>Securities Broker</i>	tel. (+48) 22 586 85 15	michal.stepkowski@santander.pl
Marek Wardzyński, <i>Securities Broker</i>	tel. (+48) 22 586 80 87	marek.wardzynski@santander.pl
Adam Mizera, ACCA, CFA, <i>Securities Broker</i>	tel. (+48) 22 586 85 14	adam.mizera@santander.pl

## DISCLOSURES

All of the views expressed in this report accurately reflect the personal views of the Analyst of Equity Research Team in Santander Brokerage Poland which is a separate organizational unit of Santander Bank Polska S.A. ("Santander Bank Polska"), who is the author of this report. Santander Brokerage Poland emphasizes that this document is going to be updated at least once a year.

Santander Brokerage Poland acts as a market maker / liquidity provider, on principles specified in the Regulations of the Warsaw Stock Exchange (WSE), for the shares of **PKO BP SA** and therefore holds financial instruments issued by this issuer / these issuers.

Over the last 12 months Santander Bank Polska has received remuneration for providing investment banking services for: **PKO BP SA**.

Over the last 12 months Santander Bank Polska has received remuneration for providing non-investment banking services for: **PKO BP SA**.

The issuer / issuers this report relates to, may hold shares of Santander Bank Polska in the amount of less than 5% of the total issued capital.

Santander Bank Polska Group, its affiliates, representatives or employees may occasionally undertake transactions or may be interested in acquiring securities of companies directly or indirectly related to those being analysed.

Santander Bank Polska or its affiliates may, from time to time, to the extent permitted by law, participate or invest in financing transactions with issuer / issuers this report relates to, perform services for or solicit business from such issuers and/or have a position or effect transactions in the financial instruments issued by these issuers (especially in relation to the services provided by PTE Santander Allianz SA), as a result Santander Bank Polska may be indirectly connected with these issuers. Santander Bank Polska does not rule out that in the period of preparing this report any Affiliate of Santander Bank Polska might purchase shares of the Issuer or any financial instruments being the subject of this report which may cause reaching at least 0,5% of the share capital.

Subject to the above, the Issuer is not bound by any contractual relationship with Santander Bank Polska, which might influence the objectivity of the recommendations contained in this report.

However, it cannot be ruled out that, in the period in which this report is in force, Santander Bank Polska will submit an offer to provide services for the issuer / issuers this report relates to, or will purchase or dispose of financial instruments issued by these issuers or whose value depends on the value of financial instruments issued by these issuers.

With the exception of remuneration from the Santander Brokerage Poland Analysts do not receive any other form of compensation for recommendations made. Remuneration received by the persons who prepare this report may be dependent, in an indirect way, from financial results gained from investment banking transactions, related to financial instruments issued by the Issuer, made by Santander Brokerage Poland or its Affiliates.

Global statistics presenting the rating of the covered companies and the share of companies provided with investment banking in the past 12M are available at: <https://www.santander.pl/inwestor/global-statistics>

A list of all recommendations on any financial instrument or issuer that were disseminated by Santander Brokerage Poland during the preceding 12 month period can be found on: <http://centruminformacji.santander.pl/fileserver/item/1501616>

## LIMITATION OF LIABILITY

This report was produced by Santander Brokerage Poland which is a separate organizational unit of Santander Bank Polska S.A. (Santander Bank Polska) with its registered office in Warsaw. Santander Brokerage Poland and brokerage activity conducted by Santander Brokerage Poland is subject to the supervision of the Financial Supervision Commission with its headquarters in Warsaw.

Santander Brokerage Poland is subject to the regulations of the Act on Trading in Financial Instruments dated July 29th 2005 (Journal of Laws of 2018, item 2286 - consolidated text, further amended), Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading, and Public Companies dated July 29th 2005 (Journal of Laws of 2019 item 623 - consolidated text, further amended), Act on Capital Market Supervision dated July 29th 2005 (Journal of Laws of 2019, item 1871 - consolidated text, further amended). This report is addressed to qualified investors and professional clients as defined under the above indicated regulations and to Clients of Santander Brokerage Poland entitled to gain research reports based on the brokerage services agreements.

Santander Brokerage Poland may not have taken any steps to ensure that the securities referred to in this report are suitable for any particular investor. The investments and services contained or referred to in this report may not be suitable for particular investor and it is recommended to consult an independent investment advisor in case of doubts about such investments or investment services. Nothing in this report constitutes investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to investor's individual circumstances, or otherwise constitutes a personal recommendation to particular investor.

