

A nighttime photograph of the Warsaw skyline, featuring the illuminated Saxon Palace and other skyscrapers. The image is framed by large, overlapping blue geometric shapes that create a dynamic, modern aesthetic.

2019

MANAGEMENT BOARD REPORT ON THE ACTIVITY OF
THE PARENT ENTITY AND THE GROUP:
GIEŁDA PAPIERÓW WARTOŚCIOWYCH
W WARSZAWIE S.A.

FOR THE YEAR ENDED 31 DECEMBER 2019

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LETTER FROM THE PRESIDENT OF THE GPW MANAGEMENT BOARD



Dear Sir or Madam,

Dear Shareholder or Investor,

I present the Report of the Management Board of the Exchange from the activities of the Warsaw Stock Exchange Group (GPW Group) and the separate and consolidated financial statements for 2019.

Let me start with the success of our subsidiary, the Polish Power Exchange (Towarowa Gielda Energii, TGE), which had a very good year in 2019. The volume of trade in electricity was record-high and stood at 228.9 TWh, representing an increase of 1.3 percent year on year. The total volume of trade in gas was record-high at 146.1 TWh (up by 2.0 percent year on year).

The success is especially important given that 2019 was not an easy year for the GPW Group on the financial market, among others due to low company valuations and the sell-off of shares by pension funds. Exchanges reported falling trade. The decrease reported by GPW was the least acute in Europe at 7.1 percent year on year (EUR 44.9 billion) compared to -12 percent on CEESEG Vienna, -12.6 percent on Deutsche Boerse, -16.7 on LSE (according to FESE data).

Our fundamentals remain strong. We generated strong results for another year in a row. The consolidated net profit was PLN 119.3 million as at 31 December 2019 v. PLN 183.7 million in 2018, and the sales revenue was PLN 336.1 million (down 3.1 percent year on year). The net operating profit was PLN 156.3 million in 2019 vs. PLN 170.2 million in 2018. EBITDA stood at PLN 193.2 million, a decrease of 4.3 percent year on year. The revenue from information services grew steadily (by 7 percent year on year) and contributed 14.3 percent of the total revenue. Further single-digit annual growth in revenue will be possible

thanks to expansion of the customer base and revenue from index and benchmark licences. I should add that demand for GPW and GPW Benchmark data is mainly generated by foreign customers, which boosts the revenue potential of such products.

In 2019, we paid PLN 133.5 million in dividends from the 2018 consolidated net profit (adjusted for the share of profit of associates). The total dividends paid out in the past nine years have reached close to PLN 794 million. The GPW Management Board has decided that the dividend will increase by no less than PLN 0.1 per share annually from 2019 to 2022, coupled with consistent implementation of strategic initiatives.

We are almost half-way through the implementation of the **strategy #GPW2022**. This is a good time to take stock of where we are as a group and where we are headed. We have made great strides since the publication of the updated strategy, as demonstrated by 22 active strategic projects. In 2019, we raised close to PLN 40 million from the National Centre for Research and Development (NCBR) for the implementation of three initiatives (Agricultural Market, GPW Data, Trading System). We launched some of the published initiatives in 2019.

We are focusing on business diversification of the GPW Group by entering new business and product segments. We want to make sure that the strategic projects create value for our clients and shareholders in the coming years.

First, new technology. We have taken steps to address and set global trends. We believe that the exchange equals innovation thanks to technology implementations. Commercialisation of new technology for the capital market is a responsibility of GPW Tech (TCA Tools – innovative tools for transaction cost identification and analysis). We are developing GPW's proprietary trading system tailored to the needs of smaller and medium-sized exchanges in full compliance with global quality standards. For that purpose, we have established a research and development centre in Łódź.

We are developing GPW Data, a data system based on artificial intelligence, which will facilitate companies' reporting. The system is expected to roll out in the latter half of 2021.

We have opened a business incubator dedicated to start-ups. On the one hand, we leverage the potential and experience of GPW Group companies to offer mentoring to innovators; on the other hand, we help them raise capital for project development. Business incubation is supported by the Idea Global Accelerator. Innovators can get co-financing up to PLN 200 thousand as well as financial support for legal and expert consulting. We have completed the first acceleration round and initiated next rounds in support of innovations including big data, AI, and robotisation.

Our initiatives focusing on technology development and alignment with EU regulatory standards lay the foundation for further improvement of revenue from information services.

Second, new business lines. This theme includes many projects. We are nearing completion in preparation for the launch of a securities lending platform, GPW Private Market, and a pilot electronic Waste Platform pending legal amendments. GPW Ventures has established a company operating as a private/passive investor in venture capital funds, a financing vehicle which will enable market development, add innovation and bring more IPOs to GPW.

In 2019, we launched the GPW Partner Firm Programme – Crowdfunding Programme which attracts investors to start-ups, enabling them to buy shares and then divest on NewConnect. The first company under the programme was newly listed on NewConnect in January. Seven companies were newly listed on the Main Market in 2019 (including five transfers from NewConnect) and 15 companies were newly listed on NewConnect, including mainly game developers which have become particularly successful on NewConnect in the past years.

I cannot fail to mention the pilot food exchange project which opened in Q1 2020 with wheat as the first traded commodity. We are planning to introduce more food and agricultural products, followed by financial products on such commodities. The agricultural market project supports the development of Poland's agriculture.

Third, new investment products. *This includes a range of initiatives. In 2019, we attracted two foreign issuers of structured products, introduced three FTEs under Polish law, and launched new index categories: four macrosector indices which are the underlying of futures, including the most popular index WIG-Games. We started to calculate indices of new technology stocks (WIGtech) and ESG stocks (WIG-ESG). In partnership with six Central European exchanges, we launched CEEplus, an index which covers the most liquid stocks on those exchanges. Late in the year, with a view to alignment with new regulatory requirements, GPW Benchmark took over as the competence centre responsible for management of exchange indices. GPW Benchmark applied for authorisation as the administrator of the reference rates WIBID and WIBOR.*

The launch of WIG-ESG is one more step drawing the attention of investors to non-financial factors: environmental, social, governance. A new paradigm is emerging in capital market investments. Companies listed on the capital market which fail to follow the trend risk being marginalised. GPW wants to embrace the change as an active participant of the global trend by taking measures necessary to help issuers face the new challenges and by offering new ESG investment products.

The beginning of 2020 brought many challenges in view of the global COVID-10 pandemic. We are facing those challenges in daily work. Both Exchange Members and the Exchange have passed the test under these new circumstances. The Exchange has completed additional testing to confirm its business continuity and safety of trading under the remote work regime. Thanks to the determination of the GPW Group staff and the participants of our markets, investors enjoy uninterrupted access to trading.

I wish to thank all employees of our Group for their commitment, sense of responsibility, and engagement under the new circumstances of our work. I want to assure everyone that we will make best efforts in 2020 to continue the development of our Group in line with the defined directions. I hope that despite the new difficult challenges, we will continue to grow and meet your expectations. I am optimistic because I know that the GPW Group will creatively turn the experience of this difficult time into a future success.

I wish to thank the GPW shareholders, investors, issuers, the GPW Management Board and Supervisory Board, and all employees of the GPW Group for their efforts in 2019. Have every success in 2020!

Yours sincerely,

Marek Dietl, President of the Management Board of GPW



LETTER FROM THE CHAIRMAN OF THE EXCHANGE SUPERVISORY BOARD



Dear Sir or Madam,

The year 2019 opened with many a challenge for participants of Poland's capital market including the Warsaw Stock Exchange (GPW), aware as they were of the difficult market environment. The key objectives of GPW in the past year included the implementation of the leading strategic initiatives. The Exchange Supervisory Board, which I have the honour to chair, was focusing on active support and oversight of the efforts of the Management Board.

The milestones of 2019 included a review of the financial targets under the strategy #GPW2022 completed by the GPW Management Board in late March. According to the guidance, the GPW Group will generate revenue at PLN 470 million and EBITDA of PLN 250 million in 2022. The Exchange Supervisory Board issued a positive opinion regarding the payment of dividend from the 2018 profit at PLN 3.18 per share. The Management Board decided that the dividend from the profits of 2020-2022 should increase by no less than PLN 0.1 per share annually. The dividend payout ratio was confirmed above 60% of the consolidated net profit of the GPW Group for the financial year attributable to the shareholders of GPW adjusted for the share of profit of associates.

According to the numbers from the last three years (excluding dual-listed companies), although the number of issuers on the Main Market who pay dividends has decreased (184 in 2017, 176 in 2018, 153 in 2019), the total amount of dividends paid has risen (PLN 10,484.25 million, PLN 17,129.70 million, and 18,876.06 million, respectively). What drives the value of stock portfolios is not only the change in stock prices but also the benefits provided to shareholders, including in particular dividends. Over the past

15 years, WIG20 gained 10 percent and WIG20TR gained 100 percent (including dividend income). The ten-fold difference between these indices is owed to dividend payments. Dividends provide returns to investors, support strong shareholder relations, and underpin a culture of long-term investing, which is particularly relevant in the low rate environment. Dividends have generated returns over the years. I believe that dividend-paying issuers should be an asset of first choice for long-term investors.

GPW sets the example for other issuers as a stable, forward-looking company which regularly shares its earnings with the shareholders and follows a dividend policy which has been communicated to the shareholders and sets clear dividend targets in the horizon of the strategy #GPW2022. The most recent dividend paid was one of the highest ever in the Company's history. The implementation cost of strategic initiatives should not be shouldered by GPW shareholders. The Company will continue to share its profits with the shareholders in accordance with the dividend policy. That profit-sharing approach seems to have been acknowledged by the shareholders, as demonstrated by GPW's stock price, which gained 7.2% year on year; the Total Shareholder Return (TSR) was +15.9% and GPW's capitalisation reached approximately PLN 1.6 billion at the year's end. In line with its dividend policy, GPW expects to pay dividends exceeding the average dividend paid by global exchange operators (6.1-6.3% vs. average 3.2%).

From the perspective of shareholders, the company's outlook is equally important. The GPW Management Board focuses on business diversification through strategic initiatives. One of the key goals is to turn the GPW Group into the region's technology leader. That goal is materialising with the decision to develop a proprietary trading platform and the plans for GPW Tech, which will establish a stand-alone technology company specialising in IT solutions for the capital market. Trading venues in this day and age cannot expect to grow without technology. GPW not only wants to be a part of the technological revolution on the global capital markets; we want to set the trend and develop unique solutions which could be implemented in the countries of our region and beyond.

Technology is not only a key part of #GPW2022 but also a pillar of the government's Capital Market Development Strategy. GPW took active part in consultations concerning the strategy, which is bound to provide tangible benefits for the entire capital market. GPW will actively participate in the implementation of the strategy, in particular by promoting corporate governance principles

In 2019, the Exchange Supervisory Board and the Audit Committee focused in large part on broadly understood safety measures, including the functioning of the Company's internal control system. The Audit Committee is responsible for ensuring that the system operates as required. We share our recommendations and expectations regarding the system. Notwithstanding the many new initiatives, we never forget about GPW's core business and make sure that it is fully professional in keeping with the highest standards.



The Exchange Supervisory Board remains active and looks beyond the minimum requirements set by law. The Exchange Supervisory Board held eight meetings in 2019. The Audit Committee held 12 meetings; the Regulation and Corporate Governance Committee held nine meetings; the Strategy Committee held seven meetings; the Remuneration and Nominations Committee held six meetings. The Exchange Supervisory Board issued many key decisions at meetings and additionally passed 30 resolutions by circular procedure in 2019.

We need to keep up to date with the current developments in the company, which is why we listen not only to the opinions of the Management Board but also those of all other managers. In 2019, we initiated a series of meetings with GPW managers to give the Exchange Supervisory Board a broader picture of the Company's activities.

