

Management Board
Report on the Activity
of the Parent Entity
and the Group:
Giełda Papierów
Wartościowych
w Warszawie S.A.

2023

TABLE OF CONTENTS

Letter from the President of the GPW Management Board	4
1. Information for the shareholders	6
1.1. Brief description of the GPW Group	6
1.2. Selected market data	10
1.3. Selected consolidated financial data	13
1.4. Selected separate financial data	16
1.5. GPW on the capital market	19
1.5.1. GPW stock price	19
1.5.2. GPW shareholders	21
1.5.3. Dividend for GPW shareholders	22
1.5.4. Dialogue with GPW Shareholders and investors	23
1.5.5. GPW bonds on the exchange	24
2. Activity of the GPW Group	25
2.1. Market environment	25
2.1.1. Financial market	25
2.1.2. Commodity market	30
2.2. Mission and Strategy of the GPW Group	32
2.3. Implementation of the GPW Group Strategy in 2023	34
2.3.1. Planned initiatives under the GPW Group's Strategy in 2024	43
2.3.2. External drivers of the GPW Group's growth	44
2.4. Business lines – Financial market	44
2.4.1. Trading	45
2.4.2. Listing	52
2.4.3. Information services on the financial market	53
2.5. Business lines – Commodity market	58
2.5.1. Trading	58
2.5.2. Register of Certificates of Origin	62
2.5.3. Register of Guarantees of Origin	64
2.5.4. Information services on the commodity market	67
2.5.5. Clearing	67
2.6. International activity	68
2.6.1. GPW Representative Office outside Poland	69
2.6.2. Development of a network of foreign investment firms – GPW clients	69
2.6.3. Share of foreign investors in turnover on GPW markets	69
2.6.4. Regional initiatives – Three Seas Exchanges and publication of CEE Plus	70
2.6.5. International activity of TGE	71
2.6.6. The GPW Group as a member of international organisations and initiatives	72
2.7. Development of the GPW Group in 2024	74
2.7.1. Internal drivers	74
2.7.2. External drivers	74
2.8. Risk management	85
2.8.1. Risks to which the GPW Group is exposed	86
2.8.2. Non-financial risks	86
2.8.3. Financial risks	95
2.8.4. Risk of the war in Ukraine	96
2.8.5. SARS-COV-2 pandemic	97
3. Corporate governance	98
3.1. Statement of compliance with corporate governance rules	98

3.1.1.	Sponsorship and charity initiatives in 2023.....	98
3.1.2.	Promotional and educational activities in 2023.....	100
3.2.	Internal control and risk management system in the preparation of financial statements...	104
3.3.	Auditor.....	105
3.4.	Diversity policy	106
3.5.	GPW share capital, shares, and bonds.....	107
3.6.	Controlling rights and restrictions of rights from shares.....	108
3.6.1.	Controlling rights	108
3.6.2.	Restrictions on exercise of voting rights	108
3.6.3.	Obligations of shareholders related to material blocks of GPW shares	108
3.7.	Rules for amending the GPW Articles of Association	108
3.8.	General Meeting	109
3.8.1.	Main powers of the General Meeting	109
3.8.2.	Procedures of the General Meeting	109
3.8.3.	Shareholder rights.....	110
3.8.4.	Annual General Meeting	110
3.9.	Supervisory Board and Committees	110
3.9.1.	Appointment and dismissal of Supervisory Board members	110
3.9.2.	Powers and composition of the Supervisory Board.....	111
3.9.3.	Committees of the Exchange Supervisory Board	114
3.9.4.	Audit Committee.....	118
3.10.	Exchange Management Board	121
3.10.1.	Appointment and dismissal of Management Board members.....	121
3.10.2.	Powers of the GPW Management Board.....	122
3.11.	Remuneration policy	127
3.11.1.	GPW remuneration policy	127
3.11.2.	Remuneration policy for GPW Management Board members	127
3.11.3.	Terms of employment of GPW Management Board members	130
3.11.4.	Remuneration of Exchange Supervisory Board members	131
3.11.5.	Evaluation of GPW's remuneration policy.....	131
3.12.	Changes of key management rules of GPW and the GPW Group	131
3.12.1.	Changes in the GPW Group structure.....	132
3.12.2.	Change of persons sitting on the authorities of GPW Group companies.....	132
4.	Responsible business and sustainable development.....	134
4.1.	Information on the GPW Group and its business model	134
4.2.	Key non-financial indicators	136
4.3.	ESG strategy of the GPW Group	136
4.4.	ESG management framework.....	138
4.5.	ESG Strategy indicators (KPIs).....	139
4.6.	ESG risk management framework.....	141
4.7.	Business ethics	141
4.7.1.	Code of Ethics.....	141
4.7.2.	Anti-corruption and anti-fraud policy	142
4.7.3.	Human rights policy.....	143
4.7.4.	Personal data protection and cyber security.....	144
4.7.5.	GPW Group Policy towards suppliers.....	144
4.8.	Employees.....	145
4.8.1.	Approach to workplace management	145
4.8.2.	Diversity policy	148
4.8.3.	Remuneration policy.....	150
4.8.4.	Social benefits	152
4.8.5.	Training and development.....	153

4.8.6.	Anti-mobbing.....	155
4.8.7.	Occupational health and safety	155
4.9.	Social impact	156
4.9.1.	Initiatives supporting diversity.....	156
4.9.2.	Promoting standards and practices that develop the organisational culture of financial market participants.....	156
4.9.3.	Stock market and financial education.....	158
4.10.	Environmental impact	162
4.10.1.	Approach to environmental impact management.....	162
4.10.2.	Reducing the environmental impact.....	167
4.10.3.	GPW Group’s environmental performance: fuel consumption	167
4.10.4.	GPW Group’s environmental performance: energy consumption.....	168
4.10.5.	GPW Group’s environmental performance: emissions.....	168
4.10.6.	GPW Group’s environmental performance: consumption of other commodities..	170
4.10.7.	Products and initiatives supporting the green transition	171
5.	Financial position and assets of the GPW Group	173
5.1.	Summary of results of the GPW Group	173
5.2.	Consolidated statement of comprehensive income	175
5.2.1.	Sales revenue – summary	175
5.2.2.	Sales revenue – Financial market.....	175
5.2.3.	Sales revenue – Commodity market	179
5.2.4.	Operating expenses.....	182
5.2.5.	Other income, other expenses, gains on reversal of impairment/(losses) on impairment of receivables	183
5.2.6.	Financial income and expenses	183
5.2.7.	Share of profit of entities measured by the equity method.....	183
5.2.8.	Income tax.....	184
5.3.	Consolidated statement of financial position.....	184
5.4.	Consolidated statement of cash flows.....	185
5.5.	Atypical factors and events impacting the GPW Group’s results in 2023.....	185
5.6.	Liquidity, financial assets and financial risk management of the Group	185
5.7.	Expected financial position of the Group	186
5.8.	Other information	186
6.	Financial position and assets of GPW.....	188
6.1.	Summary of separate results of GPW S.A.	188
6.2.	Separate statement of comprehensive income	189
6.2.1.	Sales revenue.....	189
6.2.2.	Operating expenses.....	190
6.2.3.	Other lines of the separate statement of comprehensive income	191
6.3.	Separate statement of financial position	191
6.4.	Separate statement of cash flows	191
7.	Glossary.....	193

Letter from the President of the GPW Management Board



Ladies and Gentlemen, Dear Shareholders and Investors,

I present this Report of the Exchange Management Board on the activities of the Parent Company and the Warsaw Stock Exchange Group, as well as the separate and consolidated financial statements for 2023.

The year 2023, especially the period following the parliamentary elections on 15 October 2023, should be considered a successful year for stocks listed on the domestic capital market. The broad market index of the Warsaw Stock Exchange WIG rose by 36.5% in 2023, one of the best performances among the indices of leading European and global stock exchanges. The large cap index WIG20 gained 35.0% (total return), while the mWIG40 and sWIG80 indices gained 39.3% and 30.1%, respectively.

The stock rally on the Warsaw Stock Exchange was solid despite the ongoing war in Ukraine. For the second consecutive year, the markets lived with elevated inflation, relatively high interest rates and the risk of recession in the major global economies.

The geopolitical and macroeconomic uncertainty prevailing on the financial markets had a significant impact on IPO activity, which was evident not only on the Warsaw Stock Exchange but also on other markets across Europe. Ten companies were newly listed on the GPW Main Market, of which nine were transfers from NewConnect. Murapol SA was newly listed on the GPW Main Market in December 2023 with a public offering of over PLN 363 million. Despite the low activity on the IPO market, the secondary offering (SPO) market rebounded. Secondary issues of shares of issuers previously listed on the GPW Main Market totalled PLN 2.7 billion, including Polenergia (PLN 750 million), CCC (PLN 505 million) and Atal (PLN 252 million) raising capital for further growth. I hope that the geopolitical situation in the coming months will be stable enough to attract more IPOs to the Warsaw Stock Exchange in 2024.

The capital market was supported last year by rising cash inflows into Employee Capital Plans (PPK). The number of PPK participants rose to 3.39 million, which was 870,000 more than a year earlier. The net asset value of PPK funds increased by PLN 9.8 billion in 2023 and reached PLN 21.7 billion, almost twice as much as at the end of 2022.

Although the past year saw strong index performance on many European markets, it was marked by sharp declines in equity turnover. This also affected GPW: electronic order book (EOB) turnover in shares on the Main Market dropped by 3.9% year on year in 2023. However, we are proud that GPW reported the third highest velocity among European Union exchanges in 2023 according to FESE data.

On the spot market, 2023 was another year of growth for the ETF offering: ETF turnover rose to a record PLN 1.1 billion and was up 8.7% year on year, corroborating growing interest in these products. The first ETC product, which offers exposure to responsibly sourced physical gold, was newly listed on GPW in August 2023. On the derivatives market, the futures and options turnover value increased to PLN 380.1 billion (up by 4% year on year) and the offering was expanded to include new single-stock derivatives.

Last year was record-breaking for the corporate bond market: we newly listed over 100 issues worth more than PLN 26 billion. We introduced sustainable finance bonds in 2023 (the data is presented in the Warsaw Sustainable Segment), including bonds issued by Santander Bank, Ghelamco, Cyfrowy Polsat.

Despite the abolition of the obligation to trade on the exchange, 2023 was a relatively good year for TGE, which accounts for 35% of the GPW Group's annual revenues as one of the pillars of the Group's development. TGE introduced two new instruments on the electricity forward market: lowPeak and highPeak, which contribute to more efficient management of the trading portfolio. Total trading volumes increased for electricity (up by 4.3% year on year) and guarantees of origin of electricity generated in RES (up by 1.1% year on year; the volume at 42,344 GWh was the highest in the history of the Register of Guarantees of Origin). However, the total turnover volumes dropped for natural gas (by 6.0% year on year) and property rights for electricity generated from RES (by 20.5% year on year).

The GPW Group's financial results for 2023 carry the costs of a range of strategic initiatives whose expected impact on revenue has not yet materialised. Despite a 14.3% increase in GPW Group revenue to PLN 444.9 million, EBITDA dropped by 4.3% to PLN 160.2 million. The GPW Group's cost/income ratio increased to 71.8% in 2023 from 65.5% in 2022. I will make best efforts to ensure that the cost/income ratio of the core business and of the GPW Group as a whole decreases significantly in 2024 and beyond.

Thanks to financial income and a contribution from the associate KDPW, net profit attributable to the owners of the parent entity increased by 7.6% year on year to PLN 156.0 million in 2023. We used PLN 113.3 million to pay dividends in 2023, equivalent to PLN 2.70 per share and a dividend yield of 6.7%. GPW's total shareholder return was 27.3%. The GPW Group's net cash position of PLN 392.6 million in the absence of significant financial debt will ensure the continuation of an attractive

dividend policy while opening an opportunity to accelerate growth through selective M&A transactions, where we will focus on the Polish market.

My priorities for the coming year and the new term of office are to increase the share of the capital market in financing Poland's business, to attract new issuers and investors, and to develop the educational mission of GPW aiming to improve knowledge of the capital and financial market, with a special focus on young people. I will focus on expanding the range of financial instruments and products attractive to investors. Another key objective is to work on rebuilding confidence in the market and ensuring the efficiency and security of the stock exchange infrastructure.

As I begin my term as President of the GPW Management Board, I would like to thank all the shareholders and stakeholders of GPW for the trust they have placed in me. I thank the Exchange Supervisory Board, the Management Board of the GPW Group and all the employees of the GPW Group for their hard work during this challenging period.

I am optimistic about the future of the Warsaw Stock Exchange Group and I strongly believe that the coming years will open up new opportunities and bring us many successes. I firmly believe that the Polish capital market will play an even greater key role in financing the development of our economy.

Yours sincerely,

Tomasz Bardziłowski

President

GPW Management Board

1. Information for the shareholders

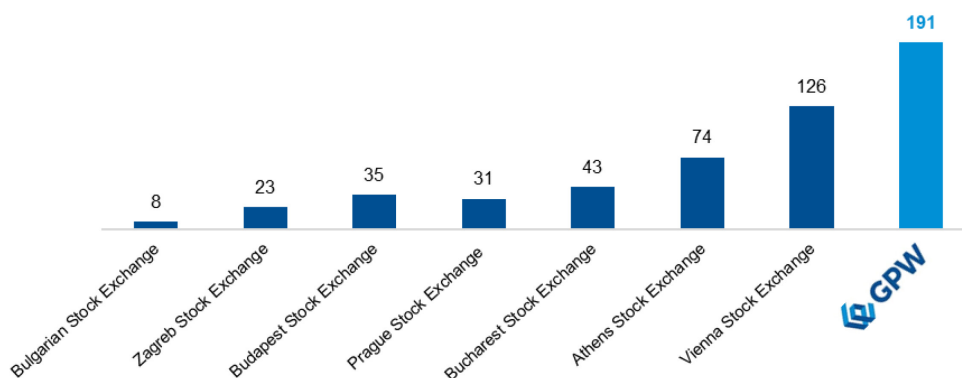
1.1. Brief description of the GPW Group

Giełda Papierów Wartościowych w Warszawie Spółka Akcyjna (“the Warsaw Stock Exchange”, “the Exchange”, “GPW” or “the Company”) with its registered office in Warsaw, ul. Książęca 4 was established by Notarial Deed on 12 April 1991 and registered in the Commercial Court in Warsaw on 25 April 1991 (entry no. KRS 0000082312, Tax Identification Number 526-025-09-72, Regon 012021984). The Exchange has been listed on GPW’s Main Market since 9 November 2010.

The GPW Group includes the leading institutions of the Polish capital and commodity market. It is the biggest exchange in Central and Eastern Europe. The parent entity of the Group is the Warsaw Stock Exchange, which organises trade in financial instruments and pursues a range of educational initiatives to promote economic knowledge of the general public. GPW is the key source of capital for companies and local governments in the region, contributing to dynamic growth of the Polish economy, creation of new jobs, international competitiveness of Polish businesses and the resulting affluence of Poles. Presence on the capital market provides Polish companies with additional benefits including enhanced visibility, credibility, efficiency and transparency in governance.

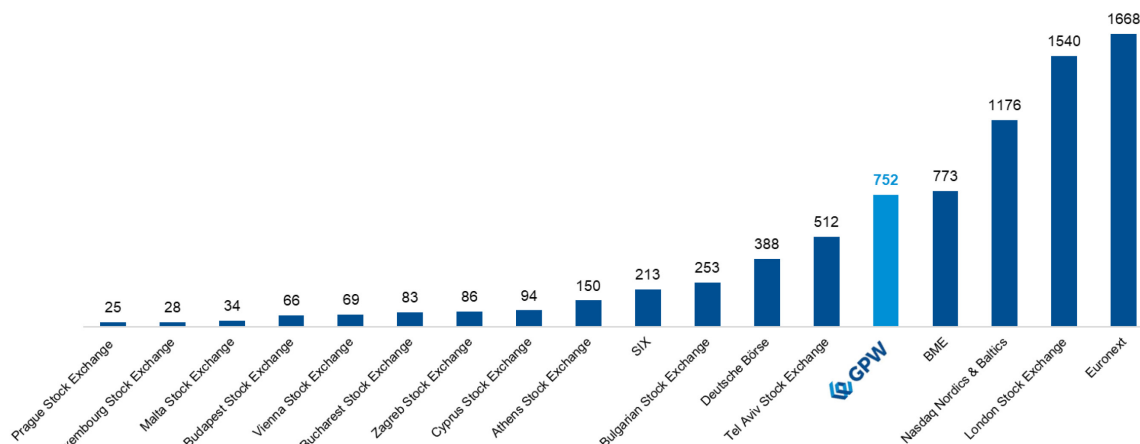
The Warsaw Stock Exchange has the biggest capitalisation of all exchanges in Central and Eastern Europe at EUR 191 billion. It is one of the biggest markets in Europe and lists 772 companies, including 726 domestic companies and 46 foreign companies. The Warsaw Stock Exchange focuses on development and pursues the Strategy 2023-2027 which focuses on the Group's three growth pillars: turnover, data and technology, new business models. GPW also focuses on sustainable development. The ESG Strategy adopted in December 2021 sets out the ambitions and objectives in the area of sustainable development for 2022-2025. The Strategy includes the main directions of activities in the area of ESG for all companies in the GPW Group.

Figure 1 Capitalisation of CEE exchanges (stock markets) at 2023 YE (EUR billion)



Source: FESE

Figure 2 Number of domestic companies listed on European exchanges at 2023 YE



Source: FESE; according to the FESE methodology, “domestic companies” are companies registered in a given country (e.g. for GPW - companies registered in Poland) and foreign companies listed only on the given stock exchange (no dual listing)

The TGE Group includes three companies: Towarowa Giełda Energii, InfoEngine, and Izba Rozliczeniowa Giełd Towarowych, which offer complementary services and build a transparent and secure business environment for energy industry participants.

The activity of TGE is under supervision of the Polish Financial Supervision Authority with respect to trading in energy products such as electricity, natural gas, property rights, CO2 emission allowances, and since 2020 also agricultural products. All transactions concluded on the markets operated by TGE are cleared by IRGiT.

TGE is consistently strengthening its position as a leading exchange with its trading offer in Central and Eastern Europe. This is possible among others thanks to the adopted business model, which enables participants operating on different markets to conclude transactions in one place. The commodity market accounts for around 35% of the GPW Group's revenue. Its development is one of the pillars of the Group's strategy.

The volume of turnover in electricity and gas makes TGE the biggest exchange in the region and a major European market.

Post-trade services for the financial market operated by GPW and BondSpot, including depository, clearing and settlement services, are offered by GPW's associate, Krajowy Depozyt Papierów Wartościowych S.A. (KDPW), and its subsidiary KDPW_CCP S.A.

Armenia Securities Exchange (AMX) is a company based in Yerevan which organises trading in financial instruments in Armenia. The Central Depository of Armenia, the Armenian securities depository, is a subsidiary of AMX.

Chart 1 Business lines and product offer of the GPW Group



LISTING	AMX	TRADING					POST-TRADING	MARKET DATA ¹	NEW BUSINESS LINES ²
		EQUITIES & OTHER	DERIVATIVES	BONDS	MEMBERSHIP	COMMODITIES			
Listing of the issuer's instruments	Exchange activities	Equities	Futures	Corporate bonds	Access and use of GPW trading system	Electricity spot and forward contracts	Settlement	Real-time data	GPW Logistics
Introduction	Depository activities	Structured products	Options	Municipal bonds	Membership and participation on the commodity markets	Natural gas spot and forward contracts	Custody	Non-display data	GPW Tech
Other fees		Warrants		Co-operative bank bonds		Property rights in certificates of origin	Clearing	Delayed data	
		ETF		Convertible bonds		CO2 emission allowances	Certificate of Origin Register (COR) ¹	Historical data	
		ETC		Covered bonds		Agricultural Commodity Market	Register of Guarantees of Origin (RGO)	Indices	
		Investment certificates		T-bonds			KDPW ³		
							RRM Reporting		

■ Financial Market
 ■ Commodity Market
 ■ Market Data
 ■ New Business Lines

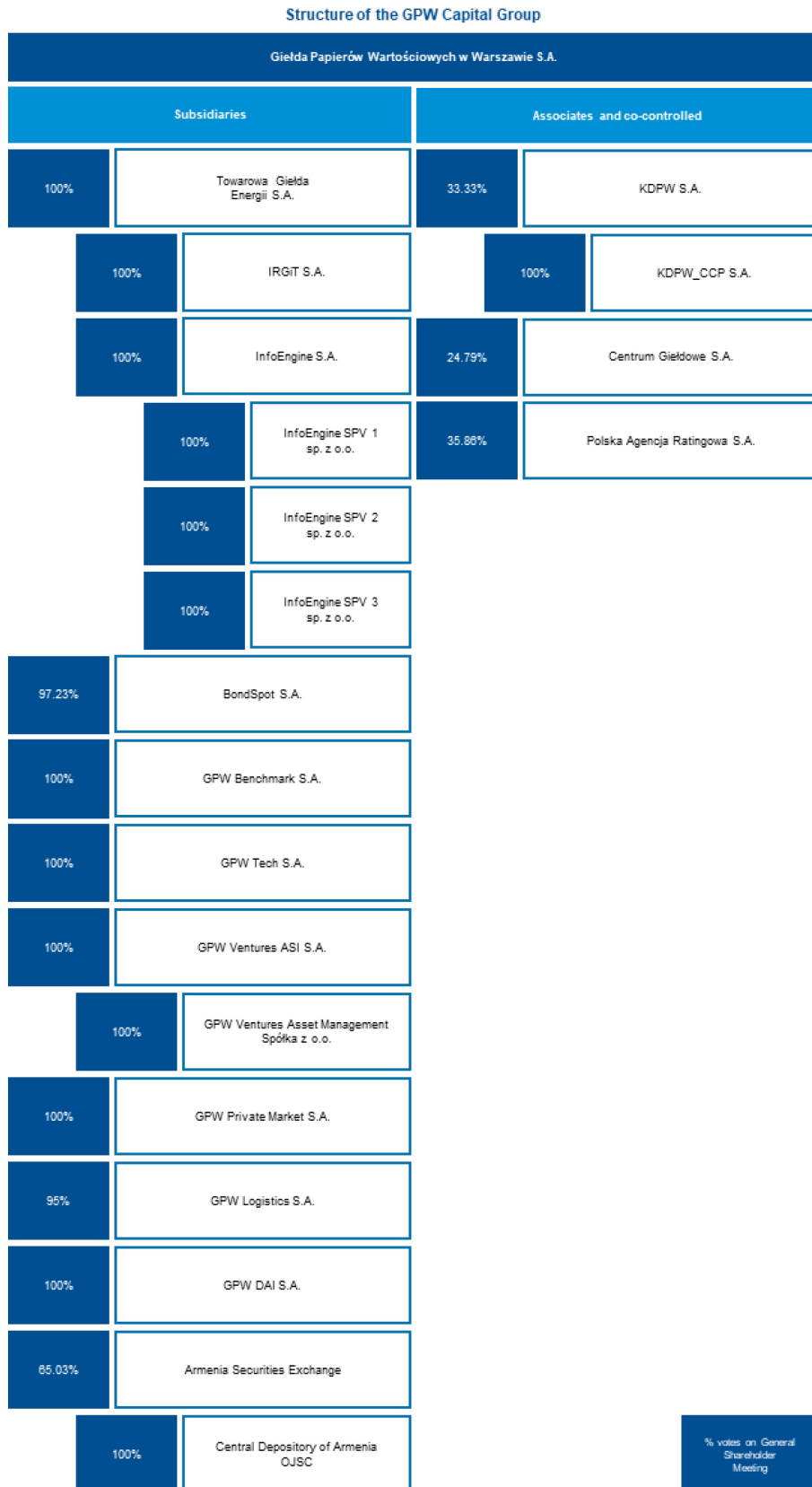
1. Total sales of financial and commodity market information
2. In the profit and loss account as "Other income" in sales revenue
3. Associate (33.33%); the KDPW Group offers post-trade services on the financial market

The GPW Group was comprised of the parent entity and 16 subsidiaries as at 31 December 2023. GPW holds a stake in 3 associates and joint ventures.

Table 1 Core business of GPW Group companies as at the publication date of the report

Subsidiary	Business profile
BondSpot S.A.	Operates trade in Treasury and non-Treasury debt securities. Treasury BondSpot Poland, operated by BondSpot, is the electronic wholesale market in Treasury securities authorised by the Ministry of Finance and a part of the Treasury Securities Dealers system in Poland.
Towarowa Giełda Energii S.A. (TGE)	The only licensed commodity exchange in Poland authorised to operate a regulated market. TGE is supervised by the Polish Financial Supervision Authority to the extent of trade on the markets it operates, including markets in electricity, natural gas, property rights, and CO2 emission allowances. Since March 2020, TGE organises trade in agricultural commodities.
Izba Rozliczeniowa Giełd Towarowych S.A. (IRGIT, subsidiary of TGE)	Provides clearing and risk management for all markets operated by TGE. Authorised as a clearing house and settlement institution.
InfoEngine S.A. (subsidiary of TGE)	Operates an electronic OTC commodity trading platform, provides services as a technical trade operator and entity responsible for trade balancing.
InfoEngine SPV 1 sp. z o.o. InfoEngine SPV 1 sp. z o.o. InfoEngine SPV 1 sp. z o.o. (spółki zależne InfoEngine S.A.)	InfoEngine's special purpose vehicles responsible for power system projects.
GPW Benchmark S.A.	Licensed administrator of benchmarks on regulated markets (WIG Exchange Index Family, CEEplus), non-interest-rate benchmarks (TBSP.Index), and interest rate benchmarks including the WIBOR and WIBID Reference Rates – WIBOR is a critical benchmark of systemic importance on the Polish money market, used in valuations of most bank loans, derivatives and debt in PLN.
GPW Logistics S.A.	The company provides tools based on artificial intelligence to automate and digitise processes for the Transport, Shipment and Logistics (TSL) industry and to ensure the security of transport document flows.
GPW Ventures ASI S.A.	The company is a fund of funds and invests assets of many investors in venture capital (VC) funds, mainly funds which plan to invest in microfirms and SMEs or divest through pre-IPOs and IPOs.
GPW Ventures Asset Management Spółka z o.o. (subsidiary of GPW Ventures ASI S.A.)	The company manages investment funds in the form of Alternative Investment Companies which it plans to set up jointly with external professional financial and industry investors.
GPW TECH S.A.	The core business of the company is to build, develop and commercialise IT solutions supporting dedicated to the financial market.
GPW Private Market S.A.	The company is to provide crowdfunding services, tokenisation services and trading of financial and non-financial assets.
GPW DAI S.A.	The company is implementing the Telemetria Operator project. The aim of this project is to build a multi-module auction platform for comprehensive media market transactions related to dynamic ad insertion (DAI).
Armenia Securities Exchange	Armenia Securities Exchange (AMX) is a company based in Yerevan which organises trading in financial instruments in Armenia.
Central Depository of Armenia OJSC (subsidiary of AMX)	The company is the securities depository in Armenia's depository system. It provides clearing of transactions in equity instruments and corporate debt securities (both on the organised exchange market and over-the-counter).

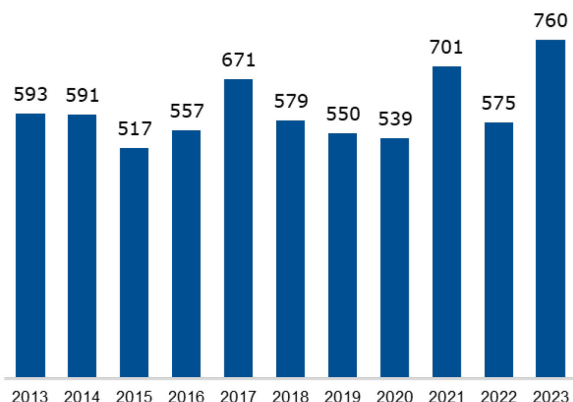
Chart 2 GPW Group, associates and joint ventures as at the publication date of the report



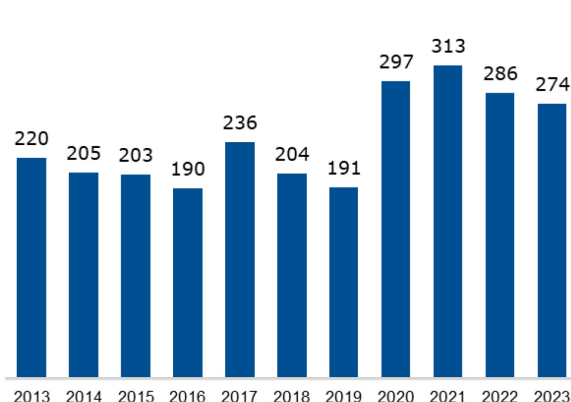
*Polska Agencja Ratingowa S.A. is under joint control

1.2. Selected market data

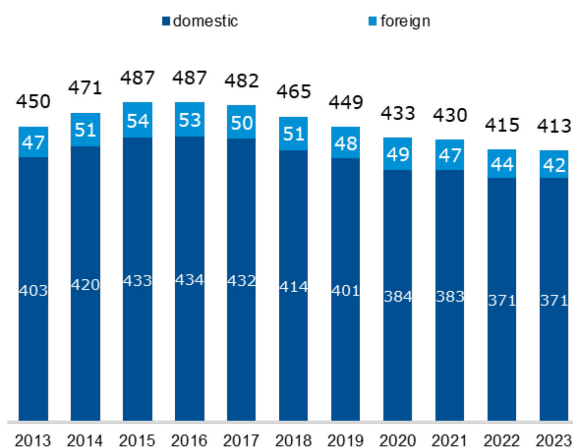
Capitalisation of domestic companies
- Main Market (PLN bn)



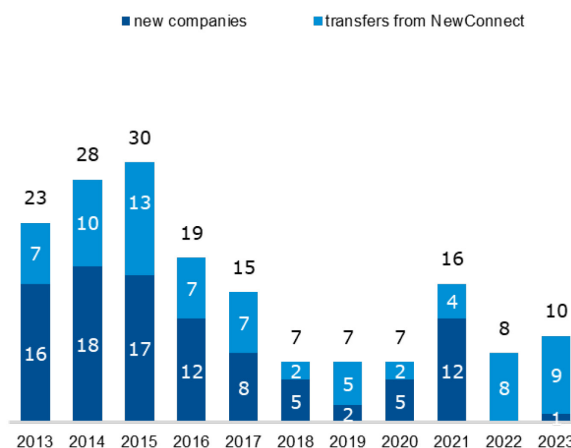
Equity turnover, Electronic Order Book
- Main Market (PLN bn)



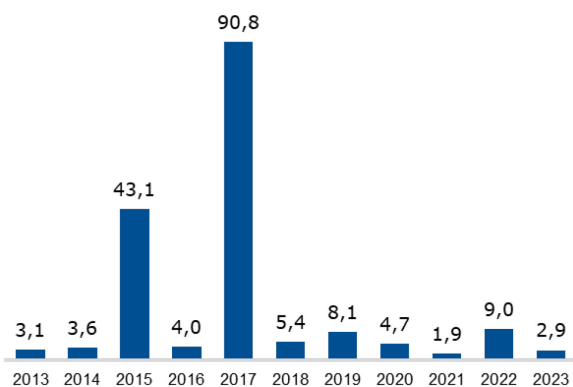
Number of companies - Main Market



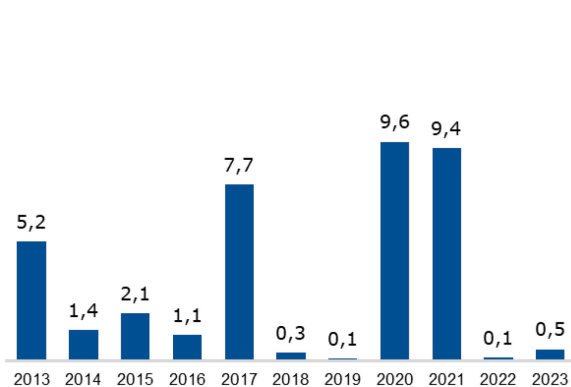
Number of new listings - Main Market



Value of secondary offerings
- Main Market and NewConnect (PLN bn)

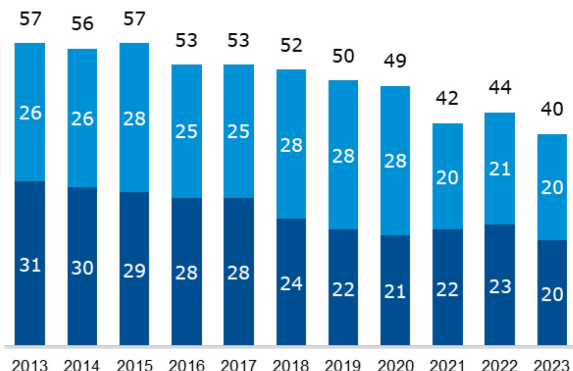


Value of primary offerings
- Main Market and NewConnect (PLN bn)



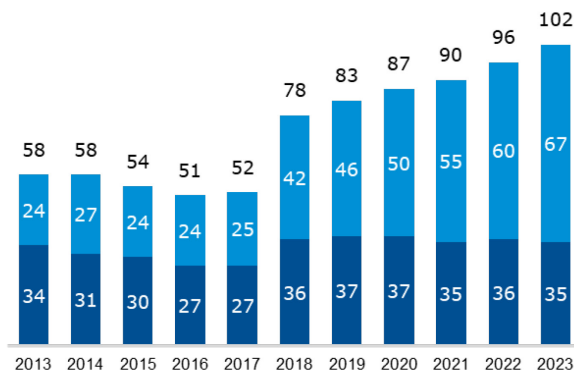
Number of Exchange Members

■ local ■ remote

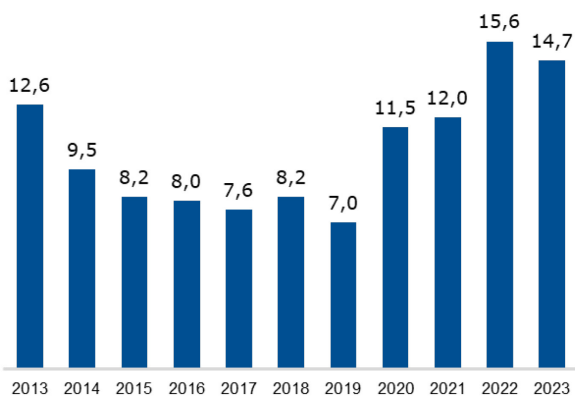


Number of data vendors

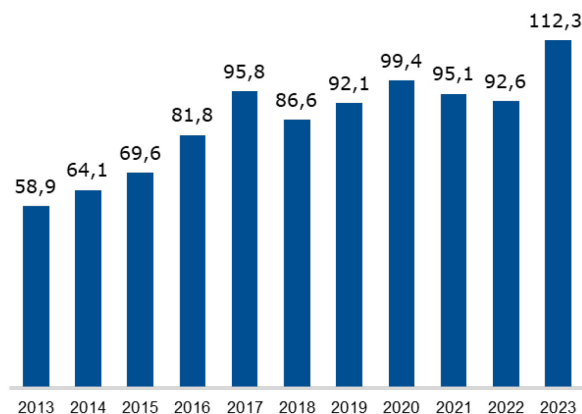
■ local ■ foreign



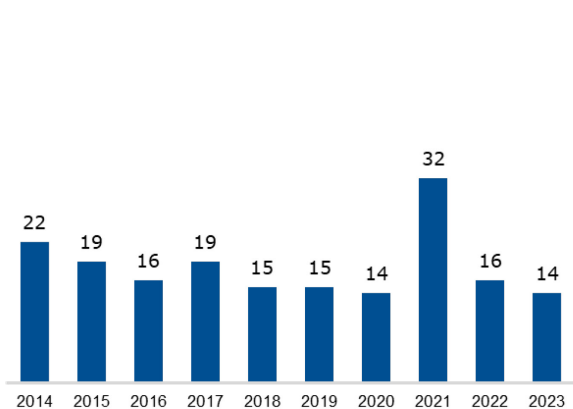
Turnover volume - futures contracts
(m contracts)



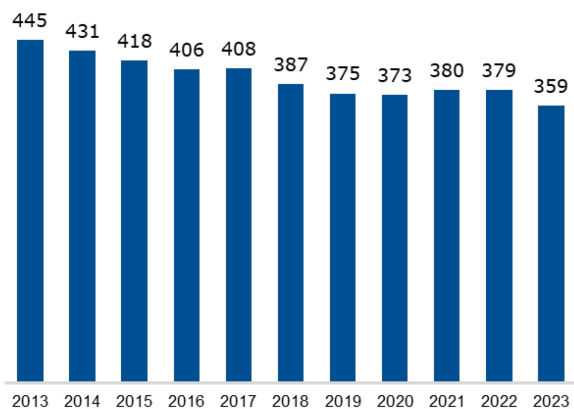
Catalyst - value of listed non-Treasury
bond issues (PLN bn)

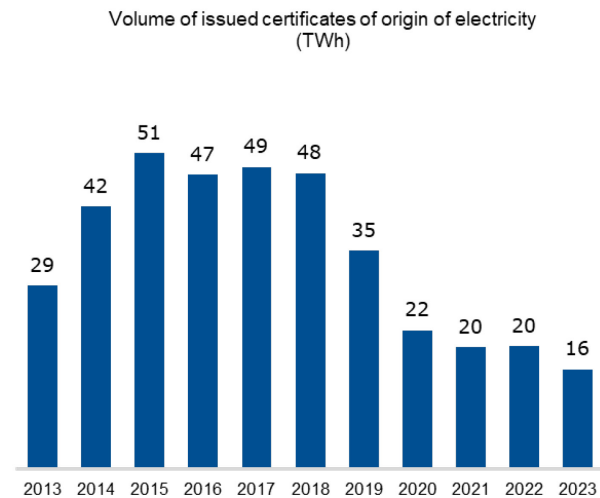
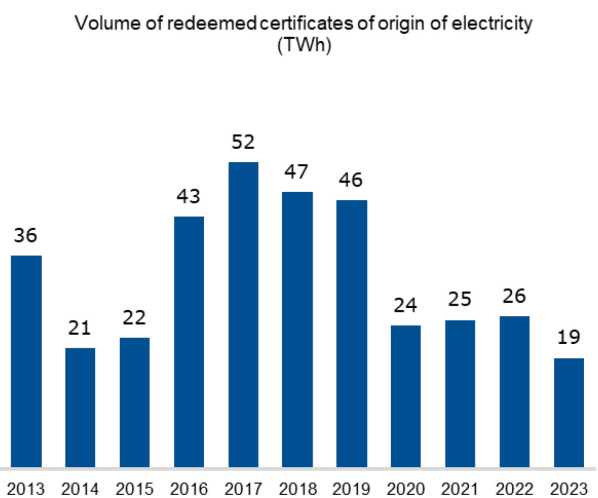
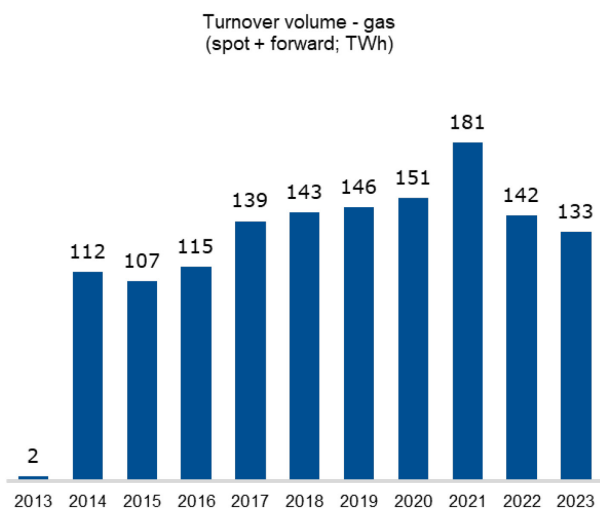
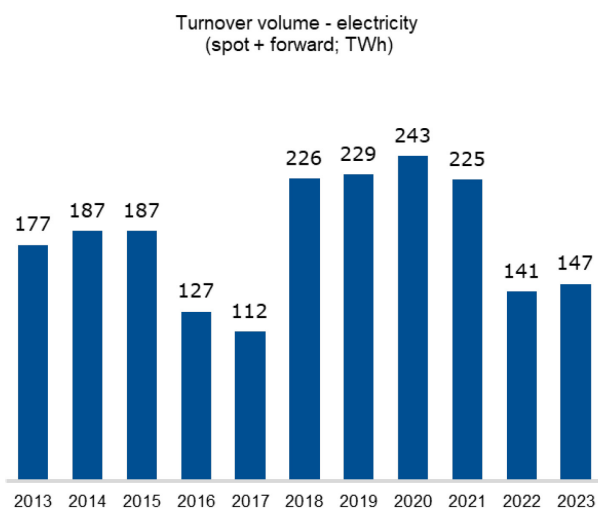
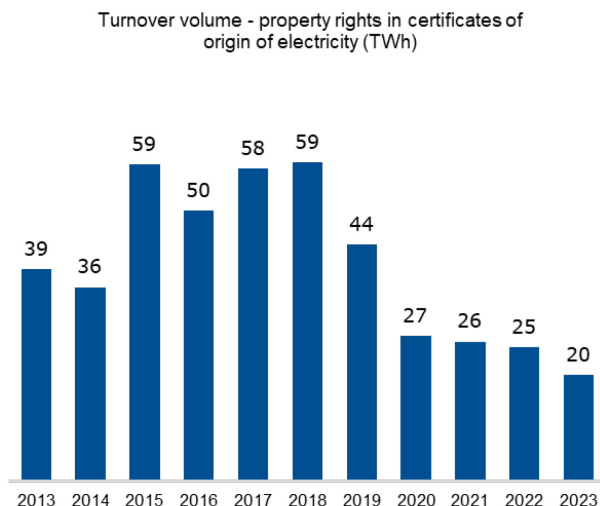


Number of new listings - NewConnect



Number of companies - NewConnect





1.3. Selected consolidated financial data

Table 2 Consolidated statement of comprehensive income, earnings per share and EBITDA

	Year ended 31 December			
	2023	2022	2023	2022
	PLN'000		EUR'000[1]	
Sales revenue	444,928	389,265	97,937	83,054
Operating expenses	(319,504)	(254,881)	(70,329)	(54,382)
Gains on reversed impairment of receivables/(Losses) on impairment of receivables	(332)	565	(73)	121
Other revenue	6,252	10,027	1,376	2,139
Other expenses	(3,370)	(14,384)	(742)	(3,069)
Operating profit	127,974	130,592	28,169	27,863
Financial income	28,384	23,501	6,248	5,014
Financial expenses	(2,132)	(7,505)	(469)	(1,601)
Share of profit/(loss) of entities measured by the equity method	34,135	28,255	7,514	6,029
Profit before tax	188,361	174,843	41,462	37,305
Income tax expense	(30,800)	(29,867)	(6,780)	(6,372)
Net profit for the period	157,561	144,976	34,682	30,932
Basic/Diluted earnings per share[2] (PLN, EUR)	3.72	3.45	0.82	0.74
EBITDA[3]	160,225	167,419	35,269	35,721

[1] At the incremental average exchange rate EUR/PLN for 12 months published by the National Bank of Poland (1 EUR = 4,5430 PLN in 2023 and 1 EUR = 4,6869 PLN in 2022).

[2] Based on net profit.

[3] EBITDA = operating profit + depreciation/amortisation.

Table 3 Selected figures from the consolidated statement of financial position

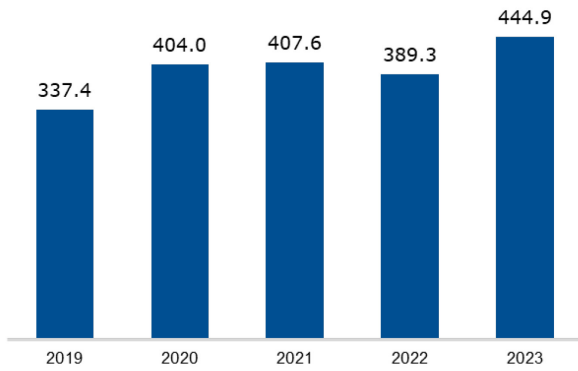
	As at			
	31 December 2023	31 December 2022	31 December 2023	31 December 2022
	PLN'000		EUR'000[1]	
Non-current assets:	758,012	651,608	174,336	138,939
Property, plant and equipment	109,362	107,605	25,152	22,944
Right-to-use assets	25,425	4,685	5,848	999
Intangible assets	323,755	282,892	74,461	60,319
Investment in entities measured by the equity method	274,221	241,313	63,068	51,454
Other non-current assets	25,249	15,113	5,807	3,222
Current assets:	499,669	530,648	114,919	113,147
Trade receivables and other receivables	74,412	79,348	17,114	16,919
Financial assets measured at amortised cost	171,421	63,964	39,425	13,639
Cash and cash equivalents	246,781	378,641	56,757	80,735
Other current assets	7,055	8,695	1,623	1,854
TOTAL ASSETS	1,257,681	1,182,256	289,255	252,086
Equity	1,049,921	1,000,827	241,472	213,400
Non-current liabilities:	87,439	53,814	20,110	11,474
Lease liabilities	20,386	495	4,689	106
Other liabilities	67,053	53,319	15,422	11,369
Current liabilities:	120,321	127,615	27,673	27,211
Lease liabilities	5,265	4,852	1,211	1,035
Other liabilities	115,056	122,763	26,462	26,176
TOTAL EQUITY AND LIABILITIES	1,257,681	1,182,256	289,255	252,086

[1] At the average exchange rate EUR/PLN of the National Bank of Poland as at 29.12.2023 r. (1 EUR = 4,3480 PLN) and as at 30.12.2022 (1 EUR = 4,6899 PLN).

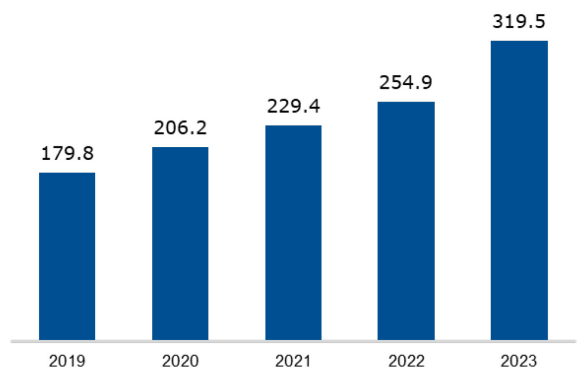
Table 4 Indicators

	As at/Year ended 31 December	
	2023	2022
EBITDA margin (EBITDA/Sales revenue)	36.0%	43.0%
Operating profit margin (Operating profit/Sales revenue)	28.8%	33.5%
Return on equity (ROE) (Net profit for last 12 months/Average equity at the beginning and at the end of the 12-month period)	15.4%	14.7%
Debt to equity (Lease liabilities and liabilities under bond issue/Equity)	2.4%	0.5%
Cost / income (GPW Group operating expenses / GPW Group sales revenue (for a 12-month period))	71.8%	65.5%

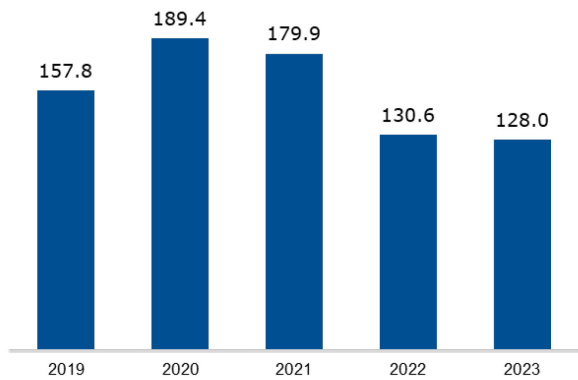
Sales revenue (PLN mn)



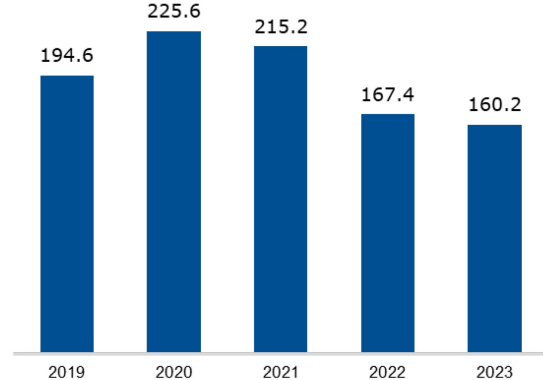
Operating expenses (PLN mn)



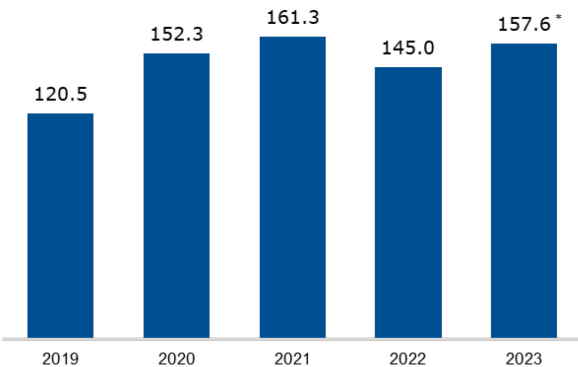
Operating profit (PLN mn)



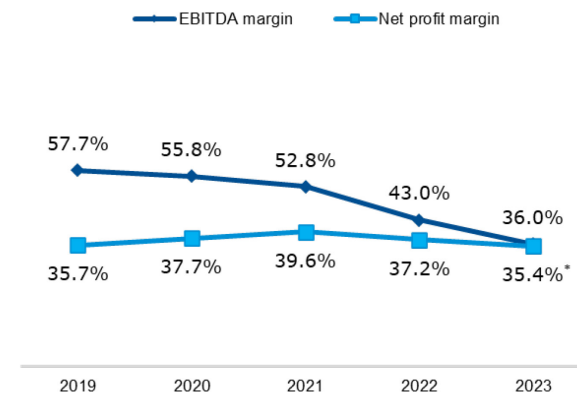
EBITDA (PLN mn)



Net profit (PLN mn)



Net profit margin and EBITDA margin



*Net profit attributable to shareholders of the parent entity in 2023 at PLN 156.0 mn; net margin of profit attributable to shareholders of the parent entity in 2023 at 35.1%

1.4. Selected separate financial data

Table 5 Statement of comprehensive income, EBITDA, earnings per share

	Year ended 31 December			
	2023	2022	2023	2022
	PLN'000		EUR'000[1]	
Sales revenue	244,966	247,951	53,922	52,903
Operating expenses	(190,953)	(170,342)	(42,032)	(36,344)
Gains on reversed impairment of receivables/(Losses) on impairment of receivables	(496)	588	(109)	125
Other revenue	6,920	2,281	1,523	487
Other expenses	(3,184)	(11,300)	(701)	(2,411)
Operating profit	57,253	69,178	12,602	14,760
Financial income	73,555	49,837	16,191	10,633
Financial expenses	(1,131)	(3,971)	(249)	(847)
Profit before tax	129,677	115,044	28,544	24,546
Income tax expense	(12,769)	(15,480)	(2,811)	(3,303)
Net profit for the period	116,908	99,564	25,734	21,243
Basic/Diluted earnings per share (PLN, EUR)	2.79	2.37	0.61	0.51
EBITDA	77,881	94,406	17,143	20,143

[1] At the incremental average exchange rate EUR/PLN for 12 months published by the National Bank of Poland (1 EUR = 4,543 PLN in 2023 and 1 EUR = 4,6869 PLN in 2022).

Table 6 Selected figures from the separate statement of financial position

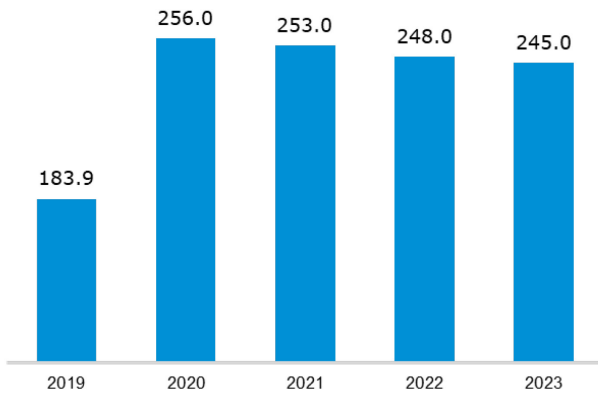
	As at			
	31 December 2023	31 December 2022	31 December 2023	31 December 2022
	<i>PLN'000</i>		<i>EUR'000[1]</i>	
Non-current assets:	562,863	492,077	129,453	104,923
Property, plant and equipment	90,835	91,078	20,891	19,420
Right-to-use assets	13,572	2,551	3,121	544
Intangible assets	124,740	88,167	28,689	18,799
Other non-current assets	333,716	310,281	76,752	66,159
Current assets:	166,656	203,699	38,329	43,434
Trade receivables and other receivables	50,662	37,447	11,652	7,985
Financial assets measured at amortised cost	57,856	53,698	13,306	11,450
Cash and cash equivalents	49,819	100,037	11,458	21,330
Other current assets	8,319	12,517	1,913	2,669
TOTAL ASSETS	729,519	695,776	167,783	148,356
Equity	600,072	595,781	138,011	127,035
Non-current liabilities:	78,490	46,556	18,052	9,927
Lease liabilities	19,585	424	4,504	90
Other liabilities	58,905	46,132	13,548	9,836
Current liabilities:	50,957	53,439	11,720	11,394
Lease liabilities	4,644	4,616	1,068	984
Other liabilities	46,313	48,823	10,652	10,410
TOTAL EQUITY AND LIABILITIES	729,519	695,776	167,783	148,356

[1] At the average exchange rate EUR/PLN of the National Bank of Poland as at 29.12.2023 r. (1 EUR = 4,3480 PLN) and as at 30.12.2022 (1 EUR = 4,6899 PLN).

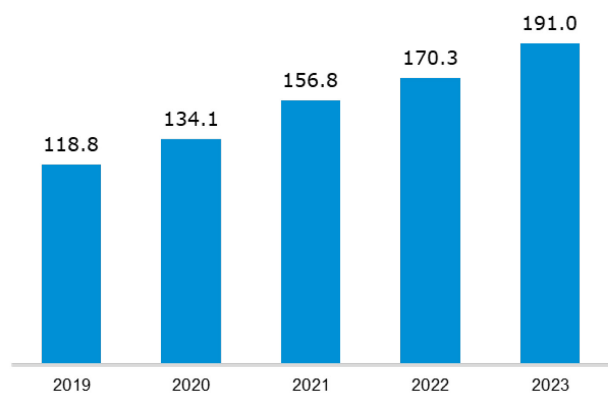
Table 7 Indicators

	As at/Year ended 31 December	
	2023	2022
EBITDA margin (EBITDA/Sales revenue)	31.8%	38.1%
Operating profit margin (Operating profit/Sales revenue)	23.4%	27.9%
Return on equity (ROE) (Net profit for last 12 months/Average equity at the beginning and at the end of the 12-month period)	19.6%	16.5%
Debt to equity (Lease liabilities and liabilities under bond issue/Equity)	4.0%	0.8%

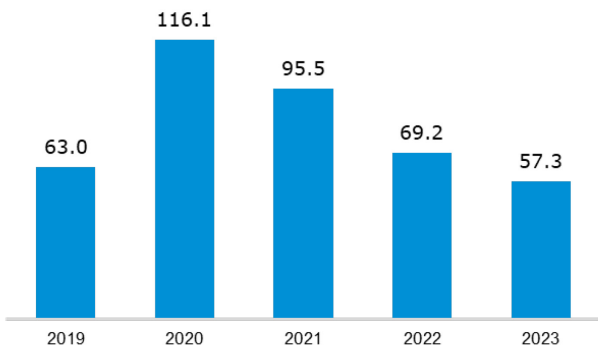
Sales revenue (PLN mn)



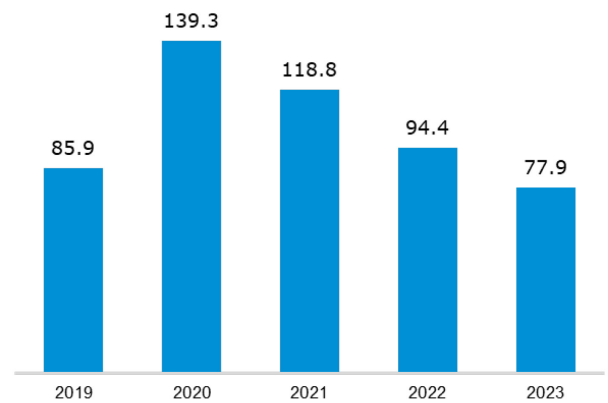
Operating expenses (PLN mn)



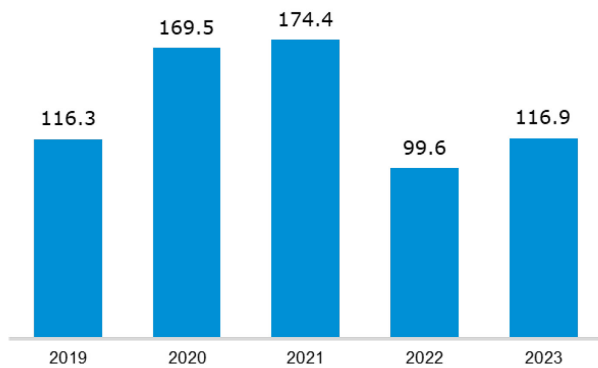
Operating profit (PLN mn)



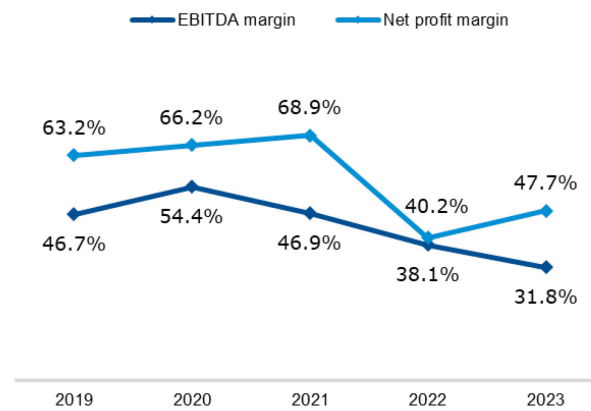
EBITDA (PLN mn)



Net profit (PLN mn)



Net profit margin and EBITDA margin



1.5. GPW on the capital market

GPW has been listed on the Warsaw Stock Exchange since 9 November 2010. The Company's shares are listed in the continuous trading system on the GPW main market. The capitalisation of the company was PLN 1.78 billion as at the end of 2023, ranking #49 among all domestic stocks on GPW.

The Company is a part of the mid-cap index mWIG40 since 19 March 2011 with a 1.59% share in the index portfolio at the end of 2023, and a part of mWIG40TR (total return index, which is based on transaction prices in the participating stocks as well as dividend income). GPW shares are also part of the broad market indices (WIG and WIG-Poland), as well as WIGdiv (GPW regular dividend index) and CEEplus (the biggest Central and Eastern European stocks). In addition, GPW shares participate in a number of small and mid-cap indices on the emerging markets, as well as indices which group securities exchanges, computed by global specialised, renowned index providers (including MSCI, FTSE Russell and S&P Dow Jones). Since September 2019, GPW participates in the socially responsible index WIG-ESG (previously RESPECT Index).

Since December 2018, GPW calculates and publishes new dividend indices WIG20dvp and mWIG40dvp, whose values depend on the value of dividends paid by companies included in WIG20 and mWIG40 respectively. GPW, which participates in mWIG40, regularly pays out dividends and contributes to the value of the mWIG40dvp index.

1.5.1. GPW stock price

The GPW stock price ranged in 2023 from PLN 35.06 (the year's low on 6 April 2023) to PLN 43.18 (the year's high on 27 December 2023). The stock price was PLN 42.50 as at the end of 2023, compared to PLN 35.52 as at the end of 2022 and PLN 41.42 as at the end of 2021, rising 19.7% during the year. Including the dividend of PLN 2.70 per share, the total shareholder return (TSR) in 2023 was 27.3%.

Figure 3 GPW stock price since new listing on GPW (PLN)



Figure 4 GPW stock price in 2023 v. mWIG40 and WIG (rebased: 31.12.2022 = 100%)

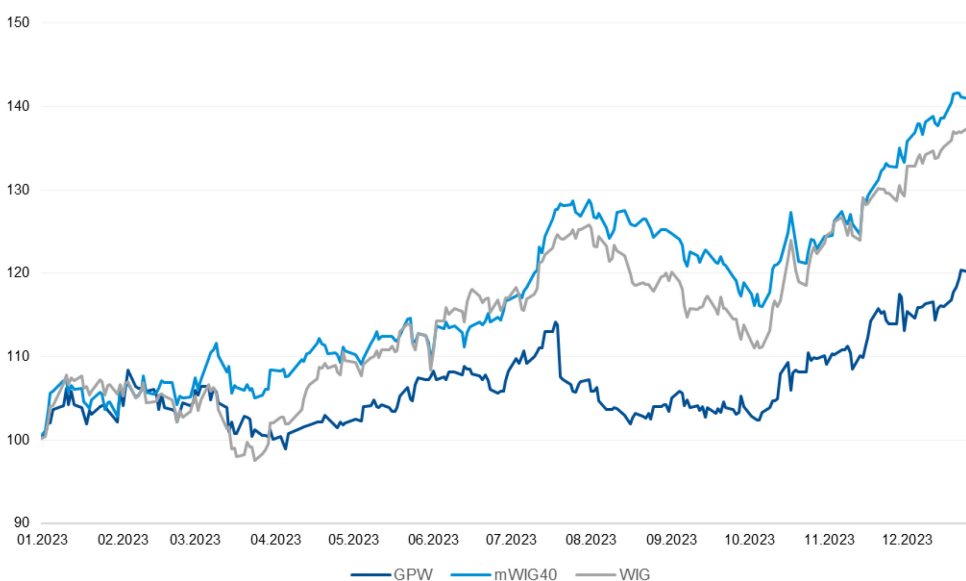


Table 8 Selected statistics of GPW SA stock

	2023	2022	2021	2020	2019	2018	2017	2016	2015
Earnings per share (PLN) ¹	3.72	3.45	3.84	3.63	2.84	4.38	3.78	3.12	2.95
Dividend per share (PLN) ²	2.70	2.74	2.50	2.40	3.18	2.20	2.15	2.36	2.40
Dividend yield ³	6.7%	7.5%	5.2%	5.5%	7.4%	5.8%	4.4%	6.7%	4.9%
P/E	11.4	10.3	10.4	12.7	13.8	8.4	16.9	12.8	12.2
Maximum share price (PLN)	43.18	42.98	50.25	49.55	43.90	48.65	49.98	41.57	53.00
Minimum share price (PLN)	35.06	31.16	40.00	29.95	36.85	34.05	39.06	31.05	34.53
Share price at the end of the period (PLN)	42.50	35.52	41.42	45.70	39.30	36.65	46.99	39.93	35.95
Average (volume) weighted share price (PLN)	38.06	34.88	44.87	40.92	39.95	39.69	46.05	35.87	44.99
Return rate on shares	19.7%	-14.2%	-9.4%	22.6%	7.2%	-22.0%	17.7%	11.1%	-21.3%
Total shareholder return - TSR ⁴	27.3%	-7.5%	-4.34	27.4%	15.9%	-17.3%	23.1%	17.6%	-16.1%
Number of shares (thousand)	41 972	41 972	41 972	41 972	41 972	41 972	41 972	41 972	41 972
Capitalisation (PLN million)	1 784	1 491	1 738	1 918	1 649	1 538	1 972	1 676	1 509
Free float ⁵ (PLN million)	1 156	966	1 127	1 243	1 068	997	1 278	1 089	978
Free float %	48.2%	48.2%	48.2%	48.2% ⁶	64.8%	64.8%	64.8%	64.8%	64.8%
Turnover volume (million shares) ⁷	12.5	15.3	15.1	16.8	9.7	14.8	10.9	11.8	11.7
Turnover value (PLN million)	477.5	564.0	677.2	685.3	388.6	589.5	501.9	424.0	526.4
Number of transactions (thousand)	138.3	161.1	167.4	159.4	81.8	98.9	90.2	89.7	63.0
Average turnover volume per session (thousand)	50.2	61.0	60.1	64.6	39.2	60.1	46.3	47.1	46.6
Average turnover value per session (PLN thousand)	1 910.0	2 247.1	2 698.0	2 719.6	1 567.0	2 386.5	2 007.7	1 689.1	2 097.4
Average number of transactions per session	553	642	667	633	330	400	361	357	251
Velocity ⁸	46.1%	56.3%	55.2%	59.4%	36.0%	55.3%	40.1%	43.3%	42.9%

¹ Based on the consolidated profit attributable to the owners of the parent entity

² Based on last year's profit

³ Dividend paid / Share price at dividend record date

⁴ (Annual change of share price + Dividend per share) / Share price at the end of the previous period

⁵ Free-float shares (excluding shares held by the State Treasury and strategic investors)

⁶ According to a new methodology based on the number of votes

⁷ Electronic Order Book (net of block trades)

⁸ Measured as annualised average turnover volume during the period to average number of shares traded during the period

1.5.2. GPW shareholders

The State Treasury was the biggest shareholder of GPW as at 31 December 2023: it held 14,695,470 shares representing 35.01% of all shares and 51.80% of the total vote. The second biggest shareholder of GPW was Allianz Polska Otwarty Fundusz Emerytalny which held 2,242,998 shares representing 5.34% of all shares and 3.95% of the total vote.

Table 9 GPW shareholders as at 31 December 2023

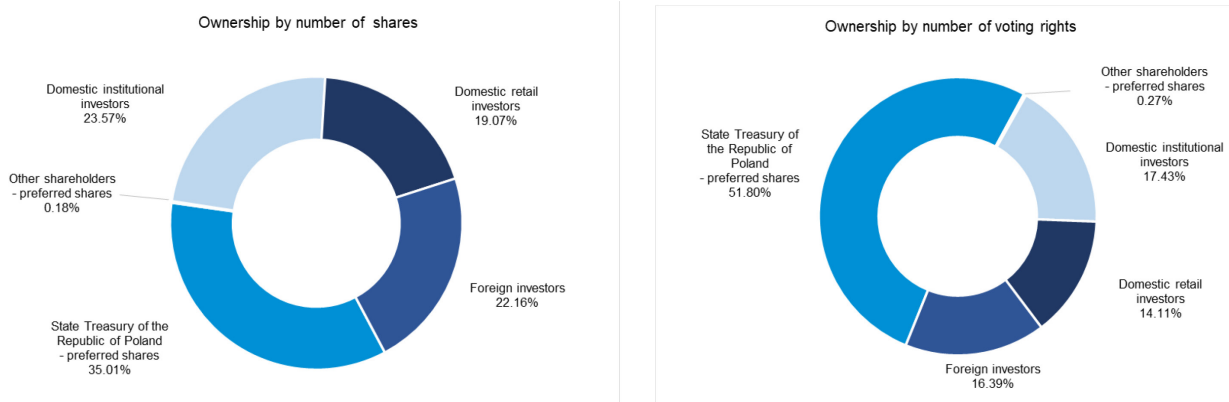
Shareholder:	Shares		Votes	
	#	%	#	%*
State Treasury – preferred shares	14 695 470	35.01%	29 390 940	51.80%
Allianz Polska OFE	2 242 998	5.34%	2 242 998	3.95%
Other shareholders – preferred shares	77 000	0.18%	154 000	0.27%
Other shareholders – bearer shares (free float)	24 956 532	59.46%	24 956 532	43.98%
Total	41 972 000	100%	56 744 470	100%

* Series A registered shares held by the State Treasury of the Republic of Poland and other entities which were shareholders of the Warsaw Stock Exchange before its public offering (banks, brokerage houses, issuers) are preferred in that each such share carries two votes at the General Meeting. As at 31 December 2022.

According to the shareholder register provided by KDPW, the detailed shareholding structure of the Company was as follows (after excluding the block of 14,695,470 shares held by the State Treasury):

- › 9.3 million shares representing approx. 22.16% of the Company’s share capital - foreign investors,
- › 8.0 million shares representing approx. 19.07% of the Company’s share capital - domestic retail investors,
- › 7.8 million shares representing approx. 18.58% of the Company’s share capital - open-ended pension funds managed by pension fund companies,
- › 2.1 million shares representing approx. 4.99% of the Company’s share capital - domestic institutional investors (mainly open-ended investment funds, special open-ended investment funds, closed-ended investment funds, employee capital plans, the Demographic Reserve Fund).

Figure 5 GPW shareholders as at 31 December 2023



Source: KDPW

Table 10 GPW free float – 31.12.2023

	#	%
Open-ended pension funds managed by pension fund companies	7 797 052	18.58%
Domestic funds (open-ended investment funds, special open-ended investment funds, closed-ended investment funds, employee capital plans, the Demographic Reserve Fund open-ended investment funds, special open-ended investment funds, closed-ended investment funds, employee capital plans, the Demographic Reserve Fund)	2 095 813	4.99%

Domestic retail investors	8 003 851	19.07%
Foreign investors	9 302 814	22.16%
TOTAL	27 199 530	64.80%

Source: KDPW

According to KDPW data, foreign shareholders hold a total of 9.30 million GPW shares i.e. 22.16% of the share capital. Foreign investors are predominantly entities registered in:

- › USA – 9.93% of the share capital,
- › Canada – 3.38% of the share capital,
- › Luxembourg – 1.81% of the share capital.

1.5.3. Dividend for GPW shareholders

According to the current dividend policy (communicated by the company in Current Report 7/2023) during the term of the Strategy 2023-2027, it is the intention of the GPW Management Board to recommend that the General Meeting pay dividend depending on the profitability and the financial capacity of GPW, at 60-80% of the consolidated net profit of the GPW Group for the financial year. The Strategy aims to maintain the acquisition potential of the GPW Group. If acquisitions are not realised, the Management Board may recommend to the General Meeting a dividend payout ratio higher than 60-80%.

The dividend is to be paid annually upon the approval of the Company's financial statements by the GPW General Meeting ("General Meeting"). To determine the final amount of dividend to be recommended to the General Meeting, the GPW Management Board will consider among others the following factors:

- › capital and investment needs in the implementation of the strategy of the GPW Group;
- › the dividend yield and the pay-out ratios used by peer companies;
- › actions necessary to develop the Polish capital market infrastructure;
- › liquidity requirements of the GPW Group depending on actual and expected market and regulatory conditions, liabilities incurred in current operations and debt service, and optimisation of the GPW Group's financing structure.

Dividend paid in 2023

GPW has paid the shareholders a dividend for each year since the company went public. On 7 August 2023, the Company paid PLN 113.3 million in dividend from the 2022 profit. The dividend of PLN 2.70 per share was paid to GPW shareholders who held shares at 24 July 2023 (record date). The dividend yield in 2023 at the closing price on the record date was 6.7%.

Table 11 GPW dividend from profits in 2010-2022

Financial year for which dividend was paid	Paid dividend (PLN'000)	Dividend per share (PLN)	Dividend payout rate ⁹	Dividend yield ¹⁰	Date of the General meeting	Dividend record date	Dividend payout date
2022	113,324	2.70	97.09% ¹¹	6.68%	26.06.2023	24.07.2023	7.08.2023
2021	115,003	2.74	71.30% ¹²	7.43%	23.06.2022	25.07.2022	5.08.2022
2020	104,930	2.50	77.30% ¹³	5.23%	21.06.2021	23.07.2021	5.08.2021
2019	100,732	2.40	93.22% ¹⁴	5.53%	22.06.2020	28.07.2020	11.08.2020

⁹ Based on the consolidated profit attributable to the owners of the parent entity

¹⁰ Based on the closing price at dividend record date

¹¹ Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

¹² Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

¹³ Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

¹⁴ Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

Financial year for which dividend was paid	Paid dividend (PLN'000)	Dividend per share (PLN)	Dividend payout rate ⁹	Dividend yield ¹⁰	Date of the General meeting	Dividend record date	Dividend payout date
2018	133,471	3.18	77.1% ¹⁵	7.35%	17.06.2019	19.07.2019	2.08.2019
2017	92,338	2.20	63.3% ¹⁶	5.84%	19.06.2018	19.07.2018	2.08.2018
2016	90,240	2.15	70.71% ¹⁷	4.39%	19.06.2017	19.07.2017	2.08.2017
2015	99,054	2.36	80.27%	6.69%	22.06.2016 ¹⁸	20.07.2016	4.08.2016
2014	100,732	2.40	89.88%	4.93%	25.06.2015	15.07.2015	4.08.2015
2013	50,366	1.20	44.45%	3.31%	25.07.2014 ¹⁹	7.08.2014	26.08.2014
2012	32,738	0.78	30.95%	2.03%	21.06.2013	12.07.2013	26.07.2013
2011	60,440	1.44	45.19%	3.84%	27.06.2012	6.07.2012	20.07.2012
2010	134,730	3.21	142.28%	6.05%	27.06.2011	12.07.2011	27.07.2011

1.5.4. Dialogue with GPW Shareholders and investors

GPW aspires to comply with the highest standards of investor communications as it considers its presence on the capital market to be a part of a long-term growth strategy. Pursuant to the investor relations policy, the company develops long-term professional relations with all participants of the capital markets and ensures active communications and equal access to information for all investor groups. In 2023, GPW took a number of initiatives and applied a broad range of tools in its ongoing communications with the shareholders, investors and analysts, including:

- › presentations of the financial results after the end of each quarter at online meetings of the GPW Management Board with capital market analysts and investors (in Polish and English),
- › presentation of the GPW Group Strategy in May 2023,
- › live broadcast of the Annual General Meeting on 26 June 2023,
- › online participation in local and international financial conferences for global institutional investors,
- › more than 50 one-on-one and group meetings and other contacts with representatives of domestic and international institutional investors.

In 2023, GPW once again presented its milestones, key events and strategic plans in an online Integrated Annual Report available at [GPW Capital Group Integrated Report 2022](#). The report provides transparent and precise information presenting a broad picture of the developments in 2022.

GPW engages individual investors in active dialogue. In addition to information published by the Company on its website, the activities in 2023 focused on proactive communication with investors, distribution of all necessary information, as well as direct contacts with the Company's representatives, including a chat for investors with GPW Management Board Member and Head of Business Development and IR Izabela Olszewska (21 April 2023). The chat has been published on the company's website: [Presentations and webcasts](#).

According to the investor relations policy, GPW voluntarily applies periods of limited communications with capital market participants preceding the publication of financial results. Consequently, the Company neither holds nor takes part in investor meetings two weeks before the publication of financial statements (periodic reports).

As an important part of the Company's open communications with investors, the Investor Relations section of the Company's website regularly provides information relevant to shareholders and investors including:

¹⁵ Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

¹⁶Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates.

¹⁷ Based on the consolidated profit attributable to the owners of the parent entity adjusted for the share of profit of associates

¹⁸ Annual General Meeting of the Company commenced on 22 June 2016, resumed and adjourned on 21 July 2016

¹⁹ Annual General Meeting of the Company commenced on 26 June 2014, resumed on 15 July 2014 and adjourned on 25 July 2014

- › current and past financial results (including Excel files),
- › investor presentations (updated at least once a month),
- › dates of events,
- › factsheets,
- › video recordings of quarterly conferences and the General Meeting,
- › news.

GPW also provides an IR alert service in order to communicate current corporate news to subscribers.

1.5.5. GPW bonds on the exchange

No GPW bonds were listed on the regulated market operated by GPW and in the alternative trading system operated by BondSpot as at 31 December 2023.

On 6 October 2015, GPW issued PLN 125 million seven-year series C bonds with a maturity of 7 years. The bonds were redeemed on 6 October 2022. The bonds were unsecured. The bonds were listed in the alternative trading system operated by GPW and BondSpot from December 2015. The bonds had fixed interest at 3.19% p.a., interest was paid semi-annually.

Series A and series B bonds in a nominal amount of PLN 120.5 million were redeemed on maturity on 2 January 2017. Those were the outstanding series A and B bonds issued at the turn of 2011 to 2012 in a total amount of PLN 245 million. The bonds were introduced to trading on Catalyst (regulated market and alternative trading system) and assimilated under a single ISIN code. GPW's series A and B bonds were unsecured floating-rate bonds. Interest was fixed within six-month interest periods at WIBOR 6M plus a margin of 117 basis points.

Series D and E bonds in a nominal amount of PLN 120 million were issued by GPW in October 2016 and registered in January 2017. The bonds were redeemed on 31 January 2022 at maturity. Those were five-year bearer bonds. The GPW Management Board decided to issue the bonds in connection with the redemption of the second part of series A and B bonds, maturing on 2 January 2017. The bonds had a fixed interest rate at WIBOR 6M plus a margin of 0.95% p.a. The bonds were listed on the Catalyst regulated market operated by GPW and on the Catalyst regulated market operated by BondSpot.

2. Activity of the GPW Group

2.1. Market environment

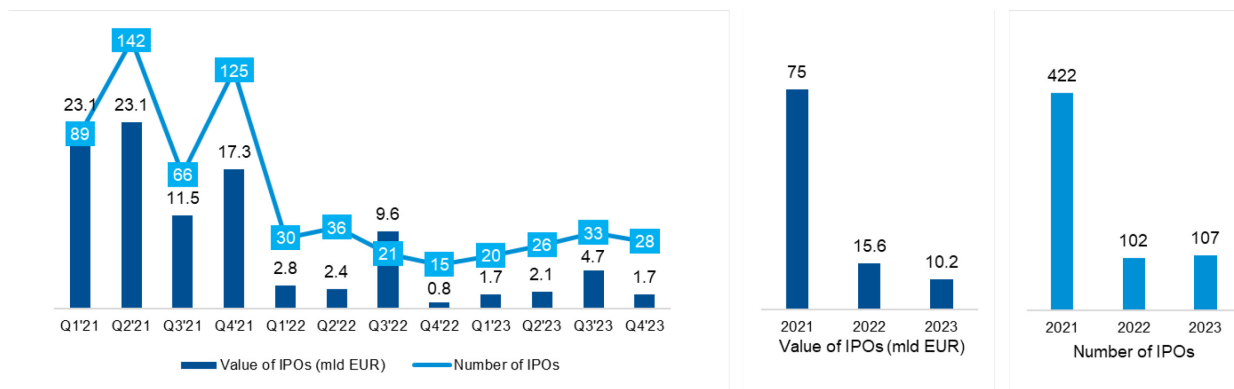
2.1.1. Financial market

In 2023, the GPW indices outperformed both emerging market and developed market aggregate stock indices. The index of the largest companies, the WIG20, gained 30.8% last year, the WIG20TR increased by 35.0% and, in US dollars, the WIG20 USD gained 45.6%, while the MSCI Emerging Markets increased in value by 9.8% and the MSCI World (developed markets) by 23.8%. The improved sentiment of foreign investors towards Polish assets was also evident in the strong appreciation of the zloty against the euro and the dollar in H2 2023.

The turnover in shares on the electronic order book on the GPW Main Market in 2023 decreased by 3.9% year-on-year to PLN 275.5 billion. Average session turnover was PLN 1.098 billion compared to PLN 1.138 billion in 2022. According to data from the Federation of European Securities Exchanges (FESE), total turnover on European stock exchanges (including MTFs) fell by 14.9% last year to EUR 9.2 trillion.

The value of IPOs on the GPW stock markets in 2023 rose to PLN 502 million compared to PLN 127 million in 2022, and the largest offering was the IPO of property development company MURAPOL S.A. on the GPW Main Market. According to PwC's IPO Watch Europe 2023 report, the total value of IPOs on European markets fell by 34.6% year-on-year in 2023 to EUR 10.2 billion, and the number of IPOs rose to 107 from 102 a year earlier.

Figure 6 Value and number of IPOs in Europe in 2021-2023

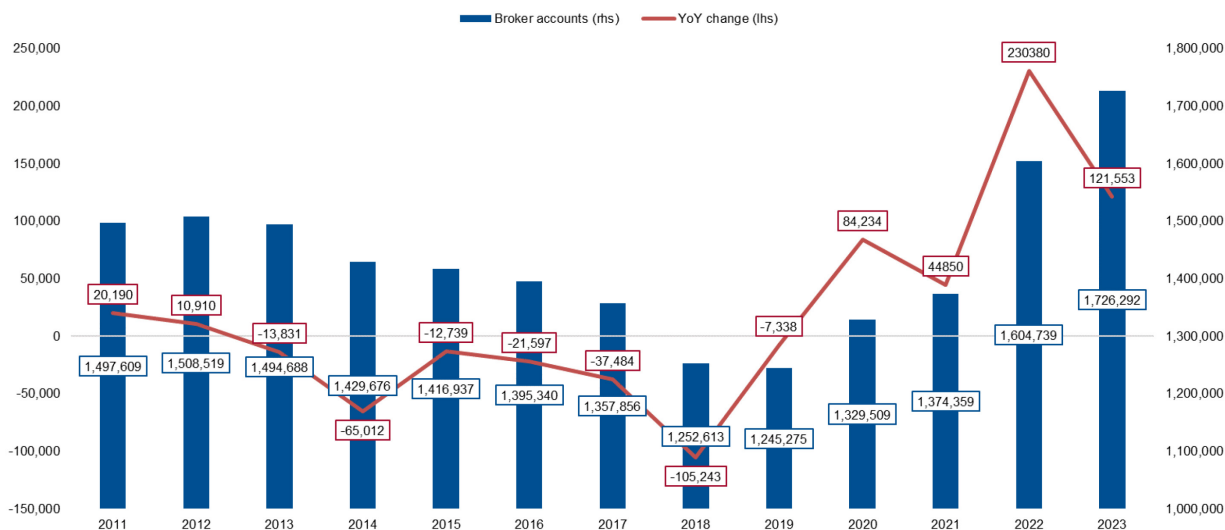


Source: PwC, IPO Watch Europe reports

The total value of Secondary Public Offerings (SPOs) on the GPW stock markets in 2023 was PLN 2.9 billion, down from PLN 9.0 billion in 2022. The highest value SPOs took place for companies in the energy industry (POLENERGIA S.A.), consumer goods (CCC S.A.) and property development (ATAL S.A., MLP GROUP S.A.).

The year 2023 saw continued influx of individual investors into the market. At the end of 2023, KDPW maintained 1.726 million securities and omnibus accounts compared to 1.605 million at the end of 2022, which shows that 121.6 thousand accounts were added during the year, the second largest annual increase ever. The largest increase in the number of brokerage accounts in 2023 was recorded by XTB S.A. (up 81.7k accounts year-on-year). Dom Maklerski Banku Ochrony Środowiska S.A. and mBank S.A. Biuro Maklerskie had 24.1k and 19k more accounts respectively. Brokerage Office.

Figure 7 Number of securities accounts and omnibus accounts operated by KDPW in 2011-2023



Source: KDPW

Competition of financial instrument trading venues in Europe has increased over the past few years following the implementation of EU Directives MiFID I and MiFID II. Operators of regulated markets compete for new issuers, investors, liquidity and trade. Another challenge for exchanges is posed by alternative trading venues and platforms including MTFs (Multilateral Trading Facilities) and SIs (Systematic Internalisers), supported by MiFID I and MiFID II.

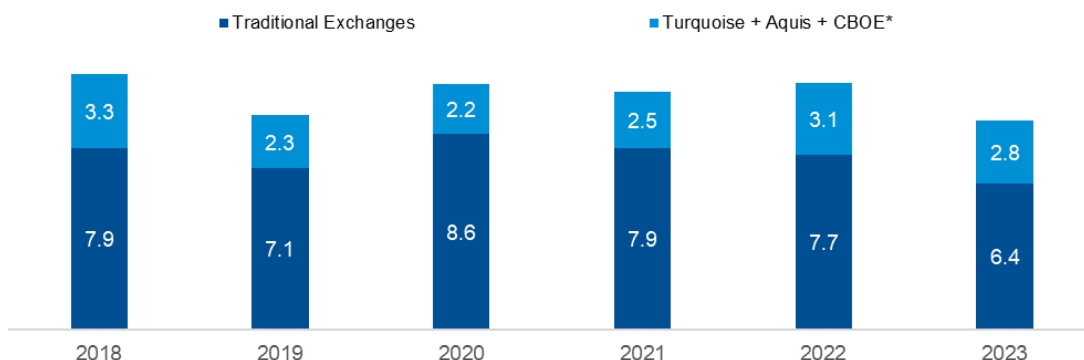
Some MTFs have been licensed as regulated markets, for instance CBOE Europe N.V. The experience of other exchanges suggests that the emergence of alternative trading venues boosts the total turnover in stocks on the market due to the emergence of new investor categories as well as arbitrage strategies pursued by market participants who trade in the same stocks on two or more venues. However, the percentage share of incumbent exchanges in total turnover typically shrinks. Trade in Polish equities has been offered for several years among others by the London-based venue Turquoise (owned by the London Stock Exchange) and, since 5 November 2018, by CBOE Europe N.V. In previous years, the value of trading in shares of Polish companies on these platforms was not significant. In the opinion of GPW, this could suggest that smaller markets, such as GPW, tend to concentrate trading. Alternative trading venues which offer trade in Polish stocks charge significantly lower execution fees but their costs of clearing and settlement are much less competitive.

Measures taken in response to competitive trading venues:

- improvement of stock market liquidity and order book quality. To support it, we continued promotions to electronic traders (HVP, HVF) as well as programmes for market makers;
- offering colocation services as a key part of the capital market infrastructure which supports the development of electronic liquidity providers and improves liquidity of the order book;
- contract signed in 2023 with a new data centre owned by Equinix. As a result, it is now easier to connect clients who have a relationship with Equinix but are not present at the GPW;
- the Technology Development Support Programme launched in 2019 continued in 2023. Developed in consultation with brokers, the Programme offers discounts on some exchange fees to those brokers who invest in additional technological potential and improve the quality of service;
- the Analytical Coverage Support Programme 3.0 closed and the fourth edition of the Programme opened. The objective is to improve liquidity in the sector of medium and small companies. In return for contractually determined fees, investment firms undertake to conduct and publish research of companies enrolled in the Programme which meet the criteria described in the Programme regulations. In the current edition, the Programme covers 59 companies listed on the Main Market. In 2023, the fourth edition of Programme produced 262 analytical reports in Polish;
- the Employee Capital Plans (PPK) programme. In March 2023, automatic re-enrolment in the PPK took place for all employees aged 18-55 who have not participated in the programme so far, and as a result, the number of participants in the programme increased sharply. According to data from the Polish Development Fund (PFR), 3.39 million people were saving in PPK at the end of 2023, compared to 2.52 million at the end of 2022. For more information on PPK, see section 2.7.2 of this Report;
- active promotion of the Polish equity market among global investors together with domestic brokers, in connection with the classification of Poland as a developed market by FTSE Russell and Stoxx;
- growing activity of individual investors – their growing presence on GPW helps to boost the value of turnover, improve the velocity ratio, and consolidate the position of GPW as a regional financial hub. GPW offers a range of educational initiatives and conferences addressed to individual investors.