Affiliates of Santander Bank Polska may, from time to time, to the extent permitted by law, participate or invest in financing transactions with the issuer / issuers this report relates to, perform services for or solicit business from such issuers and/or have a position or effect transactions in the financial instruments issued by these issuers. Santander Brokerage Poland may, to the extent permitted by applicable Polish law, UK law and other applicable law or regulation, effect transactions in the Financial Instruments before this report is published to recipients.

Santander Brokerage Poland may have issued, and may in the future issue, other research reports that may be inconsistent with, and reach different conclusions from, the information presented in this report. Those reports reflect the different assumptions, views and analytical methods of the analysts who prepared them and Santander Brokerage Poland is under no obligation to ensure that such other reports are brought to the attention of any recipient of this report.

Santander Brokerage Poland informs that success in past recommendations is not a guarantee of success in future ones.

Information and opinions contained herein have been compiled or gathered, with due care and diligence, by Santander Brokerage Poland from sources believed to be reliable, however Santander Brokerage Poland cannot ensure their accuracy or completeness. Investor shall be responsible for conducting their own investigation and analysis of the information contained or referred to in this report and of evaluating the merits and risks involved in the Financial Instruments forming the subject matter of this report. The information and opinions contained herein are subject to change without any notice.

Santander Brokerage Poland is not responsible for any losses incurred by Investors which were result of investment decisions based on recommendations issued by Santander Brokerage Poland, on condition that they were prepared with due care and diligence.

This report does not constitute an offer or invitation to subscribe for or purchase or carry out transactions in any financial instruments and shall not be considered as an offer to sell or to buy any securities. This report is furnished and presented to you solely for your information and shall not be reproduced or redistributed to any other person. This report nor any copy hereof shall not be disseminated, published or distributed directly or indirectly in the United States of America, Canada, Australia or Japan. Disseminating, publishing or distributing of this report directly or indirectly in the above countries or to any citizen or resident of these countries may be considered breach of the law or regulations related to the financial instruments in force in these countries. Dissemination, publishing or distribution of this report may be restricted by law in other countries. Persons who distribute this report shall make themselves aware of and adhere to any such restrictions. This report may be distributed in the United Kingdom to persons who have professional knowledge about investing in accordance with relevant regulations.

Opinions in this report must not be relied upon as having been authorised or approved by issuer. Santander Brokerage Poland informs that investing assets in financial instruments implies the risk of losing part or all the invested assets.

Santander Brokerage Poland indicates that the price of the financial instruments is influenced by lots of different factors, which are not or cannot be dependent from issuer and its business results. These are factors such as changing economical, law, political or tax condition. More information on financial instruments and risk connected with them can be found on [www.santander.pl/inwestor](http://www.santander.pl/inwestor) section disclaimers and risk.

The decision to purchase any of the financial instruments should be made only on the basis of the prospectus, offering circular or other documents and materials which are published on general release on the basis of Polish law.

## Ratings definitions:

**Outperform** – Total return 10% above benchmark. Upside of approximately  $\geq 15\%$ .

**Neutral** - Total return 0%-10% above benchmark. Upside of approximately 5%-15%.

**Underperform** - Total return below benchmark. Upside of approximately <5%.

NOTE: The relevant benchmark for European Equities (including CEE Equities) is the 1Y German Bund rate +ERP (5.5%).

The definition of ratings are indicative. Recommendations may differ from these guidelines when justified due to the market factors, industry trends, company specific event, etc. In such cases, a pertinent clarification for the discrepancy is included in the report.

Target prices set from January to June are for December 31st of the current year. Target prices set from July to December are for December 31st of the following year.

Periodicity: our recommendations/ target prices for each issuer are going to be reviewed at least once a year and whenever market events so warrant.

In the Technical Analysis reports (TA reports), Santander Brokerage Poland does not apply direct investment ratings, and all opinions and elements of analysts' assessment are included in a descriptive form in the study itself.

The period of validity of the TA report is a maximum of 30 days, while the publication of a new TA report for a given financial instrument means that the previously published study is no longer valid.

Due to the short time horizon of the Technical Analysis reports, Santander Brokerage Poland is not going to update them on a regular basis.