We are closely watching all of GPW's initiatives, striving to mitigate inherent risks. It is our long-term objective to create value for shareholders through the Company's growth, not least driven by new business segments.

Every few years, the global financial markets face a crisis. We are facing one right now. This time, the coronavirus pandemic has stirred panic, precipitating a sharp decline on the exchanges. History shows that the capital markets are usually capable of facing a crisis, including GPW, which is a robust institution with strong fundamentals. I am certain that we will come out of the crisis unscathed.

Last but not least, I wish to thank the GPW Management Board, Employees and the Members of the Exchange Supervisory Board for their committed efforts throughout the year. At the same time, I would like to wish the next Supervisory Board success in the next term. We all realise that we have had two difficult years and are now looking to pursue ambitious but realistic goals. I am positive that they will boost the development of the Warsaw Stock Exchange, which is what I wish the GPW Management Board, employees, and shareholders.

Yours sincerely,

Jakub Modrzejewski
Chairman of the Exchange Supervisory Board



1. FOR THE SHAREHOLDERS

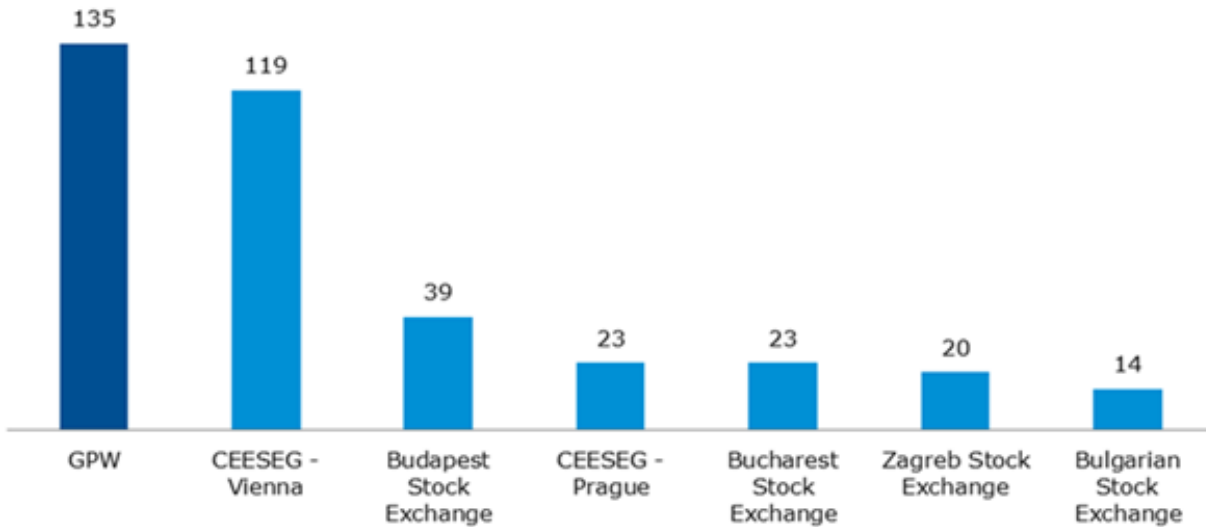
1.1. BRIEF DESCRIPTION OF THE GPW GROUP

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 ("GPW"), 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 135 billion. It is one of the biggest markets in Europe and lists 824 companies, including 770 domestic companies and 54 foreign companies. The Warsaw Stock Exchange focuses on development and pursues the Strategy #GPW2022 by expanding its product offer and undertaking innovative projects including new technologies. GPW has become an attractive platform for the gaming industry. With 36 gaming companies listed on the GPW markets at the end of 2019, GPW ranked #1 in Europe and #2 globally.

GPW is the heart of the Polish capital market and a leading participant in international projects. For more than 28 years now, we have provided growth capital to companies, created and developed growth initiatives, supported exposure to international markets, and set the direction of development.

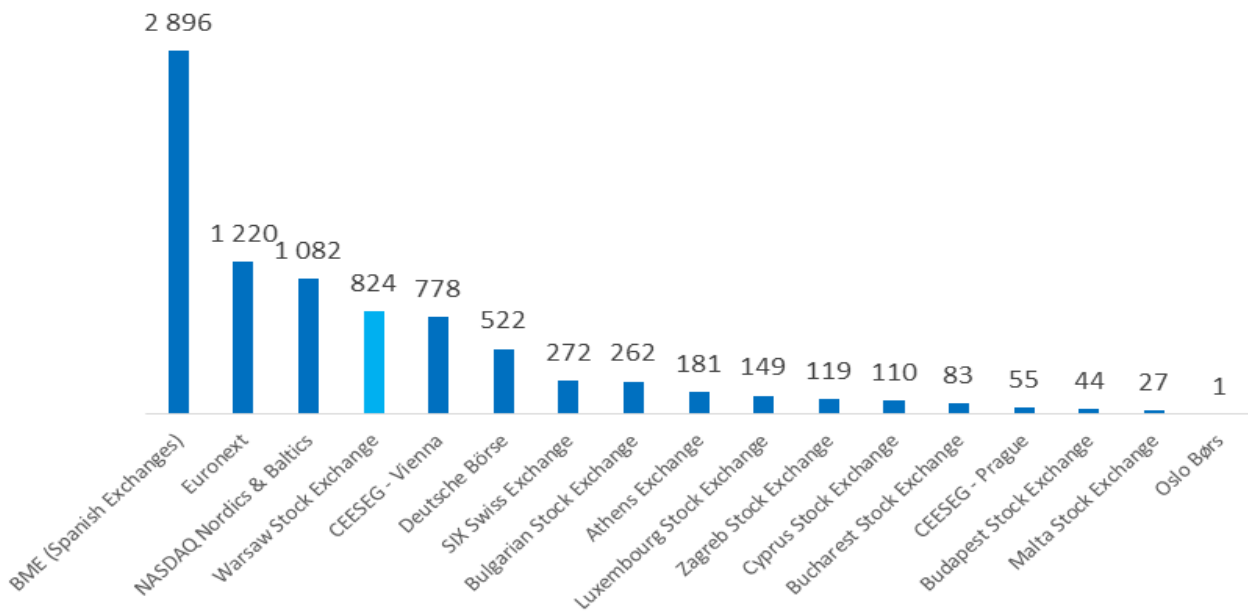
Figure 1 Capitalisation of CEE exchanges (stock markets) at 2019 YE [EUR billion]



Source: FESE

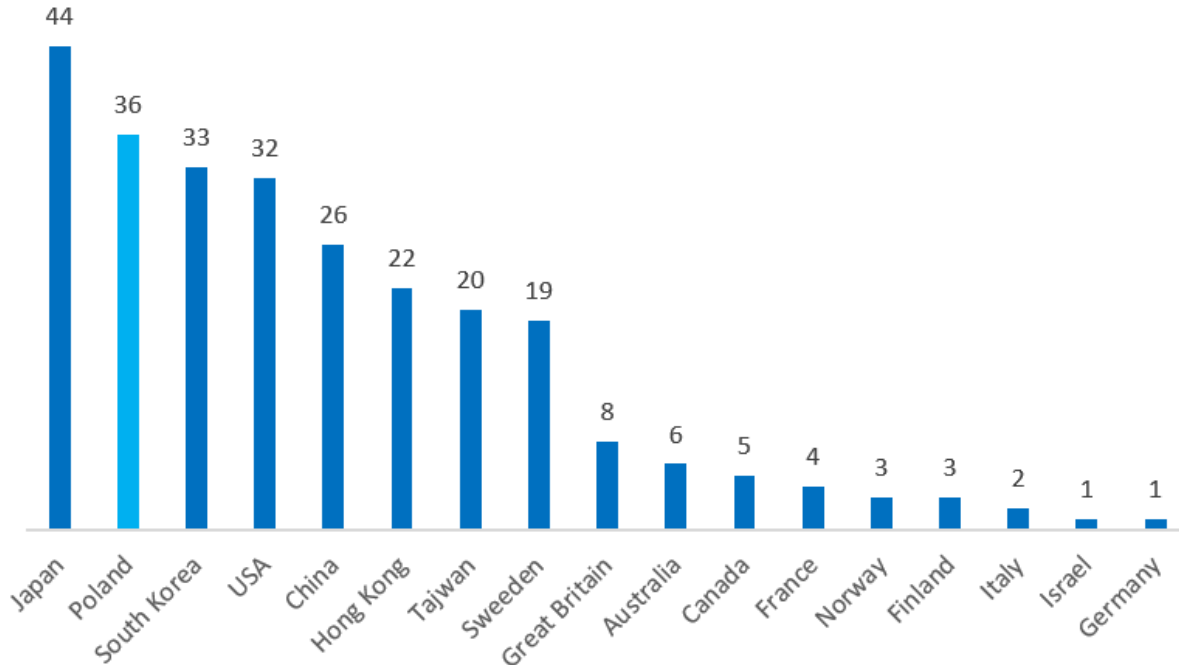


Figure 2 Number of domestic and foreign companies listed on European exchanges at 2019 YE



Source: FESE

Figure 3 Number of gaming companies listed at 2019 YE



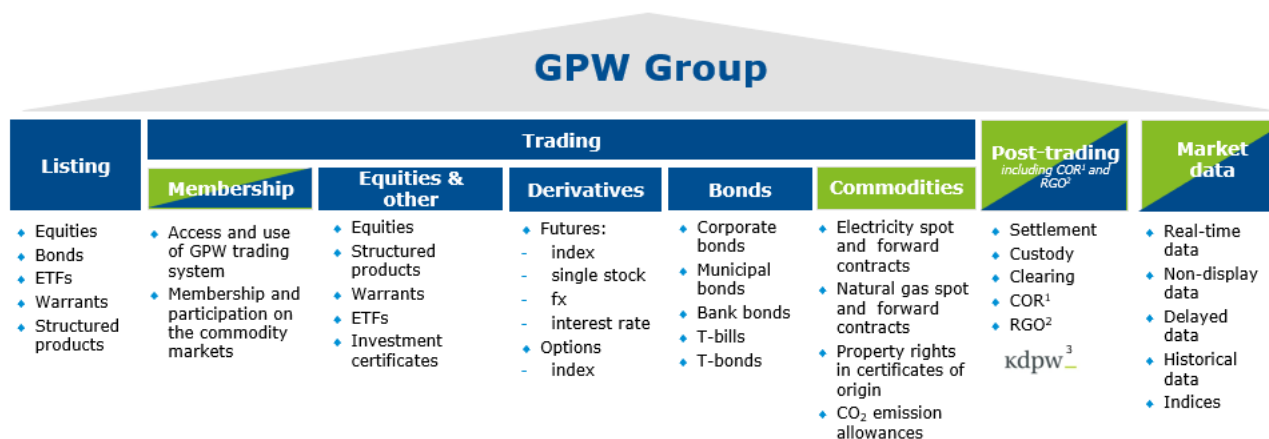
The TGE Group includes three companies: Towarowa Giełda Energii, Infoengine, and Izba Rozliczeniowa Giełd Towarowych. Our companies provide a comprehensive range of services to existing and prospective TGE Members. A member of the GPW Group since February 2012, TGE organises trade on one of the fastest developing capital markets in Europe. The commodity market generates more than 40% of revenue of the GPW Group. This is possible thanks to the broad range of services offered by TGE and its subsidiaries, which operate as a one-stop-shop for existing Members and offer transparency to



interested prospective customers. TGE also operates a Register of Certificates of Origin and a Register of Guarantees of Origin. Through the subsidiary Izba Rozliczeniowa Giełd Towarowych (IRGiT), TGE clears transactions on the TGE commodity market. TGE's product offer is similar to the product range of the most advanced commodity exchanges in EU Member States. The volume of trade in electricity and gas makes TGE the biggest exchange in the region and a major European market. Considering that TGE products are offered only for the Polish market while many European exchanges pool trade from many national markets on a shared platform, TGE's volume of trade confirms its strong position.