According to FESE data, MTFs (Turquoise, Aquis Exchange) and CBOE Europe Equities (originally an MTF, now classified as a regulated market by FESE; for the purposes of this analysis, it is considered an MTF) generated EUR 2.8 trillion i.e. 30.4% of European stock turnover on the electronic order book in 2023. The total value of European stock turnover on the electronic order book (exchanges and MTFs) stood at EUR 9.2 trillion in 2023, a decrease of 14.9% year on year.

Figure 8 EOBS equity turnover on European FESE exchanges and alternative trading venues [EUR billion]



*CBOE Europe Equities is a regulated market according to FESE classification. For comparison, it is shown under MTFs

Source: FESE – European Equity Market Report

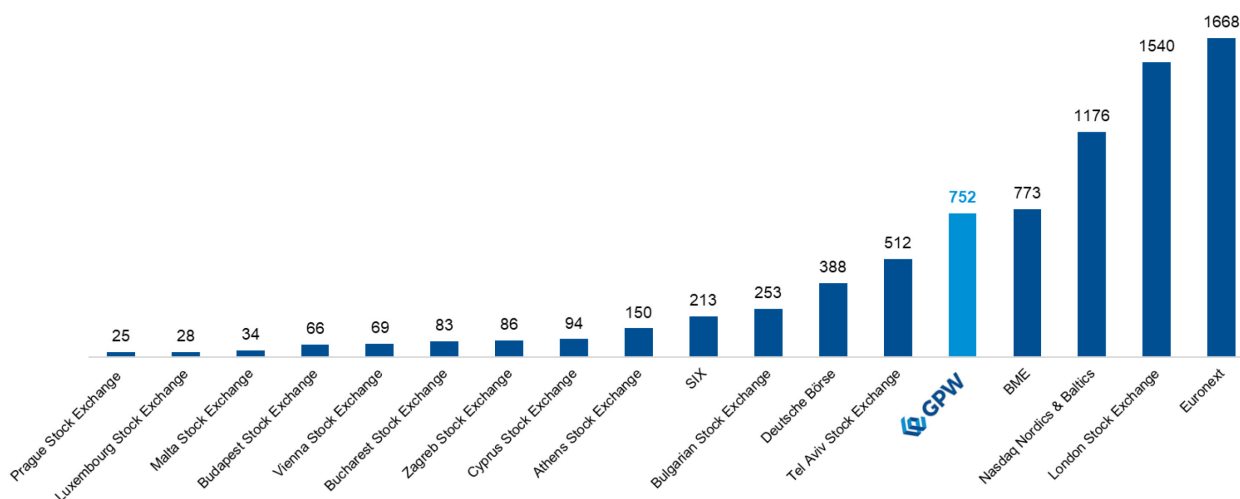
Number of listed companies

There were 10 new listings on the GPW Main Market and 14 new listings on the NewConnect alternative market in 2023. The value of Initial Public Offerings (IPOs) was PLN 444 million on the Main Market and PLN 58 million on NewConnect.

Last year was another period of decline in the value of IPOs in Europe and globally, driven by greater uncertainty in the macroeconomic environment (elevated inflation and interest rates, risk of recession in major economies). According to PwC's IPO Watch Europe 2023 report, the total value of IPOs in European markets fell by 34% year-on-year to EUR 10.2 billion in 2023, with the number of offerings increasing to 107 from 102 a year earlier. Globally, the value of offerings fell by 30.2% year-on-year to USD 121 billion, according to data compiled by PwC. Two countries accounted for more than half of the global IPO market in 2023: China (USD 45.3 billion) and the US (USD 24 billion).

According to FESE and the London Stock Exchange, there were 7,910 domestic companies listed on European exchanges at the end of 2023. GPW was in the leading position in Europe with 752 listed domestic companies, second only to entities grouping several exchanges (Euronext - 1,668 companies, Nasdaq Nordics&Baltics - 1,176 companies, BME - 773 companies) and the London Stock Exchange group (1,540 companies).

Figure 9 Number of domestic companies listed on European exchanges at 2023 YE

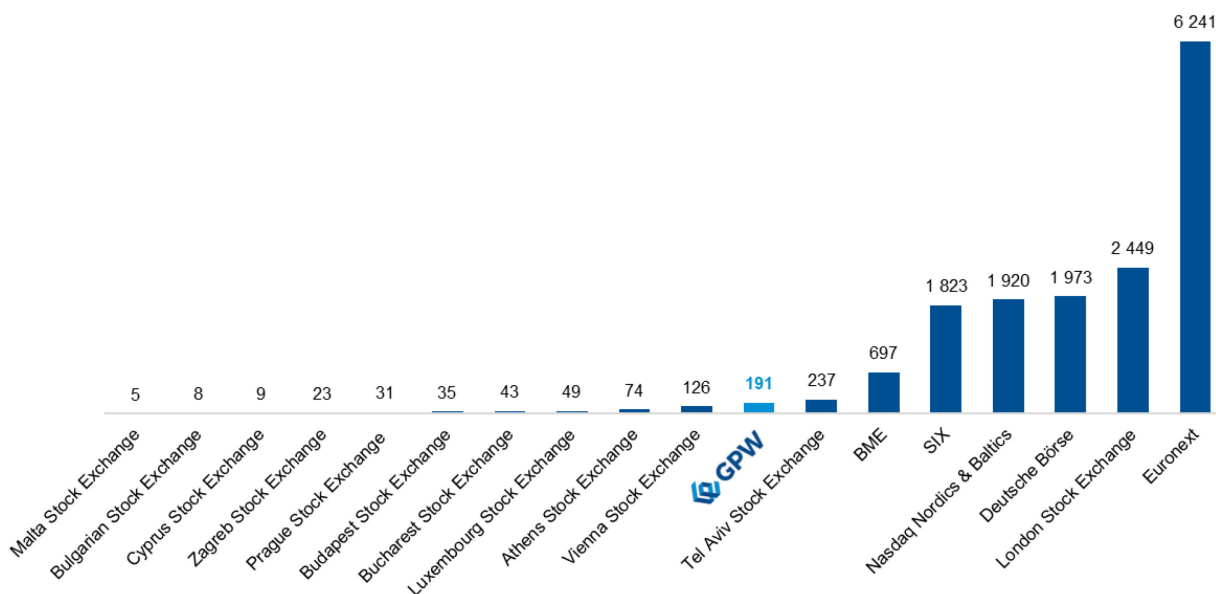


Source: FESE; data for the London Stock Exchange from the LSE website

Capitalisation of stock markets

According to FESE and London Stock Exchange, Europe's biggest exchanges as measured by capitalisation as at the end of 2023 included the Euronext Group (which operates regulated markets in Belgium, France, Ireland, the Netherlands, Portugal, Norway and Italy), LSE, Deutsche Börse and Nasdaq Nordics&Baltics. GPW was CEE's biggest market (PLN 191 billion).

Figure 10 Capitalisation of domestic companies on European exchanges at 2023 YE [EUR billion]

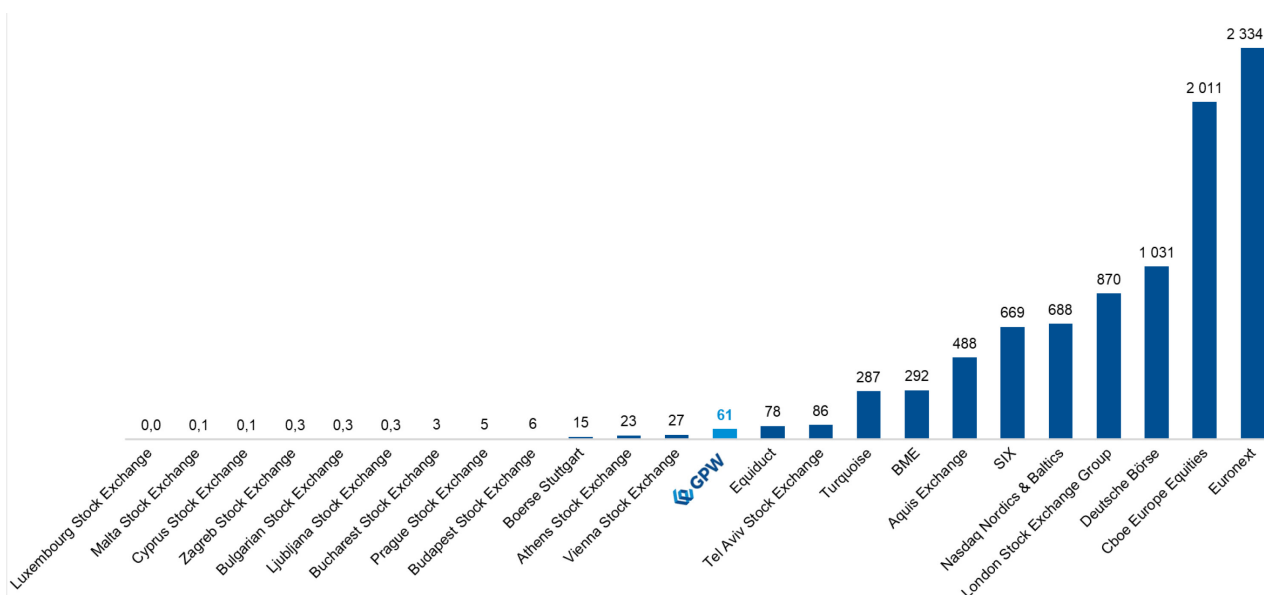


Source: FESE; data for the London Stock Exchange from the LSE website

Equity trade

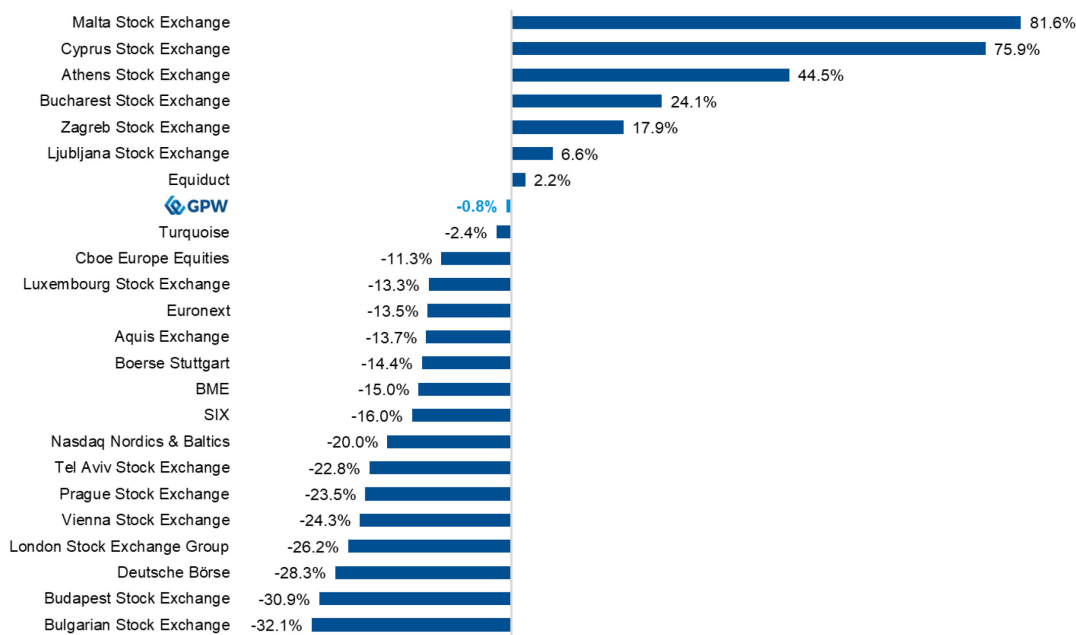
According to FESE, the European exchange industry is dominated by several large operators as measured by the value of equity turnover. The European leader in 2023 was the Euronext Group (EUR 2.7 trillion) followed by Cboe Europe (EUR 2.27 trillion). According to FESE statistics, the value of turnover in stocks on the electronic order book on GPW was EUR 61.0 billion in 2023 (vs. EUR 61.5 billion in 2022), which represented a year-on-year decrease of 0.8%. The decrease in turnover on GPW calculated in EUR was lower than in the local currency (3.9%) due to the decrease in the EUR/PLN exchange rate in 2023. GPW remained the CEE leader by the value of turnover in shares in 2023, well ahead of Vienna, Budapest, Prague and Bucharest.

Figure 11 Value of turnover in shares on the electronic order book on European exchanges in 2023 [EUR billion]



Source: FESE; data for the London Stock Exchange from the LSE website

Figure 12 Change in the value of turnover in shares on the electronic order book on European exchanges in 2023 vs. 2022 [EUR]

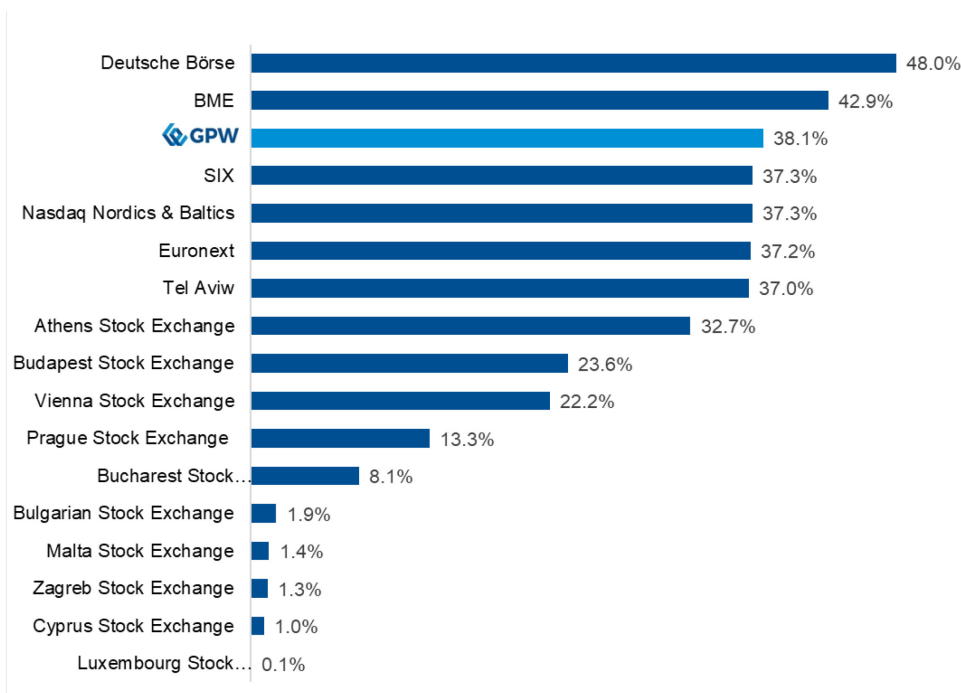


Source: FESE

Velocity ratio

The velocity ratio measures turnover in relation to average monthly capitalisation on an exchange. FESE statistics present velocity by month. On average in 2023, domestic equity trading velocity was the highest once again on the Deutsche Börse (48.0%). GPW's average velocity ratio was 38.1% in 2023, the third highest in Europe.

Figure 13 Velocity²⁰ on European exchanges in 2023



Source: FESE

²⁰ Velocity measured as turnover in 2023 to average capitalisation at the end of each month on exchanges

2.1.2. Commodity market

Electricity market and gas market

Exchange trading in electricity increased while trading in natural gas decreased in 2023. The changes for both commodities were not significant and amounted to less than six percent year-on-year (in the case of the electricity market, turnover increased by only 4.3%). Excluding 2022, electricity trading volumes were the lowest since 2017, while for gas, 2023 recorded the lowest trading volumes since 2016.

The electricity trading volumes increased in 2023 due to a sharp rise in spot market turnover to 63.2 TWh, up by 91.4% from 33.0 TWh in 2022. At the same time, this was an increase of as much as 74.4% on the record year to date of 2021 (36.2 TWh). This was mainly due to the increased use of a range of Day Ahead Market instruments by trading participants: the trading volume in block instruments increased by as much as 22 times to 18.1 TWh, the trading volume in hourly instruments in continuous trading increased by almost three times to 0.27 TWh, and the trading volume in both fixings increased by approximately one-third (by a total of 32.4%) to almost 40.0 TWh. The growth of the Intraday Market was also very dynamic, with turnover reaching 4.8 TWh, exceeding that of 2022 by 143.8% and that of the previous record year 2021 (2.4 TWh) by 105.1%.

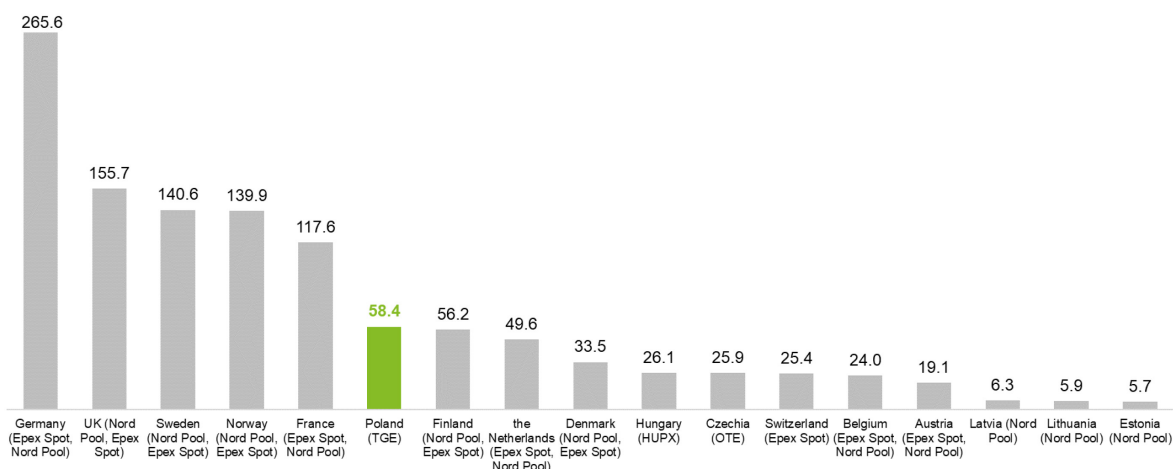
The increase in the spot market was accompanied by a decrease in liquidity in the forward market, which represented a continuation of the trend set in the second half of 2022 due to the legislative process of abolition of the obligation to sell electricity on an exchange. Despite the significant increases in trading volumes in the last quarter of 2023 and due, among others, to the final abolition of the obligation as of 6 December 2022, the trading volume of electricity forwards listed on the Organised Trading Platform (OTF) decreased by 22.2% year-on-year for the whole of 2023, to 84.2 TWh. This represents the lowest volume of the electricity forward exchange market since 2010, when it traded at 74.1 TWh and when a sales obligation was in place at a significant level. At the same time, turnover in electricity forwards was slightly lower in 2023 than in 2017 (86.4 TWh), when the sell obligation was in operation but was the lowest in the period 2010-2022.

The decrease in liquidity of instruments with longer delivery periods was accompanied by increased interest in other instruments, also outside the spot market. The year 2023 saw the highest trading volume for weekly electricity instruments, which amounted to 3.3 TWh. For these instruments, the best month ever on TGE was January 2023 (0.65 TWh), and a similar record was broken for monthly electricity instruments in March 2023 (2.2 TWh).

Turnover in natural gas declined on TGE in 2023 on both the spot market (by 4.5 TWh or 19.7%) and the forward market (by just under 4.0 TWh or 3.4%). Liquidity on the gas exchange market, like on the electricity market, was affected by, among others, the changes to the mandatory sales regulations made in December 2022. However, the obligation to sell gas was only reduced at that time (both temporarily and in terms of volume) rather than abolished, so that its impact on volumes on the forward market was small. Total gas trading volumes on the Organised Trading Platform (OTF) amounted in 2023 to 114.9 TWh, while turnover in gas on the spot market was 18.2 TWh in 2023. The decline in turnover was also driven by relatively high temperatures in the first months of the year and the declines in gas consumption during this period (year-on-year), which only slowed down to a greater extent in the second half of the year.

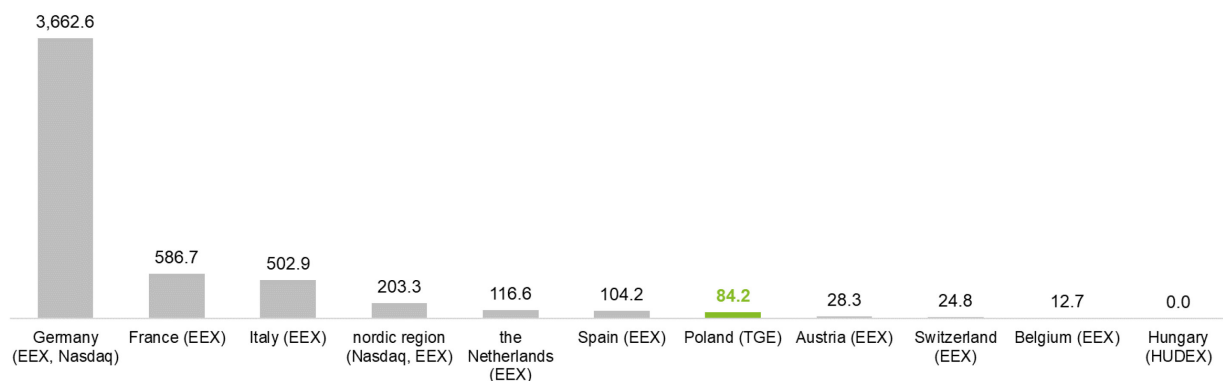
Volume of trade in electricity and gas on European exchanges

Figure 14 Volume of trade in electricity on European exchanges in 2023 (day-ahead markets) [TWh]



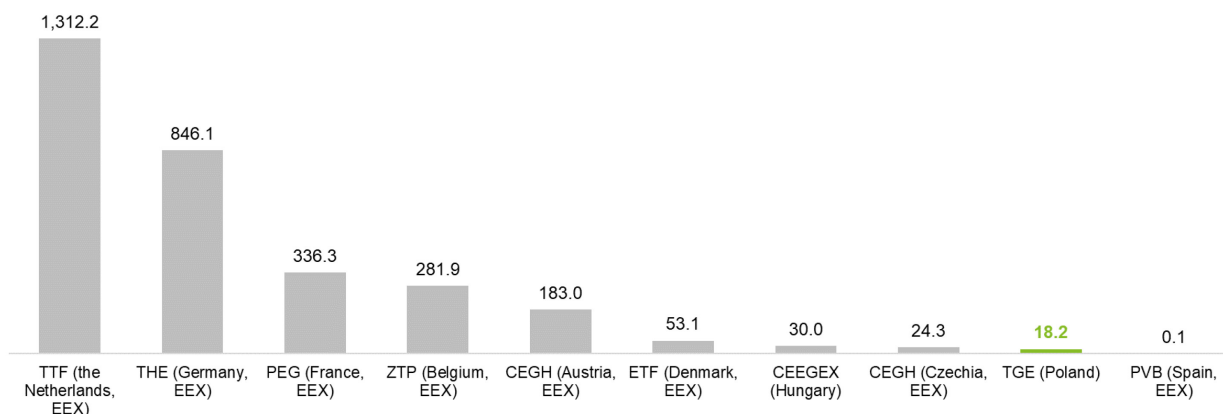
Source: TGE based on exchange data

Figure 15 Volume of trade in electricity on European exchanges in 2023 (forward markets)²¹ [TWh]



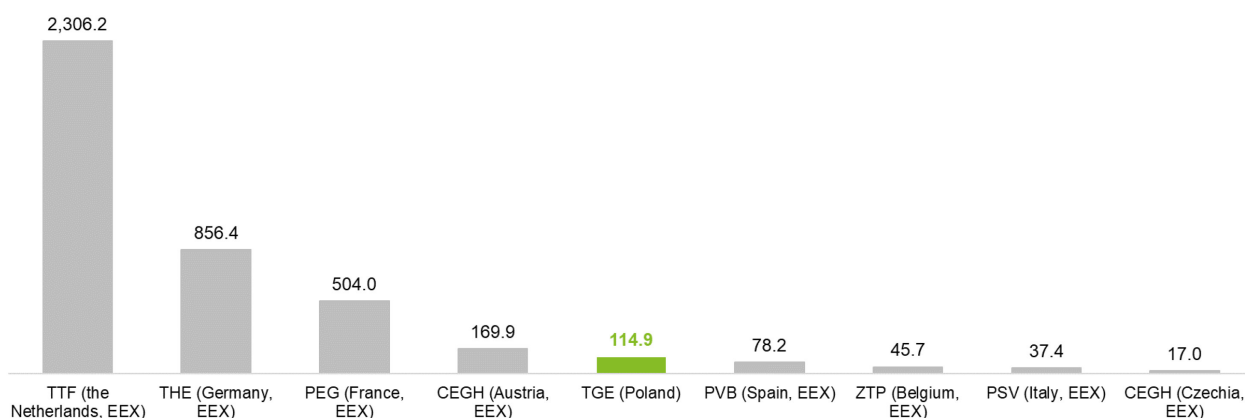
Source: TGE based on exchange data

Figure 16 Volume of trade in gas in European hubs (spot markets) in 2023²² [TWh]



Source: TGE based on exchange data

Figure 17 Volume of trade in gas in European hubs (forward markets) in 2023²³ [TWh]



Source: TGE based on exchange data

²¹ EEX volumes include OTC trade

²² EEX volumes include OTC trade

²³ EEX volumes include OTC trade

Property rights

Turnover of green and blue certificates (for electricity generated from RES) on the Property Rights Market amounted to approximately 19.7 TWh in 2023. This represents a 20.5% decrease in trading volume compared to 2022 resulting, among others, from the end of the certificate support scheme for some of the entities in the Register of Certificates of Origin and the migration of entities to the Energy Regulatory Authority's auction system, a significantly reduced level of redemption obligation in the recent period (from 18.5% for the 2022 clearing year to 12% for 2023 and to 5% for 2024), and reduced electricity consumption affecting redemption volumes measured in energy units.

In 2023, turnover of white certificates of energy efficiency increased by 12.7% to 110.4 ktoe. The relatively low level of issuance of white certificates continued for another year and decreased by 12.2% to 109.8 ktoe in 2023. The certificates traded in 2023 were certificates without a fixed term (registered under the instrument PMEF_F) and annual certificates (instruments PMEF-2022 and PMEF-2023).

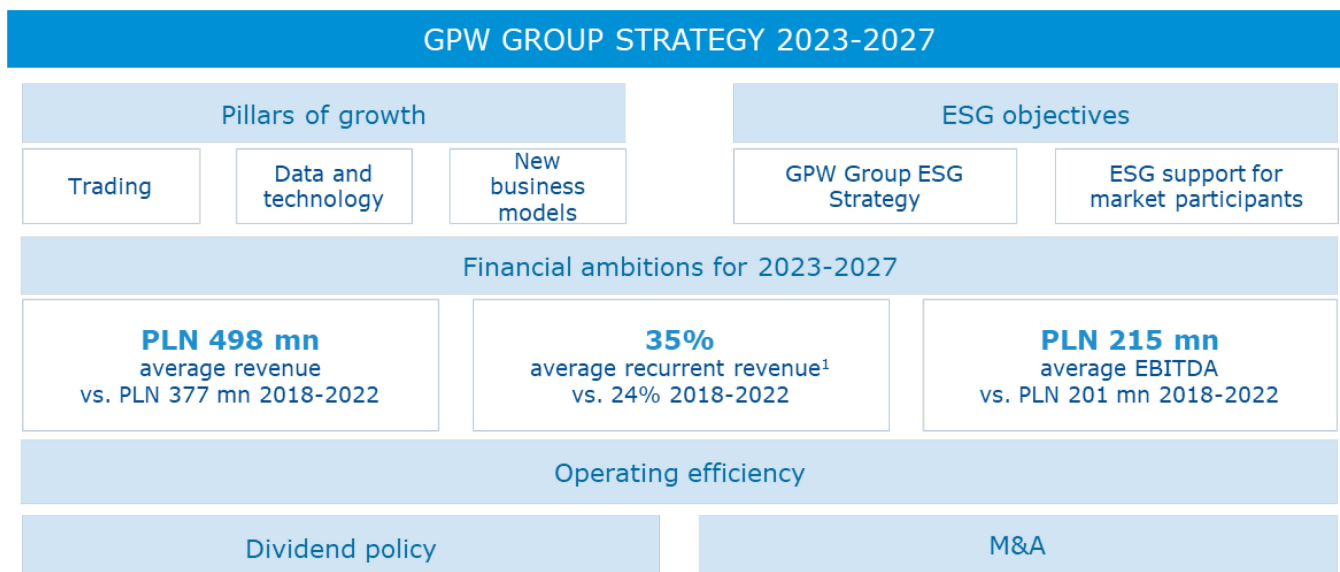
2.2. Mission and Strategy of the GPW Group

The mission of the GPW Group is to develop efficient mechanisms for the movement of capital and goods by providing exchange and clearing services competitive in quality and price which meet the needs and expectations of the Group's clients - businesses, investors and trading intermediaries:

- › Promoting economic growth and building an investment culture;
- › Creating an international capital hub;
- › Ensuring the highest standards and safety of trading based on world-class technology;
- › Running integrated, efficient, growth-oriented operations.

The GPW Management Board presented on 25 May 2023 the framework of the new strategy of the GPW Group for 2023-2027 approved by the Exchange Supervisory Board.

Chart 3 Framework of GPW Group strategy for 2023-2027



¹ Revenue not dependent on turnover, including data services and regular fees paid by issuers

According to the strategy, in the time horizon 2023-2027, approximately 35% of the GPW Group's average annual revenues will be recurring revenues, independent of the value of turnover in financial instruments, including among others information services and regular fees from issuers. This will improve the company's financial security and predictability.

In the time horizon 2023-2027, the GPW Group plans to achieve average annual revenues of PLN 498 million and average annual EBITDA of PLN 215 million. Revenue growth in 2027 vs. 2023 will be PLN 157 million, of which PLN 101 million is attributable to new strategic initiatives. The EBITDA margin will increase to 50% over the Strategy period.

The new strategy focuses on three pillars of Group revenue growth:

1. Trading

- › **Introducing new products** – on markets under development, including GlobalConnect, ETF, ETC, ETN;
- › **Derivatives development** – launch of new derivatives tailored to clients' needs, promotion of market maker orders supporting liquidity of the order book, extension of promotional and educational programmes for all groups of investors;
- › **New platform for institutional investors** – launch of a Treasury securities market complementary to TBSP, including cash and contingent trading segments. The market will provide access to banks currently active in the TBSP market and direct participation by institutional investors;

2. Data and technology

- › **GPW WATS** – GPW's proprietary trading system. The initiative assumes the monetisation of the WATS system across GPW Group companies and the sale of the WATS to external clients;
- › **GPW Cloud** – it will cover two areas: (1) the launch of GPW's cloud infrastructure compliant with the PFSA's requirements for its own needs, (2) the launch of a GPW environment based on public cloud infrastructure to provide services to market participants.;
- › **GPW STORK** – continuing to offer a web-based market abuse detection application to detect manipulation and insider dealing. Potential clients include brokerage houses, supervisory institutions, also outside Poland;
- › **GPW TCA TOOL** – Transaction Cost Analysis (TCA). The project has developed a set of tools to identify and analyse transaction costs as a source of information for investors and brokers on data aggregated at micro market level. The product can be sold to other exchanges, as well as brokerage houses;
- › **Expanding the scope of offered data** – to include the creation of the ESG Data Hub, a repository of non-financial reports of companies listed on the ATS and the Main Market. New market data products are also planned for algo-traders and alternative data users.

3. New business models

- › **GRC by GPW Tech** – commercialisation of a GRC (Governance, Risk, Compliance) tool to manage risks of non-compliance with applicable regulations and internal procedures and to ensure continuous monitoring of regulatory and legal requirements, particularly for public companies;
- › **Corporate solutions: Investor relations** – implementation of a platform to offer IR corporate solutions services, including organising and monitoring interactions with institutional investors, facilitating reporting and access to training. In addition, advice on building investor engagement or on IR/PR will be available through the platform;
- › **Warsaw Integrated Digital Exchange** – supporting tokenisation of financial assets (shares, ETFs and bonds) using a dedicated platform owned by GPW Private Market for tokenisation of non-financial assets (e.g. works of art), and conducting crowdfunding activities.

In addition, a number of **growth activators** are envisaged as part of the implementation of the Strategy:

- › **Knowledge Exchange Forum** – to complement the current knowledge transfer infrastructure (GPW Growth, Exchange School). Led by the World Federation of Exchanges and GPW, the Forum aims to educate and share best practice;
- › **GPW Group's ESG Strategy 2025 "Together for Sustainability"** – continued implementation of the strategy announced in 2021;
- › **Building human capital** – division of the GPW Group team into current activities ("run the business") and the implementation of strategic projects ("change the business");
- › **Acquisitions and partnerships** - the Strategy aims to maintain the acquisition potential of the GPW Group. Between 2023 and 2027, the GPW Group will opportunistically pursue an inorganic growth strategy in both equity and commodity markets.

In addition, between 2023 and 2027, the GPW Group plans to continue the transformation of its operating model and gradually improve **cost efficiency**. The planned measures include: replacement of IT systems, implementation of new tools, automation and robotisation, process management, and a new organisation of work following the implementation of GPW WATS. The assumed cost savings of the GPW Group between 2023 and 2027 are expected to amount to PLN 34 million.

The GPW has paid **dividends** to shareholders for each year since its IPO as a public company. During the 2023-2027 Strategy, it is the intention of the GPW Management Board to recommend that the General Meeting pay dividend depending on the profitability and the financial capacity of GPW, at 60-80% of the consolidated net profit of the GPW Group for the

financial year. The Strategy aims to maintain the acquisition potential of the GPW Group. If acquisitions are not realised, the Management Board may recommend to the General Meeting a dividend payout ratio higher than 60-80%.

2.3. Implementation of the GPW Group Strategy in 2023

The status of the GPW Group's strategic initiatives in 2023 was as follows:

- › The biggest and most important product under development in the GPW Group is a new trading system **Warsaw Automated Trading System (WATS)**. It will reduce the operating costs of the exchange and may also be commercialised. In 2019, the new system development project received funding from a grant by the National Centre for Research and Development (NCBR) of nearly PLN 30 million, which is one-third of the planned budget.

 - ✓ GPW selected Equinix as the provider of the state-of-the-art data centre where the WATS will be launched. The presence in the new data centre will create an opportunity for the Polish capital market to join the global ecosystem connecting thousands of Equinix partners.
 - ✓ In June 2023, GPW developed the GPW WATS Data Centre Migration Support Programme, which is related to the placement of the Warsaw Automated Trading System in the new data centre. The Programme is one element of GPW's support for market participants to adapt to the new exchange infrastructure.
 - ✓ In March 2024 The Exchange Management Board has decided to accept the recommendation of the GPW WATS Implementation Committee to postpone the production rollout date of the Exchange's new trading system to the turn of Q3/Q4 2025. The new deadline will allow Exchange Members to complete complex IT system customisation projects and testing with the GPW WATS.
- › **GPW Tech** developed four products:

 - ✓ TCA Tool is used to analyse macro and micro market structure. The product can be sold to other exchanges as well as brokers. The first contract for TCA Tool services for the Kuwait Stock Exchange has been completed.
 - ✓ GPW STORK is used to detect market abuse related to trading on the exchange. It has already been implemented on the Polish market. Potential clients include brokerage houses, supervisory institutions, also outside Poland. The product has been fully implemented at GPW.
 - ✓ Indexator – index calculator has replaced the previous, less powerful calculator used by GPW. GPW Tech is in talks with foreign clients interested in purchasing the tool.
 - ✓ The GRC System, which is a tool for managing the risk of non-compliance with applicable regulations and internal procedures, ensuring continuous monitoring of regulatory and legal requirements in particular for public companies. The product has been implemented in the GPW Group and the first fee-paying client outside the Group has been acquired.
- › In December 2022, the formal conditions were fulfilled and GPW purchased 65.03% of shares in the **Armenia Securities Exchange (AMX)**.

 - ✓ At the beginning of September 2023, a strategy session was held in Yerevan, attended by representatives of the shareholders of the Armenia Securities Exchange (AMX) (GPW and the Central Bank of Armenia), the Supervisory Board and the Management Board of AMX. The main points of AMX's strategy implementation were presented at the event, with a particular focus on the coming months and quarters. The main points identified were primarily: continuation of integration work between GPW and AMX, starting the process of financial education (with particular emphasis on the capital market) in Armenia through the creation of the AMX Academy, starting work on the launch of new products on the Armenian market (structured products, ETFs, companies), implementation of ESG principles in Armenia, assimilation of compliance and AML principles using the experience of GPW and other entities (K2 from the USA, recommended by the US embassy in Yerevan).
 - ✓ In July 2023, the Armenian government announced details of support for the development of the Armenia Securities Exchange (AMX). The bond market assistance project envisages, among others, support for the placement and trading of bonds issued in Armenian drams (AMDs) with a maturity of at least 36 months at the time of issuance, placement and listing at 2% of the issue value (but not more than AMD 30 million) and after listing at 3% of the issue value (but not more than AMD 45 million) per year over a three-year period. The target companies of the initial phase of the assistance project can be entities that have undergone external audits. In particular, audit firms with an international reputation that are more likely to meet the requirements of the bond issue. In the context of an equity issue, the Armenian government offers companies to cover the costs of external audits, banking and stock exchange services related to the issue, placement and listing - a one-off payment of 80% of the incurred and documented costs. Once listing has commenced, it will refinance 50% of the costs of obtaining and maintaining a rating (for companies listed on the AMX, this will be 80%).
 - ✓ In 2023, AMX's revenue was PLN 23.5 million, operating profit was PLN 4.5 million and net profit was PLN 4.4 million.
- › In November 2022, the Warsaw Stock Exchange launched a market for shares of foreign companies **GlobalConnect**. Trading on GlobalConnect takes place during GPW trading hours in the Polish zloty, which means

that investors have certainty as to the price at which they buy shares. Investors can place orders through an account in a domestic brokerage house connected to the new market.

- ✓ At the end of 2023, GlobalConnect listed a total of 16 companies from USA, Germany, Spain, the Netherlands and Portugal,
 - ✓ In December, the shares of the first US company (Tesla) were newly listed on GlobalConnect,
 - ✓ In 2023, turnover in shares on GlobalConnect totalled PLN 7.14 million.
- › **GPW Benchmark** focused its efforts in 2023 on performing the functions of benchmarks administrator within the meaning of the BMR and the continued provision of the WIRON index and the WIRON Compound Indices Family (WIRON 1M Compound Rate, WIRON 3M Compound Rate, WIRON 6M Compound Rate, and WIRON Single Base Index), which can be used as a benchmark by supervised entities in financial contracts, financial instruments and investment funds as of 2 December 2022.
- ✓ On 2 May 2023, GPW Benchmark started publication of a new index GPWB Poland Government Floating Rate Bond (GPWB-BWZ), which covers floating rate government bonds and is part of the Treasury Bond Index Family. The input data for the GPWB-BWZ index are reference rates from the Treasury BondSpot Poland (TBSP) market, used in the methodology of other Treasury Bond Indices.
- › As part of the **GPW Data** project, work started in 2023 to implement a system for reporting on NewConnect and Catalyst issuers.
- ✓ Through the use of machine-readable data technology, GPW Data will enable the adaptation of issuer reporting systems to current market standards and generate additional revenue from the service of making issuer reports available to news agencies.
- › June 2023 marked the end of the fourth edition of the **GPW Growth** Academy organised by the Exchange. The Academy included networking meetings with experts and business practitioners, workshops and case studies. The programme is aimed at CEOs, Management Board members and directors responsible for achieving key goals in companies. The fifth edition of the GPW Growth Academy was launched at the end of 2023.
- › The project aiming to develop the **derivatives segment** under the #GPW2022 strategy is also ongoing. Investors had access to 5 index-based contracts, 42 equity-based contracts, and 4 foreign exchange contracts in 2023. GPW introduced new contracts on the shares of Budimex S.A., Dom Development S.A. and Inter Cars S.A. in 2023.
- › **ETF** turnover in 2023 amounted to PLN 1.12 million, up by 8.7% compared to 2022. At the end of 2023, 11 ETFs were listed on GPW. At the end of 2023, the total assets under management of funds of Beta Securities Poland, the most active ETF provider on GPW, increased to over PLN 0.6 billion.
- › In August 2023, the first **ETC** product, The Royal Mint Responsibly Sourced Physical Gold ETC was newly listed on the GPW Main Market. The issuer of the new instrument is the European platform HANetf. The instrument provides exposure to physical gold that has been responsibly sourced by The Royal Mint in the UK. The ETC was launched in February 2020. The instrument is denominated in US dollars.
- › **Securities Lending** – GPW took steps to develop the securities lending market in cooperation with KDPW and other market participants. The aim is to stimulate liquidity growth on the GPW Group's cash and derivatives market by promoting and increasing the scale of securities lending.
- › In December 2023, Krajowy Ośrodek Wsparcia Rolnictwa (KOWR) took a majority stake in GPW Ventures Asset Management sp. z o.o. ASI spółka komandytowo-akcyjna, established by **GPW Ventures Asset Management**, a company of the GPW Group. The name of the company has been changed to GPW Ventures Asset Management sp. z o.o. KOWR Ventures ASI spółka komandytowo-akcyjna. The value of the new issue of shares directed to KOWR amounts to PLN 75 million in the current year. The target is to reach a total of PLN 225 million by 2026 (PLN 75 million in 2023, PLN 50 million in 2024, PLN 50 million in 2025, and PLN 50 million in 2026). The cumulative management fee charged by GPW Ventures Asset Management sp. z o.o. over the years 2023 to 2026 will amount to approximately 5 percent of the fund's target capitalisation.
- › **Polish Digital Logistics Operator (PCOL)** is a reference project of the "Synergy" team operating at the Ministry of State Assets and coordinated by GPW. The aim of the project is to streamline and facilitate processes for the TSL (Transport, Logistics and Shipping) industry and to ensure security of the Polish transport market. The project was launched in response to the needs of the industry of key importance to the Polish economy.
- GPW Logistics Sp. z o.o. was set up in 2022, a company responsible for commercialisation of the technology and business development of the venture. GPW Logistics provides transport organisation services (freight forwarding services) to, among others, KGHM, Grupa Azoty Puławy, Grupa Azoty Kędzierzyn-Koźle and Polska Grupa Górnicza. In 2023, GPW Logistics's revenue was PLN 15.6 million.
- › **The GPW Private Market** is a technology project of the Warsaw Stock Exchange (GPW) based on blockchain technology. Its objective is to develop a platform for individual investors where it is possible to trade in tokenised non-financial assets, such as works of art, and to raise investment capital through crowdfunding. Ultimately, financial assets such as shares and bonds are also to be available on the Private Market platform.
- Works of art are the first of the areas that GPW wants to enter together with its partners. This initiative is intended to enable a larger range of investors to take an interest in the art market. The next step in the development of the platform in the area of works of art will be the first test tokenisations.

- ✓ On 27 October 2023, the Polish Financial Supervision Authority authorised GPW Private Market to operate as a crowdfunding provider for investment crowdfunding.
- › In December 2023, the research and development phase of the **Telemetry Operator (TeO)** project was completed, in line with the NCBiR schedule. A special purpose vehicle GPW DAI S.A. was established for the commercialisation of an auction platform for the comprehensive handling of media market transactions related to dynamic ad insertion (DAI).
 - ✓ The Telemetry Operator TeO project carried out proof of concept tests with broadcasters and operators. The first pair was Emitel as operator and Telewizja Puls as broadcaster. Emitel provided the HbbTV platform, where commercials broadcast in the Puls Television stream were inserted. In late August and early September, ad insertion took place in the open signal of Puls Television. The further proof-of-concept test pairs were cable operators Korbank and Nasza Wizja and the television channels TV Puls and TV Regio. In parallel, pilot advertising campaigns on the OTT platforms of Telewizja Polska and Polsat, i.e. the TVP GO and Polsat BOX GO applications, were realised through the company GPW DAI. At the end of 2023, GPW DAI carried out a pilot campaign using DAI technology for PZU - the broadcast took place in TV REGIO on the Korbank cable network.
- › In 2023, **BondSpot S.A.** initiated steps to allow the Minister of Finance (MF) to operate directly on the Repo TBSP market as a new participant with Public Investor status. This status allows the MF to operate on the Repo TBSP market solely on the basis of the Trade Registration Facility (TRF) functionality, which involves agreeing the terms of a transaction in advance and then registering it in the trading system. This model allows transactions to be concluded on both individual bond series as well as baskets of bonds (General Collateral repo). The post-trade service model ensures that settlement instructions are sent to KDPW, via KDPW_CCP, but without the need for the above transactions to be covered by the KDPW_CCP clearing guarantee system. Formal admission of MF to trading on the TBSP market and operational launch is planned for March 2024.
- › In 2023, legislation exempting selected repo transactions from bank tax came into force. The Act of 16 November 2022 amending the Act on Tax on Certain Financial Institutions and Certain Other Acts introduced a solution that reduces the tax base for bank tax by the value of assets resulting from selected repo transactions. The condition to use this solution is that the repo transaction is concluded on a Regulated Market or in an Alternative Trading System (ATS) and cleared by KDPW_CCP. Participants of the TBSP market which has ATS status are beneficiaries of the changes. The exemption of repo transactions from the bank tax base should, in the long term, contribute to increasing the efficiency of the TBSP market as well as its referentiality.
- › In 2023, BondSpot S.A. continued work on the All-to-All project. The main objective of the project is to increase the value of transactions executed on the markets operated by the company and to expand the range of market participants to include financial institutional investors by enabling their direct participation in trading on the spot and repo and buy/sell back markets. The project assumes that transactions concluded within this segment will be concluded both by banks currently active in the TBSP market as well as by new participants (in particular institutional investors) based on a separate order book (spread-free trading) in the form of several matching sessions and using the CCP trade clearing collateral mechanism. The project assumes the launch of a new market in the ATS format, operating on the basis of the WATS trading system provided by GPW. Key stakeholders in the project will include domestic and foreign banks currently operating on the TBSP market, institutional investors and brokerage houses, and entities acting as clearing institutions for entities that are not members of the CCP clearing house. The launch of the All-to-All market is planned once the migration of BondSpot Catalyst Regulated Market and Alternative Trading System to the WATS system has been completed.
- › In December 2021, the GPW Group approved the **GPW Group's ESG Strategy 2025**, which sets out the ambitions and objectives in the area of sustainable development for 2022-2025. The Strategy includes the main directions of activities in the area of ESG and sustainable development for all companies in the GPW Group. The GPW Group's ESG Strategy 2025 outlines the directions of the GPW Group's activities under three pillars: environmental, social and governance. The GPW Group's ambition is to reach zero emissions by 2030. Further steps were taken in 2023 in pursuit of the Strategy, including reducing greenhouse gas emission levels, increasing employee knowledge in the area of sustainable development, developing educational activities aimed at a wide range of stakeholders.
 - ✓ An ESG Committee was established within the GPW Group, which includes among others Management Board Members of the GPW Group companies (TGE, BondSpot, IRGiT, GPW Benchmark).
 - ✓ The ESG Committee serves as a standing committee established by the Group's Board. The Committee is a consultative and advisory body supporting the Management Boards of the Companies in the effective management of ESG policies, strategies and objectives and in the supervision of the ESG Factors management system at GPW and the GPW Group.
 - ✓ The responsibilities of the Committee include:
 - defining directions for ESG activities
 - monitoring the implementation of the GPW Group ESG Strategy,
 - giving opinions on and monitoring the implementation of the Annual Operational Plans which detail the ESG objectives and actions of the Companies for a given year, including the objectives and actions concerning climate change

- annual evaluation of implementation of the Companies' actions in compliance with the objectives of the GPW Group ESG Strategy, Climate Policy (conclusions from the evaluation are an input to the process of defining subsequent Annual Operational Plans)
 - giving opinions on the results of ESG risk assessment, including climate risk
 - reviewing recommendations from internal and external audits on ESG issues
 - regular review of ESG activities and issuing opinions, reports and recommendations to the Group Board on ESG management in the GPW Group.
- ✓ As part of the implementation of the strategic objectives under the ESG Strategy, regular ESG reviews were held at meetings of the Management Boards of the companies and at Group Board meetings in 2023.
 - ✓ There is also a **Regulation and Corporate Governance Committee** within the Exchange Supervisory Board. The Committee submits recommendations to the Exchange Supervisory Board on issues including: initiating, providing opinions on and monitoring activities related to the implementation of corporate governance principles by GPW and in listed companies, assessing on an annual basis how the Exchange complies with corporate governance principles and information obligations related to their application set out in the Exchange Rules and regulations on current and periodic reports published by issuers of securities.

Other actions supporting the implementation of the GPW Group strategy:

- › On 6 July 2023, a memorandum of understanding was signed between the Warsaw Stock Exchange, the European Bank for Reconstruction and Development and the National Securities and Stock Market Commission of Ukraine. The memorandum of understanding, signed as part of GPW's **Ukraine capital market reorganisation project**, aims among others to support the integration of the Ukrainian capital market with international capital markets and the development of financial services and products based on international practices and innovative technologies. The cooperation is also expected to help improve price formation and develop risk hedging mechanisms. Specific activities will be implemented within the framework of the initiated cooperation, including the exchange of information, including technical assistance reports, financial forecasts, diagnostic market analyses, regulatory framework assessments and other technical information on the development of capital market infrastructure and the development of the local financial market in Ukraine. It is also important to develop options for the modalities of potential EBRD and GPW support for the development of Ukraine's capital market infrastructure. In addition, a working group consisting of representatives of the parties signing the memorandum of understanding and other stakeholders will be established to support the development of Ukraine's capital market infrastructure, including the preparation of an updated diagnostic assessment of Ukraine's capital markets in the reconstruction phase.
- › The **Knowledge Exchange Forum** is a new initiative of the Warsaw Stock Exchange, one of the key elements of the new GPW Group Strategy 2023-2027. The idea behind the Forum is to support participants of the Polish capital market in gaining expert knowledge based on reliable and verified information sources and to facilitate the transfer of information and experience between experts and all participants of the Polish capital market. The first edition of the Knowledge Exchange Forum was organised by GPW at the end of 2023 together with foreign partners: the World Federation of Exchanges and the International Sustainable Finance Centre.
- › The **Exchange Analytical Coverage Support Programme** continued in 2023. The fourth edition of the programme for the years 2023-2025 was launched on 3 July and covers 59 companies listed on the GPW Main Market. The new edition of the programme includes a modified framework: the new criteria for qualifying companies for the Programme 4.0 are the market value of free float and the status of GPW Main Market issuer.
 - ✓ In the Exchange Analytical Coverage Support Programme 4.0, investment firms provide research financed by GPW. The goal of the Programme is to increase the availability of research on less liquid companies and thus to enable investors to take informed investment decisions based on a reliable, independent source of information about issuers. The Programme covers 59 companies listed on the GPW Main Market.
- › GPW organised consecutive editions of the conference **#GPWInnovationDay** three times in 2023. Participants had the opportunity to update their knowledge of current developments in companies listed on the GPW Main Market and NewConnect and learn about companies planning to be floated. GPW also organised sector and thematic conferences, including the Warsaw Passive Investment Conference, Progressive Investor Day, Space Day Conference, Warsaw Structured Products Day.
- › **Stock Exchange School courses**, including an online Stock Exchange Summer School.
 - ✓ The Stock Exchange School has been active since 1999. Its programme is implemented by the GPW Foundation under the honorary patronage of the Warsaw Stock Exchange and in cooperation with several academic centres across the country. The courses cover basic, advanced and personal finance management topics.
 - ✓ The on-line Stock Exchange Summer School is a joint educational project of the Association of Individual Investors (SII) and the GPW Foundation addressed to all persons interested in investing in the stock market. The main objective of the Summer School is to introduce participants to the key issues related to individual investment in financial instruments. Each of the 10 trainings focused on a different issue and was provided by top experts and long-term practitioners.

- › The GPW Foundation organised the third edition of the **Financial Education Day** addressed to a wide audience interested in expanding their knowledge of personal finance and investment. The event was co-organised by the Warsaw Stock Exchange. The event was held on-site and online on 18 October 2023. It was attended by more than 1,800 participants. The Education Day programme included an expert debate and multiple lectures aimed at those interested in expanding their knowledge of personal finance and investment.
- › 2023 marked the completion of the Capital Market Development Strategy, a key document that defined the directions and modalities of market participants' activities. Many of the initiatives included in the new strategy of the Warsaw Stock Exchange are in line with the framework of the government document implemented from 2019. The GPW Group actively participates in the **Financial Market Development Council's thematic working groups for the implementation of the Capital Market Development Strategy**, including the Working Group on Gold Plating, Sustainable Finance, and others. Many of GPW's activities fit with the Capital Market Development Strategy and are included in the Capital Market Development Strategy Monitor, including:
 - ✓ in 2023, GPW and PwC co-organised the third edition of the ESG Leaders competition as part of Action 88 "Undertaking dual-track educational and promotional activities on sustainable investments and products";
 - ✓ Go4Poland internship programme as part of Action 6 "Attracting Poles working abroad in major financial, consulting, IT and FinTech companies to the domestic capital market";
 - ✓ Best Practice for GPW Listed Companies 2021 as part of Action 10 "Exercise by GPW, to a greater extent than before, of the powers set out in the Exchange Rules concerning the enforcement of compliance with corporate governance principles by listed companies";
 - ✓ launching a family company segment as part of Action 60 "Secondary equity market development plans to compete with the best developed markets in the world".

Technology and security

- › Colocation and support services: The colocation service was opened to GPW's clients in Q1 2016 and the first client, Erste Securities Polska, started to use the service in April 2016. The service is dedicated to algorithmic traders seeking the closest possible access to GPW markets for themselves and for their clients. In 2023, GPW's service offered attractive technologies and state-of-the-art solutions for clients in Poland and beyond. In 2023, GPW signed an agreement with Equinix, a leading global data centre operator. This is the next step in improving GPW's access infrastructure.

Equity market

- › Ten companies were newly listed on the Main Market in 2023 (9 were transfers from NewConnect to the Main Market) and 14 companies were newly listed on NewConnect. GPW promoted the exchange as a potential source of capital for companies. The GPW Growth project continued and supported companies in building corporate value through expansion based on external sources of financing, in particular the capital market. High interest in the secondary market continued in 2023, with the total value of SPOs amounting to PLN 2.9 billion on the GPW stock markets. The biggest SPOs took place for companies in the energy industry (POENERGIA S.A.), consumer goods (CCC S.A.) and property development (ATAL S.A., MLP GROUP S.A.).
- › EOB turnover on the Main Market was down 3.9% year on year to PLN 274.5 billion in 2023 (vs. PLN 285.6 billion in 2022). NewConnect turnover was 12.8% lower year on year in 2023 (PLN 2.2 billion vs. PLN 3.5 billion in 2022).
- › GPW reported the third highest velocity ratio among European exchanges in 2023, according to FESE data, second only to Deutsche Boerse and the BME group of Spanish exchanges. GPW's average monthly velocity ratio last year was 38.1%.
- › Trading fee reductions:
 - ✓ A reduction of fees for market makers of non-WIG20 shares was effective throughout 2023. The promotion was designed to support liquidity of trade in shares of companies which do not participate in WIG20 and to support the local brokerage industry. The promotion is a part of the strategy encouraging investor activity with a flexible pricing policy aligned with the needs of different groups of GPW clients.
 - ✓ The High Volume Provider (HVP) and the High Volume Funds (HVF) programmes were active throughout 2023. HVP is addressed to proprietary traders on the exchange. HVF is addressed to funds under the Alternative Investment Fund Managers Directive 2011/61/EU. Steps were taken in 2022 to flag orders using the technical order type, thus enabling KDPW to use the quotation mechanism. In 2023, steps were taken to acquire more programme participants and, as a result, improve liquidity on GPW.
 - ✓ The Super Market Maker programme was in effect in 2023. The programme supported liquidity of the cash market and the volume of trade in shares in the WIG20 portfolio. The programme imposed higher requirements for market makers' orders on GPW (size, spread) but it also provided eligible participants with reimbursement of part of transaction fees. The programme was also offered on the derivative market.
 - ✓ Promotional fees for introduction of structured products (ETP) and option warrants to trading were extended in 2023. The fee cap was PLN 550 thousand per issuer per year starting in 2024. The promotion is key to issuers of structured products and supports further growth of this market segment.
- › Sustained high liquidity of the Main Market in shares due to:

- ✓ Acquisition of new clients including exchange members, market makers and participants of the liquidity support programmes.
 - ✓ Continuation and introduction of transaction fee promotion programmes.
 - ✓ Improvement of the infrastructure and accessibility of the Polish market for global investors.
 - ✓ Continued extension of GPW's product offer: new futures were introduced on shares of Inter Cars S.A., Dom Development S.A. oraz Budimex S.A.
 - ✓ Growth of ETF segment, ETC: Turnover in ETFs in 2023 increased by 8.7% YoY to PLN 1.12 billion; the first ETC was introduced to trading (details below)
 - ✓ GPW's Analytical Coverage Support Programme 3.0 closed and the fourth edition of the Programme opened in 2023. The objective is to improve liquidity in the sector of medium and small companies. In return for contractually determined fees, investment firms undertake to conduct and publish research of companies enrolled in the Programme which meet the criteria described in the Programme regulations. In the current edition, the Programme covers 59 companies listed on the Main Market. In 2023, the fourth edition of Programme produced 262 analytical reports in Polish;
 - ✓ Continued webinar training dedicated to products offered to individual investors in partnership with brokerage houses and capital market institutions.
- › Continued initiatives making NewConnect more attractive.

The capitalisation of companies listed on NewConnect was PLN 12.9 billion as at 31 December 2023 vs. PLN 14.5 billion as at 31 December 2022. Since the market opened on 30 August 2007, 91 companies have transferred to the GPW Main Market (including 9 transfers in 2022). In 2023, GPW continued the promotion of NewConnect among smaller companies which are considering to raise capital in the alternative trading system. The activities included one-on-one meetings, initiatives addressed to start-ups, participation in conferences dedicated to start-ups and new technologies.

- › Launch of the new market GlobalConnect on 4 November 2022

In 2023, the value of turnover in shares of foreign companies listed on GlobalConnect was PLN 7.14 million. At the end of 2023, 15 companies from the European market and one from the US market (Tesla) were listed on GC. GPW is actively working to increase the number of companies listed on the market and to attract more market makers.

- › New Exchange Traded Commodities (ETC)

On 30 August 2023, GPW launched the first Exchange Traded Commodities (ETC) product: Royal Mint Responsibly Sourced Physical Gold ETC (RMAU). The new product offers exposure to physical gold responsibly sourced and stored at the UK Royal Mint. The issuer of GPW's first physical gold ETC is the European ETF platform HANetf. What is new compared to the products previously offered on GPW giving exposure to gold is the full physical collateral and the genuine possibility of receiving physical gold from the issuer, corresponding to the value of the ETC held. Investors in this product have the option to exchange it for physical gold bars or bullion coins. The value of turnover in this instrument in 2023 amounted to PLN 7.1 million.

Debt market

2023 rok na rynku Catalyst był kontynuacją przyjętej strategii nakierowanej na popularyzację obligacji wśród spółek z sektora MŚP. Organizowane były zarówno indywidualne spotkania ze spółkami oraz samorządami jak również GPW uczestniczyła w organizowanych w całym kraju konferencjach, podczas których popularyzowała sposób finansowania poprzez emisję instrumentów dłużnych.

In 2023, Catalyst continued to pursue its strategy of promoting bonds among SMEs, including one-on-one meetings with companies and local governments and GPW's participation in conferences across Poland where it promoted financing with debt issues.

- › 284 series of PLN bonds, 9 series of EUR bonds, and 3 series of PLN covered bonds were introduced to trading in 2023.
- › 6 new issuers issued and introduced bonds to Catalyst: OLIVIA FIN Sp. z o.o. S.K.A., GMINA BIAŁE BŁOTA, DOMESTA Sp. z o.o., UNIDEVELOPMENT S.A., DEKPOL DEWELOPER Sp. z o.o., BEST CAPITAL FIZ AN.
- › The biggest bond issues on Catalyst in 2023 were completed by:
 - ✓ EUROPEJSKI BANK INWESTYCYJNY – PLN 5.0 billion
 - ✓ CYFROWY POLSAT S.A. – PLN 2.7 billion
 - ✓ SANTANDER BANK POLSKA – PLN 3.1 billion

Derivatives market

In 2023, to meet investor demand, GPW introduced new futures on the shares of Inter Cars S.A., Dom Development S.A. and Budimex S.A.

Commodity market

The directions of development of TGE and its subsidiaries match the strategy of the GPW Group, the government programmes supporting the development of the Polish energy industry, market and legal conditions, and the EU's efforts in implementation of the European internal energy market and the green transition of the energy and gas markets.

Initiatives taken by TGE in 2023:

- › 15 March 2023 marked the launch of the 9th edition of the "Platinum Megawatts" Media Competition, which reviews publications on the energy, gas and renewables markets. On 24 May 2023, the competition was closed and nine prizes were awarded at a gala ceremony.
- › January - December 2023: TGE S.A., as NEMO (Nominated Electricity Market Operator), was actively pursuing tasks arising from the European projects SDAC (Single DayAhead Coupling) and SIDC (Single IntraDay Coupling), in particular activities aimed at implementing the IDA (IntraDay Auction) on the European Day-Ahead Market (SIDC). This project aims to extend the possibility of trading in SIDC to include auctions (single-price quotations).
- › In June 2023, in consultation with market participants, TGE decided to implement two new forward instruments that will be offered in parallel to the products currently listed on the OTF for peak hours as new low-PEAK and high-PEAK products.
- › On 26 June 2023, TGE and IRGiT awarded the most active companies and brokers of the past year at the 2022 Year on the Exchange Gala. A total of 17 prizes were presented: 14 Platinum Megawatts and 3 Settlements. Last year's 13th Year on the Exchange Gala was held as part of the 15th Trading Forum organised by TGE in Ostróda.
- › On 1 December 2023, the President of the Energy Regulatory Authority re-appointed TGE as the Nominated Electricity Market Operator (NEMO) for the Polish price area. The status was first granted to TGE in 2015, then upheld in 2019 and, following TGE's application for re-appointment in August 2023, upheld for another four years, i.e. until December 2027.
- › In July 2023, TGE was recognised for the fourth time by the London-based magazine Capital Finance International (CFI.co), which named the Polish exchange the Best Commodities Exchange ESG Strategy Europe 2023. The award was given in a ranking in which CFI.co annually identifies companies and organisations from all over the world that contribute to the convergence of economies and provide inspiration for others.
- › In 2023, TGE participated in the work carried out under the "Sectoral Agreement for the Development of the Hydrogen Economy in Poland" signed in October 2021.
- › In 2023, TGE participated in the work carried out under the "Cooperation Agreement for the Development of the Biogas and Biomethane Sector" signed in November 2021.
- › In 2023, efforts were made towards foreign partners to establish business relations in the natural gas market. Meetings were held with the Slovak Transmission System Operator EUSTREAM, which expressed interest in becoming a member of TGE. TGE provided support to EUSTREAM with regard to the identification of regulations applicable to the Polish gas market and in establishing a dialogue with the Energy Regulatory Authority.
- › Cooperation with the Balkan Gas Hub (BGH), the Bulgarian company organising wholesale trading on the Bulgarian gas market, continued in 2023 based on a letter of intent signed in October 2022 between IRGiT and BGH. The joint initiative involves the development of an offer on the basis of which IRGiT will provide clearing services for the markets operated by the Bulgarian exchange. In 2023, individual solutions were under development and barriers to the development of cooperation were identified.
- › TGE initiated actions towards the Moldovan gas market. On 5 April 2023, TGE and the Moldovan state-owned company Energocom S.A. signed a Memorandum of Understanding (MoU) in Chisinau, the capital of the Republic of Moldova. The aim of the agreement is to exchange experience between the organisations, in particular to introduce the Moldovan partner to the principles of operation of the commodity exchange markets for electricity and natural gas. In May and October, TGE delivered training sessions for ENERGOCOM management and staff. During the visit of the TGE/IRGiT delegation to Chisinau, discussions were held with the Minister of Energy of the Republic of Moldova and the management of ANRE (the Moldovan market regulator) on the possibilities of cooperation in the Moldovan gas market. Representatives of the Moldovan administration expressed interest in TGE's offer to create a trading platform and price index for the Moldovan gas market. TGE undertook conceptual work in this regard.
- › On 8 September 2023, TGE, IRGiT and the Ukrainian Energy Exchange (UEEX) signed a Memorandum of Understanding (MoU) in Warsaw. The main objective of the Memorandum of Understanding is to strengthen cooperation between the Polish and Ukrainian partners based on TGE Group's knowledge and experience in running the exchange market. Work will continue in 2024 to identify possible joint business ventures for implementation.
- › In 2023, TGE and IRGiT continued their involvement in the SEEGAS project. BGH and UEEX, TGE/IRGiT's business partners, are among those participating in this initiative.

Existing business lines on the commodity market – areas of development:

Development of the electricity market

- › Development of the spot electricity market
 - ✓ participation in European energy market integration projects: Market Coupling trade on new cross-border connections, including XBID and PCR which organise European spot trade (TGE's Intra-Day Market and Day-Ahead Market),
 - ✓ maintaining the position of TGE as the leading Nominated Electricity Market Operator (NEMO) on the local electricity market with active acquisition of new wholesale market participants, implementation of algo trading solutions, development of the product offer on the spot market,
 - ✓ review and preparation of implementation of spot market modifications and plans to launch Phase II of the Balancing Market reform,
 - ✓ implementation of new indices on the production profiles of the RES sector for PV and WIND-onshore,
 - ✓ consultation on proposals for changes to European electricity markets under the European Commission's Electricity Market Design project. The consultation on this project ended in December 2023, which could bring changes to the spot market in mid-2024, subject to approval of the final wording by the European Parliament and European Council.
- › Development of the forward electricity market and related markets
 - ✓ preparing the forward market for the implementation of the market in financial instruments for electricity including collaboration with the CCP,
 - ✓ active participation in initiatives and projects developing solutions for financial markets involving the energy markets and the related system ETS (CO2 emission trading on the primary and secondary market),
 - ✓ development of the Organised Trading Facility – review of the OTF's operating model in the light of market and regulatory developments in the energy market,
 - ✓ continuation of other initiatives improving liquidity on the forward market in consultation with the industry and through the Market Council at TGE,
 - ✓ consultation on proposals for changes to European electricity markets under the European Commission's Electricity Market Design project. The consultation on this project ended in December 2023. The Company believes that the proposed regulations do not have a material impact on the forward markets operated by the exchanges.

Development of the gas market

- › Development of the spot gas market
 - ✓ maintenance of liquidity of the Intra-Day and Day-Ahead Market in gas to ensure balancing of gas market participants,
 - ✓ co-operation with the Transmission System Operator in continued development of TGE's spot markets, including international markets and new interconnections,
 - ✓ commencement of preparatory works for implementation of changes in the short-term gas market on TGE in connection with the Transmission System Operator's planned changes in balancing rules.
- › Development of the forward gas market
 - ✓ preparing the forward market for the implementation of a market in financial instruments for gas, related to the work for the electricity market,
 - ✓ development of the Organised Trading Facility – review of the OTF's operating model in the light of market and regulatory developments in the gas market, including new potential areas of cooperation in foreign markets,
 - ✓ continuation of initiatives improving liquidity on the forward market in consultation with the industry and through the Market Council at TGE.

Development of TGE Registers

In August 2023, an amendment to the Renewable Energy Sources Act came into force, including provisions on the introduction of guarantees of origin for new energy carriers (heat/cool, biomethane, hydrogen) and allowing the Energy Regulatory Authority to join the AiB (Association of Issuing Bodies), a hub for cross-border trade in guarantees of origin. Immediately after the legislation came into force, work began to support the Energy Regulatory Authority on the path to joining AiB and to bring the Register of Guarantees of Origin into line with the new rules.

In November, a new version of the Register of Guarantees of Origin was introduced, which automated the process of issuing confirmation documents to end-users and enabled Register of Guarantees of Origin members to access these documents immediately in an electronic version. The second major feature introduced by this update was to allow bulk redemption of

guarantees of origin; previously, Register of Guarantees of Origin members had to carry out redemption for each guarantee of origin separately.

A new version of the Register of Certificates of Origin application was released in November, adapting its operation to the new clearing system (PCCP3).

Further development work is planned for 2024 to automate processes in the Register of Certificates of Origin and Register of Guarantees of Origin.

Gas hub

The gas hub is a government programme under the Strategy for Responsible Development and the Energy Policy of Poland until 2040 adopted in February 2021. The work is co-ordinated by the Ministry of Climate and Environment on behalf of the public administration (formerly by the Ministry of Energy).

The gas hub project is an undertaking complementary to infrastructure projects enabling the diversification of natural gas supplies to Poland, such as the Baltic Pipe launched in 2022. In 2023, the expansion of the LNG Terminal in Świnoujście continued and design work started on the FSRU Terminal in Gdańsk Bay. The commissioning of this infrastructure will result mainly in increasing the technical possibilities of natural gas supply to the Polish market from various sources. No more gas was imported from the Russian Federation to Poland in 2023. In the future, the gas hub, of which the gas exchange operated by TGE is to be an integral element, will act as a focal point for gas trade in the geographical region described above.

TGE participates in work on the project focusing primarily on issues related to the appropriate organisation of gas trade within the future gas hub. The work includes, among others, the definition of optimal solutions enhancing the liquidity of the exchange market and increasing its attractiveness for Polish and international gas market participants. In 2023, TGE participated in working groups set up at the initiative of the Ministry of Climate and the Environment.

In 2023, efforts were made towards foreign partners to establish business relations in the natural gas market. Meetings were held with the Slovak Transmission System Operator EUSTREAM, which expressed interest in becoming a member of TGE. TGE provided support to EUSTREAM with regard to the identification of regulations applicable to the Polish gas market and in establishing a dialogue with the Energy Regulatory Authority.

Cooperation with the Balkan Gas Hub (BGH), the Bulgarian company organising wholesale trading on the Bulgarian gas market, continued in 2023 based on a letter of intent signed in October 2022 between IRGiT and BGH. The joint initiative involves the development of an offer on the basis of which IRGiT will provide clearing services for the markets operated by the Bulgarian exchange. In 2023, individual solutions were under development and barriers to the development of cooperation were identified.

TGE initiated actions towards the Moldovan gas market. On 5 April 2023, TGE and the Moldovan state-owned company Energocom S.A. signed a Memorandum of Understanding (MoU) in Chisinau, the capital of the Republic of Moldova. The aim of the agreement is to exchange experience between the organisations, in particular to introduce the Moldovan partner to the principles of operation of the commodity exchange markets for electricity and natural gas. In May and October, TGE delivered training sessions for ENERGOCOM management and staff. During the visit of the TGE/IRGiT delegation to Chisinau, discussions were held with the Minister of Energy of the Republic of Moldova and the management of ANRE (the Moldovan market regulator) on the possibilities of cooperation in the Moldovan gas market. Representatives of the Moldovan administration expressed interest in TGE's offer to create a trading platform and price index for the Moldovan gas market. TGE undertook conceptual work in this regard.

On 8 September 2023, TGE, IRGiT and the Ukrainian Energy Exchange (UEEX) signed a Memorandum of Understanding (MoU) in Warsaw. The main objective of the Memorandum of Understanding is to strengthen cooperation between the Polish and Ukrainian partners based on TGE Group's knowledge and experience in running the exchange market. Work will continue in 2024 to identify possible joint business ventures for implementation.

In 2023, TGE and IRGiT continued their involvement in the SEEGAS project. BGH and UEEX, TGE/IRGiT's business partners, are among those participating in this initiative.

Information services

- › Fast growth of the sale of non-display data from all Group members: in 2023, by expanding the customer base of its information services, GPW signed 18 agreements for non-display products covering GPW, GPW Benchmark, BondSpot and TGE data (used in algorithmic trading, risk management, portfolio valuation, other non-display applications, and in the development of proprietary indices and financial instruments).
- › Continued increase in the number of GPW Group data vendors: 7 entities were licensed as GPW data vendors, 3 as GPW Benchmark data vendor, and 1 as TGE data vendor.
- › Record number of subscribers for data from GPW Group companies – over 618,200.
- › New clients acquired for GPW Group added-value information services, including 5 clients using GPW data, 1 client using BondSpot data, 1 client using GPW Benchmark data.

2.3.1. Planned initiatives under the GPW Group's Strategy in 2024

In 2024, as a result of its strategic initiatives, the GPW Group expects to achieve further tangible benefits to strengthen the Group's business position and diversify the Group's revenue streams.

- › **Trading System (GPW WATS)** - The coming months will be a period of intensive work on the implementation of the GPW WATS trading system and cooperation with Equinix, the supplier of the new data centre where the new system will be launched. A test version of the GPW WATS system has been launched and made available to clients at the Equinix data centre. To build the GPW WATS system, the Exchange uses the RUST programming language, which is used in the key components by software market leaders (Microsoft, Google, AWS). The new trading system will support multiple asset classes. This multi-module system is expected to streamline processes within the GPW Group but can also be sold to external clients. GPW WATS is one of the priority strategic initiatives and the largest IT project conducted within the GPW Group.

 - ✓ In March 2024 The Exchange Management Board has decided to accept the recommendation of the GPW WATS Implementation Committee to postpone the production rollout date of the Exchange's new trading system to the turn of Q3/Q4 2025. The new deadline will allow Exchange Members to complete complex IT system customisation projects and testing with the GPW WATS.
- › **GPW Logistics (PCOL project)** - The special purpose vehicle GPW Logistics S.A. (GPWL) will pursue the objectives related to revenue growth by increasing the volume of handled orders and servicing new clients. GPW and GPWL are planning to set up the rules for the use, maintenance and further development of the PCOL platform.
- › Work is underway to commercialise the **GPW Data** platform based on machine learning and artificial intelligence. Through a mobile application, innovative services will be offered to facilitate market data analysis and the investment process.
- › **ESG Data Hub** - A portal and repository for non-financial reports of companies listed on the ATS and the Main Market. A tool to collect and share ESG data in XBRL.
- › GPW is preparing a platform to offer **Corporate Solutions** services. Investor relations will be one of the key modules offered on the platform. It will provide access to a global network of investors, enable the organisation and monitoring of interactions with institutional investors (CRM) and facilitate reporting and access to training offered by the GPW Group. In addition, IR consulting (e.g. on building investor engagement or PR) will be available through the platform.
- › **GPW Tech** is working on the commercialisation of several technology products:

 - ✓ GPW STORK - a web application which optimises the process of market data analysis in the area of market abuse detection;
 - ✓ Indexator is a very important module of any trading system which supports the calculation and real-time publication of capital market indices. It was successfully launched on GPW in September 2021;
 - ✓ GRC - IT solution to support process management, risk management, compliance and internal audit;
 - ✓ TCA Tool - a tool to improve transaction cost analysis. The first sale of the solution took place in 2022 (Kuwait Exchange).
- › In December 2023, the research and development phase of the **Telemetry Operator (TeO)** project was completed in line with the NCBiR schedule. The special purpose vehicle GPW DAI S.A. was established for the commercialisation of an auction platform for the comprehensive handling of media market transactions related to dynamic ad insertion (DAI). Further business development will take place in 2024.
- › In 2024, the GPW Group intends to pursue the goals set in the **GPW Group ESG Strategy 2025**, in particular by implementing reporting mechanisms in accordance with the Corporate Sustainability Reporting Directive (CSRD), continuing efforts to reduce the GPW Group's greenhouse gas emissions by 50% by the end of 2025 (relative to 2022) and continuing educational initiatives aimed at the market as well as GPW Group employees, including the development of ESG management structures.
- › The Exchange continues to focus on **developing its product offer and information services**. GPW offers access to over 2,500 structured products providing exposure to a variety of commodities and instruments. In August 2023, the first ETC (Exchange Traded Commodity) product for gold was introduced. What is new compared to the products previously offered on GPW giving exposure to gold is the full physical collateral and the genuine possibility of receiving physical gold from the issuer, corresponding to the value of the ETC held. In information services, the GPW Group is working on expanding the scope to include alternative data, such as algo trader data and ESG data in 2024.
- › **Warsaw Integrated Digital Exchange (WIDE)** is a new market complementary to the Private Market Platform where it will be possible to trade in tokenised financial instruments such as shares, bonds and ETFs. The new market will enable instantaneous clearing of transactions and efficient communication between the company and the investor. The WIDE market will be created mainly with SMEs and startups in mind.
- › The business objective of the **GPW Private Market** Project is to develop and launch a platform (built on DLT technology) enabling issuance and offering of tokens as well as secondary trading in tokens aligned with regulatory and business requirements related to various types of tokenised products. On 27 October 2023, the Polish Financial

Supervision Authority issued a licence to GPW Private Market to operate crowdfunding services. The aim is to launch the crowdfunding platform in the second half of 2024.

- › GPW plans to continue its cooperation as part of the **Three Seas Stock Exchanges Initiative**, whose main objective is to jointly promote markets and companies and more effectively attract investors and capital in the Central European region.
- › Further development of **GPW Ventures**, a fund investing investors' assets on market terms in Venture Capital funds. GPW Ventures supports in particular the development of agriculture and rural areas, the agricultural and food industry, and the RES sector. The target capitalisation of the GPW Ventures Asset Management sp. z o.o. KOWR Ventures ASI S.K.A. fund by 2026 is expected to total PLN 225 million (PLN 75 million in 2023, PLN 50 million in 2024, PLN 50 million in 2025, and PLN 50 million in 2026). The cumulative management fee charged by GPW Ventures Asset Management sp. z o.o. over the years 2023 - 2026 will amount to approximately 5 percent of the fund's target capitalisation.
- › **GPW Venture Network** – The aim of the initiative is to create a network of start-ups, partners and investors and to provide affiliates with access to training and networking in order to raise funding or sell their services.
- › GPW will continue its commitment to educational activities addressed both to issuers and individual investors.
 - ✓ Planned further editions of the **GPW Growth Academy** addressed to CEOs, management board members and directors responsible for achieving key objectives in companies was launched in 2022. The programme is geared towards supporting the growth of small and medium-sized companies based on identified business needs.
 - ✓ More GPW Innovation Day **conferences** for investors, thematic and industry conferences planned.
 - ✓ **Knowledge Exchange Forum** is a new initiative of GPW organised together with foreign partners: the World Federation of Exchanges and the International Sustainable Finance Centre. The idea is to support participants of the Polish capital market in gaining expert knowledge based on reliable and verified sources of information. The first inaugural edition of the Knowledge Exchange Forum took place on 4 December 2023.

2.3.2. External drivers of the GPW Group's growth

Macroeconomic conditions in Poland and globally

The GPW Group's business and financial performance indirectly depend on the economic climate. According to preliminary data from the Central Statistical Office (GUS), Poland's GDP grew by 0.2% in 2023, compared to growth of 5.3% in 2022. In the first and second quarters of 2023, year-on-year GDP growth was negative at -0.3% and -0.6%, respectively. The reduction in economic activity was accompanied by significantly elevated inflation, with double-digit price growth readings persisting in the first half of the year. In the second half of the year, economic growth turned positive, while inflation fell to single-digit levels, private consumption rebounded and investment levels rose. In the third quarter of 2023, Poland's GDP grew by 0.5% y-o-y, and according to a preliminary estimate by the Central Statistical Office (GUS), positive GDP dynamics amounted to 1% in Q4 2023. During the past year, the Polish economy remained supported by dynamically growing salaries, social transfers and one of the lowest unemployment rates in Europe (according to GUS methodology, the unemployment rate in December was 5.1%).

The situation on GPW also depends on developments on external markets, i.e. the US, Western European and Asian stock exchanges. The situation on these markets is in turn driven by the condition of the world's largest economies, including the development of inflation and the risk of recession, as well as central banks' decisions regarding interest rates. At the same time, GPW's economic situation is likely to be significantly influenced by the further course of the war in Ukraine.

In its World Economic Outlook report published in January 2024, the International Monetary Fund (IMF) estimates that global GDP grew by 3.1% in 2023. According to the report, the second half of 2023 saw better-than-expected macroeconomic readings in major economies, particularly in the US. The IMF forecasts that the growth rate of global GDP this year will be 3.1%, the same as in 2023. IMF analysts expect GDP growth of 1.5% in developed economies (down from 1.6% in 2023) and 4.1% GDP growth in emerging and developing economies (the same as in 2023). The report forecasts a decline in global inflation to 5.8% in 2024 from 6.8% in 2023.

2.4. Business lines – Financial market

The activity of the GPW Group is diversified and focuses on two markets: the financial market and the commodity market, where Group companies organise trade in financial instruments and commodities, and offer complementary services.

The activities of the GPW Group on the financial market include:

- › trade in financial instruments on the regulated market and in the alternative trading system:
 - ✓ trade in shares and other equity instruments on the Main Market and on the NewConnect market,

- ✓ trade in derivatives on the Main Market,
- ✓ trade in debt instruments on the Catalyst market organised by GPW and BondSpot and on Treasury BondSpot Poland (TBSP),
- › listing, including introduction to trading and listing of financial instruments,
- › information services including data from the financial market,
- › exchange and depository operations of the Armenia Securities Exchange (AMX).

2.4.1. Trading

Trading encompasses trade in financial instruments on the Main Market and on GPW regulated markets NewConnect, Catalyst, GlobalConnect and on Treasury BondSpot Poland.

Chart 4 Financial instruments in trading on the GPW Group financial markets

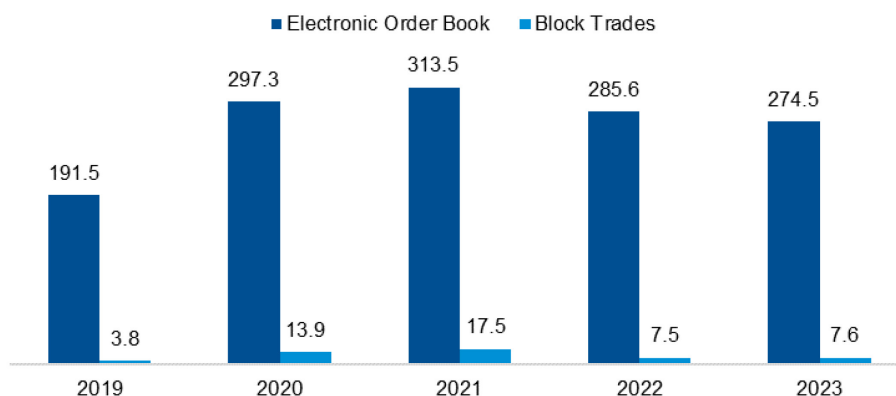
FINANCIAL MARKET – TRADING					
MAIN MARKET		NEWCONNECT	GLOBALCONNECT	CATALYST	TBSP
DERIVATIVES		EQUITIES AND OTHER		BONDS	
Index futures		Equities and other		Corporate bonds	
Single-stock futures		Structured products		Municipal bonds	
Currency futures		Warrants		Co-operative bank bonds	
Interest rate futures		Investment certificates		Convertible bonds	
Options		ETF		Mortgage bonds	
		ETC		Treasury bonds	

Stock market

The value of turnover in shares on the electronic order book (EOB) on the GPW Main Market was PLN 274.5 billion in 2023, representing a decrease of 3.9% year on year (PLN 285.6 billion in 2022). The value of turnover was significantly higher for another consecutive year compared to the years prior to the outbreak of the COVID-19 pandemic (the value of EOB turnover increased by 43.4% in 2023 compared to 2019). The average daily value of turnover was PLN 1,097.9 million in 2023 vs. PLN 1,138.0 million in 2022. The number of EOB transactions was 34.3 million in 2023 vs. 32.9 million in 2022. The average value of EOB transactions was PLN 8.0 thousand in 2023 vs. PLN 8.7 thousand in 2022. There were 250 trading sessions in 2023 and 250 trading sessions in 2022.

Liquidity on the GPW equity market was impacted by the HVP and HVF programmes, which continued in 2023. Participants in these programmes accounted for 18.7% of total share turnover volume in 2023 vs. 16.7% in 2022. The total nominal value of turnover generated by participants in the HVP and HVF programmes amounted to PLN 51.25 million in 2023 vs. PLN 47.75 billion in 2022.

Figure 18 Value of turnover in shares on the Main Market [PLN billion]

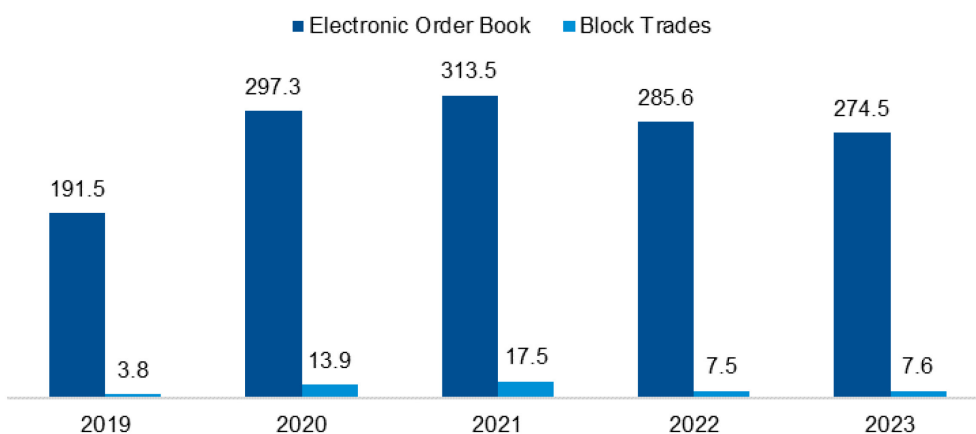


Source: GPW

The value of turnover on the electronic order book on NewConnect decreased by 12.8% year on year to PLN 2.177 billion in 2023.