In preparing this report Santander Brokerage Poland applied at least one of the following valuation methods: discounted cash flows (DCF), comparative, mid-cycle, dividend discount model (DDM), residual income, warranted equity method (WEV), SOTP valuation, liquidation value.

**The discounted cash flows (DCF) valuation method** is based on expected future discounted cash flows. One advantage of the DCF valuation method is that it takes into account all cash streams reaching Issuer and the cost of money over time. Some disadvantages of the DCF valuation method are that a large number of parameters and assumptions need to be estimated; and the valuation is sensitive to changes in those parameters.

**The comparative valuation method** is based on the economic rule of "one price". Some advantages of the comparative valuation method are that the analyst need only estimate a small number of parameters; the valuation is based on current market conditions; the relatively large accessibility of indicators for companies being compared; and that there is an extensive knowledge of the comparative method among investors. Some disadvantages of valuation by the comparative method are the considerable sensitivity of the results of the valuation on the choice of companies to the comparative group; the method can lead to a simplification of the picture of the company which in turn can lead to omitting certain important factors (e.g. growth dynamics, extra-operational assets, corporate governance, the repeatability of results, differences in applied accounting standards); and the uncertainty of the effectiveness of a market valuation of companies being compared.

**The mid-cycle multiple valuation** is based on long-term average valuation multiples of a sector or a peer group. The methodology aims to calculate a fair, through the cycle value of the company. Among its shortfalls is that at peaks and/or troughs of the cycle, the implied fair value may deviate substantially from the market's value of an analysed stock as well as the methods' reliance on the quality of external data (we usually use Bloomberg or Damodaran databases). Simplicity and average through-cycle value allowing to capture over- as well as under-valuation of a given stock are the main advantages of this methodology.

**The dividend discount model (DDM) valuation** is based on the net present value of the future dividends that are expected to be paid out by the company. Some advantages of the DDM valuation method are that it takes into account real cash flows to equity-owners and that the methodology is used in respect to companies with long dividend payout history. Main disadvantage of the DDM valuation method is that dividend payouts are based on a large number of parameters and assumptions, including dividend payout ratio.

**Residual income method** is conceptually close to the discounted cash flows method (DCF) for non-financial stocks, the difference being that it is based on expected residual income (returns over COE) rather than expected future cash flows. One advantage of this valuation method is that it captures the excess of profit potentially available to shareholders and the cost of money over time. Main disadvantage of the valuation method is that a large number of parameters and assumptions need to be estimated; and the valuation is sensitive to changes in those parameters.

**The warranted equity method (WEV)** is based on the formula  $P/BV = (\text{two year forward ROE less sustainable growth rate}) / (\text{Cost of equity less sustainable growth rate})$  which allows estimating a fair value (FV) of a given stock in two years' time. Subsequently the FV is discounted back to today. The main advantage of the WEV method is that it is a transparent one and based on relatively short term forecasts, hence substantially reducing the margin of forecasting error. The main disadvantage in our view is that the model is based on the principle that stock price should converge towards its fair value implied by company's ROE and COE.

**SOTP valuation** - different assets of a company are being valued according to different valuation methods, and the sum of these valuations represents the final valuation of the company. SOTP valuation advantages / disadvantages are identical to advantages and disadvantages of the specific valuation methods used.

**Liquidation value method** - liquidation value is the estimated amount of money that an asset or company could be quickly sold for, such as if it were to go out of business. Then, the estimated assets value is adjusted for liabilities and liquidation expenses. One advantage of this valuation method is its simplicity. This method does not account for intangible assets as goodwill, which is the main disadvantage.

In the opinion of Santander Brokerage Poland, this report has been prepared with all due diligence and excludes any conflict of interests which could influence its content. In Santander Bank Polska there are implemented internal regulations, which are designed to prevent conflicts of interest concerning recommendations. Physical and logic barriers are established, and the principles of documentation adequate to the type of Santander Bank Polska operations are implemented. Additionally, Santander Bank Polska introduced a number of obligations and restrictions relating to the protection of confidential information flow between organizational units.

The date and time on the first page of this report indicates the date of the production of the recommendation, and the dissemination of the recommendation takes place on the same day before the start of the session.

ANY PERSON WHO ACCEPTS THIS REPORT AGREES TO BE BOUND BY THE FOREGOING DISCLAIMER AND LIMITATIONS.

2023 © Santander Bank Polska. All Rights Reserved.