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.

Chart 1 Business lines and product offer of the GPW Group



¹ Register of Certificates of Origin

² Register of Guarantees of Origin

³ Associate (33.33%); the KDPW Group offers post-trade services on the financial market

The Warsaw Stock Exchange Group was comprised of the parent entity and 7 consolidated subsidiaries as at 31 December 2019. GPW holds a stake in 4 associates.

Table 1 Core business of GPW Group companies

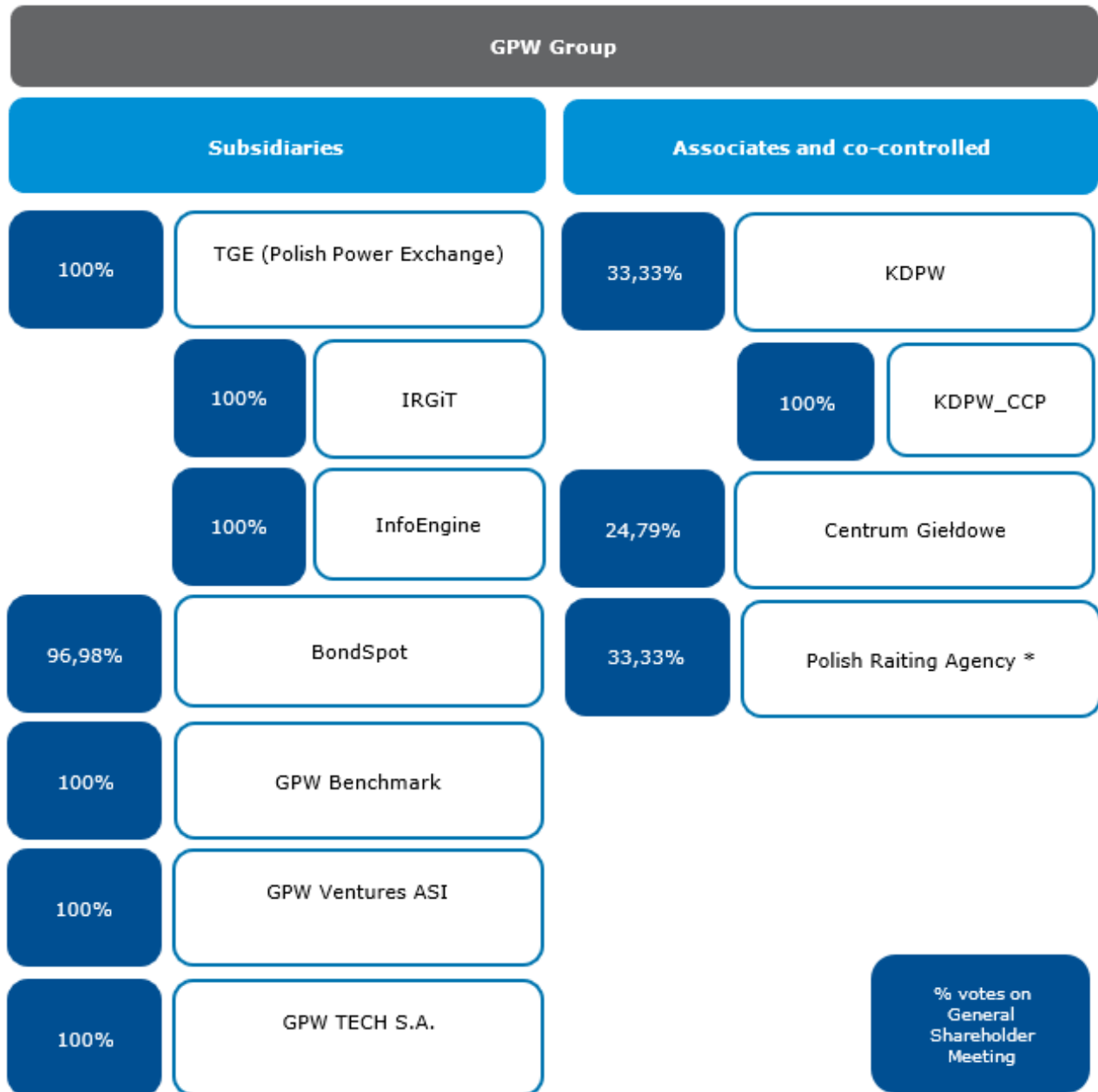
Subsidiary	Business profile
BondSpot S.A.	Operates trade in Treasury and non-Treasury debt securities. Treasury BondSpot Poland, operated by BondSpot, is the electronic wholesale market in Treasury securities authorised by the Ministry of Finance and a part of the Treasury Securities Dealers system in Poland.
Towarowa Giełda Energii S.A. (TGE)	The only licensed commodity exchange in Poland, operates trade in electricity, natural gas, emission allowances, property rights in certificates of origin of electricity, certificates of origin of biogas, energy efficiency certificates; operates the Register of Certificates of Origin of electricity generated from renewable energy sources, high-efficiency cogeneration and agricultural biogas as well as energy efficiency certificates; operates the Register of Guarantees of Origin; operates the Financial Instruments Market.
Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT, subsidiary of TGE)	Provides clearing services 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 to electricity market participants.
GPW Benchmark S.A.	Licensed administrator of benchmarks on regulated markets (WIG Exchange Index Family, CEEplus) and non-interest-rate benchmarks (TBSP.Index); provides the WIBOR and WIBID Reference Rates – WIBOR is a key benchmark of systemic importance on the Polish money market, used in valuations of most bank loans, derivatives and debt in PLN.
GPW Ventures ASI S.A.	The core business of the Company is to pool assets of many investors in order to invest such assets in the interest of the investors according to an investment policy, and to manage an alternative investment company.



GPW TECH S.A.

Develops, maintains and commercialises IT solutions supporting the financial market, in particular the capital market.

Chart 2 GPW Group and associates and joint venture company

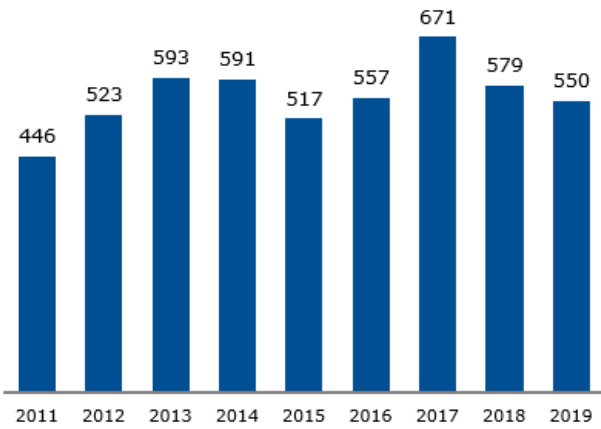


*Polska Agencja Ratingowa S.A. is a joint venture company

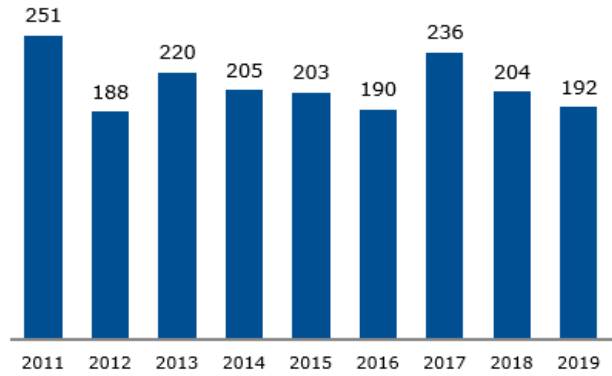


1.2. SELECTED MARKET DATA

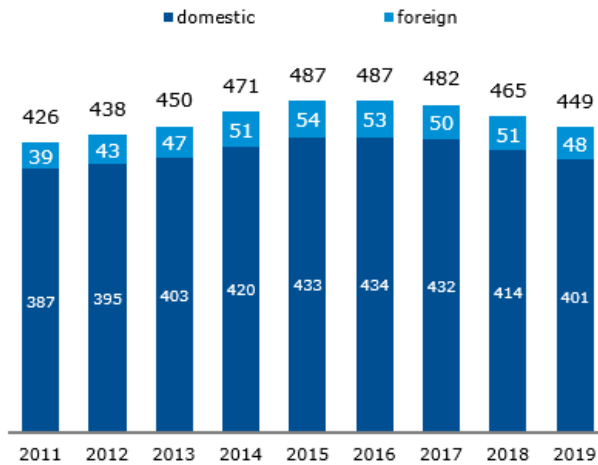
Capitalisation of domestic companies
- Main Market (PLN bn)



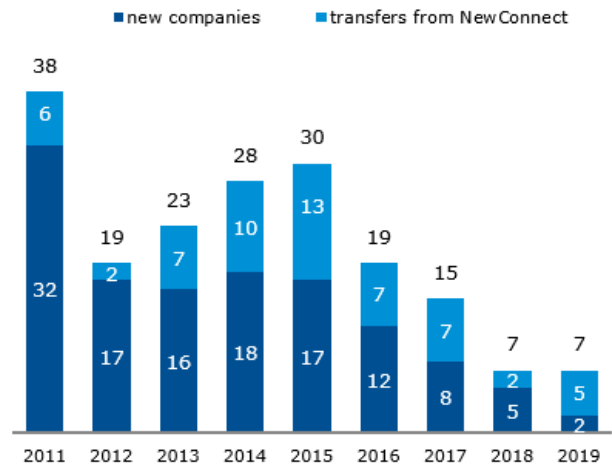
Equity turnover, Electronic Order Book
- Main Market (PLN bn)



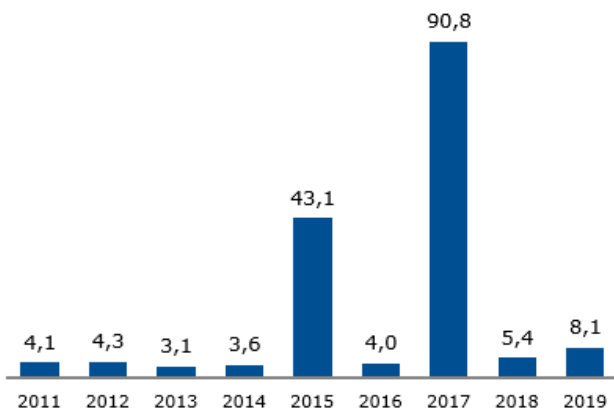
Number of companies - Main Market



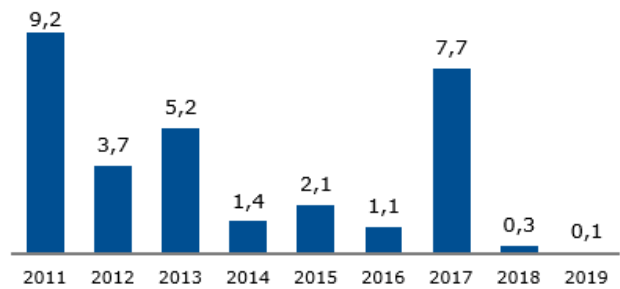
Number of new listings - Main Market



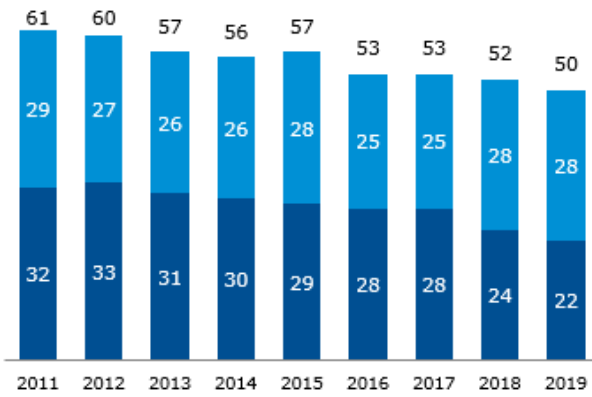
Value of secondary offerings
- Main Market and NewConnect (PLN bn)