- › In 2023, GPW hosted new editions of the investor conference “GPW Innovation Day” as well as other industry and thematic conferences where listed companies, including NewConnect companies, met with individual and institutional investors.
- › In November 2023, GPW announced amendments to the Alternative Trading System Rules which will come into force on 1 June 2024. The amendments are aimed primarily at increasing the transparency of issuers and thus the safety of trading on the NewConnect and Catalyst markets. The new provisions of the Rules focus on the criteria and requirements for the introduction of shares or bonds to the ATS. The amendments raise the value of the required equity capital of an issuer applying for a NewConnect listing to PLN 2 million, increase the minimum number of unrelated minority shareholders to 25, and impose restrictions on the introduction of founders' shares to the NewConnect market.
- › GPW understands the huge potential of further growth of NewConnect in view of strong interest of companies in being listed on NewConnect combined with growing investor activity. NewConnect was named an SME Growth Market in 2019, which allows for regulatory facilitations for issuers. NewConnect is a very attractive option for small companies which look for growth capital and liquidity of shares. A dedicated section of GPW regularly meets with companies and participates in thematic and industry events to promote NewConnect.

Figure 19 Value of turnover in shares on NewConnect [PLN billion]

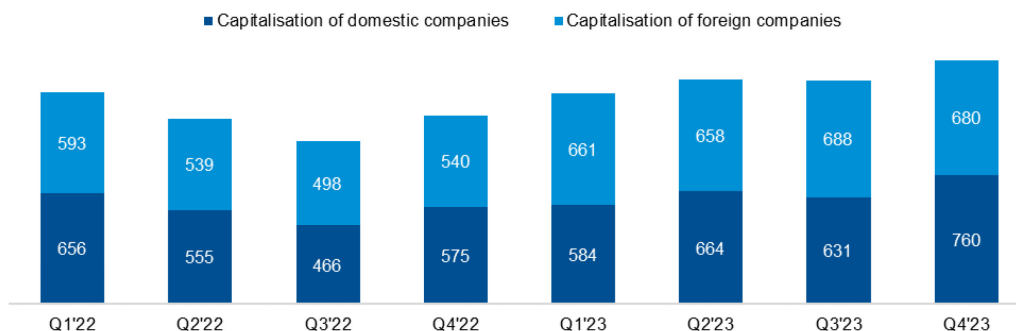


Source: GPW

In 2023, turnover in shares of foreign companies traded on GlobalConnect amounted to PLN 7.14 million compared to PLN 0.74 million in 2022 (the market was launched in November 2022). At the end of the year, 16 entities from Germany, the Netherlands, Spain, Portugal and the USA were listed on GlobalConnect.

The capitalisation of domestic companies listed on the Main Market was PLN 760.2 billion as at 31 December 2023. The capitalisation of foreign companies was PLN 680 billion as at 31 December 2022. Both were the highest capitalisations in GPW history.

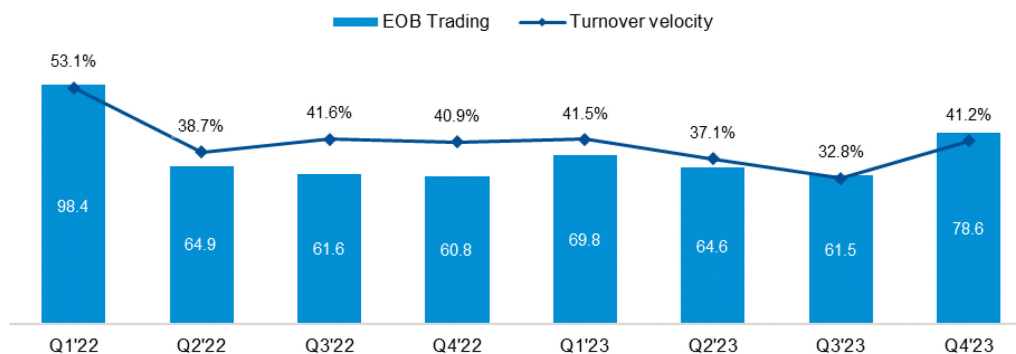
Figure 20 Capitalisation of domestic and foreign companies [PLN billion]



Source: GPW

The velocity ratio measures turnover in relation to average monthly capitalisation. FESE statistics present velocity by month. On average, domestic equity trading velocity was 38.1% in 2023, the third highest velocity among all FESE exchanges.

Figure 21 Turnover in shares on the Main Market [PLN billion] and velocity [%]



Source: GPW – trade on the electronic order book; FESE – domestic equity trading velocity.

GPW takes far-reaching initiatives to improve liquidity on the Main Market, mainly including acquisition of new clients, improvement of infrastructure and availability, and generation of additional volumes among others through active promotional programmes offering reduced transaction fees.

- › **Collocation and auxiliary services** – the collocation service was opened to GPW’s clients in Q1 2016 and the first client, Erste Securities Polska started to use it in April 2016. The service is dedicated to algorithmic traders seeking the closest possible access to GPW markets for themselves and for their clients. GPW’s offering of technology services and cutting-edge solutions for the market was attractive and attracted interest from Polish and international clients. In 2023, GPW signed an agreement with Equinix, a leading global data centre operator. This is the next step in improving GPW’s access infrastructure.
- › The **Super Market Maker** programme was in effect in 2023. The programme supported liquidity of the cash market and the volume of trade in shares of the biggest companies participating in the WIG20 portfolio. The programme imposed much higher requirements for market makers’ orders on GPW (size, spread) but it also provided eligible participants with reimbursement of part of transaction fees. Similar schemes which encourage market makers to offer better quotes are available for all classes of derivatives.
- › The **High Volume Provider (HVP) programme** is addressed to entities which invest on own account only. Launched by GPW in November 2013, it offers promotional fees to those investors who generate at least PLN 5 million of turnover in equities per session on the stock market or 150 thousand futures and options on the derivatives market. HVP mini, an additional threshold of minimum turnover volumes under the High Volume Provider programme, was introduced in June 2017. The HVP mini thresholds are PLN 2.5 million on the cash market and 75 futures contracts or options on the derivative market. Turnover under the HVP programme is aggregated on a monthly basis. An optional price list introduced in 2018 rewards HVP participants for passive orders in index futures. With the development of passive strategies used by programme participants, discounts on passive orders were extended in 2020 to cover single-stock futures. Acquisition activities in 2023 identified new candidates for the programme.
- › The **High Volume Funds (HVF) Programme** is addressed to investment funds which actively trade in shares or derivatives on GPW. It was launched in July 2015. Similar to HVP, it is a fee promotion for those funds which generate daily turnover in shares exceeding PLN 5 million or 150 futures and options. The conditions of eligibility

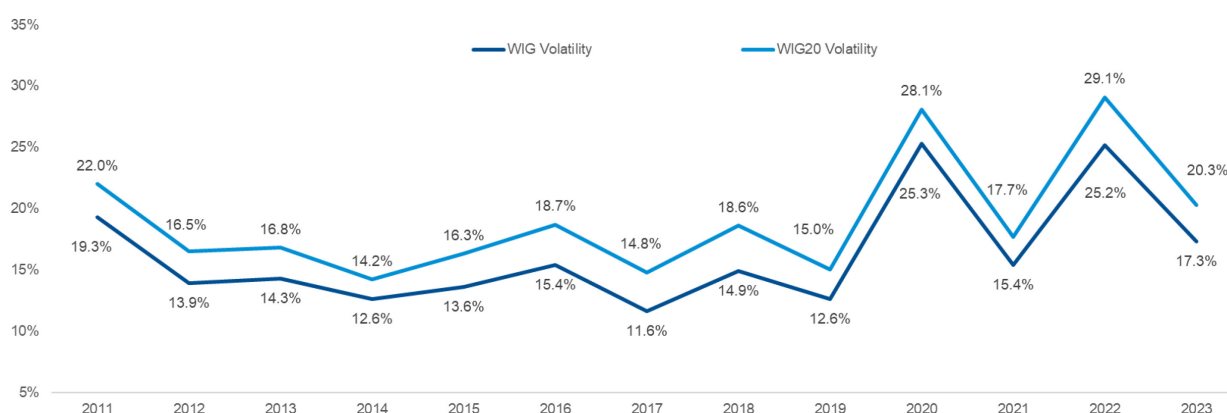
for the programme included a high portfolio turnover ratio (200% per month), targeting mainly small and mid-sized funds which generate high monthly turnover. In 2020, that condition was replaced by the requirement for participants to be classified as an alternative fund within the meaning of the Alternative Investment Fund Managers Directive 2011/61/EU. The modification was designed to attract new participants of the programme. In 2021, the rules were aligned with the HVP programme and the possibility to trade in swaps was added for Exchange member clients. The possibility for funds domiciled outside the EEA to participate in the programme was also added. Acquisition activities in 2023 identified new candidates for the programme.

- › **Extension of the promotion for exchange members who are proprietary traders and enter into cross trades with clients** – the dealer fee was reduced by 100% and the client fee for cross trades was reduced by 20%. The promotion was introduced in two steps: trading fees were reduced for dealers in H1 2020 and for clients as of H2 2020. In 2023, it was extended for a further year. The promotion is available for instruments listed on the Main Market and in the NewConnect ATS.

In 2023, GOW closed the Analytical Coverage Support Programme 3.0 and opened the fourth edition of the Programme aimed at improving liquidity in the sector of medium and small companies. In return for contractually determined fees, investment firms undertake to conduct and publish research of companies enrolled in the Programme which meet the criteria described in the Programme regulations. In the third edition, the Programme covers 59 companies listed on the Main Market. In 2023, the fourth edition of the Programme produced 262 analytical reports in Polish.

In 2023, GPW's main indices, like the major foreign markets, were characterised by significantly lower volatility than in 2022.

Figure 22 Annual volatility of WIG and WIG20



Source: GPW

Other cash market instruments

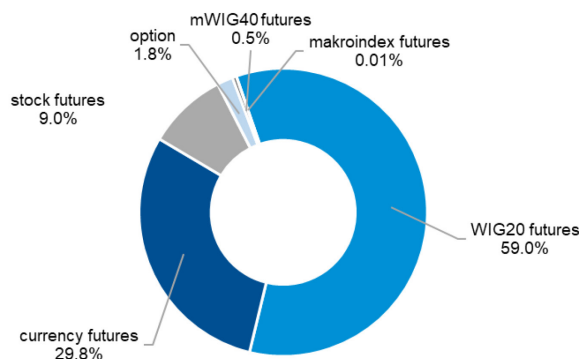
The GPW cash market also lists structured products, investment certificates, ETFs and ETCs.

Table 12 Numbers of products listed in 2018-2023

As at 31 December [#]	2023	2022	2021	2020	2019	2018
Structured products	2 787	2 232	2 434	1 793	1 220	1 151
Investment certificates	28	42	40	36	36	33
ETFs	11	11	10	7	6	3
ETCs	1	-	-	-	-	-

GPW listed 2,839 structured instruments including 2,787 structured certificates, 12 structured bonds, 28 investment certificates, 11 ETFs and 1 ETC at the end of 2023. The value of turnover in structured instruments was PLN 2.4 billion in 2023, a decrease of 24.7% year on year. Turnover in ETFs was record high at PLN 1.12 billion, an increase of 8.7% year on year. On 30 August 2023, The Royal Mint Responsibly Sourced Physical Gold ETC (RMAU), the first Exchange Traded Commodity (ETC) offering exposure to physical gold, was launched on GPW. The issuer of the ETC is HANetf. The instrument had a turnover of 7.1 million in 2023.

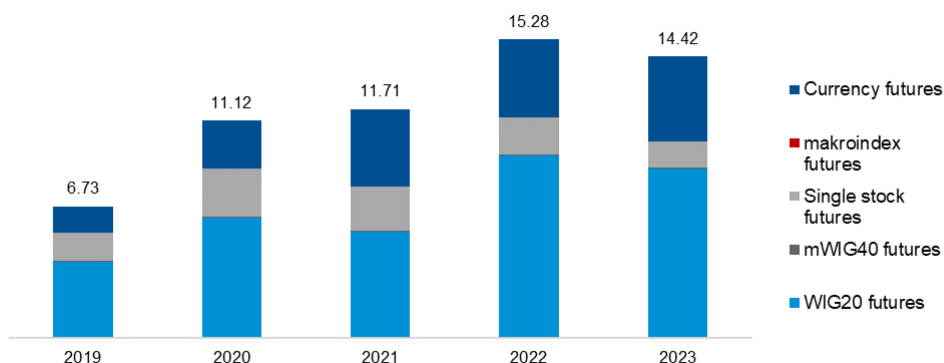
Figure 23 Structure of volume of turnover in derivatives in 2023 by category of instrument



Source: GPW

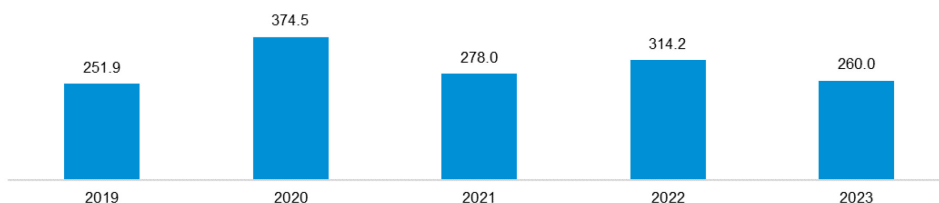
The total volume of trade in derivatives was 14.68 million instruments in 2023 vs. 15.59 million instruments in 2022. The biggest volume was generated, as in previous years, by WIG20 futures; it dropped to 8.67 million in 2023 from 9.34 million. The volume of turnover in currency futures increased to 4.37 million in 2022 from 4.00 million in 2022. The number of open interest in all derivatives was 400,900 as at 31 December 2023, an increase of 21.4% year on year (330,100 as at 31 December 2021).

Figure 24 Volume of turnover in futures, EOB and block trades [million instruments]



Source: GPW

Figure 25 Volume of turnover in options, EOB and block trades [thousand instruments]



Source: GPW

Investor activity in the derivatives market is largely a function of the volume of turnover in the underlying market, but it is additionally influenced by volatility even more than investor activity in the cash market.

The volatility of WIG20 on the cash market was lower in 2023 than in previous years and reached 20.3% in 2023 vs. 29.1% in 2022. DLR (derivatives liquidity ratio equal to the nominal value of trade in index derivatives to the value of trade in the underlying) of WIG20 futures was 151 in 2023 vs. 137 in 2022 and 94 in 2021. Similar to the cash market, GPW supports the liquidity of trade in derivatives by offering incentives to providers of liquidity for index futures, single-stock futures, bond futures, and options.

Liquidity on GPW's financial derivatives market was additionally supported by the HVP and HVF programmes which continued in 2023. The share of programme participants in the total volume of turnover in derivatives was 5.4% in 2023 vs. 7.9% in

2022. The share of programme participants in the volume of turnover in WIG20 futures, which are the most liquid derivative contract, stood at 5.7% in 2023 vs. 7.8% in 2022.

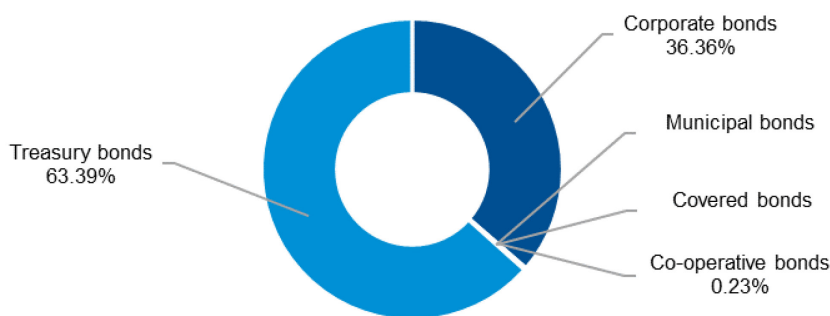
Debt market

The GPW Group offers trade in debt instruments on Catalyst, which is comprised of regulated and alternative trading systems operated on the trading platforms of GPW and BondSpot. The following instruments are traded on Catalyst:

- > corporate bonds;
- > municipal bonds;
- > co-operative bank bonds;
- > convertible bonds;
- > covered bonds;
- > Treasury bonds.

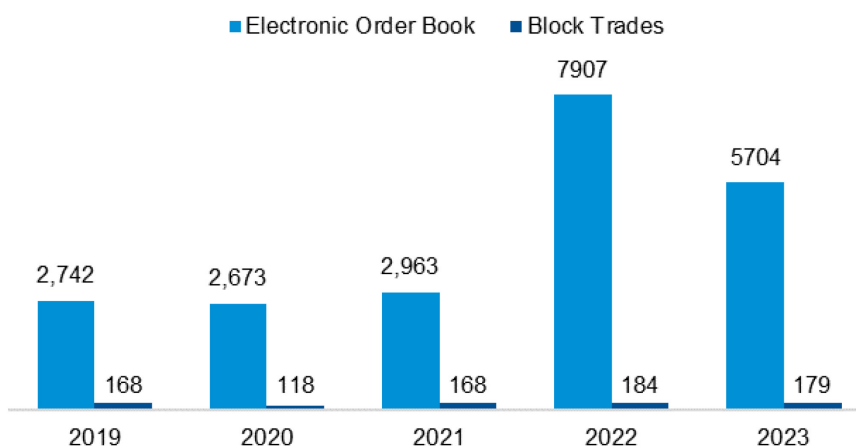
The value of turnover on the electronic order book on the markets operated within Catalyst was PLN 5,704 million in 2023 vs. PLN 7,907 million in 2022 (a decrease of 27.9% year on year) and the value of block trades was PLN 179 million in 2023 vs. PLN 184 million in 2022. The total value of turnover on Catalyst was PLN 5,882 million in 2023 vs. PLN 8,091 million in 2022, representing a decrease of 27.3% year on year.

Figure 26 Structure of turnover on Catalyst (EOB and block trades) in 2023 by instrument



Source: GPW

Figure 27 Value of turnover on Catalyst, EOB and block trades [PLN million]



Source: GPW

In 2023, GPW offered a range of initiatives to introduce companies and local governments to financing options available on all GPW markets. Those included conferences and special webinars dedicated to financing on the capital market attended by domestic and international institutional investors. One-on-one meetings were held with potential issuers.

Treasury BondSpot Poland

Treasury BondSpot Poland (TBSP) operated by BondSpot S.A. is an electronic Treasury bond market and an integral part of the Treasury Securities Dealer system operated by the Ministry of Finance with the support of the National Bank of Poland and the banking industry. The main objective of the Treasury Securities Dealer system is to minimise the cost of public debt by improving liquidity, transparency and effectiveness of the Treasury securities market. TBSP includes :

- › a market of cash transactions, and
- › a market of conditional transactions (repo, buy/sell back).

2023 was a period of dynamic changes in the Polish economy, starting with the highest inflation in 26 years (in February), through a shock interest rate cut (in September), to the strong appreciation of the zloty at the end of the year, as well as the change of government. Also important was the situation on global markets, mainly related to the dynamic increase in inflation and the reaction of central banks which raised the cost of money, as well as geopolitical factors. Global bond markets moved from a period of dynamically rising bond yields in the previous year to falling yields in most EU countries and the USA. Poland also saw a decline in yields on government debt, the main factors being the dynamically falling inflation readings throughout 2023 and the commencement of interest rate cuts by the NBP (from September 2023). The results of the October parliamentary elections and the announcement of the release of European funds for Poland contributed to a further decline in Treasury bond yields and positive sentiment among foreign investors.

Higher price volatility on the bond market enabled an increase in the value of transactions concluded on TBSP in 2023 – the value of transactions increased by approximately 78% year on year. Measures taken by BondSpot S.A. in previous years and continued in 2023 to ensure optimal solutions for the functioning of a liquid, secure and transparent Treasury securities market, a broad product offer tailored to the needs of market participants, and competitive costs of market participation also impacted the activity of TBSP market participants.

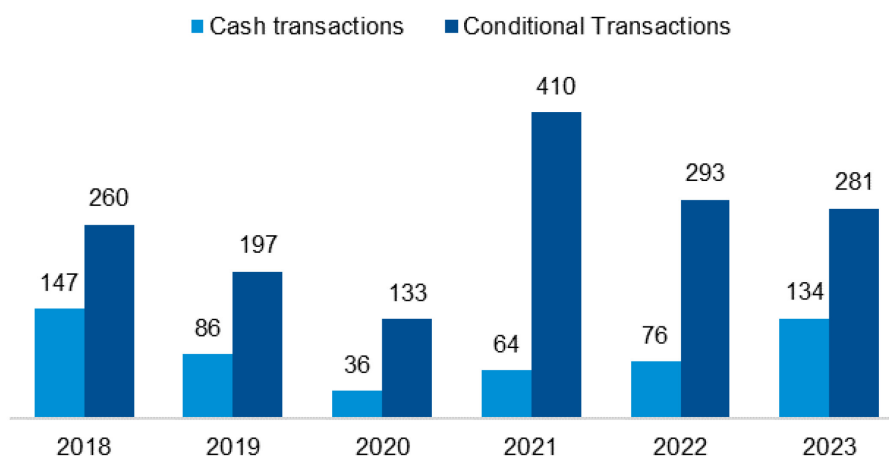
In the longer term, the economic situation and market conditions, as well as the evolution of inflation in Poland and globally, will remain the key factors influencing the value of turnover and TBSP's share in the Treasury securities market. These factors will directly or indirectly affect the monetary policy of global central banks and the Monetary Policy Council, and consequently the level of market interest rates and their volatility, as well as the size of the Treasury instruments market and the liquidity of the financial system.

Other important factors will include the policy of the Ministry of Finance in the implementation of the public debt management strategy directly determining the volume and structure of financing the needs of the State Treasury, as well as trends in the foreign exchange market, in particular the development of PLN exchange rates in relation to base currencies. In the case of domestic banks, the exclusion of repo transactions from the bank tax, in force since January 2023, should also be an important factor supporting repo market activity.

As at 31 December 2023, TBSP had 24 market participants (domestic and foreign banks and the BGF).

Treasury BondSpot Poland held 250 trading sessions in 2023, where 15,812 transactions were closed (including 12,603 cash transactions and 3,209 conditional transactions). The total value of turnover was PLN 415.5 billion, an increase of 12.6% year on year. The average value of turnover per session was PLN 1.66 billion. The share of cash transactions and conditional transactions (repo and buy/sell back) in total turnover on TBSP was 32% (PLN 134.6 billion) and 68% (PLN 280.9 billion), respectively, in 2023.

Figure 28 Value of turnover on Treasury BondSpot Poland [PLN billion]

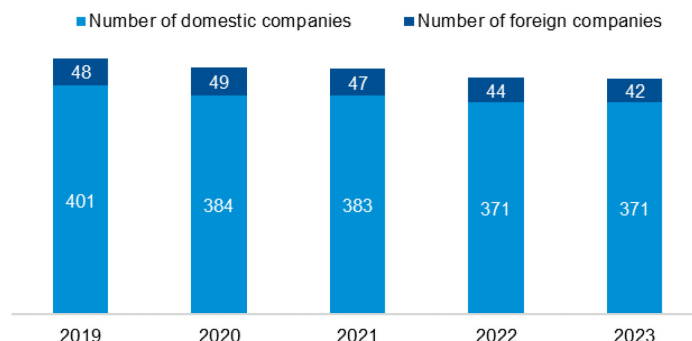


Source: GPW

2.4.2. Listing

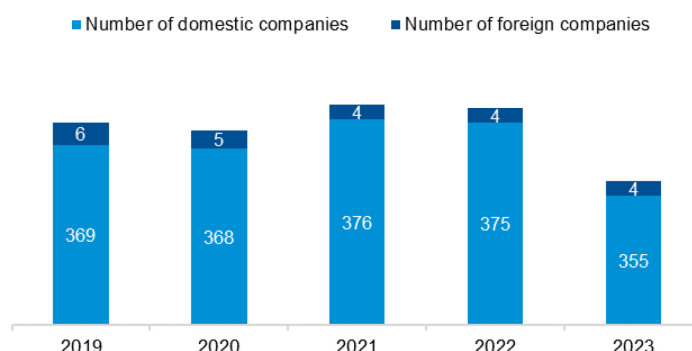
Listing includes admission and introduction to exchange trading and listing of securities on the markets organised and operated by the GPW Group. GPW listed 772 companies as at 31 December 2023 (413 companies on the Main Market and 359 on NewConnect), including 46 foreign issuers.

Figure 29 Number of domestic and foreign companies – Main Market



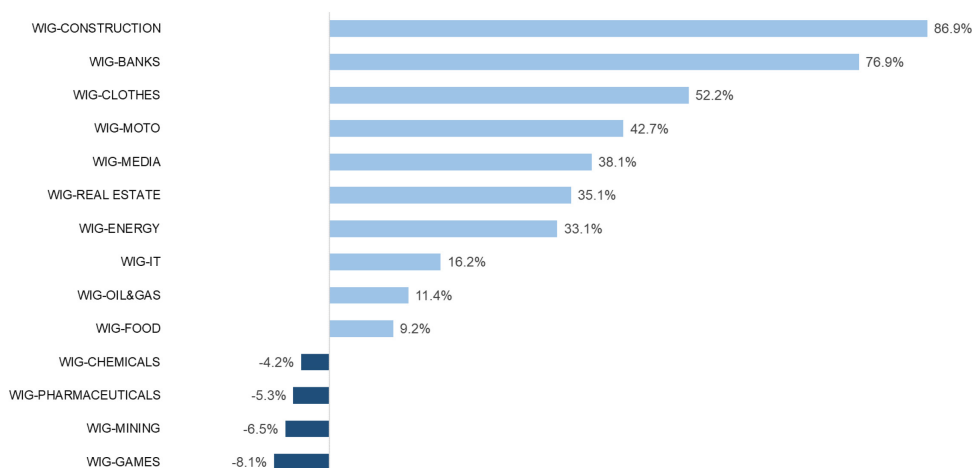
Source: GPW

Figure 30 Number of domestic and foreign companies – NewConnect



Source: GPW

Figure 31 Performance of sector indices in 2023 [%]



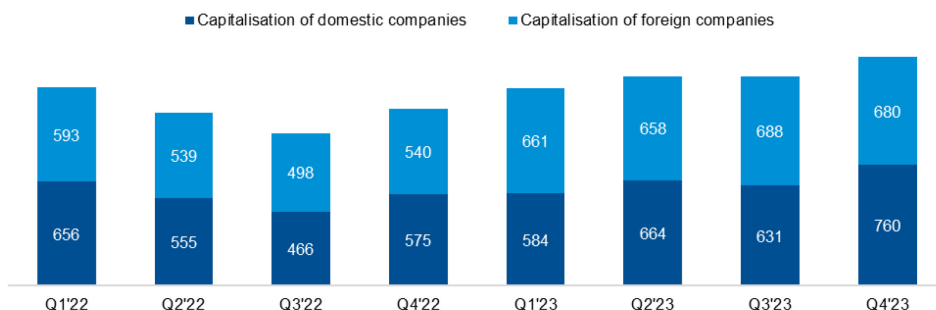
Source: GPW

Most of the GPW sector indices gained in 2023. The highest positive returns were recorded by WIG-Construction, WIG-Banks and WIG-Clothing. The largest decline was experienced by the WIG-Games index.

The total capitalisation of domestic and foreign companies on the Main Market and NewConnect was PLN 1,453 billion as at 31 December 2023.

There were 24 new listings on GPW's two stock markets in 2023 (including 9 companies which transferred from NewConnect to the Main Market), the same as in 2022. The total value of IPOs in 2023 was PLN 444 million on the Main Market and PLN 58 million on NewConnect, i.e., PLN 502 million in total.

Figure 32 Capitalisation of domestic and foreign companies – Main Market and NewConnect [PLN billion]



Source: GPW

Figure 33 Value of IPOs and SPOs – Main Market and NewConnect [PLN billion]²⁴



Source: GPW

The nominal value of non-Treasury debt listed on Catalyst was PLN 112.3 billion as at 31 December 2023 vs. PLN 92.5 billion as at 31 December 2022. Catalyst listed 567 series of non-Treasury debt instruments as at 31 December 2023 vs. 482 series as at 31 December 2022.

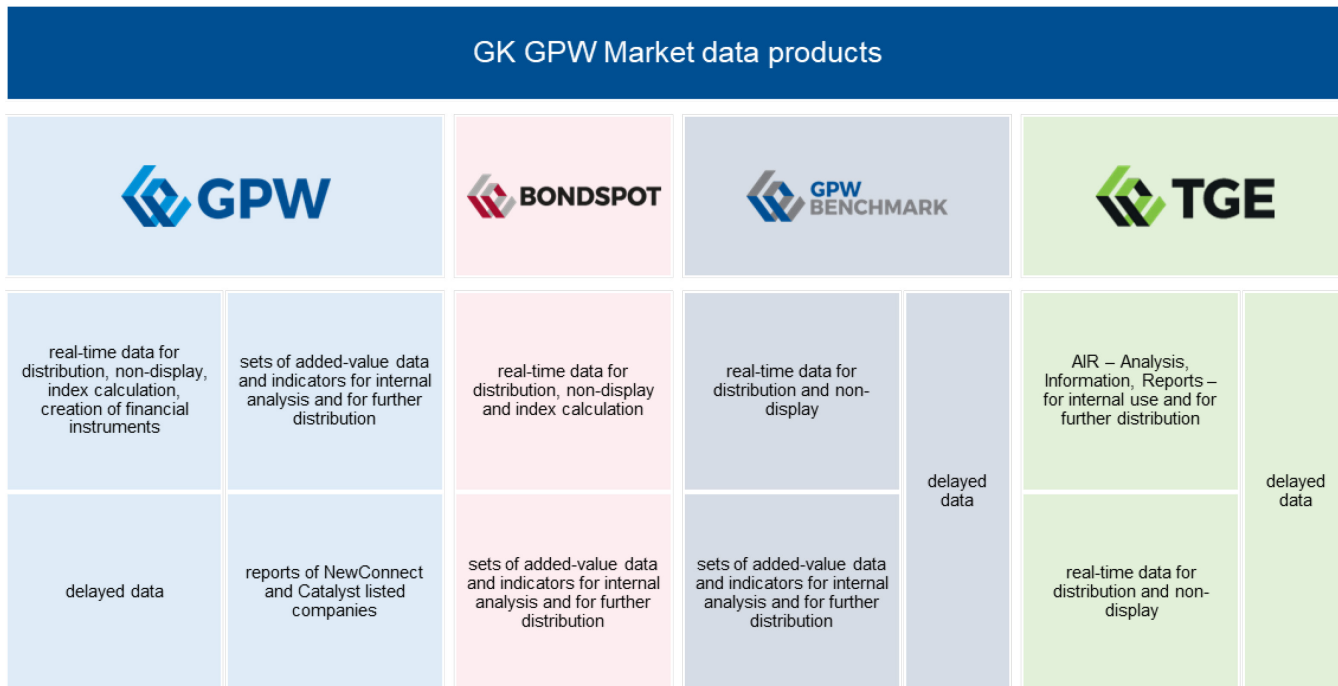
2.4.3. Information services on the financial market

GPW collects, processes and sells market data from all of the financial markets operated by the GPW Group. The status of GPW as the original source of information on trading and its strong brand and diversified business activity enable the Company to successfully reach various groups of market participants with advanced information adjusted to individual needs.

Revenue from information services of the parent entity consists of revenue earned on the sale of stock exchange information and data products, i.e., real-time and delayed stock exchange data and statistical and historical data in the form of a online or e-mail daily statistical bulletin, electronic publications, calculation of indices, and other calculations. In addition to data from GPW, TGE, BondSpot and GPW Benchmark (including WIRON transaction-based benchmarks from December 2022), the Company distributed reports of issuers listed on NewConnect, Catalyst and GlobalConnect in 2023.

²⁴ Including dual-listed companies

Chart 5 GPW Group’s business lines and product offering



Source: GPW

The sale of information is based on separate agreements signed with exchange data vendors, exchange members, and other organisations, mainly financial institutions. The Group’s revenue from information services also includes the revenue from BondSpot and GPW Benchmark information services.

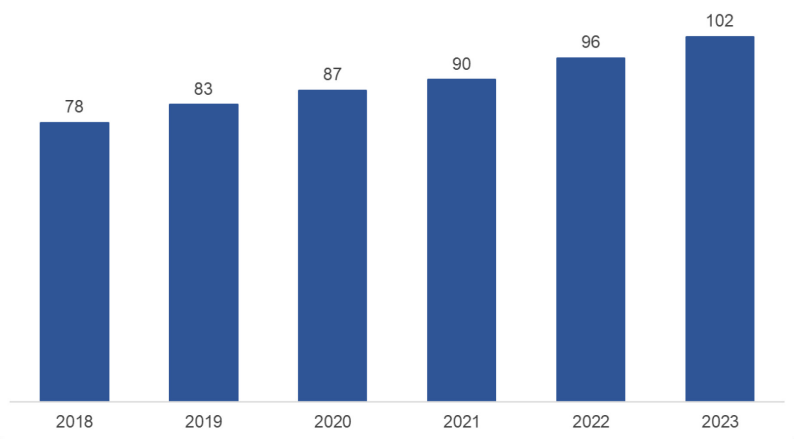
The key groups of clients who use the GPW Group’s information services include:

Data vendors

Specialised data vendors deliver data made available by the Company to investors and other market participants. Data vendors include information agencies, investment firms, internet portals, IT companies, and other entities with a diversified portfolio of services.

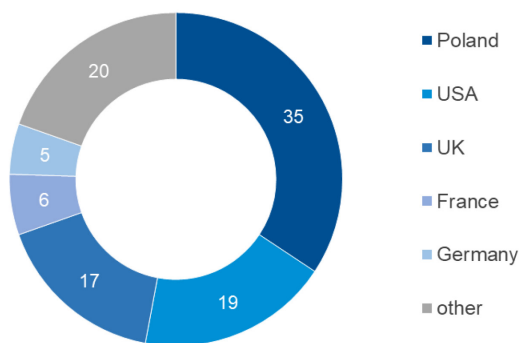
As at 31 December 2023, the GPW Group had data vendors in the United States, the United Kingdom, France, Germany, Estonia, Norway, Switzerland, Austria, Belgium, Czech Republic, Denmark, the Netherlands, Ireland, Israel, Malta, Portugal and Sweden. As at 31 December 2023, the GPW Group’s information services clients were 102 data vendors, including 35 domestic and 67 foreign ones, with subscribers using professional and basic data feeds. By purchasing a subscription service from a data vendor, stock exchange investors gain access to the real-time quotes from GPW, BondSpot and TGE to the extent that depends on the configuration of their package, as well as GPW Benchmark reference rates and transaction-based indexes.

Figure 34 GPW Group data vendors [#]



Source: GPW

Figure 35 GPW Group data vendors by country [#]

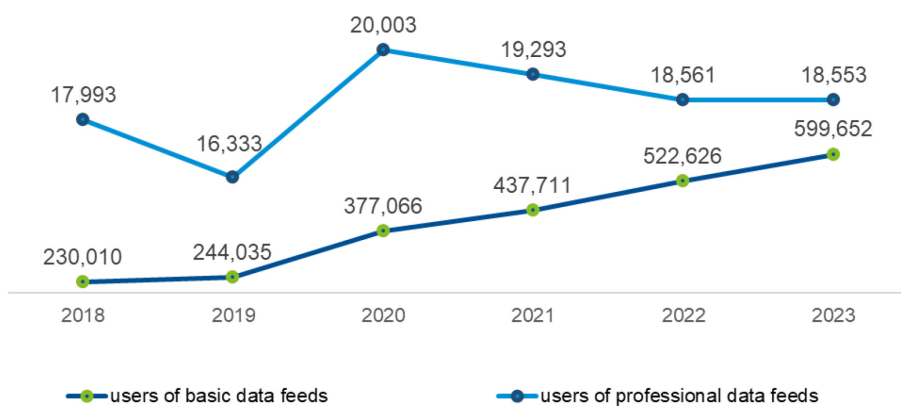


Source: GPW

Individual and professional subscribers

The GPW Group reported a strong increase of the number of real-time data subscribers among individual investors.

Figure 36 GPW Group data subscribers [#]



Source: GPW

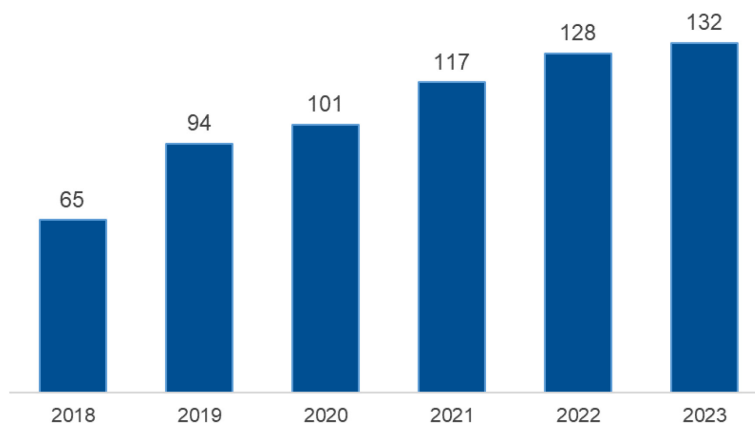
Non-display users of GPW Group data

Following intensive acquisition initiatives, GPW signed 18 contracts for non-display data from all Group companies.

At the end of 2023, the GPW Group had 132 non-display clients in countries including the United States, the United Kingdom, Germany, the Netherlands, Poland, France, Switzerland, Denmark, Finland, Australia, Austria, Ireland, Canada, Portugal, Belgium, Hong Kong, Luxembourg, Malta, Norway, Sweden, Hungary and Italy.

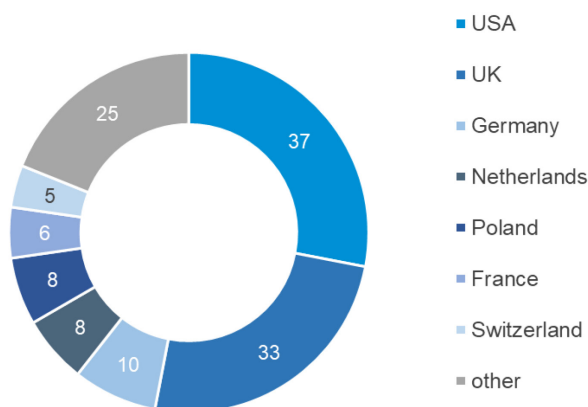
The Company's clients use data from GPW, BondSpot, TGE and GPW Benchmark in applications used in connection with their investments, e.g., for automated trading, risk management, fund valuation, as well as for index calculation and the creation of proprietary financial products such as CFDs or structured instruments.

Figure 37 Non-display users of GPW Group data [#]



Source: GPW

Figure 38 Non-display users of GPW Group data by country [#]



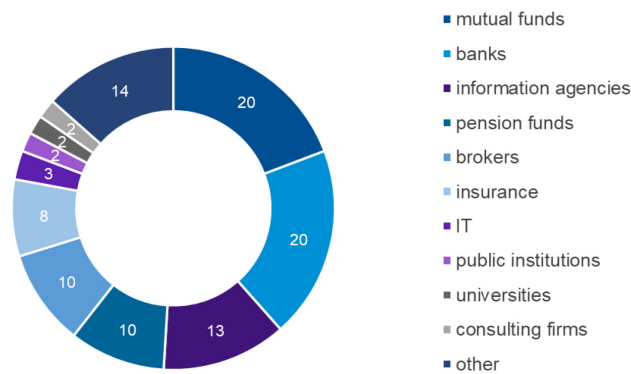
Source: GPW

Added-value services, benchmarks

In addition to real-time and delayed data, GPW offers a broad range of advanced added-value information products appreciated by financial institutions due to suitability for analytical purposes, ease of integration and stability of the data source. Diverse data and indicators are available in packages addressed to specific segments of the financial market in user-friendly formats. The GPW Group's offering includes current and historical information on issues and other share operations, index portfolios, reference data sets and session results, as well as information on shareholder structure and a calendar of market events. In 2023, the offer of added-value data and indices was expanded to include WIRON reference rates and data from the Warsaw Sustainable Segment.

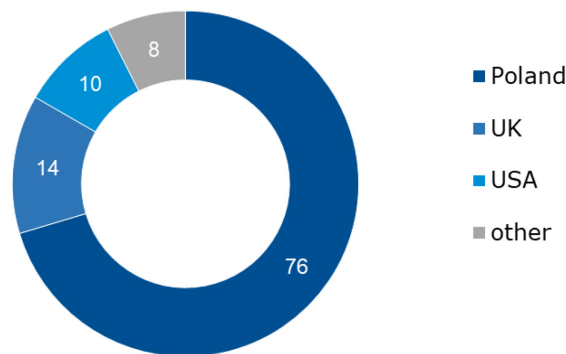
The main users of processed data and benchmarks in 2023 included investment funds, banks, news agencies, pension funds, brokers and insurers.

Figure 39 Users of added-value services and benchmarks [#]



Source: GPW

Figure 40 Users of added-value services and benchmarks by country [#]



Source: GPW

Table 13 Number of data vendors, their subscribers and non-display users, as at 31 December 2023

	2023	2022	2021	2020	2019
Number of real-time data vendors	102	96	90	87	83
– domestic	35	36	35	37	37
– foreign	67	60	55	50	46
Number of real-time data subscribers [thou.]	618.2	541.2	457.0	397.1	260.3
– number of subscribers using professional data feeds	18.6	18.6	19.3	20.0	16.3
Number of non-display users of GPW Group data	132	128	117	101	94

The Company's information services also include licences:

- on GPW data for use in the calculation and publication of clients' proprietary indices and financial instruments such as CFDs, binary options, certificates;
- for television stations using real-time data feeds for limited presentation in public financial programming;
- for clearing houses to use GPW Group data.

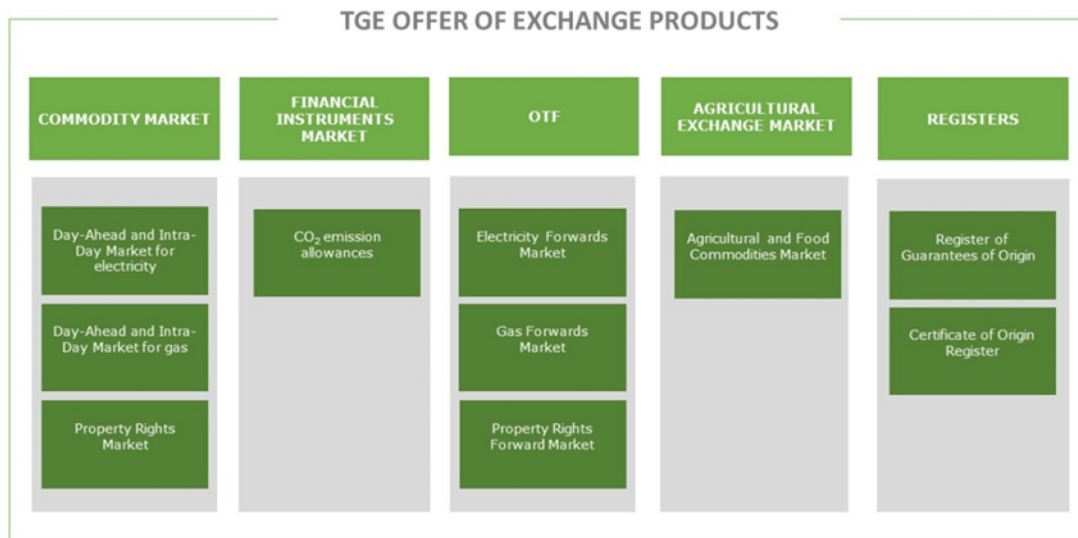
2.5. Business lines – Commodity market

The activity of the GPW Group on the commodity market is concentrated in the Towarowa Giełda Energii Group which is comprised of TGE, its subsidiary Izba Rozliczeniowa Giełd Towarowych, as well as the company InfoEngine. The activity of the Towarowa Giełda Energii Group includes:

- › operation of markets which offer trade in:
 - ✓ electricity;
 - ✓ natural gas;
 - ✓ greenhouse gas emission allowances;
 - ✓ property rights in certificates of origin of electricity, biogas and energy efficiency;
 - ✓ food and agricultural products (wheat, rye, maize, rape);
- › operation of the Register of Certificates of Origin and the Register of Guarantees of Origin;
- › operation of the trade reporting system TGE RRM;
- › operation of data sales platform AIR "Analyses Information Reports" and the data distribution system to data vendors;
- › post-trade services and the operation of a clearing guarantee system for markets operated by TGE;
- › trade balancing services and market operator services providing access to the transmission system operator's IT systems for electricity trading.

2.5.1. Trading

Chart 6 Trading on TGE commodity markets

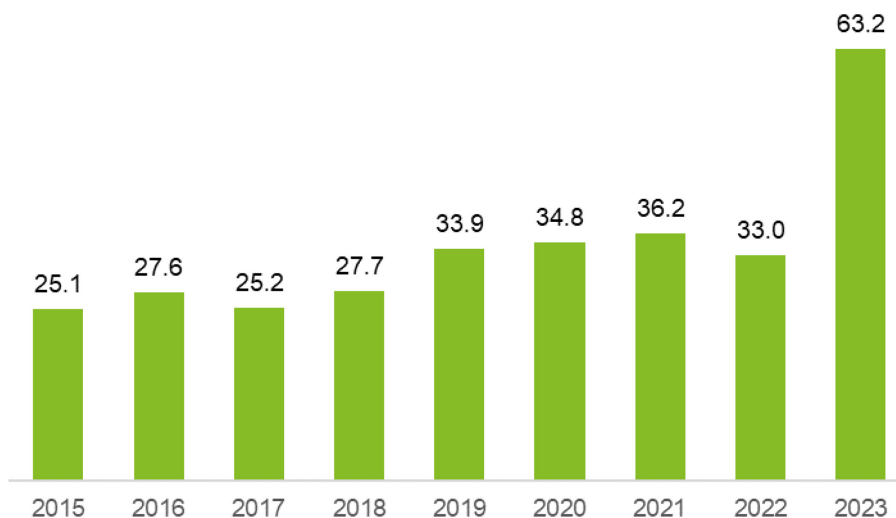


Electricity market

Day-Ahead and Intra-Day Market

The turnover volume increased by 91.4% year on year to the record high 63.2 TWh. Turnover on the Day-Ahead Market increased by 88.1 % to 58.4 TWh and turnover on the Intra-Day Market by 143.8% to 4.8 TWh.

Figure 41 Volume of turnover in electricity on the Day-Ahead and Intra-Day Market [TWh]

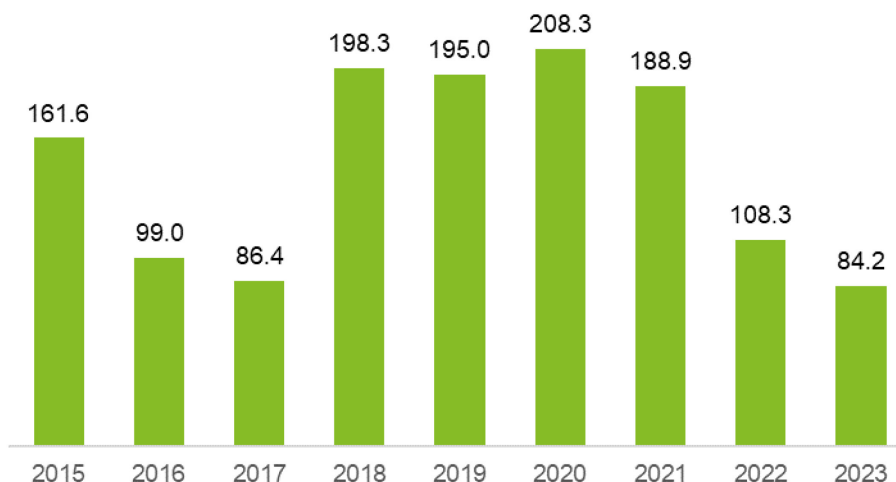


Source: TGE

Forward electricity market (on the OTF since May 2020)

The turnover volume decreased by 22.2% compared to 2022 and reached 84.2 TWh in 2023, the lowest turnover in electricity forwards since 2010.

Figure 42 Volume of turnover on the forward electricity market [TWh]



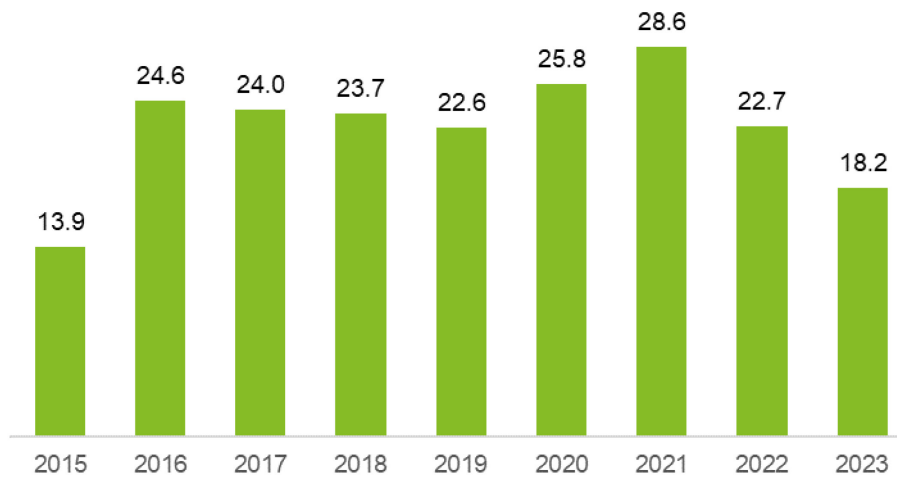
Source: TGE

Natural gas market

Day-Ahead and Intra-Day Market

Trading volumes fell by 19.7% year on year to 18.2 TWh in 2023, the lowest turnover on the Day-Ahead and Intra-Day Market since 2015. The year-on-year decrease in volume was 17.4% in the gas Day-Ahead Market (to 14.9 TWh) and 28.4% in the gas Intraday Market (to 3.4 TWh).

Figure 43 Volume of turnover in natural gas on the Day-Ahead and Intra-Day Market [TWh]

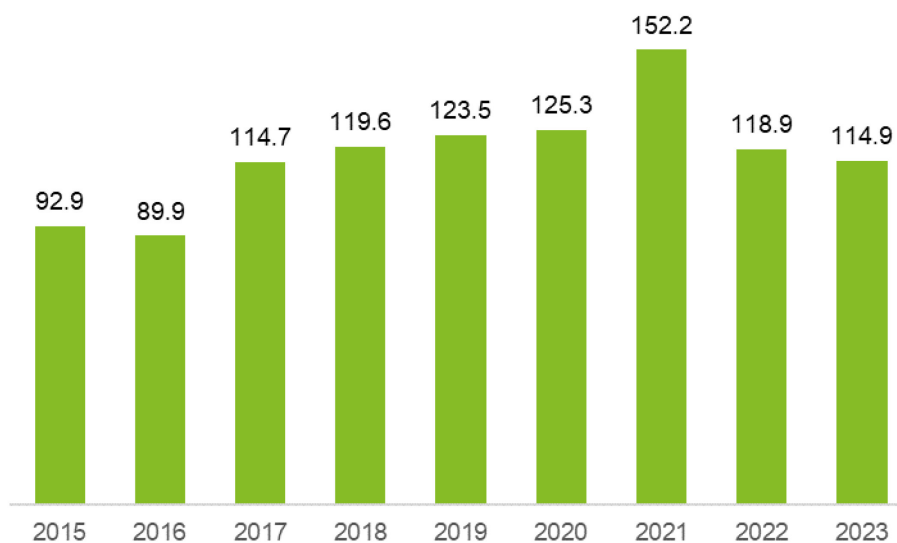


Source: TGE

Forward gas market (on the OTF since May 2020)

Trading volumes decreased by 3.4% year on year to 114.9 TWh in 2023. For a second consecutive year, this was the lowest level of trading in gas forwards since 2017.

Figure 44 Volume of turnover on the forward gas market [TWh]



Source: TGE

Property Rights Market

TGE operates a Property Rights Market in certificates of origin of electricity produced:

- › from renewable energy sources without naming the production technology, excluding biogas (PMOZE and PMOZE_A, known as green certificates),
- › from agricultural biogas (PMOZE-BIO, known as blue certificates).

Furthermore, the Property Rights Market lists:

- › property rights in certificates of origin of agricultural biogas (PMBG, known as brown certificates),
- › property rights in energy efficiency certificates (PMEF, annual PMEF and PMEF_F, known as white certificates).

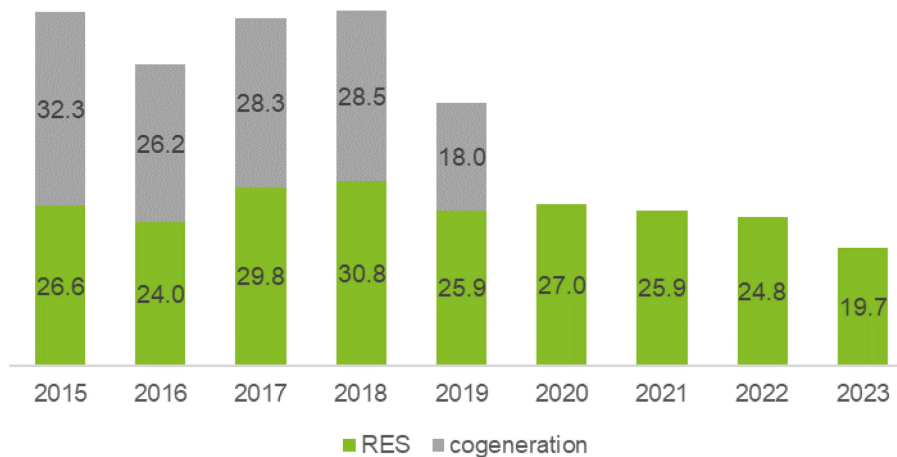
The Property Rights Market is a part of the support scheme for producers of energy from renewable energy sources. It allows producers of energy from renewable energy sources and biogas and holders of energy efficiency certificates to sell property rights, and energy operators required to pay substitution fees or to cancel certificates of origin to meet that obligation.

The volume of turnover on the Property Rights Market is driven by the volume of certificates issued in the Register of Certificates of Origin: increased production of energy covered by the system of certificates of origin generates the issuance of more certificates of origin, which in turn generates an increase of the volume of certificates of origin available on the market. The turnover volume also depends on the level of obligation to cancel certificates imposed on certain entities pursuant to the RES Act, as well as other legal regulations and trading strategies of trading participants.

Turnover in RES instruments (PMOZE, PMOZE_A and PMOZE-BIO) on the electronic order book reached 5.5 TWh in 2023 and non-EOB turnover was 14.1 TWh. The total volume was 19.7 TWh in 2023, a decrease of 20.5% year on year. The volume of issued RES property rights decreased by 18.9% to 16.0 TWh.

Turnover in white certificates (PMEF_F, PMEF-2022, PMEF-2023) increased by 12.7% in 2023. The total volume was close to 110.4 ktoe. The volume of issued white certificate decreased by 12.2% in 2023 to just under 109.8 ktoe.

Figure 45 Volume of turnover in property rights to certificates of origin [TWh]



Source: TGE

Exchange Agricultural Market

The Exchange Agricultural Market was launched in March 2020 by a consortium of the GPW Group (TGE, IRGiT, GPW). Agricultural commodities are traded on the market, stored in authorised warehouses that ensure quality, availability and delivery of the commodity. There are 52 warehouses within the System of Authorised Warehouses (SMA), of which 34 provide storage services and 18 do not provide storage services.

The product portfolio of the Exchange Agricultural Market currently includes wheat, rye, maize, and rape. Trading takes place in a single-price quotation system every working Wednesday. It is also possible to sell cereals at auctions, which are organised at the request of the seller.

The following amendments were made to the Exchange Agricultural Market regulations:

- › enabling sales auctions also in warehouses providing storage services
- › introduction of a new type of SMA participant, i.e., a participant providing storage services only for auctions
- › modification of quality parameters
- › elimination of barriers reported by the Agricultural Market Council (abolition of the deposit, reduction of the time for submitting an auction request from 7 to 3 days, reduction of the deadline for clearing auctions from 21 days to 1 day),
- › enabling trade in goods produced outside the EU on the Exchange Agricultural Market

The following amendments were made to the SMA Rules:

- › abolition of the obligation for SMA participants not providing storage services to carry out laboratory tests
- › revision of the maximum fees for acceptance, storage and release of foods charged by authorised warehouses

TGE's efforts are focused on further development of the market both in terms of the products offered and the market format. Currently, transactions on the Exchange Agricultural Market are concluded in the spot system with physical delivery of the commodity. In the future, it is planned to launch a forward market, which will enable trading in contracts for agri-food commodities, primarily cereals.

In 2023, the "Proposals for changes for the exchange agricultural market" were adopted for implementation, outlining a comprehensive long-term plan to revive trading in this market. The plan includes entering into cooperation with the banking sector to finance trading, working out a market maker formula, expanding the authorised warehouse system, and implementing forward instruments.

2.5.2. Register of Certificates of Origin

The Register of Certificates of Origin is a system of registration and recording of:

- › certificates of origin which confirm that electricity was generated from renewable energy sources (RES);
- › certificates of origin which confirm that agricultural biogas was produced and introduced to the gas distribution network;
- › energy efficiency certificates which confirm that the project improved energy efficiency;
- › property rights under such certificates.

The main functions of the Register of Certificates of Origin include:

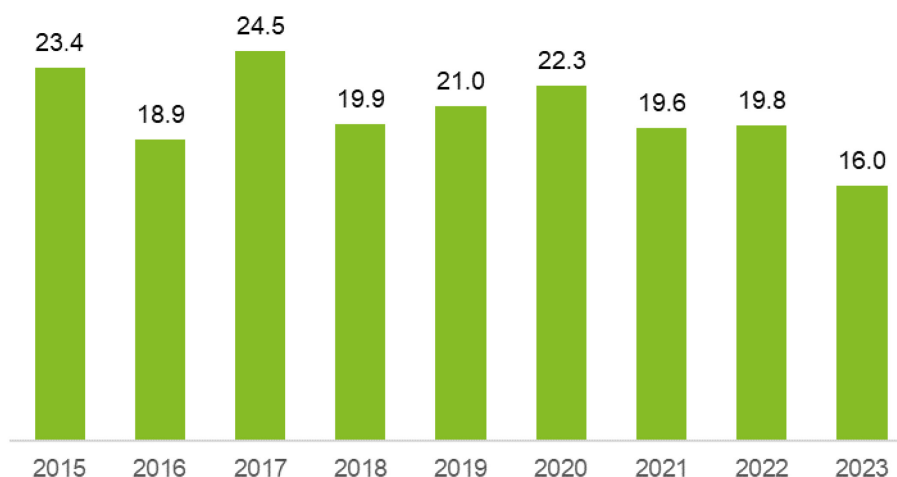
- › to identify entities entitled to property rights in certificates of origin;
- › to identify property rights under certificates of origin and the corresponding quantity of electricity;
- › to register certificates of origin and the resulting property rights;
- › to record transactions in property rights and balances of property rights in certificates of origin;
- › to issue documents confirming property right balances in the register, used by the Energy Regulatory Authority for cancellation of certificates of origin.

Certificates issued and cancelled (Register of Certificates of Origin)

RES – green certificates

The volume of issued green certificates was 16.0 TWh in 2023, a decrease of 18.8% year on year (19.8 TWh in 2022).

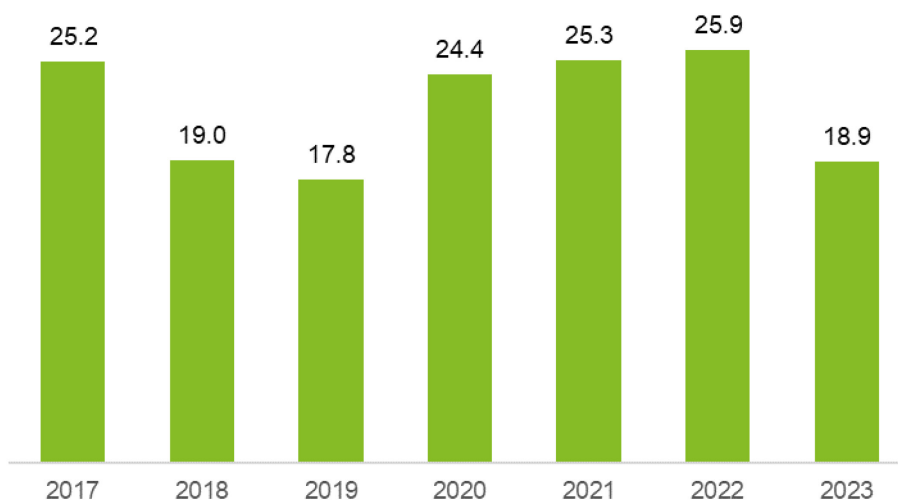
Figure 46 Volume of issued RES certificates of origin [TWh]



Source: TGE

The volume of cancelled green and blue certificates was 18.9 TWh in 2023 vs. 25.9 TWh in 2022 (a decrease of 27.3%). The obligation to cancel certificates of origin from RES was 6.5 percentage points lower in 2023 than in 2022 (12.0%).

Figure 47 Volume of cancelled RES certificates of origin [TWh]



Source: TGE

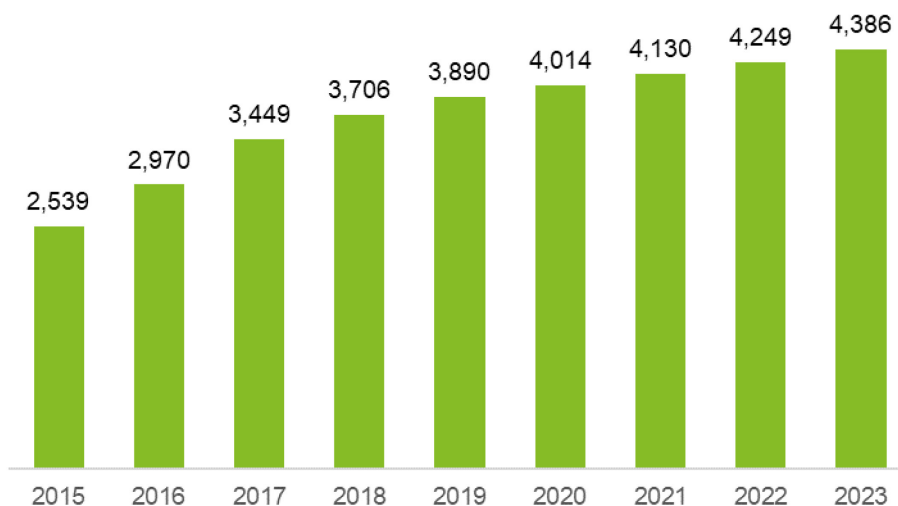
Energy efficiency – white certificates

109.8 ktoe of white certificates were issued in 2023, a decrease of 12.2% year on year compared to 125.0 ktoe in 2022. The volume of cancelled white certificates was 158.0 ktoe in 2023 vs. 124.1 ktoe in 2022.

Number of participants of the Register of Certificates of Origin

The Register of Certificates of Origin had 4,386 participants as at 31 December 2023. 137 companies became members of the Register of Certificates of Origin in 2023 (119 companies in 2022).

Figure 48 Number of participants of the TGE Register of Certificates of Origin



Source: TGE

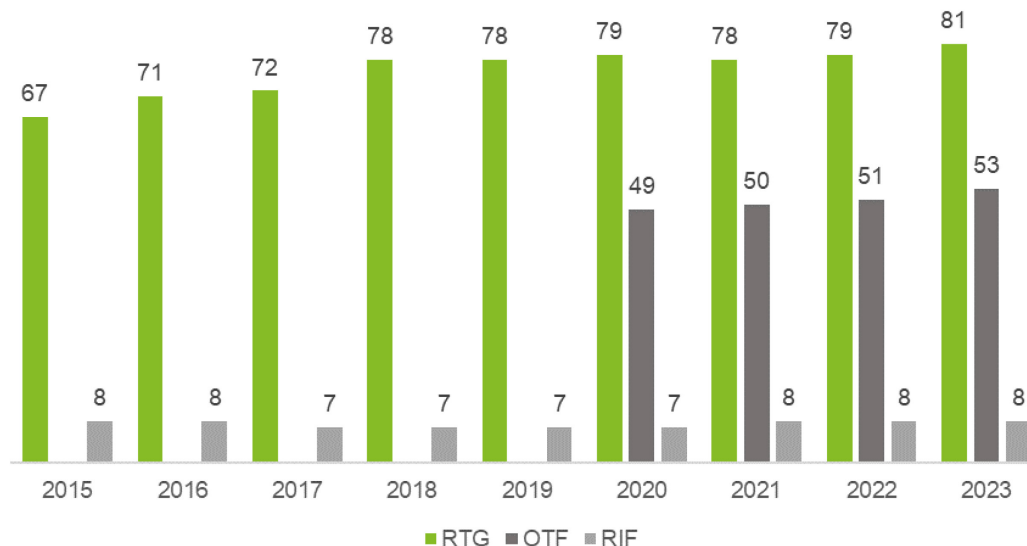
Number of TGE members

In 2023, 81 entities had membership status on the Commodity Market, 53 entities on the Organised Trading Facility (OTF), and 8 entities on the Financial Instruments Market. There were 5 new members admitted on the Commodity Market and 3 members on the OTF. There were 24 foreign entities on the Exchange in 2023, 4 brokerage houses, and 3 entities trading for entities in the same group.

In 2023, TGE delivered (in Polish or English) 6 training courses for candidates for TGE Brokers, ending with an exam, with a total of 92 participants. TGE continued to deliver training via means of distance communication. As a result of the training

activities, a total of 80 TGE Broker certificates were issued in 2023, entitling the holder to represent the member in transactions on the Commodity Market, Organised Trading Platform and Financial Instruments Market operated by TGE. Furthermore, as part of the dissemination of market knowledge and communication of current issues to members, TGE organised webinars and meetings for market participants (including the 14th Trading Forum). The activities were addressed to trading participants, potential clients, and entities interested in trading on the exchange. The purpose of the activities was to grant authorisation to enter into transactions, expand and update knowledge of TGE's operation, including regulations in force on the exchange and its offer.

Figure 49 Number of TGE members in 2015-2023



Source: TGE

2.5.3. Register of Guarantees of Origin

TGE operates a Register of Guarantees of Origin and organises trade in guarantees of origin. The Register of Guarantees of Origin launched in September 2014 and registers energy from renewable sources and OTC trade in environmental benefits of its production. Unlike certificates of origin, guarantees do not involve property rights or a support scheme for renewable energy sources: they are issued for information only. There is no obligation to acquire guarantees but they can be used by entities to prove that a certain quantity of consumed energy was generated from renewable sources. TGE offers trade in guarantees of origin of energy since November 2014.

According to the regulations, the Energy Regulatory Authority issues guarantees of origin which are then uploaded to the IT system of the Register of Guarantees of Origin operated by TGE. System users can trade in guarantees of origin or transfer them to end users as proof that energy was generated from renewable sources.

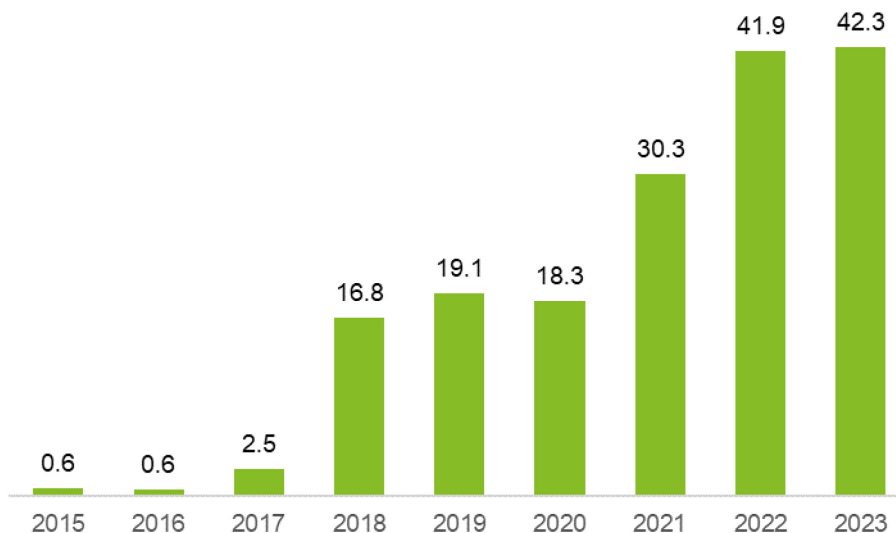
In October 2019, the Register of Guarantees of Origin was extended to include a module of guarantees of origin of high-efficiency cogeneration. As a result, 3.9 TWh of cogeneration guarantees were uploaded in the system in 2019. The number of applications for membership in the Register of Guarantees of Origin increased sharply in 2022 and the rise continued in 2023.

In November 2023, a new version of the Register of Guarantees of Origin was released, automating the process of issuing confirmation documents to end-users and enabling bulk redemption of guarantees of origin. This was a major step in the development of the Register of Guarantees of Origin, addressing the expectations of Register of Guarantees of Origin members, who have since had immediate access to electronic versions of requested documents.

The volume of turnover and redemptions in the Register of Guarantees of Origin is a function of the volume of guarantees of origin issued in the Register of Guarantees of Origin, increased demand for guarantees of origin resulting in a growing number of installations applying for guarantees of origin. A significant share of the guarantee of origin market is that of foreign entities redeeming guarantees in favour of end-users based outside Poland (ex-domain cancellation).

Guarantees of origin turnover amounted to 42.3 GWh in 2023, an increase of 1% year on year.

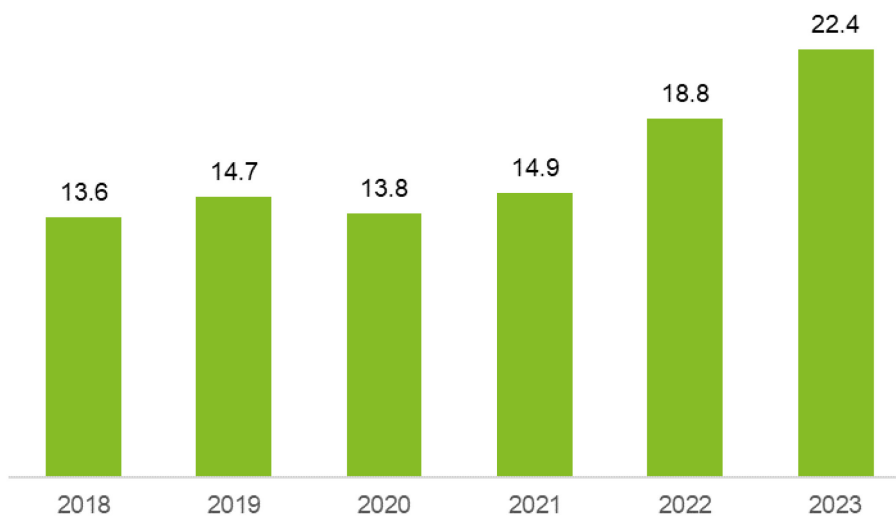
Figure 50 Turnover volume of guarantees of origin [GWh]



Source: TGE

Growing demand for guarantees of origin is reflected in the volume of redeemed guarantees of origin. In 2023, 22.4 GWh were redeemed, an increase of 19.2% year on year.

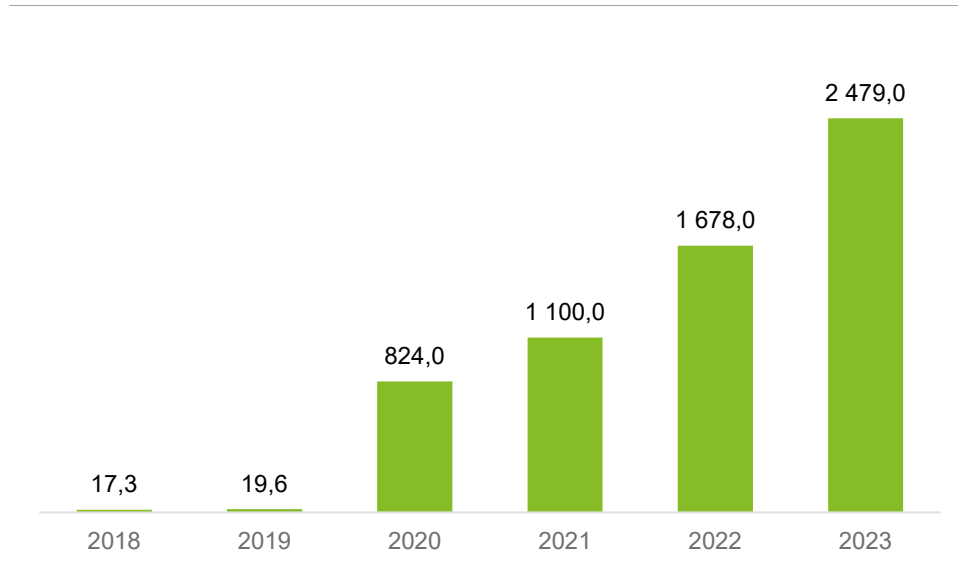
Figure 51 Volume of redeemed guarantees of origin [GWh]



Source: TGE

The volume of issued guarantees of origin rose to 26.0 TWh, an increase of 7% year on year.

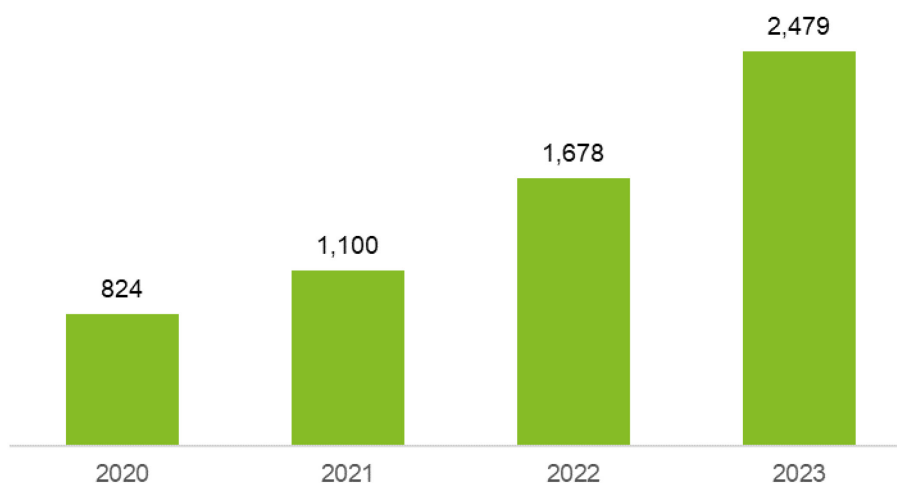
Figure 52 Volume of issued guarantees of origin [TWh]



Source: TGE

The Register of Guarantees of Origin had 2,479 members as at 31 December 2023. 801 members joined the Register of Guarantees of Origin in 2023 (578 members joined in 2022).

Figure 53 Number of members of the Register of Guarantees of Origin



Source: TGE

Trade reporting – TGE RRM

TGE offers a Registered Reporting Mechanism (RRM) to electricity and gas market participants under the requirements of REMIT and its Implementing Regulations, including reporting of trades on organised trading platforms as of 7 October 2015 and OTC trade reporting as of 7 April 2016. All information required under REMIT and Regulation 1348/2014 is reported for the electricity market and the gas market.

In 2023 there were:

- > 9,370,749 reported operations on orders,
- > 3,628,230 reported orders,

- › 3,348,360 reported transactions,
- › 66,435 exchange reports,
- › 18,864 reported standard OTC transactions,
- › 295 reported non-standard OTC transactions,
- › 12,609 OTC reports,
- › over 750 entities – ACER has registered 1,011 entities, which means that we report for 70% of participants of the Polish energy market,
- › over 2,500 users.

2.5.4. Information services on the commodity market

The AIR platform (Analysis, Information, Reports) launched in 2020 allows for simplified and effective data management for market participants. In view of growing interest, it should meet clients' expectations more effectively with further planned development work and expansion of the product range.

In 2023, the AIR platform was used by:

- › over 370 active business and individual clients:
 - ✓ 75 individual clients,
 - ✓ 295 business clients;
- › 208 companies, including 25 Exchange Members.

75 orders were fulfilled in 2023, including both standard product subscriptions and bespoke reports.

TGE real-time data were sold through the Warsaw Stock Exchange; this service was used by exchange members making market information available to their clients, professional data vendors and external parties using data in applications running in automated mode, e.g., risk/portfolio management.

2.5.5. Clearing

Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT) provides post-trade services for all commodity and financial markets operated by Towarowa Giełda Energii S.A. and ensures the safety of trading on these markets by operating a clearing guarantee system. IRGiT is authorised as a clearing house and a settlement institution under the Act on Trading in Financial Instruments and operates as an authorised exchange clearing house under the Commodity Exchange Act.

Clearing operations

In 2023, IRGiT provided clearing services as an exchange clearing house (GIR) for commodities traded on the Commodity Market (RTG), the Organised Trading Facility (OTF), and the Food and Agricultural Commodity Market, and as a clearing house and a settlement institution (IRR) for financial instruments traded on the Property Rights Forward Market and for CO2 Emission Allowances traded on the Financial Instruments Market (RIF).

The total volume of cleared transactions in the markets in electricity in 2023 was 446 TWh, the total volume of cleared transactions in the markets in gas was 493 TWh, the total volume of cleared transactions in property rights was 40 TWh. IRGiT served than 63 direct members, 5 indirect members and close to 200 entities operating via brokers in 2023 under a settlement model operated in partnership with 10 banks.

As a partner of TGE - NEMO appointed by the Energy Regulatory Authority as responsible for the integration of the European market into a coherent, harmonised mechanism of the internal energy market, enabling participation of all market players in cross-border electricity trading, IRGiT handled settlements with other NEMOs in the Market Coupling project within the framework of Single Day-Ahead Coupling (SDAC) and Single Intra Day Coupling (SDAC).

Clearing guarantee system

The clearing guarantee system organised and administered by IRGiT aims to protect the safety of clearing and settlement for all participants of cleared markets, in particular by managing counterparty credit risk and accepting collateral of the appropriate value and quality. The system ensures high stability and certainty of the execution of trades on agreed terms for all market participants, including in the event of counterparty default, even under extreme market conditions.

The system operated by IRGiT relies on international standards and risk management rules. In its risk management, IRGiT takes into account a broad range of risks, including financial risks (i.e., credit risk, liquidity risk, market risk) and a range of non-financial risks.

The clearing guarantee system includes deposits, margins, and guarantee funds in which members post collateral. They cover the risks mentioned above.

Deposits cover cash flows in respect of physical delivery under cleared trades. Margins include initial margins and additional margins. Initial margins cover potential future exposure to price risk under normal market conditions in the event of market member default. IRGiT's initial margining methodology is based on a historical Value-at-Risk model. Additional margins represent aggregate mark-to-market and mitigate the risk of current price volatility recorded between the time of conclusion of the transaction and the date on which the margins are determined. The purpose of guarantee funds established by IRGiT is to mitigate potential future exposure to the risk of price volatility beyond normal market conditions (under stress conditions) in the event of market member default.

In the clearing guarantee system, margins decreased in 2023 as a consequence of the decline and stabilisation of price levels in the electricity and gas markets.

In 2023, the Act amending certain laws with regard to shielding measures in connection with the spread of the SARS-CoV-2 virus continued to apply, aimed to reduce liquidity pressure on market participants by expanding the catalogue of collateral accepted by IRGiT and removing concentration limits on collateral for entities meeting the requirements described in the Act. In addition, regulations introducing a reverse VAT charge for transactions executed on the exchange market came into force on 1 April 2023, resulting in an additional 18.7% decrease in required collateral. In 2023, IRGiT's priority objectives remained to maintain a high level of security, promote solutions that support market liquidity, and optimise costs incurred by market participants in exchange trading.

Risk Committee

IRGiT's risk management system includes a Risk Committee which issues opinions and provides advice to IRGiT in matters concerning regulations or arrangements which impact the risks of IRGiT's clearing services and as such directly impact the safety and effectiveness of the clearing guarantee system. The Risk Committee is comprised of representatives of IRGiT clients' organisations, a representative of Towarowa Giełda Energii S.A., and a representative of IRGiT. The Committee provided a number of recommendations in 2023, setting the direction of development of the clearing guarantee system. Summary reports of Risk Committee meetings are published on the IRGiT website.

Development activities of IRGiT

In 2023, IRGiT cooperated with TGE in development projects and carried out initiatives to develop the clearing offering. In 2023, IRGiT implemented a new version of the clearing system and ancillary applications, and undertook a number of other activities aimed at ensuring optimal solutions for market participants, such as the operational implementation of the reverse VAT charge, the development of new collateral models resulting in, among others, a reduction in cash margin exposure, the simplification of TGE and IRGiT member service through the integration of the Exchange Member Department within the TGE Group, and simplification of membership documentation and the abolition of the requirement to submit the approval of the Polish Financial Supervision Authority to IRGiT.

In 2023, IRGiT developed its international engagement. The company actively participated in the SEEGAS initiative set up by the Energy Community to develop a model for cross-border gas trade. IRGiT continued to cooperate with the Balkan Gas Hub EAD in the further development of the Bulgarian and regional gas market and entered into a cooperation agreement between IRGiT, TGE and the Ukrainian Energy Exchange which aims to strengthen cooperation between the Polish and Ukrainian partners based on the knowledge and experience of TGE's exchange market.

2.6. International activity

GPW is strengthening its dominant position in the CEE region by expanding its base of foreign clients: investors, issuers, brokers and market data vendors. GPW continued its efforts to promote the Polish capital market internationally in cooperation with brokers and investment banks. As part of investor conferences in 2023, the Investor Relations team participated in the following events:

- › Polish Capital Market: Our Presence in FTSE/MSCI and What Lies Ahead – mBank, Warsaw
- › Annual Emerging Europe Investment Conference – Pekao, Warsaw
- › mBank/Commerzbank "European Financials Conference, Warsaw
- › Wood's Winter Wonderland, WOOD & Company, Prague

Activities directed at the development of the liquidity support programmes (HVP and HVF) continued in 2023, with the largest trading volumes being generated by remote exchange members.

In 2023, as in previous years, TGE continued to be active in European energy market integration projects. European energy integration is taking place both at the legislative level and at the level of regional initiatives in support of cross-border connections.

2.6.1. GPW Representative Office outside Poland

The Representative in London was hired in June 2013 to enhance GPW’s acquisition activities on the London and global market. In 2023, the Representative focused on supporting relations with GPW’s business partners including exchange members, investors, journalists and providers of technology services for GPW and its clients in the UK, Western Europe, Middle East and Asia.

The Representative Office in London has no separate legal personality and does not carry out any profit earning independent business operations. In all its activities, the Representative Office acts on behalf and for GPW to the extent of powers of attorney granted by the GPW Management Board.

2.6.2. Development of a network of foreign investment firms – GPW clients

GPW is the biggest exchange in Central and Eastern Europe and continues to strengthen its international presence. We work with international partners to deliver optimum solutions to clients. We follow a global approach to relationship management in all business segments. This is reflected in our operations and distribution initiatives.

Markets classified as developed, which include Poland since September 2018 (according to FTSE Russell classification), follow an upward trend of passive asset management. To address the trend, GPW is focusing its efforts on developing new products for the market, including ETFs (in cooperation with Agio TFI and Beta Securities Poland to list ETFs on GPW), as well as expanding and strengthening cooperation with key foreign partners.

In 2023, GPW continued to focus on the development of the business network including acquisition of new exchange members, investors, and technology providers, and expanding the relations with existing partners.

TP ICAP was admitted as an exchange member in November 2022 and commenced operations in August 2023.

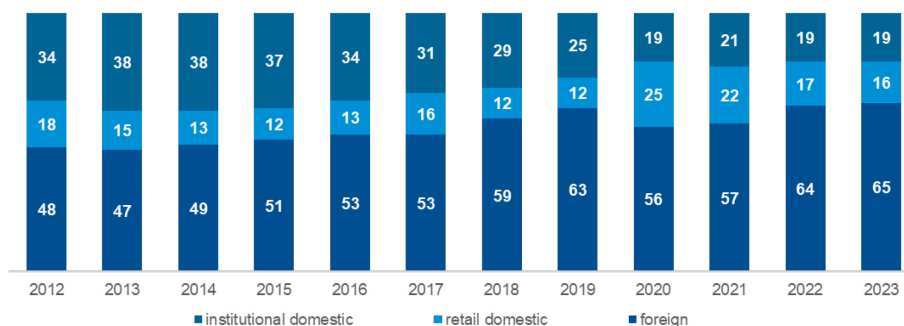
Table 14 Share of local and remote GPW members in turnover in shares on the Main Market

	2023	2022	2021	2020	2019	2018
Local	41.9%	42.5%	48.6%	51.1%	45.7%	51.5%
Remote	58.1%	57.5%	51.4%	48.9%	54.3%	48.5%

2.6.3. Share of foreign investors in turnover on GPW markets

In 2023, foreign investors accounted for 65% of turnover on the Main Market (vs. 64% in 2022). Domestic institutional investors accounted for 19% of turnover (vs. 19% in 2022) and individual investors accounted for 16 (vs. 17% in 2022).

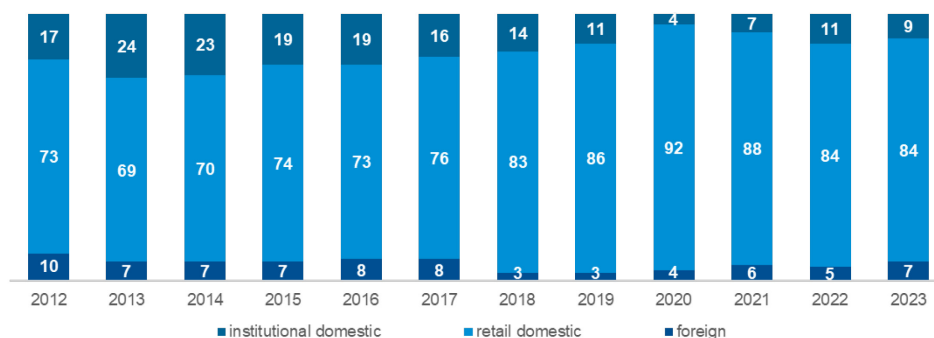
Figure 54 Investors’ share of trading in shares on the GPW Main Market [%]



Source: GPW

In 2023, retail investors once again were in the lead on NewConnect, accounting for 84% of equity trading (vs. 84% in 2022). Domestic institutional investors accounted for 9% of turnover (vs. 11% in 2022) and foreign investors accounted for 7% (vs 5% in 2022).