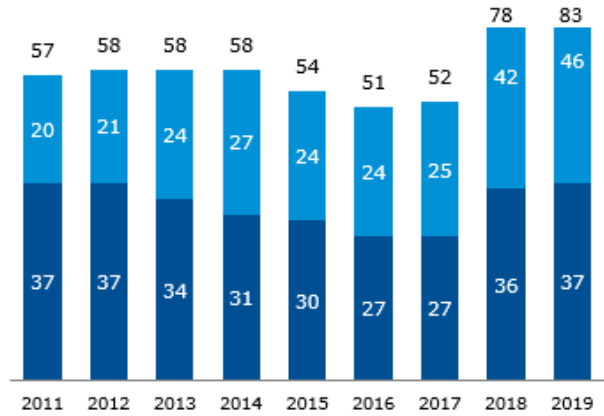
Value of primary offerings
- Main Market and NewConnect (PLN bn)



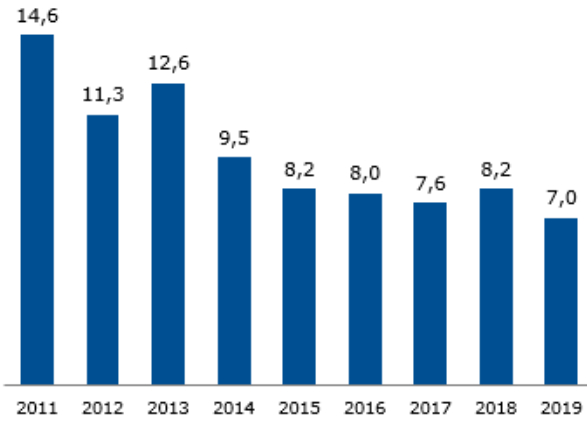
Number of Exchange Members
 ■ local ■ remote



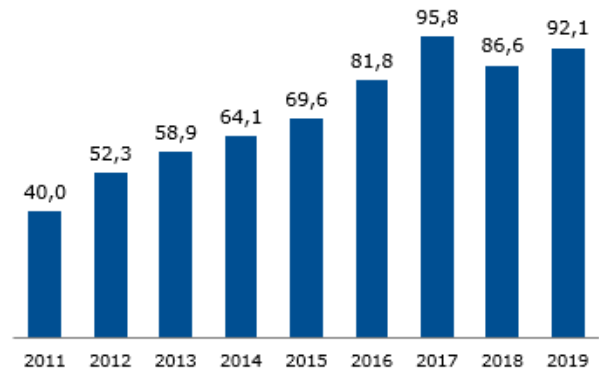
Number of data vendors
 ■ local ■ foreign



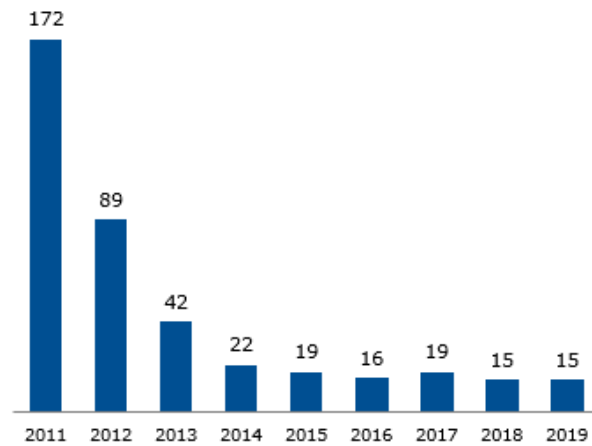
Turnover volume - futures contracts
 (m contracts)



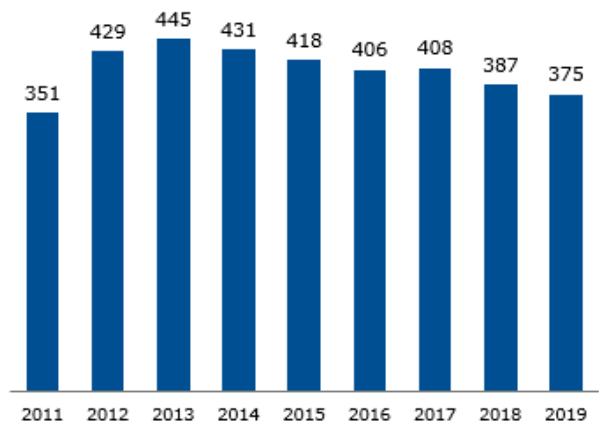
Catalyst - value of listed non-Treasury
 bond issues (PLN bn)



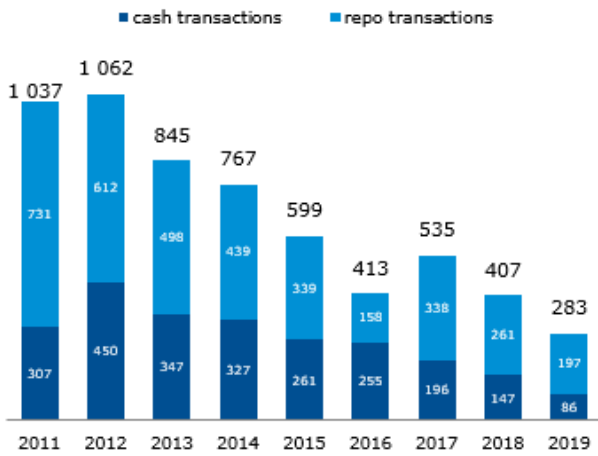
Number of new listings - NewConnect



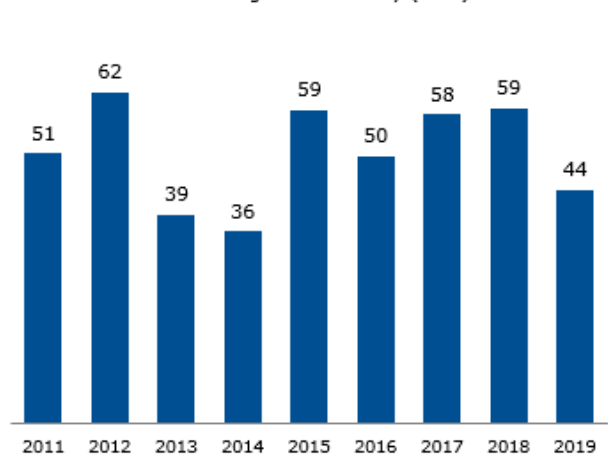
Number of companies - NewConnect



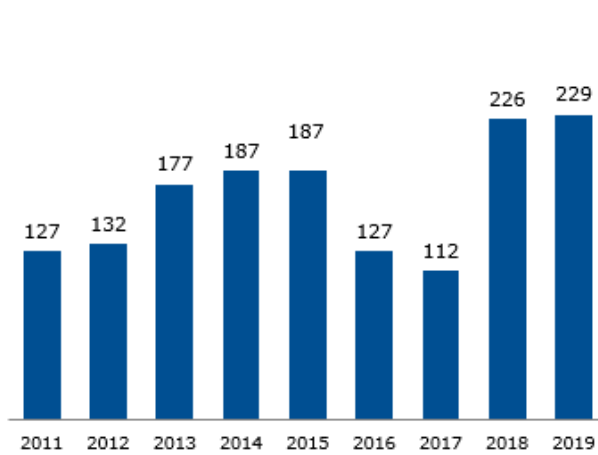
Treasury debt securities turnover value - TBSP (PLN bn)



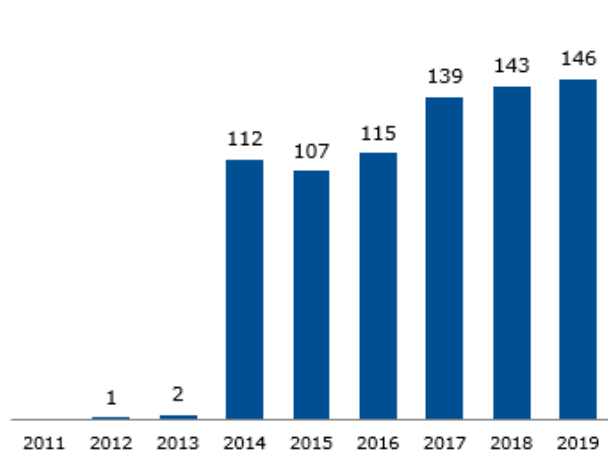
Turnover volume - property rights in certificates of origin of electricity (TWh)



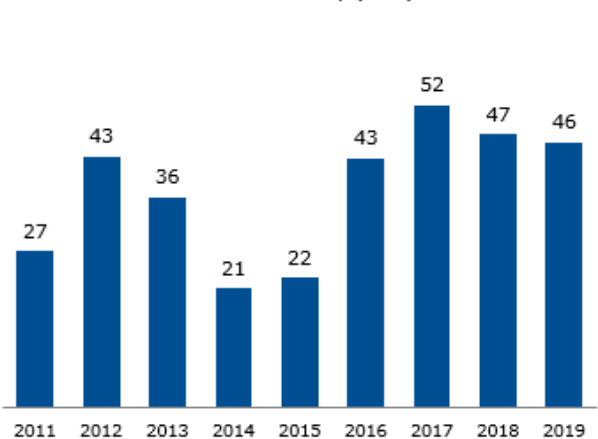
Turnover volume - electricity (spot + forward; TWh)



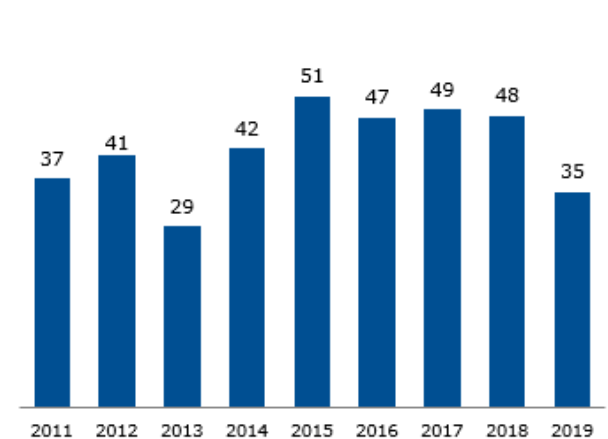
Turnover volume - gas (spot + forward; TWh)



Volume of redeemed certificates of origin of electricity (TWh)



Volume of issued certificates of origin of electricity (TWh)



⁴ Trade in gas opened in December 2012.



1.3. SELECTED CONSOLIDATED FINANCIAL DATA

Table 2 Selected data on the statement of comprehensive income, consolidated, under IFRS, audited

	12-month period ended 31 December			
	2019	2018	2019	2018
	PLN'000		EUR'000 ^[1]	
Sales revenue	336,081	346,781	78,195	81,360
Financial market	184,990	191,852	43,041	45,011
Trading	117,455	124,280	27,328	29,158
Listing	19,629	22,805	4,567	5,350
Information services and revenue from calculation of reference rates	47,906	44,767	11,146	10,503
Commodity market	149,940	153,555	34,886	36,026
Trading	75,167	78,547	17,489	18,428
Register of certificates of origin	27,815	28,696	6,472	6,733
Clearing	46,270	45,862	10,765	10,760
Information services	688	450	160	106
Other revenue	1,151	1,374	268	322
Operating expenses	181,149	173,812	42,147	40,779
Other income	6,616	2,703	1,539	634
Gains on reversed impairment/(losses) on impairment of receivables	(1,901)	(3,153)	(442)	(740)
Other expenses	3,345	2,314	778	543
Operating profit	156,302	170,205	36,366	39,933
Financial income	8,911	8,527	2,073	2,001
Financial expenses	25,549	9,021	5,944	2,116
Gains on investment/(losses) on impairment of investment in other entities	(1,089)	45,771	(253)	10,739
Share of profit/(losses) of entities measured by equity method	11,262	10,553	2,620	2,476
Profit before income tax	149,837	226,035	34,862	53,031
Income tax	30,503	42,334	7,097	9,932
Profit for the period	119,334	183,701	27,765	43,099
Basic / Diluted earnings per share ^[2] (PLN, EUR)	2.84	4.38	0.66	1.03
EBITDA^[3]	193,220	201,977	44,956	47,387

^[1] Based on the 12M average EUR/PLN exchange rate published by the National Bank of Poland (1 EUR = 4.2980 PLN in 2019 and 1 EUR = 4.2623 PLN in 2018)

^[2] Based on total net profit

^[3] EBITDA = operating profit + depreciation and amortisation



Table 3 Selected data on the statement of financial position, consolidated, under IFRS, audited

	As at 31 December			
	2019		2018	
	PLN'000		EUR'000 ^[1]	
Non-current assets	590,114	580,501	138,573	135,000
Property, plant and equipment	101,968	108,158	23,945	25,153
Right-to-use assets	22,725	-	5,336	-
Intangible assets	246,649	254,564	57,919	59,201
Investment in entities measured by equity method	210,327	207,267	49,390	48,202
Investment in non-consolidated subsidiaries	4,000	-	939	-
Subleasing receivables	523	-	123	-
Deferred tax assets	464	666	109	155
Financial assets measured at fair value through other comprehensive income	120	101	28	23
Prepayments	2,043	5,523	480	1,284
Other non-current assets	1,295	4,222	304	982
Current assets	666,680	636,942	156,553	148,126
Inventories	47	64	11	15
Corporate income tax receivable	4,132	-	970	-
Trade and other receivables	45,232	69,437	10,622	16,148
Subleasing receivables	190	-	45	-
Contract assets	2,415	1,215	567	283
Financial assets measured at amortised cost	328,998	377,502	77,257	87,791
Other current assets	4,382	-	1,029	-
Cash and cash equivalents	281,284	188,724	66,052	43,889
TOTAL ASSETS	1,256,794	1,217,443	295,126	283,126
Equity of the shareholders of the parent entity	872,881	887,210	204,974	206,328
Non-controlling interests	605	590	142	137
Non-current liabilities	283,502	269,026	66,573	62,564
Current liabilities	99,807	60,617	23,437	14,097
TOTAL EQUITY AND LIABILITIES	1,256,794	1,217,443	295,126	283,126

[1] Based on the average EUR/PLN exchange rate of the National Bank of Poland as at 31.12.2019 (1 EUR = 4,2585 PLN) and 31.12.2018 (1 EUR = 4.3000 PLN).

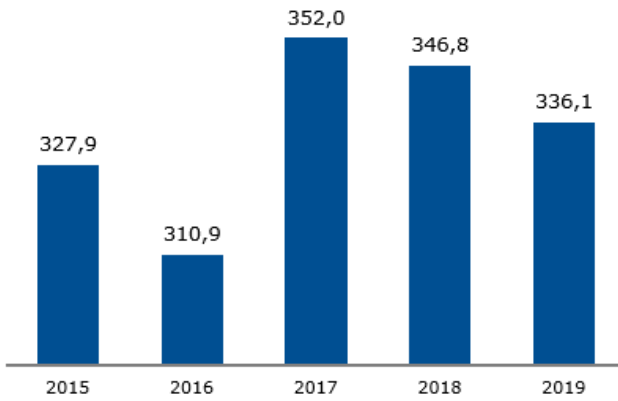
Table 4 GPW Group's selected financial ratios

	Year ended/ As at 31 December	
	2019	2018
EBITDA margin (<i>EBITDA/Sales revenue</i>)	57.5%	59.6%
Operating profit margin (<i>Operating profit/Sales revenue</i>)	46.5%	50.6%
Return on equity (ROE) (<i>Net profit for the last 12 months / Average equity at the beginning and at the end of the last 12 month period</i>)	13.6%	21.8%
Debt to equity (<i>Interest-bearing liabilities^[1]/Equity</i>)	30.6%	27.7%

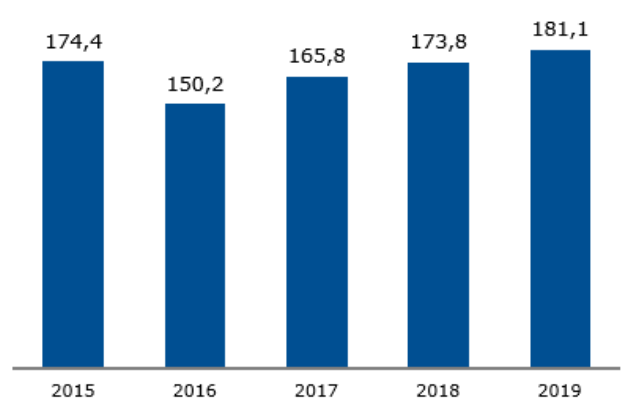
[1] interest and principal payable



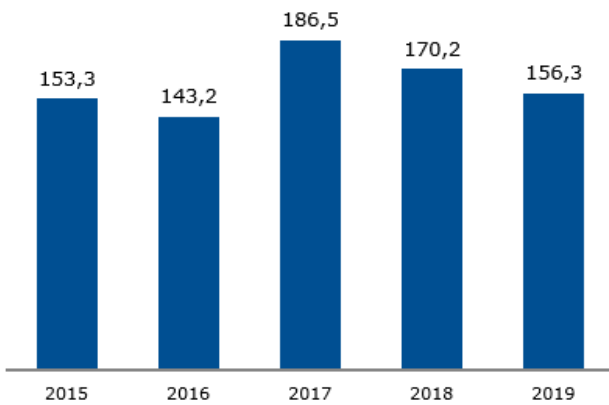
Sales revenue (PLN mn)



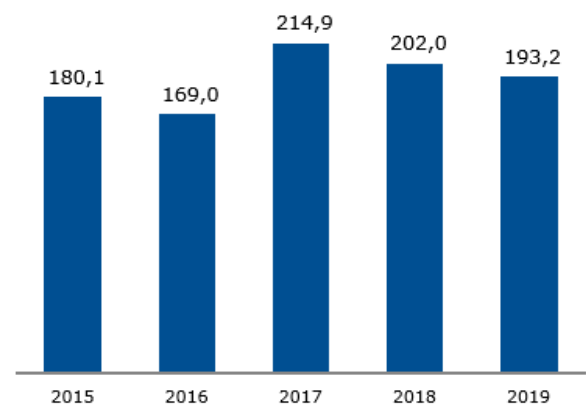
Operating expenses (PLN mn)



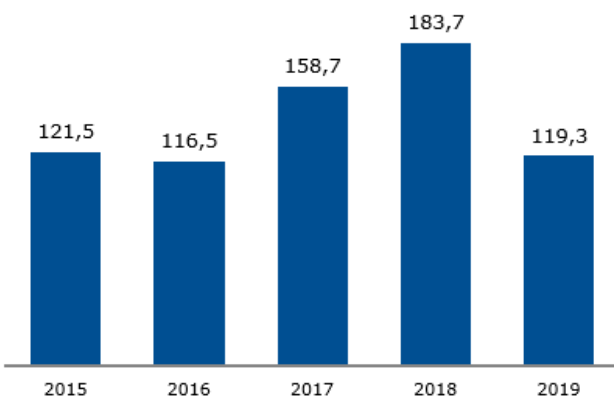
Operating profit (PLN mn)



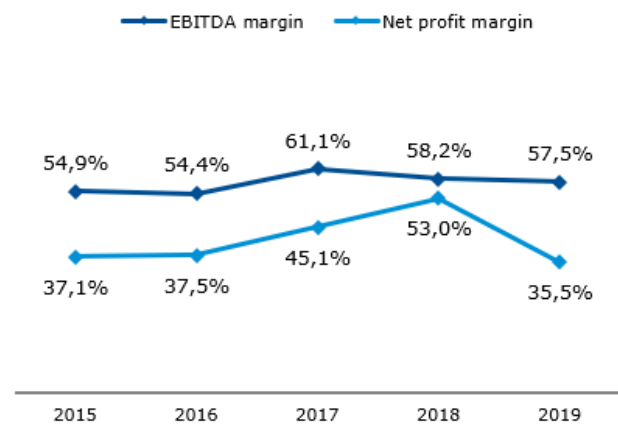
EBITDA (PLN mn)



Net profit (PLN mn)



Net profit margin and EBITDA margin



1.4. SELECTED SEPARATE FINANCIAL DATA

Table 5 Selected data on the statement of comprehensive income, separate, under IFRS, audited

	Year ended 31 December			
	2019	2018	2019	2018
	PLN'000		EUR'000 ^[1]	
Sales revenue	183,599	190,880	42,717	44,783
Financial market	172,348	181,150	40,100	42,501
Trading	107,837	114,277	25,090	26,811
Listing	18,784	22,000	4,370	5,162
Information services	45,727	44,873	10,639	10,528
Commodity market	685	423	159	99
Information services	685	423	159	99
Other revenue	10,566	9,307	2,458	2,184
Operating expenses	119,317	113,007	27,761	26,513
Other income	1,277	1,115	297	262
Impairment gains/(losses) on receivables	(756)	(2,295)	(176)	(538)
Other expenses	3,315	1,633	771	383
Operating profit	61,488	75,060	14,306	17,610
Financial income	76,206	75,075	17,731	17,614
Financial expenses	8,742	8,043	2,034	1,887
Gains on investment/(losses) on impairment of investment in other entities	(2,173)	30,170	(506)	7,078
Profit before tax	126,779	172,262	29,497	40,415
Income tax	11,656	20,333	2,712	4,770
Profit for the period	115,123	151,929	26,785	35,645
EBITDA^[2]	84,936	95,317	19,762	22,363

^[1] Based on average annual EUR/PLN exchange rate published by the National Bank of Poland (1 EUR = 4.2980 PLN in 2019 and 1 EUR = 4.2623 PLN in 2018).

^[2] EBITDA = operating profit + depreciation and amortisation



Table 6 Selected data on the statement of financial position, separate, under IFRS, audited

	As at 31 December			
	2019	2018	2019	2018
	PLN'000		EUR'000 ^[1]	
Non-current assets	435,342	426,635	102,229	99,217
Property, plant and equipment	95,416	96,362	22,406	22,410
Right-to-use assets	14,329	-	3,365	-
Intangible assets	49,829	56,439	11,701	13,125
Investment in associates and joint ventures	11,652	13,825	2,736	3,215
Investment in subsidiaries	255,885	250,885	60,088	58,345
Subleasing receivables	6,363	-	1,494	-
Financial assets measured at fair value through other comprehensive income	120	101	28	23
Prepayments	1,748	4,801	410	1,117
Other non-current assets	-	4,222	-	982
Current assets	357,422	358,619	83,931	83,400
Inventories	47	64	11	15
Corporate income tax receivable	4,132	-	970	-
Trade and other receivables	30,128	25,483	7,075	5,926
Subleasing receivables	2,302	-	541	-
Contract assets	940	1,015	221	236
Financial assets measured at amortised cost	267,687	310,090	62,859	72,114
Other current assets	4,222	-	991	-
Cash and cash equivalents	47,964	21,967	11,263	5,109
TOTAL ASSETS	792,764	785,254	186,160	182,617
Equity	479,843	498,237	112,679	115,869
Non-current liabilities	275,299	263,237	64,647	61,218
Current liabilities	37,622	23,780	8,835	5,530
TOTAL EQUITY AND LIABILITIES	792,764	785,254	186,160	182,617

[1] Based on the average EUR/PLN exchange rate of the National Bank of Poland as at 31.12.2019 (1 EUR = 4,2585 PLN) and 31.12.2018 (1 EUR = 4.3000 PLN).