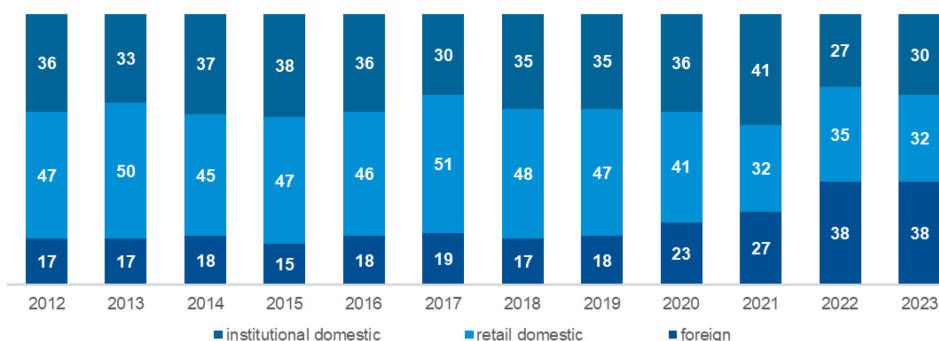
Figure 55 Investors' share of trading in shares on NewConnect [%]



Source: GPW

In 2023, the share of foreign investors in futures trading volume was the biggest at 38% (vs. 38% in 2022). The share of individual investors was 32% (vs. 35% in 2022) and the share of domestic institutional investors was 30% (vs. 27% in 2022).

Figure 56 Investors' share of trading in futures [%]



Source: GPW

The detailed results of the survey on investor's share in trading in financial instruments are published on the GPW website: <https://www.gpw.pl/analysis>.

2.6.4. Regional initiatives – Three Seas Exchanges and publication of CEE Plus

GPW is a co-initiator and chair of the Three Seas Stock Exchanges Initiative. Apart from the Polish stock exchange, the initiative includes six other European stock exchanges in the Czech Republic, Hungary, Slovakia, Romania, Croatia, and Slovenia. GPW has for years been fostering and expanding the co-operation among the stock exchanges in the Three Seas region by organising and engaging in events of key importance to the region's further development and increased attractiveness for investors. The first edition of the Three Seas Stock Exchanges Conference took place in September 2020 in Krakow.

We see our position among the stock exchanges in the CEE region as a commitment to active cooperation within the Three Seas initiative. GPW is continuously developing regional partnerships. In 2023, our commitment to supporting cooperation and promoting the interests of the stock markets of Europe's emerging economies at the European Union level was recognised in the Emerging Europe Awards 2023, where we took second place in the "Regional Collaboration Initiative of the Year" category.

As an active capital market measure, the CEEplus index published since 4 September 2019 includes the biggest and most liquid stocks of companies listed on the stock exchanges in the Visegrad Group countries, Croatia, Romania, and Slovenia. The index is the underlying instrument for a passive fund managed by TFI PZU. The index portfolio includes 120 most liquid

stocks listed on the regulated markets of the Three Seas region, including 93 companies listed on the Warsaw Stock Exchange.

2.6.5. International activity of TGE

National day-ahead electricity markets in the EU are brought closer together in the cross-border exchange model of the Price Coupling of Regions (PCR) and the European intra-day markets in the Cross-Border Intra-Day project (XBID). According to the new European terminology, physical markets of electricity are defined as Single Day Ahead Coupling (SDAC) and Single Intra-Day Coupling (SIDC).

Within the framework of EU projects i.e. SDAC and SIDC, TGE also participates in regional projects/activities:

- › Price Coupling of Regions – PCR, on the day-ahead market,
- › CORE Flow Based Market Coupling, on the day-ahead market,
- › Local Implementation Projects under XBID (SIDC),
- › MNA – Multi-NEMO Arrangements, for the Polish day-ahead and intra-day electricity market,
- › NC – NEMO Committee, co-ordination and project work on the day-ahead and intra-day markets.

Single DayAhead Coupling (SDAC)

SDAC is a pan-European project for the operational integration of day-ahead electricity markets. It is the largest and most liquid market in Europe, covering around 90% of energy demand. In July 2015, TGE became a full member of the MRC (SDAC) market by signing the Day-Ahead Market Operational Agreement (DAOA), which now ensures the cooperation of 14 energy exchanges and 27 transmission system operators. TGE has been an MRC exchange since 2010 and since 14 November 2017 it is an active and independent operator of the MRC (SDAC). In March 2019, TGE signed a new DAOA, extending the common day-ahead market to other European countries based on detailed market regulations, officially approved by the European regulators and ACER. Since June 2021, available exchange trade on the international day-ahead market was extended to include further borders under the Interim Coupling project. As a result, Poland gained the possibility to conclude inter-system transactions on additional borders: with Germany, the Czech Republic, and Slovakia. TGE's participation in the project is part of its on-going business on the day-ahead market.

Price Coupling of Regions – PCR

PCR standardises IT solutions on the European day-ahead electricity market (SDAC) by developing a shared trading algorithm (EUPHEMIA) and a data exchange and communication system (PCR Matcher & Broker (PMB)) used to calculate electricity prices in all of Europe's price areas. PCR is used across the European Union for day-ahead markets.

Towarowa Giełda Energii is a full member of PCR since October 2015 and a project co-owner together with the exchanges EMCO, EPEX Spot, GME, OMIE, OTE, OPCOM, HENEX and NASDAQ. TGE holds all necessary certificates as a PCR operator and co-ordinator and is eligible to actively participate in regional market projects and to implement the EU day-ahead electricity market mechanisms.

CORE FB MC (previously CEE FB MC)

CORE FB MC is a regional project of the European day-ahead market (SDAC) which covers Central Europe and integrates the Central European and CEE CORE markets with MRC (incorporation of MRC into CORE FB MC). The objective was for operators to design algorithms to calculate available cross-border transmission capacities according to the flow based allocation methodology which TSO consider to be optimal. This project was completed on 8 June 2022 and is now fully operational.

Single IntraDay Coupling (SIDC)

The European electricity market XBID (SIDC) launched in June 2018 (first wave of XBID) in Western and Northern Europe. TGE joined the project in June 2018 and opened the market in the "second wave" which started on 19 November 2019. Italy joined the international intra-day market in 2021, and Greece and Slovakia in 2022 under LIPs (Local Implementation Projects), with TGE's direct participation.

In 2023, SIDC focused on software development, and continued implementation of intra-day market auctions (IDA). XBID trade is now based on continuous trading while an auction system (IDA) is under implementation.

The intra-day market is monitored in order to identify any necessary local modifications.

Multi-NEMO Arrangements - MNA, for the Polish day-ahead and intra-day electricity market

MNA is based on initiatives of stakeholders in the Polish price area, including TGE, EMCO, EPEX SPOT led by PSE under the MNA approved by the President of the Energy Regulatory Authority. The process was completed with the implementation of the Multi-NEMO model on 9 February 2021 and has been operational since.

NEMO Committee – NC

The NEMO Committee groups all European NEMOs and co-ordinates NEMOs' joint projects on the intra-day (SIDC) and day-ahead (SDAC) electricity markets under the All NEMO Cooperation Agreement – ANCA signed in March 2019. The NEMO Committee replaced the Interim NEMO Committee established in March 2016.

The CACM Regulation requires NEMOs to prepare a range of spot market documents and submit them for approval of regulators. The first and most fundamental document to be prepared jointly was the Market Coupling Operations Plan (MCO Plan). The MCO Plan, which was approved by the Energy Regulatory Authority and other regulators in June 2017, defines the operating rules of single electricity markets: SDAC (Single Day Ahead Coupling) under the PCR model and SIDC (Single Intra-Day Coupling) under the XBID model. A range of other documents were prepared for the markets including the specifications and opinions for algorithms, minimum and maximum prices, and operating procedures.

The NEMO Committee focused on research and preparations for a single SDAC and SIDC management structure, which was implemented in early 2022. Meanwhile, 2023 was a year of intensive work on analysing and issuing opinions on proposed changes to the law, i.e. European Market Design (EMD).

2.6.6. The GPW Group as a member of international organisations and initiatives

WFE

In January 2022, GPW was granted the status of an affiliate exchange of the World Federation of Exchanges (WFE) and became its full member in June 2022. WFE is a global industry organisation bringing together over 250 capital market infrastructure operators, including exchanges, clearing houses, and settlement institutions.

FESE

The Warsaw Stock Exchange has co-operated with the Federation of European Securities Exchanges (FESE) since 1992. GPW was granted the status of associated member in 1999 and has been a full member of FESE since June 2004. FESE represents 35 exchanges which organise trading in equities, bonds, derivatives and commodities through 18 full members from 30 countries as well as 1 affiliated exchange and 1 non-European observer member.

In June 2018, Marek Dietl, then President of the GPW Management Board, was elected Member of the Board of the Federation of European Securities Exchanges. Marek Dietl was re-elected to the FSE Board in June 2021. The Board is FESE's superior body after the General Assembly. Board Members are elected for a term of three years. They frame overall strategy of the organisation, implement and oversee FESE's policies of financial market integration and development, co-operation in trading, clearing and security depositories, as well as regulation.

Capital Market Union

In 2015, the Warsaw Stock Exchange was involved in consultations of the Capital Market Union project, designed to create a single capital market across the 28 European Union member states. GPW welcomed the Green Paper which provides for a greater role of the capital market in financing of the EU economy, especially SMEs.

The main objectives of the Capital Market Union are: to provide businesses (especially SMEs) with a greater choice of funding at lower costs; offer new opportunities for savers and investors across the EU; facilitate cross-border investing and attract more foreign investment to the EU; support long-term projects; make the EU financial system more stable, resilient and competitive.

The majority of proposed measures focus on bringing financial intermediation closer to the capital markets and on eliminating barriers to cross-border investing.

In 2020, The European Commission published a new action plan to complete the Capital Market Union. The Commission envisaged a series of legislative actions to achieve three main objectives:

- ✓ support a green, digital and resilient economic recovery by increasing access to finance for European companies
- ✓ make the EU an even safer place to save and invest for the long term
- ✓ connect national capital markets into a truly single market.

Sustainable Stock Exchange (SSE)

GPW is a member of the Sustainable Stock Exchanges (SSE) since December 2013. SSE is a UN initiative of global exchanges which promote the development of corporate social responsibility and sustainable development on their home capital markets. SSE was created in 2009 by the United Nations to exchange members' experience in the development and promotion of corporate social responsibility and responsible investment among investors, public companies, regulators and capital market infrastructure institutions. GPW was the ninth exchange to join SSE, the first one in Central and Eastern Europe.

UN Global Compact Network Poland

UN Global Compact Network Poland (GCNP) and GPW signed a Memorandum of Understanding on 16 December 2020 concerning support for tools financing sustainable development. The partnership aims to develop and promote measures in support of sustainable development of Poland, improvement of living standards of the population, and corporate social responsibility.

FIX Trading Community

GPW became a member of the FIX Trading Community in 2014. It is a non-profit industry-driven body which brings together close to 300 financial companies: banks, exchanges, brokers, institutional investors, IT system vendors (ISV). The organisation supports dialogue and exchange of information concerning the best practice and standards of messaging on the financial market. The flagship achievement of the FIX Trading Community is the creation and development of the FIX messaging protocol broadly used in the financial industry. The organisation groups more than 290 leading financial service providers on six continents, including 35% of members in EMEA, 29% in the Americas, and 26% in Asia-Pacific and Japan.

Europex

Europex is the association of 33 energy exchanges and operators which represents exchange markets in electricity, gas and derivatives. TGE is a EUROPEX member since 2005. TGE takes active part in the working groups Power Markets, Gas Markets, Environmental Markets, Financial Markets, Integrity & Transparency, Balancing Task Force, Energy Community Task Force, and Digital and Cybersecurity Task Force.

The mission of Europex is to enhance competition on the European market by ensuring transparent price setting and implementing a single European market in electricity and gas enabling convergence of prices as well as benefits for customers. Europex participates in the development of market solutions and engages in dialogue with EU authorities and other European institutions which contribute to the development of the markets.

Association of Power Exchanges (APEX)

The Association of Power Exchanges (APEX) is an international organisation of world energy exchanges and transmission system operators. It has 45 members around the world. APEX supports the development of energy markets. Its key initiatives include development of a platform for exchange of information and experience among its members. TGE is an APEX member since 2000.

Polish-Lithuanian Chamber of Commerce

In 2015, TGE became a member of the Polish-Lithuanian Chamber of Commerce, which is committed to creating a positive climate for Polish-Lithuanian business ventures, a dynamic trade exchange between the two countries, an influx of investments and the removal of barriers to cooperation between companies in Poland and Lithuania. An important element of the Chamber's activities is the exchange of knowledge and experience among its members. Every month, the Chamber organises club meetings for them with the aim of networking and knowledge sharing.

European Association of CCP Clearing Houses (EACH)

The European Association of CCP Clearing Houses (EACH) is a non-governmental organisation (AISBL) established in Belgium in 1992. The mission of EACH is to develop standards and services of clearing institutions. The organisation brings together the 20 largest CCP clearing houses, mainly in the European Union. EACH is currently working on clearing solutions for regulated and OTC markets and is cooperating with the European Securities and Markets Authority (ESMA), the European Banking Authority (EBA), and national supervisors on capital requirements for CCPs under the update and revision of EMIR and CRDIV.

EACH membership is a testimony to security and clearing standards, as defined among others in the CPSS-IOSCO Recommendations. IRGiT has been a member of EACH since 1 April 2011. By joining EACH, IRGiT can cooperate with Europe's best experts in clearing, settlement and risk management. IRGiT's representatives participate in plenary meetings, teleconferences and in the work of Policy Committee, the Risk Committee and the Legal Committee. IRGiT takes active part in consultations of draft European regulations. KDPW_CCP is a member of EACH.

CCP Global

IRGiT was a member of the Global Association of Central Counterparties CCP Global (formerly CCP12) from 1 January 2021 to the end of 2023. CCP Global is a global organisation of over 40 member organisations representing over 60 CCPs operating across Europe, Middle East and Africa (EMEA), the Americas, Asia and Pacific (APAC). The mission of CCP Global is to promote effective, adequate and efficient risk management standards and operating standards for central counterparties around the world in order to ensure safety and efficiency of cleared financial markets. CCP Global members issue joint position statements concerning regulatory and industry initiatives in financial market clearing and settlement and take active part in international consultations and discussions.

2.7. Development of the GPW Group in 2024

2.7.1. Internal drivers

In 2024, the GPW Group plans to continue implementing initiatives under its 2023-2027 strategy (for more information concerning the implementation of the strategic initiatives, see section 2.3 Implementation of the GPW Group Strategy in 2023). The company plans to invest in organic growth but also to monitor the market for potential M&A transactions. In line with the current dividend policy, the Management Board intends to maintain GPW's status as a dividend company over the 2023-2027 strategy horizon (for details of the dividend policy, see section 1.5.3 Dividend for GPW shareholders).

In 2024, the GPW Group plans to pursue the objectives set in the GPW Group ESG Strategy 2025, in particular by implementing reporting mechanisms in accordance with the Corporate Sustainability Reporting Directive (CSRD). Being aware of its corporate responsibility, the Company intends to contribute to the promotion of initiatives aimed at promoting ESG factors among issuers and investors. It also plans to further develop its product offer integrating ESG factors and intensify its cooperation in the CEE region.

2.7.2. External drivers

Macroeconomic situation, the Government's economic policy, conditions on the Exchange

The GPW Group's business and financial performance indirectly depend on the economic climate. According to preliminary data from the Central Statistical Office (GUS), Poland's GDP grew by 0.2% in 2023, compared to growth of 5.3% in 2022. In the first and second quarters of 2023, year-on-year GDP growth was negative at -0.3% and -0.6%, respectively. The reduction in economic activity was accompanied by significantly elevated inflation, with double-digit price growth readings persisting in the first half of the year. In the second half of the year, economic growth turned positive, while inflation fell to single-digit levels, private consumption rebounded and investment levels rose. In the third quarter of 2023, Poland's GDP grew by 0.5% y-o-y, and according to a preliminary estimate by the Central Statistical Office (GUS), positive GDP dynamics amounted to 1% in Q4 2023. During the past year, the Polish economy remained supported by dynamically growing salaries, social transfers and one of the lowest unemployment rates in Europe (according to GUS methodology, the unemployment rate in December was 5.1%).

Economists surveyed by the Polish Press Agency (PAP) expect Polish GDP growth to step up to +3.1% in 2024. The acceleration in GDP growth is expected to be driven by an increase in private consumption, fuelled by wage increases (minimum wage increase, increases in the public sector), a significant indexation of pensions and an increase in social benefits. According to the median forecast of economists, average annual CPI will fall to 4.6% in 2024, down from 11.4% in 2023, and core inflation (excluding food and energy prices) will be 4.8%.

Monetary policy has a significant impact on investor activity and thus on turnover on the GPW Group markets. As a result of lower inflation, the Monetary Policy Council decided to cut interest rates twice in 2023: in September (the reference rate was cut by 75 bps to 6.0%) and in October (the reference rate was cut by 25 bps to 5.75%). The market consensus is for a further reduction in NBP interest rates in 2024: the reference rate at the end of this year is expected to be 5.25% according to economists.

The situation on GPW in 2024 will also depend on developments on external markets on the US, Western European and Asian stock exchanges. The situation on the markets is linked to the condition of the world's largest economies, including the outlook of inflation, the risk of recession, and central banks' interest rate decisions. The further course of the war in Ukraine is likely to have a significant impact on the conditions prevailing on GPW.

In its World Economic Outlook report published in January 2024, the International Monetary Fund (IMF) estimates that global GDP grew by 3.1% in 2023. According to the report, the second half of 2023 saw better-than-expected macroeconomic readings in major economies, particularly in the US. The IMF forecasts that the growth rate of global GDP this year will be 3.1%, the same as in 2023. IMF analysts expect GDP growth of 1.5% in developed economies (down from 1.6% in 2023) and 4.1% GDP growth in emerging and developing economies (the same as in 2023). The report forecasts a decline in global inflation to 5.8% in 2024 from 6.8% in 2023.

Competition of Multilateral Trading Facilities (MTF)

Competition of financial instrument trading venues has largely increased over the past few years. Operators of regulated markets compete for new issuers, investors, liquidity and trade. Another challenge for exchanges is posed by OTC markets and multilateral trading facilities (MTF). They offer trade in the same stocks as those listed on traditional exchanges. Some MTFs have been licensed as regulated markets, for instance CBOE Europe Equities.

The experience of other exchanges suggests that the emergence of alternative trading venues boosts the total turnover in stocks on the market due to arbitrage strategies pursued by market participants who trade in the same stocks on two or more venues. However, the percentage share of incumbent exchanges in total trading typically shrinks.

Trading in Polish equities has been offered by the London-based venue Turquoise since October 2015 and by CBOE Europe Equities since 5 November 2018.

The volume of trade on both platforms was negligible in recent years. However, alternative trading platforms may grow their share in trading in stocks listed on GPW in the future. Other similar platforms may also offer trade in Polish stocks.

GPW podejmuje aktywne działania w odpowiedzi na działalność konkurencyjnych platform obrotu:

- › improvement of stock market liquidity and order book quality. To support it, GPW has offered promotions to electronic traders (HVP, HVF) as well as programmes for market makers. GPW has added and improved system functionalities which address the needs of those market participants who trade in large volumes;
- › development of colocation services launched in Q1 2016, a key part of the capital market infrastructure which supports the development of electronic liquidity providers and largely improves liquidity of the order book;
- › contract signed in 2023 with a new data centre owned by Equinix. As a result, it is now easier to connect clients who have a relationship with Equinix but are not present at the GPW;
- › GPW runs a number of initiatives aimed at activating individual investors, implemented among others through webinars and training in cooperation with external partners. The inflow and support of this group of GPW investors contributes to an increase in the value of trading, growth of the velocity ratio and strengthening of GPW's position as a regional financial hub;
- › GPW continues the Analytical Coverage Support Programme to improve liquidity in the sector of mWIG40 and sWIG80 companies;
- › the Employee Capital Plans (PPK) programme helps to improve the attractiveness of stock exchange trading on GPW platforms. In March 2023, automatic re-enrolment in the PPK took place for all employees aged 18-55 who have not participated in the programme so far.

Capital Market Development Strategy (SRRK)

On 20 October 2023, during a meeting of the Financial Market Development Council (RRRF), the Representative of the Minister of Finance for the Capital Market Development Strategy summarised the activities undertaken by participants and institutions of the Polish capital market in the implementation of the Strategy. According to the Report on the Implementation of the Capital Market Development Strategy, 65 initiatives were fully implemented, 18 initiatives were partially implemented, and 7 initiatives were not implemented.

The Strategy is a detailed and comprehensive plan for the development of the Polish capital market. Its overarching objective is to significantly increase the competitiveness of the Polish capital market. The report of the Representative of the Minister of Finance for the Capital Market Development Strategy is available on the website: [Rok 2023 - Ministerstwo Finansów - Portal Gov.pl \(www.gov.pl\)](https://www.gov.pl)

Open-ended Pension Funds (OFE)

Open-ended Pension Funds are a voluntary element of the second pillar of the pension system in Poland. Individuals who remained OFE members after the 2014 reform transfer 2.92% of their salary (part of their pension contribution) to the funds. Ten years before reaching retirement age, savings begin to be transferred from OFEs to the Social Security Institution (ZUS) for later payment in the form of a pension. In view of the value of assets and the high allocation of funds in equities (ban on investments in Treasury bonds), OFEs remain important for the condition of the capital market in Poland.

According to PFSA, OFEs had 14.554 million members as at 31 December 2023 and their total assets under management stood at PLN 206.6 billion. Total allocation on the stock market was 91.4% of assets under management as at 31 December 2023, including 82.1% in Polish shares and 9.4% in foreign shares. The total value of shares in OFE portfolios stood at PLN 188.9 billion as at 31 December 2023, including PLN 169.5 billion in Polish shares and PLN 19.3 billion in foreign shares. Allocation on the debt market was 6.3%. The value of debt instruments stood at PLN 13.1 billion. OFEs' total cash stood at PLN 4.6 billion as at 31 December 2023. The share of cash in assets under management was 2.2%.

Table 15 OFE assets as at 31 December 2023 and as at 31 December 2022, allocation by asset class

	31.12.2023		31.12.2022	
	PLN mn	% assets	PLN mn	% assets
Shares	188 874.92	91.42%	138 308.04	88.87%
- domestic	169 548.79	82.07%	123 427.40	79.31%
- foreign	19 326.12	9.35%	14 880.64	9.56%
Bonds	13 117.65	6.35%	12 144.47	7.80%
- local government bonds(PL)	2 923.16	1.41%	2 083.28	1.34%
- covered bonds (PL)	1 307.41	0.63%	2 008.55	1.29%
- corporate and other bonds (PL)	8 899.27	4.31%	8 502.64	5.17%

Cash	4 589.96	2.22%	5 146.81	3.31%
Total assets under management	206 594.72	100%	155 634.48	100%
- domestic	186 161.11	90.11%	139 947.64	89.92%
- foreign	20 433.61	9.89%	15 686.84	10.08%

Source: OFE, PFSA

Employee Capital Plans (PPK)

Employee Capital Plans (PPK) are a universal voluntary long-term employee savings scheme developed by the government in partnership with the Polish Development Fund (PFR), employer organisations and trade unions. PPK assets increasingly bolster the long-term potential of the Polish capital market. The PPK Act of 4 October 2018 took effect on 1 January 2019.

PPK automatically cover all employees aged 18 to 54 years (employees older than 55 years independently file the membership application). The employer selects a financial institution to manage the PPK. The PPK manager opens personal accounts for employees to invest savings (personal PPK accounts). Each employee may decide to leave the PPK scheme

In March 2023, automatic re-enrolment took place of all employed persons aged 18-54 who did not participate in the PPK, resulting in a sharp increase in the number of programme participants. Subsequent enrolment will take place every four years.

Under PPK, employees and employers pay two contributions to private accounts: a mandatory basic contribution and a voluntary additional contribution. PPK participants are eligible to use special subsidies from the Labour Fund. The savings are invested by institutions specified in the law:

- › pension funds,
- › investment funds,
- › employee pension funds,
- › insurers.

Institutions which operate PPKs are required to set up at least 5 target-date funds. The investment portfolio of each fund should be designed in such a way as to gradually reduce investment risk depending on PPK members' age.

Table 16 Structure of PPK target-date funds

Time to 60 years of age	Equity (e.g. shares)	Debt (e.g. bonds)
>20 years	60-80%	20-40%
11-20 years	40-70%	30-60%
6-10 years	25-50%	50-75%
1-5 years	10-30%	70-90%
After 60 years of age	<15%	>85%

Source: Polish Ministry of Finance

The Act specifies the allowed types of financial instruments acceptable as investments. Equity investments include:

- › at least 40% - WIG20 stocks;
- › no more than 20% - mWIG40 stocks;
- › no more than 10% - other listed stocks;
- › at least 20% - foreign investments.

Debt instruments eligible to invest include:

- › at least 70%: securities issued or guaranteed by the State Treasury, NBP, local governments, public authorities or central banks of Member States, the European Union, the European Central Bank, the European Investment Bank or other securities guaranteed by organisations rated at a grade recognised by the European Central Bank;
- › deposits with maturities up to 180 days with domestic banks or credit institutions rated at a grade recognised by the European Central Bank;
- › no more than 30% in other assets, including no more than 10% in instruments not rated at a grade recognised by the European Central Bank.

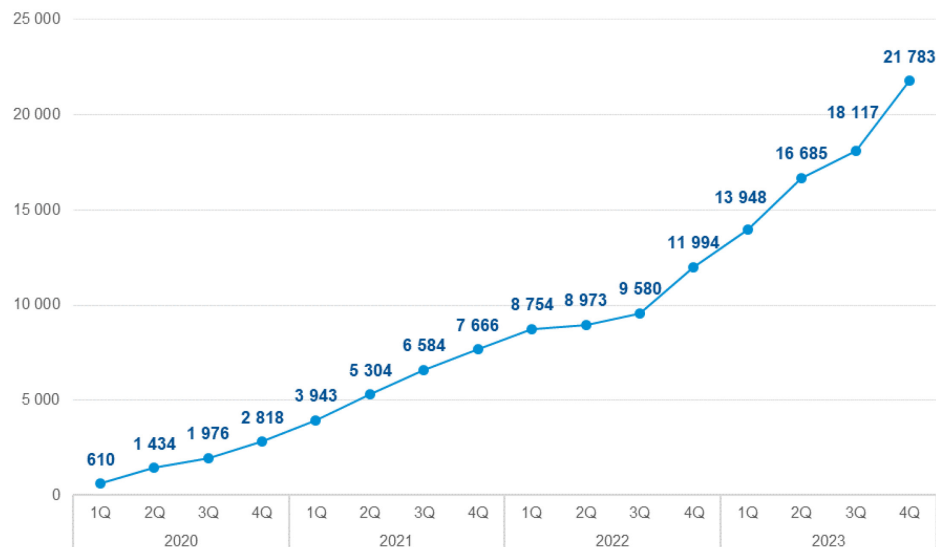
The Act provides that the fees of financial institutions managing funds are up to 0.5% of the net asset value of funds plus a success fee up to 0.1% of the net asset value.

Employers are not obliged to establish a PPK if they operate Employee Pension Schemes (PPE), a voluntary scheme of similar nature. PPE were introduced on 1 January 1999 as the first voluntary pension saving scheme organised by Polish employers.

PPK assets

As at 31 December 2023, the PPK assets amounted to PLN 21.8 billion and the participation rate was 45.6% (according to PFR data, i.e. including companies with at least one PPK participant). The participation rate was 71.3% in the largest companies with more than 250 employees. PKO TFI remained the leader of the PPK market by the value of assets, followed by TFI PZU and Nationale-Nederlanden PTE.

Figure 57 PPK total assets [PLN million]



Source: PFSA

Table 17 PPK assets – institutions, as at 31 December 2023 and as at 31 December 2022 [PLN million]

	Net asset value (PLN mn)	
	31.12.2023	31.12.2022
PKO TFI	6 803	3 812
TFI PZU	4 612	2 447
Nationale-Nederlanden PTE	2 287	1 335
TFI Allianz Polska	1 958	1 054
Goldman Sachs TFI	1 437	776
Pekao TFI	1 155	596
Uniq TFI	764	424
Investors TFI	518	290
Generali Investments TFI	396	212
Santander TFI	356	192
Pocztylion-Arka PTE	315	192
Esaliens TFI	300	171
BNP Paribas TFI	295	170
Compensa TUnŻ	219	125
Millennium TFI	168	93
PFR TFI	103	56
Skarbiec TFI	97	49
TOTAL	21 783	11 994

Source: PFSA

Poland's presence in MSCI EM Index, FTSE Developed ex. US Index and STOXX Europe 600

Companies listed on GPW participate in global indices published by index providers and administrators. Any rebalancing of global index portfolios directly boosts or dampens the interest of international investors in selected GPW-listed stocks and consequently impacts the value of turnover and the valuation of the stocks. Many international institutional investors follow investment policies which directly or indirectly refer to indices from such providers as MSCI, FTSE Russell and STOXX. FTSE Russell and Stoxx promoted Poland in 2018 from emerging markets to developed markets. However, a majority of funds (measured by assets under management) rely on MSCI indices where GPW remains an emerging market.

- › Poland's participation in the MSCI Emerging Markets Index increased to 0.98% at the end of 2022 vs. 0.71% at the end of 2021. The index included 15 companies: PKO BP, Orlen, PZU, Bank Pekao, Dino Polska, LPP, KGHM, Santander Bank Polska, Allergo, mBank, PGE, CD Projekt, Budimex, Pepco, Cyfrowy Polsat.
- › Poland's participation in the FTSE Developed ex US Index increased to 0.29% at the end of 2022 vs. 0.22% at the end of 2021.
- › Ten Polish companies (PKO BP, Orlen, PZU, Pekao, Dino Polska, KGHM, LPP, Santander Bank Polska, Allegro, CD Projekt) participated in Stoxx Europe 600 as at 31 December 2023. The share of these companies in the index portfolio totalled 0.52% as at 31 December 2023 vs. 0.28% as at 31 December 2021. STOXX Europe 600 is a large, mid and small-cap index covering 17 European developed economies: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and UK.

Any announced rebalancing of the index portfolios may impact the Polish stock market in 2024.

Financial and commodity market regulations

Amendment of the Directive of the European Parliament and of the Council on markets in financial instruments (MiFID II) and the Regulation of the European Parliament and of the Council on markets in financial instruments (MiFIR)

On 25 November 2021, the European Commission published a draft amendment of MiFID II and MiFIR. The draft includes changes, among others, in the area of pre-trade and post-trade transparency: modification of the waiver (waiver) for the reference price trading venue, modification of the Double Volume Cap (DVC), modification of the rules of publication by systematic internalisers. In connection with Brexit, a change proposed to the rules of the share trading obligation (STO) clarifies that shares with an ISIN code from countries of the European Economic Area (EEA) are covered by the obligation. The draft regulation also changes the rules regarding the publication of market data. The draft introduces mandatory reporting of market data by execution venues (including regulated markets and ATS) to a consolidated tape provider (CTP), which will collect such information from all EU execution venues, consolidate it and deliver it to market data users. The draft also provides that trading venues whose annual share turnover volume represents no more than 1% of the annual share turnover volume of the entire Union will not be required to report their market data to the CTP. In addition, such a trading venue must comply with at least one of the following conditions: (a) it does not have close links or is not part of a group with a trading venue whose annual share turnover volume represents more than 1% of the annual share turnover volume in the whole Union, or (b) more than 85% of the annual share turnover volume on that trading venue consists of shares that were originally admitted to trading on that trading venue. A trading venue meeting the above conditions for exemption may choose to report data to the CTP. The proposed amendments will significantly change the existing model for the distribution of market data by trading venues.

In 2024, work will begin on delegated regulations to the revised MiFID II and MiFIR, which will address among others the detailed CTP rules and detailed regulation of the reasonable commercial basis for market data distribution.

Act of 16 August 2023 amending certain acts in connection with the development of the financial market and protection of investors in the financial market

The Act of 16 August 2023 amending certain acts in connection with the development of the financial market and protection of investors in the financial market, which entered into force on 29 September 2023, amended several legal acts, including the fundamental capital market acts.

In the Act on Trading in Financial Instruments, the rules on outsourcing for investment firms and companies operating a regulated market were liberalised and the group of entities to which a company operating a regulated market may provide services was extended. Article 19(1)(6) explicitly provides for the possibility of listing foreign exchange-traded funds on the ATS and not, as was previously the case, only on the regulated market. The deadline for the management board of the company operating the regulated market to adopt a resolution on the admission of financial instruments to trading on that market was shortened from the previous 14 to 7 days. The Act introduced provisions resulting in significant changes to the scope of activities that a bank with its registered office in the Republic of Poland may perform without holding the relevant authorisation.

In the Act on Public Offering and the Conditions for Introducing Financial Instruments to Organised Trading and on Public Companies, the requirement for the PFSA to approve an information memorandum for certain public offerings of securities was waived. The Act provides that the admission to trading on the regulated market of investment certificates issued by a portfolio fund (ETF) will require the publication of an information prospectus of that fund rather than, as was previously the case, the issue prospectus. In addition, the company operating the regulated market which organises the ATS (the Exchange)

was granted the right to request information and documents from auditors for the purpose of exercising supervision over compliance with disclosure obligations under MAR by companies whose shares are listed in the ATS, while minority shareholders of such companies were granted the right to request the buy-out of shares excluded from trading, which makes the position of shareholders of companies listed on the ATS equal in rights with shareholders of companies listed on the regulated market. The fees under Article 94a of the Act paid by issuers to the PFSA for supervision were modified. In the case of issuers of shares listed on the regulated market, the upper limit of such fees at the PLN equivalent of EUR 30,000 was abolished, and a fixed fee at the PLN equivalent of EUR 1,500 was introduced for issuers of shares listed in the ATS.

In the Bond Act, transition bonds were introduced. Transition bonds are defined as bonds whose purpose is to finance a new investment conducive to accelerating the sustainable economic development of the country. The maturity of the bonds should be no less than five years from the date of issue and the issuer is required to invest at least 95% of the funds raised within 36 months from the date of issue. Issuers are required to apply for the admission of bonds to trading on a regulated market or ATS.

Regulation of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU (DLT Pilot Regime)

As of 23 March 2023, the DLT Pilot Regime applies in all EU Member States. It aims to support the development of secondary markets in tokenised financial instruments, promote DLT applications in secondary trade and post-trade clearing, and provide market participants and supervisory authorities with experience regarding new opportunities and threats relating to DLT.

The DLT Pilot Regime introduces three new categories of entities (DLT infrastructures): DLT MTF (DLT-based multilateral trading facility), DLT SS (DLT-based settlement system), DLT TSS (DLT-based trading and settlement system). In the case of DLT TSS, the Regulation introduces the novel solution of having a single entity perform the functions of both trading in financial instruments and settlement of transactions. DLT infrastructures will be able to perform a classic capital market function in infrastructures based on distributed ledger technology, with exemptions from the MIFID, MIFIR and CSDR requirements. The exemptions relate to the requirements that appear to be the most difficult to meet using distributed ledger technology solutions.

To be granted the DLT market infrastructure status, entities need to be authorised by the local supervisory authority. The Regulation defines the principles of granting and withdrawing authorisations; granting, modifying and withdrawing related exemptions; the operation of DLT market infrastructure operators; supervision over DLT market infrastructure operators; as well as co-operation between DLT market infrastructure operators, competent authorities and ESMA.

DLT infrastructures will be allowed to provide their services under the DLT Pilot Regime for a maximum period of 6 years. The limitation also applies to the catalogue of financial instruments that can be registered and traded on the DLT infrastructure, i.e., the pilot applies to shares, bonds and units in collective investment undertakings. In addition, the total market value of all DLT-operated financial instruments admitted to trading on a DLT-based market infrastructure or registered on a DLT-based market infrastructure may not exceed EUR 6 billion.

Effective as of 29 September 2023, the Act of 16 August 2023 amending certain acts in connection with ensuring the development of the financial market and the protection of investors in the financial market introduced into the Polish legal order provisions ensuring the application of the DLT Pilot Regime, which allows infrastructures, including the Exchange, investment firms, as well as newly established entities, to participate in organising trading in certain tokenised securities.

Regulation (EU) 2022/2554 of the European Parliament and of the Council of 14 December 2022 on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014, (EU) No 909/2014 and (EU) 2016/1011 (DORA)

DORA was published in the Official Journal of the European Union on 14 December 2022. As from the date of application, i.e. 17 January 2025, DORA will become an important element of the regulatory regime for cyber-security in the financial market. DORA is expected to enhance the digital operational resilience of financial entities (including GPW) and regulate the provision of ICT (information and communication technology) services in the EU financial market. DORA addresses the following issues: ICT risk management, serious ICT incident reporting by financial entities, digital operational resilience testing, risk management of ICT service providers and the creation of a framework for the control and supervision by national and EU supervisory authorities, including supervision of key ICT service providers and the supply chain. Financial entities will be required to analyse their ICT strategies, systems and processes to identify areas that need to be adapted to the new regulations.

DORA mandates the European Commission to adopt a number of second-level regulations, with the majority of the drafts to be prepared by European supervisory authorities in the form of RTS (regulatory technical standards) and ITS (implementing technical standards). RTS and ITS are expected to be adopted in the first half of 2024.

Listing Act

On 7 December 2022, as part of its proposal for amendments to the Listing Act regulatory package, the European Commission presented a draft Regulation of the European Parliament and of the Council amending Regulations (EU) No. 2017/1129, No. 596/2014 and No. 600/2014 make public capital markets in the Union more attractive to companies and to facilitate access

to capital for small and medium-sized enterprises, a draft Directive of the European Parliament and of the Council amending Directive 2014/65/EU to make public capital markets in the Union more attractive to companies and to facilitate access to capital for small and medium-sized enterprises and repealing Directive 2001/34/EC, and a draft Directive of the European Parliament and of the Council on multiple-vote share structures of companies that seek admission to trading of their shares on an SME growth market.

The draft Regulation contains a number of amendments to the Prospectus Regulation, including the expansion of the catalogue of cases subject to the prospectus exemption, an increase of the quantitative thresholds for cases subject to the prospectus exemption, the replacement of the simplified disclosure regime for secondary offerings with a new document, the EU Follow-on Prospectus. The changes to the MAR relate to a number of areas, including: the scope of published insider information, delay of the publication of information, the maintenance of insider lists, insider transactions.

The draft Directive provides for reorganisation of the registration of ATS segments as SME growth markets, introduces changes to investment analyses, in particular those paid for by the issuer, changes to the conditions for the admission of shares to trading on a regulated market regarding, inter alia, the required capitalisation and the free float. The draft also provides for the repeal of Directive 2001/34/EC of 28 May 2001 on the admission of securities to official stock exchange listing and on information to be published on those securities.

The draft Directive on multiple-vote share structures provides for the introduction of the possibility to list shares of companies that have shares with different numbers of votes. This regulation will have to be introduced by Member States on a mandatory basis for SME growth markets (SME GM). What is under discussion is the inclusion of other trading venues, i.e. regulated markets and ATSS other than SME GMs, within the scope of the directive. The draft sets out general guidelines for national regulation.

Shield 4.0 (Act of 19 June 2020 on subsidies for interest on bank loans granted to companies affected by COVID-19 and simplified creditor restructuring approval procedures relating to COVID-19)

Shield 4.0 introduced among others amendments to the Act on control of certain investments. The new terms of investment are in force since 24 July 2020. The regulations are temporary and expire after 60 months (they were originally to run for 24 months, but were extended to 60 months in July 2022). Their objective is to protect against hostile foreign takeovers those Polish companies operating in sectors essential to the economy which are hit by the COVID-19 pandemic. In July 2022, a criterion was added regarding an international situation that distorts the market or competition. The regulations define among others the terms and conditions of control of investments by foreign investors including the obligation to notify the President of the Office of Competition and Consumer Protection (UOKiK) as well as sanctions for non-compliance. According to the Shield 4.0 regulations, protection is available among others to public companies irrespective of the type of business and of the business sector. The eligibility conditions include having establishment in Poland and generating revenue over EUR 10 million on sales and services in Poland in any of the two financial years preceding the notification.

The UOKiK notification is required for transactions resulting in acquisition, gaining a significant interest, or becoming the parent entity by entities established or domiciled (natural persons) outside the European Union, the European Economic Area (EEA) and the Organisation for Economic Co-operation and Development (OECD). According to the Shield 4.0 regulations, the UOKiK notification is required for transactions resulting in acquisition of or gaining a significant equity interest in a protected entity (being able to influence the activity of the protected entity by holding at least 20% of the total vote, equity or profit sharing) or becoming its parent entity.

Following the control procedure, the competent authority may refuse to approve the proposed transaction, and its decision may be appealed in administrative court. Investors who fail to give a notification of becoming the parent entity of or gaining a significant interest in a protected entity have criminal liability subject to a fine up to PLN 50 million, deprivation of liberty from 6 months to 5 years, or both.

Benchmarks Regulation and the financial market

Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 took effect on 1 January 2018.

To align with the requirements, GPW and BondSpot transferred the responsibility for the provision of WIG family indices and TBSP.Index to GPW Benchmark as of 1 December 2019 (WIG-ESG Index and CEEplus Index as of 1 January 2020) following the authorisation issued to GPW Benchmark by the Polish Financial Supervision Authority on 27 November 2019 to operate as an administrator of regulated data benchmarks and critical and non-critical non-interest-rate benchmarks.

Regarding the Reference Rates WIBID and WIBOR, GPW Benchmark aligned the Reference Rates documentation with the Regulation (the new documentation took effect on 4 February 2020) and submitted an application to the Polish Financial Supervision Authority on 6 December 2019 requesting authorisation to operate as an administrator of interest-rate benchmarks, including the critical benchmark WIBOR.

The Polish Financial Supervision Authority on 16 December 2020 unanimously granted authorisation for GPW Benchmark SA to operate as an administrator of interest rate benchmarks, including critical benchmarks. This means that the provision of such benchmarks by GPW Benchmark SA is subject to public supervision, which includes a cyclical assessment of the ability

of the critical benchmark to measure the relevant market or economic reality. PFSA's authorisation for GPW Benchmark implies that the financial supervisory authority recognises the process of determining the WIBOR benchmark as compliant with the requirements imposed by EU law.

The Regulation provides for administrative penalties that may be imposed on legal entities or individuals for infringements of the Regulation. This will generate financial risks for the Group's business.

On 1 December 2022, GPW Benchmark commenced the provision of the WIRON Interest Rate Index and the Compound Indices: WIRON Compound Rate 1M, 3M and 6M, and the WIRON Single Base Index. The WIRON Index was identified by the Steering Committee of the Benchmark Reform National Working Group (NGR SC) as an alternative interest rate benchmark to WIBOR. They can be used as a benchmark by supervised entities in financial contracts, financial instruments and investment funds as of 2 December 2022. On 13 February 2023, PFSA announced in a communication on its website that WIRON had become an interest rate benchmark.

On 29 June 2023, PFSA issued a communication to the effect that the WIBOR critical interest rate benchmark has the capacity to measure the market and economic realities it was established to measure.

On 5 July 2023, the Administrator published a communication presenting a Summary of the Cyclical Review of the WIBID and WIBOR Reference Rate Method, including the Waterfall Method, taking into account the mandatory assessment of the ability of the benchmark to measure the market or economic reality.

Act on Pan-European Personal Pension Product

On 26 September 2023, the Act on Pan-European Personal Pension Product entered into force, introducing amendments to the Banking Law of 29 August 1997 and the Act of 11 May 2017 on Statutory Auditors, Audit Firms and Public Supervision aimed at improving the quality and consistency of the audit processes referred to in Annexes I and II to Regulation 2016/1011 (Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016, on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (Official Journal EU L 171 of 29.06.2016, p. 1, as amended)).

In the Act on Statutory Auditors, Audit Firms and Public Supervision of 11 May 2017, Article 136(2)(10) was added, introducing the external audit services referred to in point 4 or 12 of Annex I or point 18 of Annex II to Regulation 2016/1011. As a consequence of the addition of Article 136(2)(10) in the Act on Statutory Auditors, Article 105(1)(2)(i) of the Banking Law of 29 August 1997 was amended by adding a provision allowing access to the bank secrecy for the auditor in the performance of external audits referred to in point 4 or 12 of Annex I or point 18 of Annex II to Regulation 2016/1011.

Commodity Exchanges Act

On 13 July 2023, the Sejm passed the Act amending certain acts in connection with ensuring the development of the financial market and the protection of investors in the financial market. The Act amends, among others, the Act on Commodity Exchanges including the deletion of the requirement for entities wishing to operate directly on an exchange to obtain a permit to maintain accounts or registers for exchange commodities. The Act was promulgated in the Journal of Laws and comes into force on 29 September 2023.

Renewable Energy Sources Act

The Renewable Energy Sources (RES) Act took effect on 1 July 2016. It implements a new support scheme for the production of energy from renewable energy sources based on auctions. Auctions are held by the Energy Regulatory Authority (URE). Auction winners who offer the lowest price for energy generation receive support for a period of 15 years. The existing system of certificates of origin is being phased out. All producers who generated electricity before 30 June 2016 are still eligible to receive certificates of origin. Generation of energy after 1 July 2016 allows producers to participate in auctions but they are not eligible to apply for certificates of origin. The Renewable Energy Sources Act was amended in 2017. The amendment changed the rules of calculation of the unit substitution fee, replacing a fixed fee of 300.03 PLN/MWh with a fee linked to an index based on EOB transactions in the previous calendar year. The amendment impacted the prices of non-EOB transactions indexed to the unit substitution fee. The potential impact of amendments to RES regulations on the business of TGE is discussed in section 2.7. Risks and threats. Another amendment of the RES Act took effect on 9 August 2019. Its provisions do not affect the operation of TGE. It clarifies auction regulations and refers to the rights of prosumers (private producers of electricity).

Several amendments to the Act came into force in 2021, in particular the amendment of 17 September 2021 aimed at reducing concession obligations for entrepreneurs carrying out their operations within small systems, as well as the Act on the Promotion of Electricity in Offshore Wind Farms of 17 December 2020.

Several amendments to the Act come into force in 2022, including a reduction in licensing obligations for entrepreneurs operating small systems. This will be done by raising the upper threshold of the total installed electrical capacity or the cogeneration heat output for renewable energy source systems.

The Act amending the Act on Renewable Energy Sources and certain other Acts was adopted on 17 August 2023. In particular, the Act includes proposed provisions implementing into the Polish legal order Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (Official Journal L 328 of 21.12.2018, p. 82, as amended) (REDII). From TGE's perspective, the provisions on guarantees of origin

are important, which among others extend the possibility of issuing a guarantee of origin to cover such types and carriers of energy as biomethane, heat or cold, renewable hydrogen, biogas or agricultural biogas; amend the rules for issuing a guarantee of origin and recognising a guarantee of origin issued in another Member State; add rules for the participation of the President of the Energy Regulatory Authority in the AIB; and amend the rules for the redemption of guarantees of origin; the Act was promulgated in the Journal of Laws; with regard to the changes to the guarantees of origin, it entered into force on 1 January 2024.

Regulation of the Minister of Climate and the Environment of 13 July 2022 on changes to the volume share of the sum of electricity resulting from redeemed certificates of origin confirming the generation of electricity from renewable energy sources in 2023 (green certificates), Regulation of the Minister of Climate and the Environment of 29 August 2023 on changes to the volume share of the sum of electricity resulting from redeemed certificates of origin confirming the generation of electricity from renewable energy sources in 2024

The Regulation of the Minister of Climate and the Environment of 13 July 2022 on changes to the volume share of the sum of electricity resulting from redeemed certificates of origin confirming the generation of electricity from renewable energy sources in 2023 (green certificates) entered into force on 11 August 2022. According to the Regulation, the share referred to in Article 59 of the Renewable Energy Sources Act: (1) point 1 of the Renewable Energy Sources Act - is 12% in 2023 (previously 18.5%); (2) point 2 of the Renewable Energy Sources Act - is 0.5% in 2023 (previously - 0.5%).

The Regulation of the Minister of Climate and the Environment of 29 August 2023 on changes to the volume share of the sum of electricity resulting from redeemed certificates of origin confirming the generation of electricity from renewable energy sources in 2024 set the share at 5% and 0.5%.

The change will result in a decrease in in Register of Property Rights trading volumes and redemption volumes. As a consequence, the revenue from the Register of Certificates of Origin will fall. The amount of the decrease is difficult to estimate as it depends on the activities and business decisions of customers.

Energy Efficiency Act

The Energy Efficiency Act took effect on 1 October 2016. It modifies the white certificate system. Previously, the President of the Energy Regulatory Authority opened tenders for white certificates. White certificates of origin were granted to tender winners. The new Act eliminated tenders: certificates of origin of energy efficiency are now issued by the President of the Energy Regulatory Authority on the same terms as other types of certificates of origin. Furthermore, the new Act imposes limits on the performance of the obligation to acquire white certificates by the payment of a substitution fee as follows: 30% of the obligation for 2016, 20% of the obligation for 2017, 10% of the obligation for 2018. The new regulations provide for a gradual increase of the unit substitution fee (the unit substitution fee is 1,000 PLN/toe for 2016, 1,500 PLN/toe for 2017, and it is increased by 5% of last year's unit substitution fee for 2018 and each subsequent year). Those market players which previously met the obligation by paying the substitution fee exclusively started to operate on TGE. Under the new Act, the obligation may be fulfilled by paying a substitution fee above the caps only if the market player demonstrates that it has placed buy orders for property rights on the exchange but was unable to buy property rights in the absence of trade or because the price of property rights exceeded the substitution fee. The new solutions will boost investments in energy efficiency and improve liquidity of trade in white certificates on TGE.

An amendment of the Energy Efficiency Act which took effect on 29 June 2019 extends the validity of white certificates issued by the President of the Energy Regulatory Authority by another two years (until 30 June 2021). As a result, obliged entities may fulfil the "energy efficiency" obligation by means of PMEF for another two years: 2019 and 2020. The decision has a positive impact on trade in and cancellations of white certificates and, as a result, on TGE's revenue from white certificates.

CACM Regulation

TGE as NEMO in the market competition model: The Third Energy Package of September 2009 is a key element of EU legislation governing the European electricity markets. Under these regulations and the 2011 decisions of the European Council, the governments of the EU Member States made commitments to jointly develop a spot electricity market. The CACM Regulation published in July 2015 specifies the obligations of exchanges and operators and the powers of regulators. For TGE, its authorisation as NEMO on 2 December 2015 triggered focused involvement in international intra-day and day-ahead market projects. With the publication of the CACM Regulation, TGE is subject to specific requirements to implement the new market solutions according to a predefined timeline. As a NEMO on the spot electricity market and an authorised commodity exchange, TGE is supervised by the Polish Financial Supervision Authority. On the other hand, as a NEMO, TGE and IRGIT are supervised by the Energy Regulatory Authority, which may revoke the authorisation. The CACM Regulation required NEMOs to prepare a range of spot market documents and submit them for approval of regulators. The Interim NEMO Committee (INC) was appointed under the Interim NEMO Co-operation Agreement (INCA) in 2017. The first and most fundamental document to be prepared jointly was the Market Coupling Operations Plan (MCO Plan). The MCO Plan, which was approved by the Regulators' Forum with the participation of the Energy Regulatory Authority in June 2017, defined the operating rules of single electricity markets: SDAC (Single Day Ahead Coupling) under the PCR model and SIDC (Single Intra-Day Coupling) under the XBID model. The INC platform has developed other documents for the day-ahead and intra-day markets including the specifications and requirements for algorithms, minimum and maximum prices, commercial products, and operating procedures. TGE prepared the Polish version of the documents and submitted them to the Energy Regulatory Authority.

An amendment to the CACM Regulation is planned; it has been suspended for the moment due to the prioritisation by the European Commission of other legislative actions related to the EU energy crisis. In particular, ACER's planned amendments include: the establishment of a new central entity with the participation of transmission system operators (TSO) responsible for settlements between the parties and holding broad powers; these plans are contested by NEMOs and TSOs; changes to the scope of cost reimbursements.

Greenhouse Gas Emission Allowances Trading Act

Effective as of September 2015, it enables TGE to grow a new business segment by becoming the national platform authorised to organise CO₂ primary market auctions (currently Poland sells them on the German exchange EEX). TGE received the conditional approval of the Polish Financial Supervision Authority to operate a CO₂ allowances platform on 20 December 2016. The CO₂ licence renewal procedure is now pending before PFSA. In the next step, TGE will participate in a tender for the operation of an auction platform for Polish emission allowances opened by the Ministry of Climate. As the last step, TGE needs to be entered into the list of auction platforms in Annex III to Commission Regulation 1031/2010. Operation of an auction platform will help to develop the market operated by TGE which offers trade in emission allowances and to improve liquidity of the market. With the launch of the auction platform, financial instruments on delivery of emission allowances will be introduced into trading.

Commission Regulation (EU) No 1031/2010 of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community (as amended)

It governs among others the terms and conditions of auctions on the CO₂ auction platform, reflected in TGE's exchange regulations concerning the operation of the auction platform (including the Detailed Terms and Conditions of CO₂ Auctions).

Energy Law of 10 April 1997

The consolidated text incorporating amendments under the Capacity Market Act of 8 December 2017 (Journal of Laws of 2018, item 9) and the Act on Promotion of Electricity from High-efficiency Cogeneration of 14 December 2018 (Journal of Laws of 2019, item 42) requires energy companies trading in gaseous fuels to sell, inter alia through commodity exchanges, no less than 55% of natural gas.

An Act of 19 November 2019 amending the Renewable Energy Sources Act and certain other Acts modified the provisions of the Energy Law (effective as of 14 August 2019). The term "cancellation" of guarantees of origin was replaced by "redemption". The end customer may be notified of the origin of electricity for which a guarantee of origin is issued only after the guarantee is redeemed and the operator of the register of guarantees of origin issues a confirmation of the redemption to the holder of the guarantee within 10 business days after its request. According to Article 18 of the Act, guarantees of origin issued before the effective date of the Act remain valid until the end of their term.

Several amendments to the Energy Law came into force in 2020 (on 15 July and 19 September, among others), concerning, inter alia, the implementation of the directive on the internal market for natural gas, the system of support for entrepreneurs in connection with the spread of the SARS-CoV-2 virus (crisis shields).

In addition, a significant amendment to the Energy Law was enacted on 20 May 2021. Among other things, it enables the implementation of the provisions of Regulation (EU) 2015/1222 of the European Parliament and of the Council of 24 July 2015 establishing a guideline on capacity allocation and congestion management, including general rules for voting on decisions on applications prepared by nominated electricity market operators. The law also creates a legal basis for the recuperation of electricity returned to the grid following vehicle braking and the collection of electricity by a charging point from an electric vehicle; and it introduces an obligation for the storage system operator to prepare instructions for the operation and use of the storage facility.

The Act amending the Energy Law and certain other acts was adopted on 28 July 2023. Among others, the Act introduces a provision in the Energy Law providing that a commodity exchange shall post on its website information on prices and tariffs in the day-ahead and intraday market at intervals equal to the imbalance settlement period within the meaning of Article 2(10) of Regulation 2017/2195 and shall make this information available, immediately after its determination, in electronic form to sellers of electricity. Prices shall be expressed in PLN per MWh of electricity, to the nearest PLN 0.01. The above provision will enter into force on 24 August 2024.

Act on Trading in Financial Instruments of 29 July 2005 (Journal of Laws No. 183, item 1538, as amended)

On 23 February 2015, the Minister of Finance issued an administrative decision authorising TGE to operate an exchange under the Act and approved the Rules of Trading on the Financial Instruments Market issued under the Resolution of the Supervisory Board of 10 October 2014. The current consolidated text of the Financial Instrument Rules was published by the TGE Management Board on 9 November 2021 following approval by the Polish Financial Supervision Authority on 22 October 2021.

Act of 8 December 2017 on the capacity market (Journal of Laws of 3 January 2018, item 9, as amended)

The Act of 23 July 2021 amending the Capacity Market Act and certain other acts entered into force on 17 August 2021. The Act amends the Act on commodity exchanges by allowing the company operating a commodity exchange to organise a secondary market (capacity market).

Act of 5 August 2022 amending certain laws to strengthen the state's gas security in view of the gas market situation

1) Suspension of the obligation to sell gas on the exchange – in case of a declared state of emergency:

"in Article 49b of the Energy Law, paragraph 6 shall be added as follows: "(6) In the event of the declaration of a state of emergency on the territory of the Republic of Poland in accordance with Article 49a(2) of the Act on Stocks of Crude Oil, Petroleum Products and Natural Gas and the Rules of Procedure in Situations of Threat to the State's Fuel Security and Disturbances on the Oil Market, the implementation of the obligation referred to in paragraph (1) shall be suspended for the duration of the state of emergency."

2) The possibility of changing the level of the obligation to sell gas on the exchange:

"Article 7. The minister responsible for energy may determine for the year 2022 or 2023, by means of a regulation, a lower amount of high-methane natural gas injected into the transmission network than that specified in Article 49b(1) of the Act amended in Article 1, taking into account the need to ensure continuity of supply of gaseous fuels to end users, the importance of gaseous fuel prices for the economy and functioning of the state and equal treatment of market participants."

On 29 September 2022, the Sejm passed a law amending the Energy Law and the Renewable Energy Sources Act. The Act includes provisions abolishing the so-called exchange obligation, i.e. the obligation to sell generated electricity on an institutionalised market (commodity exchange), and tightening the liability for electricity market manipulation. The law entered into force on 6 December 2022.

On 27 October 2022, the Sejm passed the Act on Emergency Measures to Reduce Electricity Prices and Support for Certain Consumers in 2023. The Act provides for a system of energy price freezes for selected categories of consumers and compensation for electricity traders and distributors. In addition, the Act introduces a mechanism to limit the revenues of traders and producers by imposing an obligation to pay a contribution to the fund for the price difference on excess revenue (hereinafter, fund contribution). The level and method of accounting for fund contributions, as presented at this stage, is already impacting the behaviour of exchange market participants. Participants refrain from contracting in the forward market and declare a reduction in their activity in the forward market in 2023. In addition, the obligation to pay fund contribution is likely to have a negative impact on the planned financial revenues of market participants, including potential liquidity problems of market participants. The Act entered into force on 4 November 2022.

On 15 December 2022, the Sejm passed the Act on special protection of certain gas fuel consumers in 2023 in connection with the gas market situation. The Act provides for the continuation in 2023 of the protection of household customers, as well as customers performing important public utility functions, and introduces a financial equivalent for energy companies; the draft provides for, inter alia, a maximum price for gaseous fuels of approximately PLN 200/MWh, freezes the distribution fee rates, and introduces a VAT refund mechanism for the most sensitive gaseous fuel customers using gaseous fuels for heating purposes. The Act provides for TGE's obligation to publish, by 5 January 2023, the volume-weighted average price of transactions concluded in annual contracts on TGE Y-23 in the period from the beginning of quotation of this instrument until the date of entry into force of the Act, i.e., 21 December 2022.

On 21 December 2022, the Minister for Climate and Environment issued a regulation on the volume of high-methane natural gas injected into the transmission network in 2022 and 2023 in accordance with Article 49b(1) of the Act of 10 April 1997 - Energy Law, reducing the level of the obligation to trade in high-methane gas on the exchange to no less than 30% in 2022 and 2023. The regulation entered into force on 24 December 2022. In the absence of legislative changes and a new regulation, the level of the exchange trade obligation will be restored at 55% from 1 January 2024.

Under the Act, on 30 December 2022, the Council of Ministers issued a regulation on the method of determining the amount of the gas price difference fund contribution. As regards the determination of the amount of the contribution, the Regulation refers to the volume-weighted average price of transactions in GAS_BASE_Q-1-23 quarterly contracts concluded on the commodity exchange in the period from the beginning of quotation of this instrument to the date of entry into force of the Regulation. The Regulation entered into force on 31 December 2022.

On 7 December 2023, the Sejm passed the Act amending acts to support consumers of electricity, gaseous fuels and heat and certain other acts. The main changes include the extension of the period of "price freeze" of electricity and gas for end consumers until mid-2024.

The Act amends several acts including the Act on special solutions to protect electricity consumers in 2023 in connection with the situation on the electricity market, the Act on emergency measures to limit the level of electricity prices, including the elimination of the contribution to the Price Difference Payment Fund at the end of 2023 (the obligation applied in the period from 1 December 2022 to 31 December 2023).

With regard to TGE, the Act amends the Act of 15 December 2022 on special protection of certain consumers of gaseous fuels in 2023 in connection with the situation on the gas market by imposing the obligation of TGE to publish the average

prices as components of the formula for the amount of the gas contribution to the Price Difference Payment Fund on its website by 5 January 2024. TGE has complied with the publication obligation.

2.8. Risk management

The operation of the Warsaw Stock Exchange Group is exposed to various risks, both external risks related to the market conditions, the legal and regulatory environment, and internal risks related to the operating activities. In pursuit of its strategic goals, the GPW Group actively manages its risks aiming to mitigate or eliminate their potential adverse effect on the Group's results.

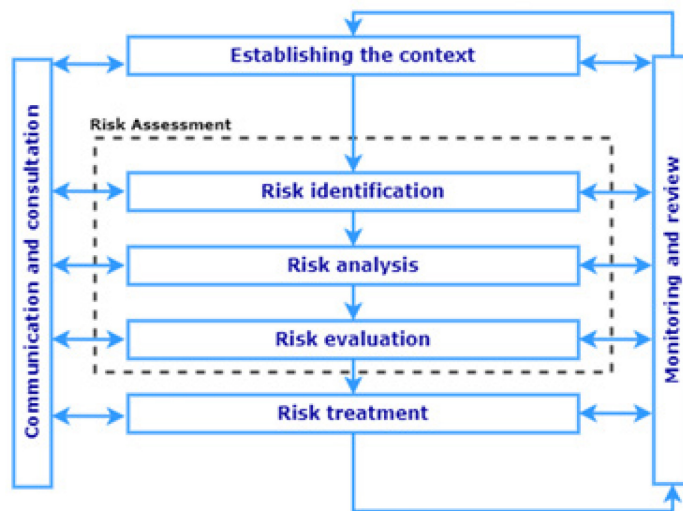
The goal of GPW risk management is to ensure that all material risks of GPW's activity are properly identified, measured, mitigated, reported and controlled and do not pose a threat to the operational stability and continuity of the Company. The risk management system includes a range of processes, organisational solutions, technology tools and documented rules for risk management. The key assumptions and principles of the Company's risk management system derive from the Warsaw Stock Exchange Risk Management Strategy ("Strategy") which is regularly reviewed.

The key role in the risk management system is that of the Exchange Supervisory Board, which approves the Strategy at the request of the Management Board. The Exchange Supervisory Board is supported by the Audit Committee in supervising the GPW risk management system. Risk management is a responsibility of the Exchange Management Board supported by the Risk Management Committee. The Company's Management Board establishes and implements the Strategy and takes the key decisions affecting the risk levels. The effectiveness of the risk management system as well as the adequacy and effectiveness of established controls are reviewed by the Internal Audit Department.

GPW builds an organisational culture which focuses on effective risk management, compliance with procedures, as well as enforcement of the rules of conduct. For this purpose, steps are taken in order to raise GPW employees' awareness of risk management responsibilities at each level of the GPW organisation, including training, risk management information available to employees, and on-going advice.

The GPW risk management process is continuous and includes the following elements:

Chart 7 GPW risk management process



- Defining the context – identifying the internal and external conditions of GPW's business.
- Risk identification – identification of existing and potential sources of risk which impact or may impact GPW.
- Risk analysis – it comprises analyses of internal and external threats to GPW's business aimed at determining GPW's risk profile. Risk analysis measures the risk using risk measures appropriate to the type and materiality of the risk and the availability of data
- Risk evaluation – comparison of the level of risk identified in the analysis with established criteria.
- Risk handling – applying one of the following risk handling options when the level of risk exceeds an acceptable level:
 - ✓ risk reduction,
 - ✓ risk transfer,
 - ✓ risk avoidance,
 - ✓ risk acceptance.

- › Monitoring and review – a step in the risk management process which is concurrent with other steps. It consists in identifying emerging changes, controlling deviations of the risk level from forecasts or benchmarks, and assessing actions taken.
- › Communication and consultation – risk management is based on the best information available. Effective exchange of information between all stakeholders is ensured at each step of the risk management process. GPW's bodies are regularly informed about the results of risk assessment and the risk handling options taken or recommended.

2.8.1. Risks to which the GPW Group is exposed

GPW's risk management strategy covers the following risks:

Non-financial risks:

- › business risk,
- › operational risk,
- › compliance risk,
- › AML/CFT risk,
- › reputation risk,
- › ESG risk.

Financial risks:

- › credit risk,
- › liquidity risk,
- › market risk.

The Company believes that the following risks presented in the sections below are objectively most material; however, the order in which they are presented does not reflect their relative importance or impact for the Company. Additional risks, which are not yet identified or which are considered immaterial at this point, may in the future also have an adverse impact on the activity of the Company, its financial position and results.

2.8.2. Non-financial risks

Business risk

Risks of the geopolitical and economic situation globally

The Group's business depends on conditions on the global financial markets. Economic trends in the global economy, especially in Europe and the USA, as well as the geopolitical situation in neighbouring countries, especially the risk of persistent inflation and the risk of recession, impact investors' perception of risks and their activity on financial and commodity markets, which may result in a shift towards safer investments and, consequently, a reduction of financial instrument trading volumes on GPW. The perception of investment risk will also be affected by the war in Ukraine, which will certainly result in the collapse of the Ukrainian economy and have a negative impact on economic development in Europe, including Poland. Sanctions imposed on Russia will, on the one hand, drive up the prices of energy commodities and, on the other hand, exacerbate problems in the supply chains, which will probably boost inflation. Moreover, there is a risk of retaliatory sanctions by the Russian Federation, which will result in losses for Polish companies with exposure to Russia and Belarus. Given the possible scenarios for further development of the conflict, investment risk aversion towards CEE assets is likely to increase. The perception of investment risk in European economies may also be affected, among others, by an economic slowdown or crisis in Europe or unexpected economic crises in other parts of the world, especially caused by difficulties of some countries in servicing their debt, which may have an adverse impact on the Group's results. Another factor influencing investor sentiment and decisions in the capital markets will be the upcoming US presidential election and the European Parliament elections. These political events may significantly affect expectations for future economic policy, market regulation and international trade relations, which may directly impact investment strategies. In addition, the ongoing conflict in the Gaza Strip, which may lead to destabilisation of global markets and increased volatility, and thus increased risk aversion of international investors, may indirectly lead to the flight of foreign capital from the Polish stock market in order to reduce investment risk exposure. As global investors evaluate geographic regions from the perspective of potential investment, their perception of Poland and GPW may decline in spite of a relatively stronger macroeconomic situation compared to other countries of the region. Less active trading by international investors on the markets operated by the GPW Group could make the markets less attractive to other participants and reduce the amount of charged trading fees, which are the main source of the Group's revenue. Combined with a stable cost level, this could reduce the GPW Group's potential profit.

Risk of the economic situation in Poland

The conditions in the Polish economy, including changes to monetary and fiscal policy, inflationary pressures, changes in Poland's credit rating, availability of funding and availability of alternative investments, impact strongly investors' activity and sentiment on the Polish market and consequently the level of turnover on the markets of the Group. Changes in the state of the Polish economy affect the business and investment activities of issuers whose securities are listed on the markets operated by the Group, including their financial results, which in turn may affect the prices of these securities and, given that sentiment in the primary market is a function of the sentiment in the secondary market, companies' initiatives related to issuing new securities. A significant risk related to the economic situation in Poland is the persistent inflation. The elevated inflation in Poland drives market interest rates. Despite a sharp decline in 2023, inflation in Poland remains significantly higher than average inflation in the European Union. Market interest rates and their volatility may result, among other things, in a decrease in investor activity on the markets operated by the Group and even in investors withdrawing from these markets. It should be noted, however, that this factor may, on the other hand, result in increased investor activity on the markets as investors change their investment strategies and decide to invest in other assets and financial instruments while withdrawing from their current investments, which generates increased turnover in the markets. Another important risk factor is the high volatility of the Polish currency against the US dollar as well as the euro. This is driven among others by global factors. In view of Russia's armed aggression against Ukraine and the ongoing conflict, the reasons for the volatility of the zloty may include the fact that Poland has a geographical proximity to Ukraine. In an effort to minimise currency risk, investors may be rapidly selling off high-risk assets and currencies, in particular the Polish zloty. Changes of investors' activity and sentiment on the Polish market have a direct impact on the GPW Group's trading revenue. In periods of economic instability and under conditions of risk aversion, the Group's revenue may decrease; even combined with a strict cost discipline, this could reduce the GPW Group's profits. In particular, GPW's listing revenue depends directly on the prices of listed instruments. Furthermore, perception of higher risks of investment in Polish assets could restrict access to capital which could be invested on the markets of the GPW Group and could adversely impact prices of assets traded on the markets organised and operated by the Group. Changing FX rates could have an adverse impact on investment decisions and their frequency, which could affect the volume, value and number of transactions on the markets of the GPW Group and consequently also the Group's revenue.

Risk of reduced benefits of the Company's investment in KDPW

The Company holds 33.33% of the equity of Krajowy Depozyt Papierów Wartościowych (KDPW). The KDPW Group (with KDPW as the parent entity and KDPW_CCP as its subsidiary) is responsible for the operation and supervision of the depository, clearing and settlement system for financial instrument trade in Poland, with the exception of trade in Treasury bills where clearing and settlement are operated by the National Bank of Poland. As a minority shareholder, GPW has limited strategic and operational influence over the activity of KDPW. KDPW's business model may be adversely impacted by a range of factors reducing its profits, including price pressures or reduced trading. Lower profits of the KDPW Group including lower dividend paid out by KDPW could have an adverse impact on future profits of the Group, which could in turn have a material adverse impact on the financial position and results of the Group.

Risk of regulatory fees

GPW, TGE, IRGIT, BondSpot, GPW Benchmark and KDPW are required to pay contributions towards the annual budget of the Polish Financial Supervision Authority in respect of capital market supervision. The amount of the fees is defined on the basis of the expected cost of supervision over the Polish capital market within the year and the estimated revenue of the Polish Financial Supervision Authority from market participants. GPW has no control of the amount of the fees and it is unable to anticipate the exact amount to be paid to the Polish Financial Supervision Authority in a given year; consequently, it cannot predict the impact of the fees on the cash flows of the Group. An increase of the fees may have an adverse impact on the activity of the Group, its financial position and results.

Risk of concentration of trade and dependence of a large part of the Group's sales revenue on trade in shares of a limited number of issuers and trade in futures by a limited number of Exchange Members

The Group is exposed to the risk of concentration of trade among a small number of investment firms operating on GPW. In 2023 (according to GPW data), 20 Exchange Members had a share between 0.93% and 19.87% of trade in stocks on the electronic order book on the Main Market. Furthermore, four Exchange Members had a share of more than 10% each in the volume of trade in futures, jointly representing approx. 56% of the volume of trade in futures. The loss of one or more of such Exchange Members could have a material adverse impact on the activity of the Group, its financial position or results.

Furthermore, the revenue from trade in equities and other equity-related securities represented 26.8% of the Group's total sales revenue in 2023. In that period, the top five companies with the biggest share in turnover on GPW generated 44.5% of the average monthly value of turnover in shares on the electronic order book on the Main Market while the top 10 companies generated 68.3%. The concentration of a large part of the Group's revenue in the context of a small number of issuers and securities generates material risks. In particular, if those and other major issuers decide to have their shares delisted, it could have an adverse impact on the activity of the Group, its financial position, results and outlook.

Risk of concentration of trade due to dependence of a large part of the Group's revenue from derivatives on trade in WIG20 futures

Trade in derivatives is one the Group's largest sources of revenue from trading on the financial market and accounted for 11.9% of the Group's sales revenue from trading on the financial market and 4.4% of the Group's total revenue in 2023. The vast majority of the Group's revenue from trade in derivatives was generated by trade in a single product: WIG20 futures, which represents approx. 92% of revenue from derivatives. A large decrease in trade in WIG20 futures could have an adverse impact on the revenue from trade in derivatives, which could have a material adverse impact the activity of the Group, its financial position and results.

Risk of concentration of turnover in the conditional transactions segment of the TBSP market

Due to the specific nature of the activity of the participants in the repo market, there is a risk of concentration of turnover in the conditional transactions segment of the TBSP market (MMF), where exposure of one participant accounting for up to half of total turnover may generate business risks in the segment.

Risk of termination of TBSP's reference market status

In January 2019, Treasury BondSpot Poland was appointed by Treasury Securities Dealers and approved by the Ministry of Finance as the electronic market which is the reference secondary trade platform for Treasury debt. Treasury BondSpot Poland is exposed to the risk that it may lose the status of operator of an electronic market if the Minister of Finance terminates the agreement with BondSpot S.A. (with a termination notice) upon initiating the procedure of selecting a new trading platform at the request of more than 50% of Treasury Securities Dealers.

As a result, the Company has to take continuous measures necessary to ensure that TBSP remains an attractive market, mainly by providing a complete range of solutions typical of a Treasury bond market and by providing services of highest quality on competitive terms. Otherwise, if a new entrant offers more attractive market terms in Poland, BondSpot S.A. could no longer be entitled to operate the reference market, which would significantly affect the activities and financial position of BondSpot S.A. Furthermore, there is no guarantee that the Treasury Securities Dealers competition rules will not change in the future, which could directly or indirectly impact the volume of trade and, consequently, the revenue of the TBSP platform.

Risk of failure to implement the Group's strategy

The strategy of the Group provides among other things for improved attractiveness of GPW for a growing group of market participants, in particular by investing in state-of-the-art technologies, diversification and expansion of GPW's offer by adding new products and services. The achievement of these goals depends on a range of factors which are beyond the Group's control, in particular market conditions and the overall economic and regulatory environment. Furthermore, the identification and implementation of development initiatives takes time and requires higher operating costs and capital expenditures which could impact financial results. GPW is looking for ways to strengthen its business and leverage opportunities of further development. As a result, the Group is in a position to launch new products and grow its presence on other markets. If development solutions prove ineffective, this could adversely impact the goals (including financial goals) under the GPW strategy and the Group's financial results.

Risk of doing business in the sector of exchanges and alternative trading platforms

The global exchange industry is strongly competitive. In the European Union, competition in the trade and post-trade sectors is amplified by legal amendments designed to harmonise legislation of the EU member states and integrate their financial markets. Hence, the Group is exposed to the risk of competition from other exchanges and alternative trading platforms whose presence on the Polish market could adversely impact the activity of GPW. In particular, the GPW Group may face competition of multilateral trading facilities (MTF) and other venues of exchange and OTC trade. The launch of active trade in Polish stocks by MTFs could impact the value of trade in stocks on GPW. TGE faces competition from foreign power exchanges with NEMO (Nominated Electricity Market Operator) status for the Polish price area. An entity which has the NEMO status on one of the markets may conduct the same activity and offer its services to participants on other domestic markets. The activity of GPW's and TGE's competitors on the Polish market could take away part of the trading volumes handled by the platforms operated by the Group and exert additional pressures on the level of transaction fees, adversely impacting the activity of the Group, its financial position and results.

Risk of price competition

The trading cost on large foreign exchanges and MTFs is lower than on GPW, mainly due to the relatively small size of the market in Poland. Consolidations in the global exchange sector and the development of MTFs may increase pressures to reduce fees charged for trade on the financial markets. As a result, GPW clients could exert pressures on GPW to reduce listing and trading fees, affecting GPW's revenue.

Risk of technological changes

The exchange industry has experienced and will continue to experience fast technological progress, evolving requirements and preferences of clients, launches of products and services integrating new technologies, as well as the emergence of new industry standards and practices. To remain competitive, the Group must continue to strengthen and improve its ability to respond to changes combined with the productivity, availability and functionality of automatic trading systems. This will

require the Group to continue attracting and retaining highly qualified staff and to invest heavily in continuous upgrades of its systems. Otherwise, the Group's systems may become less competitive.

As a result of the analysis of the development scenarios of GPW and the GPW Group, initiatives/projects have been launched to change the legacy technology. In September 2019, GPW launched a research and development project to develop an in-house, modular and scalable trading system dedicated to GPW and its subsidiaries as well as foreign exchanges in the region of Central and Eastern Europe (CEE) looking for IT solutions tailored to their needs and specifics of their operations. According to the development strategy of the Polish capital market, for which the Exchange is one of the fundamental institutions, a proprietary IT solution ensures optimisation of costs and risks related to platform operation. The project under implementation requires significant capital expenditures for the Company, which are partly refinanced with funds granted by NCBiR. The is aimed at replacing the currently used system UTP. If the project fails, it may be necessary to revisit the option of replacing the system by purchasing a new trading system from a foreign supplier. The expenses incurred by the Company related to the replacement of the transaction system may have an impact on the Group's operations, financial position and results.

As part of its technological development, GPW is focusing on cloud solutions. An IT transition path has been charted towards an organisation ready for cloud computing both in internal systems and externally oriented services. The transition covers organisational, legal and technological areas, including competence building, in order to comply with the requirements imposed by the regulator on supervised institutions and thus ensure the security of data processed in the cloud at the required level.

In line with technological trends, GPW has initiated a Private Market project to launch a trading platform for the tokenisation of property rights and financial instruments using blockchain.

Risk of provision of Reference Rates WIBID and WIBOR

The Polish Financial Supervision Authority authorised GPW Benchmark S.A. on 16 December 2020 as an administrator of interest-rate benchmarks including critical benchmarks.

The benchmarks provided by GPW Benchmark S.A. include the Warsaw Interbank Offered Rate (WIBOR), entered into the critical benchmark register referred to in Article 20(1) of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (BMR). The authorisation allows GPW Benchmark S.A. to provide other interest-rate benchmarks in accordance with the BMR requirements.

On 25 April 2022, the Prime Minister announced the government's plans to support borrowers, including replacing the WIBOR index with another index. Consequently, the Act on Crowdfunding of Business Projects and Borrower Assistance, which came into force on 29 July 2022, among others provides for a procedure for the introduction of a replacement for the WIBOR index enabling the application of Article 23c of the BMR. On 18 May 2022, GPW Benchmark S.A. started publishing three test indices: WIRON (formerly WIRD), WIRF, WRR. On 27 September 2022, the Steering Committee of the National Working Group on Benchmark Reform approved the Roadmap for the Replacement of the WIBOR and WIBID Benchmarks with WIRON, which is an index provided by GPW Benchmark S.A. The calculation method of the WIRON index is the same as the WIRD index. The Roadmap is a set of necessary actions to ensure the safe and effective transition of the WIBID and WIBOR Reference Rates including, most importantly, the WIBOR Reference Rate to a new risk-free rate (RFR). In October 2023, the Steering Committee of the National Working Group on Benchmark Reform decided to revise the maximum deadlines for the Roadmap which assumes a bottom-up move by the financial sector away from the use of WIBOR towards new financial contracts and financial instruments using a fixed interest rate or new RFR-type benchmarks. The Steering Committee of the National Working Group on Benchmark Reform set the final conversion point at the end of 2027.

One of the main risks from the point of view of the benchmark administrator is the loss of the attribute of "representativeness" in accordance with the BMR, i.e. the inability of benchmarks to accurately and reliably reflect the market or economic realities that the benchmark intends to measure. The Polish Financial Supervision Authority carried out an assessment in this respect and, in its communication of 29 June 2023, concluded that the WIBOR key interest rate benchmark has the capacity to measure the market and economic realities that the benchmark intends to measure. According to the assessment of the Polish Financial Supervision Authority, the WIBOR benchmark responds appropriately to changes in liquidity conditions, changes in central bank rates and economic realities.

As a result of the Administrator's own analyses carried out as part of the Cyclical Review of the WIBID and WIBOR Reference Rate Method, including the Waterfall Method, which indicated the limited scope of application of the WIBOR Reference Rate for Fixing Term 1Y and the position of the Polish Financial Supervision Authority in this regard, the Administrator conducted a public consultation on the safe cessation of the provision of the Reference Rates for Fixing Term 1Y. Responses from those participating in the consultation showed that the optimum date to cease the provision of WIBID and WIBOR Reference Rates for Fixing Term 1Y is 2 January 2025. This change will affect the scope of Input Data contributed by Fixing Participants as Binding Quotes and Model Quotes, the Administrator's documentation and technological changes on the part of the Administrator, Fixing Participants and distributors.

The Administrator has given one year's notice that it will cease to provide Fixing Term 1Y from 2 January 2025 in order to carry out the necessary adjustments to documentation or financial contracts and financial instruments that refer to Fixing Term 1Y by those using it.

Risk of provision of the WIRON index and the WIRON Compound Indices Family

GPW Benchmark, which is an administrator of interest rate benchmarks under an authorisation granted by the Polish Financial Supervision Authority and registered with the European Securities and Markets Authority (ESMA) in accordance with the provisions of the Benchmarks Regulation, published the documentation of the WIRON (Warsaw Interest Rate Overnight) Index and the WIRON Compound Indices Family required by the Regulation on 1 December 2022.

GPW Benchmark thus met the objectives defined as the 2023 milestone in the Roadmap for the Replacement of the WIBOR and WIBID Benchmarks with WIRON: "the WIRON benchmark is fully available and usable in financial products and instruments for entities that are willing to use it." The WIRON is available for use as a benchmark by supervised entities in financial contracts, financial instruments, and investment funds.

In 2022, , in addition to the WIRON index, GPW Benchmark developed and implemented the WIRON Compound Rates for 1M, 3M and 6M, as well as the WIRON Single-Base Index. In 2024, it is planning to start providing the WRR Index as an interest rate index that can act as an alternative benchmark to WIRON, based on O/N repos and buy-sell-backs, as well as the WRR Compound Rate and WRR Single-Base Indices.

The Polish Financial Supervision Authority announced on 13 February 2023 that WIRON had become an interest rate benchmark as WIRON had been introduced as a component of performance fees (variable remuneration) in the first investment funds.

The risks that the administrator identifies include the occurrence of unforeseen circumstances and factors, i.e., external events beyond the administrator's control, which may result in a permanent disruption of the market being measured, i.e., a permanent absence of transactions as inputs for the determination of WIRON and the consequent need to permanently apply the substitute procedure until changes to the method are implemented in agreement with the Interest Rate Benchmarks Oversight Committee and after public consultation. In addition, the administrator identifies potential limitations to the reliability of the measurement of the market that WIRON aims to measure when input data sources are insufficient, inaccurate or unreliable.

On 9 January 2024, the Administrator published information on the impact of the database update on the performance of the WIRON index and the indices of the Compound Indices Family for the period 2021-2023. During the preparation for the external audit of the input data and during the internal audit work of the Data Contributors, the Data Contributors carried out a verification of the consistency of the entity classification rules of the counterparties. Explanations provided by Data Contributors allowed to identify a recurring cause of errors, which was primarily the misclassification of counterparties as a result of not applying the classification criteria in accordance with the FINREP Manual. There were also other errors of an incidental nature identified in the analytical samples and not related to the classification rules. The update of the transaction database was performed by Data Contributors for the full WIRON index provision period, i.e. from the beginning of 2019. The revision of the WIRON Input Data resulted in a cumulative increase in the WIRON Single-Base Index over time, whose value is a combination of the entire history of the WIRON Index. The Administrator decided to cease the provision of the WIRON Single-Base Index as of 11 January 2024, taking into account the characteristics of this index and the initial stage of its application in the financial market. The Administrator will take steps to restart the provision of the WIRON Single-Base Index as soon as possible with a newly set start date.

Risk of the provision of capital market indices and benchmarks

The Polish Financial Supervision Authority authorised GPW Benchmark S.A. on 27 November 2019 as an administrator of the Exchange Indices and the benchmark TBSP.Index. Based on the decision issued by the Polish Financial Supervision Authority, the European Securities and Markets Authority (ESMA) added GPW Benchmark S.A. to the register of benchmark administrators on 29 November 2019.

The risk of the provision of capital market indices and benchmarks includes:

- › the risk of loss of representativeness of certain indices and benchmarks arising from economic and market conditions resulting in their cessation;
- › the risk that the Exchange Indices may not fulfil the BMR requirements for the method to cover ESG factors and the decarbonisation trajectory;
- › the risk of declining interest of obliged entities in sustainable finance regulations, including e.g. SFDR (Sustainable Finance Disclosure Regulation), indices that do not incorporate ESG factors and decarbonisation trajectories;
- › limited availability of data from data providers for the development of climate indices, including the high cost of purchasing data for the development of climate indices (as well as the disclosures required by BMR and Delegated Regulations), limiting the ability to expand the offering of the administrator and potentially affecting the competitive position;
- › insufficient reporting of non-financial data by listed companies, e.g. GHG emissions data in all scopes (1, 2, 3), emission reduction targets, limiting the capacity to develop indices which incorporate the decarbonisation and sustainable economy objectives;
- › operational risk, including the management of external services.

Risk of declining use of interest rate benchmarks

In the event of an increase in the number of court cases concerning mortgage loans based on benchmarks, there is a risk of a decrease in their use, which raises GPW Benchmark S.A.'s business risk.

Operational risk

Risk of attracting and retaining qualified staff of the Group

Effective management of the GPW Group's business requires recruitment of highly qualified employees. The skills of some Group employees are scarce due to the unique nature of the GPW Group's operations. Any increased turnover of key employees could temporarily affect the GPW Group's effectiveness in view of the lengthy training process necessary to prepare new staff for such positions, including successors. This could have an adverse impact on the activity of the Group, its financial position, results, ability to achieve strategic targets, and outlook.