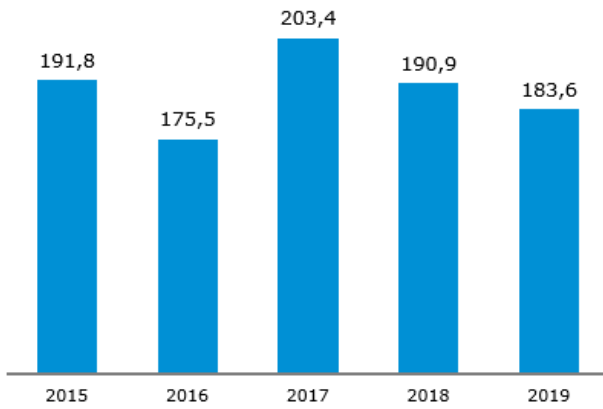
Table 7 GPW's selected financial ratios

	Year ended / As at 31 December	
	2019	2018
EBITDA margin (<i>EBITDA/Sales revenue</i>)	46.3%	49.9%
Operating profit margin (<i>Operating profit/Sales revenue</i>)	33.5%	39.3%
Return on equity (ROE) (<i>Net profit for the last 12 months / Average equity at the beginning and at the end of the last 12 month period</i>)	23.5%	32.4%
Debt to equity (<i>Interest-bearing liabilities^[1]/Equity</i>)	55.7%	49.4%

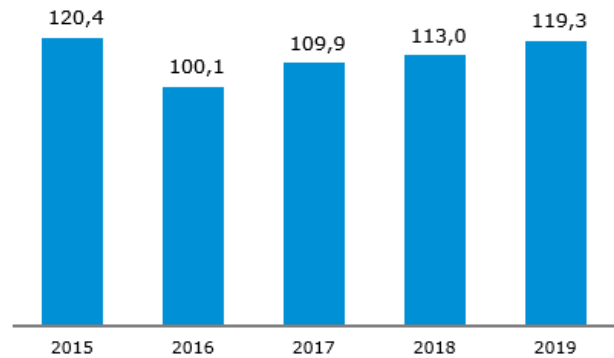
^[1] interest and principal payable



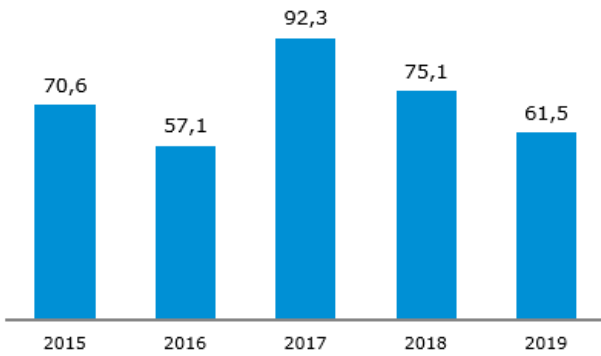
Sales revenue (PLN mn)



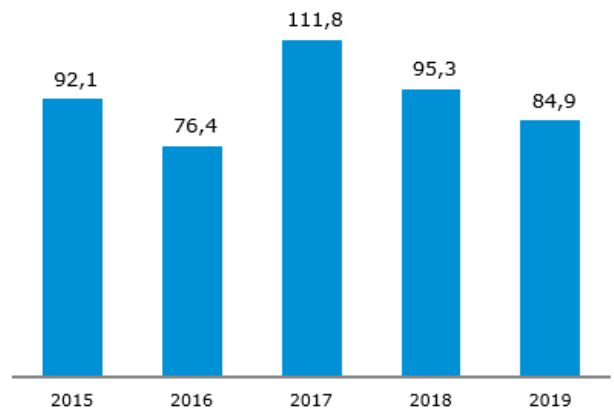
Operating expenses (PLN mn)



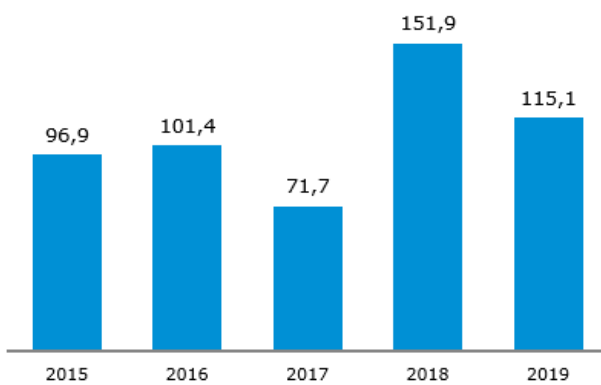
Operating profit (PLN mn)



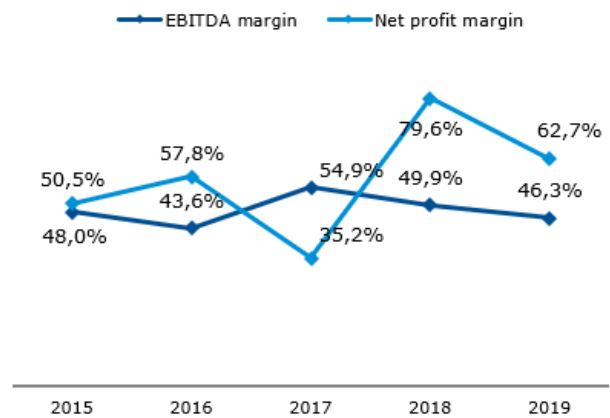
EBITDA (PLN mn)



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 1.65 billion as at the end of 2019, ranking #46 among all domestic stocks on GPW.

**The Company's TSR
(Total Shareholder
Return) was +15.9%
in 2019.**

The Company is a part of the mid-cap index mWIG40 since 19 March 2011 with a 2.05% share in the index portfolio at the end of 2019, 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 SP Dow Jones). On 3 September 2019, GPW joined the new ESG index WIG-ESG (previously RESPECT Index) as one of 59 companies which follow the highest environmental, social and governance standards.

Since December 2018, GPW calculates and publishes new dividend indices. GPW, which participates in mWIG40, contributes to the index mWIG40dvp, which tracks cumulative dividends paid by stocks participating in the underlying index.

1.5.1. GPW STOCK PRICE

The GPW stock price ranged in 2018 from PLN 36.85 (the year's low on 3 January 2019) to PLN 43.90 (the year's high on 12 July 2019). The stock price was PLN 39.30 at the end of 2019, compared to PLN 36.65 as at the end of 2018 and PLN 46.99 as at the end of 2017, falling 7.2% during the year. Including the dividend of PLN 3.18 per share, the total shareholder return (TSR) in 2019 was +15.9%. In the same period, the GPW mid-cap index mWIG40 lost 19.4%, and the broad market index WIG lost 9.5%.

Figure 4 GPW stock price since new listing on GPW [PLN]

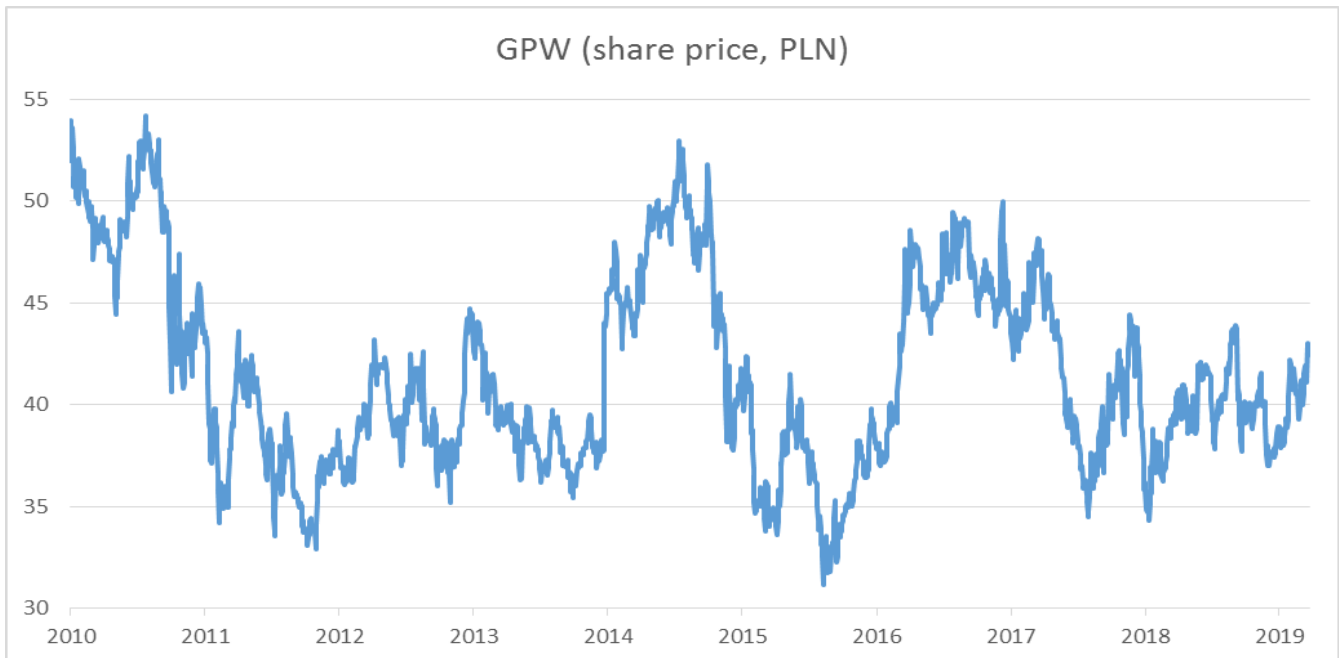


Figure 5 GPW stock price in 2019 v. mWIG40 and WIG [normalised: 1 January 2019 = 100 percent]



Table 8 Selected statistics of GPW SA stock

	2019	2018	2017	2016	2015	2014	2013	2012
Earnings per share (PLN) ¹	2.84	4.38	3.78	3.12	2.95	2.67	2.70	2.52
Dividend per share (PLN) ²	3.18	2.20	2.15	2.36	2.40	1.20	0.78	1.44
Dividend yield ³	7.4%	5.8%	4.4%	6.7%	4.9%	3.3%	2.0%	3.8%
P/E	13.8	8.4	16.9	12.8	12.2	17.1	15.4	15.4
Maximum share price (PLN)	43.90	48.65	49.98	41.57	53.00	48.04	45.10	43.89
Minimum share price (PLN)	36.85	34.05	39.06	31.05	34.53	35.25	34.75	32.10
Share price at the end of the period (PLN)	39.30	36.65	46.99	39.93	35.95	45.70	41.50	38.87
Average (volume) weighted share price PLN)	39.95	39.69	46.05	35.87	44.99	39.52	40.22	37.55
Return rate on shares	7.2%	-22.0%	17.7%	11.1%	-21.3%	10.1%	6.8%	10.3%
Total shareholder return - TSR ⁴	15.9%	-17.3%	23.1%	17.6%	-16.1%	13.0%	8.8%	14.4%
Number of shares (thousand)	41 972	41 972	41 972	41 972	41 972	41 972	41 972	41 972
Capitalisation (PLN million)	1 649	1 538	1 972	1 676	1 509	1 918	1 742	1 631
Free float ⁵ (PLN million)	1 068	997	1 278	1 089	978	1 241	1 127	1 054
Free float %	64.8%	64.8%	64.8%	64.8%	64.8%	64.7%	64.7%	64.6%
Volume of trading (million shares) ⁶	9.7	14.8	10.9	11.8	11.7	14.5	14.8	19.2
Value of trading (PLN million)	388.6	589.5	501.9	424.00	526.4	571.8	596.1	720.7
Number of transactions (thousand)	81.8	98.9	90.2	89.7	63.0	68.8	67.3	73.3
Average volume of trading per session (thousand)	39.2	60.1	46.3	47.1	46.6	58.1	60.0	77.1
Average value of trading per session (PLN thousand)	1 567.0	2 386.5	2 007.7	1 689.1	2 097.4	2 296.2	2 413.4	2 894.2
Average number of transactions per session	330	400	360.7	357.4	250.9	276.0	272.6	294.2