Risk of industrial disputes

Most of the employees of the Company are members of the Trade Union of Exchange Employees, the sole trade union active in GPW since 2005. The trade union is entitled to coordinate and consult opinion-making activities (including those related to restructuring of the Company). On 1 June 2023, a collective dispute arose between GPW and the Trade Union of Exchange Employees. The dispute arose as a result of the refusal to meet the Union's demands regarding an additional inflation-related benefit. On 12 October 2023, an agreement was reached ending the collective dispute with the Trade Union of Exchange Employees, pursuant to which GPW paid employees a one-off inflation-related benefit of approximately PLN 2.7 million gross in total.

Risk of trading systems malfunction

Safety and continuity of trading are among the key functions of GPW and other GPW Group members which operate trading systems. The Group's operations are strongly dependent on the effective functioning of its trading systems, which are subject to the risk of outages, instability of client access, and security breaches. The reliability of the Group's trading systems is as important as their efficiency. In the event that any or all of the GPW Group's systems, or those of its third-party service providers, fail or operate slowly, it may cause any of the following to occur: unanticipated disruptions in services provided to the Group's market members and clients; slower response times or delays in trade executions; incomplete or inaccurate recording or processing of trades; financial losses and liability to clients; litigation or other claims against the Group, including formal complaints with the Polish Financial Supervision Authority, proceedings or sanctions. Malfunctions in the trading systems and other integrated IT systems could disrupt a trading session and therefore cause a reduction in the volume of trading and affect confidence in the markets operated by the Group, and malfunctions disrupting trade on the TGE spot market may result in a transfer of trading to competitive power exchanges operating in the Polish price area, which could have a material adverse effect on the Group's results, its financial position or development prospects. Furthermore, the Group may be forced to make additional material investments in security in order to improve security measures or mitigate existing issues, or to improve its reputation harmed by a potential security breach. Such factors could have an adverse impact on the Group's activity, including its financial position.

Risk of dependence of the Group's activity on third parties

The GPW Group's activity depends on third parties, including KDPW, KDPW_CCP, as well as several third-party service providers including mainly IT service providers. The ICT systems operated by the GPW Group for trading in financial instruments and commodities are highly specialised and customised. Consequently, there is limited choice in service providers for such systems. There can be no assurance that any of the GPW Group's providers will be able to continue to provide their services in an efficient manner, or that they will be able to adequately expand their services to meet the GPW Group's needs. System interruption or malfunction or the cessation of important services by any third party in whole or in part could strongly affect the Group's operation, financial position and results.

Risks of outsourcing of certain services

The Administrator (GPW Benchmark) identifies operational risks arising from the calculation of certain forward and single-base indices by the Calculation Agent on an outsourced basis within the meaning of Article 10 of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (BMR).

GPW Benchmark also identifies operational risks arising from technological disruptions in connection with the services provided on an outsourced basis by GPW and GPW Tech. In the event of operational unavailability of the benchmark systems or the website, the administrator cannot fulfil its tasks with respect to the provision of the WIBID and WIBOR Reference Rates, the WIRON index and the WIRON Compound Indices Family, as well as capital market indices.

Risk of insufficient insurance cover

The Group is exposed to operational risks associated with its business. The Group has insured its IT assets against risks such as natural disasters, theft and burglary, vandalism, misuse of electronic equipment and inadequate energy performance. In

addition, the Group has Directors and Officers (D&O) liability insurance. The Company does not hold liability insurance of its operations, in particular with respect to potential damage to Exchange Members and trading participants in connection with IT system failures. In view of the insurance cover held by the Group, certain types of damage may not be covered by insurance or may be covered by partial insurance only. Furthermore, the Group could incur material losses or damage for which full compensation may not be available. The Group may be unable to effectively manage risks, which could have an adverse impact on the activity of the Group, its revenue, results and financial position.

Climate risk related to the impact of extreme weather events and weather anomalies

Climate risks associated with the impact of extreme weather events, an increase in the frequency and severity of abnormal weather events may disrupt logistics processes and may affect IT infrastructure. In addition, the occurrence of weather anomalies in terms of ambient temperature levels may result in increased costs associated with the adaptation and operation of office infrastructure (e.g. costs of increased air conditioning consumption). The phenomenon may also affect the wellbeing of employees.

According to the results of the analysis, GPW is exposed to the direct impact of climate risk to a small extent.

Risk of the acquisition of the Armenia Securities Exchange by GPW

GPW holds 65.03% of the shares of the Armenia Securities Exchange (AMX). In addition, GPW indirectly controls the Central Depository of Armenia, in which AMX holds 100% of the share capital. The current difficult humanitarian situation related to the influx of refugees from Nagorno-Karabakh and the risk of a reconfiguration of the geopolitical alignment in the region (increasing pressure for the opening of the Zangezur corridor, which would connect the two parts of Azerbaijan through the territory of Armenia) may have a negative impact on the level of economic growth in the country, consequently leading to a weaker economic situation in the overall capital market. In addition, the geographical distance between the companies' headquarters may generate potential risks for the integration of AMX into GPW, hindering the rebuilding of Armenia's capital market with our joint efforts and delaying the expansion of our activities in the region.

As GPW and AMX (a non-EU entity) operate in different legal regimes, there are increased legal and compliance risks. An additional risk is the limited access to local human resources with the appropriate level of knowledge and professional experience in capital and financial markets.

Operational risk – legal risk

Risk related to amendments of national laws and regulations

The Group operates primarily in Poland. The existing legal system and regulatory environment can be subject to significant changes and Poland's laws and regulations may be subject to different official interpretations. The capital market and the commodity market are strictly regulated and may be subject to increasingly strict supervision. Regulatory change may affect the Group as well as existing and prospective customers of its services. For instance, regulatory changes may affect the attractiveness of listing or trading on the markets organised and operated by the Group or the attractiveness of services provided by the Group. Such changes could also encourage companies listed on GPW to transfer to other markets which offer competitive listing costs or more flexible listing or corporate governance requirements.

The Act of 16 August 2023 amending certain acts in connection with ensuring the development of the financial market and the protection of investors in the financial market provides (in certain cases) for the nullity for transactions in shares of alternative investment companies (ASI), thus introducing a partial restriction on the transferability of such shares. The Exchange Rules and the Alternative Trading System Rules stipulate that one condition for the admission or introduction of a company's shares to trading is the absence of restrictions on their trading. This legal situation generates a risk, which is difficult to estimate, that some transactions concluded on the GPW markets in shares of ASI companies will be deemed invalid as of 29 September 2023. This could have further negative consequences for the interests of exchange investors participating in trading in such shares after this date, and pose a threat to the safety of exchange trading. After a detailed analysis of the amendments to the provisions of the Investment Funds Act and an assessment of the potential risks arising from these amendments to the safety of exchange trading and the interests of its participants, and after consultation with external advisors, the Exchange decided to suspend trading in the shares of nine ASI companies from 29 September 2023 until the legal risks have ceased. The Management Board of the Exchange cancelled the resolutions of 26 September 2023 suspending trading on the GPW market in the shares of MCI Capital ASI and JR Holding ASI after these ASIs introduced appropriate measures to mitigate the risk. On 6 December 2023, trading in the shares of MCI Capital ASI (GPW Management Board Resolution 1313/2023) and JR Holding ASI (Resolution 1314/2023) resumed.

Regulatory risk related to EU law

European Union regulation increasingly impacts the Group and adds to the costs of compliance, especially in the area of trading and post-trade services. It could hurt the competitiveness of smaller European exchanges, such as GPW, in favour of larger market players. Changes to regulations could require the harmonisation of the Group's trading systems and operations, which could entail additional capital and operating expenditures, resulting in reduction of the Group's net profit.

One of the challenges facing the GPW Group is the implementation of Regulation (EU) 2022/2554 of the European Parliament and of the Council of 14 December 2022 on the digital operational resilience for the financial sector (DORA) which comes into force on 17 January 2025.

A threat to TGE's strategy and business performance in the spot electricity market is posed by the proposed amendment to the CACM 2.0 Regulation published by ACER in December 2021 and the Electricity Market Design amending, among others, Regulation 943/2019 regulating the obligations of NEMOs and affiliates in respect of operated markets. These legislative changes may impair TGE's competitiveness in the electricity market and its ability to achieve its intended business outcomes.

Risk of ineffective protection of intellectual property

The Group protects its intellectual property under agreements concerning trademarks, copyrights, protection of trade secrets, non-disclosure agreements and other agreements with its suppliers, subsidiaries, associates, clients, strategic partners and others. The measures implemented by the Group may be insufficient, for instance, to prevent appropriation of information. Furthermore, protection of intellectual property rights of the Group may require significant investments of funds and human resources, which could have an adverse impact on the Group's activity, financial position and results.

Risk of the Group's potential infringement on intellectual property rights of third parties

The Group's competitors and other legal and natural persons were likely to obtain and are likely to obtain in the future intellectual property rights in products or services related or similar to the types of products or services which the Group offers or intends to offer. The Group may be unaware of all protected intellectual property rights which may be at risk of infringement by the Group's products, services or technologies. Furthermore, the Group cannot be certain that its products and services do not infringe on the intellectual property rights of third parties and that third parties will raise no claims against the Group due to such infringement. If the Group's trading system or at least one of its other products, services or technologies is considered to infringe on the rights of third parties, the Group may be forced to discontinue the development or introduction into trading of such products, services or technologies, to obtain a necessary licence from the holders of intellectual property rights, or to modify such products, services or technologies to avoid infringement of such rights. If the Group is forced to discontinue the development or introduction into trading of some products or is unable to obtain a necessary licence, it may have a material adverse impact on its activity, financial position and results.

Risk of regulations governing open-ended pension funds in Poland

Open-ended pension funds are an important group of participants in the markets operated by the Group. As at 31 December 2023, open-ended pension funds held shares listed on the local regulated market worth PLN 169.5 billion, representing approximately 22% of the capitalisation of domestic companies listed on the Main Market. Legislative amendments which would replace open-ended pension funds with other collective investment undertakings and eliminate cash flows to/from pension funds, could impair the activity of this investor group on GPW. They could also augment the risk of an excessive supply of shares listed on GPW and curb the interest of other investors in such shares. As a consequence, this could cause a decrease of trade in financial instruments.

Risk of amendments to and interpretations of tax regulations

Tax regulations and their interpretations are frequently amended, and such changes could not only raise the tax rates but also add new specific legal instruments, extend the scope of taxation, or even impose new tax burdens. Changes of tax laws could also be driven by the implementation of new rules under EU legislation following the interpretation of new tax regulations or amendments of existing tax regulations. Amendments of tax regulations, inconsistencies between local and EU tax law, failure to align tax laws with sanctions regulations resulting from the war in Ukraine, and different interpretations of applicable tax regulations by tax authorities could be to the disadvantage of the GPW Group, adversely impacting its activity and financial position.

The risk of inconsistency between local (Polish) tax regulations and the Union's VAT Directive concerns doubts as to the tax policy and consequently the accounting policy of a taxpayer where input VAT under invoices issued correctly is deducted in a given financial period in which the tax obligation arises in respect of goods purchased if invoices for the purchase in such period are received in the following period but before the submission of tax returns. That could generate the risk that tax authorities will follow the literal wording of Polish regulations, without regard to EU law, and challenge the date of input VAT deductions under Article 85(10b)(1) of the VAT Act (i.e., one of the conditions for input VAT deductions depending on the invoice receipt date would not be met).

Compliance risk

Risk of non-compliance with regulatory requirements and recommendations of the Polish Financial Supervision Authority applicable to the activity of the Group

The Group is supervised by the Polish Financial Supervision Authority. The Group may be unable to comply with all regulatory requirements and recommendations of the supervisory authority and thus it may be exposed to future proceedings and sanctions (including cash penalties) imposed due to the Group's non-compliance or alleged non-compliance with its obligations under the applicable laws and regulations as well as recommendations of the supervisory authority. Any such proceedings against the Group and resulting sanctions could have a material adverse impact on the activity of the Group, its financial position and results.

Risks related to the requirements of financial and market institutions with regard to climate and environmental protection and sustainability disclosures

Risks related to the requirements of financial and market institutions to protect the climate and the environment and to disclose sustainability data. As a result of the dynamic regulatory changes at national and EU level regarding corporate sustainability, including climate and environmental protection, the Group may come under increasing pressure from financial and market institutions and stakeholders to adapt more intensively and in a more complex way to the growing expectations of the institutions. New and planned regulations related to the environmental and climate transition and minimum guarantees for value chains force the Group to continuously analyse regulatory changes, to adapt to the new requirements, including increasing sustainability and decarbonisation disclosures, including the integration of entities along the value chain in certain sustainability policies. Failure to ensure legal compliance may result in administrative penalties imposed by supervisory authorities and in reputational damage to Group companies. This risk may also increase the future cost of the transition to a zero-carbon and low-energy economy.

In addition, if products and services are not adapted to changes in trends and the needs/expectations of participants in the GPW Group's markets, this may potentially affect the turnover and liquidity on the markets operated by the GPW Group and, consequently, reduce the competitiveness of GPW's business.

The analysis performed showed that GPW is exposed to the risks to a small extent.

Risk of potential breach of competition laws

GPW Group companies are subject to certain limitations including the prohibition of abusing the dominant position and using anti-competitive practices under Polish and EU competition laws. Competition authorities (President of the Office of Competition and Consumer Protection (UOKIK), Commission) may monitor compliance with such limitations. If the Company is found to be in breach of any such limitations, the competition authorities may require it to take specific measures in order to discontinue an anti-competitive practice or to discontinue abusing the dominant position, and impose sanctions including cash penalties up to 10% of revenue earned in the year preceding the year when the penalty is imposed. Such measures could have a material adverse impact on the Group's activity, financial position and results.

Risks of Benchmark Administrator

The authorisation to operate as an administrator imposes the obligation to ensure that the benchmark provision process complies with the requirements of the EU Benchmarks Regulation. As such, GPW Benchmark bears compliance risk of being found in breach of the provisions setting out the administrator's obligations and of incurring certain supervisory sanctions as a result. The risk arises both in relation to benchmarks that are provided on the basis of transaction data received from GPW and benchmarks that are important for the operation of the banking sector, i.e., the WIBID and WIBOR Reference Rates and the newly developed WIRON transactions-based benchmarks and WIRON Compound Indices. Materialisation of these risks could adversely affect the reputation of the GPW Group.

Reputation risk

Risk of loss of the Group's reputation and client trust necessary to process exchange transactions

The Group operates in a sector where strong reputation and trust of clients (including issuers, financial intermediaries, and investors) are particularly important. The Company has achieved a relatively high volume of trade and a high number of IPOs among others owing to its reputation and clients' trust. In view of the role of the Group on the Polish capital market, its reputation could be harmed by any malfunctions of the trading system, trading interruptions, operational errors, disclosure of client information, litigation, press speculations and other adverse events. Unexpected changes of regulations governing the capital market and the commodity market in Poland, as well as actions of other participants of the exchange market, including issuers, financial intermediaries, competitive trading platforms and the media, in breach of accepted standards of conduct or good practice, could undermine overall trust in the Polish capital market and the Group. Furthermore, it is important to consider the risk that employees of the Group could be in breach of the law or procedures while measures taken by the Group to identify and prevent such behaviour could in certain cases be ineffective, resulting in sanctions and causing a serious harm to reputation. To eliminate or mitigate these risks, the Group takes proactive and reactive measures to strengthen the protection of its reputation.

Reputational risk of GPW Benchmark

In the context of litigation between borrowers and lenders following an increase of the WIBOR index, there have been attempts to challenge the WIBOR index as being non-compliant with the provisions of the BMR. It should be noted that the WIBOR benchmark method was reviewed and assessed by the Polish Financial Supervision Authority in the proceedings regarding GPW Benchmark S.A.'s application for authorisation to act as a benchmark administrator, and the Polish Financial Supervision Authority considered it conformant to BMR and granted the authorisation on 16 December 2020.

The Polish Financial Supervision Authority exercises on-going supervision of the activities of GPW Benchmark S.A. in relation to the WIBOR method. The Polish Financial Supervision Authority and the Financial Stability Committee in communications issued on 6 and 9 December 2022 reiterated the full compliance of WIBOR with the provisions of the BMR Regulation and the absence of grounds to challenge WIBOR.

In addition, the Polish Financial Supervision Authority carried out an assessment of the capacity of the WIBOR interest rate benchmark to measure the market and economic realities and concluded in its communication of 29 June 2023 that the WIBOR key interest rate benchmark has the capacity to measure the market and economic realities it intends to measure. According to the assessment of the Polish Financial Supervision Authority, the WIBOR benchmark responds appropriately to changing liquidity conditions, changes in central bank rates and economic realities.

ESG risk

ESG risks are a group of risks that include climate (environmental), social and labour, and corporate governance risks. ESG risks are not treated as a separate type of risk, but as cross-cutting risks, which affect GPW's traditional financial and non-financial risks to varying degrees and through different transmission channels.

The following types of ESG risks are identified in the risk management system:

- › climate risks related to the impact of extreme weather events;
- › risk of attracting and retaining qualified staff of the Group;
- › risk related to the requirements of financial and market institutions with regard to the climate and environmental protection and non-financial disclosures.

A detailed description of the aforementioned risks can be found in the descriptive section of operational risks and compliance risks.

AML/CFT risk

The risk of money laundering and terrorist financing relates to GPW's activity of providing bookkeeping services to GPW Group companies. Pursuant to Article 76a(1) of the Accounting Act of 29 September 1994 (Journal of Laws of 2019, item 351), bookkeeping services are a business activity, as defined in the Act of 6 March 2018 - Entrepreneurs' Law, consisting in the provision of services in the field of bookkeeping, determination and verification of balances of assets and liabilities, valuation of assets and liabilities, determination of financial result, preparation of financial statements, and collection and retention of accounting evidence and other documentation.

The indications of a lower risk of money laundering and terrorist financing are set out in Article 42 of the AML Act. A relatively close business relationship between bookkeeping service providers and their clients may be considered as one of the factors that could potentially determine the applicability of simplified security measures. One condition for the application of simplified financial security measures, i.e. management of the frequency and accuracy of the execution of all measures indicated in Article 34 of the AML Act, is the confirmation of a lower risk in the course of the risk assessment of the client or the occasional transaction. Any application of simplified financial security measures must be preceded by an assessment of the risk of the client or occasional transaction as low. Article 43 of the AML Act sets out the criteria of the application of enhanced financial security measures. In contrast to the simplified financial security measures, whose application is merely optional, the legislator expressly stated in this provision that enhanced financial security measures must always be applied in cases of higher risk of money laundering or terrorist financing. Situations that may give rise to a higher risk include the following: entering into a business relationship in unusual circumstances; a client's activity to hold personal assets; entering into a relationship with a company in which bearer shares have been issued and whose securities are not admitted to organised trading; the client's tax residence in a high-risk country, a country with a high level of corruption or a sanctioned country; an unusual or excessively complex ownership structure of the client; link of a business relationship or an occasional transaction to a high-risk third country or a country for which the UN or the EU has imposed specific restrictive measures. In 2023, GPW monitored business relationships with clients both in the area of AML and in the area of the sanctions regime under EU regulations and Polish law. GPW was also subject in 2023 to controls carried out periodically by the AML Officer covering compliance with the provisions of the Act in respect of the performance of AML and CTF obligations taking into account the sanctions regime. The results of the controls identify GPW's money laundering and terrorist financing risks at a level within GPW's risk appetite.

2.8.3. Financial risks

Financial risks include:

- › credit risk
- › liquidity risk
- › market risk

These are discussed in detail in the Consolidated Financial Statements of the GPW Group, Notes 2.2., 2.3. and 2.4.

In addition, the Group is exposed to the risk of significant periodic earnings volatility associated with unforeseeable revenue levels and relatively high fixed costs.

The Group's sales revenue and net profit are strongly dependent on a range of external factors which are beyond the Group's control, including the activity of investors and the prices of financial instruments listed on the markets organised and operated

by the Group; consequently, the Group's sales revenue could vary from period to period. A decrease in the value of IPOs on GPW could have an adverse impact on revenues from fees for admission and introduction to trading on the exchange and on listing revenues. If its sales revenue decreases, the Group may be unable to reduce its operating expenses, which could have a material adverse impact on its operating profit.

As at 31 December 2023, the Group held PLN 418.2 million in cash and cash equivalents and short-term financial assets including bank deposits and guaranteed corporate bonds. They are sufficient financial resources to conclude that the Group's short-term and mid-term liquidity risk is very low and that there is no risk to the Group's payment of its financial liabilities.

2.8.4. Risk of the war in Ukraine

The GPW Group has taken into account the recommendations of the Polish Financial Supervision Authority of 25 February 2022 addressed to issuers in connection with the political and economic situation in Ukraine and the CRP alert level in Poland set by the Prime Minister. In connection with the ongoing war in Ukraine, the GPW Group identifies the following risks to its activity:

Risk of withdrawal of funds by investors

A wider invasion of Ukraine by Russia could have a major impact on GPW's business as Poland is a direct neighbour of both countries. Hostilities in a country neighbouring Poland boost investor uncertainty. The greater investor uncertainty, the greater the propensity to exit stock market investments, particularly for foreign investors operating globally. In addition, individual investors may show a preference for assets perceived as less risky, which may result in them selecting less risky assets on the GPW market but also exiting the market altogether. A long period of high interest rates may have a similar effect. Due to open aggression towards Ukraine, there is a high risk that investors will sell off shares of companies listed on GPW. The persistence of the conflict in the longer term may affect the perception of Poland as a safe investment destination.

Risk of above-average load on the trading system

Following Russia's attack on Ukraine, financial markets reacted very nervously. Investors were selling off shares of companies listed on GPW; as a result, all Warsaw indices were down. On 24 February 2022, WIG lost 10.73% and the blue-chip index WIG20 lost 10.87%. The falls on GPW were accompanied by high turnover: its value on the main market exceeded PLN 3.3 billion. On the following day (25 February 2022), the indices rebounded: WIG20 gained 8.44% and the broad market index WIG gained 7.72%. Turnover was again high at around PLN 2.3 billion. The increased load on the trading system, caused by the large number of orders placed and trades made, did not affect the proper functioning of the trading system. The trading system has a significant reserve capacity and performance. The Exchange monitors the operation of the IT systems and takes appropriate steps to ensure continuity of their operation.

Risk of money laundering and terrorist financing

The international sanctions imposed on entities in the Russian Federation are a factor with a potential impact on the risk of money laundering or terrorist financing. The risk profile of money laundering and terrorist financing may change in particular due to attempts by sanctioned entities to circumvent the sanctions by resorting to means which conceal the identity of the beneficial owner of the transaction.

GPW has taken measures to mitigate the risk of money laundering and terrorist financing resulting from the international sanctions imposed on the Russian Federation following the invasion of Ukraine. GPW applies enhanced financial security measures with respect to transactions with entities incorporated or domiciled in the territory of the Russian Federation as well as with entities controlled by persons incorporated or domiciled in the territory of the Russian Federation or holding Russian Federation citizenship. GPW conducts ongoing monitoring of the consolidated sanctions list published by the European Commission.

Risk of violation of sanction lists

In view of the expansion of international sanctions imposed on both natural and legal persons, the GPW Group monitors business relationships with counterparties for the presence of entities or individuals on the consolidated EU list and the Ministry of the Interior list.

Risk of cyber attack

As an operator of critical infrastructure and a financial sector entity, GPW is particularly exposed to the risk of cyber attack. GPW has in place a Cyber Attack Management Policy which sets out the principles to be followed in the event of a cyber attack in GPW's cyber space. The Company takes ongoing measures to manage and monitor security in its IT infrastructure. In collaboration with the CSIRT, reports are filed on incidents which may affect the operation of the GPW Group's services. In case of alerts communicated by the CSIRT, checks are made whether the vulnerabilities identified concern the GPW Group's systems. In addition, GPW systematically educates employees on the security of the IT environment and information security. In connection with the war in Ukraine, the GPW Group operates on heightened alert to ensure efficient response in case of cyber security incidents.

Risk of bankruptcy or deterioration of transparency of WIG-Ukraine index participants

Risk of deterioration of financial results of companies listed on GPW and participating in the WIG-Ukraine index or their potential bankruptcy. The development of the ongoing armed conflict hinders the ability of such companies to carry out their business activities, which has an impact on their results. This may be caused, in particular, by logistical difficulties preventing the export of goods due to closed ports, the destruction of or impeded access to assets, some of which may be located in combat zones, as well as the conscription of some employees to the army. Hostilities may cause significant damage to the assets of the companies included in the index and significantly reduce their liquidity. There is also the risk that it will not be possible to monitor the current situation of entities operating in Ukraine and the related potential problems of listed companies in properly fulfilling their disclosure obligations, including prompt public disclosure of material events taking place (inside information), and in preparing and making available annual reports containing audited annual financial statements. The situation of such companies also affects the ability of listed companies to meet their obligations to GPW.

Risk of loss of representativeness of indices comprising Ukrainian companies

Risk of deterioration in financial results and, in particular, of the lack of audited financial statements of 5 Ukrainian companies included in 5 indices (WIG, WIG-Food, WIG-Mining, WIG-CEE, WIG-Ukraine). These companies are supervised by supervisory authorities in other EU Member States.

This risk consists of the uncertainty regarding the publication of financial statements of those companies supervised by foreign supervisory authorities and the effectiveness and speed of the supervisory authorities' reaction to the above (in the case of companies subject to the jurisdiction of the Polish Financial Supervision Authority, the Polish supervisory authority may request the suspension of trading). This may lead to a risk of deterioration in the ability to reflect the actual market situation whose measurement is the defined purpose of published indices which include Ukrainian companies.

The lack of financial statements and the resulting lack of investor knowledge about the current situation of companies generates risks regarding the actual valuation of companies and may affect the value of indices, especially those in which the share of Ukrainian companies is significant.

Risk of disruptions in gas supplies to Poland

In the period 2022 - 2023, the structure of natural gas imports to Poland was revised. Gas imports from the Russian Federation were terminated in 2022 and no attempts to return to this trade based on new long-term contracts should be expected. Therefore, the risks to natural gas supplies from this direction expired with the end of imports.

Thanks to the infrastructure investments carried out and completed, the Polish market is now diversified in terms of directions and sources of natural gas supply. The share of internal imports from the European Union has increased, as has that of liquefied gas obtained under long-term and spot contracts from global suppliers, mainly from the USA and Qatar. Security of supplies is strengthened by gas streams from Norway via the Baltic Pipe pipeline.

However, despite the decisive improvement in the security of natural gas imports, which cover around 80% of domestic demand, the occurrence of events disrupting its supply cannot be completely ruled out. These may occur as a consequence of damage/destruction of critical infrastructure, technical problems in the operation of terminal infrastructure worldwide, incidents or armed conflicts occurring in the vicinity of maritime routes. Currently, the level of risk of significant disruptions to natural gas supplies to Poland is low.

Risks regarding the activity of participants in Treasury bond trading and the structure of the trading

The increase in market risk accompanying the persistent conflict in Ukraine continues to affect the degree of activity of participants in Treasury bond trading and the structure of the trading. A possible further increase in interest rates translating into an increase in yields and a decrease in bond prices generates the risk of a decrease in Treasury securities market turnover; however, the scale of the risk will depend mainly on further developments, the time horizon of the conflict and the combination of negative demand and supply shocks to the economy.

Given the negative factors in the market environment, reinforced by the impact of the conflict in Ukraine, a cautious approach should be taken to the revenue forecasts.

2.8.5. SARS-COV-2 pandemic

The state of epidemic emergency caused by SARS-CoV-2 virus infections was lifted in Poland as of 1 July 2023. Despite the absence of restrictions, the Group continues to consciously monitor the risks associated with the Sars-CoV-2 virus and take precautions to protect the health of employees and customers.

In the opinion of the Management Boards of the Companies, in 2023, the GPW Group was exposed to low operational and financial risks related to the SARS-CoV-2 virus pandemic.

3. Corporate governance

3.1. Statement of compliance with corporate governance rules

Corporate governance principles and compliance

Pursuant to § 70(6)(5) of the Regulation of the Minister of Finance of 29 March 2018 on current and periodic information provided by issuers of securities and conditions for recognising as equivalent information required by the laws of a non-member state, the Warsaw Stock Exchange declares that it has adopted the following set of corporate governance principles for application.

On the date of admission of the shares of GPW to trading on the regulated market, i.e., 5 November 2010, GPW adopted for application the corporate governance principles established by the Warsaw Stock Exchange as the organiser of trading.

From 1 January 2016 to 30 June 2021, the Company complied with the corporate governance principles contained in the document "Best Practice for GPW Listed Companies 2016".

New corporate governance principles for companies listed on the GPW Main Market were adopted by Resolution No. 13/1834/2021 of the Exchange Supervisory Board of 29 March 2021. This is the next version of the set of corporate governance principles to which companies listed on the GPW Main Market are subject. The new principles came into force on 1 July 2021.

Accordingly, as of 1 July 2021, the Company complies the principles contained in the document "Best Practice for GPW Listed Companies 2021". This document is available on the GPW website in the section dedicated to corporate governance of listed companies (<https://www.gpw.pl/dobre-praktyki2021>).

Information on the status of compliance with the Best Practice for GPW Listed Companies 2021 is available on the website [GPW Main Market - ESPI/EBI Company Reports](#).

As at 1 January 2023, the Company did not comply with two principles of the Best Practice for GPW Listed Companies 2021: principle 2.1 and principle 2.2.

On 24 March 2023, the Company provided, in the form of an EBI report, updated information on the status of compliance with the Best Practice for GPW Listed Companies 2021, which took into account the change in the status of compliance with principles 2.1 and 2.2 due to the adoption of an approach in line with the Corporate Governance Committee's Guidance on compliance with the principles of the "Best Practice for GPW Listed Companies 2021" (version 2 of 29 July 2021).

As at 31 December 2023 and at the date of publication of this Report, GPW complies with all the corporate governance principles contained in the Best Practice for GPW Listed Companies 2021.

3.1.1. Sponsorship and charity initiatives in 2023

In 2023, the Company contributed its sponsorship expenses and donations in accordance with the Company's regulations:

- › The rules of sponsoring activity conducted by the Warsaw Stock Exchange, and
- › The Warsaw Stock Exchange's procedure for granting donations.

The Company's sponsorship expenses stood at PLN 1,207.552 thousand in 2023, including mainly support for events dedicated to the capital market.

The sponsorship included events supporting the community of brokerage houses in Poland. GPW was the Main Partner of the 23rd IDM Conference in Bukowina Tatrzańska organised by the Chamber of Brokerage Houses. In 2023, it was entitled "Capital Market Participants Facing the Challenges of the Modern Economy". The IDM Conference is an annual meeting of leading capital market representatives aimed at supporting the development of the capital market in Poland in order to build a competitive economy.

As part of its sponsorship, GPW supported events serving the issuer community. These included two congresses: the 14th Investor Relations Congress and the 11th SEG Listed Companies CFO Congress organised by the Association of Listed Companies. These were cyclical meetings organised as part of SEG's educational mission to share experiences of CFOs and IR departments of listed companies.

GPW took part in Invest Cuffs 2023, an annual meeting bringing together the investment market industry - equities, currencies, commodities, cryptocurrencies, investment funds. It is one of the largest events of its kind in Europe. Every year, it attracts experts, representatives of key players in the industry, institutional and retail clients.

Another event which discussed the challenges and problems of the investment industry in Poland was the 17th Investment Funds Forum. GPW was a strategic partner of the conference. In addition, in 2023, GPW was involved in subsidising training courses organised by the Financial Markets Association ACI Poland on financial instruments, risk management and legal

aspects of financial markets. These trainings were prepared and conducted in cooperation with national and international experts.

As part of its sponsorship, GPW supported the 22nd Local Government Forum on Capital and Finance organised by MUNICIPIUM, which is the largest professional local government event in Poland. Each year, the event is attended by executives of local governments and organisational units, including representatives of the largest cities, districts and provinces.

In 2023, GPW was active in supporting events dedicated to stock market investors. As part of its long-standing cooperation with the Association of Individual Investors (SII), GPW was the Organising Partner of the WallStreet27 Conference. During the conference addressed to individual investors, investors, analysts, representatives of companies and institutions of the Polish capital market discussed its condition and prospects of development.

GPW was the Strategic Partner of the 21st National Investor Survey organised by the SII. It is the largest and most important survey on the basis of which the profile of the Polish individual investor is created every year. The results of last year's survey were announced in November during the ForFin Forum of Finance and Investment (an educational event addressed to all those interested in managing their own finances).

In 2023, GPW sponsored the Krynica Forum conference, an international event bringing together business, politics and academia. It is a platform for the open exchange of ideas, discussion of key socio-economic issues and building relationships at the highest level. It aims to strengthen the security, social cohesion and economic position of Poland and the countries of the Central and Eastern European region.

GPW was a partner of the Three Seas Local Government Congress, a cyclical international economic event bringing together representatives of central and local government administration, the scientific sector and business from 13 member states of the Three Seas Initiative (Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia and Greece), representatives of strategic partners (the European Union, the United States and Germany) and partner regions from Ukraine and Moldova. An integral part of the Congress is the Economic Forum which aims to create conditions for the development of entrepreneurship and investor services, as well as to develop advanced forms of international cooperation.

As part of its cooperation with the Project PL Foundation, GPW sponsored the conference "Polka XXI w.", the only event organised in this format in Poland which brought together top female managers, social activists, experts and representatives of central and local government administration. During the conference, experts jointly debated the most important issues for Polish women.

GPW sponsored the "International Women in IT Career Day", which aims to support women at various stages of their IT careers by enabling participants to consciously build their careers in the world of technology. Through a variety of panel discussions, workshops and mentoring sessions, female participants had the opportunity to learn about different positions, roles and tasks related to the IT industry.

As part of its sponsorship activities, GPW supported investor conferences such as:

- › Wood's Winter Wonderland, EME Conference 2023 and Poland Cyclical: into the new business cycle organised by Wood&Company,
- › Future in CEE - ERSTE Consumer & Technology Conference organised by Erste Securities Polska,
- › the conference on Poland's 5th anniversary in the FTSE index organised by mBank.

In 2023, GPW cooperated with and supported events organised by national media. As every year, GPW was a partner of the "Stock Exchange Company of the Year" event organised by the daily Puls Biznesu. The survey was conducted for the 24th time on a sample of 103 people (68 analysts and 35 managers). They evaluated 140 companies included in the WIG20, mWIG40 and sWIG80 indices. The experts assessed, among others, the competence of the management board, growth prospects, innovation of products and services, the company's success in 2022, and the quality of investor relations. In addition, the companies that take ESG most seriously, the companies that are most attractive from an investment perspective, and those that are worth paying attention to on NewConnect were selected. On the one hand, the "Stock Exchange Company of the Year" ranking underlines the importance of GPW for the financing of the Polish economy; on the other hand, it identifies those companies whose management boards, products, services or corporate culture are at the forefront and which are worth emulating, appreciating and promoting. The results of the ranking are also a valuable indication for stock market investors.

Another event was the Byki i Niedźwiedzie (Bulls and Bears) Gala organised by Gazeta Giełdy i Inwestorów Parkiet which, since its inception, annually awards the best companies, managers and institutions, and presents Golden Portfolios to the best managers.

A new initiative supported by GPW as a supporting partner last year was the POLAND PRESS Business Giants 2023 initiative. The organisers honoured brands, institutions and personalities that contribute to Poland's security, actively support and develop its socio-economic and business potential. The aim of the project is to identify and appreciate companies, institutions and personalities that are successful on Polish and foreign markets, strengthen the potential of the Polish economy and entrepreneurship, invest in people and new technologies, support innovation, engage in pro-social activities, and inspire others by creating the modern face of Polish business. The project was inaugurated in December 2022.

The Exchange was a Gala Partner of the ninth edition of the Polish Compass, a yearbook of financial institutions and joint-stock companies, which is an up-to-date summary of the state of the economy, a review of financial and insurance institutions, as well as companies listed on GPW. The periodical summarises the most important economic events and anticipates the trends and changes that await the Polish economy.

As part of its long-term cooperation with wprost.pl, GPW was a Partner in three projects: Polish 200, Wprost Innovators, White Red Capital Report. The Polish 200 ranking is published annually at the end of May and the beginning of June at wprost.pl and consists of the Main Ranking, the Polish Ambassadors Ranking and the Polish Cheetahs Ranking. Wprost Innovators go to the most innovative companies, institutions and people in Poland. They honour projects, ideas and personalities that have influenced the development of, among others, the Polish economy and medicine, pioneers and visionaries. White-Red Capital is the latest in a series of reports by Wprost showing what proportion of Polish GDP is generated by companies with Polish capital (exclusive or predominant). It identifies industries and companies that pay taxes in Poland, invest primarily in Poland and promote Polish products and services around the world.

GPW's donations in 2023 stood at PLN 3,921.78 thousand including PLN 2,394.98 thousand for the GPW Foundation for statutory purposes, in accordance with the donations plan. The funds were used for the implementation of educational projects addressed to school and university students, teachers of economic subjects, potential stock exchange investors, and for the current activity of the GPW Foundation.

In addition, GPW made the following donations:

- › PLN 8,800 for the purchase of Allegro gift cards on the occasion of Children's Day for the charges of orphanages supported by GPW,
- › PLN 4,500 for the purchase of vouchers for the charges of the Regional Care and Therapeutic Centre in Gdańsk "Dom im. J. Korczaka",
- › PLN 13,500 to purchase and donate 90 Allegro gift cards worth PLN 150 each for the charges of orphanages taken care of by GPW,
- › PLN 1,500 thousand for the Polish National Foundation.

Towarowa Giełda Energii

In 2023, TGE participated in a number of events and conferences that were key to the energy industry and the development of the Company's offering. The cooperation was based not only on sponsorship activities but also on unpaid substantive support, as TGE representatives acted as experts and special guests. The most important ones included:

- › 14th Solar+ Forum,
- › EuroPOWER Energy Conference,
- › Derivatives Forum Frankfurt 2023,
- › Quick wins for the Polish energy sector - transition security,
- › European Economic Congress,
- › Conference "Energy clusters, local government and industry cooperation - climate action and development",
- › 6th Development Vision Forum,
- › Lower Silesian Energy Congress,
- › GAZTERM Conference,
- › Energy Fair,
- › Scientific Conference "Energy Security - Pillars and Development Perspectives",
- › Regular meetings of the Energy Club.

3.1.2. Promotional and educational activities in 2023

For the Warsaw Stock Exchange, promotion and education regarding the financial environment and the creation of communication in the area of financial markets are very important. In 2023, GPW was shaping the culture of investing savings on the stock exchange through initiatives aimed at capital market participants, investors and school and university students.

One of the most important stock exchange events of last year was the annual Year on the Exchange Gala 2022 which presented awards to the most active and particularly successful participants of the capital market. The organiser of the Year on the Exchange Gala was GPW together with its partners: KDPW, BondSpot and GPW Benchmark.

A new initiative of the Warsaw Stock Exchange, included in the GPW Group Strategy 2023-2027, was the Knowledge Exchange Forum. The idea behind the Forum is to support participants of the Polish capital market in gaining expert knowledge based on reliable and verified sources of information. The first edition of the Knowledge Exchange Forum was organised by GPW together with foreign partners: the World Federation of Exchanges and the International Sustainable Finance Centre.

In January 2023, the Warsaw Stock Exchange was a co-organiser of the "Polish Zone" event, hosted by Powszechny Zakład Ubezpieczeń S.A. during the World Economic Forum in Davos. The aim of GPW's involvement was to promote the activities and initiatives implemented by the GPW Group, organise and participate in discussion panels and business meetings aimed at promoting the Polish capital market on the international arena.

Last year, ESG factors were more and more visible and increasingly in focus, relating to environmental protection, social responsibility and corporate governance. As a market organiser, GPW joined the global trend of activities related to ESG factors on the capital markets and is supporting the development of sustainability initiatives.

Last year, for the ninth time, stock exchanges from around the world took part in the "Ring the Bell for Gender Equality" event. On the occasion of International Women's Day on 8 March at 9 a.m., also in Poland, the bell symbolically rang on the Trading Floor of the Warsaw Stock Exchange to draw attention to the problem of inequality between men and women in the labour market and society. During last year's edition, the symbolic ringing of the stock exchange bell resounded throughout March on more than 100 stock exchanges around the world. In Poland, Ring the Bell for Gender Equality is organised by the UN Global Compact Network Poland and the Warsaw Stock Exchange. The Polish edition of Ring the Bell for Gender Equality had a unique setting last year. The event was accompanied by an exhibition of a replica of the famous New York sculpture Fearless Girl® (by Kristen Visbal, commissioned by State Street Global Advisors), which is intended to represent the strength of spirit of women at the helm of companies today and to inspire and motivate the next generation.

The fifth edition of the ESG Warsaw conference was mainly aimed at listed companies and issuers and was hosted jointly with Goldman Sachs, Erste Securities Polska and CFA Society Poland. The conference presented, among others, how to create a green strategy and how to access sources of financing for sustainable projects, while institutional investors were introduced to the criteria for evaluating companies and the investment process.

The third edition of the ESG Leaders competition took place in 2023, aimed at companies implementing an outstanding ESG strategy, offering innovative products and services with a positive impact on the environment, and running effective information and promotion campaigns in the area of sustainable development. The competition was organised by the Warsaw Stock Exchange and PwC Poland. The strategic partner of the project is the UN Global Compact Network Poland, the partners are the European Bank for Reconstruction and Development, Konfederacja Lewiatan, the Polish Association of Capital Investors (PSIK), the Łukasiewicz Research Network, the Polish Bank Association (ZBP), the Responsible Business Forum (FOB) and the non-financial reporting portal ESGInfo.pl, and the media partner is Dziennik Gazeta Prawna.

GPW conducts educational activities with regard to the Best Practice for GPW Listed Companies, the Best Practice for NewConnect Listed Companies, the Best Practice for NewConnect Authorised Advisers, as well as with regard to the regulations applicable to companies listed on the GPW Main Market and in the Alternative Trading System and to Authorised Advisers. As part of these activities, workshops were organised for companies listed on NewConnect, Catalyst ATS and Authorised Advisers, whose programme included:

- › discussion of the most significant amendments to the ATS Rules,
- › presentation of the new Best Practice for NewConnect Listed Companies 2024,
- › presentation of the new Best Practice for NewConnect Authorised Advisers,
- › presentation of the most important changes concerning the process of introduction of securities to the alternative trading system and the presence of companies on the NewConnect market,
- › discussion of the tasks of Authorised Advisers in the context of listing requirements.

GPW organised and held the Corporate Governance & Compliance Conference "Corporate Governance and Ethical and Compliance Management Standards in Listed Companies" with the participation of national and international experts. The conference programme included discussion of the following issues:

- › legal protection of whistleblowers; whistleblowing through the eyes of market practitioners,
- › modern corporate governance standards, governance reporting,
- › foreign guest speakers: "Corporate governance applications for listed companies", "Global capital market trends and their influence on the revised G20/OECD Principles of Corporate Governance".

The Supervisory Boards Forum conference is a joint initiative of the Warsaw Stock Exchange, PwC and the Association of Listed Companies, providing a platform for communication between supervisory board members, management board members and regulators. The Supervisory Boards Forum included workshop meetings and conferences. The Forum is also a centre for research and analysis on key market challenges and the professionalisation of supervisory board members.

The Exchange organised and co-organised a number of events (conferences and webinars) aimed at investors.

In 2023, GPW once again partnered with ING N.V. and was the Main Partner of ING's investment competition, which invests virtual funds in Turbo certificates, selected stocks and ETFs.

The fourth edition of the Warsaw Passive Investment Conference, an annual conference organised by GPW in cooperation with Beta Securities Poland S.A. and the Brokerage Office of mBank, took place in 2023. It is a forum that brings together institutional investors, fund managers, issuers and individual investors. The conference is designed to increase knowledge of, among others, the prospects for passive investing, as well as building investment portfolios using ETFs.

September 2023 saw the first edition of the Warsaw Structured Products Day, a conference dedicated to structured products listed on GPW, organised by GPW in cooperation with ING N.V. and Raiffeisen Bank International. The aim of the conference was to raise interest in the structured products market, to educate individual and institutional investors in Poland about the market (primarily to reach employees of Exchange Members who will be able to get their clients interested in structured products) and to present foreign experiences and practices in the use of structured products in asset management.

GPW, in cooperation with HANetf, organised a webinar on the first ETC on physical gold, which was newly listed on GPW in August 2023. The aim of the webinar "Discover ETCs on GPW" was to explain the mechanism of ETC-type instruments and the first such product listed on GPW (RMAU).

The annual conference on passive investing "Passive Revolution" was organised by Stockbroker.pl. GPW was a Strategic Partner of the Conference, which aims to show what passive funds are, how to use them in passive and active investing, and to introduce current trends in the ETF and index funds market.

The annual conference "Structured Retail Products Europe" was organised by Euromoney Trading Limited in London. It is Europe's most important structured products conference. GPW had the opportunity to present its market offering, the evolution of the market (growth since 2020) and its potential.

Three editions of the GPW Innovation Day took place in 2023. It is one of the largest events of its kind in Poland where innovative companies listed on GPW markets meet individual and institutional investors in an online format. The Innovation Day also features presentations by companies that are yet to be listed on GPW.

The conference "Artificial Intelligence on the Capital Market" organised by GPW is an event which seeks to develop the range of information and services available to support investors in the process of analysing stock market data. Modern technologies such as algo trading or artificial intelligence are becoming an important element of today's capital markets.

GPW, in co-operation with the GPW Foundation, organised two conferences for investors interested in capital markets, investing and long-term savings under the title "Investing in times of uncertainty".

The "Day with Culture on GPW" was an event aimed at discussing the financing of creativity and art in Poland, both in the real and digital world, as well as the role of new technologies in this process and the presentation of the assumptions of the GPW Private Market project.

In addition, GPW organised and co-organised conferences to introduce investors to companies in various sectors of the economy:

- 10th edition of "Gaming on the Exchange", an event where specialists in the games production industry discussed the most important trends in the sector,
- International Investor Day, a conference organised jointly with InnerValue dedicated to companies successfully building their business on foreign markets,
- Space Day Conference, an event organised jointly with CC Group dedicated to the space industry. The conference presented companies from this sector, both listed on GPW and unlisted,
- Progressive Investor Day - a conference organised jointly with InnerValue devoted to companies using funding through GPW.

In 2023, GPW established a year-long cooperation with the following media: FXMAG, Investor Zone, Stockwatch and Comparic.TV to educate and promote GPW markets and products to retail investors.

In 2023, the Exchange for the first time organised a training course entitled "Discover GPW" for employees of brokerage houses and banks. The aim of the training was to present GPW's current offerings, bring stock market issues closer to the participants and disseminate knowledge of stock market products among private banking representatives, as well as to build relationships with distributors who have direct contact with existing and potential retail investors.

GPW prepared 5 episodes of "It's worth being a listed company: Get to know us better", a series of video materials and accompanying podcasts. Each material is devoted to a listed company that presents its business profile, its history and the challenges it has faced. The CEO of the company talks about the advantages of the company's presence on the stock exchange and how it can contribute to the company's further development. This is accompanied by podcasts of interviews with the CEO, available on the stock exchange's YT channel and #GPWpodcasts.

GPW cooperated in the organisation of events and conferences with many organisations, societies, chambers of commerce and institutions, such as the Centre for Strategic Thought, ICAN Institute (MIT Sloan Management Review Poland), the Paga Foundation, the Poland Great Project Foundation, the Association of Alumni of Master of Business Administration, the Patent Office of the Republic of Poland, the "Dialog" Club of CFOs and the Academic Circles at universities.

The educational activities of GPW are largely focused on the GPW Foundation, which was established in May 2015. The Foundation's projects and initiatives reach a wide range of audiences, from primary school students, to investors at various levels, to listed companies and those planning to go public on GPW markets. The educational activities are described in detail in section 4.9.3 of this Report.

Last year, GPW representatives gave many lectures to school and university students on the functioning of the stock exchange at events organised by the GPW Foundation.

Towarowa Giełda Energii

Towarowa Giełda Energii has for more than 20 years offered educational initiatives for market participants, TGE members the media and academics. The initiatives promote TGE as a transparent energy trading venue which determines reference prices. They also raise awareness about the benefits of trading on the exchange. One of TGE's key priorities is an ongoing dialogue with the market, carried out among others through advisory bodies to the TGE Management Board, which include the Market Council and the Agricultural Market Council, as well as activities addressed to market participants.

Education and partnership

Towarowa Giełda Energii was involved in 2023, as in previous years, in projects aimed at the school and academic community. Among them were:

- › 15th National Energy Competition organised by the Climate Aware Foundation,
- › Energy Academy, organised by the Lesław A. Paga Foundation,
- › Go4Poland programme and the Student Session on the Trading Floor project implemented by the GPW Foundation.

As part of its efforts to enhance the knowledge of market participants in 2023, TGE organised two seminars "The impact of the current market situation on the exchange trading surveillance process" and "The exchange trading surveillance process carried out by trading participants in the existing market conditions". A workshop and exam on sampling of cereal grains, pulses and pulse products and oilseeds were developed as part of the Exchange Agricultural Market.

Training and examinations for TGE Broker candidates

In 2023, TGE delivered six training rounds (in Polish and/or English) for TGE Broker candidates closed with examinations for 92 participants. All training was delivered by means of remote communication. As a result of the training programmes, 80 TGE Broker certificates were issued in 2023 authorising the holders to represent an Exchange Member or OTF Member in transactions on the Exchange Commodity Market, the Organised Trading Platform, and the Financial Instrument Market.

Media competition and workshop

In 2023, for the ninth time, TGE organised the "Platinum Megawatts" Media Competition to promote high quality journalism governed by the principles of ethics and objectivity, reporting complex issues of the energy sector in an accessible way. The Minister of State Assets, the Minister of Climate and the Environment and the President of the Energy Regulatory Authority were honorary patrons of the 2022 edition. Partners included: TAURON Polska Energia S.A. (Strategic Partner), Fortum Power and Heat Polska Sp. z o.o., GAZ-SYSTEM S.A., Izba Rozliczeniowa Giełd Towarowych S.A., PGE Polska Grupa Energetyczna S.A., PGE Energetyka Kolejowa S.A., Polskie Sieci Elektroenergetyczne S.A., Respect Energy S.A. and Veolia Energy Contracting Poland Sp. z o.o. The award ceremony took place on 24 May 2023. A workshop for journalists on the energy transition and the challenges facing market participants was organised in cooperation with TAURON Polska Energia S.A. on 15 November.

Information meetings for TGE members

TGE organised the 15th Trading Forum as part of a conference for market participants on 26-28 June 2023. Guests could participate in the main part, which consisted of two panels: "The energy market in the new regulatory environment" and "The gas market - opportunities and challenges in the area of infrastructure and regulation". In addition, the event included three thematic workshops: New Product Development, New Animation Model and New Billing System. The Exchange Gala 2022 was held during the 2023 Trading Forum. The Platinum Megawatt awards went to the most active companies and traders on the stock exchange.

Dialogue with market participants

The dialogue with market participants, takes place among others via the Market Council, an advisory body to the TGE Management Board with regard to the development of the product offer and the best solutions for entities operating on the exchange. The Council is composed of the representatives of eleven industry associations including: Gas Transmission Operator GAZ-SYSTEM S.A., Chamber of Brokerage Houses, Chamber of Industrial Energy and Energy Recipients, Gas Industry Economic Chamber, Polish Association of Professional Heat and Power Plants, Association of Energy Trading, Polish Economic Society of Power Plants, Renewable Energy Association, Polish Wind Energy Association, Association of Private Employers of the Energy Industry (Lewiatan), EFET, as well as the representatives of TGE and IRGiT.

In addition to the Market Council, the Agricultural Market Council brought together representatives of the agricultural and food industry to provide opinions and advice to the TGE Management Board on matters concerning the development of the

Agricultural Market, including the Authorised Warehouse System. The Agricultural Market Council comprises representatives of the most important industry organisations related with the agricultural sector, scientific institutes, the public administration and the GPW Group.

Development of the exchange market and promotion of TGE

Last year at TGE was marked by efforts aimed at the development of the exchange market, both domestically and internationally. TGE representatives spoke, among others, at the SEEGAS initiative, set up by the Energy Community Secretariat to coordinate activities and harmonise outlooks and practices with regard to the development of a common and integrated gas market in the South East European region. The initiative is open to all stakeholders working on the creation of national gas hubs, pan-European stakeholders and experts from national authorities responsible for regulating the energy and financial sectors in the SEEGAS countries.

TGE experts work in international working groups established to develop optimal tools for the integration of the European energy market. The groups operate within the NEMO Committee - Market Coupling Steering Committee.

In 2023, TGE continued its activities under the MoU documents signed a year earlier, aimed at launching the biomethane and hydrogen market in Poland. TGE representatives actively participated, among others, in the work of the working groups operating at the Ministry of Climate and Environment: the Coordinating Council for the Hydrogen Economy, the Coordinating Council for the Development of Biogas and Biomethane, and Group 7 on Avoided Emissions (the biomethane team).

In April 2023, Towarowa Giełda Energii and the Moldovan state company Energocom signed a Memorandum of Understanding (MoU) in Chisinau, the capital of the Republic of Moldova. The aim of the Memorandum of Understanding is to exchange experience between the organisations, including, above all, introducing the Moldovan partner to the principles of operation of the commodity exchange markets for electricity and natural gas. In September 2023, TGE, IRGiT and the Ukrainian Energy Exchange (UEEX) signed a Memorandum of Understanding in Warsaw. The main goal of the tripartite document is to strengthen cooperation between the Polish and Ukrainian partners, building on the knowledge and experience of TGE Group's exchange market.

GPW Benchmark

In 2023, GPW Benchmark co-organised the 3rd Interest Rate Benchmark Congress, which took place on 15-16 May. The leading topics at this edition of the Congress were issues related to the WIBOR/WIRON transition. The event featured presentations by leading benchmark experts and panel discussions, as well as workshop and training sessions on the most important aspects related to the benchmark reform.

In 2023, the Vice-President of the Management Board and staff of GPW Benchmark were involved in the work of the Benchmark Reform National Working Group. The Benchmark Reform National Working Group (NGR) was established in connection with the planned reform of benchmarks in Poland, including the introduction of a new interest rate benchmark with inputs of ON (overnight) transactions. The NGR's work aims to ensure credibility, transparency and reliability in the provision and use of the new interest rate benchmark.

In educational activities, GPW Benchmark conducted, among others: a workshop for representatives of cooperative banks "Replacing WIBOR with WIRON" (3 March); Training for audit firms and domestic banks on "External Audit of Input Data for benchmarks under the BMR" (22 June, 29 June, 18 July), and a webinar "Provision of the WIBOR benchmark - legal status and case law" (27 October). In addition, GPW Benchmark Management Board Members actively participated in many educational initiatives covering the topic of interest rate benchmarks (European Financial Congress 2023; 6th Development Vision Forum; 3rd National Scientific Conference Copernican Digital Forum; Convention for Cooperation and Development of Polish Cooperative Banking 2023; Forum of Cooperative Bank Leaders 2023). GPW Benchmark's educational activities were also addressed to journalists, including participation of Aleksandra Bluj (Vice-President of the Management Board) in a Polish Bank Association webinar for journalists which discussed the WIBOR and WIRON benchmarks, the process of providing benchmarks, subsequent stages of the Roadmap for benchmark reform, and examples of reforms from other countries.

3.2. Internal control and risk management system in the preparation of financial statements

The preparation of financial statements is governed by:

- › the International Financial Reporting Standards;
- › the Accountancy Act of 29 September 1994;
- › the Act of 11 May 2017 on Auditors, Audit Firms, and Public Supervision;
- › the Articles of Association of the Warsaw Stock Exchange;
- › the Accounting Policy of the Warsaw Stock Exchange and the accounting policy of the subsidiaries;
- › internal accounting procedures.

The preparation of financial statements is subject to the internal control system and the risk management system, which ensures fair and true financial reporting in compliance with laws and internal regulations.

The internal control system in the preparation of financial statements includes:

- › controls exercised by all employees as part of their responsibilities;
- › functional controls exercised as part of responsibilities of supervision of organisational units;
- › checks of GPW's compliance with laws and internal regulations.

Risk management in the preparation of financial statements involves the identification and assessment of risks, as well as the development and implementation of measures which mitigate risks. In particular, GPW on an on-going basis monitors amendments of laws and regulations applicable to the preparation of financial statements, updates the Company's internal regulations and harmonises its IT systems.

The Company's Financial Accounting Section and its Reporting Section are responsible for ensuring compliance with internal and external regulations. The Financial Reporting Section is responsible for keeping and closing the books of account. The Reporting Section is responsible for the recognition and disclosure of accounting data in financial statements and ensuring that financial statements are prepared in compliance with the accounting regulations listed above. Books of account are kept and closed and financial reports are prepared under substantive supervision of and in co-ordination with the Chief Accountant and the Director of the Financial Department. The Company keeps its books of account using computer technology. The Company uses a financial and accounting system implemented in August 2011, which includes embedded mechanisms protecting against destruction, modification or concealment of records. Controls are carried out at the stage of entering accounting records. In addition, financial and accounting processes are subject to audits conducted by the Internal Audit Department in accordance with the annual audit plan approved by the Exchange Supervisory Board following a positive opinion of the Audit Committee.

The Company's Management Board and the members of the Exchange Supervisory Board are required to ensure that financial statements and activity reports comply with the requirements defined in the Accountancy Act of 29 September 1994. GPW's Audit Committee, which is part of its Supervisory Board, controls the financial reporting process. Within its powers, the Audit Committee monitors the financial reporting process, financial audit functions, and the independence of the auditor. GPW's auditor is appointed by the Exchange Supervisory Board by recommendation of the Audit Committee from among renowned audit firms. Audit firms of subsidiaries are appointed by their Supervisory Boards. The Audit Committee also monitors the effectiveness of the internal control, internal audit, and risk management systems. The responsibilities of the Exchange Supervisory Board include assessment of the Exchange Management Board's reports on the activity of the Company and the GPW Group, as well as separate and consolidated financial statements, and presentation of a written report on the results of the assessment to the General Meeting.

In the opinion of the Company, the division of tasks related to the preparation of financial statements in the Company, review of financial statements by the auditor, monitoring of the preparation and review of financial statements by the Audit Committee, and assessment of financial statements by the Exchange Supervisory Board ensure that information presented in financial statements is true and fair.

3.3. Auditor

The procedure for appointment of the audit firm by Giełda Papierów Wartościowych w Warszawie S.A. is defined in its internal document: Audit Firm Selection Policy and Procedures, drafted in accordance with:

- › Regulation 537/2014 on specific requirements regarding statutory audit of public-interest entities, and
- › Act of 11 May 2017 on Auditors, Audit Firms, and Public Supervision.

The document defines the maximum period in which an audit firm or a member of its network may provide audits of financial statements. The period is 10 years. After the end of the period, the audit firm or a member of its network may not be selected to audit financial statements of GPW for a period of another 4 years.

The selection of an audit firm is a responsibility of the Exchange Supervisory Board. The selection of an auditor is opened with a resolution of the Exchange Supervisory Board concerning the selection of an auditor. Next, audit firms are invited to submit offers. The Exchange Supervisory Board selects the offer of an audit firm following a procedure which ensures independent and equitable selection of the best offer according to a number of criteria (including experience and position of the audit firm, knowledge of the financial market, audit services provided to public companies, price of the service). The Audit Committee is responsible for presenting a recommendation of an audit firm to audit financial statements to the Exchange Supervisory Board. As the body responsible for the selection of the auditor, the Exchange Supervisory Board passes a resolution appointing the auditor. The Exchange Management Board signs the contract with the audit firm.

The entity authorised to audit the separate financial statements of GPW and the consolidated financial statements of the GPW Group for the financial year ended 31 December 2023 and to review the interim financial statements of GPW and the GPW Group in the year ended 31 December 2023 was KPMG Audyt spółka z ograniczoną odpowiedzialnością sp. k., with its seat in Warsaw at ul. Inflancka 4A, 00-189 Warsaw, entered by the National Chamber of Auditors in the list of entities authorised to audit financial statements, entry no. 3546.

The contract for the audit and review of the Exchange's separate financial statements and the Group's consolidated financial statements was signed on 8 April 2021 for a period of three years.

Table 18 KPMG Auditor's fees for services provided to GPW Group (net) [PLN'000]

	Year ended 31 December			
	2023		2022	
	GPW S.A.	Subsidiaries	GPW S.A.	Subsidiaries
Audit of the annual financial statements	358	389	358	389
Other assurance services (including review of financial statements)	90	-	117	-
Other services	-	4	-	-
Total auditor's remuneration	448	393	475	389

With respect to control and monitoring of the independence of the audit firm which audits the issuer's financial statements, KPMG submitted a written declaration concerning:

- › all relations (including non-audit services) impacting the independence of audit;
- › risks to continued independence caused by any relations; and
- › security measures mitigating the risks.

KPMG provided no prohibited services to GPW or its subsidiaries in 2023.

The terms and conditions of the auditor's non-audit services are defined in the "Policy of Buying Non-audit Services from the Auditor and Companies of Its Network".

The audit firm which audits financial statements of GPW and consolidated financial statements of the GPW Group and members of its network cannot provide directly or indirectly any prohibited services to entities of the GPW Group. Such services cannot be provided in the following periods:

- › from the start of the audited period to the issuance of the audit report; and
- › in the financial year directly preceding the audited period – with respect to design and implementation of internal control procedures or risk management procedures related to the preparation or controlling of financial information or the preparation and implementation of technological systems for financial information.

Allowed services may only be provided where their scope is unrelated to the tax policy and the Audit Committee performs a threat assessment and an analysis of independence.

Fees for allowed services, which are not statutory audit services, are capped. Where the audit firm which reviews and audits financial statements of GPW and consolidated financial statements of the GPW Group provides such services to GPW or entities controlled by GPW at least in three successive financial years, the total fee for such services is capped at 70% of the average fee paid to the auditor in the last three successive financial years for statutory audits of financial statements of GPW and the GPW Group.

3.4. Diversity policy

As at the publication date of this report, the Company follows a diversity policy defined in internal regulations: Warsaw Stock Exchange Diversity Policy approved on 21 January 2021 and updated on 8 November 2021. The Company followed diversity guidelines defined in the Remuneration and Nominations Committee Rules, as well as the formal diversity policy in the selection of Members of the GPW Management Board, developed and approved by the Exchange Supervisory Board on 17 December 2018, updated as at 27 October 2021.

In particular, the policy addresses balanced gender representation among candidates taking into account their qualifications, knowledge and experience necessary to perform the functions of a member of the Exchange Management Board.

Diversity and openness are at the heart of GPW's business operations and underpin the Exchange's recruitment and employment policy. As a socially responsible employer, the Exchange follows the principles of equal treatment and non-discrimination. GPW's diversity policy creates a work environment where everyone feels respected and appreciated, develops their talents and predispositions, and achieves their potential while contributing to the success of the entire Group.

Guided by respect for a diverse and multicultural community, GPW attaches special importance to equal treatment and equal opportunities of employees in professional development and promotion regardless of gender, age, disability, health status, race, nationality, ethnicity, religion or lack of religious belief, political opinion, union membership, family status, lifestyle and any other circumstances which could give direct or indirect grounds for discrimination. GPW ensures that those principles are respected with regard to all employees irrespective of the form, scope and basis of employment or affiliation.

The diversity policy defines the principles followed in recruitment in order to recruit competent employees with diverse expertise and experience, adequate education, regardless of origin, ensuring comprehensive and professional activity of the Company in compliance with the principles of diversity and its benefits.

The diversity policy promotes measures which build a corporate culture based on versatility, innovation and diversity.

GPW follows a policy of non-discrimination and equal treatment based on the applicable provisions of the Labour Law, the Code of Ethics, the Talent Development Programme Rules, and the employee competences appraisal model.

The Company is working to formalise the existing diversity rules in a diversity policy covering all employees of the GPW Group. The following subsidiaries have implemented policies in this regard: TGE, BondSpot, GPW Benchmark, IRGIT, GPW InfoEngine, GPW Ventures, and GPW Tech.

3.5. GPW share capital, shares, and bonds

The share capital of the Company amounts to PLN 41,972,000 and is divided into 41,972,000 shares with a nominal value of PLN 1 per share including:

- › 14,772,470 series A preferred registered shares, and
- › 27,192,530 series B ordinary bearer shares.
- › 27,199,530 series B ordinary bearer shares are introduced to trading on GPW (64.80% of all shares representing 47.93% of the total vote).

The series A registered shares are preferred as follows:

- › each series A share represents two votes, and
- › shareholders who hold more than 25% of the total number of series A registered shares (i.e., more than 10,493,000 series A registered shares) are not subject to the limitation on voting rights laid down in § 9(4)(2) of the Articles of Association.

Holders of series A preferred registered shares may convert series A shares to series B ordinary bearer shares. Conversion of preferred registered shares to ordinary bearer shares results in a change of the number of votes conferred by each share from two votes to one vote per share.

On 14 March 2019, on request of a shareholder of the Company, pursuant to Article 334(2) and Article 341(1) of the Code of Commercial Companies and Article 4(2) and (3) of the Company's Articles of Association, the GPW Management Board passed a resolution converting 7,000 series A preferred registered shares into series B ordinary bearer shares. The Company communicated the conversion in Current Report No. 2/2019.

GPW has no information as to agreements which could result in any changes in the future in respect of the proportions in shares held by the existing shareholders.

Table 19 GPW shareholders as at 31 December 2023

	Shares		Votes	
	#	%	#	%
Treasury of Poland – preferred shares (series A)	14 695 470	35.01%	29 390 940	51.80%
Other shareholders – preferred shares (series A)	77 000	0.18%	154 000	0.27%
Other shareholders – bearer shares (free float; series B)	27 199 530	64.80%	27 199 530	47.93%
Razem	41 972 000	100%	56 744 470	100%

As at 31 December 2023, GPW's biggest shareholder was the State Treasury of the Republic of Poland which held 14,695,470 shares representing 35.01% of all shares and 51.80% of the total vote. The threshold of 5% of the share capital was also exceeded by Allianz Polska Otwarty Fundusz Emerytalny, which held 2,242,998 shares representing 5.34% of all shares.

According to the Company's best knowledge, no persons managing and supervising the Company hold shares in its related parties or GPW bonds.

The Company did not purchase its own shares in 2023. The Company has no employee share scheme; accordingly, it has no control system for an employee share scheme.

3.6. Controlling rights and restrictions of rights from shares

3.6.1. Controlling rights

As at the publication date of this report, the State Treasury of the Republic of Poland holds 14,695,470 series A registered shares preferred as to vote (one share gives two votes at the General Meeting); consequently, the State Treasury may exercise 51.80% of the total vote at the General Meeting. Thus, the State Treasury as a shareholder controls the Company and may exercise strategic control of the Company by exercising voting rights at the General Meeting.

The State Treasury may exercise most of the votes at the General Meeting and may elect most of the members of the Exchange Supervisory Board. Furthermore, according to the Articles of Association of the Warsaw Stock Exchange, the President of the Management Board is elected by the General Meeting and the other Members of the Management Board are elected by the Exchange Supervisory Board. The Exchange Supervisory Board appoints Members of the Management Board following a selection procedure before the Exchange Supervisory Board which verifies and evaluates the qualifications of candidates and selects the best candidate. The terms and conditions of the selection procedure are defined by the Exchange Supervisory Board.

3.6.2. Restrictions on exercise of voting rights

According to the Articles of Association, the voting right of shareholders is limited to the extent that none of them may exercise at the General Meeting more than 10% of the overall number of votes in GPW on the day when the General Meeting is held, provided that, for the purpose of determining obligations of acquirers of significant blocks of shares stipulated in the Act on Public Offering and the Conditions of Introduction of Financial Instruments to an Organised Trading System and on Public Companies, such limitation of the voting right will be considered as not existing. The above limitation of voting right does not apply to:

- › shareholders who on the day when the General Meeting passed a resolution on introducing the restriction referred to above (i.e., 30 July 2010) were authorised due to holding shares representing more than 10% of the overall number of votes existing in the Company (the State Treasury of the Republic of Poland is the only such shareholder);
- › shareholders who are authorised due to holding more than 25% of the total number of shares preferred as to voting right referred to in § 4(1)(1) of the Articles of Association, i.e., shareholders authorised due to holding more than 10,493,000 series A registered shares preferred as to voting right (the State Treasury of the Republic of Poland was the only such shareholder as at the publication date of this report).

In order to limit the voting right, the votes of shareholders between which a domination or dependency relationship exists are summed up in accordance with the rules laid down in the Company's Articles of Association. The Articles of Association define detailed limitations of the voting right of shareholders between which a domination or dependency relationship exists. Should any doubts arise, the provisions regulating the voting right restrictions should be construed in accordance with Article 65(2) of the Civil Code.

No limitations or restrictions have been imposed on the transfer of proprietary rights to the Company's securities.

3.6.3. Obligations of shareholders related to material blocks of GPW shares

Obligations of GPW shareholders concerning material blocks of shares are subject to the provisions applicable to public companies laid down in the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading, and Public Companies (including Article 69 which defines the threshold at or above which the shareholder is required to notify the Polish Financial Supervision Authority and the issuer of shares).

GPW is also subject to the provisions of the Act on Trading in Financial Instruments, in particular Article 24 which requires a person or entity intending to acquire or take up, directly or indirectly, shares of the Warsaw Stock Exchange representing at least 5% of the total number of votes or shares or causing it to reach or exceed 5%, 10%, 15%, 20%, 25%, 33% or 50% of the total number of votes or shares to notify the Polish Financial Supervision Authority. The Polish Financial Supervision Authority may raise objections within three months of the notification. If the Polish Financial Supervision Authority raises no objections, the acquisition of shares on the terms laid down in the notification may take place after three months from the notification or at the date set by the Polish Financial Supervision Authority. If GPW shares are acquired in the absence of objections of the Polish Financial Supervision Authority earlier than after three months or earlier than the date set by the Polish Financial Supervision Authority or in breach of objections of the Polish Financial Supervision Authority, any exercise of rights attached to GPW shares is ineffective.

3.7. Rules for amending the GPW Articles of Association

Any amendment to the Articles of Association must be passed in the form of a General Meeting resolution adopted by a qualified majority of three fourths of votes. Moreover, in accordance with Article 9(1) of the Articles of Association, a

resolution on amending the Articles of Association may be adopted only by such General Meeting at which at least 50% of total votes in the Company are represented.

Amendments to the Articles of Association are effective if approved by the Polish Financial Supervision Authority and registered by the competent court. The Exchange Supervisory Board is authorised, at each time after the court decision to register amendments to the Articles of Association has become final, to adopt the consolidated text of the Company's Articles of Association.

The most recent amendments of the Articles of Association were approved in Resolution No. 22 of the Annual General Meeting on 26 June 2023 and resulted, inter alia, from amendments to the Code of Commercial Companies, which came into force on 13 October 2022. The resolution of the GPW General Meeting was published in current report no. 15/2023. The amendments to the Articles of Association were approved by the Polish Financial Supervision Authority on 28 July 2023 and registered by the District Court for the Capital City of Warsaw, 12th Commercial Division of the National Court Register, on 12 September 2023, as announced by the Company in current report no. 18/2023. The consolidated text of the Company's Articles of Association was approved by the Exchange Supervisory Board on 19 October 2023 and was attached to current report no. 20/2023.

3.8. General Meeting

3.8.1. Main powers of the General Meeting

The powers of the General Meeting include decisions on the organisation and operation of the Company subject to the Code of Commercial Companies and Partnerships and the Articles of Association. The powers of the General Meeting include: to define the terms of remuneration of Members of the Exchange Supervisory Board and the Exchange Management Board and the appointment and dismissal of the President of the Management Board; to establish a limited property right or contractual right over the Exchange's business or its organised part; to sell or encumber for the Exchange any shares held by the Exchange in entities carrying on business activity in the area of trading in financial instruments with property right or contractual right if such sale or encumbrance concerns shares whose value at the selling price or, for encumbrance, at the nominal price is greater than 1/5 of the Company's share capital; to acquire or sell real property, perpetual usufruct right or an interest in real property; to acquire treasury shares.

3.8.2. Procedures of the General Meeting

The General Meeting is the supreme authority of the Exchange. The powers of the General Meeting, the procedure for convening and participating in the General Meeting are laid down in the Code of Commercial Companies and Partnerships, the Company's Articles of Association (in particular Articles 8 - 12), the General Meeting Rules, and the Rules of Participating in the General Meeting by Means of Electronic Communication. The Articles of Association and the Rules are available on the GPW website under the tab Regulations.

The General Meeting may be held as:

- › an annual general meeting summoned once per year within 6 months after the end of each financial year, i.e., no later than the end of June;
- › an extraordinary general meeting summoned in the events laid down in the generally applicable regulations and in the Articles of Association.

The General Meeting is summoned by posting an announcement on the GPW website and in the procedure required for the publication of current reports by public companies. An announcement and the materials presented to the shareholders are available from the day that the General Meeting is summoned on the GPW website under the tab About the Company/General Meeting.

The General Meeting resolutions are passed in an open ballot, subject to other regulations, by an absolute majority of votes, save for resolutions which require a qualified majority in accordance with the Code of Commercial Companies and Partnerships or the Articles of Association. Secret ballot is ordered for elections and motions for revoking members of the Company's authorities or the Company's liquidators, or for holding them liable, and for other personal issues. Additionally, a secret ballot must be ordered if requested by at least one shareholder present in person or by proxy at the General Meeting.

It is possible to participate in the General Meeting by means of electronic communications if so decided by the person convening the General Meeting. Such participation includes two-way communication in real time where shareholders may table motions, requests and speak during the General Meeting from a location other than the General Meeting and exercising the voting right during the General Meeting in person by the shareholder or through a proxy. The Company provides a real-time broadcast of the General Meeting.

3.8.3. Shareholder rights

The rights of shareholders and the procedure of exercising the rights at the General Meeting are laid down in the Code of Commercial Companies and Partnerships, the Articles of Association, the General Meeting Rules, and the Rules of Participating in the General Meeting by Means of Electronic Communication.

A shareholder or shareholders representing at least 30% of the share capital or at least 30% of total votes of the Company may summon an Extraordinary General Meeting. In addition, a shareholder or shareholders representing at least 1/20 of the share capital may request that items be put on the agenda of the next General Meeting under generally applicable regulations.

Only persons who are shareholders of the Company sixteen days before the date of the General Meeting (record date) are eligible to participate in the General Meeting. Shareholders may participate and exercise their rights at the General Meeting in person or through a proxy. Each shareholder may speak on matters put on the agenda.

A detailed description of the procedures of participation in the General Meeting and exercising the voting rights is presented at each time in the announcement of the General Meeting, the General Meeting Rules, and the Rules of Participating in the General Meeting by Means of Electronic Communication.

3.8.4. Annual General Meeting

The Annual General Meeting of GPW was held on 26 June 2023 with an agenda including review and approval of the Management Board's report on the activity of the Company and the Company's Group and the financial statements of the Company and the Company's Group for 2022, review of reports of the Exchange Supervisory Board on the assessment of those reports and financial statements and the motion of the Management Board concerning 2022 profit distribution, review of the report of the Exchange Supervisory Board for 2022, a resolution concerning distribution of the Company's profit for 2022, vote of discharge of duties to the Members of the Exchange Supervisory Board and the Exchange Management Board, review of the Management Board's report on representation expenses as well as expenses for legal services, marketing services, public relations and social communication services and management consulting services for 2022, an opinion on the report on remuneration of members of the Management Board and the Supervisory Board of the Warsaw Stock Exchange, approval of amendments to the Company's Articles of Association. The resolutions of the Annual General Meeting of 26 June 2023 were published in current report no. 15/2023 of 26 June 2023 available on the Company's website in the Investor Relations tab.

3.9. Supervisory Board and Committees

3.9.1. Appointment and dismissal of Supervisory Board members

According to the Articles of Association, the Exchange Supervisory Board consists of five to seven members appointed for a joint three-year term. The term of office will be calculated in full financial years. Members of the Exchange Supervisory Board are elected and dismissed by the General Meeting. In the event of voting in groups under Article 385(3) of the Code of Commercial Companies and Partnerships, the Exchange's Supervisory Board is composed of seven members.

The Exchange Supervisory Board elects the Chairman and the Deputy Chairman of the Exchange Supervisory Board from amongst its members. The Exchange Supervisory Board may elect the Secretary to the Exchange Supervisory Board from amongst its members.

According to the Articles of Association, the General Meeting appoints:

- › at least one of the Exchange Supervisory Board members from among the candidates proposed by the shareholders being exchange members; and
- › at least one of the Exchange Supervisory Board members from among the candidates proposed by the shareholder or shareholders who jointly represent at least 10% of the share capital not being exchange members.

Candidates nominated by both these groups need to meet the criteria for independence laid down in Article 14 of the Articles of Association. A candidate must be nominated no later than 7 days before the scheduled date of the General Meeting. The nomination must be accompanied by the candidate's CV and specify the number of the shares and the number of votes the shareholder(s) nominating the given candidate represent(s). When voting on the candidates nominated by the shareholders who at the same time are exchange members, the first candidates put to vote are these nominated by the shareholders being exchange members representing the highest number of votes. If no candidates are nominated by the shareholders who at the same time are exchange members or by minority shareholders, the General Meeting elects all the Exchange Supervisory Board members on the general terms and conditions. If at least one candidate is nominated by the shareholders who at the same time are exchange members or by minority shareholders, the General Meeting elects the remaining Exchange Supervisory Board members on the general terms and conditions. If the General Meeting does not elect two Exchange Supervisory Board members following the procedure set out above in spite of candidates having been nominated by the shareholders, another General Meeting is convened, where the elections are held of such Exchange Supervisory Board

members. If another General Meeting is convened, the shareholders must nominate other candidates than these originally nominated. The Exchange Supervisory Board member(s) elected following the procedure set out above may be dismissed only with the simultaneous election of an Exchange Supervisory Board member following the same procedure. In the event when due to the expiration of a mandate in the course of the term of office, except for dismissing an Exchange Supervisory Board member, the Exchange Supervisory Board does not include an Exchange Supervisory Board member elected following the procedure set out above, the elections are held not later than at the nearest Annual General Meeting.

According to Article 14(1) of the Articles of Association, at least two members of the Exchange Supervisory Board shall meet the independence criteria defined for members of audit committees in the regulations governing the functioning of audit firms and auditors and defined in the corporate governance principles issued under the Exchange Rules. Members of the Exchange Supervisory Board who meet the independence criteria immediately provide the Company and the Exchange Supervisory Board with a declaration to the effect that they are no longer independent members. If a candidate nominated by shareholders being exchange members and minority shareholders who does not meet the independence criteria is elected an Exchange Supervisory Board member, such election will be ineffective in respect of the Company, and if the Exchange Supervisory Board member no longer meets the independence criteria during the term of his/her office, his/her mandate shall expire.

3.9.2. Powers and composition of the Supervisory Board

The powers of the Exchange Supervisory Board are laid down in the Articles of Association as follows:

- › exercising on-going supervision of the activity of the Company;
- › appointing and dismissing members of the Management Board (except the President of the Exchange Management Board);
- › assessing the financial statements for the previous financial year and the Exchange Management Board's report on the activity of the Company;
- › approving a report of the Exchange Management Board on representation expenses, as well as legal fees, marketing service charges, public relations and social communications service charges, and management advisory service charges;
- › approving a report on compliance with best practice defined by the Prime Minister under the Act of 16 December 2016 on Management of State Assets;
- › assessing the Exchange Management Board's proposals on the distribution of profits or covering the losses;
- › presenting to the General Meeting an annual concise assessment of the situation of the Company including: assessment of the financial situation of the Company and the Company's Group; assessment of the internal control system and the system of management of risks material to the Company; assessment of the manner of the Company's fulfilment of the disclosure requirements concerning application of corporate governance rules determined by the Exchange Rules and regulations concerning current and periodic information submitted by the issuers of securities; assessment of the policy conducted by the Company with regard to sponsoring, charitable and other similar activities; assessment of the functioning of the remuneration policy in the Company;
- › considering and presenting opinions on the items to be placed on the General Meeting's agenda;
- › presenting to the General Meeting for approval a written report for the previous financial year in accordance with Article 382 § 3 of the Commercial Companies Code and with the Best Practice for GPW Listed Companies 2021;
- › preparing the Company's remuneration report for the General Meeting's opinion and preparing and submitting to the General Meeting the annual report on the evaluation of the Company's remuneration policy;
- › approving, at the request of the Exchange Management Board, the annual consolidated and separate financial plan and monitoring its implementation;
- › adopting the Exchange Supervisory Board Rules;
- › adopting the Exchange Rules at the request of the Exchange Management Board and amendments to these Rules;
- › approving, at the request of the Exchange Management Board:
 - ✓ the whistleblowing procedure,
 - ✓ the internal audit rules and annual internal audit plans;
 - ✓ the Exchange Management Board Rules;
 - ✓ the organisational chart defining the internal division of competences on the Exchange Management Board;
 - ✓ the risk management strategy;
 - ✓ the conflict of interest management rules;

- › determining the rules on which the Exchange Management Board members and the Exchange Supervisory Board members buy and sell the securities listed on the stock exchange operated by the Company;
- › approval of the diversity policy for members of the Exchange Management Board defined by the nomination and remuneration committee;
- › approval of the policy of training of members of the Exchange Management Board and members of the Exchange Supervisory Board defined by the nomination and remuneration committee;
- › approval of the audit firm selection policy and selection procedure for the statutory audit of financial statements defined by the audit committee;
- › approval of the policy of non-audit services provided by the auditor and companies of its network defined by the audit committee;
- › issuing opinions on the sponsoring policy of the Company and the donation rules;
- › issuing opinions on the Rules of the Alternative Trading System within the powers of the Exchange Supervisory Board under such Rules;
- › performing obligations defined in the Exchange Rules and the Rules of the Alternative Trading System;
- › determining the terms and conditions of contracts and remuneration of members of the Exchange Management Board on the basis of the resolution of the General Meeting referred to in Article 9.1a(2) of the Articles of Association;
- › representing the Company in contracts and disputes between the Company and the Exchange Management Board members;
- › appointing the audit firm to audit and review the Company's financial statements and the consolidated financial statements of the Company's Group;
- › performing an annual assessment of the Company's compliance with the Rules of Corporate Governance for Supervised Institutions issued by the Polish Financial Supervision Authority;
- › consenting to the Company entering into a contract which has a material impact on the financial or legal position of the Company where the other party is a shareholder who holds at least 5% of the total vote in the Company or a related party;
- › approving any actions involving disposal of non-current assets within the meaning of the Accounting Act of 29 September 1994 classified as intangible assets, property, plant and equipment, and long-term investments, including their contribution to a company or co-operative, if the market value of such assets is more than 3% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements, and giving such assets for use to another entity for a period of more than 180 days in a calendar year, under a legal transaction, if the market value of the object of such legal transaction is more than 3% of the total assets;
- › approving any actions involving acquisition of non-current assets within the meaning of the Accounting Act of 29 September 1994, at a value greater than PLN 40,000,000 or 3% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements;
- › approving agreements concerning a donation or another agreement with a similar effect at a value greater than PLN 20,000 or 0.1% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements, or cancellation of debt or another agreement with a similar effect at a value greater than PLN 50,000 or 0.1% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements;
- › approving an agreement concerning legal services, marketing services, public relations and social communications services, and management advisory services where the total fee for the services under such agreement or other agreements with the same entity is to be greater than PLN 500,000 net per annum;
- › approving amendments to an agreement concerning legal services, marketing services, public relations and social communications services, and management advisory services where the total fee is to be increased above the amount referred to above;
- › approving an agreement concerning legal services, marketing services, public relations and social communications services, and management advisory services where the total fee is not set;
- › approving the Company's sale, otherwise than in a tender or in an auction, of a non-current asset within the meaning of the Accounting Act of 29 September 1994 at a value greater than 0.1% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements of the Company;
- › making decisions on other matters reserved for the Exchange Supervisory Board under generally applicable laws.

According to the Articles of Association, the Exchange Supervisory Board as a rule passes resolutions by an absolute majority of votes; however, resolutions of the Exchange Supervisory Board in the following matters are passed by a majority of 4/5 of votes:

- › approving the execution of an agreement which establishes a strategic alliance with another exchange (an agreement concerning in particular long-term operational relations to the extent of the Company's core business);
- › approving the multi-annual development strategy of the Exchange on the request of the Exchange Management Board;
- › approving the execution, to the extent permissible under legal regulations, of an outsourcing agreement concerning operational support of trading on the regulated market or any of its segments or an outsourcing agreement concerning operational support of trading in the alternative trading system;
- › acquisition of an IT system dedicated to exchange transactions;
- › approving an acquisition, taking up or disposal of shares or participations in commercial law companies where their value at the acquisition price, taking up price or market selling price is greater than PLN 4,000,000 or 5% of the total assets within the meaning of the Accounting Act of 29 September 1994, determined on the basis of the most recent approved financial statements.

If any action defined in the Articles of Association must be approved by the Exchange Supervisory Board and the General Meeting, the approval of the General Meeting will suffice, subject to Article 18(2)(5) of the Articles of Association.

Furthermore, at each time that a court decision to register amendments of the Company's Articles of Association becomes legally valid, the Exchange Supervisory Board is authorised to define the consolidated text of the Company's Articles of Association.

The composition of the Exchange Supervisory Board in 2023 is presented in the table below.

Table 20 Composition of the Exchange Supervisory Board as at 1 January 2023

Name	Function	Independence ²⁵
Dominik Kaczmarski	Chairman	-
Izabela Flakiewicz	Deputy Chairman	-
Michał Bałabanow	Secretary	independent member of the Exchange Supervisory Board
Janusz Krawczyk	Member	independent member of the Exchange Supervisory Board
Filip Paszke	Member	independent member of the Exchange Supervisory Board
Leszek Skiba	Member	independent member of the Exchange Supervisory Board
Adam Szyszka	Member	independent member of the Exchange Supervisory Board

Table 21 Composition of the Exchange Supervisory Board as at 31 December 2023

Name	Function	Independence ²⁶
Dominik Kaczmarski	Chairman	-
Izabela Flakiewicz	Deputy Chairman	-
Michał Bałabanow	Secretary	independent member of the Exchange Supervisory Board

²⁵ Fulfills the independence criteria referred to in § 14 (1) of the Articles of Association of the Warsaw Stock Exchange.

Janusz Krawczyk	Member	independent member of the Exchange Supervisory Board
Eva Sudol	Member	independent member of the Exchange Supervisory Board
Adam Szyszka	Member	independent member of the Exchange Supervisory Board

Table 22 Composition of the Exchange Supervisory Board as at the date of this Report

Name	Function	Independence ²⁷
Iwona Sroka	Chairwoman	independent member of the Exchange Supervisory Board
Paweł Homiński	Deputy Chairman	independent member of the Exchange Supervisory Board
Michał Bałabanow	Secretary	independent member of the Exchange Supervisory Board
Jerzy Kalinowski	Member	independent member of the Exchange Supervisory Board
Piotr Prażmo	Member	independent member of the Exchange Supervisory Board
Małgorzata Rusewicz	Member	independent member of the Exchange Supervisory Board
Katarzyna Szwarc	Member	independent member of the Exchange Supervisory Board

On 1 June 2023, Mr Leszek Skiba resigned from the Exchange Supervisory Board with effect from 25 June 2023.

On 26 June 2023, the Annual General Meeting removed Mr Filip Paszke from the Exchange Supervisory Board and appointed Ms Eva Sudol to the Exchange Supervisory Board.

On 5 February 2024, the Extraordinary General Meeting removed Mr Dominik Kaczmarski, Ms Izabela Flakiewicz, Mr Janusz Krawczyk, Ms Eva Sudol and Mr Adam Szyszka from the Exchange Supervisory Board. On 5 February 2024, the Extraordinary General Meeting appointed Mr Paweł Homiński, Mr Jerzy Kalinowski, Mr Piotr Prażmo, Ms Małgorzata Rusewicz, Ms Iwona Sroka and Ms Katarzyna Szwarc to the Exchange Supervisory Board.

3.9.3. Committees of the Exchange Supervisory Board

According to the Exchange Supervisory Board Rules, the Exchange Supervisory Board appoints the following committees: the Audit Committee, the Remuneration and Nominations Committee, the Regulation and Corporate Governance Committee, and the Strategy Committee. The committees report to the Exchange Supervisory Board on an annual basis. The detailed powers and procedures of appointment and operation of the committees are defined in the committee rules approved by the Exchange Supervisory Board.

The membership and powers of the Committees of the Exchange Supervisory Board are presented below as at 31 December 2023 and as at the publication date of this report:

Table 23 Composition of the Strategy Committee of the Exchange Supervisory Board as at 31 December 2023

Strategy Committee		
Name	Function	Committee powers
Michał Bałabanow	Chairman	Issues recommendations for the Exchange Supervisory Board as follows:
Izabela Flakiewicz	Member	› approval of GPW's strategy and its updates;
Dominik Kaczmarski	Member	› implementation of GPW's strategy and monitoring its implementation;
Eva Sudol	Member	› proposals of GPW's strategic alliances;
Adam Szyszka	Member	› proposals of GPW's acquisition of stakes in entities of strategic significance;
		› the system of exchange fees.

Table 24 Composition of the Regulation and Corporate Governance Committee of the Exchange Supervisory Board as at 31 December 2023

Regulation and Corporate Governance Committee		
Name	Function	Committee powers
Izabela Flakiewicz	Chairwoman	Issues recommendations for the Exchange Supervisory Board as follows:
Michał Bałabanow	Member	› fulfilment of obligations under the Exchange Rules and the Alternative Trading System Rules;
Dominik Kaczmarski	Member	› accepting, approving and issuing opinions on regulations and changes in regulations;
Janusz Krawczyk	Member	› adopting joint position statements of the Supervisory Board and the Management Board;
		› initiating, issuing opinions and monitoring activities related to the implementation of the corporate governance rules by GPW,
		› initiating, issuing opinions and monitoring activities supporting the implementation of the corporate governance rules in listed companies;
		› performing an annual assessment of the Exchange's compliance with the corporate governance principles and compliance disclosure requirements laid down in the Exchange Rules and the regulations concerning current and periodic reports published by issuers of securities, and information concerning measures taken by the Committee to perform the assessment;
		› performing an annual assessment of compliance with the corporate governance principles for supervised institutions issued by the Polish Financial Supervision Authority.

Table 25 Composition of the Remuneration and Nominations Committee of the Exchange Supervisory Board as at 31 December 2023

Remuneration and Nominations Committee		
Name	Function	Committee powers
Janusz Krawczyk	Chairman	<p>Issues recommendations for the Exchange Supervisory Board as follows:</p> <ul style="list-style-type: none"> › determining the terms and conditions of opening and conducting selection procedures of Members of the Exchange Management Board to review and assess the qualifications of candidates and to select the best candidate; › defining the scope of responsibilities for candidates for Members of the Exchange Management Board, requirements concerning knowledge and competences, and expected engagement of time committed to the performance of functions; › selection of candidates for Members of the Exchange Management Board in a selection procedure; › closing the selection procedures of Members of the Exchange Management Board and approving the procedure report; › determining the terms and conditions and the amount of remuneration of the Exchange Management Board on the basis of resolutions of the General Meeting defining the terms and conditions of remuneration of the Exchange Management Board; › concluding, amending and terminating agreements with Members of the Exchange Management Board; › defining management objectives for Members of the Exchange Management Board for the financial year, the evaluation methods and the evaluation of their performance, including effective performance of the tasks and responsibilities of the Exchange Management Board; › determining the amount of variable remuneration of Members of the Exchange Management Board for the financial year; › defining the target representation of the under-represented gender on the Exchange Management Board and defining the diversity policy for the Exchange Management Board aimed at achievement of the target representation, taking into account a broad range of features and competences required of management board members; › drafting the training policy for Members of the Exchange Management Board and Members of the Exchange Supervisory Board; › approving the training budget for Members of the Exchange Management Board and Members of the Exchange Supervisory Board ; › authorising Members of the Exchange Management Board to perform functions on authorities of other businesses; › resolving disputes between the Exchange Management Board and the Exchange; › regular, at least annual, evaluation of the structure, size and composition of the Exchange Management Board and changes to the distribution of responsibilities between Members of the Exchange Management Board, the performance of the Exchange Management Board and its Members, and proposed recommendations of changes; › regular, at least annual, evaluation of the knowledge, competences and experience of the Exchange Management Board as a whole and individual Members of Exchange Management Board and reporting the evaluation results to the Exchange Management Board; › regular evaluation of the Exchange Management Board's policy of selection and appointment of managers, and presentation of recommendations; › approving the organisational chart of the Exchange which defines the internal division of powers on the Exchange Management Board; › preparing remuneration reports under the Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy; › regular, at least annual, evaluation of the functioning of the Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy to assess the achievement of its goals and targets; › approving assessments of the Company's situation taking into account assessments of the Company's remuneration policy and information on the degree of implementation of the diversity policy with respect to the Exchange Management Board and the Exchange Supervisory Board.
Izabela Flakiewicz	Member	
Dominik Kaczmarski	Member	

Table 26 Composition of the Strategy Committee of the Exchange Supervisory Board as at the date of publication of this Report

Strategy Committee	
Name	Function
Michał Bałabanow	Chairman
Paweł Homiński	Member
Jerzy Kalinowski	Member
Piotr Prażmo	Member
Małgorzata Rusewicz	Member
Iwona Sroka	Member
Katarzyna Szwarc	Member

Table 27 Composition of the Regulation and Corporate Governance Committee of the Exchange Supervisory Board as at the date of publication of this Report

Regulation and Corporate Governance Committee	
Name	Function
Małgorzata Rusewicz	Chairwoman
Michał Bałabanow	Member
Katarzyna Szwarc	Member

Table 28 Composition of the Remuneration and Nominations Committee of the Exchange Supervisory Board as at the date of publication of this Report

Remuneration and Nominations Committee	
Name	Function
Katarzyna Szwarc	Chairwoman
Paweł Homiński	Member
Jerzy Kalinowski	Member
Piotr Prażmo	Member

The powers of the Supervisory Board Committees are presented above as per the Rules of the Committees.

During 2023 and up to the date of publication of this report, the following changes to the composition of the Committees have taken place:

The Strategy Committee from the beginning of 2023 until 26 June 2023 was composed of: Leszek Skiba - Chairman of the Committee, Michał Bałabanow, Dominik Kaczmarski, Filip Paszke and Adam Szyszka - Committee Members. The changes in the composition of the Strategy Committee in 2023 resulted from changes in the composition of the Exchange Supervisory Board. On 1 June 2023, Leszek Skiba resigned from the Exchange Supervisory Board with effect from 25 June 2023. On 26 June 2023, the Annual General Meeting removed Filip Paszke from the Exchange Supervisory Board and appointed Eva Sudol to the Exchange Supervisory Board. On 6 July 2023, the Exchange Supervisory Board decided to appoint Eva Sudol to the Strategy Committee. On 29 August 2023, the Strategy Committee decided to elect Michał Bałabanow as Chairman of the Committee. As of that date, the Committee was composed of: Michał Bałabanow - Chairman of the Committee, Izabela Flakiewicz, Dominik Kaczmarski, Eva Sudol, Adam Szyszka - Committee Members. Following the changes in the composition

of the Exchange Supervisory Board made on 5 February 2024 by the Extraordinary General Meeting, on 8 February 2024 the Exchange Supervisory Board decided to appoint Paweł Hominski, Piotr Prażmo, Małgorzata Rusewicz and Iwona Sroka to the Strategy Committee. Subsequently, on 19 February 2024, the Exchange Supervisory Board decided to appoint Jerzy Kalinowski and Katarzyna Szwarc as members of the Strategy Committee. As of that date, the Committee is composed of: Michał Bałabanow - Chairman of the Committee, Paweł Homiński, Jerzy Kalinowski, Piotr Prażmo, Małgorzata Rusewicz, Iwona Sroka, Katarzyna Szwarc - Committee Members.

The Regulation and Corporate Governance Committee from the beginning of 2023 until 26 June 2023 was composed of Izabela Flakiewicz - Chairwoman of the Committee, Michał Bałabanow, Dominik Kaczmarski, Filip Paszke - Committee Members. On 26 June 2023, the Annual General Meeting made changes to the composition of the Exchange Supervisory Board, i.e. removed Filip Paszke from the Exchange Supervisory Board and appointed Eva Sudol to the Exchange Supervisory Board. Subsequently, on 29 November 2023, the Exchange Supervisory Board decided to appoint Janusz Krawczyk to the Regulation and Corporate Governance Committee. As of that date, the Committee was composed of Izabela Flakiewicz - Chairwoman of the Committee, Michał Bałabanow, Dominik Kaczmarski, Janusz Krawczyk - Committee Members. Following the changes in the composition of the Exchange Supervisory Board made on 5 February 2024 by the Extraordinary General Meeting, on 8 February 2024 the Exchange Supervisory Board decided to appoint Małgorzata Rusewicz and Katarzyna Szwarc to the Regulation and Corporate Governance Committee. On 21 February 2024, the Regulation and Corporate Governance Committee decided to elect Małgorzata Rusewicz as Chairwoman of the Committee. As of that date, the Committee is composed of: Małgorzata Rusewicz - Chairwoman of the Committee, Michał Bałabanow, Katarzyna Szwarc - Committee Members.

The Remuneration and Nominations Committee from the beginning of 2023 until 26 June 2023 was composed of: Janusz Krawczyk - Chairman of the Committee, Dominik Kaczmarski and Filip Paszke - Committee Members. On 26 June 2023, the Annual General Meeting made changes to the composition of the Exchange Supervisory Board, i.e. removed Filip Paszke from the Exchange Supervisory Board and appointed Eva Sudol to the Exchange Supervisory Board. Subsequently, on 6 July 2023, the Exchange Supervisory Board decided to appoint Izabela Flakiewicz to the Remuneration and Nominations Committee. As of that date, the Committee was composed of: Janusz Krawczyk - Chairman of the Committee and Izabela Flakiewicz and Dominik Kaczmarski - Committee Members. Following the changes in the composition of the Exchange Supervisory Board made on 5 February 2024 by the Extraordinary General Meeting, on 8 February 2024 the Exchange Supervisory Board decided to appoint Paweł Homiński, Jerzy Kalinowski, Piotr Prażmo and Katarzyna Szwarc to the Remuneration and Nominations Committee. On 21 February 2024, the Remuneration and Nominations Committee decided to elect Katarzyna Szwarc as Chairwoman of the Committee. As of that date, the Committee is composed of: Katarzyna Szwarc - Chairwoman of the Committee, Paweł Homiński, Jerzy Kalinowski, Piotr Prażmo - Committee Members.

3.9.4. Audit Committee

The responsibilities of the Audit Committee include financial reporting, the internal control system, in particular implementation of audit and inspection recommendations, internal audit, findings of external audits and inspections, compliance and risk management including compliance risk, ICT security and IT.

The responsibilities of the Audit Committee include:

- › monitoring of the financial reporting process;
- › monitoring of financial audits, in particular the conduct of the audit by the audit firm, taking into account any conclusions and findings of the Polish Audit Oversight Agency arising from the audit carried out at the audit firm;
- › control and monitoring of the independence of the auditor and the audit firm, in particular when the audit firm provides non-audit services to the Group;
- › assessment of the independence of the auditor and approving its provision of allowed non-audit services;
- › development of the policy of selection of the audit firm and implementation of the audit firm selection procedure;
- › development of the policy of allowed non-audit services provided by the audit firm, its associates and members of its network, making a recommendation to the Exchange Supervisory Board for the selection of the audit firm in accordance with the Regulation and the policy for the selection of the audit firm to carry out the audit, the policy for the provision of allowed non-audit services by the audit firm, its associates and members of its network and the procedure for the selection of the audit firm. The recommendation (unless it relates to the renewal of the audit engagement) shall include a statement of reasons and at least two options for entrusting the statutory audit engagement and a duly justified preference of the Committee for one of them. The recommendation shall include a statement that it is free from third party influence and is not limited by any contractual clauses entered into by the Exchange with third parties that would restrict the choice of audit firm to certain categories of audit firms;
- › presentation of recommendations ensuring accurate financial reporting in the Company;
- › reporting the outcome of reviews to the Exchange Supervisory Board and defining how the reviews ensured accurate financial reporting and what was the role of the Audit Committee in the review;
- › reviewing additional reports for the Audit Committee presented by the audit firm responsible for the audit;

- › issuing opinions on financial statements and motions of the Management Board concerning distribution of profits or coverage of losses and presenting recommendations to the Exchange Supervisory Board;
- › issuing opinions on Management Board reports on representation expenses, as well as legal fees, marketing service charges, public relations and social communications service charges, and management advisory service charges and making recommendations to the Exchange Supervisory Board in this regard;
- › presenting recommendations to the Exchange Supervisory Board on declarations concerning the publication of the annual report of the Exchange and the consolidated annual report of the Exchange's Group;
- › presenting recommendations to the Exchange Supervisory Board on approval of the assessment of the Company's situation including an assessment of the financial standing of the Company and the Company's Group and the internal control system and the system of managing risks, compliance and internal audit functions, and the assessment of the reasonableness of expenditures incurred by the Company and its Group to support culture, sport, charities, the media, social organisations, trade unions, etc.;
- › performing regular reviews, at least once per calendar year, of significant transactions with related parties based on the Procedure for periodic assessment of significant related party transactions, and presenting findings to the Exchange Supervisory Board;
- › issuing opinions on annual financial plans of the GPW Group and GPW (including the donations budget and sponsorship plan), presenting recommendations to the Exchange Supervisory Board;
- › opiniowanie informacji Zarządu Giełdy z wykonania planu finansowego Grupy Kapitałowej GPW oraz Giełdy,
- › monitoring the efficiency of GPW's internal control system, including with regard to financial reporting, inter alia by reviewing and giving an opinion on the degree of implementation of recommendations from internal audits, external audits and audits carried out by supervisory authorities (quarterly and annual information from the Internal Audit Department);
- › drafting the procedures for the disclosure and exchange of data and information between the Polish Financial Supervision Authority, the audit firm, the key auditor and GPW's control function in the internal control system;
- › monitoring GPW's implementation of changes arising from recommendations of the auditor, internal audit concerning the preparation of the financial statements, the Exchange Supervisory Board or the Committee;
- › supporting the independence and objectivism of the Internal Audit Department including: approving decisions of the Exchange Management Board appointing and dismissing the Director of the Internal Audit Department and approving the remuneration of the Director of the Internal Audit Department, approving the budget and resource plan of the Department, reviewing and issuing opinions on the rules of internal audit, participating in the appointment of an independent auditor to review the internal audit function at least every five years, reviewing and issuing opinions on annual internal audit plans, including the submission of audit proposals to the annual internal audit plan and giving an opinion on amendments to the annual internal audit plan after its approval by the Exchange Supervisory Board consisting in the deletion or addition of audit tasks, as well as commissioning ad hoc audits not included in the annual internal audit plan, enabling direct communication of the Director of the Internal Audit Department with the Audit Committee, inter alia, by the participation of the Director of the Internal Audit Department in Committee meetings and by meeting regularly, at least once a year, with the Director of the Internal Audit Department without the Exchange Management Board present to discuss matters that the Director of the Internal Audit Department or the Committee deems relevant, and by periodically reviewing with the Director of the Internal Audit Department the absence of restrictions on the independence and objectivity of the activities of the Internal Audit Department;
- › monitoring the effectiveness of internal audit, including with regard to internal audit's assessment of the adequacy and effectiveness of controls in the area of financial reporting;
- › oversight of the activities of the Internal Audit Department by, inter alia, reviewing and giving an opinion on the annual reports on the activities of the Internal Audit Department including, inter alia, the extent to which the annual internal audit plan has been implemented and reviewing and giving an opinion on the results of the annual self-assessment of the activities of the Internal Audit Department verifying compliance with the Definition of Internal Audit, the IIA Institute of Internal Auditors' Code of Ethics and the International Standards for the Professional Practice of Internal Auditing;
- › reviewing internal audit findings;
- › issuing opinions on the whistleblowing procedure;
- › issuing opinions on conflict of interest management rules;
- › reviewing the rules and the efficiency of the compliance system including findings of compliance audits;
- › reviewing findings of external inspections carried out in GPW by supervisory authorities;
- › approving decisions to hire or dismiss the Director of the Compliance and Risk Department acting as Compliance Officer;

- › enabling the Director of the Compliance and Risk Department, in his/her capacity as Compliance Officer, to attend Committee meetings where the subject matter of the meeting relates to the compliance function;
- › issuing opinions on the risk management strategy;
- › monitoring the effectiveness of the risk management system, including financial reporting on the basis of the semi-annual risk management reports, including information on significant operational events occurring at the Exchange and the results of risk assessments;
- › monitoring the effectiveness of the business continuity system on the basis of semi-annual reports on business continuity management at the Exchange, including information on the results of business continuity tests and the timeliness and effectiveness of corrective actions taken;
- › monitoring the effectiveness of the ICT security and IT management system based on regular reports;
- › presenting recommendations to the Exchange Supervisory Board on the need for prior consultation with an external entity to provide a valuation of a transaction and an analysis of its economic impact if the Exchange's transaction with a related entity requires the approval of the Exchange Supervisory Board;
- › presenting recommendations to the Exchange Supervisory Board on giving consent for the Company to enter into a contract which has a material impact on the financial or legal position of the Company where the other party is a shareholder who holds at least 5% of the total vote in the Company or a related party.

Members of the Audit Committee are appointed by the Exchange Supervisory Board from among its members following review of their fulfilment of the requirements laid down in Article 129 of the Act on Auditors, Audit Firms and Public Supervision. The Chairman of the Audit Committee is elected by the Audit Committee. The Audit Committee is comprised of at least 3 members. At least one member of the Audit Committee should have the knowledge and skills in accounting or financial audits. The majority of members of the Audit Committee, including the Chairman of the Audit Committee, should fulfil the criteria of independence defined in Article 129(3) of the Act of 11 May 2017 on Auditors, Audit Firms, and Public Supervision. Members of the Audit Committee should have knowledge and skills in the area of business of the Company. The condition is met if at least one Member of the Audit Committee has knowledge and skills in the area of business of the Company or different Members to a different extent have knowledge and skills in the area of business of the Company.

The Audit Committee from the beginning of 2023 until 26 June 2023 was composed of: Adam Szyszka - Chairman of the Committee, Filip Paszke and Leszek Skiba - Committee Members. The changes in the composition of the Audit Committee in 2023 resulted from changes in the composition of the Exchange Supervisory Board. On 1 June 2023, Leszek Skiba resigned from the Exchange Supervisory Board with effect from 25 June 2023. On 26 June 2023, the Annual General Meeting removed Filip Paszke from the Exchange Supervisory Board and appointed Eva Sudol to the Exchange Supervisory Board. On 6 July 2023, the Exchange Supervisory Board decided to appoint Michał Bałabanow and Eva Sudol to the Audit Committee. As of that date, the Committee was composed of: Adam Szyszka - Chairman of the Committee, Michał Bałabanow and Eva Sudol - Committee Members. Following the changes in the composition of the Exchange Supervisory Board made on 5 February 2024 by the Extraordinary General Meeting, on 8 February 2024 the Exchange Supervisory Board decided to appoint Paweł Homiński and Piotr Prażmo as members of the Audit Committee. On 26 February 2024, the Audit Committee decided to elect Paweł Homiński as Chairman of the Committee. As of that date, the Committee is composed of: Paweł Homiński - Chairman of the Committee, Michał Bałabanow and Piotr Prażmo - Committee Members.

Table 29 Composition of the Audit Committee as at 31 December 2023

Audit Committee		
Name	Function	Independence ²⁸
Adam Szyszka	Chairman	independent Member of the Exchange Supervisory Board
Michał Bałabanow	Member	independent Member of the Exchange Supervisory Board
Eva Sudol	Member	independent Member of the Exchange Supervisory Board

²⁸ Fulfils the independence criteria referred to in § 14 (1) of the Articles of Association of the Warsaw Stock Exchange.

Table 30 Composition of the Audit Committee as at 31 December 2022 and as at the date of publication of this Report

Audit Committee		
Name	Function	Independence ²⁹
Paweł Homiński	Chairman	independent Member of the Exchange Supervisory Board
Michał Bałabanow	Member	independent Member of the Exchange Supervisory Board
Piotr Prażmo	Member	independent Member of the Exchange Supervisory Board

According to submitted declarations, all members of the Audit Committee meet the independence criteria defined in § 14(1) of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A., i.e., the criteria defined for members of audit committees in regulations governing audit firms and auditors and in the corporate governance rules issued under the Exchange Rules.

The Members of the Audit Committee Adam Szyszka and Eva Sudol as well as Paweł Homiński and Piotr Prażmo declared that they have knowledge and skills of accounting and financial audit, and all the Members of the Audit Committee declared that they have knowledge and skills of the Exchange's industry. The Audit Committee worked at meetings (13 meetings were held in 2023) and through on-going exchange of views and opinions.

3.10. Exchange Management Board

3.10.1. Appointment and dismissal of Management Board members

The Exchange Management Board consists of three to five members, including the President of the Management Board. The Exchange Management Board members are appointed for a joint four-year term. The term of office will be calculated in full financial years. The President of the Management Board is appointed by the General Meeting. The other members of the Exchange Management Board are appointed and dismissed by the Exchange Supervisory Board according to the Articles of Association in a selection procedure conducted by the Exchange Supervisory Board to review and assess the qualifications of the candidates and to select the best candidate. The terms and conditions of the selection procedure are defined by the Exchange Supervisory Board taking into account among others the requirement of diversity on the Management Board.

Exchange Management Board members can serve as board members in other business entities only with the approval of the Exchange Supervisory Board.

Considering that the Company operates a regulated market, additional rules regarding the composition of the Exchange Management Board apply under the Act on Trading in Financial Instruments of 29 July 2005. Accordingly, the Management Board should include persons with higher education, at least three years of management experience in financial market institutions or entities which provide services to financial market institutions in the core activity of such institutions, a spotless reputation as regards the functions they perform, as well as knowledge, competences and experience necessary to manage a company which operates a regulated market. In their functions, Management Board Members exercise independent judgment to ensure effective assessment and verification of decisions taken and executed in on-going management, and dedicate sufficient time to their functions and responsibilities. Not eligible as Management Board Members is any person declared in a valid court judgment as guilty of a tax crime, falsification of documents, crime related to property, business transactions, cash and securities transactions, crime or misdemeanour referred to in article 305, Article 307 or Article 308 of the Act of 30 June 2000 – Industrial Property Law, crime referred to in Article 523 of the Act of 28 February 2003 – Bankruptcy Law, crime referred to in the Acts referred to in Article 1(2) of the Act of 21 July 2006 on Financial Market Supervision, or crime violating equivalent regulations of other countries. If a company running a regulated market organises an alternative trading system, the above conditions should also be satisfied by the persons managing those activities, unless members of the Exchange Management Board manage the organisation of the alternative trading system. The Act on Trading in Financial Instruments imposes limits on the number of functions held at any time by a member of the management board of a company operating a regulated markets. The requirements for Members of the Exchange Management Board under the Act on Trading in Financial Instruments are specified in the Regulation of the Minister of Finance, Funds and Regional Policy of 24 November 2020 concerning requirements applicable to members of the management board and of the supervisory board of a company operating a regulated market and the terms and conditions of maintaining and improving their knowledge and competences.

²⁹ Fulfills the independence criteria referred to in § 14 (1) of the Articles of Association of the Warsaw Stock Exchange.

Furthermore, in connection with the provisions of the Act of 16 December 2016 on Management of State Assets, eligible as Members of the Exchange Management Board are persons who have at least 5 years of employment, at least 3 years of experience in management positions or in self-employment. Not eligible as a Member of the Exchange Management Board is any person who meets any of the following criteria:

- › is a social liaison or employee of the office of a Deputy, Senator or Member of the European Parliament under an employment agreement, work contract or similar agreement;
- › is a member of a body of a political party which represents the political party and is authorised to assume obligations;
- › is employed by a political party under an employment agreement, work contract or similar agreement;
- › is elected to a trade union of the company or a trade union of a member of the group of companies;
- › his or her social or professional activity creates a conflict of interests for the business of the Company.

Changes to the composition of the Exchange Management Board require the consent of the Polish Financial Supervision Authority, which is granted at the request of the body authorised to appoint a member. The Polish Financial Supervision Authority will refuse to grant consent if the proposed changes do not ensure that operations will be conducted in a way which does not jeopardize the safety of securities trading and properly safeguards the interests of participants in that trading.

GPW keeps records of documents and declarations confirming that the Members of the Management Board fulfil the requirements of good repute, knowledge, competences, experience, independent judgment and sufficient time dedicated to the performance of their functions and obligations as well as the number of functions held at any time, and reviews on that basis the compliance of the Members of the Management Board with the requirements applicable in their functions.

3.10.2. Powers of the GPW Management Board

The Exchange Management Board handles the Company's affairs and assets, and represents it in its dealings with third parties. The Exchange Management Board exercises all powers that are not vested in the General Meeting or the Exchange Supervisory Board. Resolutions of the Exchange Management Board are adopted by an absolute majority of votes. Two Exchange Management Board members acting jointly or an Exchange Management Board member acting together with a commercial proxy are authorised to represent the Company. On 21 June 2017, the Exchange Management Board granted a commercial proxy to Tomasz Walkiewicz. The power of proxy is a joint power and authorises the proxy to act only jointly with an Exchange Management Board member. Pursuant to Article 5(3) of the Articles of Association, the Exchange Management Board may, with the consent of the Exchange Supervisory Board, make interim dividend payments to the shareholders on the terms laid down in the Code of Commercial Companies and Partnerships.

The Exchange Management Board convenes a General Meeting in the cases defined in the Articles of Association, the Code of Commercial Companies and Partnerships and other applicable regulations.

The Management Board prepares and presents to the General Meeting and the Supervisory Board, together with the activity report of the Exchange Management Board for the past year, also the following:

- › a report on representation expenses, as well as legal fees, marketing service charges, public relations and social communications service charges, and management advisory service charges;
- › a report on compliance with best practice defined by the Prime Minister under the Act of 16 December 2016 on Management of State Assets. The report will be issued and tabled to the General Meeting after the Prime Minister publishes the good practice.

The functioning of the GPW Management Board is governed by the Rules of the Exchange Management Board.

3.10.2.1. Composition of the GPW Management Board

The composition of the Management Board from 1 January 2023 to 31 December 2023 and to the date of publication of this Report was as follows:

Table 31 Composition of the Exchange Management Board as at 31 December 2023

GPW Management Board	
Name	Function
Marek Dietl	President
Monika Gorgoń	Member
Adam Młodkowski	Member
Izabela Olszewska	Member

Table 32 Composition of the Exchange Management Board as at the date of publication of this Report

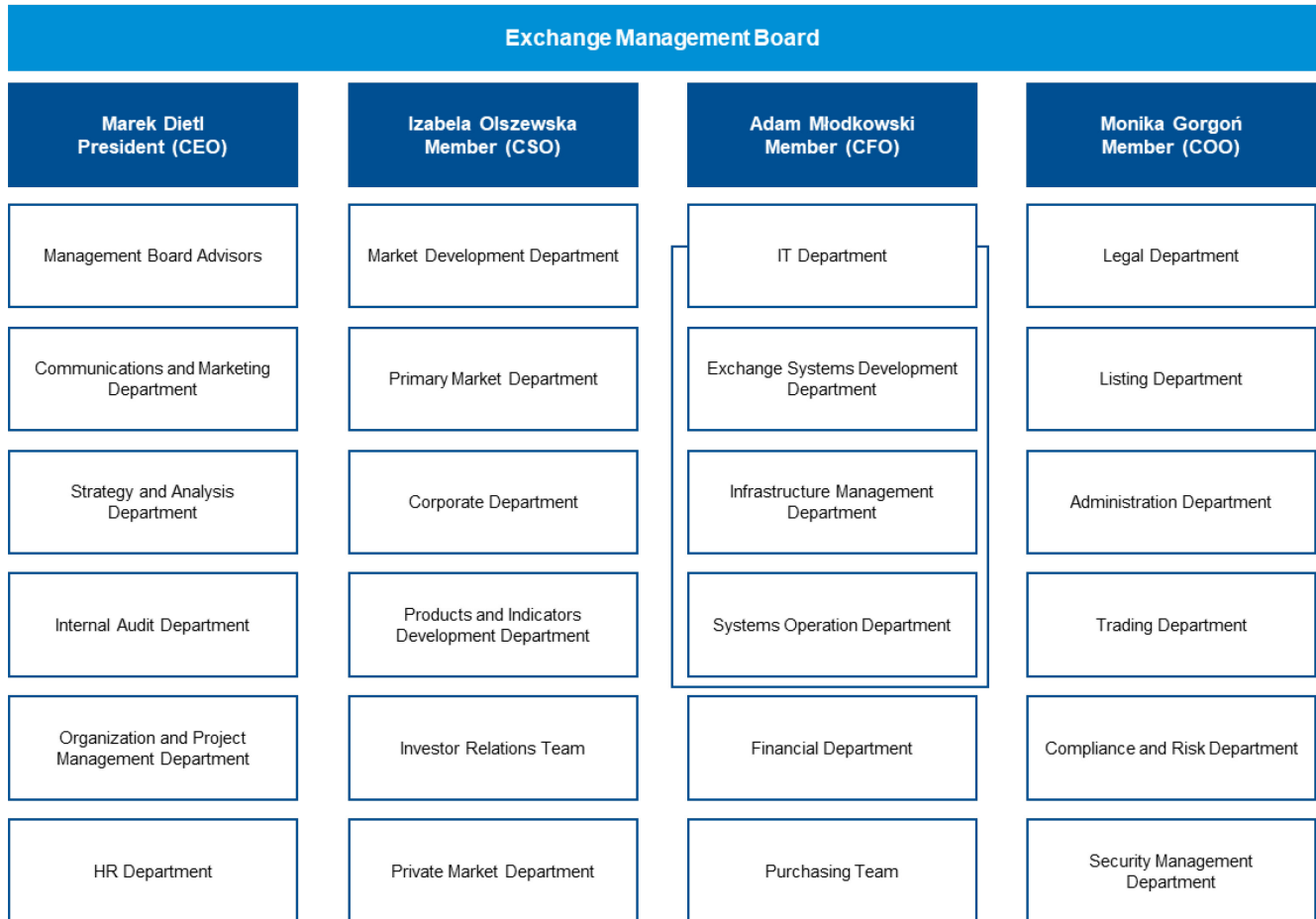
GPW Management Board	
Name	Function
Tomasz Bardziłowski	President
Monika Gorgoń	Member
Adam Młodkowski	Member
Izabela Olszewska	Member

No changes were made to the Exchange Management Board in 2023. On 5 February 2024, the Extraordinary General Meeting in Resolution No. 18 and Resolution No. 19 removed Marek Dietl from the Management Board and appointed Tomasz Bardziłowski as President of the Management Board. The aforementioned resolutions came into force on 29.03.2024, after the proxy of the GPW General Meeting received on behalf of the Company the decisions of the Polish Financial Supervision Authority announcing the approval of changes in the composition of the Exchange Management Board.

3.10.2.2. GPW organisational chart

Chart 8 Organisational chart of GPW as at 1 January 2023

Organizational structure of the Warsaw Stock Exchange

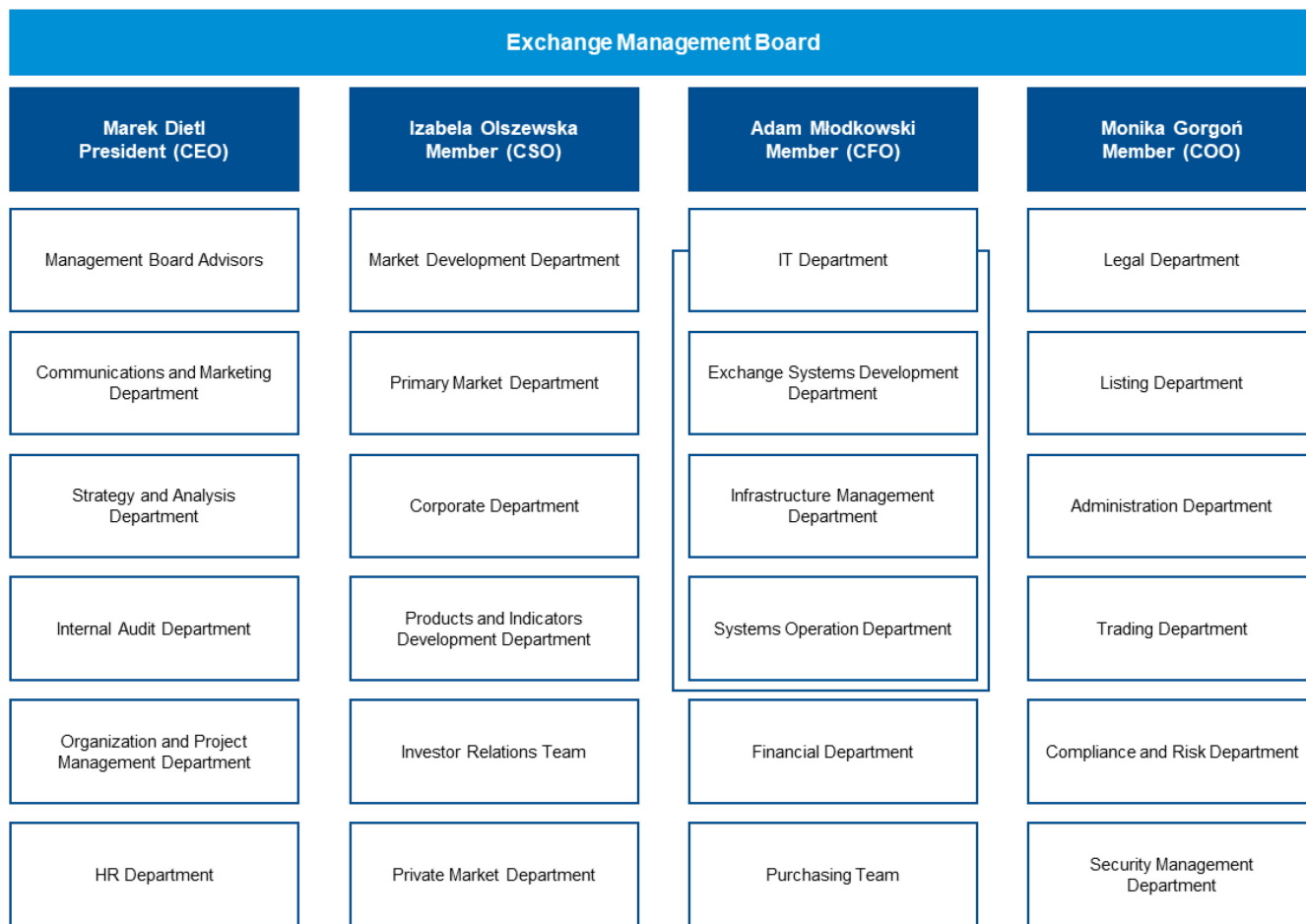


Proxy*

*supporting function to Exchange Management Board in the representation of the GPW

Chart 9 Organisational chart of GPW as at 31 December 2023

Organizational structure of the Warsaw Stock Exchange

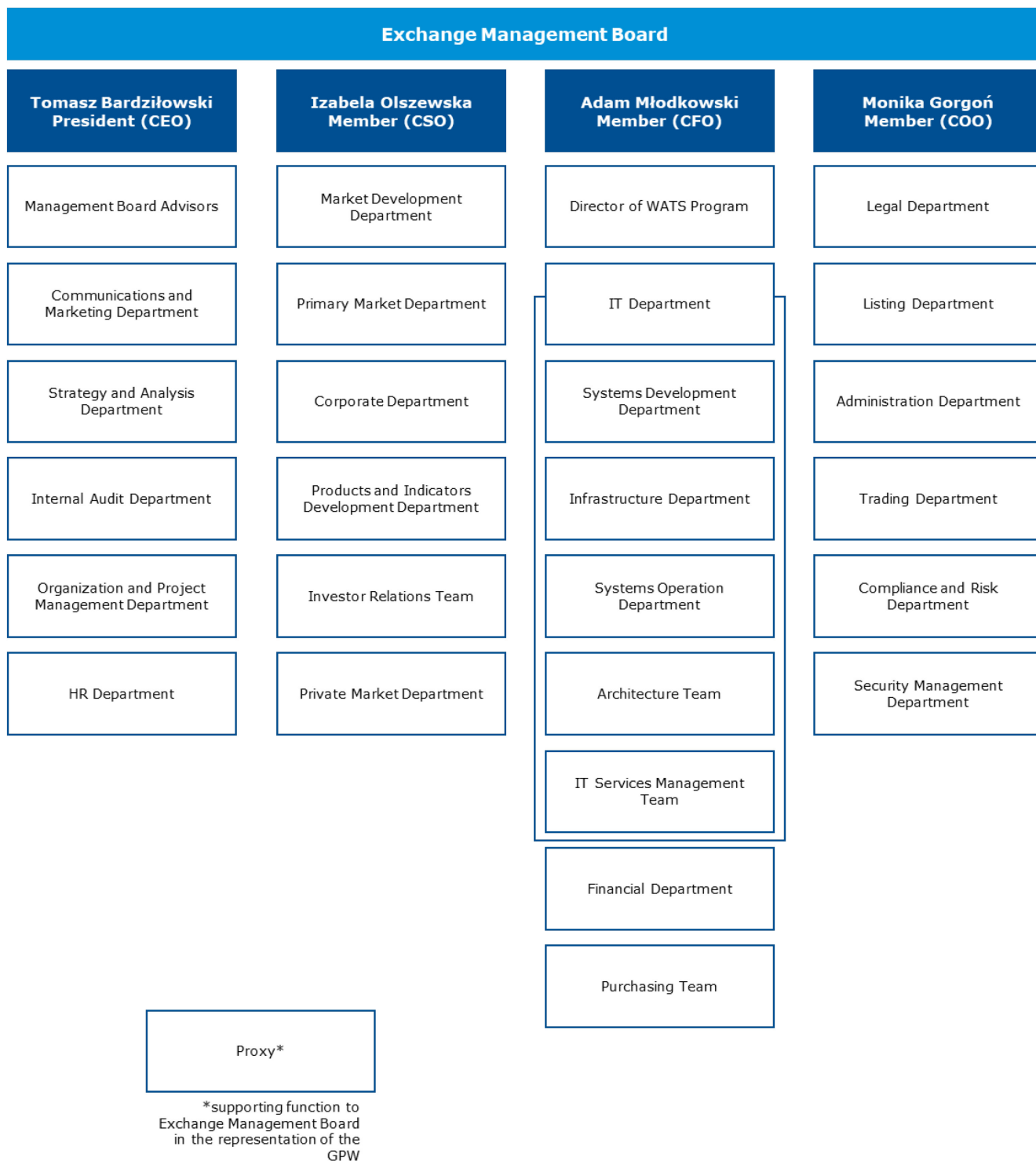


Proxy*

*supporting function to Exchange Management Board in the representation of the GPW

Chart 10 Organisational chart of GPW as at the date of publication of this Report

Organizational structure of the Warsaw Stock Exchange



3.11. Remuneration policy

3.11.1.GPW remuneration policy

The incentive remuneration system for employees and managers consists of the following components: a fixed part (basic remuneration), a variable part (including the annual bonus and discretionary awards), as well as fringe benefits. Basic remuneration on GPW depends on:

- › professional qualifications, expertise and experience required in the job position,
- › responsibility for HR management,
- › type and complexity of contacts with colleagues and third parties in the job position,
- › complexity of responsibilities in the job position,
- › impact of the job position on the results of the company.

The base salary is also linked to key competences identified by GPW:

- › embracing change / invention,
- › knowledge and development,
- › action orientation,
- › leadership,
- › co-operation and communication,
- › the employees' performance.

As an important part of GPW's incentive scheme, the bonus system aims to create a motivating work environment which supports on-going improvement of employees' competences and engagement in pursuit of their targets, and which fosters awareness raising and a sense of responsibility for work in all job positions. Improvement of competences implies that steps are taken which ensure that employees acquire knowledge, skills and key competences and their motivation rises, leading to more effective performance of the employees.

The bonus system covers all GPW employees other than the Exchange Management Board Members. It provides a simple and clear mechanism of calculating the annual bonus.

The system is designed to incentivise employees for superior performance by achieving operating and strategic targets set early in the year; it incentivises managers to motivate their employees.

The bonus system includes an annual employee appraisal at the end of the year, which covers the employee's overall performance in the bonus year.

Managers assess employees according to the GPW key competences. Employees' strengths and areas for improvement are identified. Development targets are set to support employee in the development of key competences. Overall, the annual appraisal includes an evaluation of both performance and competences.

GPW provides employees with a wide range of fringe benefits including health care, life insurance, the Employee Pension Scheme, a cafeteria system and a hybrid work allowance. GPW employees can use loans including housing and medical loans, as well as payments from the Company Social Benefits Fund.

For more information on the GPW employee policy, including the training policy, the recruitment policy and employee volunteering, see section 4.7 Employees.

3.11.2.Remuneration policy for GPW Management Board members

Pursuant to the Articles of Association, the power to determine the rules of remuneration of the Members of the Exchange Management Board is vested in the General Meeting and the power to determine the terms of contracts and the remuneration of the Members of the Exchange Management Board is vested in the Exchange Supervisory Board.

GPW has established in writing the Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy approved by the General Meeting in Resolution No. 31 of the Annual General Meeting of the Warsaw Stock Exchange of 22 June 2020. The Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy is attached to the Resolution and published on the company's website.

The Exchange Management Board Members Remuneration Rules remain in force as defined in Resolution No. 36 of the Annual General Meeting of the Warsaw Stock Exchange of 17 June 2019 concerning approval of the Warsaw Stock Exchange Management Board Members Remuneration Rules.

The remuneration system for Members of the Exchange Management Board includes a basic part (fixed remuneration) and a variable part which constitutes supplementary remuneration (variable remuneration). Since August 2019, under Resolution No. 36 of the Annual General Meeting of 17 June 2019, in addition to fixed and variable remuneration, Members of the Exchange Management Board are entitled to fringe benefits (health care, participation in the Employee Pension Plan, life insurance) determined by the Exchange Supervisory Board.

The monthly fixed remuneration of each Member of the Exchange Management Board ranges from 4 times to 8 times the average monthly remuneration in the enterprise sector net of profit bonuses for the fourth quarter of the previous year, as announced by the President of the Central Statistical Office (GUS).

A resolution adopted by the Exchange Supervisory Board on 22 December 2022 amending the method of calculating the fixed remuneration of Management Board Members has been in force as of January 2023. Accordingly, pursuant to Article 1(3)(11) of the Act of 9 June 2016 on the principles of shaping the remuneration of persons managing certain companies, the basis for calculation of remuneration in a given calendar year is the amount of the average monthly remuneration in the enterprise sector net of profit bonuses for the fourth quarter of the previous year, as announced by the President of the Central Statistical Office (GUS).

The variable remuneration depends on the performance of management targets and it cannot be more than 100% of the fixed remuneration in the previous financial year. The management targets include growth of the Company value and improvement of its financial indicators. The Exchange Supervisory Board defines specific management targets and their weights as well as objective and measurable criteria (indicators) of their performance. Other management targets on which variable remuneration depends include: (1) development and application of rules of remuneration of members of management and supervisory authorities in accordance with the provisions of the Act, and (2) performance of the obligations defined in Articles 17-20, Article 22 and Article 23 of the Act of 16 December 2016 on Management of State Assets, in the subsidiaries.

In addition to the foregoing, the Company has no incentive or bonus schemes based on the issuer's equity (including schemes based on bonds with pre-emptive rights, convertible bonds, subscription warrants, or stock options).

Table 33 Remuneration and benefits of Members of the Exchange Management Board paid in 2023 [PLN thousand]

Name	Basic remuneration	Variable remuneration due for 2021*)	Variable remuneration due for 2022*)	Bonus – one-off payment	Bonus – bonus bank	Bonus – bonus phantom shares	Other benefits	Benefits after termination	TOTAL
Piotr Borowski	-	358.3	215.6	-	-	-	40.2	33.9	648.0
Marek Dietl	668.3	372.0	392.4	-	-	-	107.5	-	1540.2
Monika Gorgoń	645.2	-	141.1	-	-	-	29.8	-	816.1
Dariusz Kułakowski	-	358.3	215.6	-	-	-	40.2	-	614.1
Adam Młodkowski	638.3	-	163.2	-	-	-	15.7	-	817.2
Izabela Olszewska	640.1	358.3	378.8	-	-	-	110.8	-	1 448,0
TOTAL	2 591.9	1 446.9	1 506.7	-	-	-	344.2	33.9	5 923.6

* The variable remuneration due for 2021 and 2022 was paid in 2023.

Table 34 Remuneration and benefits of Members of the Exchange Management Board paid in 2022 [PLN thousand]

Name	Basic remuneration	Variable remuneration	Bonus – one-off payment	Bonus – bonus bank	Bonus – bonus phantom shares	Other benefits	Benefits after termination	TOTAL
Piotr Borowski	230.7	-	-	-	-	21.3	271.4	523.4

Marek Dietl	423.9	-	-	-	-	34.6	-	458.5
Monika Gorgoń	152.4	-	-	-	-	1.6	-	154.0
Dariusz Kułakowski	227.5	-	-	-	-	23.7	-	251.2
Adam Młodkowski	171.3	-	-	-	-	6.6	-	177.9
Izabela Olszewska	401.3	-	-	-	-	41.4	-	442.7
TOTAL	1 607.1	-	-	-	-	129.2	271.4	2 007.7

Table 35 Benefits in kind of Exchange Management Board Members paid in 2023 [PLN]

Benefits in kind						
Name	Company car	PPE	Health care	PZU	Business travel insurance	TOTAL
Piotr Borowski	-	40 174	-	-	-	40 174
Marek Dietl	410	100 320	5 718	270	798	107 516
Dariusz Kułakowski	-	40 174	-	-	-	40 174
Izabela Olszewska	7 706	96 946	5 718	270	144	110 783
Adam Młodkowski	9 565	-	5 718	-	393	15 675
Monika Gorgoń	2 595	21 214	5 718	270	32	29 829
TOTAL	20 276	298 828	22 870	810	1 367	344 151

Table 36 Benefits in kind of Exchange Management Board Members paid in 2022 [PLN]

Benefits in kind						
Name	Company car	PPE	Health care	PZU	Business travel insurance	TOTAL
Piotr Borowski	2 286	16 308	2 538	158	-	21 290
Marek Dietl	-	29 676	4 430	270	222	34 598
Dariusz Kułakowski	5 446	16 308	1 749	158	-	23 661
Izabela Olszewska	7 990	28 651	4 430	270	100	41 441
Adam Młodkowski	5 025	-	1 514	-	98	6 637
Monika Gorgoń	-	-	1 514	90	-	1 604
TOTAL	20 747	90 943	16 175	946	420	129 231

The tables above do not include social security contributions paid by the employer. In addition, Members of the Exchange Management Board received no remuneration for their functions on the supervisory authorities of subsidiaries in 2017-2023.

3.11.3. Terms of employment of GPW Management Board members

The current four-year term of the Management Board of Giełda Papierów Wartościowych w Warszawie started on 27 July 2022. The GPW Management Board in 2023 comprised: Marek Dietl - President of the Management Board, Izabela Olszewska - Management Board Member, Adam Młodkowski - Management Board Member, Monika Gorgoń - Management Board Member. On 5 February 2024, the Extraordinary General Meeting in Resolution No. 18 and Resolution No. 19 removed Marek Dietl from the Management Board and appointed Tomasz Bardziłowski as President of the Management Board. The aforementioned resolutions came into force on 29.03.2024, after the proxy of the GPW General Meeting received on behalf of the Company the decisions of the Polish Financial Supervision Authority announcing the approval of changes in the composition of the Exchange Management Board.

Management contracts for the term of the function may be terminated by agreement of the parties with a notice of two weeks or effective immediately in the case of a serious breach of the contract by the manager or by the Company. According to the contract, if the contract is terminated due to termination of the function for any reason other than the manager's breach of essential obligations under the contract, the Management Board Member is entitled to a severance pay equal to three times the fixed salary provided that the Management Board Member performed the function for at least 12 months before termination.

Table 37 Members of the Exchange Management Board, as at 31 December 2023

Name	Function	In office from	In office to
Marek Dietl	President, CEO	27 September 2017	26 July 2026
Izabela Olszewska	Board Member, CSO	1 August 2018	26 July 2026
Adam Młodkowski	Board Member, CFO	27 July 2022	26 July 2026
Monika Gorgoń	Board Member, COO	18 August 2022	26 July 2026

Table 38 Members of the Exchange Management Board, as at the date of publication of this Report

Name	Function	In office from	In office to
Tomasz Bardziłowski	President, CEO	29 March 2024	26 July 2026
Izabela Olszewska	Board Member, CSO	1 August 2018	26 July 2026
Adam Młodkowski	Board Member, CFO	27 July 2022	26 July 2026
Monika Gorgoń	Board Member, COO	18 August 2022	26 July 2026

A resolution adopted by the Exchange Supervisory Board on 22 December 2022 amending the method of calculating the fixed remuneration of Management Board Members has been in force as of January 2023. Accordingly, pursuant to Article 1(3)(11) of the Act of 9 June 2016 on the principles of shaping the remuneration of persons managing certain companies, the basis for calculation of remuneration in a given calendar year is the amount of the average monthly remuneration in the enterprise sector net of profit bonuses for the fourth quarter of the previous year, as announced by the President of the Central Statistical Office (GUS).

3.11.4. Remuneration of Exchange Supervisory Board members

According to the Articles of Association, the Exchange Supervisory Board Members receive remuneration in the amount set by the General Meeting.

GPW has established in writing the Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy approved by the General Meeting in Resolution No. 31 of the Annual General Meeting of the Warsaw Stock Exchange of 22 June 2020. The Warsaw Stock Exchange Management Board and Supervisory Board Member Remuneration Policy is attached to the Resolution and published on the company's website.

- › The monthly remuneration of the Exchange Supervisory Board Members was determined as equal to 1.5 times the basis referred to in Article 1(3)(11) of the Act of 9 June 2016 on Rules of Remuneration of Managers of Certain Companies.
- › The amount of remuneration is raised by a percentage of the monthly remuneration as follows:
 - ✓ for the Chairman of the Exchange Supervisory Board – 10%,
 - ✓ for the Deputy Chairman of the Exchange Supervisory Board – 9%,
 - ✓ for the Secretary to the Exchange Supervisory Board – 8%,
 - ✓ for Chairmen of Committees of the Exchange Supervisory Board – 9%.
- › The additional remuneration is not aggregated.

Table 39 Remuneration of the GPW Supervisory Board members [PLN thousand]

Name	Year ended	
	31 December 2023	31 December 2022
Michał Bałabanow	135.8	86
Dominik Kaczmarski	137.9	87
Janusz Krawczyk	136.7	86
Filip Paszke	61.3	79
Eva Sudol	64.4	0
Adam Szyszka	136.7	86
Leszek Skiba	66.4	86
Izabela Flakiewicz	136.7	86

The Exchange Supervisory Board Members held no supervisory or management functions in any other entities of the GPW Group.

3.11.5. Evaluation of GPW's remuneration policy

The Company's remuneration policy based on an incentive system directly supports the implementation of GPW's business strategy.

The remuneration policy differentiates between pay levels depending on the job position, performance, and competences. The variable component provides flexibility and aligns the system with the implementation of GPW's strategy. The incentive system links the Company's management with the goals of the GPW strategy and cascades the goals to employees, thus supporting GPW's business.

The extensive system of employee benefits is competitive on the market while ensuring cost efficiency for the Company. As a part of the HR strategy, the remuneration policy consistently helps to recruit, retain, and incentivise employees.

3.12. Changes of key management rules of GPW and the GPW Group

3.12.1.Changes in the GPW Group structure

The Giełda Papierów Wartościowych w Warszawie Group was comprised of the parent entity and 16 consolidated subsidiaries as at 31 December 2023. GPW holds a stake in three associates and joint ventures.

3.12.2.Change of persons sitting on the authorities of GPW Group companies

The change of GPW's managing persons as well as changes to GPW's organisational structure are described in section 3.10. Exchange Management Board. The section below outlines changes in other companies participating in the GPW Group as at 31 December 2023.

BondSpot S.A.

As at 31 December 2023, the Management Board of BondSpot S.A. was comprised of two persons:

- › Mariusz Bieńkowski – President of the Management Board,
- › Maciej Bombol – Member of the Management Board.

As of 31 May 2023, Paweł Ostrowski resigned from the Management Board of the Company. On 19 May 2023, Maciej Bombol was appointed to the Management Board of the Company.

Towarowa Giełda Energii S.A.

As at 31 December 2023, the Management Board of TGE was comprised of three persons:

- › Piotr Zawistowski – President of the Management Board,
- › Piotr Listwoń – Vice-President of the Management Board,
- › Jarosław Ziębiec – Member of the Management Board.

On 5 September 2023, Jarosław Ziębiec was appointed to the Management Board of the Company.

IRGiT S.A.

As at 31 December 2023, the Management Board of IRGiT S.A. was comprised of two persons:

- › Łukasz Goliszewski – President of the Management Board,
- › Piotr Listwoń – Vice-President of the Management Board.

As of 30 September 2023, Andrzej Kalinowski resigned from the Management Board of the Company. On 1 October 2023, Łukasz Goliszewski was appointed President of the Management Board of the Company and Piotr Listwoń was appointed Vice-President of the Management Board.

InfoEngine S.A.

As at 31 December 2023, the Management Board of InfoEngine S.A. was comprised of one person:

- › Dariusz Katulski – President of the Management Board.

The composition of the Company's Management Board did not change in 2023.

GPW Benchmark S.A.

As at 31 December 2023, the Management Board of GPW Benchmark S.A. was comprised of three persons:

- › Zbigniew Minda – President of the Management Board,
- › Aleksandra Bluj – Vice-President of the Management Board,
- › Arkadiusz Szymanek – Member of the Management Board.

On 10 May 2023, Arkadiusz Szymanek was appointed as a Member of the Management Board of the Company.

GPW TECH S.A.

As at 31 December 2023, the Management Board of GPW TECH S.A. was comprised of two persons:

- › Witold Wiliński – President of the Management Board,
- › Arkadiusz Gronek – Member of the Management Board.

A new term of office for the Management Board of GPW Tech S.A. started on 1 July 2023. By decision of the GPW Tech S.A. General Meeting of 30 June 2023, Witold Wilinski was appointed President of the Management Board of the Company for the new term. On 1 October 2023, Arkadiusz Gronek was appointed as a Member of the Management Board of the Company.

GPW Ventures ASI S.A.

As at 31 December 2023, the Management Board of GPW Ventures ASI S.A. was comprised of the following persons:

- › Piotr Gębala – President of the Management Board,
- › Paweł Tymendorf – Member of the Management Board.

The composition of the Company's Management Board did not change in 2023.

GPW Ventures Asset Management Spółka z o.o.

As at 31 December 2023, the Management Board of GPW Ventures Asset Management Spółka z o.o. was comprised of the following persons:

- › Piotr Gębala – President of the Management Board,
- › Paweł Tymendorf – Member of the Management Board.

The composition of the Company's Management Board did not change in 2023.

GPW Ventures Asset Management Spółka z o.o. KOWR Ventures ASI S.K.A.

The company was registered in the National Court Register on 28 January 2021 as the first alternative investment company (ASI) managed by GPW Ventures Asset Management Spółka z o.o.

GPW DAI S.A. (Tanerstile Investments S.A.)

As at 31 December 2023, the Management Board of GPW DAI S.A. was comprised of the following persons:

- › Paweł Laskowski – President of the Management Board,
- › Maciej Stanecki – Vice-President of the Management Board.

As of 1 March 2023, Monika Gorgoń resigned from the Management Board of the Company. On 1 March 2023, Paweł Laskowski was appointed as President of the Management Board of the Company, and on 1 April 2023, Maciej Stanecki was appointed as Vice-President of the Management Board of the Company.

GPW Private Market S.A. (Teelgren Investments S.A.)

As at 31 December 2023, the Management Board of GPW Private Market S.A. was comprised of the following persons:

- › Elżbieta Małecka – President of the Management Board,
- › Adrian Kutnik – Vice-President of the Management Board.

The composition of the Company's Management Board did not change in 2023.

GPW Logistics S.A. (Molonello Investments S.A.)

As at 31 December 2023, the Management Board of GPW Logistics S.A. was comprised of the following persons:

- › Marcin Wolak – Vice-President of the Management Board,
- › Tomasz Klonowski – Member of the Management Board.

On 1 September 2023, Tomasz Klonowski was appointed as a Member of the Management Board of the Company. As of 14 November 2023, Marek Harasny resigned from the Management Board of the Company.

Armenia Securities Exchange

As at 31 December 2023, the Management Board of the Armenia Securities Exchange was comprised of the following persons:

- › Hayk Yeganyan – President of the Management Board,
- › Mikayel Hayrapetyan – Member of the Management Board,
- › Tigran Petrosyan – Member of the Management Board,
- › Grzegorz Kucharski – Member of the Management Board,
- › Ani Makaryan – Member of the Management Board.

4. Responsible business and sustainable development

4.1. Information on the GPW Group and its business model

Information on the GPW Group

The GPW Group comprises the most important capital and commodity market institutions in Poland and it is the largest stock exchange in the region of Central and Eastern Europe. The main entity of the group is the Warsaw Stock Exchange (Giełda Papierów Wartościowych w Warszawie S.A.), which organises trading in financial instruments and ensures the dissemination of economic knowledge in society through numerous educational initiatives. The stock market ecosystem is an important source of capital for businesses and local governments in the region. It contributes to the dynamic development of the Polish economy, the creation of new jobs, increased competitiveness of Polish enterprises on the international arena and, as a result, growing wealth of Polish society. Presence on the capital market also brings other benefits to Polish entrepreneurs, such as increased recognition, credibility, management efficiency and transparency.

Since December 2022, with the acquisition of a majority stake in AMX, the structure of the GPW Group has expanded to include AMX together with its capital group. The Warsaw Stock Exchange is the majority shareholder of the Armenia Securities Exchange. This is already reflected not only in the financial results of the GPW Group but also in the activities supporting the AMX strategy, which will indirectly impact the stock market ecosystem in Armenia.

GPW Group's mission

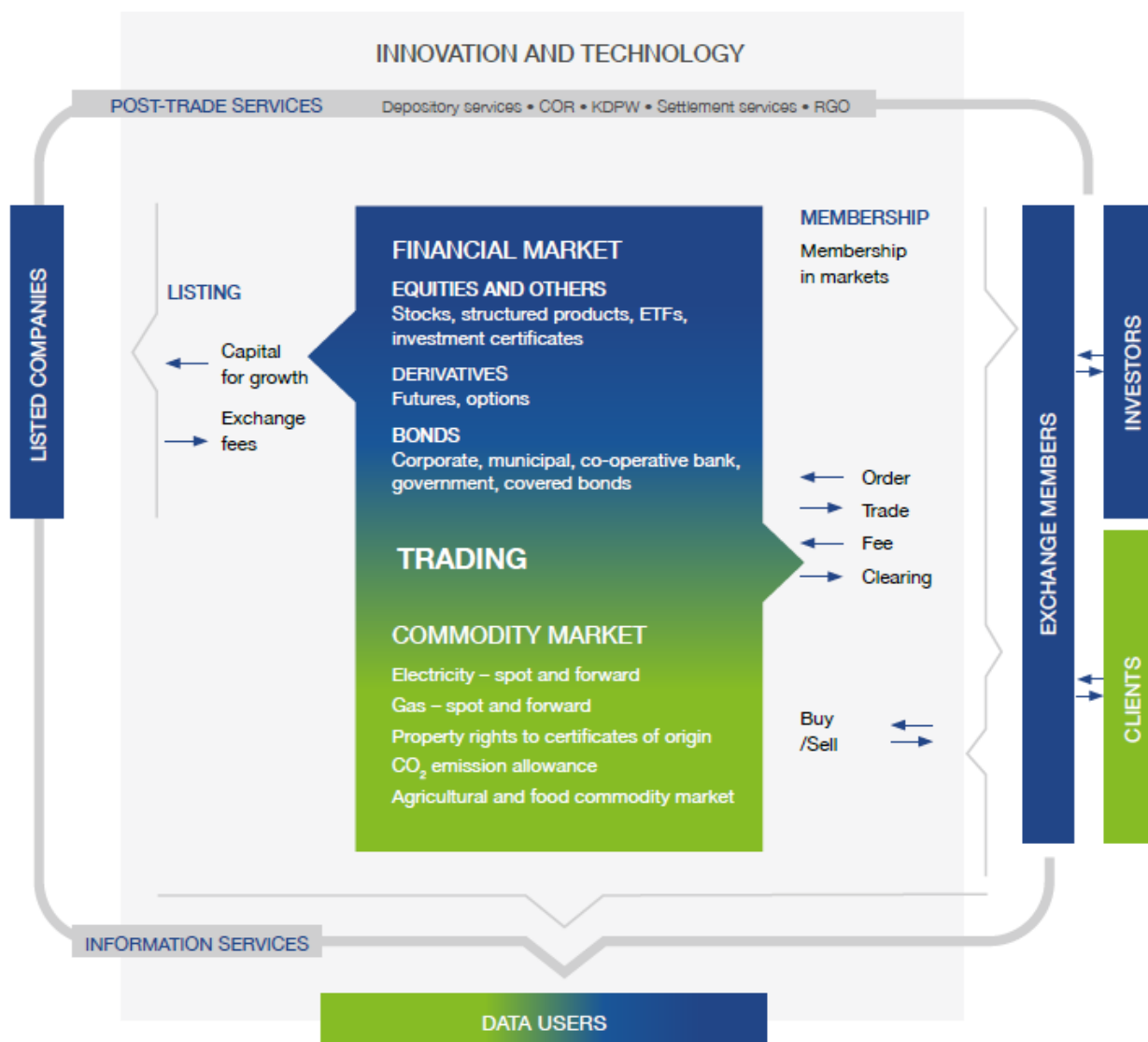
The mission of the GPW Group is to develop efficient mechanisms for the movement of capital and goods by providing exchange and clearing services competitive in quality and price which meet the needs and expectations of the Group's clients - businesses, investors and trading intermediaries:

- › Promoting economic growth and building an investment culture;
- › Creating an international capital hub;
- › Ensuring the highest standards and safety of trading based on world-class technology;
- › Running integrated, efficient, growth-oriented operations.

GPW Group's business model

The GPW Group's business model focuses on services provided on two markets of key importance to the economy: the financial market and the commodity market. In both markets, the services offered cover the entire activity chain, from listing to post-trade services, generating value for listed companies, data users and Exchange Members, and ultimately for investors and the economy as a whole

Chart 11 Business model



Certificate of Origin Register (COR)

Register of Guarantees of Origin (RGO)

The GPW Group comprises 14 subsidiaries: Towarowa Giełda Energii S.A., Izba Rozliczeniowa Giełd Towarowych S.A., InfoEngine S.A., BondSpot S.A., GPW Benchmark S.A., GPW Ventures ASI S.A., Ventures Asset Management Spółka z o.o., GPW Ventures Asset Management sp. z o.o. S.K.A., GPW Tech S.A., GPW Private Market S.A., GPW Logistics S.A., GPW DAI S.A., Armenia Securities Exchange, and Central Depository of Armenia OJSC. GPW has a stake in 3 associates and joint ventures.

For more information on the GPW Group and an extended description of the business model and business strategy as well as information on products and revenue, see Section 2 and Section 5 of this Report.

4.2. Key non-financial indicators

Table 40 Key non-financial indicators in 2023

	GPW	GPW Group
Scope 1 and 2 (market-base) emissions in CF [t CO2e/year]		1548.01
Average annual employment (FTE)		566.71
Rotation rate (overall) ³⁰	22.71%	19.07%
Number of data breach incidents	0	0
Number of fraud/corruption incidents	0	0
Participation of women in the Management Board [%]	50%	33%
Participation of women in the Supervisory Board [%]	16%	29%
Number of participants in educational activities of the GPW Group and the GPW Foundation		61 980
The number of significant events triggering the unavailability of the trading system	0%	
Average availability of the trading system	100%	

4.3. ESG strategy of the GPW Group

GPW's core business is to organise trading in financial instruments in a professional and responsible manner. The Warsaw Stock Exchange and the companies of the GPW Group conduct their operations bearing in mind not only business standards but also social, ethical and environmental issues.

In 2021, the GPW Group adopted a new GPW Group ESG Strategy for 2022-2025.

By implementing the ESG Strategy, the GPW Group contributes to the Global 17 Sustainable Development Goals 2030 set by the United Nations and adopted by all 193 UN member states, including Poland. The GPW Group sees its activities in particular in relation to the following UN Goals:



The GPW Group's ESG Strategy covers three pillars:

E – ENVIRONMENT	S – SOCIAL	G – GOVERNANCE
<p>GPW Group supports transition to low-carbon economy.</p>	<p>GPW Group is a responsible and attractive employer which creates an inclusive working environment.</p> <p>GPW Group brings unique value to financial education and training of generations of investors.</p>	<p>GPW Group has established quality corporate governance practices.</p>

GPW Group's ESG Strategy 2025

In December 2021, the GPW Group adopted the GPW Group ESG Strategy 2025 ("ESG Strategy"), which sets out the ambitions and targets in the area of sustainable development for 2022-2025.

The GPW Group's ESG strategy has been adopted in the companies: GPW, TGE, BondSpot, IRGiT, GPW Benchmark, InfoEngine, GPW Tech, and GPW Ventures.

³⁰ Equal to the number of employees who left in 2023 (voluntary or compulsory) to the average number of all employees in 2023

A description of the results of the applied policies, as well as measures of their implementation with regard to social, employee, environmental, human rights and anti-corruption issues applies to the above entities and is described in this section: Corporate Social Responsibility and Sustainable Development.

Any references to the GPW Group solely in this chapter should be understood as the following companies: GPW, TGE, BondSpot, IRGiT, GPW Benchmark, InfoEngine, GPW Tech and GPW Ventures, unless other company names are indicated in the text. The remaining Polish companies of the Group are currently companies in organisation and their early development structure prevented the implementation of the GPW Group ESG Strategy and key ESG policies in 2023. The Armenian company AMX, which has been part of the GPW Group since December 2022, announced a new strategy in October in which it committed to implement the ESG standards operating in the GPW Group in the coming years.

Ambitions of the three pillars of the GPW Group ESG Strategy

E – ENVIRONMENT	S – SOCIAL	G – GOVERNANCE
GPW Group supports transition to low-carbon economy.	<p>GPW Group is a responsible and attractive employer which creates an inclusive working environment.</p> <p>GPW Group brings unique value to financial education and training of generations of investors.</p>	GPW Group has established quality corporate governance practices.

IT IS GPW GROUP'S AMBITION (STRATEGIC GOAL) TO:

<ul style="list-style-type: none"> ✓ Reduce GPW Group's greenhouse gas emissions by 50% by the end of 2025 and become emission-neutral by 2030 (base year: 2022). ✓ Introduce climate reporting in GPW Group in line with Commission and TCFD climate recommendations. ✓ Launch a new environmentally sustainable product by the end of 2025. 	<ul style="list-style-type: none"> ✓ Ensure high employee engagement (2025 score above the base year 2022). ✓ Ensure high/growing employee satisfaction and engagement. ✓ Ensure that GPW Group is seen as an attractive workplace for employees with competencies key to GPW. ✓ Develop GPW Group and GPW Foundation educational initiatives addressed to various stakeholders, in particular investors and the young generation. 	<ul style="list-style-type: none"> ✓ Establish GPW Group's ESG Committee. ✓ Integrate ESG risks into the Group's existing risk management system. ✓ Educate employees in ESG and sustainable development.
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For a detailed description of the GPW Group ESG Strategy 2025, click [HERE](#).

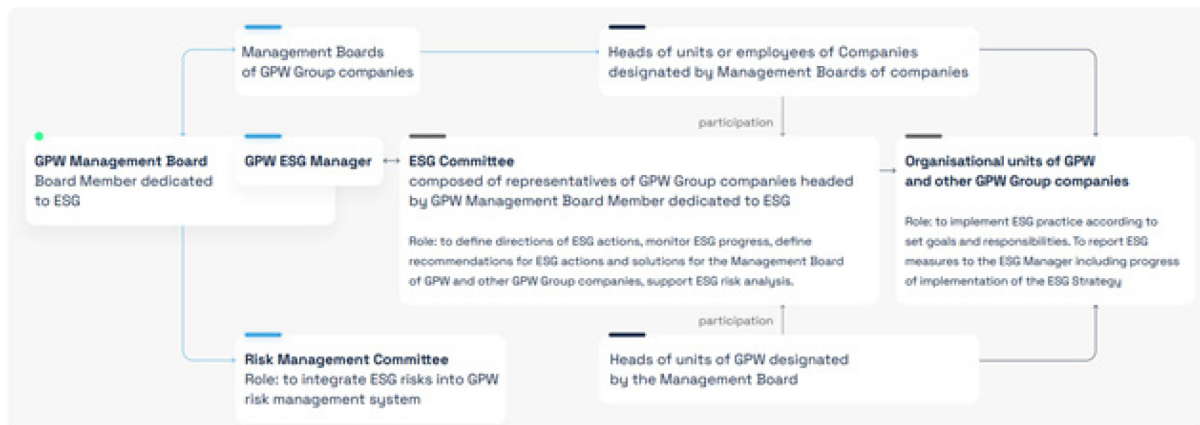
The companies which have adopted the GPW Group's ESG Strategy annually draft and approve their annual operational plans of the ESG Strategy. The plans define the main implementing activities in a given year, the expected results, and the companies and organisational units responsible for them. The plans are one of the tools of systematic evaluation of progress and integration of ESG issues into the organisation's daily operations.

Progress in the implementation of the GPW Group ESG Strategy 2025 is regularly evaluated and reported:

- internally – in the GPW Group's ESG management system,
- externally – in GPW Group annual integrated reports published on the GPW Group website.

4.4. ESG management framework

Chart 12 GPW Group's ESG management framework



The implementation of ESG factors in the Group is supervised by Izabela Olszewska, Member of the GPW Management Board. The remuneration of the Management Board Member dedicated to the ESG area is linked to performance in this area. According to the remuneration policy, the remuneration for the Exchange Management Board Members consists of a basic part and a variable part constituting a supplementary remuneration (variable remuneration), which depends on the level of achievement of the management objectives. The Exchange Supervisory Board sets detailed Management Objectives by setting criteria for: restructuring the Exchange, increasing the value of the Exchange and improving the economic and financial indicators of the Group, and contributing to the protection of the environment, taking into account social interests, taking measures aimed at preventing and eliminating the negative social effects of the Group's activities.

The GPW Group has an ESG Committee comprising, among others, Management Board Members of several GPW Group companies (TGE, BondSpot, IRGiT, GPW Benchmark).

The ESG Committee serves as a standing committee established by the Group's Board. The Committee is a consultative and advisory body supporting the Management Boards of the Companies in the effective management of ESG policies, strategies and objectives and in the supervision of the ESG Factors management system at GPW and the GPW Group.

The responsibilities of the Committee include:

- › defining directions for ESG activities
- › monitoring the implementation of the GPW Group ESG Strategy,
- › giving opinions on and monitoring the implementation of the Annual Operational Plans which detail the ESG objectives and actions of the Companies for a given year, including the objectives and actions concerning climate change
- › annual evaluation of implementation of the Companies' actions in compliance with the objectives of the GPW Group ESG Strategy, Climate Policy (conclusions from the evaluation are an input to the process of defining subsequent Annual Operational Plans)
- › giving opinions on the results of ESG risk assessment, including climate risk
- › reviewing recommendations from internal and external audits on ESG issues
- › regular review of ESG activities and issuing opinions, reports and recommendations to the Group Board on ESG management in the GPW Group.

As part of the implementation of the strategic objectives under the ESG Strategy, regular ESG reviews were held at meetings of the Management Boards of the companies and at Group Board meetings in 2023.

There is also a **Regulation and Corporate Governance Committee** within the Exchange Supervisory Board. The Committee submits recommendations to the Exchange Supervisory Board on issues including: initiating, providing opinions on and monitoring activities related to the implementation of corporate governance principles by GPW and in listed companies, assessing on an annual basis how the Exchange complies with corporate governance principles and information obligations related to their application set out in the Exchange Rules and regulations on current and periodic reports published by issuers of securities.

Key policies on ESG factors

The GPW Group has established policies and procedures which form the basis for managing ESG factors. These policies are updated in accordance with the procedures for creating, implementing and updating internal regulations.

Policies in force in GPW

- › GPW Diversity Policy,
- › Diversity Policy for GPW Management Board Members and for members of bodies appointed by the General Meeting,
- › Code of Ethics,
- › GPW Anti-Corruption and Anti-Fraud Policy,
- › GPW Anti-mobbing Policy,
- › GPW procedure for reporting violations,
- › GPW procedure for handling complaints,
- › Policy for managing ESG risks, including climate risk at GPW.

These regulations have also been implemented in the subsidiaries: TGE, BondSpot, IRGIT, GPW Benchmark, InfoEngine, GPW Tech and GPW Ventures by implementing them into the system of internal policies and procedures through appropriate resolutions of the relevant management and supervisory bodies.

In addition, at the level of those companies, expectations towards suppliers, client relations from the perspective of ESG good practice, and climate issues have been regulated by establishing policies applicable at GPW and all its subsidiaries:

- › Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group;
- › Policy governing relations with clients in the GPW Group;
- › GPW Group climate policy.

A description of the results of the policies in place, as well as measures of their implementation in relation to social, labour, environmental, human rights and anti-corruption matters, covers the above entities and is presented in this section "Responsible business and sustainable development", unless a direct reference is made to a particular GPW Group company in the given section.

4.5. ESG Strategy indicators (KPIs)

The year 2023 was another year of implementation of the ESG Strategy in the area of sustainable development in the GPW Group. In accordance with the ESG Strategy, the progress in achieving the set objectives is examined every year through specific strategic indicators, and the progress in achieving them is described in the report.

The strategic indicators cover the companies where the ESG Strategy has been implemented. The other operational indicators cover the GPW Group as a whole unless specific exclusions are made in the explanations of the calculations.

The key performance indicators (KPIs) for 2023 vs. the base year (2022), together with the target indicator level to be achieved in 2025, are presented in the tables below:

- › environment (E)

ENVIRONMENT KPIs				
No.	KPI	BASE YEAR DATA (2022)	2023	KPI TARGET 2025 IN THE ESG STRATEGY
E1	SCOPE 1 + SCOPE 2 GPW GROUP market-base (direct + indirect emissions)	3,591.9 t CO2e/year	1,548.0 t CO2e/year	Reduce GPW Group greenhouse gas emissions by 50% by the end of 2025 (Scope 1+2)
E2	DEVELOP AN ESG PRODUCT/SERVICE	Analysis of information providers' offerings of ESG services to investors and issuers.	Initiation of strategic discussions with partners/suppliers related to the plan to build products and services in the ESG area	Develop a product/service by 2025. Success rate adopted for the new product.

› social (S)

SOCIAL/EMPLOYEE KPIS				
No.	KPI	BASE YEAR DATA (2022)	2023	KPI TARGET 2025 IN THE ESG STRATEGY
S1	EMPLOYEE ENGAGEMENT SCORE ³¹	8.71 GPW 8.68 GPW Group	In 2023, we discontinued the engagement and satisfaction survey in its previous form and decided to carry out an in-depth survey in this area and obtain the result in a different form (see paragraph [...] of this Management Board Report for a description of the survey).	Increasing indicator between base year 2022 and 2025
S2	EMPLOYEE ENGAGEMENT SCORE IN THE KEY EMPLOYEE SCHEME ³²	8.50 GPW 8.71 TGE 9.33 GPW Benchmark		Increasing indicator between base year 2022 and 2025
S3	EMPLOYEE VOLUNTARY DEPARTURE INDEX (VOLUNTARY ROTATION) ³³	15.35% GPW 13.77% GK GROUP	22.37% GPW 18.67% GPW Group (excluding AMX Group)	Indicator unchanged or lower between base year 2022 and 2025
S4	NUMBER OF BENEFICIARIES OF GPW GROUP AND GPW FOUNDATION EDUCATIONAL INITIATIVES	34,585	61,980	Number unchanged or higher between base year 2022 and 2025
S5	GENDER PAY GAP (OWN INDICATOR) ³⁴	Indicator for 2022 shown in section 4.7.3 of the 2022 Management Board Report	Indicator for 2023 shown in section 4.8.3 of this Management Board Report	Measurement and monitoring of the indicator with annual publication.

› governance (G)

GOVERNANCE KPIS				
No.	KPI	BASE YEAR DATA (2022)	2023	KPI TARGET 2025 IN THE ESG STRATEGY
G1	IMPROVING EMPLOYEES' ESG KNOWLEDGE	4.61h GPW 4.22 h GPW Group	5.21 GPW 5.82 GPW Group	8h of training/employee in the first two years of implementation of the ESG Strategy (2022-2023) KPI reached in 100%
G2	REGULAR ESG RISK REVIEWS, INCLUDING CLIMATE RISK	A review of ESG risks was carried out	A review of ESG risks was carried out	Annual review of ESG risks
G3	COMPLETED AND DOCUMENTED ESG COMMITTEE MEETINGS	Documented ESG Committee meetings have been held regularly since April 2022	Documented ESG Committee meetings have been held regularly	Regular meetings of the ESG Committee from 2022 onwards
G4	REGULAR REVIEWS OF ESG FACTORS AT MEETINGS OF COMPANIES' MANAGEMENT BOARDS	Regular reviews of ESG factors took place at meetings of the Management Boards of the companies	Regular reviews of ESG factors took place at meetings of the Management Boards of the companies	Quarterly reporting on the implementation of the Climate Policy or ESG Strategy targets to the GPW Management Board and to the Management Boards of the other GPW Group companies

³¹ Based on the 2022 engagement survey, employee rating on a scale of 1-10 for the employees' self-assessment of their engagement in performing their duties at GPW/Group.

³² Employee engagement score for employees in key positions based on research using engagement surveys in companies where key positions are defined and where the number of people in these positions allows for the survey to be anonymous and the results to be analysed. Employee rating on a scale of 1-10 for the employees' self-assessment of their engagement in performing their duties at GPW/Group.

³³ Calculated by dividing the number of employees who left voluntarily in 2022 by the average number of all employees in that period (includes retirements).

³⁴ Gender Pay Gap in GPW and selected GPW Group companies in 2022 as at 31 December 2022. Gender Pay Gap Ratio under the methodology established and published annually by GPW in the Report on Compliance with the Best Practice of GPW Listed Companies 2021.

GOVERNANCE KPIs				
No.	KPI	BASE YEAR DATA (2022)	2023	KPI TARGET 2025 IN THE ESG STRATEGY
G5	COMPLETED AND DOCUMENTED MEETINGS OF THE GROUP BOARD DISCUSSING ESG FACTORS	Regular reviews of ESG factors took place at Group Board meetings	Regular reviews of ESG factors took place at Group Board meetings	Quarterly reporting on the implementation of the Climate Policy tasks and the ESG Strategy objectives to the Group Board

A description of specific actions taken in the management of environmental, social and governance factors in order to fulfil the ESG Strategy's objectives is provided under the headings: business ethics, employees, social and environmental impact.

4.6. ESG risk management framework

We actively and continuously manage the external and internal risks in our business, aiming to eliminate or reduce their potential negative impact on the Group. The objective of risk management at the GPW Group is to ensure that all material risks associated with the business are properly measured, reported and controlled and do not pose a threat to operational stability and continuity.

The implementation of ESG policies involves the process of identifying and mitigating ESG risks. We have identified the following main risks from this perspective:

Operational risk

- › climate risks related to the impact of extreme weather events and weather anomalies;
- › risk of attracting and retaining qualified staff of the Group.

Compliance risk

- › risk related to the requirements of financial and market institutions with regard to the climate and environmental protection and sustainability disclosures.

A description of material risks associated with the activities of GPW and the GPW Group that may have an adverse effect on social, employee, environmental, human rights and anti-corruption issues, including risks related to the entity's products or its relations with the external environment, including counterparties, and a description of the management of these risks is provided in section 2.8.2 of this Report.

4.7. Business ethics

4.7.1. Code of Ethics

The organisational culture in the companies of the GPW Group is based on values including principles of ethics in activities and relations, both internal and with all stakeholders, as the foundation of the working environment.

The Code of Ethics applicable in the companies of the GPW Group defines a set of values and principles to be followed by every employee of the GPW Group.

The Code of Ethics defines the role of ethical values applicable in all aspects of the GPW Group's activity, describes the established principles of conduct, disseminates and promotes the culture of compliance with applicable laws, decision-making based on ethical criteria and respect for the rights of suppliers, customers, employees and competitors.

The Code of Ethics defines:

- › relations with employees,
- › relationships with clients,
- › relations with business partners,
- › relations with competitors,
- › ethical action in communication, promotion and advertising,
- › principles of ethical conduct for GPW employees.

The Code of Ethics also includes GPW's declaration to support and respect the protection of human rights included in the Convention for the Protection of Human Rights and Fundamental Freedoms ("European Convention on Human Rights") and to ensure that GPW's activities do not make it an accomplice to human rights violations.

In the biggest companies of the GPW Group, the Code of Ethics establishes, among others, the function of Ethics Officer held by the Compliance Officer, Risk Officer, or Head of Compliance and Risk, whose role is to uphold the principles of the Code of Ethics and to assist in resolving ethical issues. The Compliance Officer also has an advisory role in ethics-related matters, in particular by providing guidance and advice on ethical issues, promoting GPW's ethical standards and assisting in designing and promoting information and awareness campaigns on GPW's ethical standards.

Conflict of interest prevention

One of the responsibilities of our employees is to uphold the reputation of the GPW Group. Employees at every level should avoid situations where a conflict of interest may arise.

GPW has established transparent rules to manage, identify, monitor and manage conflicts of interest where they arise to ensure that GPW operates in a sound, transparent and professional manner in accordance with the standards of fair trading and corporate governance.

The rules for managing conflicts of interest at GPW define:

- › the concept of conflict of interest,
- › rules of conduct with respect to GPW clients,
- › rules of conduct with respect to GPW Group companies,
- › rules of conduct with respect to employees,
- › rules of conduct with respect to Exchange Management Board Members,
- › rules of conduct with respect to Exchange Supervisory Board Members,
- › rules of prevention of conflicts of interest,
- › procedures for keeping records of events concerning potential or actual conflicts of interest.

The Compliance and Risk Department is the organisational unit designated by the GPW Management Board to provide support to employees in identifying circumstances or situations which constitute a conflict of interest and in interpreting the provisions of the rules.

Companies of the Group have established and apply internal regulations on the prevention of conflicts of interest.

4.7.2. Anti-corruption and anti-fraud policy

The topic of corruption and potential fraud in the GPW Group is one of the key elements of exemplary corporate governance. The management of this area is defined in detail in the dedicated policies described in this chapter.

The GPW Group follows the principle of no tolerance for corruption and fraud in every area of the companies' operations. This area is managed under the GPW Anti-Corruption and Anti-Fraud Policy established in 2021. This regulation was subsequently adopted by the following subsidiaries: BondSpot, TGE, IRGIT, InfoEngine, GPW Benchmark, GPW Tech and GPW Ventures which incorporated it into their corporate governance.

The Policy established by most of the GPW Group companies prohibits all acts of corruption and fraud. It requires the employees of the GPW Group not to engage in or tolerate any form of corruption, extortion or embezzlement.

The anti-corruption policy concerning the supply chain is regulated at Group level in relevant provisions of the policy addressed to suppliers and subcontractors of GPW and all Group companies.

The Company has established an internal document: the Rules for acceptance and giving of gifts by GPW employees. These rules are designed to prevent situations where the professionalism, objectivity, impartiality and integrity of employees would be called into question or the reputation of GPW would be damaged by the acceptance or presentation of a gift by a GPW employee.

GPW and the other companies of the GPW Group do not accept any unethical practices in relations with suppliers, subcontractors and business partners, as defined in the "Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group", also adopted in 2021. In addition, according to the "GPW Group Procurement Procedure," anti-corruption standards are implemented in the procurement process.