¹ Based on the consolidated profit attributable to the shareholders 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 Electronic Order Book (net of block trades)



Schroders PLC	0.30%
Teachers Insurance & Annuity Assoc.	0.30%
Power Corp of Canada	0.20%
Royce & Associates LP	0.20%
Skandinaviska Enskilda Banken AB	0.20%
Avaron Funds/Estonia	0.10%
State of California	0.10%
Charles Schwab Corp	0.10%
Danske Bank A/S	0.10%
SEI Investments	~ 0.1%
RAM Lux Systematic Funds SICAV	~ 0.1%
BAYERISCHE LANDESBANK	~ 0.1%
Bessemer Group Inc	~ 0.1%
British Columbia Investment Manage	~ 0.1%
Esfera Capital Gestion SGIIC SA/Sp	~ 0.1%
Manulife Financial Corp	~ 0.1%
UBS AG	~ 0.1%
American Century Cos Inc	~ 0.1%
FlexShares Trust	~ 0.1%

Source: Bloomberg, Reuters; Norges Bank; the list is based on estimates and may not be exhaustive

1.5.3. DIVIDEND FOR GPW SHAREHOLDERS

According to the current strategy (as per Current Report 4/2019), 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, above 60% of the consolidated net profit of the GPW Group for the financial year attributable to the shareholders of GPW adjusted for the share of profit of associates.

It is also the intention of the GPW Management Board to recommend that the General Meeting pay dividend:

- ♦ from the 2019 profit of at least PLN 2.4 per share,
- ♦ from the profits of 2020-2022 annually increasing by at least PLN 0.1 per share.

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.

GPW is a financially stable company and has for many years paid regular high dividends to investors. The dividend yield was 7.4% in 2019.

Dividend paid in 2019



GPW has paid the owners a dividend for each year since the company went public. On 2 August 2019, the Company paid PLN 133.5 million in dividend. The dividend of PLN 3.18 per share was paid to GPW shareholders who held shares at 19 July 2019 (record date). The dividend yield in 2019 at the closing price on the record date was 7.4%.

Table 11 GPW dividend from profits in 2010-2018

Year for which dividend was paid	Dividend paid [PLN'000]	Dividend per share	Dividend pay-out ratio*	Dividend yield**	General Meeting date	Dividend record date	Dividend payment date
		[PLN]					
2018	133 471	3.18	77.1%*****	7.40%	17.06.2019	19.07.2019	2.08.2019
2017	92 338	2.2	63.3%*****	5.84%	19.06.2018	19.07.2018	2.08.2018
2016	90 240	2.15	70.71%*****	4.39%	19.06.2017	19.07.2017	2.08.2017
2015	99 054	2.36	80.27%	6.69%	22.06.2016****	20.07.2016	04.08.2016
2014	100 732	2.4	89.88%	4.93%	25.06.2015	15.07.2015	04.08.2015
2013	50 366	1.2	44.45%	3.31%	25.07.2014***	07.08.2014	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	06.07.2012	20.07.2012
2010	134 730	3.21	142.28%	6.05%	27.06.2011	12.07.2011	27.07.2011

* Based on the consolidated profit attributable to the shareholders of the parent entity

** At the closing price as at the dividend record date

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

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

***** Based on the consolidated profit attributable to the shareholders of the parent entity adjusted for the share of profit of associates

1.5.4. DIALOGUE WITH 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 approved in January 2015, GPW 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 2019, GPW took a number of initiatives and applied a broad range of tools in its on-going communications with the shareholders, investors and analysts, including:

- ◆ presentations of the financial results after the end of each quarter within approximately one month except for the annual results presented within approximately two months after the end of the period at meetings of the GPW Management Board with capital market analysts (broadcast live online);
- ◆ live broadcast of the Annual General Meeting on 17 June 2019, the Extraordinary General Meeting on 6 August 2019 and the Extraordinary General Meeting on 1 October 2019;
- ◆ participation in international financial conferences for global institutional investors co-organised by GPW in London, Stockholm, New York, Paris, Frankfurt, Vienna, Zurs (Austria), Athens and Prague;
- ◆ participation in two conferences for institutional investors in Warsaw;
- ◆ more than 100 one-on-one and group meetings at the Company's head office and other contacts with representatives of domestic and international institutional investors.

In 2019, GPW first presented its milestones, key events and strategic plans in an online Integrated Annual Report available at <https://raportzintegrowany2018.gpw.pl/pl-home>. The report features interactive tools which provide a broad picture of the developments in 2018.

GPW engages individual investors in active dialogue. In addition to information published by the Company on its website, the activities in 2019 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 CEO Marek Dietl (16 July 2019) and two chats with GPW VP Jacek Fotek – CFO and Head of IR (27 March 2019; 27 November 2019),
- ◆ participation in the Wall Street conference dedicated to individual investors, organised by the Individual Investor Association (SII) in Karpacz.

According to the investor relations policy approved in January 2015, 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, the Investor Relations section of the Company's website regularly provides information relevant to shareholders and investors including the current financial results, investor presentations, 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

GPW bonds of three series (C, D and E) in a total nominal amount of PLN 245 million were listed on the regulated market operated by GPW and in the alternative trading system operated by BondSpot as at 31 December 2019.

On 6 October 2015, GPW issued PLN 125 million seven-year series C bonds maturing on 6 October 2022. The bonds are unsecured. The bonds are listed in the alternative trading system operated by GPW and BondSpot since December 2015. The series C bonds have fixed interest at 3.19% p.a., interest is paid semi-annually. At the date of issue, the interest rate was the lowest of all corporate long-term fixed-coupon PLN bonds listed on Catalyst. The proceeds from the issue of series C bonds were used for partial redemption of series A and B bonds which were due for redemption on 2 January 2017 but were redeemed early in October 2015. As a result, GPW's series A and B bonds in a total amount of PLN 124.5 million were redeemed by GPW at PLN 101.20 per bond. The price of GPW's series C bond (ticker GPW1022) ranged in 2019 from PLN 101.5 on 22 November 2019 to PLN 103.75 on 21-23 January 2019.

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. Those are 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. Series D bonds were addressed to institutional investors and series E bonds to individual investors. The issue price of series D bonds was PLN 100 per bond. The issue price of series E bonds depended on the date of subscription as follows: PLN 99.88 for subscriptions submitted on 2 January 2017 and PLN 99.89 for subscriptions submitted on 3 January 2017. The total nominal value of the issue was PLN 120 million. Series D bonds were allocated on 29 December 2016 and series E bonds were allocated on 5 January 2017. The series D and E bonds were assimilated under a single ISIN code. The average cost of issue was PLN 0.60 per bond with a nominal amount of PLN 100. The bonds have a fixed interest rate at WIBOR 6M plus a margin of 0.95 percent p.a. Interest is paid semi-annually. The bonds are listed on the Catalyst regulated market operated by GPW and on the Catalyst regulated market operated by BondSpot.

The price of GPW's series D and E bonds (ticker GPW0122) ranged in 2019 from PLN 100.46 on 2 January 2019 to PLN 101.75 on 30 July 2019 and from 1 August to 6 August 2019.

Table 12 Interest on GPW series D and E bonds



Interest Period	First Day of Interest Period	Number of days in Interest Period	Record Date	Last Day of Interest Period and Payment Date
1	Issue Date	Number of days from Issue Date (inclusive) to 31.01.2017 (exclusive)	23.01.2017	31.01.2017
2	31.01.2017	181	21.07.2017	31.07.2017
3	31.07.2017	184	23.01.2018	31.01.2018
4	31.01.2018	181	23.07.2018	31.07.2018
5	31.07.2018	184	23.01.2019	31.01.2019
6	31.01.2019	181	23.07.2019	31.07.2019
7	31.07.2019	184	23.01.2020	31.01.2020
8	31.01.2020	182	23.07.2020	31.07.2020
9	31.07.2020	184	22.01.2021	31.01.2021
10	31.01.2021	181	23.07.2021	31.07.2021
11	31.07.2021	184	21.01.2022	31.01.2022

2. ACTIVITY OF THE GPW GROUP

2.1. MARKET ENVIRONMENT

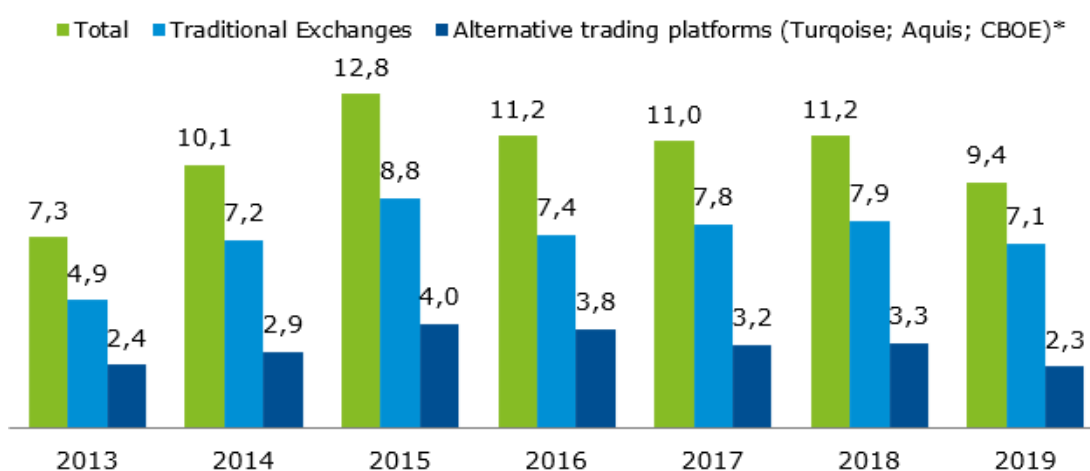
2.1.1. FINANCIAL MARKET

Competition of financial instrument trading venues in Europe has largely 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 OTC (Over The Counter) markets, 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 Equities, the third biggest stock trading venue in Europe in 2019. 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 trading typically shrinks. Trading in Polish equities has been offered for several years by the London-based venue Turquoise (owned by the London Stock Exchange) and, since 5 November 2018, by CBOE Europe Equities. Polish stocks were traded on certain trading days on both of these venues in 2019 but their share in total trade was negligible. 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.

In response to potential emergence of threats from competitive trading venues, GPW has been focusing on improvement of stock market liquidity and order book quality. 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. Launched in Q1 2016, the colocation service is another key part of the capital market infrastructure which supports the development of electronic liquidity providers and largely improves liquidity of the order book. GPW launched its Technology Development Support Programme in March 2019. 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. GPW launched a pilot Analytical Coverage Support Programme in 2019 (see section 4.3.4 for details). To make trade on the exchange even more attractive, GPW is expecting to benefit from the new Employee Capital Plan (PKK) programme combined with initiatives under the Government's Capital Market Development Strategy (SRRK). Following the promotion of Poland to Developed Markets by FTSE Russell and Stoxx, GPW actively promotes the Polish stock market among global investors in partnership with local brokers.

Figure 7 Equity trading on European FESE exchanges and alternative trading venues⁸ [EUR bn]



Source: FESE – European Equity Market Report; *CBOE Europe Equities is a regulated market according to FESE classification. For comparison, it is shown under MTFs

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 2.3 trillion i.e. 24.9% of European stock trade on the electronic order book in 2019. The total value of European stock trade on the electronic order book (exchanges and MTFs) stood at EUR 9.4 trillion in 2019, down by EUR 1.8 trillion or 16.1% year on year.