The topic of anti-corruption is addressed in regular onboarding training and other training on ethical topics. The companies which have adopted the Anti-Corruption and Anti-Fraud Policy maintain dedicated records of potential cases of corruption and fraud.

More than 90% of employees received training on developing an ethical culture and reporting violations, as well as on anti-corruption issues in GPW. In 2023, the companies: BondSpot, TGE and IRGiT delivered training to all employees on compliance obligations, including shaping an ethical culture and reporting violations. Participation was 41% at BondSpot and 91% at TGE and IRGiT, respectively.

In 2023, the companies of the GPW Group did not record any confirmed cases of corruption, incidents where employees were dismissed or disciplined for corruption, or cases where contracts with business partners were terminated or not renewed due to corruption-related violations.

There were no corruption-related lawsuits against Group companies. The GPW Group companies keep records of incidents of corruption and other fraud, as well as records of penalties and their amounts and non-monetary sanctions.

No significant penalties or non-financial sanctions were imposed on Group companies for non-compliance with laws and regulations.

Whistleblowing and whistleblower protection policy

In the GPW Group, the regulations concerning the mechanism of reporting violations apply in all companies on the basis of the same catalogue of rules described above. The whistleblowing mechanism allows reports to be made anonymously and without fear of negative consequences. It is also available through specific communication channels such as email and/or a dedicated website.

According to the "GPW Violation Reporting Procedure":

- › reports may be made anonymously by an individual who has an employment relationship with GPW or an individual who has a commission relationship with GPW or performs activities for GPW under another civil law agreement. GPW assures that it will not pursue the identity of the person making a report anonymously. No feedback is provided to the person submitting a report anonymously;
- › violations may be reported to the Compliance Officer by e-mail via the mailbox naruszenia@gpw.pl, by telephone, in person, in writing at the GPW secretariat with the annotation "personal". A report may also be made to the President of the Exchange Management Board at his email address or to a member of the Exchange Supervisory Board at RN.naruszenia@gpw.pl if the violation concerns a member of the Management Board. If the report is made by telephone or in person, a written note is drawn up of the conversation and made available to the reporting person to confirm the information contained therein. The reporting person has the opportunity to check, correct and confirm in writing or electronically via email the information indicated in the note;
- › GPW does not take retaliatory action against whistleblowers.

According to the Procedure of Handling Complaints, trading participants may file complaints against GPW relating in particular to activities in connection with the organisation of trading. Complaints may concern, among others, non-performance, negligence, or undue performance of obligations by GPW. The method of handling complaints is set out in the Procedure of Handling Complaints, an extract of which is available on the GPW website at <https://www.gpw.pl/skargi>.

In 2023, there were no material cases of non-compliance with laws, market standards or internal regulations in the GPW Group. No financial penalties were imposed on GPW Group companies for this reason.

4.7.3. Human rights policy

We have a common Group-wide policy of respect for human rights. It is based on:

- › Code of Ethics;
- › Policy governing relations with clients in the GPW Group;
- › Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group.

In accordance with our Code of Ethics, we support the protection of rights as enshrined in the Convention for the Protection of Human Rights and Fundamental Freedoms, and we strive to ensure that our activities do not make us complicit in rights violations. We strongly oppose all forms of child labour, forced or compulsory labour and all forms of slavery, including modern forms of slavery and human trafficking. The above policies are available internally to all employees via the intranet and are made available by email through the procedure for informing employees of approved regulations.

Respect for human rights in the value chain

We have implemented the "Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group". According to the Policy, we expect suppliers and subcontractors to comply with applicable labour law, including standards protecting employees against discrimination and mobbing in the workplace, and to respect employees' right of association.

4.7.4. Personal data protection and cyber security

Personal data protection and cyber security are topics identified as most important by GPW Group stakeholders. The Group is taking a range of measures in this area to best meet stakeholder demands and ensure data security.

The GPW Group complies with all obligations under data protection legislation. The regulation underlying the management of this area at GPW is the "GPW Personal Data Security Policy". GPW's cyber security regulations include the "Information Security Policy". GPW appointed a Data Protection Officer who monitors compliance with the relevant legislation and is the point of contact for matters relating to this category of data. Other Group companies appointed DPOs or their duties are performed by the Security Officer. TGE appointed a Security Coordinator in 2022.

GPW as a critical infrastructure operator and financial sector entity is particularly exposed to the risk of a cyber attack. For this reason, it has in place a Procedure for the Management of Specific Types of Cyber Attacks, which sets out the rules for dealing with and managing the occurrence of cyber attacks in its cyberspace. The Company conducts ongoing activities to manage and monitor security in its IT infrastructure. As part of its cooperation with the CSIRT, reports are made on incidents that may affect the operation of GPW Group services. In the case of warnings communicated by the CSIRT, verifications are made as to whether the vulnerabilities identified apply to GPW Group systems. In addition, the GPW Group systematically educates employees on the security of the ICT environment and information security. In connection with the war in Ukraine, the Group is operating on high alert to ensure an efficient response in the event of cyber security incidents.

The subsidiaries established security policies coinciding in principle with the GPW regulation and have their own policies and procedures for specific areas of data protection and cyber security.

In the companies TGE, BondSpot, IRGiT, GPW Benchmark, GPW Tech and GPW Ventures, the process of monitoring the IT infrastructure for potential cyber security threats is an ongoing process subject to continuous development.

Cyber security measures taken in the GPW Group in 2023:

- › training for employees to raise their awareness of cyber security and data protection,
- › competence improvement of the team responsible for cyber security,
- › developing and implementing new technological solutions in the field of cyber security and to counter risks in this area,
- › improving the information security management system through monitoring, audits, testing, reviewing and updating policies, procedures and instructions - these actions are undertaken on a regular basis, every year,
- › review of the security area with a view to meeting the requirements of external regulations,
- › systematic checks of IT and security service providers.

In the coming years, we plan to continue all the actions taken in the reporting period and improve the security management system, in particular to focus on the implementation of new technological solutions for cyber security.

In the companies GPW Benchmark, TGE and BondSpot, the security service is provided by the relevant GPW cyber security team under a service agreement with the lead company.

The GPW Group companies maintain registers of complaints concerning breaches of customer privacy or data loss.

In 2023, there were no substantiated complaints against the GPW Group companies in these areas.

4.7.5. GPW Group Policy towards suppliers

We follow the Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group. According to the Policy, we expect suppliers and subcontractors to comply with, among other things:

- › applicable labour laws, including the application of standards protecting workers from discrimination and mobbing in the workplace, as well as respecting workers' right of association,
- › no tolerance in their business for any action that violates human rights,
- › provision of safe and healthy working conditions,
- › commitment not to practice or tolerate any form of corruption, extortion or embezzlement,
- › generally applicable environmental legislation and management of the environmental impact of their business activities in a responsible manner.

GPW and the GPW Group companies expect:

- › that each potential supplier of the GPW Group companies entering into a written agreement will read and comply with the Policy towards Suppliers and the Supply Chain with Respect to Human Rights, Ethical and Environmental Issues in the GPW Group;
- › suppliers to sign a declaration of compliance with the principles contained in the Policy.

This declaration is included in each contract with every potential supplier.

The Policy also applies to the GPW Group's key suppliers subject to procurement processes on the basis of the procurement procedure in place within the GPW Group (the procedure was updated accordingly for this purpose).

4.8. Employees

4.8.1. Approach to workplace management

In managing the HR area, two directions set out in the GPW Group ESG Strategy 2022 - 2025 are the key:

- › creating a friendly and inclusive workplace;
- › supporting the development of key competences of employees by providing access to expert knowledge and implementing solutions supporting the educational ambitions of our staff.

We value the unique qualifications of our employees, their commitment and professionalism. We take care to develop the competencies of our employees to ensure that they are prepared for the tasks facing the business and the economy, especially the transition towards a low-carbon economy. We implement measures to prevent talent loss and unwanted turnover.

Employees are one of the key stakeholders of the GPW Group as they have a direct impact on the implementation of our mission and growth strategy. We offer them employment stability: almost 17% of GPW's staff have more than 10 years of seniority with the Company. In the GPW Group companies in operation for more than 10 years, as many as 21% of the staff have been with us for more than a decade. The average length of service is around 10 years at GPW and around 9 years in the GPW Group companies in operation for more than 10 years. 21% of employees working in the GPW Group's domestic companies have more than 10 years' seniority.

In 2023, we retained the option of working from home and hybrid working, also in response to our employees' preference for a working regime.

In order to achieve the strategic objectives under the ESG Strategy, a GPW Group employee satisfaction and engagement survey is conducted by principle every year. The survey is a tool to examine the results of the implementation of the strategic objectives in terms of building employee satisfaction and commitment, including employees in positions defined as key positions. On the basis of the analysis of the results of the survey, annual plans are developed to increase the commitment and job satisfaction of GPW Group employees and measures are identified to counteract the increase in rotation at the GPW Group. Consequently, based on the results of the 2022 survey, the measures described below were implemented in 2023.

In 2023, an initiative to build a culture of appreciation for colleagues was implemented in the GPW Group. The initiative was a response to the opinions and needs expressed in the satisfaction and engagement survey that was conducted at the end of 2022. The aim of the Kudos & Kudos Recognition programme is to build a culture of appreciation within the organisation by awarding and receiving praise and thanks for attitudes displayed at work, such as selfless help, teamwork, collaboration, innovation, responsibility, knowledge sharing and proactivity. The programme covered people working for the companies: GPW, TGE, IRGiT, GPW Benchmark. In 2023, as many as 458 expressions of gratitude were awarded, divided into the above 7 categories, through the presentation of Kudos and Kudos Recognition.

In an effort to improve communication and collaboration within teams, the budget for departmental integrations was maintained in 2023. Each Department could use the allocated funds for any integration activities. Thematic events were also organised, such as a joint Pizza Day lunch or an Employee Appreciation Day bowling outing aimed at integrating all GPW Group Employees.

In the 2022 survey, Employees reported needs for the development of professional skills needed for their position as well as participation in soft skills training. In 2023, training courses and webinars in the aforementioned areas were implemented alongside training projects for lower and senior management.

As part of the expansion of the well-being project, in addition to webinars on mental wellbeing, we joined the "Two Hours for the Family" campaign, enabling employees to leave work early and spend an extra two hours with their loved ones.

As part of the expansion of fringe benefits, a dental service was added to the Allianz medical package, and physiotherapy consultations were introduced in the office. Employees can use a physiotherapist free of charge in the office twice a week. During the meetings, the physiotherapist determines the general condition of the spine and posture, helps to identify possible health risks resulting from the specific nature of sedentary work, and develops individual exercise sets to be performed both at home and at work. During the visit, the physiotherapist also delivers treatments to address pain in the spine and

musculoskeletal organs and release tension from the body, which contributes to stress reduction and an increased sense of relaxation, calmness and improved mood.

In the 2022 Engagement and Satisfaction Survey, employees reported that remuneration and fringe benefits are not fully satisfactory to them as they currently stand. Due to this, and in view of an industrial dispute with the Trade Union of Exchange Employees, in order to implement remedial plans and to best align the supplementary pay and fringe benefits system with the needs of employees, we decided to conduct a supplementary pay and fringe benefits preference survey in 2023 instead of the annual employee engagement and satisfaction survey.

The survey was conducted using the Conjoint method with the support of an external expert, who participated at every stage in conducting the survey and will analyse and present the results obtained from the survey.

The survey was completed on 4 January 2024 and the results will be prepared in Q2 2024.

Additional information on the survey is presented in section 4.8.4 of this Report.

GPW's HR Department holds regular meetings with employees who decide to leave the GPW. The conclusions of these exit interview surveys enable further improvements to be made in the approach to workplace management.

As part of the onboarding process, an onboarding mentor function was introduced, who is responsible for the employee's adaptation to the new workplace and a meeting between HR people and new employees after they have worked for a month in order to get feedback on the process of introducing the new hires into GPW's organisation.

In the GPW Group companies which have implemented the ESG Strategy, the HR area is mainly governed by:

- › Code of Ethics applicable to all employees of the GPW Group, which defines a set of values and principles to be followed by every employee to ensure that GPW and its subsidiaries operate not only in compliance with the law but also in an honest and ethical manner,
- › Diversity policy,
- › Anti-mobbing policy,
- › Work regulations which define the rights and obligations of employees.

The issues addressed by the policies are managed at the level of the GPW Group companies.

Other personnel issues are governed by separate policies established internally by the GPW Group companies.

GPW has also established:

- › GPW Employee Selection Policy,
- › GPW Talent Development Programme Regulations,
- › Employee Remuneration Regulations,
- › Development Interview Regulations.

Freedom of association and industrial dispute

All companies of the GPW Group have freedom of association and collective bargaining. GPW has one trade union organisation but no collective bargaining agreement. Most GPW employees are members of the Trade Union of Exchange Employees (ZZPG), the only trade union active in GPW since 2005. There are no trade unions in the other GPW Group companies.

According to the law, the Trade Union of Exchange Employees represents the rights of all employees of the Exchange to the extent of collective rights and interests. In accordance with its Statute, the Trade Union of Exchange Employees represents its members vis-à-vis the employer to the extent of individual rights and interests. In particular, the objective of the Trade Union of Exchange Employees is to protect the rights and interests of employees and to participate in creating favourable working, remuneration and leisure conditions for the Exchange employees.

Table 41 Number of members of the Trade Union of Exchange Employees as at 31 December

	2023	2022
Number of GPW employees	306	291
Number of Trade Union members	175	164
<i>including GPW employees</i>	150	139
<i>including retired former employees</i>	25	25
number of employees who are members of the Trade Union as % of total number of GPW employees	49.02%	47.77%

On 1 June 2023, an industrial dispute arose with the Trade Union of Exchange Employees. The dispute arose as a result of the refusal to meet the following demands of the Trade Union of Exchange Employees:

- Introduction of rules in GPW for the payment of an additional benefit ("inflation-linked benefit");
- Setting the amount of the inflation-linked benefit for 2023 at min. 15% of the GPW Employee's gross annual base salary, calculated as 12 times the Employee's base salary as of 31 May 2023;
- Granting of the inflation-linked benefit to each GPW Employee in employment as at 31 May 2023;
- Payment of the inflation-linked benefit on the following dates: by 30 June 2023 (1/2 of the amount of the benefit due) and by 30 September 2023 in the remaining amount.

As part of the industrial dispute process, GPW and the Trade Union of Exchange Employees entered into mediation.

In October 2023, an agreement ending the industrial dispute with Trade Union of Exchange Employees was concluded. Pursuant to the agreement, GPW paid the employees a one-off inflation-linked benefit in a certain percentage of the annual gross base salary, depending on the annual appraisal of the respective employee for 2022. The amount of the inflation-linked benefit paid by GPW will be approximately PLN 2.7 million gross (in words: two million seven hundred thousand zloty). The average unit value of the inflation-linked benefit amounted to approximately 5.7% of the annual gross base salary. In addition, the social side undertook to support the Exchange Management Board in the implementation of the GPW Group's strategy for 2023-2027.

In addition, under the agreement, an increase in employees' basic salaries was made equal to a certain percentage amount depending on the employee's annual appraisal for 2022. The salary increase took effect from 1 October 2023 and was of a one-off nature resulting from the special circumstance of an above-standard high increase in the consumer price index in 2023 (inflation).

Headcount

Table 42 Number of employees of GPW and the GPW Group by type of employment, as at 31 December

Number of persons employed under:	GPW		GPW Group	
	2023	2022	2023	2022
employment agreement – full-time	276	255	546	428
employment agreement – part-time	30	36	50	65
average annual employment in full-time equivalents (FTE)	294.4	275.43	526.6	460.44
contracts other than an employment agreement ³⁵	85	88	179	150

Table 43 Number of employees of GPW and the GPW Group by type of employment, as at 31 December 2023

Number of persons employed under:	GPW			GPW Group		
	Women	Men	Total	Women	Men	Total
employment agreement – full-time	119	157	276	247	299	546
employment agreement – part-time	5	25	30	12	38	50
average annual employment in full-time equivalents (FTE)	121.9	172.5	294.4	201	325.6	526.6
contracts other than an employment agreement ³⁶	21	64	85	49	130	179

³⁵ "Contracts other than an employment agreement" include management service contracts, contracts of appointment, short-term work contracts (umowa zlecenie), the employment of persons holding functions on the Exchange Court and examination and supervisory boards, and B2B contracts in GPW.

³⁶ "Contracts other than an employment agreement" include management service contracts, short-term work contracts (umowa zlecenie), the employment of persons holding functions on the Exchange Court and examination and supervisory boards, and B2B contracts.

Table 44 Employee rotation in GPW SA and the GPW Group in 2022-2023

Employee rotation	GPW		GPW Group (excluding AMX Group)		AMX Group (2023)
	2023	2022	2023	2022	
Employee rotation (total) ³⁷	22.71%	15.7%	19.07%	13.97%	6.00%
Women	4.34%	8.37%	5.16%	6.16%	10.00%
Men	18.36%	7.32%	13.90%	7.81	3.00%
Voluntary rotation (total) ³⁸	22.37%	15.35%	18.67%	13.77%	6.00%
Compulsory rotation (total)	0.33%	0.35%	0.4%	0.21%	0.00%

Table 45 Employee rotation in GPW SA and the GPW Group in 2023

Indicator	GPW	GPW Group (excluding AMX Group)	AMX Group
Total number of employees who were hired during the reported financial year, including:	46	75	29
Women	19	30	14
Men	27	45	15
Total number of employees who left the organisation during the reported financial year, including:	68	96	6
Women	13	26	5
Men	55	70	1

4.8.2. Diversity policy

All GPW Group companies attach special importance to equal treatment and equal opportunities of employees in professional development and promotion regardless of gender, age, disability, health status, race, nationality, ethnicity, religion or lack of religious belief, political opinion, union membership. We follow this approach in all our business relationships and in the implementation of our employment policy.

GPW has in place a diversity regulatory package including:

- › Diversity Policy for Employees,
- › Diversity Policy for Members of the GPW Management Board,
- › Diversity Policy for Members of Bodies Appointed by the General Meeting.

Policy reviews are conducted periodically.

The approach to managing and promoting diversity is common to all GPW Group companies. The package of the diversity policies was adopted by the subsidiaries of the GPW Group taking into account the structure of the respective company to ensure that the policies apply to employees at all levels of employment.

³⁷ Equal to the number of employees who left in 2022 (voluntary or compulsory) to the average number of all employees in 2022.

³⁸ Voluntary staff rotation includes retirements. There were 3 retirements in the GPW Group and 2 in the GPW in 2022. The compulsory rotation occurs when an employer terminates a contract as a result of planned layoffs, budget cuts, position elimination or non-renewal of a contract.

Table 46 Number of persons employed under an employment agreement in GPW and the GPW Group by gender as at 31 December 2023

Category		GPW	GPW Group
Managers			
	Women	12	28
	Men	22	65
Other staff			
	Women	112	230
	Men	160	273

Table 47 Number of persons employed under a contract other than an employment agreement in GPW and the GPW Group by gender as at 31 December 2023

Category		GPW	GPW Group
Managers			
	Women	4	15
	Men	7	51
Other staff			
	Women	17	34
	Men	57	79

Table 48 Number of persons employed under an employment agreement in GPW and the GPW Group by age as at 31 December 2023

Category		GPW	GPW Group
Managers			
	Under 30 years	1	1
	30-50 years	19	60
	Over 50 years	14	32
Other staff			
	Under 30 years	29	97
	30-50 years	184	311
	Over 50 years	59	95

Table 49 Number of persons employed under a contract other than an employment agreement in GPW and the GPW Group by age as at 31 December 2023

Category		GPW	GPW Group
Managers			
	Under 30 years	0	0
	30-50 years	7	39
	Over 50 years	4	27
Other staff			
	Under 30 years	10	20
	30-50 years	50	73
	Over 50 years	14	20

Table 50 Diversity in supervisory bodies of GPW as at 31 December

Indicator	2023	2022
Share of women on the Management Board [%]	50	50
Share of women on the Supervisory Board [%]	33	14

In 2023, the percentage of women in the GPW's management and supervisory bodies combined was 40%.

Table 51 Diversity in supervisory bodies of the GPW Group (excluding AMX Group) as at 31 December

Indicator	2023	2022
Share of women on the Management Board [%]	16	19
Share of women on the Supervisory Board [%]	29	18

The ratios for AMX in 2023 are: 20% for the proportion of women on the Management Board and 0% for the proportion of women on the Supervisory Board, respectively. The ratios for the AMX Group as a whole were 20% and 0%, respectively.

Table 52 Number of persons with disabilities employed under an employment agreement in GPW and the GPW Group as at 31 December 2023

Indicator	GPW	GPW Group
Number of persons with disabilities	2	6
Share of persons with disabilities	0.65%	1%

Table 53 Number GPW SA and GPW Group employees employed under an employment agreement by education as at 31 December 2023

Number of employees with:	GPW	GPW Group
vocational education	0	0
secondary education	82	110
tertiary education	224	486

4.8.3. Remuneration policy

The remuneration policy is described in detail in section 3.11 of this Report.

GPW employees have broad access to non-wage benefits, as described in section 4.8.4 of this Report.

All non-wage benefits are available to persons employed under an employment agreement, whether part-time or full-time.

In 2023, pursuant to the agreement ending the industrial dispute between the GPW and the Trade Union of Exchange Employees, an increase was made in the basic salaries of Employees in a specified percentage amount depending on the Employee's annual appraisal for 2022. The salary increase took effect from 1 October 2023 and was one-off due to the special circumstance of an above-standard high increase in the consumer price index in 2023 (inflation).

In addition, a one-off inflation-linked benefit was paid to the Employees at a certain percentage of the Employee's annual gross base salary depending on the annual appraisal for 2022. The inflation-linked benefit was a one-time benefit resulting from the special circumstance of an above-standard high increase in the consumer price index.

Table 54 GPW's annual remuneration index in 2023

Indicator	GPW
Ratio of the annual total compensation for the organisation's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual)	2,57
Ratio of the percentage increase in annual total compensation for the organisation's highest-paid individual to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual)	0,5

The above calculations include total cash compensation: all components of remuneration paid to the employee in 2022 and representing the employer's cost. Persons on parental leave are included.

Table 55 Gender pay gap ratio in GPW in 2023 as at 31 December 2023

Pay grade other than IT	Ratio		IT pay grade	Ratio	
1	12%	M/W	1*		
2	2%	M/W	2**		
3	3%	W/M	3	55%	M/W
4	14%	M/W	4**		
5	3%	W/M	5	2%	W/M
6	2%	W/M	6**		
7**			7*		

* no employee in the pay grade

** no comparative group

Gender Pay Gap Ratio under the methodology established and published by GPW in the Report on Compliance with the Best Practice for GPW Listed Companies 2021.

Legend:

M/W – men earn more (by the % shown in the left column)

W/M – women earn more (by the % shown in the left column)

GPGR (Gender Pay Gap Ratio) according to the following formula: $GPGR = [(APW/APM)-1] \times 100\%$, where:

APW - average monthly pay of women in the Company in 2023,

APM - average monthly pay of men in the Company in 2023.

Table 56 Gender pay gap ratio in TGE in 2023 as at 31 December 2023

Pay grade other than IT	Ratio		IT pay grade	Ratio	
1*			1*		
2	73%	M/W	2*		
3	6%	W/M	3**		
4	25%	M/W	4**		
5	15%	M/W	5	3%	M/W
6**			6**		
7*			7*		

* no employee in the pay grade

** no comparative group

Gender Pay Gap Ratio under the methodology established and published by GPW in the Report on Compliance with the Best Practice for GPW Listed Companies 2021.

Legend:

M/W – men earn more (by the % shown in the left column)

W/M – women earn more (by the % shown in the left column)

GPGR (Gender Pay Gap Ratio) according to the following formula: $GPGR = [(APW/APM)-1] \times 100\%$, where:

APW - average monthly pay of women in the Company in 2023,

APM - average monthly pay of men in the Company in 2023.

Table 57 Gender pay gap ratio in IRGiT in 2023 as at 31 December 2023

Pay grade other than IT	Ratio		IT pay grade	Ratio
1*			1*	
2	18%	M/W	2**	
3	13%	M/W	3**	
4	11%	W/M	4**	
5	10%	W/M	5**	
6	4%	W/M	6*	
7*			7*	

* no employee in the pay grade

** no comparative group

Gender Pay Gap Ratio under the methodology established and published by GPW in the Report on Compliance with the Best Practice for GPW Listed Companies 2021.

Legend:

M/W – men earn more (by the % shown in the left column)

W/M – women earn more (by the % shown in the left column)

GPGR (Gender Pay Gap Ratio) according to the following formula: $GPGR = [(APW/APM)-1] \times 100\%$, where:

APW - average monthly pay of women in the Company in 2023,

APM - average monthly pay of men in the Company in 2023.

The analysis shows that persons with the same competences and responsibilities are remunerated at a comparable level in the above companies, and that the differences are not related to the gender of the employees but have their origin in other factors, such as annual performance appraisals.

4.8.4. Social benefits

Non-wage benefits in the GPW Group cover a variety of employee needs. Each of the Group's subsidiaries offers its employees a selected range of non-wage benefits and perks within the catalogue below:

- › MOTIVIZER cafeteria system, in particular the MultiSport card;
- › individual MultiSport card;
- › private medical care, including the extension of services to include dental care;
- › physiotherapy consultations at GPW headquarters;
- › life insurance;

- › Employee Pension Scheme;
- › Employee Loan Scheme;
- › holiday subsidy for employees and their children;
- › benefits from the Company's Social Benefits Fund, e.g., a one-off Christmas benefit;
- › hybrid work allowance (the benefit is designed to subsidise the costs of hybrid work).

On the occasion of the 30th anniversary of GPW, the GPW Management Board introduced a Phantom Share Scheme in 2021, which will remain in force at least for 10 years until 2031. The scheme covers all GPW employees in employment as at 16 April 2021. Under the terms of the scheme, each employee is entitled to a certain number of phantom shares for the period from the time they start working for the Company until 16 April 2021. In addition, GPW will grant 4 phantom shares to each participant in each subsequent year of the scheme.

In GPW, certain provisions of the Rules of the Company Social Benefits Fund were updated in 2023 to adjust the new income thresholds with the amount of subsidies covering them.

In December 2023, a survey was conducted on preferences for supplementary pay and fringe benefits. The survey was conducted in response to the needs of Employees indicated in the 2022 Engagement and Satisfaction Survey regarding changes in the above areas. The purpose of the survey was to determine GPW Group Employees' preferences regarding supplementary remuneration and benefits, as well as the rules for awarding and calculating pay raises. The results will allow us to plan measures in future periods best suited to the needs of Employees in such areas as: the pay rise matrix, the pay rise matrix in the case of inflation and deflation, the frequency of pay rises in the GPW Group, the additional benefits offered (i.e. Employee Pension Schemes, medical package, cafeteria system), the variable component of remuneration (i.e. bonuses), training and integration activities. Questions in the survey focused on preferences for possible models of supplementary remuneration and fringe benefits, as well as satisfaction with the current model.

In the 2022 Engagement and Satisfaction Survey, Employees reported that remuneration and fringe benefits are not fully satisfactory to them as they currently stand. Due to this, in order to implement remedial plans and to best align the supplementary pay and fringe benefits system with the needs of Employees, we decided to conduct a supplementary pay and fringe benefits preference survey in 2023 instead of the annual employee engagement and satisfaction survey.

The survey was conducted using the Conjoint method with the support of an external expert, who participated at every stage in conducting the survey and will analyse and present the results obtained from the survey.

The survey was completed on 4 January 2024 and the results will be prepared in Q2 2024.

4.8.5. Training and development

Each of the Group companies pursues a separate training policy. Investing in the development and improvement of employees' qualifications is an important part of the HR policy in all companies. It is also an important part of the implementation of the ESG Strategy to the extent of ensuring the development of key competences of employees.

In 2023, the GPW Group paid particular attention to the following thematic areas:

- › developing digital and technological skills - learning from generative models - prompt creation, data analysis (including a series of webinars on artificial intelligence and available tools based on AI and how to use it in practice in professional life);
- › strengthening soft skills of middle managers - communication, leadership, collaboration, change orientation, motivating employees, which remain key to successful teams;
- › bridging competency gaps and developing unique competencies;
- › development of the online training offer - due to the popularity of the hybrid working model, we provide online training and remote learning methods.

Our training programme is based on in-house and external training, project training, conferences, participation in courses and post-graduate programmes, webinars with experts, and e-learning training on an e-learning platform. Each GPW Group company defines the schedule and scope of training, adjusting it to the development requirements and specificity of its operations, e.g. GPW Benchmark focused in particular on the development of interest rate benchmarks and composite indices.

With regard to managers at GPW, training was provided on change management and team management with an emphasis on communication and collaboration (incorporating FRIS methodology to learn FRIS thinking styles), leadership support, delegating responsibilities, building trust within the team, giving feedback, managing the team during change, building employee motivation.

Our workplace management strategy includes monthly engagement and education initiatives; this year, we continued a well-being project for all GPW Group employees. All events organised as part of the well-being policy addressed the needs of employees indicated in employee surveys (for a description, see section 4.8.4. of this Report).

Table 58 Average number of hours of training received in 2023 (data refers to clock hours) per employee (in total) employed under an employment agreement in the GPW Group and by gender

Average number of hours of training per:	GPW	BondSpot	Benchmark	IRGIT	TGE	InfoEngine	GPW Logistics	GPW PM	AMX
Employee (all)	27.8	2.1	26.6	30.4	17.1	47.2	24	6	3
Woman	23	2.1	27.3	36.2	22	58.7	24	2	4
Man	21.5	2.2	25.7	24.6	14.7	34.4	-	-	3

Table 59 Average number of hours of training in 2023 per employee employed under an employment agreement in the GPW Group, by category of employment

Average number of hours of training per:	GPW	BondSpot	Benchmark	IRGIT	TGE	InfoEngine	GPW Logistics	GPW PM	AMX
Manager	38.2	2.5	0	25.3	13.8	38.3	24	-	2
Other staff	18.6	1.9	26.6	31.7	18.8	40.4	24	6	4

The companies GPW Ventures and GPW Tech did not provide training to employees in 2023 (with the exception of employee participation in ESG training courses for employees of all GPW Group companies). At GPW DAI, 1 person participated in a postgraduate programme (50 training hours).

Acquiring knowledge on ESG factors

Table 60 Average number of hours of training received in 2023 (data refers to clock hours) per employee employed under an employment agreement in the GPW Group on ESG factors

Average number of hours of training per:	GPW	GPW Group
Employee (all)	5.21	5.82

Wskaźnik dla GK GPW odzwierciedla godziny szkoleniowe przypadające na pracowników w spółkach, które wdrożyły Strategię ESG.

In the implementation of the ESG Strategy and the pursuit of the strategic objectives under the Strategy, a series of training courses was launched at the GPW Group in 2022 for employees to expand and acquire knowledge on ESG factors. This activity continued into 2023.

Training courses aimed at all GPW Group employees included:

- › reducing plastic and living a zero-waste life - "Become a recycling champion",
- › eco-driving: "ECO & SAFETY - Academy of Conscious Drivers",
- › human rights in the activities of financial institutions.

In addition, selected employees of the GPW Group participated in workshops on:

- › identification of Scope 3 data in the GPW Group,
- › identification of risks and opportunities under the TCFD standard,
- › EU Taxonomy.

Each of the GPW Group companies took its own training initiatives on the subject by directing relevant in-house and external training to specific employee groups. The main focus in 2023 was on education in compliance (ethics, anti-fraud, conflict of interest management, application of the anti-corruption policy). In addition, the GPW Group delivered training on the following topics: corporate governance (with particular emphasis on the circulation and reporting of specific information), operational risk management, cyber security.

As part of the GPW onboarding procedure, each new employee participates in a training course on ESG factors and the implementation of the GPW Group's ESG Strategy 2025.

4.8.6. Anti-mobbing

In its activities, the GPW Group is guided by the principles of equal treatment and prevention of all forms of mobbing and discrimination. The Group considers any form of mobbing to be highly reprehensible and condemnable, and does not accept any form of mobbing. No retaliatory action is taken against those who report mobbing. This approach is common to all Group companies, and compliance with these principles is an obligation of every employee at all levels of employment.

By implementing the "Anti-mobbing Policy", the GPW Group strengthens the organisational culture based on the principle of respecting the dignity and other personal goods of employees, the principle of respect towards every employee, and good practice of responsible business as defined, inter alia, in the "Best Practice for GPW Listed Companies 2021" and in the Ten Principles of the UN Global Compact.

The Policy defines:

- › clear rules on how to deal with cases of mobbing,
- › rules on confidential reporting of reasonable suspicions of mobbing,

and ensures that employees' reports are dealt with in a confidential manner and with due care.

Rules for reporting violations:

Any employee who believes that they have been subjected to mobbing, or who has observed such a situation in relation to another employee, may report it:

- › electronically to the GPW Ethics Officer by sending the report to the dedicated e-mail address;
- › in writing to the GPW Ethics Officer by submitting the report personally or via the Exchange Secretariat,
- › to the President of the GPW Management Board by sending the report to the President's business email address.

Mobbing may also be reported in writing and sent by snail mail to the GPW address care of one of the following persons: GPW Ethics Officer or a Member of the Exchange Supervisory Board or the President of the GPW Management Board (with the following note: "personal"). Mobbing may be reported anonymously.

4.8.7. Occupational health and safety

Ensuring a safe workplace is an important element of the GPW Group's operations. All Group companies comply with statutory obligations to ensure occupational health and safety and manage this area in accordance with the required legal regulations.

The GPW Group's approach to occupational health and safety is set out in the Work Rules of the GPW Group in the chapter on occupational health and safety and fire protection. The GPW employs an ergonomist - a specialist in occupational health and safety and fire protection. The other Group companies have not implemented an occupational health and safety management system.

Tasks implemented in the area of occupational health and safety and health promotion in 2023:

- › initial occupational health and safety training,
- › initial and periodic medical examinations,
- › periodic training including ergonomics of remote work,
- › subsidising the purchase of ergonomic materials needed for remote working,
- › training on health issues,
- › e-mail campaigns on occupational health and safety and health protection,
- › reporting in this area.

Initiatives involving and educating employees are an important element of ensuring occupational health and safety in the GPW Group. In 2023, the implementation of a comprehensive well-being programme continued, where employees had the opportunity to take part in further initiatives. The aim of the programme was to improve employee well-being in the area of mental health and physical health. The starting point for the initiatives were the needs of employees as expressed in surveys. One of the more enthusiastically welcomed initiatives under this measure was the introduction of physiotherapy consultations at the GPW headquarters. Free individual physiotherapy sessions were available twice a week. This activity is being continued in 2024.

The webinars offered under the above programme in 2023 focused on:

- › strategies for raising daily happiness levels and responding to the first signs of depression,
- › the most common ailments that affect office workers and effective ways to counteract them,

- › breast cancer prevention from a physiotherapeutic perspective.

In 2023, there were no fatalities of own and supervised employees in the GPW Group, and there was only 1 workplace injury among own employees.

4.9. Social impact

4.9.1. Initiatives supporting diversity

The UN Global Compact Network Poland together with GPW organised for the ninth consecutive year the global initiative "Ring the Bell for Gender Equality", which is part of an international initiative calling on societies to take action for gender equality in professional, social, and business life. More than 120 stock exchanges around the world were involved in the event. The theme of this year's Ring the Bell for Gender Equality was "Digital: Innovation and Technology for Gender Equality". It referred to the theme of the 67th meeting of the UN Commission on the Status of Women (CSW-67), taking place in March 2023 in New York. Innovations, technological change and quality education in the digital age can make a significant contribution to achieving gender equality and empowering all women and girls. They eradicate digital exclusion, increase mobility and employability, while appropriate policies and actions to close the gender gap provide opportunities for women to thrive in areas hitherto stereotypically considered the domain of men.

The Exchange co-organises meetings held on a regular basis as part of the "Financial Market Women's Club" initiative. The aim of the initiative is to foster the attitude where the financial market is open to diversity and the presence of women, including on management boards and supervisory boards, is an indispensable element in building diverse and inclusive teams, which carry great potential for entrepreneurial development. The meetings are a place to freely exchange experiences and to build professional and relational capital. Two meetings of the Financial Market Women's Club were held in 2023, attended by more than 350 people.

As part of its cooperation with the Project PL Foundation, GPW sponsored the conference "Polka XXI w.", the only event organised in this format in Poland which brought together top female managers, social activists, experts and representatives of central and local government administration. During the conference, experts jointly debated the most important issues for Polish women.

GPW sponsored the "International Women in IT Career Day", which aims to support women at various stages of their IT careers by enabling participants to consciously build their careers in the world of technology. Through a variety of panel discussions, workshops and mentoring sessions, female participants had the opportunity to learn about different positions, roles and tasks related to the IT industry.

4.9.2. Promoting standards and practices that develop the organisational culture of financial market participants

Promoting sustainability standards and practices

ESG Reporting Guidelines

GPW, in cooperation with the European Bank for Reconstruction and Development, published an update of the document "ESG Reporting Guidelines. Guide for Companies Listed on GPW", which was first published in 2021.

The aim of the document is to support issuers in reporting non-financial data in line with investors' expectations. The latest version of the ESG Reporting Guidelines is the product of many months of hard work, as a result of which much of the original text has been updated and expanded. The main objective was to create a document that takes into account EU regulations and international sustainability reporting standards. The Guidelines discuss the CSRD and the ESRS standards in detail and provide a number of practical tips and information to help Polish companies meet their new reporting obligations. The Guidelines were published on the [GPW website](#).

GPW Growth course - ESG in practice

The first edition of the GPW Growth Course - ESG in practice was launched in May 2023. Reporting of environmental, social and governance factors is increasingly important in the capital market. At the same time, many organisations are still not sufficiently prepared for ESG reporting. To meet the needs of the market, GPW has prepared the GPW Growth - ESG in practice course. It aims to introduce participants to the theory of managing ESG factors while supplementing this knowledge with important practical issues in the process of implementing sustainability standards in a company. It is addressed to management boards and executives of companies, including small and medium-sized enterprises, those building the

company's strategy, fulfilling information obligations and responsible for preparing reports, and ESG managers. Experts who have been professionally dealing with sustainability issues for years share their knowledge and experience. The course takes place in an online format and includes both lectures and workshops. It consists of three training days dedicated to: ESG determinants, ESG investments, and practical aspects of ESG reporting. Institutional partners of the course are the European Bank for Reconstruction and Development, the International Finance Corporation (IFC) of the World Bank Group, the UN Global Compact Network Poland and the Responsible Business Forum. Business partners are mBank, Baker McKenzie and Azoty Polyolefins Group. The second edition of the course took place in November/December 2023. A total of 44 people were trained in both courses. A third edition of the course is planned for April 2024.

Postgraduate course "ESG Manager".

In 2023, the GPW Foundation and the Cracow University of Economics signed a consortium agreement to organise a two-semester postgraduate course "ESG Manager". The postgraduate programme includes 180 hours of classes with theoreticians as well as practitioners of sustainable finance. Topics to be covered include planning a company's development strategy from an ESG perspective, environmental aspects, non-financial reporting standards and legal conditions for non-financial reporting, i.e. everything that addresses the challenges of increasing reporting requirements. The knowledge gained in the programme will help future ESG managers to better face these challenges while increasing the numbers of experts appropriately qualified to support companies in their upcoming sustainability reporting obligations.

Other promotional and educational initiatives

Last year, ESG factors became increasingly visible and in focus, in particular resulting from new EU regulations, i.e. the CSRD and the European Sustainability Reporting Standards (ESRS).

As a market organiser, GPW supported sustainable development issues through promotional and educational activities, including the following:

- › The fifth edition of the ESG Warsaw conference aimed primarily at listed companies and issuers;
- › A conference on corporate governance and compliance entitled "Corporate Governance and Ethical and Compliance Standards in Listed Companies". The conference covered topics related to trends and developments in corporate governance. The areas discussed focused, among others, on the topics of whistleblower protection, the prevention and detection of corruption, as well as the benefits of good corporate governance in companies and the supporting role of the Best Practice for GPW Listed Companies 2021 in meeting the ESRS standards;
- › GPW awarded its prize for the seventh time as part of the 17th edition of the Responsible Business Forum's "Sustainability Reports" competition. The competition promotes the reporting of all factors that make up a company's impact on its social environment: employees, the local community and the environment. It is not directly concerned with financials, turnover and profits. One of the main categories of the competition, under the patronage of the Warsaw Stock Exchange, is entitled: "Best Integrated Report".
- › Co-organisation and patronage of conferences on ESG and broader governance and ethics issues, including: Supervisory Boards Forum, Polish Climate Congress, 9th National Compliance & AML Conference, ESG & Sustainability Forum, ToGetAir Climate Summit, ESG Compass Congress, European Financial Congress, ESG Sustainable Transformation Conference - Warsaw School of Economics, 11th edition of the SEG Listed Companies CFO Congress, Polish Power of Business.

Prizes and awards

In October 2023, the Warsaw Stock Exchange received three awards from the UN Global Compact Network Poland:

- › in recognition of its commitment to promoting labour, human rights and ethical standards that underpin sustainable development in Poland and worldwide;
- › in recognition of its commitment to climate protection and the promotion of sustainable development for the benefit of future generations;
- › in recognition of its commitment to combating corruption and the shadow economy, thereby building the foundations of sustainable development in Poland and worldwide.

Education in the development of the organisational culture of financial market participants

GPW Growth Academy

The fifth edition of the GPW Growth Academy was launched in October 2023. The GPW Growth Academy is a comprehensive programme focused on supporting the growth of small and medium-sized companies based on their identified needs. The programme is addressed to CEOs, management board members and directors responsible for achieving key objectives in companies. This unique programme includes networking meetings with experts and business practitioners, workshops, case studies, individual conversations. The current edition of the programme includes more than 120 hours of workshops and lectures and numerous accompanying events. The four previous editions of the GPW Growth Academy attracted a total of 85 participants from 64 companies. This includes the first managers of companies which went public on GPW.

Best Practice for NewConnect Listed Companies 2024

The Management Board of the Warsaw Stock Exchange in December 2023 adopted the "Best Practice for NewConnect Listed Companies 2024" ([link](#)), which are corporate governance principles applicable to issuers of shares listed on the alternative trading system on NewConnect. The document was co-authored and consulted with GPW's advisory committee for the development of the alternative trading system - the Council of Authorised Advisers. The draft was presented to issuers and Authorised Advisers at a workshop held at the GPW headquarters on 27 November 2023. The new principles, especially those concerning standards for the internal functioning of companies and their bodies, will make it easier for companies planning to move from NewConnect to the GPW Main Market to implement the corporate governance principles applicable on the main trading floor. The Best Practice for NewConnect Listed Companies 2024 became effective on 1 January 2024. The deadline for companies to publish a current report containing information on the status of compliance with the principles contained in the new set is 15 April 2024.

Workshop for companies listed on NewConnect, ATS Catalyst and Authorised Advisers

In connection with the introduction of amendments to the ATS Rules and the adoption of new sets of ATS Best Practice: Best Practice for NewConnect Authorised Advisers and the Best Practice for NewConnect Listed Companies 2024, the Listing Department organised and conducted a workshop in November for companies listed on NewConnect, ATS Catalyst and Authorised Advisers. The programme of the workshop included:

- › discussion of the most significant amendments in the ATS Rules
- › presentation of the new Best Practice for NewConnect Listed Companies 2024
- › presentation of the new Best Practice for NewConnect Authorised Advisers
- › presentation of the most important changes concerning the process of introduction of securities to the alternative trading system and the presence of companies on the NewConnect market
- › discussion of the tasks of Authorized Advisors in the context of the requirements related to the introduction of shares to trading

4.9.3. Stock market and financial education

The Warsaw Stock Exchange attaches special importance to promotion and education in the financial community as well as communication focused on the financial market. Educational activities are one of the ways to build a culture of investment on the Polish capital market.

We believe that our educational activities are one of the cornerstones of building confidence in the capital market and its participants.

In search of an appropriate tool to increase the reach and effectiveness of their initiatives, the GPW Group companies established the GPW Foundation.

In addition, GPW Group companies independently conduct certain educational activities targeted at different groups of market participants.

The most important educational activities in the field of stock market and financial education of GPW and its subsidiaries are presented below.

- › In December 2023, GPW inaugurated the first meeting of the "Knowledge Exchange Forum" series. The Knowledge Exchange Forum is a new initiative of the Warsaw Stock Exchange included in the GPW Group Strategy 2027. The idea of the Forum is to support participants of the Polish capital market in gaining expert knowledge based on reliable and verified sources of information. The first edition of the Knowledge Exchange Forum was organized by GPW together with foreign partners: the World Federation of Exchanges and the International Sustainable Finance Center. Guests of the inaugural Knowledge Exchange Forum meeting included speakers representing recognised international organisations related to the capital market.
- › In April 2023, a draft National Financial Education Strategy for Poland was announced. The long-term goal of the proposed strategy is to ensure that the people of Poland have the necessary financial competencies to help improve their overall financial resilience and ensure financial well-being. The document was created after an earlier analysis of Poles' financial skills and knowledge, summarised in the report "Financial literacy in Poland: meaning, data and educational offerings". The National Financial Education Strategy for Poland was created with the cooperation of experts from the Organisation for Economic Cooperation and Development (OECD) and the institutions of the National Working Group on Financial Strategy in Poland. The group included the Warsaw Stock Exchange. The Strategy is available [here](#).
- › In October, GPW joined for the second time the "Ring the Bell for Financial Literacy" initiative which inaugurated the World Investor Week (WIW). WIW is a global campaign established by the International Organisation of

Securities Commissions (IOSCO) in 2017 to raise public awareness of the role of education and investor protection in the financial market. The "Ring the Bell for Financial Literacy" event was organised by the Warsaw Stock Exchange, the Polish Financial Supervision Authority (coordinator of the WIW campaign in Poland), KDPW_CCP and the GPW Foundation.

- › GPW conducts a range of activities to promote knowledge among individual investors as well as professionals about the financial instruments it trades, including in 2023 the following: the "Discover GPW" training course devoted to stock market topics: GPW's offer, analysis of market conditions and upcoming regulatory changes; the "Warsaw Passive Investment Conference", an annual conference on passive investing; the "Warsaw Structured Products Day", an online conference on structured products; "Discover ETCs on GPW", a webinar on the first ETC on GPW; and additional webinars on GPW's offerings and derivatives rules on social media channels.
- › Commodity exchange market education: thematic webinars for professionals, for example "The phenomenon of negative prices in the energy market", "Implementation of the new version of the clearing system", "The impact of the current market situation on the process of exchange trading surveillance", "The process of exchange trading surveillance carried out by trading participants in the current market conditions"; lectures as part of the Trading Forum; meetings with representatives of brokerage houses and training courses organised in response to the needs of TGE/IRGIT Members, the annual "Platinum Megawatts" competition, training for candidates for TGE brokers
- › GPW Benchmark in 2023 focused on education on benchmarks through the participation of a Management Board representative in numerous conference panels on this topic and by organising and co-organising training workshops: co-organisation of the 3rd Interest Rate Benchmark Congress; on-site workshop "Replacing WIBOR with WIRON"; Training for audit firms and domestic banks on "External Data Audit"; training as part of the Wolters Kluwer Polska webinar "Provision and use of the WIBOR benchmark - legal status and case law".

For additional information on promotional and educational activities carried out by the GPW Group companies, see Section 3.1.2. of this Report.

Activity of the GPW Foundation

The GPW Foundation, established in 2015 by GPW Group companies, takes multiple initiatives to educate the public financially, being aware that knowledge in this area is crucial at every stage of our lives.

The Foundation's mission is to develop the habit of conscious, long-term saving and investing on GPW markets. Through our activities we want more young Poles to acquire the basics of financial education and learn about the mechanisms of individual investment using the opportunities offered by GPW, and our long-term goal is to increase the share of equities and financial instruments listed on the stock exchange in household assets.

We are particularly keen to ensure that the beneficiaries of our initiatives not only broaden their theoretical knowledge but also acquire practical skills in investing, saving, personal finance and entrepreneurship. We address our activities to a wide range of audiences, in particular schoolchildren, teachers, students and graduates, investors of varying levels of sophistication, adults, as well as entrepreneurs, in particular listed companies and others planning to be listed on the GPW markets.

The activities of the Foundation are outlined on the [website](#).

Key projects in 2023:

- › The Online School Exchange Game (SIGG), which is an educational project consisting of two modules:
 - ✓ An investment game where participants have access to the stock exchange transaction system gpwtr@der and get a virtual portfolio of a specified amount. The first stage of SIGG involves investing in shares of companies listed on the Warsaw Stock Exchange and ETFs; the second stage involves investing in futures contracts (index, single-stock, currency futures). The finals take place live on the GPW Trading Floor.
 - ✓ Educational module, where participants gain knowledge using multimedia materials and e-learning courses and get tested by means of gamification. Typically, an additional on-line test is conducted for all participants who have completed the project with the maximum possible number of points.
 - ✓ The 21st edition of the project, which closed with the finals on the Trading Floor on 27 April 2023, brought together 992 schools and the participants included 22,603 students and 1,163 teachers. The current 22nd edition taking place in 2023/2024 involved record-high 29,809 students and 1,276 teachers. This is the highest number of students and teachers we have recorded to date. Registered students represent 1,059 schools.

More than 380,000 students have participated in the 21 editions of the SIGG project to date.

- › In the Exchange School project, the leading capital market experts in Poland offered online classes. In total, the Exchange School in 2023 featured 16 on-site and online courses attended by 798 participants, including:
 - ✓ 11 courses "Basics of investing in the stock market";
 - ✓ 5 courses "The stock market for intermediate learners";
 - ✓ 4 courses "Practical investing workshop";

- ✓ online course "Basics of investing in the stock market" for 400 students in a fellowship programme run in partnership with Santander Universidades.
- The Stock Exchange Summer School organised by the GPW Foundation and the Association of Individual Investors took place between June and August. The project comprised 10 webinars, each dedicated to a different topic related to investing in the stock market. The webinars have been watched more than 3,000 times in aggregate.
- EduAkcja is an educational project aimed at teachers and students, jointly run by four institutions: GPW Foundation, CFA Society Poland, Warsaw Institute of Banking Foundation, and Franklin Templeton. EduAkcja's mission is to increase young people's financial awareness and interest in financial practice. The remote lessons offered to participants by the project organisers are devoted to the topics of saving and investing, as well as the principles of the financial and capital market.
- In 2023, approximately 27,000 students and teachers participated in the various elements of the project: volunteers representing the programme partners delivered 461 online lessons, 3 online meetings with market practitioners were held (each attended by several thousand students), and 3 competitions for students with financial prizes were organised. In addition, 2 new lessons were developed in 2023: "What will the bull and the bear tell you about investments?" (for primary schools) and "The road to capital - the benefits and process of a stock market debut" (for secondary schools). The publication of teaching materials for teachers (tests, thematic crosswords, glossaries) and publications in the local media on investing and saving were continued.
- The GPW Foundation organised the 10th edition of the competition for the best thesis with an award of the President of the Management Board of the Warsaw Stock Exchange. The 2023 competition attracted 66 entries from students at 21 universities in Poland. The 7 best MA and BA theses on the capital market were awarded. Two special distinctions were awarded for a thesis on the PPK scheme with PFR Portal PPK as Patron and for a thesis on investment funds with IZFiA as Patron.
- The GPW Foundation organises school visits to the building of the Warsaw Stock Exchange addressed to secondary and primary school students (grades 7 and 8). In 2023, there were around 230 visits attended by around 8,000 students, including 30 visits and around 1,000 students participating in the "Lessons on Finance" programme organised as part of a grant competition of the Ministry of Finance.
- "Student Sessions on the Trading Floor" are study visits for organised groups of students. Participants can listen to 2 lectures on the functioning of the stock exchange and on TGE operations or ESG issues in the capital market. The lectures are given by experts in the above-mentioned fields. "Sessions" are offered 4 times per academic year. In 2023, we implemented 4 meetings attended by approximately 470 students.
- The Index Investment Challenge (IIC) is a nationwide investment competition organised by the GPW Foundation and the Capital Market Science Club INDEX at the Cracow University of Economics. GPW was the Technology Partner of the project. The 7th edition of the Project took place in 2023. The project aims to promote the Polish capital market and active ways of investing money. Thanks to this initiative, students from all over Poland could improve their knowledge of the operation of the stock exchange and listed instruments and use that knowledge in practice. The 7th edition of the competition attracted nearly 3,000 participants from 30 science clubs. An additional competition was held to promote women's participation in the financial world.
- In 2023, the Foundation continued the Personal Finance project which consists of an educational programme in the form of training aimed at groups of people who are identified in surveys as having the lowest financial competence. The aim of the project is to counteract financial exclusion and, as a consequence, social exclusion of people who are exposed to negative consequences resulting from deficits in financial knowledge. The project targets, among others, Children's Homes, Social Care Homes, organised groups of senior citizens. As part of the project, the GPW Foundation runs 14-hour free Personal Finance courses. In 2023, the Foundation organised 9 courses for socially excluded groups, with more than 200 people trained. A brochure developed by a team of experts from the Wrocław University of Economics was published and is available for download at <https://www.gpw.pl/fundacja-gpw-finanse-osobiste>.
- Financial Education Day is an event held since 2021 to disseminate knowledge and increase the competence of Polish society in financial education. The event's programme is divided into modules aimed at a diverse audience: students and novice investors, teachers and parents, adults and seniors. Nearly 1,800 people took part (onsite and online) in the 3rd edition of the Financial Education Day in October 2023. In addition, more than 4,000 students and teachers from 180 secondary school classes from all over Poland participated in a remote lesson. For the first time, the Financial Education Day organised a Meeting of Student Science Clubs, which was attended by almost 60 students representing seven science clubs from seven Polish universities. More than 30 institutions/organisations were involved in the cooperation.
- The GPW Foundation developed educational platform "Kurs na giełdę" in 2023. It offers e-learning courses aimed at anyone interested in investing in the stock market, prepared in collaboration with leading capital market experts. The key elements featured on the platform include:
 - ✓ 12 free e-learning courses aimed at anyone interested in investing in the stock market,
 - ✓ 3 paid specialised courses (added in 2023),

- ✓ knowledge repository - links to latest educational materials of the GPW Foundation and GPW,
- ✓ news - current information on educational events organised by the GPW Foundation.

More than 500 users registered on the platform by the end of 2023.

- › "Niebanalnie o giełdzie" is an educational project of the GPW Foundation addressed to teachers of subjects with economic content. The main objective is to improve the knowledge and skills of teachers and to provide additional knowledge and skills in connection with the implementation of a new Business and Management subject in the 2023/2024 school year. In Q1 2023, we started preparations for the 3rd edition of the project: materials for 3 new lectures were developed (lecturers of the Stock Exchange School from the Economic University in Wrocław), materials for 3 lectures from previous editions were updated, and materials for methodological workshops were developed (Dr K. Sekścińska from the Faculty of Psychology of the University of Warsaw). In 2023, we delivered 18 activities for 634 teachers: online lectures, methodological workshops (online/onsite) on conscious consumption, saving and personal budget management, and workshops on design thinking (online) thanks to the cooperation established with the Central Technology House.
- › Educational field game "Za głosem giełdy" - a new version of the field game was launched during the 3rd edition of the Financial Education Day. The field game "Za głosem giełdy" is designed for all those interested in the subject of the stock exchange and investing in the capital market. During an approximately one-and-a-half-hour walk through the streets of Warsaw starting at Piłsudski Square and ending at the current seat of GPW, a virtual guide - a former stock exchange broker - tells game participants about all historical seats of the stock exchange, past and present securities, the most important rules for a novice investor, and the architecture of the Polish capital market. The app features 10 questions for game participants to test their knowledge. In 2023, more than 220 people used the "Za głosem giełdy" app.

Selected other educational initiatives:

- › Financial Education and Entrepreneurship Congress - The GPW Foundation is a co-organiser of the Congress, which has been held annually since 2017. The Congress is the most important venue for interdisciplinary debates, experience sharing and networking in educational activities concerning finance, cyber security and entrepreneurship. The event is attended by representatives of public institutions, local governments, the financial sector, NGOs, schools, universities, and the media. The most recent, seventh edition of the Financial Education and Entrepreneurship Congress was held online in March 2023 under the theme "Financial knowledge and skills as a key to responding to global economic challenges". More than 400 people attended the Congress (live/onsite) and more than 11,000 students and teachers took part in the accompanying online lessons. Around 350 institutions were involved in the event.
- › The survey of "Financial Knowledge of Poles" is a periodic survey conducted on a representative sample of Poles by commission of the Warsaw Institute of Banking (WIB) and the GPW Foundation. A discussion of the results of the recent edition of the "Financial Knowledge of Poles" survey took place during the Financial Education and Entrepreneurship Congress. The survey results are available [here](#).
- › Go4Poland - The 8th edition of the Programme took place in 2023. For the third time, it was held under the honorary patronage of Polish President Andrzej Duda. 150 new participants joined the Programme in 2023. The partners of the 8th edition included 15 companies and institutions. Representatives of the Programme promoted it at three student events abroad. From 2 to 8 September, the Go4Poland Summer School took place: a 7-day intensive educational programme for the top 25 participants of the Programme. The programme was supported by 16 mentors from partner companies. The partners offered a total of 11 internship positions to the Programme participants. The Programme had 900 participants, including 60 new participants, 50 participants in the final conference, 600 people who discovered the idea of the Programme, visited stands or attended workshops during the overseas student events. The Foundation held two meetings at GPW addressed to Programme alumni.

In implementing its own projects and events, the GPW Foundation enters into partnerships with other organisations: universities, student organisations/science clubs, non-governmental organisations, state institutions, etc. The GPW Foundation supports them in terms of content, promotion and organisation.

The Foundation is actively involved in processes of change in economic education, such as the development of the National Strategy for Financial Education and the core curriculum for the subject of Business and Management. The Foundation is involved in international programmes such as World Investor Week and Global Money Week.

In 2023, the Foundation was involved in the preparation of the Year of Economic Education 2024 celebrations. The Year of Economic Education 2024 is a joint initiative of the five largest organisations implementing educational activities within the broadly understood non-formal education in the field of economic and financial knowledge in Poland. The agreement to this effect was signed in March 2023. On 7 September, the Senate of the Republic of Poland almost unanimously passed a resolution to establish 2024 as the Year of Economic Education. The formal inauguration of the Year of Economic Education 2024 took place on 11 January 2024 in the Senate of the Republic of Poland.

In 2023, the Honorary Committee, the Programme Committee and the Organising Committee of the Year of Economic Education 2024 were established, a website and a range of information materials were developed, and an application form was prepared for entities wishing to include their projects/events in the Year of Economic Education 2024 celebrations (there are currently several dozen submitted local/national initiatives on the list).

Our charitable activities for the community

GPW made the following donations in its charitable activities:

- PLN 8,800 for the purchase of Allegro gift cards on the occasion of Children's Day for the charges of orphanages supported by GPW,
- PLN 4,500 for the purchase of vouchers for the charges of the Regional Care and Therapeutic Centre in Gdańsk "Dom im. J. Korczaka",
- PLN 13,500 to purchase and donate 90 Allegro gift cards worth PLN 150 each for the charges of orphanages taken care of by GPW.

In addition, in connection with the conflict across our eastern border, TGE employees continued to be actively involved in refugee relief efforts, organising collections with their own efforts or supporting aid organisations at home and abroad.

4.10. Environmental impact

4.10.1. Approach to environmental impact management

The management of environmental impact, including the implementation of the climate change policy in the GPW Group, is based on the Environmental Pillar of the GPW Group ESG Strategy 2025. The way of achieving the targets and the approach to environmental impacts are defined in the GPW Group Climate Policy adopted in 2021, which applies to all Group companies.

In accordance with the "GPW Group Climate Policy", the GPW Group:

- ✓ strives to reduce greenhouse gas emissions in our activity, in particular by improving the management of environmental aspects, such as the level and efficiency of energy and fuel consumption, waste management aiming at a circular economy, and raising environmental awareness among our stakeholders, in particular the employees of the GPW Group;
- ✓ acts as a promoter of best practice reducing the negative impact of business activity on the climate and transparent reporting on climate issues by GPW-listed companies;
- ✓ improves the processes of monitoring greenhouse gas emissions resulting from the activities of the companies of the GPW Group and systematically, on an annual basis, publishes data on their carbon performance.

The GPW Group's approach to integrating climate factors into its business is consistent with the principles set out in the Code of Best Practice for GPW Listed Companies 2021. According to the GPW Group Climate Policy, we take into account the principles of the UN Global Compact in our activity. The GPW Group supports the climate goals set by the Sustainable Stock Exchanges Initiative and the 17 Sustainable Development Goals set by the UN for 2015-2030.

The implementation of actions defined in our Climate Policy aims to make a positive contribution to the UN Sustainable Development Goal 13: "Take urgent action to combat climate change and its impacts".

We follow the guidelines of the Best Practice for GPW Listed Companies 2021, which require us to include ESG factors in our business strategy, including environmental factors, such as climate change metrics and risks.

The GPW Group supports the transition to a low-carbon economy. Our ambition is to reduce greenhouse gas emissions associated with the Group's operations by 50% by the end of 2025, with the prospect of achieving zero carbon by the end of 2030.

Our strategy for reaching our target is based on the following action path:

1. Monitoring of Scope 1 and Scope 2 emissions resulting from our activities (to monitor is to manage)
2. Striving for maximum energy efficiency, reducing unnecessary consumption of energy and fuels (activities in this respect will focus among others on investing in energy-efficient solutions, equipment and the company's fleet of vehicles, educating employees to prevent wasteful use of fuels and other raw materials such as water, paper, etc.)
3. Introducing a system/procedure for the collection of Scope 3 emissions data
4. Rationalisation and reduction of unnecessary business travel through online meetings and teleconferencing, with rail transport preferred for business travel

5. Choosing environmentally friendly modes of transport for daily commuting, such as public transport and cycling. As a rule, the GPW Group is a cyclist-friendly organisation, which means that it endeavours, in cooperation with the administrator of the GPW Group headquarters building, to implement solutions making it easier for GPW Group employees to commute to work by bike.
6. Replacement of the used car fleet with more environmentally friendly vehicles (electric or hybrid)
7. Increasing the share of recycling in disposal of waste resulting from the GPW Group's operations. The GPW Group implements rational management of consumption of natural resources and declares efforts to reduce the use of raw materials, including plastics and paper, and to manage other office supplies sparingly
8. Systematic energy audits of the office space used by the GPW Group
9. Implementation of solutions reducing energy consumption in GPW Group offices (e.g., by using high energy class equipment and solutions reducing energy consumption and increasing the energy efficiency of office lighting systems, including the use of LED lighting and intelligent switch-off systems)
10. Switching to the use of energy from renewable energy sources (purchase of certified energy) at the GPW Group's business locations where it is possible to conclude a contract with a renewable energy supplier

The main result of the implementation of the planned measures was the achievement of a **57%** reduction in greenhouse gas emissions associated with the Group's activities in Scope 1-2 (market base).

Table 61 Greenhouse gas emissions associated with GPW Group operations

GHG emission category	Unit	Change	2023	2022
Total Scope 1 and 2 (market-based)	CF [t CO2e/year]	57%	1 548.01	3 591.90

Climate-related risks and opportunities

Climate risk management is an integral part of the GPW Group's risk management system. As part of the implementation of the ESG Strategy and the "GPW Group Climate Policy", the "Policy for ESG risk management, including climate risk at the Warsaw Stock Exchange" was adopted in 2022.

In pursuit of its climate policy objectives, the GPW Group reports on climate issues by following the TCFD recommendations. One element of this approach was to identify opportunities and risks arising from climate change for the GPW Group. These were identified during a workshop meeting between representatives of different companies and departments of GPW conducted in 2023. Both opportunities and risks were analysed in terms of their possible impact on the Group's financial result.

Four opportunities arising from climate change and seven risks were identified and assessed. Their potential impact on the financial result of the GPW Group was also assessed.

Opportunities related to products, market, resource and energy use, as well as physical and transition risks were categorised into narrower areas. Specific factors responsible for the impact of climate change on the GPW Group were identified.

Table 62 Climate risks

Risk category	Type	Factor	Description	Assessment of the impact on the financial result *	Period
Physical risk	Acute risk	Violent weather events	An increase in the frequency and severity of abnormal weather events can disrupt logistical processes and affect infrastructure, particularly energy supply.	-1	

Physical risk	Chronic risk	Occurrence of anomalies in ambient temperature levels	The occurrence of weather anomalies in terms of ambient temperature levels may result in increased costs associated with the adaptation and operation of office infrastructure (e.g. costs of increased air conditioning consumption). The phenomenon may also affect the well-being of employees.	-1	
Risk of transition to a sustainable economy model	Market risk	Failure to adapt products and services to changing trends and the needs/expectations of participants/stakeholders in GPW Group markets	Potential impact on turnover and liquidity on the markets operated by the GPW Group and, as a consequence, on the competitiveness of its operations.	-2	
Risk of transition to a sustainable economy model	Market risk	Failure of potential issuers to comply with non-financial reporting requirements	Failure of potential issuers to comply with non-financial reporting requirements may have the effect of reducing the number of new listings in the short term.	-1	
Risk of transition to a sustainable economy model	Risks related to policies/regulations	Legal non-compliance and increase in non-financial reporting requirements	As a result of dynamic regulatory changes at national and EU level regarding corporate sustainability, including climate and environmental protection, the Group may come under increasing pressure from financial and market institutions and other stakeholders. Failure to ensure legal compliance may result in administrative penalties imposed by supervisory authorities and reputational damage to Group companies.	-2	
Risk of transition to a sustainable economy model	Technology risk	Increase in operating costs	Potential cost increases resulting from the transition to a zero-carbon and low-energy economy, e.g. increases in the cost of energy from RES, including those resulting from inadequate access to such energy or from too slow market deployment of new green renewable energy technologies. An increase in capital expenditure on fixed assets with higher energy efficiency parameters is also possible.	-1	

Risk of transition to a sustainable economy model	Reputational risk	Loss of reputation	The Group operates in an industry where the good reputation and trust of stakeholders (including issuers, financial intermediaries and investors) are particularly important. Given the Group's role in the Polish capital market, any negative actions, inaction or slow implementation in the area of sustainable development, including the implementation of the ESG Strategy, could damage its reputation.	-1	
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Description for the column "Period"

Period	
Short-term (1-3 years)	
Mid-term (3-10 years)	
Long-term (10-30 years)	

*A scale from plus 10 (very high positive impact) to minus 10 (very high negative impact) was used to assess the impact on profits.

Table 63 Climate opportunities

Opportunity area	Type	Description	Assessment of the impact on the financial result	Period
Energy sources	Use of low-carbon/energy-efficient technologies and development of RES technologies	The development of renewable energy generation technologies offers an opportunity to reduce operating costs (lower cost of obtaining this type of energy by end users, including wider access to and diversification of producers).	1	

Products and services Market	New products/services related to the broader development of sustainable finance	In the short, medium and long term, we expect that demand from market participants for financial and investment products and services related to sustainable financing will increase. For the GPW Group, this is an opportunity to increase revenues from these products and services, using our experience and potential in the area of information services, the creation of new market segments and indices, including in the area of the commodity market (CO2 emission allowance market).	4	
Efficiency of resources	Management of resources such as energy, water, fuel, paper and waste	By implementing solutions to reduce the energy intensity of IT systems, the company fleet, as well as the office space and commodities used in the companies' operations, the GPW Group can reduce its operating costs.	1	

Description for the column "Period"

Period	
Short-term (1-3 years)	
Mid-term (3-10 years)	
Long-term (10-30 years)	

*A scale from plus 10 (very high positive impact) to minus 10 (very high negative impact) was used to assess the impact on profits.

The Company aggregated the above data and, on this basis, described two risks in the area of climate risks within the GPW Group's activity report:

- climate risks related to the impact of extreme weather events and weather anomalies;
- risks related to the requirements of financial and market institutions to protect the climate and the environment and to disclose sustainability data.

A description of the risks associated with the activities of GPW and the GPW Group that may have an adverse impact on social, labour, environmental, human rights and anti-corruption issues, including risks related to the entity's products or its relations with the external environment, including counterparties, as well as a description of the management of these risks is provided in section 2.8.2 of this Report.

Despite the assessment of the materiality of climate risks in the activities of the GPW Group as low, the Group sees its role in educating capital market participants, as well as supporting and developing solutions in the area of the impact of climate change on the operating and financing model of companies on the stock market, including in the area of regulatory changes affecting the scope of reporting certain data, which is also reflected in the provisions of the GPW Group's Strategy for 2023-2027 (described in section 2.2. of this Report).

The measures taken to educate and support market participants referred to above are described in section 4.9.3 of this chapter.

4.10.2.Reducing the environmental impact

Due to the profile of our business, the key objectives of our environmental policy are pursued by means of:

- › taking a preventive approach to the environment (responsible management of waste and recyclable raw materials, reduction of paper, energy and fuel consumption, monitoring and efforts to reduce CO2 emissions);
- › taking initiatives to promote environmentally responsible behaviour,
- › using and disseminating environmentally friendly technologies wherever possible.

No GPW Group companies were fined for non-compliance with environmental laws and regulations in 2023.

Key environmental measures taken at the Group companies in 2023 to reduce environmental impact and pursue the GPW Group ESG Strategy 2025 targets:

- › the fleet of company cars was replaced with more environmentally friendly vehicles (the majority of company cars are now hybrid vehicles, 1 electric car was purchased);
- › in order to achieve a reduction in greenhouse gas emissions associated with the activities of the GPW Group, measures were taken in 2023 to increase the share of RES energy in the mix of energy consumed by the GPW Group. As a result of a bidding process conducted by the Centrum Giełdowe administration, as of 1 February 2024, the electricity supplied to the Centrum Giełdowe office building will be sourced 100% from RES (under a multi-year contract);
- › in order to monitor the carbon footprint, a system was put in place to identify and record data on means of transport and kilometres travelled on business trips in the electronic business trip system (this data will be used for reporting the carbon footprint in Scope 3);
- › in order to increase energy efficiency, we continued the process of replacing the lighting with LED equivalents in the stairwells and certain parts of the garage, as well as along the access road to the building;
- › in order to promote the choice of environmentally friendly means of transport as part of the daily commute, and on the occasion of World Bike Day, we organised a campaign allowing any employee who arrived at work on a bike that day to use a free bike check-up on that day. Employees also had the opportunity to participate in the webinar "ECO & SAFETY - Conscious Driver Academy" on the topic of environmental and safe driving, including cycling. In addition, facilities for cyclists such as a changing room and shower were added at the Centrum Giełdowe building and a bicycle repair station was installed in the underground garage;
- › in order to promote environmentally friendly attitudes among our employees on the occasion of World Earth Day, a webinar entitled "Become a recycling champion" was delivered.

Centrum Giełdowe, which houses most of the GPW Group companies, has in place advanced solutions which reduce energy consumption. Offices are equipped only with lamps whose energy consumption is lower than that of traditional light bulbs and halogen lamps. The operation of lifts is optimised and the underground car park is heated with air pumped out of offices. GPW's head office is equipped with a Building Management System (BMS) which controls systems within the building and consequently optimises the consumption of heat, power, water, air (ventilators) and ice water for air-conditioning. BMS supports programming of lighting in offices and corridors, which is automatically switched off at 8 p.m. throughout the building. Adequate measures are taken annually to modernise the building in order to reduce the energy intensity of the premises (e.g., modernisation of the entrance door and central heating system pumps). More than 90% of the lighting on the garage levels has been replaced with LED lighting and we are successively replacing it in the office and service areas of the building (each expired light is replaced with a new one in LED technology).

Due to the growth of the fleet of plug-in hybrid and electric cars, a fast charger for electric cars was installed in the Centrum Giełdowe ground-level car park. Photovoltaic panels were installed on the roof above the garage entrance from Jerozolimskie Avenue. Both systems will become fully operational in 2024.

4.10.3.GPW Group's environmental performance: fuel consumption

Table 64 GPW Group's business car fleet as at 31 December

Drive	2023	2022
Gasoline cars	6	33
Diesel cars	3	3
Hybrid cars	10	1
Electric cars	1	

GPW's car fleet only includes vehicles which conform to applicable emission standards. All of GPW's company cars in operation are EURO-6 compliant. According to legal requirements, GPW pays environmental fees (for business cars).

In line with the carbon reduction trajectory set for 2023, the GPW Group took a two-pronged approach: on the one hand, it reduced the number of vehicles in its fleet of company cars; on the other hand, it replaced its used car fleet with more environmentally friendly vehicles (mainly hybrid cars and a single electric car).

Table 65 Fuel consumption of GPW Group in 2023 vs. 2022

Consumption	Unit	2023	2022
Gasoline	litre	27 443.03	45 808.60
Diesel	litre	6 067.62	5 018.72
Gas*	kg	2.32	8.1

* Gas R134a GHG emission source category - air conditioning refrigeration. Data excluding AMX Group.

4.10.4.GPW Group's environmental performance: energy consumption

Table 66 Energy consumption of GPW Group in 2023 vs. 2022

Consumption	Unit	2023	2022
Electricity*	MWh	3 919.55	3 744.65
including energy from RES confirmed with guarantees of origin	MWh	2 607.69	0
share of energy from RES in total energy consumption	%	67%	0%
Heat	GJ	3 467.91	4 146.71

*In 2022 100% of the energy consumed was from non-renewable sources. Data excluding AMX Group.

In 2023, the GPW Group did not use its own renewable energy sources, but the supply of renewable energy was ensured at one location, as confirmed by the certificates of origin for renewable energy.

4.10.5.GPW Group's environmental performance: emissions

Table 67 Direct greenhouse gas emissions (Scope 1) of GPW Group in 2023 vs. 2022

GHG emission source	Unit	2023 emissions Scope 1	2022 emissions Scope 1
Cars (gasoline)	CF [t CO ₂ e/year]	57.56	99.03
Cars (diesel)	CF [t CO ₂ e/year]	15.24	12.84
Air conditioning	CF [t CO ₂ e/year]	3.32	15.63
Total Scope 1	CF [t CO₂e/year]	76.12	127.49

Data excluding AMX Group.
The DEFRA 2022 and 2023 database (the UK Government's Department for Environment, Food and Rural Affairs) was used for the Scope 1 emissions calculations. The DEFRA databases are available at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>.

Compared to 2022, direct emissions (Scope 1) generated by the GPW Group decreased by 40%, of which 96% were emissions from fuel combustion in vehicles and 4% related to the consumption of technical gas for air conditioning equipment. The decrease in greenhouse gas emissions in 2023 compared to 2022 was owed to the new fleet mix of company cars (reduction in the number of cars and increase in the share of hybrid/electric vehicles).

Table 68 Indirect greenhouse gas emissions (Scope 2) of GPW Group in 2023 vs. 2022

GHG emission source	Unit	2023 emissions	2022 emissions
		Scope 2	Scope 2
Electricity - market-based	CF [t CO2e/year]	1 031.40	2 931.43
Electricity - location-based	CF [t CO2e/year]	1 057.15	3 152.34
Heat	CF [t CO2e/year]	440.49	532.98
Total Scope 2 market-based	CF [t CO2e/year]	1 471.89	3 464.41
Total Scope 2 location-based	CF [t CO2e/year]	1 497.64	3 685.32

Data excluding AMX Group.

Scope 2 includes two scores: location based on the basis of emission factors used for Poland for electricity end-users and market-based on the basis of emission factors adopted for specific electricity suppliers according to data published on 31.01.2024. Greenhouse gas (GHG) emissions calculated under: The Greenhouse Gas Protocol A Corporate Accounting and Reporting Standard Revised Edition, GHG Protocol Scope 2 Guidance. The data on which the calculations were based originate from the company's internal records. Sources of emission factors:
- average emission factor for electricity in Poland for electricity end-users calculated based on data contained in: <https://www.kobize.pl/pl/file/wskazniki-emisyjnosci/id/198/wskazniki-emisyjnosci-dla-energii-elektrycznej-za-rok-2022-opublikowane-w-grudniu-2023-r>. Indicator converted to comply with GHG Protocol requirements (indicator to be updated annually); and
- average factor for heat – published by the Energy Regulatory Office URE (<https://www.ure.gov.pl/pl/cieplo/energetyka-ciepna-w-l/11407,2022.html>). Indicator converted to comply with GHG Protocol requirements (indicator to be updated annually).

In 2023, indirect energy emissions (Scope 2), calculated for the GPW Group using the location-based method, amounted to 1,497.64 t eCO₂, 59% lower than in the previous year. Emissions calculated for the GPW Group using the market-based method also showed a sharp reduction in emissivity levels, in this case by 58% year on year. They amounted to 1,471.89 t eCO₂, of which 70% related to purchased electricity and 30% to purchased heat. The reduction in Scope 2 greenhouse gas emissions was primarily due to the change of electricity supplier at one of the office locations to an entity that guarantees the supply of energy from RES. The share of electricity from RES accounted for 67% of the GPW Group's total electricity consumption.

In 2023, the GPW Group did not use its own sources of renewable energy but the supply of energy from RES was ensured at one location, as confirmed by the certificates of origin for energy from renewable sources.

The year 2023 was another year of developing competencies to expand the system/procedure for the collection of Scope 3 carbon footprint data. On the basis of the GPW Group workshops, possible categories of GPW Group GHG emission sources were identified and data was collected for the first time to count the Scope 3 carbon footprint, bearing in mind the relevance of the data to the organisation's carbon footprint picture and the possibility of obtaining specific baseline data for 2023.

Table 69 Indirect greenhouse gas emissions (Scope 3)* of GPW Group in 2023

GHG emission source	Unit	2023 emissions Scope 3
Purchased good and services (Category 1)	CF [t CO2e/year]	3 263.69
Capital goods (Category 2)	CF [t CO2e/ year]	1 115.23
Fuel- and energy-related activities (not included in Scope 1 and Scope 2) (Category 3)	CF [t CO2e/ year]	19.65
Upstream transportation and distribution (Category 4)	CF [t CO2e/ year]	0.19
Waste generated in operations (Category 5)	CF [t CO2e/ year]	0.72
Business travel (Category 6)	CF [t CO2e/ year]	67.87
Employee Commuting (Category 7)	CF [t CO2e/ year]	201.88
Downstream transportatnio and distribution (Category 9)	CF [t CO2e/ year]	36.58
Total	CF [t CO2e/year]	4 705.62

Method of estimation: for most categories, we used the relevant UK Government GHG Conversion Factors for Company Reporting 2023 (ver. 1.1) and, respectively, information on paper consumption, water consumption and wastewater generated (Category 1), consumption of fuels (Category 3), waste generated (Category 5) and data on tonne-kilometres of transport services (Category 9).

In the case of car purchases, we used manufacturer data published by the manufacturer for similar car models to those purchased by GPW (Category 2).

For courier shipments (estimated data), we used the carbon footprint disclosed by one of the leading courier companies for the Polish market multiplied by the number of shipments.

For business travel (Category 6), we used the DEFRA 2023 database for car transport, carriers' emissions data per journey as emissions data for other modes of transport and, where this was not possible, the DEFRA 2023 database.

For employee commuting, we used information on the carbon footprint of the different modes of transport used by employees (UK Government GHG Conversion Factors for Company Reporting 2023 (ver. 1.1)) and data on the number of employees, the commuting distances declared in the survey, the number of commuting trips per week and the choice of primary mode of transport (Category 7).

We used the Environmentally Extended Input-Output (EEIO) method and conversion factors for the nearest purchase categories, derived from the Supply Chain Greenhouse Gas Emission Factors v1.2 by NAICS-6, to estimate the carbon footprint of most materials, services and fixed assets (Category 1 and 2) (excluding the previously mentioned purchases of paper, water and wastewater (Category 1) and car purchases (Category 2). This data does not include baseline data for calculations from companies: GPW Tech, GPW Ventures, GPW Private Market, GPW Logistics, GPW DAI.

The remaining Scope 3 carbon footprint categories were considered immaterial to the organisation's carbon footprint. Scope 3 data in any category does not cover the AMX Group.

Table 70 GPW Group carbon footprint in 2023 vs. 2022

GPW Group GHG emissions (t CO2e)	2023	2022
Scope 1	76.12	127.49
Scope 2 market-based	1 471.89	3 464.41
Scope 2 location based	1 497.64	3 685.32
Scope 3 data*	4 705.62	N/A

*2022 scope 3 data included only business travels which amounted to 37.21 tonnes of CO₂ equivalent. 2022 and 2023 data excluding AMX Group.

Table 71 GPW Group greenhouse gas emissions in 2023 vs. 2022

Emissions intensity	Unit	2023	2022
GPW Group revenue	PLN mn	444.9	389.3
GPW Group GHG emissions Scope 1 and 2 (market-base) per revenue	[t CO2e / PLN 1 mn]	3.5	9.2
GPW Group GHG emissions Scope 1 and 2 (location-base) per revenue	[t CO2e / PLN 1 mn]	3.5	9.8
GPW Group GHG emissions Scope 3 per revenue	[t CO2e / PLN 1 mn]	10.6	N/A

*Data excluding AMX Group.

4.10.6. GPW Group's environmental performance: consumption of other commodities

Table 72 GPW Group water consumption in 2023 vs. 2022

Total water withdrawal by source	2023	2022
Municipal water supply [m3]	3 209.93	3 233.19
Water withdrawal from other sources	N/A	N/A

*Excluding GPW Logistics

Table 73 GPW Group other commodity consumption in 2023 vs. 2022

Paper consumption (sheets)	GPW and subsidiaries*	BondSpot	Benchmark	IRGiT	TGE	GPW Logistics	InfoEngine	AMX Group	TOTAL
2023	139 938	60 000	3 640	4 000	71 500	10880	3 500	50 000	343 458
2022	135 090	46 000	4 113	5 000	66 810	N/A	8 200	N/A	265 212

*Subsidiaries include: GPW Tech, GPW Ventures, GPW DAI, GPW Private Market. Data also include GPW Foundation.

Table 74 GPW Group waste

Indicator	2023	2022
Total waste* [t]	0.04	0.13
including hazardous waste [t]	0	0.13
including other waste [t]	0.04	0
recycled waste [%]	100%	100%

Waste within the meaning of the Waste Act of 14 December 2012, hazardous waste: batteries, accumulators.

4.10.7. Products and initiatives supporting the green transition

Register of Guarantees of Origin

TGE operates a Register of Guarantees of Origin and organises trade in guarantees of origin. The Register of Guarantees of Origin launched in September 2014 and registers energy from renewable sources and OTC trade in environmental benefits of its production. In 2019, the Register of Guarantees of Origin was extended to include a module of guarantees of origin of high-efficiency cogeneration.

All certificates of origin issued by the Energy Regulatory Office in electronic form for a specified volume expressed in MWh (except white certificates, for which the unit is toe, i.e., tonne of oil equivalent) are entered into the Register of Certificate of Origin operated by TGE. The Register is an integral part of the support scheme for RES electricity producers, as well as the scheme of energy efficiency certificates awarded for investments to reduce energy consumption.

ESG Leaders competition

The third edition of the ESG Leaders competition took place in 2023. It was organised by the Exchange together with PwC. The strategic partner of the competition is the UN Global Compact Network Poland and the partners are: the European Bank for Reconstruction and Development, the Polish Association of Capital Investors, the Łukasiewicz Research Network, the Polish Bank Association, the Lewiatan Confederation and the Responsible Business Forum, and the media partner is Dziennik Gazeta Prawna and the ESGinfo portal. The ESG Leaders competition is aimed at companies implementing an outstanding ESG strategy, offering innovative products and services with a positive impact on the environment, and running effective information and promotion campaigns in the area of sustainable development. The competition jury selects the winners each year in four categories: Strategy, Innovation, Education, and Green Transformation Visionary. In 2023, there were eight winners. The results of the competition are available on the dedicated competition [website](#).

Green Finance Group

UN Global Compact Network Poland (UN GC) and the Warsaw Stock Exchange acting at the request of the Minister of Finance and the Minister of Economic Development entered into cooperation in December 2020, resulting in the establishment of the Green Finance Group. The mission of the Group is to ensure possibly full alignment of the financial sector with UN policies and actions in the area of sustainable finance, in particular UN climate policies, and to maintain an active dialogue between representatives of the financial sector and the administration at the European, national and local government levels in the face of challenges related to the climate crisis, energy transition and decarbonisation.

The Green Finance Group is also supported under framework agreements signed between UN GC and the Ministry of Finance, the Ministry of Climate and Environment, and the Ministry of Economic Development, Labour and Technology.

As part of the ongoing activities, the new "Green Finance in Poland" report was published in 2023. Meetings of the Group's members were held to discuss current trends in non-financial reporting and the challenges arising from the climate agenda.

Warsaw Sustainable Segment

In June 2023, GPW launched the Warsaw Sustainable Segment, a dedicated section on its website www.gpwcatalyst.pl. The section presents information on bonds issued by companies or public administration bodies listed on the markets organised by GPW, where the funds raised are earmarked for projects related to financing sustainable development.

GPW's action is part of the initiative of the Ministry of Finance, the Sustainable Finance Platform which aims to build a regional hub for green finance in Poland. GPW's highlighted presentation of debt instruments related to sustainable development will promote both such instruments and their issuers.

The Warsaw Sustainable Segment section presents a list of instruments related to sustainable development financing. In order to qualify for the Warsaw Sustainable Segment, the issuer must make a statement that the debt instruments issued and indicated by the issuer are sustainability finance instruments. The issuer's statement refers to the standard under which the instruments were issued or any other mechanism by which the debt instruments covered by the statement are considered by the issuer to be related to sustainability financing. The issuer statement states whether an independent third-party opinion

has been issued in relation to a particular issue of debt instruments or in relation to the issuer confirming that the issue or the issuer comply with sustainability financing objectives.

Issuers' statements are available in the [Warsaw Sustainable Segment](#) section.

WIG-ESG Index

In 2019, GPW launched the stock index WIG-ESG (replacing the Respect Index launched in 2009), which covers 60 biggest and most liquid securities listed on GPW and participating in the blue-chip index WIG20 and the mid-cap index mWIG40, i.e., the biggest companies listed on GPW.

Shares (weights) of individual companies from the underlying market in the WIG-ESG portfolio are determined on the basis of two rankings created on the basis of ESG factors, i.e.:

- ✓ ESG ranking, based on scoring by independent research institution Sustainalytics (www.sustainalytics.com); and
- ✓ Best Practice Ranking, based on data received from the Warsaw Stock Exchange.

5. FINANCIAL POSITION AND ASSETS OF THE GPW GROUP

All data presented in this section are provided by the GPW Group.

As percentages and numbers presented in this section are rounded off, and their simple addition may differ from the totals presented in tables and figures.

5.1. Summary of results of the GPW Group

The **GPW Group** generated a consolidated net profit of PLN 157.6 million in 2023 (+PLN 12.6 million i.e. +8.7% YoY). The increase in profit was driven by an increase of sales revenue from PLN 389.3 million in 2022 to PLN 444.9 million in 2023 (+PLN 55.7 million i.e. +14.3% YoY). The operating profit stood at PLN 128.0 million (-PLN 2.6 million i.e. -2.0% YoY). EBITDA stood at PLN 160.2 million (-PLN 7.2 million i.e. -4.3% YoY). The operating expenses were largely driven by the implementation of strategic and development projects.

Table 75 Consolidated statement of comprehensive income, earnings per share, and EBITDA

	Year ended 31 December			
	2023	2022	2023	2022
	PLN'000		EUR'000[1]	
Sales revenue	444,928	389,265	97,937	83,054
Operating expenses	(319,504)	(254,881)	(70,329)	(54,382)
Gains on reversed impairment of receivables/(Losses) on impairment of receivables	(332)	565	(73)	121
Other revenue	6,252	10,027	1,376	2,139
Other expenses	(3,370)	(14,384)	(742)	(3,069)
Operating profit	127,974	130,592	28,169	27,863
Financial income	28,384	23,501	6,248	5,014
Financial expenses	(2,132)	(7,505)	(469)	(1,601)
Share of profit/(loss) of entities measured by the equity method	34,135	28,255	7,514	6,029
Profit before tax	188,361	174,843	41,462	37,305
Income tax expense	(30,800)	(29,867)	(6,780)	(6,372)
Net profit for the period	157,561	144,976	34,682	30,932
Basic/Diluted earnings per share[2] (PLN, EUR)	3.72	3.45	0.82	0.74
EBITDA[3]	160,225	167,419	35,269	35,721

[1] At the incremental average exchange rate EUR/PLN for 12 months published by the National Bank of Poland (1 EUR = 4,5430 PLN in 2023 and 1 EUR = 4,6869 PLN in 2022).

[2] Based on net profit.

[3] EBITDA = operating profit + depreciation/amortisation.

GPW's net profit in 2023 was PLN 116.9 million (+PLN 17.3 million i.e. +17.4% YoY). Its operating profit was PLN 57.3 million in (-PLN 11.9 million i.e. -17.2% YoY) due to a decrease in sales revenue (-PLN 3.0 million i.e. -1.2% YoY) and an increase of operating expenses (+PLN 20.6 million i.e. +12.1% YoY), in particular external service charges (+PLN 10.6 million i.e. +18.0% YoY). EBITDA reached PLN 77.9 million (-PLN 16.5 million i.e. -17.5% YoY).

TGE's net profit in 2023 stood at PLN 61.1 million (+PLN 6.4 million i.e. +11.6% YoY). Its operating profit stood at PLN 41.5 million (+PLN 8.4 million i.e. +25.2% YoY) as a result of an increase of sales revenue (+PLN 13.2 million i.e. +15.1% YoY) and an increase of operating expenses to PLN 59.1 million (+PLN 4.8 million i.e. +8.9% YoY). EBITDA stood at PLN 46.5 million (+PLN 5.7 million i.e. +14.0% YoY).

IRGiT generated a net profit of PLN 28.5 million (+PLN 6.3 million i.e. +28.7% YoY vs. IRGiT's profit presented in the Group's consolidated financial statements for 2022). The operating profit stood at PLN 27.5 million (+PLN 1.4 million i.e. +5.3% YoY). EBITDA stood at PLN 30.0 million (+PLN 1.5 million i.e. +5.3%).

BondSpot's net profit in 2023 increased year on year to PLN 1.6 million (+PLN 0.9 million i.e. +122.6% YoY). The increase in profit was mainly driven by higher revenue from trading in debt (+PLN 2.6 million i.e. +26.7% YoY).

GPWB generated a net profit of PLN 1.3 million in 2023, more than a year earlier (+PLN 0.8 million i.e. +147.6%). Its operating profit stood at PLN 1.1 million and EBITDA at PLN 2.4 million.

Table 76 Selected consolidated financial indicators

	As at/Year ended 31 December		
	2023	2022	2021
Debt and financing ratios of the Group			
Net debt / EBITDA for 12 months	(2.4)	(2.6)	(1.0)
Debt to equity	2.4%	0.5%	26.4%
Liquidity ratios			
Current liquidity	4.2	4.2	2.0
Coverage ratio of interest rate on bond issue	-	48.8	36.9
Profitability ratios			
EBITDA margin	36.0%	43.0%	52.8%
Operating profit margin	28.8%	33.5%	44.1%
Net profit margin	35.4%	37.2%	39.6%
Cost / income	71.8%	65.5%	56.3%
ROE	15.4%	14.7%	17.1%
ROA	12.9%	11.2%	11.6%

The methodology for calculating the indicators is presented in the glossary at the end of this section.

Net debt to EBITDA was negative as liquid assets were much greater than interest-bearing liabilities. Net debt to EBITDA remained stable year on year. Debt to equity increased year on year due to an increase of interest-bearing liabilities (lease liabilities).

Current liquidity increased year on year due to a decrease of current liabilities combined with an increase of current assets. The coverage ratio of interest expenses on the bond issue was nil as no interest was paid on bonds in issue in 2023.

EBITDA margin and operating profit margin decreased due to an increase in operating expenses, including external service charges and salaries.

Net profit margin decreased modestly. The cost/income ratio increased by 6.3 pps year on year as expenses increased more than did the revenue.

ROA and ROE recorded a modest increase.

Impact of the war in Ukraine on the Group's results

The Group follows and monitors developments related to the armed conflict in Ukraine and analyses the potential negative consequences of the conflict on the operation of the Group Companies in order to take measures necessary to mitigate the potential impact. Given the significant uncertainties arising from the further development of the conflict and the reaction of the international community and their impact on the economy, the long-term impact of the conflict is impossible to determine as at the date of the financial statements.

Impact of the SARS-CoV-2 pandemic on the Group's results

The Group is monitoring the development of the coronavirus pandemic nationally and internationally. In the opinion of the Exchange Management Board and the Management Boards of the subsidiaries, the risk associated with the pandemic is low.

The Group monitors epidemiological developments on an ongoing basis and analyses their impact on the organisation as a whole. The Exchange has identified a number of operational and financial risks, such as: the risk of periodic staff shortages, interruption of services by certain suppliers, reduced activity of market makers, the risk of slowing down operational processes, the psychological effects of prolonged isolation, and the risk of a decline in the ability and intentions of the Exchange's clients to pay their receivables on time.

In the opinion of the Management Board, the risks did not materialise in 2023 or in the preceding year. The Group did not identify material uncertainties related to the impact of the pandemic that would cast doubt on the Group's ability to continue as a going concern.

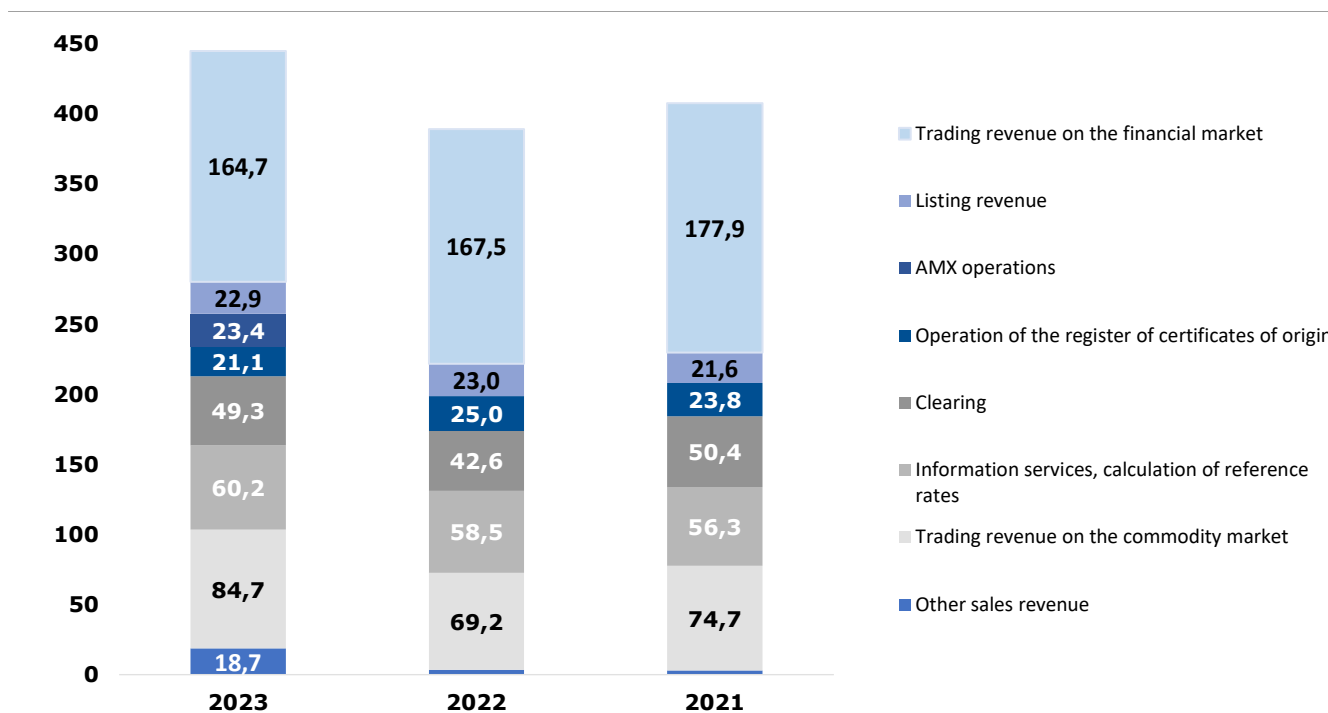
A description of the identified operational risks and the measures taken to mitigate these risks is presented in section 2.8.

5.2. Consolidated statement of comprehensive income

5.2.1. Sales revenue – summary

The GPW Group's sales revenue increased year on year to PLN 444.9 million in 2023 (+PLN 55.7 million i.e. +14.3% YoY) driven by higher turnover on the commodity market and the impact of new initiatives (Armenia Securities Exchange and revenue of GPW Logistics).

Figure 58 Structure and value of consolidated sales revenue [PLN million]



The biggest revenue streams in 2023 included trading on the financial market (37.0%), trading on the commodity market (19.0%), information services and calculation of reference rates (13.5%). The share of those revenue streams in 2022 was 43.0%, 17.8% and 15.0%, respectively.

The share of sales revenue from foreign clients in total sales revenue increased in 2023 to PLN 151.2 million (34.0%) compared to the previous year, when it amounted to PLN 128.8 million (33.1% of total revenue). Revenue from domestic clients increased from PLN 260.5 million (66.9% of total revenue) in 2022 to PLN 293.7 million (66.0%) in 2023.

5.2.2. Sales revenue – Financial market

The Group's sales revenue on the financial market in 2023 stood at PLN 269.5 million (+PLN 21.8 million i.e. +8.8% YoY), representing 60.6% of total sales revenue. Trading revenue generated the biggest share of sales revenue on the financial market (61.1%), in particular trading in equities and equity-related instruments (44.3%). The second biggest stream of consolidated sales revenue on the financial market were information services (21.7% of total revenue).

Table 77 Revenue mix on the financial market

PLN'000, %	Year ended 31 December						Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	%	2022	%	2021	%		
Financial market	269,520	100.0%	247,748	100%	254,688	100.0%	21,772	8.8%
Trading revenue	164,661	61.1%	167,505	67.6%	177,895	69.8%	(2,844)	(1.7%)
Equities and equity-related instruments	119,343	44.3%	123,691	49.9%	143,797	56.5%	(4,348)	(3.5%)
Derivatives	19,575	7.3%	21,317	8.6%	13,737	5.4%	(1,742)	(8.2%)
Other fees paid by market participants	11,635	4.3%	9,974	4.0%	8,353	3.3%	1,661	16.7%
Debt instruments	13,404	5.0%	11,070	4.5%	10,745	4.2%	2,334	21.1%
Other cash instruments	704	0.3%	1,453	0.6%	1,263	0.5%	(749)	(51.5%)
Listing revenue	22,864	8.5%	22,989	9.3%	21,553	8.5%	(125)	(0.5%)
Listing fees	18,772	7.0%	19,272	7.8%	17,165	6.7%	(500)	(2.6%)
Fees for introduction and other fees	4,092	1.5%	3,717	1.5%	4,388	1.7%	375	10.1%
Information services and revenue from the calculation of reference rates	58,523	21.7%	57,254	23.1%	55,240	21.7%	1,269	2.2%
Real-time data and revenue from the calculation of reference rates	55,236	20.5%	53,761	21.7%	51,991	20.4%	1,475	2.7%
Historical and statistical data and indices	3,287	1.2%	3,493	1.4%	3,249	1.3%	(206)	(5.9%)
Armenia Securities Exchange	23,472	8.7%	-	-	-	-	23,472	-
Exchange operations	3,588	1.3%	-	-	-	-	3,588	-
Depository operations	19,884	7.4%	-	-	-	-	19,884	-

Revenues of the Group from **trading in equities and equity-related instruments (certificates of deposit)** decreased year on year to PLN 119.3 million in 2023 (-PLN 4.3 million i.e. -3.5% YoY). The decrease of revenue from trading in equities was driven by a decrease of the turnover volume on the Main Market to 10.0 billion shares (-2.6 billion shares i.e. -20.9% YoY) combined with a decrease of the turnover volume on NewConnect to 2.5 billion shares (-0.1 million shares i.e. -3.1% YoY). The average daily turnover value on the Main Market was PLN 1,128.2 million in 2023 vs. PLN 1,167.8 million in 2022.

Table 78 Market in equities and equity-related instruments

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Financial market, trading revenue: equities and equity-related instruments (PLN mn)	119.3	123.7	143.8	(4.3)	(3.5%)
Main Market:					
Turnover value - total (PLN bn)	282.1	293.1	331.0	(11.0)	(3.8%)
Value of trading - Electronic Order Book (PLN bn)	274.5	285.6	313.5	(11.2)	(3.9%)
Value of trading - block trades (PLN bn)	7.6	7.5	17.5	0.1	1.6%
Turnover volume (bn shares)	10.0	12.7	15.3	(2.6)	(20.9%)
NewConnect:					
Turnover value - total (PLN bn)	2.3	2.6	6.3	(0.3)	(12.7%)
Value of trading - Electronic Order Book (PLN bn)	2.2	2.5	6.1	(0.3)	(12.8%)
Value of trading - block trades (PLN bn)	0.1	0.1	0.2	(0.0)	(8.7%)
Turnover volume (bn shares)	2.5	2.6	7.6	(0.1)	(3.1%)

The lower turnover in 2023 was mainly attributable to increased risk aversion in financial markets, resulting mainly from:

- persistent inflation well above the inflation target,
- continued restrictive monetary policy of the central banks,
- continuing conflict in Ukraine and other geopolitical tensions.

All those factors prompted investors to limit investment activity on the GPW trading floor, where turnover stood at PLN 282.1 billion at the end of 2023 (down by PLN 11.0 billion year on year).

Turnover on NewConnect, which is perceived as a market with a higher investment risk, recorded a drop to PLN 2.3 billion (-PLN 0.3 billion i.e. -12.7% YoY).

Revenues of the Group from **trading in derivatives on the financial market** (futures and options) amounted to PLN 19.6 million (-PLN 1.7 million i.e. -8.2% YoY). The total volume of turnover in derivatives stood at PLN 14.7 million instruments (-0.9 million instruments i.e. -5.9% YoY). The volume of turnover in WIG20 futures, which account for the majority of revenue from trading in derivatives, decreased to 8.7 million futures (-0.7 million futures i.e. -7.2% YoY). The volume of turnover in single-stock futures decreased to 1.3 million futures (-0.6 million futures i.e. -30.1% YoY). The volume of turnover in currency futures increased to 4.4 million futures (vs. 4.0 million futures in 2022). WIG20 futures and index futures had the highest share in total revenue from trading in derivatives on the financial market.

Table 79 Derivatives market

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Financial market, trading revenue: derivatives (PLN mn)	19.6	21.3	13.7	(1.7)	(8.2%)
Derivatives turnover volume (mn instruments), incl.:	14.7	15.6	12.0	(0.9)	(5.9%)
- WIG20 futures turnover volume (mn futures)	8.7	9.3	5.4	(0.7)	(7.2%)

Revenues of the Group from **other fees paid by market participants** stood at PLN 11.6 million (+PLN 1.7 million i.e. +16.7% YoY). The fees mainly included fees for access to and use of the trading system (among others, licence fees, connection setup fees, connection maintenance fees).

Revenues of the Group from transactions in **debt instruments** stood at PLN 13.4 million in (+PLN 2.3 million i.e. +21.1% YoY). The majority of the Group's revenues from trading in debt instruments was generated by Treasury BondSpot Poland ("TBSP"). The value of conditional transactions stood at PLN 280.9 billion (-PLN 12.2 billion i.e. -4.2% YoY). The value of cash transactions stood at PLN 134.6 billion (+PLN 58.8 billion i.e. +77.6% YoY).

Turnover on Catalyst stood at PLN 5.9 billion (-PLN 2.2 billion i.e. -27.3% YoY), including turnover in non-Treasury instruments which decreased to PLN 2.2 billion (-PLN 0.3 billion i.e. -12.1% YoY).

Table 80 Debt market

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Financial market, trading revenue: debt instruments (PLN mn)	13.4	11.1	10.7	2.3	21.1%
Catalyst, turnover value, incl.:	5.9	8.1	3.1	(2.2)	(27.3%)
Non-Treasury instruments (PLN bn)	2.2	2.5	1.6	(0.3)	(12.1%)
Treasury BondSpot Poland, turnover value:					
Conditional transactions (PLN bn)	280.9	293.2	410.3	(12.2)	(4.2%)
Cash transactions (PLN bn)	134.6	75.8	64.1	58.8	77.6%

The Group's revenue from transactions in **other cash market instruments** amounted to PLN 0.7 million (-PLN 0.7 million i.e. -51.5% YoY). The revenue includes fees for trading in structured products, investment certificates, ETF units, and warrants.

Listing revenues of the Group on the financial market amounted to PLN 22.9 million (-PLN 0.1 million i.e. -0.5% YoY) and included:

- revenue from listing fees at PLN 18.8 million (-PLN 0.5 million i.e. -2.6% YoY). The main driver of revenue from listing fees is the number of issuers listed on the GPW markets and their capitalisation at the end of the previous year; and
- revenue from fees for introduction and other fees, which increased to PLN 4.1 million (+PLN 0.4 million i.e. +10.1% YoY).

Table 81 Listing revenue on the Main Market

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Main Market					
Listing revenue (PLN mn)	17.9	18.5	17.2	(0.6)	(3.1%)
Total capitalisation of listed companies (PLN bn), incl.:	1,440.3	1,114.2	1,312.7	326.1	29.3%
- Capitalisation of listed domestic companies	760.2	574.7	701.2	185.5	32.3%
- Capitalisation of listed foreign companies	680.1	539.5	611.6	140.5	26.1%
Total number of listed companies, incl.:	413	415	430	(2)	(0.5%)
- Number of listed domestic companies	371	371	383	-	-
- Number of listed foreign companies	42	44	47	(2)	(4.5%)
Value of IPOs and SPOs (PLN bn)	3.2	8.7	10.7	(5.6)	(63.6%)
Number of newly listed companies (in the period)	10	8	16	2	25.0%
Capitalisation of newly listed companies (PLN bn)	3.6	1.4	45.6	2.2	162.1%
Number of delisted companies	12	22	18	(10)	(45.5%)
Capitalisation of delisted companies* (PLN bn)	8.3	49.4	56.4	(41.2)	(83.2%)

*capitalisation as at delisting

Listing revenue on the GPW **Main Market** decreased to PLN 17.9 million (-PLN 0.6 million i.e. -3.1% YoY). The table above presents the key financial and operating figures for the Main Market.

The value of IPOs on the Main Market stood at PLN 444 million (+PLN 405 million YoY). The value of SPOs decreased from PLN 8,708 million in 2022 to PLN 2,742 in 2023. Ten companies were newly listed on the Main Market and 12 companies were delisted. The capitalisation of the companies delisted on the Main Market was PLN 8.3 billion.

Table 82 Listing revenue on New Connect

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
NewConnect					
Listing revenue (PLN mn)	2.5	2.6	2.3	(0.1)	(3.7%)
Total capitalisation of listed companies (PLN bn), incl.:	12.7	14.7	18.7	(2.0)	(13.6%)
- Capitalisation of listed domestic companies	12.6	14.6	18.5	(2.0)	(13.7%)
- Capitalisation of listed foreign companies	0.1	0.1	0.2	0.0	5.4%
Total number of listed companies, incl.:	359	379	380	(20)	(5.3%)
- Number of listed domestic companies	355	375	376	(20)	(5.3%)
- Number of listed foreign companies	4	4	4	-	-
Value of IPOs and SPOs (PLN bn)	0.2	0.3	0.6	(0.1)	(35.6%)
Number of newly listed companies (in the period)	14	16	32	(2)	(12.5%)
Capitalisation of newly listed companies (PLN bn)	0.9	0.4	1.9	0.5	110.3%
Number of delisted companies*	34	17	25	17	100.0%
Capitalisation of delisted companies, (PLN bn) **	2.9	1.8	1.8	1.0	56.8%

* including transfers to the Main Market

** capitalisation as at delisting

Listing revenue on **New Connect** decreased year on year from PLN 2.6 million in 2022 to PLN 2.5 million in 2023.

The value of IPOs on NewConnect stood at PLN 58 million (-PLN 30 million i.e. -33.91% YoY). The value of SPOs decreased from PLN 245 million in 2022 to PLN 157 million in 2023. 14 companies were newly listed and 34 companies were delisted. The capitalisation of the companies delisted on NewConnect stood at PLN 2.9 billion.

Table 83 Listing revenue on Catalyst

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Catalyst					
Listing revenue (PLN mn)	2.5	1.9	2.1	0.6	31.9%
Number of issuers	125	130	129	(5)	(3.8%)
Number of listed instruments, incl.:	630	545	547	85	15.6%
- non-Treasury instruments	567	481	486	86	17.9%
Value of listed instruments (PLN bn), incl.:	1,279.8	1,150.1	1,123.8	129.8	11.3%
- non-Treasury instruments	112.3	92.6	95.1	19.7	21.3%

Listing revenue on **Catalyst** increased to PLN 2.5 million (+PLN 0.6 million i.e. +31.9% YoY) while the number of issuers decreased year on year. The value of issued instruments increased (+PLN 129.8 million i.e. +11.3% YoY).

Revenue from **information services** on the financial market and the commodity market stood at PLN 60.2 million (+PLN 1.7 million i.e. +2.8% YoY).

Table 84 Information services

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Information services and revenue from the calculation of reference rates* (PLN mn)	60.2	58.5	56.3	1.7	2.8%
Number of data vendors	102	96	90.0	6	6.3%
Number of subscribers (thou.)	618.2	539.2	458.5	79.0	14.7%

*Revenue from information services includes the financial market and the commodity market.

The year-on-year increase of revenue was driven by:

- › acquisition of new clients for GPW Group data (mainly non-display clients and data vendors);
- › a significant increase of the number of subscribers (by 14.7%).

GPWB made a significant contribution to the increase of the Group's revenue from information services and the calculation of reference rates at PLN 14.1 million in 2023 (+PLN 3.0 million i.e. +27.6% YoY).

5.2.3. Sales revenue – Commodity market

The Group's sales revenue on the commodity market stood at PLN 156.8 million (+PLN 18.7 million i.e. +13.5% YoY) and accounted for 35.2% of the Group's total sales revenue. It included revenue from trading (electricity, gas, property right to certificates of origin, agri-food goods and other fees paid by market participants), operation of the Register of Certificates of Origin, clearing, and information services.

Table 85 Value and structure of revenue on the commodity market

PLN'000, %	Year ended 31 December						Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	%	2022	%	2021	%		
Commodity market	156,754	100.0%	138,056	100.0%	149,957	100.0%	18,698	13.5%
Trading revenue	84,690	54.0%	69,193	50.1%	74,682	49.8%	15,497	22.4%
Transactions in electricity:	29,486	18.8%	13,374	9.7%	19,068	12.7%	16,112	120.5%
- Spot	17,442	11.1%	4,926	3.6%	5,321	3.5%	12,516	254.1%
- Forward	12,044	7.7%	8,448	6.1%	13,747	9.2%	3,596	42.6%
Transactions in gas:	14,544	9.3%	11,525	8.3%	14,970	10.0%	3,019	26.2%
- Spot	1,846	1.2%	2,288	1.7%	2,944	2.0%	(442)	(19.3%)
- Forward	12,698	8.1%	9,237	6.7%	12,026	8.0%	3,461	37.5%
Transactions in property rights to certificates of origin	19,808	12.6%	24,273	17.6%	25,068	16.7%	(4,465)	(18.4%)
Trade in food and agricultural products	-	-	6	0.0%	22	0.0%	(6)	(100.0%)
Other fees paid by market participants	20,852	13.3%	20,015	14.5%	15,554	10.4%	837	4.2%
Operation of the register of certificates of origin	21,104	13.5%	24,956	18.1%	23,793	15.9%	(3,852)	(15.4%)
Clearing	49,282	31.4%	42,614	30.9%	50,409	33.6%	6,668	15.6%
Information services	1,678	1.1%	1,293	0.9%	1,073	0.7%	385	29.8%

Revenue on the commodity market includes mainly the revenue of the TGE Group which includes TGE as well as Izba Rozliczeniowa Giełd Towarowych S.A. ("IRGIT") and InfoEngine S.A. ("InfoEngine").

Revenues of the TGE Group are driven mainly by the volume of transactions in electricity, natural gas, and property rights, the volume of certificates of origin issued and cancelled by members of the Register of Certificates of Origin, as well as revenues from clearing and settlement of transactions in exchange-traded commodities in clearing operated by IRGIT.

The year-on-year increase of sales revenue on the commodity market in 2023 was mainly due to an increase of revenue from trading in electricity (+PLN 16.1 million i.e. +120.5% YoY), an increase of revenue from information services (+PLN 0.4 million i.e. +29.8% YoY), and an increase of revenue from clearing (+PLN 6.7 million i.e. +15.6% YoY).

The Group's **trading revenue on the commodity market** in 2023 reached PLN 84.7 million (+PLN 15.5 million i.e. +22.4% YoY).

Table 86 Trading on the commodity market

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Commodity market, trading revenue (PLN mn)	84.7	69.2	74.7	15.5	22.4%
Electricity turnover volume:					
- Spot transactions (TWh)	63.2	33.0	36.2	30.2	91.4%
- Forward transactions (TWh)	84.2	108.3	188.9	(24.1)	(22.2%)
Gas turnover volume:					
- Spot transactions (TWh)	18.2	22.7	28.6	(4.5)	(19.7%)
- Forward transactions (TWh)	114.9	118.9	152.2	(4.0)	(3.4%)
Turnover volume in property rights (TGE) (TWh)					
- Spot transactions (TWh)	19.7	24.8	26.0	(5.1)	(20.6%)
- Spot transactions (toe)	110,390	97,963	107,995	12,426.4	12.7%

The Group's revenue from **trading in electricity** in 2023 stood at PLN 29.5 million (+PLN 16.1 million i.e. +120.5% YoY). The total turnover volume on TGE's electricity market in 2023 stood at 147.5 TWh (+6.1 TWh i.e. +4.3% YoY), an increase year on year. The increase of revenue from trading in electricity was driven by an increase of the volume of turnover in spot transactions combined with a decrease in forward transactions.

The Group's revenue from **trading in gas** in 2023 stood at PLN 14.5 million (+PLN 3.0 million i.e. +26.2% YoY). The total turnover volume on TGE's gas market decreased to 133.1 TWh in 2023 (-8.5 TWh i.e. -6.0% YoY). The turnover volume on the Day-Ahead and Intra-Day Market was 18.2 TWh (-4.5 TWh i.e. -19.7% YoY). The turnover volume on the Commodity Forward Instruments Market was 114.9 TWh (-4.0 TWh i.e. -3.4% YoY).

The Group's revenue from **trading in property rights to certificates of origin** in 2023 decreased to PLN 19.8 million (-PLN 4.5 million i.e. -18.4% YoY). The decrease in revenue in 2023 was due to a decrease in the trading volume of these rights to 19.7 TWh (-5.1 TWh i.e. -20.6% YoY). This was due, among others, to a further reduction in the level of green certificate redemptions at the end of August 2023.

The turnover in rights to energy efficiency increased by 12.7% i.e. to 110,390 toe in 2023 from 97,963 toe in 2022. This increase was driven, among others, by relatively high volumes of energy efficiency certificates issued at the turn of 2022/2023.

The Group's revenue from **other fees paid by commodity market participants** in 2023 stood at PLN 20.9 million (+PLN 0.8 million i.e. +4.2% YoY). Other fees paid by commodity market participants included fees paid by TGE market participants at PLN 11.9 million, revenues of InfoEngine from the activity of trade operator at PLN 4.0 million, and revenues of Izba Rozliczeniowa Giełd Towarowych at PLN 4.9 million including participation fees, fees for participation in TGE markets, and other fees.

Other fees paid by market participants are driven by revenues from fixed market participation fees, fees for cancellation of transactions, fees for position transfers, fees for trade reporting in the RRM (Registered Reporting Mechanism), fees for access to the exchange's IT system, and fees for management of the resources of the guarantee fund. Other fees paid by market participants depend mainly on the activity of IRGiT Members, in particular the number of transactions, the number of new clients of brokerage houses, and the number of new users accessing the clearing system.

Of other fees paid by commodity market participants, TGE's fees have the largest share, accounting for 57.1% of **revenue from other fees**. TGE's revenue from other fees increased from PLN 11.1 million in 2022 to PLN 11.9 million in 2023. The 7.1% year-on-year increase in other fees paid by market participants is due to changes in the number of Members and their activity on the markets. The increase in other fees was also due to a change in the structure of fees for access to the Exchange's IT systems and the termination of the temporary reductions in these fees applied the previous year.

Revenue from the operation of the **Register of Certificates of Origin** in 2023 stood at PLN 21.1 million (-PLN 3.9 million i.e. -15.4% YoY). The decrease in the revenue was due to a decrease in the volume of issued property rights and to the successive reduction in the obligation to redeem green certificates.

Table 87 Register of Certificates of Origin

	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
Commodity market, revenue from the operation of the Register of Certificates of Origin in electricity (PLN mn)	21.1	25.0	23.8	(3.9)	(15.4%)
Issued property rights (TWh)	16.1	19.9	19.7	(3.7)	(18.8%)
Cancelled property rights (TWh)	19.0	26.1	25.5	(7.1)	(27.1%)

The Group earns revenue from the **clearing activities** of IRGiT, which is a subsidiary of TGE. The revenue stood at PLN 49.3 million in 2023 (+PLN 6.7 million i.e. +15.6% YoY) due to the following:

- increase of revenue from clearing, settlement and registration of electricity forwards on the Commodity Forward Instruments Market by PLN 1.8 million i.e. 19.7%;
- decrease of revenue from clearing of gas trade on the Day-Ahead and Intra-Day Market by PLN 0.7 million i.e. 19.7%;
- decrease of revenue from clearing, settlement and registration of gas forwards on the Commodity Forward Instruments Market by PLN 0.2 million i.e. 1.3%;
- increase of revenue from clearing of electricity trade on the Day-Ahead and Intra-Day Market by PLN 7.2 million i.e. 289.6%; and
- decrease of revenue from clearing of transactions in property rights by PLN 1.8 million i.e. 18.4%.

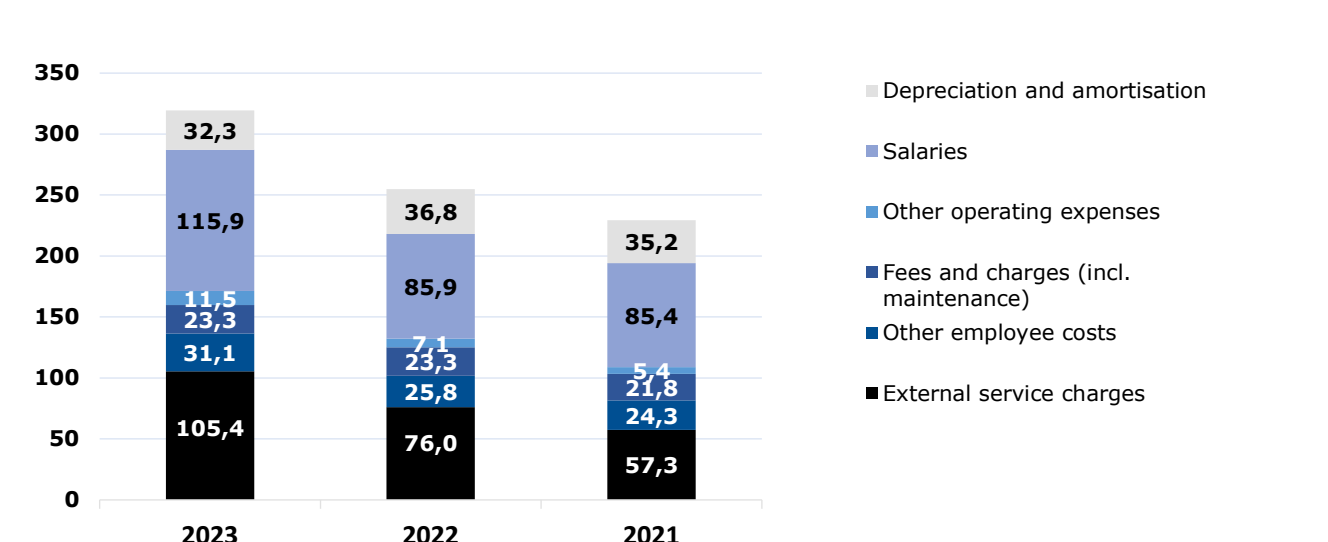
Revenue from clearing of transactions in electricity stood at PLN 20.3 million (78.7% i.e. PLN 8.9 million YoY), transactions in gas at PLN 21.1 million (-2.2% i.e. -PLN 0.5 million YoY), and transactions in property rights at PLN 7.9 million (-18.4% i.e. -PLN 1.8 million YoY).

Revenue also includes information services as an additional business line of TGE (real-time data in co-operation with GPW). Revenue from information services in 2023 stood at PLN 1.7 million (+29.8% YoY).

5.2.4. Operating expenses

Operating expenses in 2023 stood at PLN 319.5 million (+PLN 64.6 million i.e. +25.4% YoY). In particular, external service charges increased substantially. The mix of the Group's operating expenses is presented in the Consolidated Financial Statements, Note 4.2.

Figure 59 Structure and value of consolidated operating expenses [PLN million]



The Group is not dependent on any single supplier or provider as no contractor has a share exceeding 10% of the total expenses of the Group.

Depreciation charges in 2023 decreased year on year and stood at PLN 32.3 million (-PLN 4.6 million i.e. -12.4% YoY), including depreciation of property, plant and equipment at PLN 12.7 million, amortisation of intangible assets at PLN 13.3 million, and lease-related depreciation at PLN 6.3 million.

Salaries and other employee costs of the Group in 2023 increased year on year to PLN 146.9 million (+PLN 35.3 million i.e. +31.6% YoY). The increase is mainly due to salary increases and the addition of the AMX Group.

Due to GPW's active development projects, some salaries are capitalised and will be recognised as depreciation charges under expenses after the projects are rolled out. Capitalisation of salaries and other employee costs in 2023 stood at PLN 13.1 million.

Table 88 GPW Group FTEs

	As at 31 December		
	2023	2022	2021
GPW	288	277	270
Subsidiaries	285	187	182
Total	573	464	452

Maintenance fees stood at PLN 5.5 million (+PLN 0.3 million i.e. +5.7% YoY) and included mainly maintenance fees of Centrum Giełdowe.

Fees and charges stood at PLN 18.0 million (-PLN 0.1 million i.e. -0.7% YoY) including the capital market supervision fee for 2023 at PLN 15.5 million (+PLN 0.7 million i.e. +4.9% YoY). The amount of capital market supervision fees is subject to much volatility YoY and remains beyond the Group's control.

External service charges stood at PLN 105.4 million (+PLN 29.3 million i.e. +38.6% YoY). The mix of external service charges is presented in a table in the Consolidated Financial Statements, Note 4.2.2. The year-on-year increase was due to the following changes in different cost categories:

- › transport services – an increase of +PLN 13.5 million (+3,090.2% YoY) due to the high cost of outsourced transport and forwarding services,
- › IT costs – an increase of +PLN 6.1 million (+16.0% YoY) due to a higher cost of licence fees, IT hardware maintenance and software modifications;
- › advisory – an increase of +PLN 8.4 million (+62.9% YoY) due to GPW's higher costs of advisory in strategic and development projects.

Other operating expenses stood at PLN 11.5 million (+PLN 4.4 million i.e. +61.9% YoY) including mainly the cost of material and energy consumption at PLN 6.5 million, industry organisation membership fees at PLN 1.2 million, insurance at PLN 0.7 million, business travel at PLN 1.6 million, and participation in conferences at PLN 0.3 million. The increase of other operating expenses was mainly driven by an increase of the cost of material and energy consumption and an increase of the cost of electricity consumption.

5.2.5. Other income, other expenses, gains on reversal of impairment/(losses) on impairment of receivables

Other income of the Group stood at PLN 6.3 million in 2023 (-PLN 3.8 million i.e. -37.6% YoY). Grants received stood at PLN 2.5 million; however, other income was lower than in 2022 due to one-off events that occurred in the comparative period (income recognised on the acquisition of AMX).

Other expenses stood at PLN 3.4 million (-PLN 11.0 million i.e. -76.7% YoY). The lower expenses in 2023 were driven by the recognition of an impairment loss on BondSpot goodwill in the comparative period. The Group also made less donations in 2023 (-PLN 1.5 million). For more information, see the Consolidated Financial Statements, Note 4.4.

As at the balance-sheet date, the **gains on reversed impairment of receivables** stood at -PLN 0.3 million (-PLN 0.9 million i.e. -158.8% YoY) and concerned mainly GPW.

5.2.6. Financial income and expenses

Financial income of the Group stood at PLN 28.4 million (+PLN 4.9 million i.e. +20.8% YoY) and included mainly interest on bank deposits and financial instruments (corporate bonds, certificates of deposit, banks deposits, loans granted). The increase of financial income from interest was due to persistent high interest rates.

Financial expenses of the Group amounted to PLN 2.1 million (-PLN 5.4 million i.e. -71.6% YoY). The sharp decrease year on year was a result of the redemption of bonds in January and October 2022 and the absence of their costs in 2023.

5.2.7. Share of profit of entities measured by the equity method

The Group's share of profit of entities measured by the equity method in 2023 stood at PLN 34.1 million (+PLN 5.9 million i.e. +20.8% YoY). The increase of the share of profit of entities measured by the equity method in 2023 was driven mainly by an increase of the KDPW Group's profit.

The GPW Group's share of profit of the **KDPW Group** in 2023 stood at PLN 34.0 million (vs. PLN 27.8 million in 2022, i.e. +22.3% YoY) owing to an increase in the KDPW Group's revenue (+PLN 31.4 million i.e. +14.5% YoY), including fees for acceptance and recording and depository fees. Operating expenses increased by PLN 17.9 million i.e. 12.7% YoY.

The share of profit of **Centrum Giełdowe** in 2023 was PLN 0.1 million (-PLN 0.4 million i.e. -79.0% YoY).

The Group's profit for 2019 included the profit of **Polska Agencja Ratingowa** (formerly IAiR) for the period from 1 January 2019 to 30 September 2019 when the investment in PAR was fully written off. The profits of PAR are no longer included in the Group's profits as of 30 September 2019.

The profit/loss of entities measured by the equity method is presented in the Consolidated Financial Statements, Note 3.3.

Table 89 GPW's share of profit of entities measured by the equity method

PLN'000, %	Year ended 31 December			Change (2023 vs 2022)	Growth rate (%) (2023 vs 2022)
	2023	2022	2021		
KDPW S.A. Group	34,049	27,846	24,118	6,203	22.3%
Centrum Giełdowe S.A.	86	409	258	(323)	(79.0%)
Total	34,135	28,255	24,376	5,880	20.8%

5.2.8. Income tax

Income tax of the Group was PLN 30.8 million (+PLN 0.9 million i.e. +3.1% YoY). The effective income tax rate was 16.4% in 2023 (17.1% in 2022) vs. the standard Polish corporate income tax rate of 19%. The income tax paid by the Group was PLN 28.0 million (-PLN 17.0 million i.e. -37.7% YoY).

5.3. Consolidated statement of financial position

The structure of the Group's statement of financial position is very stable: equity was the predominant source of the Group's financing while current assets had a predominant share in total assets as at 31 December 2023 and as at 31 December 2022. As at 31 December 2023, the Group's net working capital, understood as the surplus of current assets over current liabilities or the surplus of non-current capital over non-current assets, was positive at PLN 379.3 million (-PLN 23.7 million i.e. -5.9% YoY), which reflects the Group's safe financial position.

The total assets of the Group stood at PLN 1.3 billion and increased by PLN 75.4 million (i.e. +6.4%) year on year mainly as a result of an increase in non-current assets and a corresponding increase in sources of financing.

Non-current assets as at 31 December 2023 stood at PLN 758.0 million (+PLN 106.4 million i.e. +16.3% YoY) representing 60.3% of total assets as at 31 December 2023 vs. 55.1% as at 31 December 2022. The biggest year-on-year increase in 2023 was reported in intangible assets (+PLN 40.9 million i.e. +14.4% YoY) and investments in entities measured by the equity method (+PLN 32.9 million i.e. +13.6% YoY). The increase in intangible assets in 2023 was mainly driven by investments in GPW's strategic projects. The increase in investments in entities measured by the equity method was mainly driven by strong profits of the KDPW Group (see section 5.2.6).

Current assets as at 31 December 2023 stood at PLN 499.7 million (-PLN 31.0 million i.e. -5.8% YoY) and represented 39.7% of total assets as at 31 December 2023 vs. 44.9% as at 31 December 2022. The year-on-year decrease in current assets as at 31 December 2023 was driven mainly by greater change in a decrease in cash and cash equivalents and other receivables (-PLN 131.9 million i.e. -34.8% YoY) than in an increase in financial assets measured at amortised cost (+PLN 107.5 million i.e. +168.0% YoY).

Equity as at 31 December 2023 stood at PLN 1,049.9 million (+PLN 49.1 million i.e. +4.9% YoY) representing 83.5% of the Group's total equity and liabilities as at 31 December 2023 vs. 84.6% as at 31 December 2022. Non-controlling interests as at 31 December 2023 increased to PLN 10.7 million and did not change significantly compared to the previous year (+PLN 0.6 million i.e. +6.4%).

Non-current liabilities as at 31 December 2023 stood at PLN 87.4 million (+PLN 33.6 million i.e. +62.5% YoY) representing 6.9% of the Group's total equity and liabilities as at 31 December 2023 vs. 4.6% as at 31 December 2022. The increase in non-current liabilities was due to an increase of non-current deferred income from grants (+PLN 15.2 million i.e. +49.1%). Non-current deferred income was the biggest item of liabilities as at 31 December 2023 and mainly included grants received in projects. For more information about grants, see the Consolidated Financial Statements, Note 6.3. Non-current liabilities were also affected by an increase of lease liabilities by PLN 19.9 million.

Current liabilities as at 31 December 2023 stood at PLN 120.3 million (-PLN 7.3 million i.e. -5.7% YoY) representing 9.6% of total equity and liabilities as at 31 December 2023 vs. 10.8% as at 31 December 2022. The decrease in current liabilities was mainly driven by changes in other liabilities.

5.4. Consolidated statement of cash flows

Table 90 Consolidated statement of cash flows

PLN'000	Year ended 31 December		
	2023	2022	2021
Cash flows from operating activities	146,383	216,214	53,089
Cash flows from investing activities	(157,287)	183,727	(3,731)
Cash flows from financing activities	(120,389)	(370,709)	(110,882)
Increase (decrease) of net cash	(131,293)	29,232	(61,524)
Impact of FX changes on balance of FX cash	(567)	85	(170)
Cash and cash equivalents - opening balance	378,641	349,324	411,018
Cash and cash equivalents - closing balance	246,781	378,641	349,324

The Group generated positive cash flows from **operating activities** at PLN 146.4 million (-PLN 69.8 million i.e. -32.3% YoY) driven by changes in the Group's working capital.

The cash flows from **investing activities** were negative at PLN 157.3 million (-PLN 341.0 million YoY). The decrease in the cash flows was mainly due to a surplus of expense for new investments in bank deposits and bonds (PLN 529.7 million) over the income from investments in deposits and bonds (PLN 424.4 million).

The cash flows from **financing activities** were negative at PLN 120.4 million (+PLN 250.3 million i.e. +67.5% YoY) mainly including the dividend paid by GPW at PLN 113.4 million (+PLN 1.7 million i.e. +1.4% YoY).

The Group's total capital expenditure amounted to PLN 73,5 million including expenditure for property, plant and equipment at PLN 23.7 million (vs. PLN 25.7 million in 2022) and expenditure for intangible assets at PLN 49.8 million (vs. PLN 34.5 million in 2022).

There were no significant contracted investments in plant, property and equipment and in intangible assets in the Group as at 31 December 2023. Contracted investments in intangible assets in 2022 were PLN 1.5 million, including mainly investment in the modernisation of the integration layer as part of the New Market Image project and the development of the Wibix system.

5.5. Atypical factors and events impacting the GPW Group's results in 2023

Atypical factors and events which impacted the GPW Group's results in 2023 included the implementation of projects with grants from NCBiR (for details, see the Consolidated Financial Statements, Note 6.3).

5.6. Liquidity, financial assets and financial risk management of the Group

The activities of the Company and the Group are exposed to three types of financial risks: market risk, credit risk, and liquidity risk.

In 2023, the Group's liquidity risk, which means inability to timely meet its payment obligations, was minor in view of material financial assets held and positive cash flows from operating activities which exceeded the value of liabilities. The current liquidity ratio was 4.15. For more information, see the Consolidated Financial Statements, Note 2.4.

Credit risk, understood as the risk of loss on counterparty default or the risk of decrease in economic value of receivables due to a counterparty's declining ability to pay amounts due, is discussed in the Consolidated Financial Statements, Note 2.3.

GPW Group members manage financial liquidity in accordance with the "Liquid Assets Allocation Procedure" adopted by the Management Board, whereby the procedures for investing free cash should be handled in view of the due dates of liabilities so as to minimise the liquidity risk for the parent entity and subsidiaries and, at the same time, to maximise financial income. In practical terms, this means that GPW and the subsidiaries invest liquid assets in bank deposits and GPW invests in certificates of deposit and corporate bonds. For more information, see the Consolidated Financial Statements, Note 2.4.

In the opinion of the Management Board of the parent entity, the Group's financial assets and financial risk management process is effective and ensures timely meeting of payment obligations. No threats have been identified to the Group's liquidity.

5.7. Expected financial position of the Group

Despite visible signs of economic slowdown and geopolitical tensions in central Europe, it is expected that the Group will generate material cash flows from operating activities in the coming years; combined with revenues from financial assets, these will cover the Group's operating expenses, capital expenditures and debt service costs.

The Group is not planning to use external financing to an extent greater than as at the date of preparation of this Report. Should any unexpected events occur, which will require financing that could not be provided by the Group, the Group will consider obtaining additional external funds in a manner optimal for the Group's capital expense and structure.

The Group did not publish any financial forecasts for 2023. Consequently, no explanations are provided for the differences between the financial results disclosed in the Annual Report and any previously published forecasts.

5.8. Other information

Assessment of management of financial resources

In 2023, the Company and the Group pursued a policy of financing operations both with own resources and external funds through leases.

It is the objective of the Group's effective management of financial resources to ensure that the Exchange and the subsidiaries may continue as a going concern while providing optimum benefits to all stakeholders. It is a priority of the Exchange Management Board and the Management Boards of the subsidiaries when deciding about the structure of the financing policy of the Group that any investments carry low risk while generating possibly optimal returns for the shareholders and stable and safe returns for the bondholders.

As at 31 December 2023, the Group held PLN 418.2 million in cash and cash equivalents and short-term financial assets including bank deposits and guaranteed corporate bonds. They are sufficient financial resources to conclude that the Group's short-term and mid-term liquidity risk is very low and that there is no risk to the Group's payment of its financial liabilities.

In the opinion of the Exchange Management Board, the Group's decisions regarding its financing policy are based on rational grounds. They have a long-term horizon and are geared at creating long-term value for the Group and the Polish capital market.

Investments in and links with other entities

GPW has organisational and equity links with Group members, associates and joint ventures. The description of the Group and associates is presented in section 1.1.

In 2023, GPW did not make any significant equity investments outside the group of related parties.

In 2022, GPW acquired AMX by taking a controlling stake of 65.03% of its share capital. The total purchase price was PLN 9.6 million.

On 19 January 2022, GPW acquired the shelf company Teelgren Investments (currently GPW Private Market S.A.) for PLN 118 thousand to simplify and shorten the process of setting up and registering a company. The company will be used to operate the market in the Private Market project.

On 14 April 2022, GPW acquired the shelf company Molonello Investments S.A. (currently GPW Logistics S.A.) for PLN 115 thousand in order to simplify the process of incorporation and registering a company. The company was acquired in order to operate as a digital system operator in the Transport, Shipping and Logistics (TSL) industry as part of the PCOL project.

On 13 October 2022, GPW acquired the shelf company Tanerstille Investments S.A. (currently GPW DAI S.A.) for PLN 118.5 thousand to simplify and shorten the process of setting up and registering a company. The company will be used to operate a multi-module auction platform designed for the comprehensive handling of media market transactions related to dynamic ad insertion (DAI).

As at 31 December 2023, GPW's capital links with non-Group members included interest in foreign entities:

- › Bucharest Stock Exchange (BVB) – 0.06% stake,
- › INNEX PJSC – 10% stake,
- › TransactionLink Sp. z o.o. – 2.16% stake,
- › IDM – 1.54% (debt to equity conversion),

› EuroCTP B.V – 0.1% stake.

The GPW Group's investment in the Bucharest Stock Exchange stood at PLN 299 thousand as at 31 December 2023 (PLN 175 thousand as at 31 December 2022), the investment in Innex stood at PLN 0 (PLN 0 as at 31 December 2022), the investment in TransactionLink at PLN 1,677 thousand (PLN 1,793 thousand as at 31 December 2022), and the investment in EuroCTP B.V. at PLN 31 thousand.

Due to the loss of control over GPW Ventures Asset Management Sp. z o. o. ASI S.K.A. ("GPWV SKA"), the Group presented its shares in the amount of 0.07% of the share capital as financial assets measured at fair value through other comprehensive income. For more information, see the Consolidated Financial Statements, Note 6.12.

In addition to the stake in the above-mentioned companies, as well as in the Group members, associates and joint ventures, GPW's major domestic investments as at 31 December 2023 included bank deposits and corporate bonds.

Transactions of the Group with related parties are described in the Consolidated Financial Statements, Note 6.4, and in the Separate Financial Statements, Note 6.3.

Credit and loan agreements signed and terminated during the financial year

In 2023, the Group neither signed nor terminated any credit and loan agreements.

In 2022, TGE entered into a revolving credit facility agreement with Deutsche Bank Polska S.A. up to a maximum amount of PLN 40 million. The balance of liabilities as at 31 December 2022 was PLN 0.

Loans granted in the financial year

Related party PAR repaid the full loan in 2023, as described in the Consolidated Financial Statements, Note 6.4.2.

Guarantees and sureties granted and accepted during the financial year

Guarantees received by the Group are presented in the Consolidated Financial Statements, Note 6.9. The Group granted no guarantees or sureties to third parties.

Material transactions of the issuer and subsidiaries with related parties on terms other than at arm's length in the financial year

In 2023, GPW and the subsidiaries did not make any significant transactions with related parties on terms other than at arm's length. The transactions with related parties are presented in the Consolidated Financial Statements, Note 6.4.

Contingent liabilities

Contingent assets and contingent liabilities are presented in the Consolidated Financial Statements, Note 6.10.

Events after the balance-sheet date which could significantly impact the future financial results of the issuer

Events after the balance sheet date are presented in the Consolidated Financial Statements, Note 6.13.

6. FINANCIAL POSITION AND ASSETS OF GPW

All data presented in this section are provided by GPW. As percentages and numbers presented in this section are rounded off, and their simple addition may differ from the totals presented in tables and figures.

6.1. Summary of separate results of GPW S.A.

GPW generated a net profit of PLN 116.9 million in 2023 (+PLN 17.3 million i.e. +17.4% YoY) as its operating profit decreased from PLN 69.2 million in 2022 to PLN 57.3 million in 2023 (-17.2% YoY) and its positive net financial income increased (+PLN 26.6 million i.e. +57.9% YoY). EBITDA reached PLN 77.9 million (-PLN 16.5 million i.e. -17.5% YoY).

Table 91 Separate statement of comprehensive income

	Year ended 31 December			
	2023	2022	2023	2022
	PLN'000		EUR'000[1]	
Sales revenue	244,966	247,951	53,922	52,903
Operating expenses	(190,953)	(170,342)	(42,032)	(36,344)
Gains on reversed impairment of receivables/(Losses) on impairment of receivables	(496)	588	(109)	125
Other revenue	6,920	2,281	1,523	487
Other expenses	(3,184)	(11,300)	(701)	(2,411)
Operating profit	57,253	69,178	12,602	14,760
Financial income	73,555	49,837	16,191	10,633
Financial expenses	(1,131)	(3,971)	(249)	(847)
Profit before tax	129,677	115,044	28,544	24,546
Income tax expense	(12,769)	(15,480)	(2,811)	(3,303)
Net profit for the period	116,908	99,564	25,734	21,243

Uncertainty in the financial markets, caused by geopolitical tensions and recessionary fears in the world's largest economies, resulted in lower revenues for the Exchange (-PLN 3.0 million i.e. -1.2%). High inflation resulted in an increase in operating expenses (+PLN 20.6 million i.e. +12.1%).

Table 92 Selected separate financials

	As at/Year ended 31 December		
	2023	2022	2021
Debt and financing ratios of the Group			
Net debt / EBITDA for 12 months	(1.1)	(1.6)	(0.5)
Debt to equity	4.0%	0.8%	41.8%
Liquidity ratios			
Current liquidity	3.3	3.8	1.7
Coverage ratio of interest rate on bond issue	-	27.5	20.4
Profitability ratios			
EBITDA margin	31.8%	38.1%	46.9%
Operating profit margin	23.4%	27.9%	37.8%
Net profit margin	47.7%	40.2%	68.9%
Cost / income	78.0%	68.7%	62.0%
ROE	19.6%	16.5%	30.3%
ROA	16.4%	12.1%	19.1%

The ratio methodology is presented in the glossary at the end of this section.

Net debt was negative because liquid assets were much greater than interest-bearing liabilities. Liquid funds decreased from PLN 153.7 million in 2022 to 107.7 million in 2023 while interest-bearing liabilities increased (PLN 5.0 million in 2022 vs. PLN 24.2 in 2023), resulting in an increase in the debt-to-equity ratio.

Current liquidity decreased modestly year on year due to a bigger decrease of current assets than current liabilities.

Operating profit margin and EBITDA margin decreased as a result of lower profits in 2023 compared to 2022.

The cost/income ratio increased year on year due to a higher growth rate of operating expenses and persistent inflationary pressures.

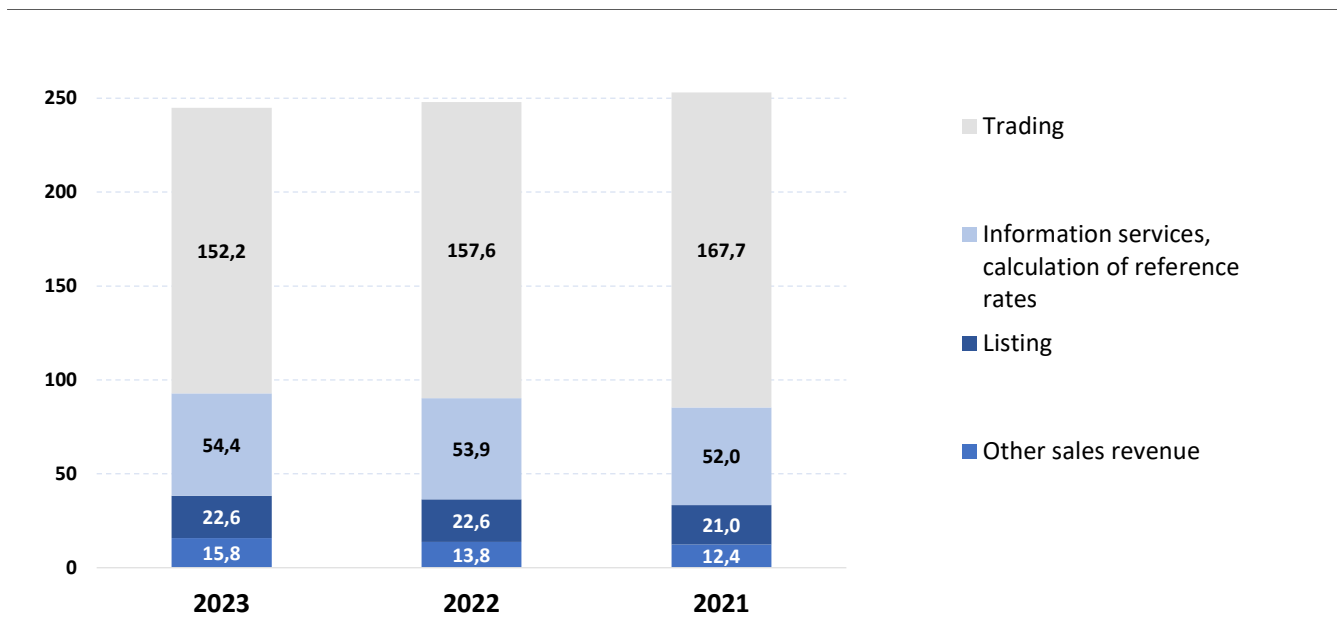
ROE and ROA increased year on year as a result of a higher net profit in 2023. Profit was supported by higher financial income, in particular higher dividends received from related parties (PLN 36.5 million in 2022 vs. PLN 63.5 million in 2023).

6.2. Separate statement of comprehensive income

6.2.1. Sales revenue

GPW's sales revenue in 2023 stood at PLN 245.0 million (-PLN 3.0 million i.e. -1.2% YoY). GPW's revenue segments and their results are presented in the Separate Financial Statements for 2023, Note 4.1.

Figure 60 Structure and value of separate sales revenue



GPW's main revenue stream in 2023, similar to previous years, was the **trading revenue on the financial market**, which generated 62.1% of the total sales revenue and stood at PLN 152.2 million (-PLN 5.5 million i.e. -3.5% YoY). The trading revenue on the financial market decreased owing to a year-on-year decrease in turnover in shares on the GPW Main Market (see section 2.4). As a result, **revenue from trading in equities and equity-related instruments** in 2023 stood at PLN 119.3 million (-PLN 4.3 million i.e. -3.5% YoY) representing 48.7% of the total sales revenue (vs. 49.9% in 2022). **Trading in derivatives** generated revenue of PLN 19.6 million (-PLN 1.7 million i.e. -8.2% YoY) representing 8.0% of sales revenue (vs. 8.6% in 2022). Revenue from trading in different categories of instruments is discussed in the presentation the Group's consolidated results (see section 2.4).

Information services remained GPW's stable revenue stream in 2023 (on the financial market and the commodity market) (see section 2.3.7). GPW's total revenue from information services stood at PLN 54.4 million (+PLN 0.5 million i.e. +0.9% YoY). The year-on-year increase of the revenue was driven by the following factors:

- › acquisition of new clients for GPW data (mainly non-display clients and data vendors);
- › continued increase of the number of GPW data subscribers.

The **listing revenue** is presented in section 2.4.2.

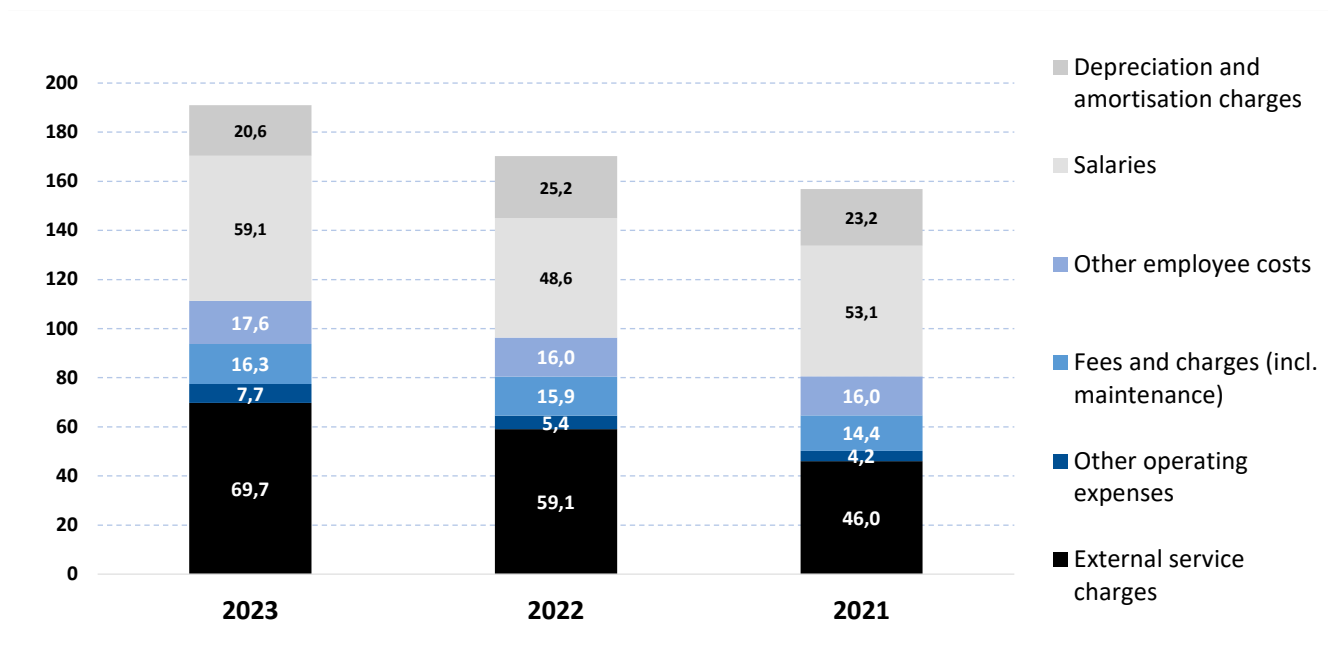
As the parent entity is the GPW Group’s procurement centre, **separate other sales revenue** of GPW in 2023 included mainly services provided to related parties: lease of own office space, maintenance fees relating to leased space, as well as financial, accounting, HR, IT, and administrative services.

The majority of GPW’s revenue in 2023 was generated by domestic clients (PLN 129.6 million i.e. 52.9% of total revenue), and it remained stable year on year. The sales revenue from foreign clients decreased (-PLN 2.2 million i.e. -1.9% YoY). In general, GPW earns revenue from domestic clients in PLN and revenue from foreign clients in EUR.

6.2.2. Operating expenses

GPW’s operating expenses in 2023 stood at PLN 191.0 million (+PLN 20.6 million i.e. +12.1% YoY). External service charges and salaries increased in particular. The mix of GPW’s operating expenses is presented in the Separate Financial Statements for 2023, Note 4.2.

Figure 61 Structure and value of separate operating expenses



Depreciation charges increased modestly year on year and stood at PLN 20.6 million, including depreciation of plant, property and equipment at PLN 8.8 million, amortisation of intangible assets at PLN 8.5 million, and lease-related depreciation at PLN 3.3 million.

Salaries and other employee costs stood at PLN 76.6 million (+PLN 12.0 million i.e. +18.6% YoY). The headcount was 306 FTEs as at 31 December 2023 vs. 291 FTEs in 2022. The increase of the headcount was driven by the implementation of the Strategy which provides for the Company’s business expansion and dynamic growth in new business segments (see section 2.3).

Maintenance fees stood at PLN 5.4 million (+PLN 0.4 million i.e. +8.2% YoY) and included mainly maintenance fees of Centrum Giełdowe.

Fees and charges stood at PLN 10.9 million (-PLN 0.1 million i.e. -1.1% YoY) including mainly the fee due to PFSA which is beyond the Company’s control. The capital market supervision fee in 2023 stood at PLN 9.1 million (+PLN 0.8 million i.e. +10.1% YoY).

External service charges stood at PLN 69.7 million (+PLN 10.6 million i.e. +18.0% YoY). An increase was mainly reported in the following lines:

- IT costs (+PLN 4.9 million i.e. +23.0% YoY) due to a higher cost of IT hardware maintenance and software modifications;
- advisory (+PLN 3.1 million i.e. +28.4% YoY) due to GPW’s higher costs of advisory in strategic and development projects and a higher cost of tax advisory.

Other operating expenses stood at PLN 7.7 million (+PLN 2.3 million i.e. +42.6% YoY). The increase was driven by an increase of the cost of material and energy consumption and an increase of the cost of electricity and heat consumption.

6.2.3. Other lines of the separate statement of comprehensive income

Other income increased to PLN 6.9 million (+PLN 4.6 million i.e. +203.4% YoY) due to higher income from grants, gains from the sale of property, plant and equipment and income from the annual adjustment of input VAT.

Other expenses decreased to PLN 3.2 million (-PLN 8.1 million i.e. -71.8% YoY) due to lower donations paid (-PLN 1.5 million i.e. -36.7% YoY) as well as assets impairment at PLN 6.6 million in 2022.

Financial income stood at PLN 73.6 million (+PLN 23.7 million i.e. +47.6% YoY). The increase was driven by a higher dividend paid by related parties. GPW received PLN 63.4 million dividend in 2023 (+PLN 27.0 million i.e. +74.0% YoY) including PLN 54.7 million from TGE, PLN 0.7 million from BondSpot, PLN 7.1 million from KDPW, and PLN 0.9 million from Centrum Giełdowe. The Company earned lower interest income (PLN 12.4 million in 2022 vs. PLN 9.5 million in 2023).

Financial expenses stood at PLN 1.1 million (-PLN 2.8 million i.e. -71.5% YoY). The decrease of financial expenses was mainly driven by the absence of interest cost on bonds in issue compared to 2022 (-PLN 3.4 million).

Income tax in the statement of comprehensive income was PLN 12.8 million (-PLN 2.7 million i.e. -17.5% YoY). The **effective tax rate** was 9.8% in 2023 and 13.5% in 2022 compared to the standard Polish corporate income tax rate of 19%. The difference between the effective tax rate and the standard tax rate was mainly due to non-taxable dividend paid by subsidiaries and associates and recognised in profit before tax.

Atypical factors and events impacting profits are presented in section 5.5.

6.3. Separate statement of financial position

The Company's total assets as at 31 December 2023 stood at PLN 729.5 million (+PLN 33.7 million i.e. +4.8% YoY). The increase was the effect of revaluation of leases due to extension of the lease term.

Non-current assets as at 31 December 2023 stood at PLN 562.9 million (+PLN 70.8 million i.e. +14.4% YoY), representing 77.2% of total assets (vs. 70.7% in 2022).

Current assets as at 31 December 2023 stood at PLN 166.7 million (-PLN 37.0 million i.e. -18.2% YoY) representing 22.9% of total assets (vs. 29.3% in 2022). The significant decrease of non-current assets was driven by a decrease in cash and cash equivalents to PLN 49.8 million (-PLN 50.2 million i.e. -50.2% YoY).

Non-current liabilities of the Company as at 31 December 2023 stood at PLN 78.5 million (+PLN 31.9 million i.e. +68.6% YoY) representing 10.8% of total equity and liabilities (vs. 6.7% in 2022). Non-current liabilities were mainly driven by an increase in accruals (+PLN 13.9 million i.e. +51.4%) related to grants received as well as an increase in lease liabilities from PLN 0.4 million as at 31 December 2022 to PLN 19.6 million as at 31 December 2023.

Current liabilities of the Company as at 31 December 2023 stood at PLN 51.0 million (-PLN 2.5 million i.e. -4.6% YoY) representing 7.0% of total equity and liabilities (vs. 7.7% in 2021). Current liabilities were mainly driven by a decrease in accruals related to grants received as well as a VAT adjustment provision set up in the comparative period.

6.4. Separate statement of cash flows

The Company generated positive cash flows from **operating activities** in 2023 at PLN 51.8 million, a decrease year on year driven by a lower operating profit.

The cash flows from **investing activities** were positive at PLN 17.6 million in 2023 (-PLN 201.5 million i.e. -92.0% YoY). The decrease in the cash flows was mainly due to a surplus of expense for new investments in bank deposits and bonds (-PLN 341.1 million) over the income from investments in deposits and bonds (PLN 336.8 million).

The Company received PLN 63.4 million in dividends from related parties in 2023 and invested PLN 5.7 million in a share capital increase of subsidiaries.

Cash flows related to investments in plant, property and equipment stood at PLN 14.3 million and investments in intangible assets at PLN 39.8 million. Future (contracted) investments of GPW are presented in the Separate Financial Statements, Note 6.6. Capital expenditure for property, plant and equipment in 2023 included mainly computer and IT equipment. Capital expenditure for intangible assets included software licences as well as development work including among others the New Trading System, Telemetry and PCOL projects. The expenditure was partly offset by grants received.

The cash flows from **financing activities** were negative at PLN 119.6 million in 2023 (+PLN 250.9 million i.e. +67.7% YoY) due to a dividend paid to the shareholders at PLN 113.3 million and lease payments (PLN 6.3 million). The decrease in expenditure was mainly due to the absence of payments in respect of bonds compared to the previous period (PLN 244.9 million).

7. Glossary

BOND INTEREST COVERAGE RATIO – EBITDA to interest expense on bonds in issue (interest paid and accrued for a period of 12 months)

Cogeneration – technological process where electricity and heat are generated simultaneously in a combined heat and power plant; thanks to lower consumption of fuel, cogeneration provides material economic benefits and environmental advantages over separate generation of heat in a traditional heat plant and of electricity in a condensation power plant

Colocation – a service where the exchange provides physical space and allows clients to install hardware and software in direct proximity to the exchange's trading system

COST / INCOME – ratio of operating expenses to sales revenue (for a period of 12 months)

CURRENT LIQUIDITY – current assets to current liabilities (as at the balance sheet date)

DEBT TO EQUITY – interest-bearing liabilities to equity (as at the balance sheet date)

EBITDA – operating profit + amortisation

EBITDA MARGIN – EBITDA to sales revenue (for a period of 12 months)

ECM – Equity Capital Market, raising capital by companies and shareholders through sale or issue of shares or warrants in public offers or private placements

EOB – Electronic Order Book, trade excluding block trades

ETF – Exchange Traded Funds, track the performance of an exchange index. Similar to other investment funds, ETFs are regulated under EU Directives and national regulations

ETP – Exchange Traded Products, structured products – financial instruments whose price is linked to the value of a market indicator (the underlying instrument)

FESE – Federation of European Securities Exchanges

Free float – free float shares are shares other than held by shareholders which hold more than 5% each, Treasury shares for cancellation, and registered shares; free float includes all shares held by investment funds, pension funds and asset managers and shares participating in depository receipt issue programmes

GCM – Global Clearing Member

HVF – High Volume Funds, a promotion programme addressed to investment funds actively trading in shares on GPW

HVP – High Volume Provider, a GPW promotion programme addressed to legal entities whose core business is to invest on financial markets only on own account

IPO - Initial Public Offering. In this report, PwC IPO Watch Europe reports and FESE data, IPO means all offerings where a company first raises equity on the capital market, either in a public offering or a private placement

ISV – Independent Software Vendors, providers of client software for exchange members used to trade on the trading platform

MRC – Multi-regional Coupling, European project of operational integration of spot electricity markets

MTF – Multilateral Trading Facility, addressed mainly to institutional investors, offers trade in stocks combined with very short lead times for the execution of orders as well as low trading fees. MTFs are usually operated by investment firms (banks, brokers) or securities exchanges. MTFs offer trade in the same stocks as those listed on other markets and do not provide listings

NET DEBT – interest-bearing liabilities less liquid funds (as at the balance sheet date)

NET PROFIT MARGIN – net profit to sales revenue (for a period of 12 months)

OPERATING PROFIT MARGIN – operating profit to sales revenue (for a period of 12 months)

OTC – Over the Counter, a non-regulated market outside the exchange, where trade in non-standardised financial instruments is made directly between counterparties without the mediation of a securities exchange

Post-trade services – depository, clearing and settlement services

REIT – Real Estate Investments Trusts are special companies and funds investing in real estate; they manage a real estate portfolio to earn a fixed income from rent, and pay out most of the earnings to shareholders as dividend

RES – renewable energy sources

SPO – Secondary Public Offering, the process of raising capital through the issue/sale of shares by companies that have already had an IPO

Velocity - a measure of liquidity of trade in stocks equal to turnover in a period to average capitalisation at the beginning and at the end of the period

WFE – World Federation of Exchanges

List of Tables

Table 1	Core business of GPW Group companies as at the publication date of the report	8
Table 2	Consolidated statement of comprehensive income, earnings per share and EBITDA.....	13
Table 3	Selected figures from the consolidated statement of financial position	14
Table 4	Indicators	14
Table 5	Statement of comprehensive income, EBITDA, earnings per share	16
Table 6	Selected figures from the separate statement of financial position	17
Table 7	Indicators	17
Table 8	Selected statistics of GPW SA stock.....	20
Table 9	GPW shareholders as at 31 December 2023	21
Table 10	GPW free float – 31.12.2023	21
Table 11	GPW dividend from profits in 2010-2022.....	22
Table 12	Numbers of products listed in 2018-2023.....	48
Table 13	Number of data vendors, their subscribers and non-display users, as at 31 December 2023.....	57
Table 14	Share of local and remote GPW members in turnover in shares on the Main Market	69
Table 15	OFE assets as at 31 December 2023 and as at 31 December 2022, allocation by asset class	75
Table 16	Structure of PPK target-date funds.....	76
Table 17	PPK assets – institutions, as at 31 December 2023 and as at 31 December 2022 [PLN million].....	77
Table 18	KPMG Auditor’s fees for services provided to GPW Group (net) [PLN’000]	106
Table 19	GPW shareholders as at 31 December 2023	107
Table 20	Composition of the Exchange Supervisory Board as at 1 January 2023	113
Table 21	Composition of the Exchange Supervisory Board as at 31 December 2023	113
Table 22	Composition of the Exchange Supervisory Board as at the date of this Report	114
Table 23	Composition of the Strategy Committee of the Exchange Supervisory Board as at 31 December 2023	115
Table 24	Composition of the Regulation and Corporate Governance Committee of the Exchange Supervisory Board as at 31 December 2023	115
Table 25	Composition of the Remuneration and Nominations Committee of the Exchange Supervisory Board as at 31 December 2023	116
Table 26	Composition of the Strategy Committee of the Exchange Supervisory Board as at the date of publication of this Report	117
Table 27	Composition of the Regulation and Corporate Governance Committee of the Exchange Supervisory Board as at the date of publication of this Report.....	117
Table 28	Composition of the Remuneration and Nominations Committee of the Exchange Supervisory Board as at the date of publication of this Report	117
Table 29	Composition of the Audit Committee as at 31 December 2023.....	120
Table 30	Composition of the Audit Committee as at 31 December 2022 and as at the date of publication of this Report	121
Table 31	Composition of the Exchange Management Board as at 31 December 2023.....	123
Table 32	Composition of the Exchange Management Board as at the date of publication of this Report	123
Table 32	Remuneration and benefits of Members of the Exchange Management Board paid in 2023 [PLN thousand]	128
Table 33	Remuneration and benefits of Members of the Exchange Management Board paid in 2022 [PLN thousand]	128
Table 34	Benefits in kind of Exchange Management Board Members paid in 2023 [PLN]	129
Table 35	Benefits in kind of Exchange Management Board Members paid in 2022 [PLN]	129
Table 36	Members of the Exchange Management Board, as at 31 December 2023	130
Table 38	Members of the Exchange Management Board, as at the date of publication of this Report.....	130
Table 37	Remuneration of the GPW Supervisory Board members [PLN thousand]	131
Table 38	Key non-financial indicators in 2023.....	136
Table 39	Number of members of the Trade Union of Exchange Employees as at 31 December	146
Table 40	Number of employees of GPW and the GPW Group by type of employment, as at 31 December.....	147
Table 41	Number of employees of GPW and the GPW Group by type of employment, as at 31 December 2023.....	147
Table 42	Employee rotation in GPW SA and the GPW Group in 2022-2023	148
Table 43	Employee rotation in GPW SA and the GPW Group in 2023.....	148
Table 44	Number of persons employed under an employment agreement in GPW and the GPW Group by gender as at 31 December 2023	149
Table 45	Number of persons employed under a contract other than an employment agreement in GPW and the GPW Group by gender as at 31 December 2023.....	149
Table 46	Number of persons employed under an employment agreement in GPW and the GPW Group by age as at 31 December 2023	149
Table 47	Number of persons employed under a contract other than an employment agreement in GPW and the GPW Group by age as at 31 December 2023	149
Table 48	Diversity in supervisory bodies of GPW as at 31 December.....	150
Table 49	Diversity in supervisory bodies of the GPW Group (excluding AMX Group) as at 31 December	150

Table 50	Number of persons with disabilities employed under an employment agreement in GPW and the GPW Group as at 31 December 2023	150
Table 51	Number GPW SA and GPW Group employees employed under an employment agreement by education as at 31 December 2023	150
Table 52	GPW's annual remuneration index in 2023	151
Table 53	Gender pay gap ratio in GPW in 2023 as at 31 December 2023	151
Table 54	Gender pay gap ratio in TGE in 2023 as at 31 December 2023	151
Table 55	Gender pay gap ratio in IRGiT in 2023 as at 31 December 2023	152
Table 55	Average number of hours of training received in 2023 (data refers to clock hours) per employee (in total) employed under an employment agreement in the GPW Group and by gender	154
Table 56	Average number of hours of training in 2023 per employee employed under an employment agreement in the GPW Group, by category of employment.....	154
Table 57	Average number of hours of training received in 2023 (data refers to clock hours) per employee employed under an employment agreement in the GPW Group on ESG factors	154
Table 58	Greenhouse gas emissions associated with GPW Group operations.....	163
Table 59	Climate risks	163
Table 60	Climate opportunities	165
Table 61	GPW Group's business car fleet as at 31 December	167
Table 62	Fuel consumption of GPW Group in 2023 vs. 2022	168
Table 63	Energy consumption of GPW Group in 2023 vs. 2022	168
Table 64	Direct greenhouse gas emissions (Scope 1) of GPW Group in 2023 vs. 2022	168
Table 65	Indirect greenhouse gas emissions (Scope 2) of GPW Group in 2023 vs. 2022.....	169
Table 66	Indirect greenhouse gas emissions (Scope 3)* of GPW Group in 2023	169
Table 67	GPW Group carbon footprint in 2023 vs. 2022	170
Table 68	GPW Group greenhouse gas emissions in 2023 vs. 2022.....	170
Table 69	GPW Group water consumption in 2023 vs. 2022.....	170
Table 70	GPW Group other commodity consumption in 2023 vs. 2022.....	170
Table 71	GPW Group waste	171
Table 73	Consolidated statement of comprehensive income, earnings per share, and EBITDA.....	173
Table 74	Selected consolidated financial indicators.....	174
Table 75	Revenue mix on the financial market.....	176
Table 76	Market in equities and equity-related instruments.....	176
Table 77	Derivatives market.....	177
Table 78	Debt market.....	177
Table 79	Listing revenue on the Main Market.....	178
Table 80	Listing revenue on New Connect	178
Table 81	Listing revenue on Catalyst	179
Table 82	Information services	179
Table 83	Value and structure of revenue on the commodity market.....	180
Table 84	Trading on the commodity market	180
Table 85	Register of Certificates of Origin	181
Table 86	GPW Group FTEs.....	182
Table 87	GPW's share of profit of entities measured by the equity method	184
Table 88	Consolidated statement of cash flows	185
Table 89	Separate statement of comprehensive income.....	188
Table 90	Selected separate financials	188

List of Charts

Chart 1	Business lines and product offer of the GPW Group	7
Chart 2	GPW Group, associates and joint ventures as at the publication date of the report	9
Chart 3	Framework of GPW Group strategy for 2023-2027	32
Chart 4	Financial instruments in trading on the GPW Group financial markets	45
Chart 5	GPW Group's business lines and product offering	54
Chart 5	Trading on TGE commodity markets.....	58
Chart 6	GPW risk management process.....	85
Chart 8	Organisational chart of GPW as at 1 January 2023	124
Chart 9	Organisational chart of GPW as at 31 December 2023	125
Chart 10	Organisational chart of GPW as at the date of publication of this Report	126
Chart 11	Business model	135
Chart 12	GPW Group's ESG management framework.....	138

List of Figures

Figure 1	Capitalisation of CEE exchanges (stock markets) at 2023 YE (EUR billion).....	6
Figure 2	Number of domestic companies listed on European exchanges at 2023 YE	6

Figure 3	GPW stock price since new listing on GPW (PLN)	19
Figure 4	GPW stock price in 2023 v. mWIG40 and WIG (rebased: 31.12.2022 = 100%)	19
Figure 5	GPW shareholders as at 31 December 2023	21
Figure 6	Value and number of IPOs in Europe in 2021-2023	25
Figure 7	Number of securities accounts and omnibus accounts operated by KDPW in 2011-2023.....	26
Figure 8	EOB equity turnover on European FESE exchanges and alternative trading venues [EUR billion]	27
Figure 9	Number of domestic companies listed on European exchanges at 2023 YE	27
Figure 10	Capitalisation of domestic companies on European exchanges at 2023 YE [EUR billion]	28
Figure 11	Value of turnover in shares on the electronic order book on European exchanges in 2023 [EUR billion]	28
Figure 12	Change in the value of turnover in shares on the electronic order book on European exchanges in 2023 vs. 2022 [EUR]	29
Figure 13	Velocity on European exchanges in 2023	29
Figure 14	Volume of trade in electricity on European exchanges in 2023 (day-ahead markets) [TWh].....	30
Figure 15	Volume of trade in electricity on European exchanges in 2023 (forward markets) [TWh].....	31
Figure 16	Volume of trade in gas in European hubs (spot markets) in 2023 [TWh].....	31
Figure 17	Volume of trade in gas in European hubs (forward markets) in 2023 [TWh]	31
Figure 18	Value of turnover in shares on the Main Market [PLN billion]	46
Figure 19	Value of turnover in shares on NewConnect [PLN billion]	46
Figure 20	Capitalisation of domestic and foreign companies [PLN billion].....	47
Figure 21	Turnover in shares on the Main Market [PLN billion] and velocity [%].....	47
Figure 22	Annual volatility of WIG and WIG20	48
Figure 23	Structure of volume of turnover in derivatives in 2023 by category of instrument	49
Figure 24	Volume of turnover in futures, EOB and block trades [million instruments]	49
Figure 25	Volume of turnover in options, EOB and block trades [thousand instruments]	49
Figure 26	Structure of turnover on Catalyst (EOB and block trades) in 2023 by instrument	50
Figure 27	Value of turnover on Catalyst, EOB and block trades [PLN million]	50
Figure 28	Value of turnover on Treasury BondSpot Poland [PLN billion]	51
Figure 29	Number of domestic and foreign companies – Main Market	52
Figure 30	Number of domestic and foreign companies – NewConnect	52
Figure 31	Performance of sector indices in 2023 [%].....	52
Figure 32	Capitalisation of domestic and foreign companies – Main Market and NewConnect [PLN billion]	53
Figure 33	Value of IPOs and SPOs – Main Market and NewConnect [PLN billion].....	53
Figure 34	GPW Group data vendors [#]	55
Figure 35	GPW Group data vendors by country [#]	55
Figure 36	GPW Group data subscribers [#]	55
Figure 37	Non-display users of GPW Group data [#].....	56
Figure 38	Non-display users of GPW Group data by country [#].....	56
Figure 39	Users of added-value services and benchmarks [#]	57
Figure 40	Users of added-value services and benchmarks by country [#]	57
Figure 41	Volume of turnover in electricity on the Day-Ahead and Intra-Day Market [TWh].....	59
Figure 42	Volume of turnover on the forward electricity market [TWh]	59
Figure 43	Volume of turnover in natural gas on the Day-Ahead and Intra-Day Market [TWh].....	60
Figure 44	Volume of turnover on the forward gas market [TWh]	60
Figure 45	Volume of turnover in property rights to certificates of origin [TWh].....	61
Figure 46	Volume of issued RES certificates of origin [TWh]	62
Figure 47	Volume of cancelled RES certificates of origin [TWh]	63
Figure 48	Number of participants of the TGE Register of Certificates of Origin.....	63
Figure 49	Number of TGE members in 2015-2023	64
Figure 50	Turnover volume of guarantees of origin [GWh]	65
Figure 51	Volume of redeemed guarantees of origin [GWh].....	65
Figure 52	Volume of issued guarantees of origin [TWh]	66
Figure 53	Number of members of the Register of Guarantees of Origin	66
Figure 54	Investors' share of trading in shares on the GPW Main Market [%]	69
Figure 55	Investors' share of trading in shares on NewConnect [%]	70
Figure 56	Investors' share of trading in futures [%]	70
Figure 58	PPK total assets [PLN million]	77
Figure 58	Structure and value of consolidated sales revenue [PLN million]	175
Figure 59	Structure and value of consolidated operating expenses [PLN million]	182
Figure 60	Structure and value of separate sales revenue	189
Figure 61	Structure and value of separate operating expenses.....	190

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