⁸ MTFs (Turquoise, Aquis Exchange) and former MTF, CBOE Europe Equities (regulated market according to FESE classification)

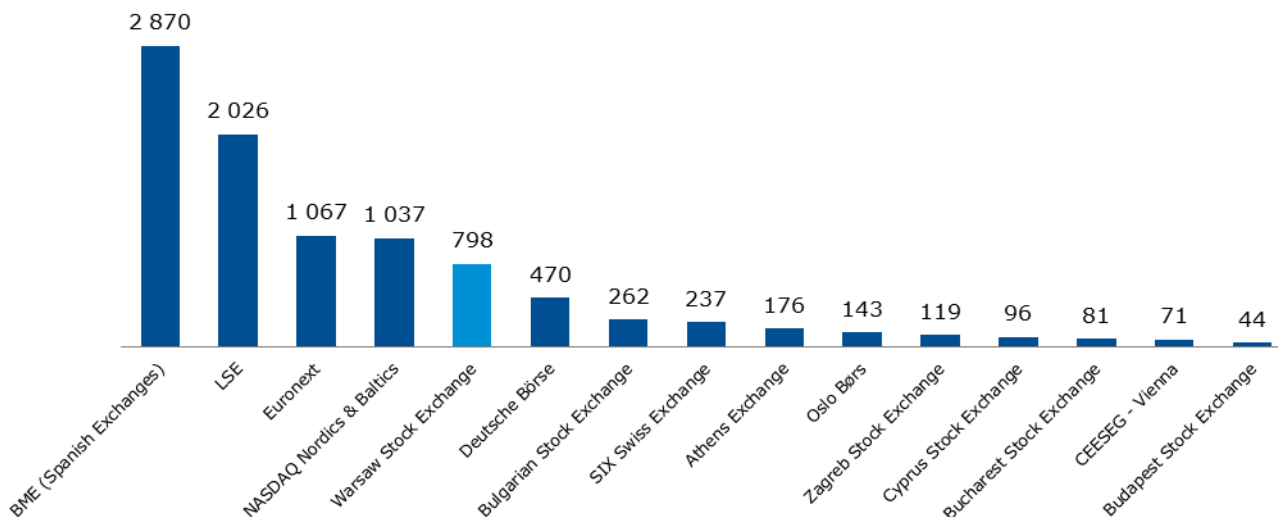


Number of listed companies

According to FESE and WFE, all European exchanges listed 9,569 domestic companies at the end of 2019. The Spanish exchange BME had the biggest number of listings (2,870 companies) accounting for more than 30.0% of all European listings. GPW ranked fifth with 798 domestic companies representing 8.3% of the total number of domestic companies listed on European exchanges.

There were 7 IPOs on the GPW main market and 15 IPOs on the alternative market NewConnect in 2019.

Figure 8 Number of domestic companies listed on European exchanges in 2019

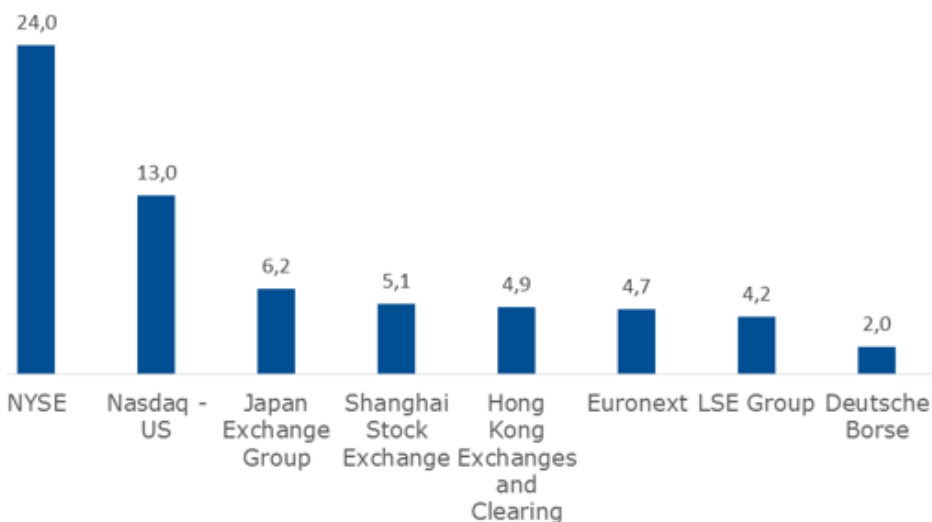


Source: FESE; WFE - <https://focus.world-exchanges.org/issue/january-2020/market-statistics>

Capitalisation of stock markets

According to WFE, the total capitalisation of all exchanges globally in 2019 increased by 26.6% to USD 94.3 trillion at the year's end (source: WFE).⁹ The biggest global exchange was NYSE with a capitalisation of domestic companies at USD 24.0 trillion at the end of 2019, followed by NASDAQ with a capitalisation of USD 13.0 trillion, Japan Stock Exchange – USD 6.2 trillion, Shanghai Stock Exchange – USD 5.1 trillion, Hong Kong Stock Exchange – USD 4.9 trillion, Euronext – USD 4.7 trillion, London Stock Exchange – USD 4.2 trillion, and Deutsche Boerse – USD 2.0 trillion.

Figure 9 Capitalisation of domestic companies on the world's biggest exchanges in 2019 according to WFE [EUR billion]



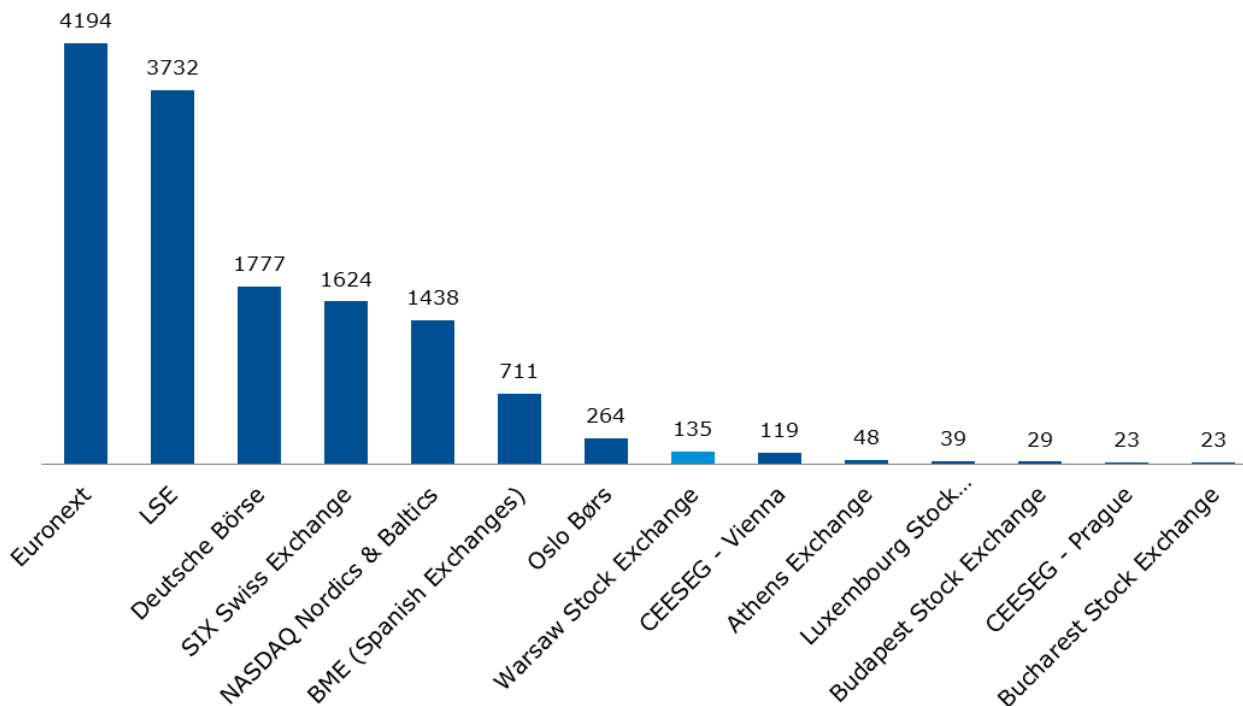
Source: WFE

⁹ <https://focus.world-exchanges.org/issue/january-2019/market-statistics>



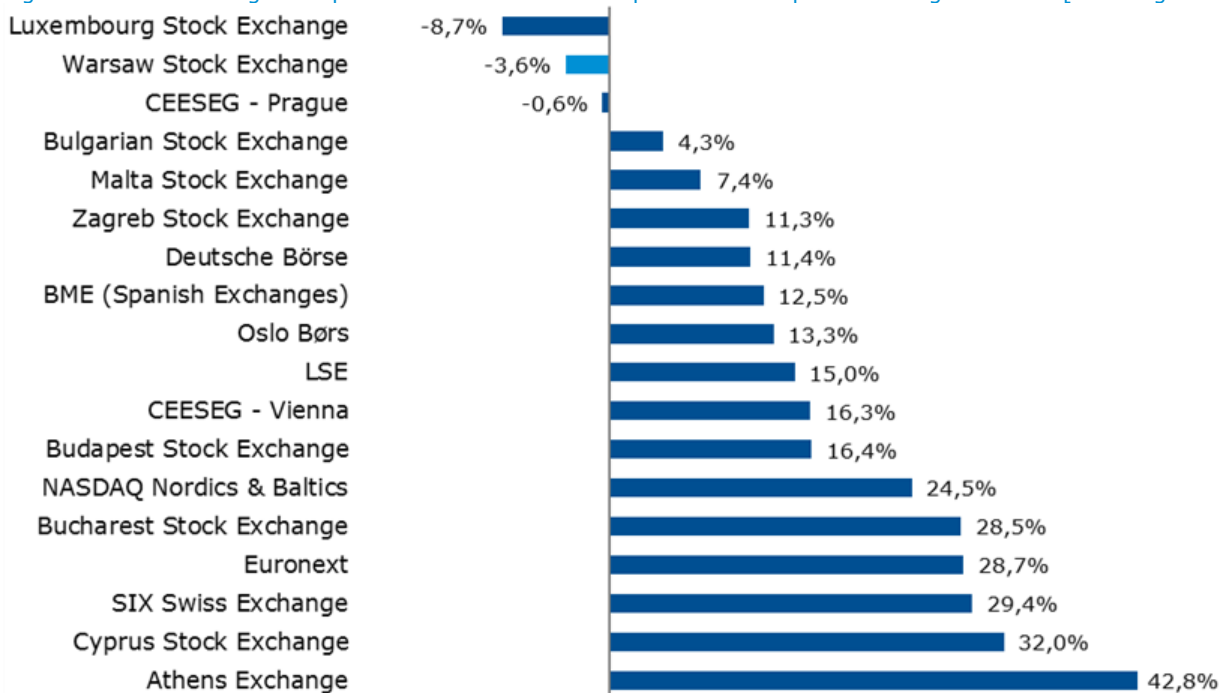
Below are FESE statistics (in EUR billion) of the capitalisation of domestic companies on European exchanges. The biggest exchange is the Euronext Group (EUR 4,194 billion) followed by the LSE Group (EUR 3,732 billion) and Deutsche Boerse (EUR 1,777 billion). With a capitalisation of EUR 135 billion, GPW ranks eighth in Europe and it is by far the biggest market in CEE.

Figure 10 Capitalisation of domestic companies on European exchanges in 2019 [EUR billion]



Source: FESE, (monthly statistics, December 2019); LSE Group data based on WFE statistics and converted from USD to EUR

Figure 11 Change in capitalisation of domestic companies on European exchanges in 2019 [% change in EUR]



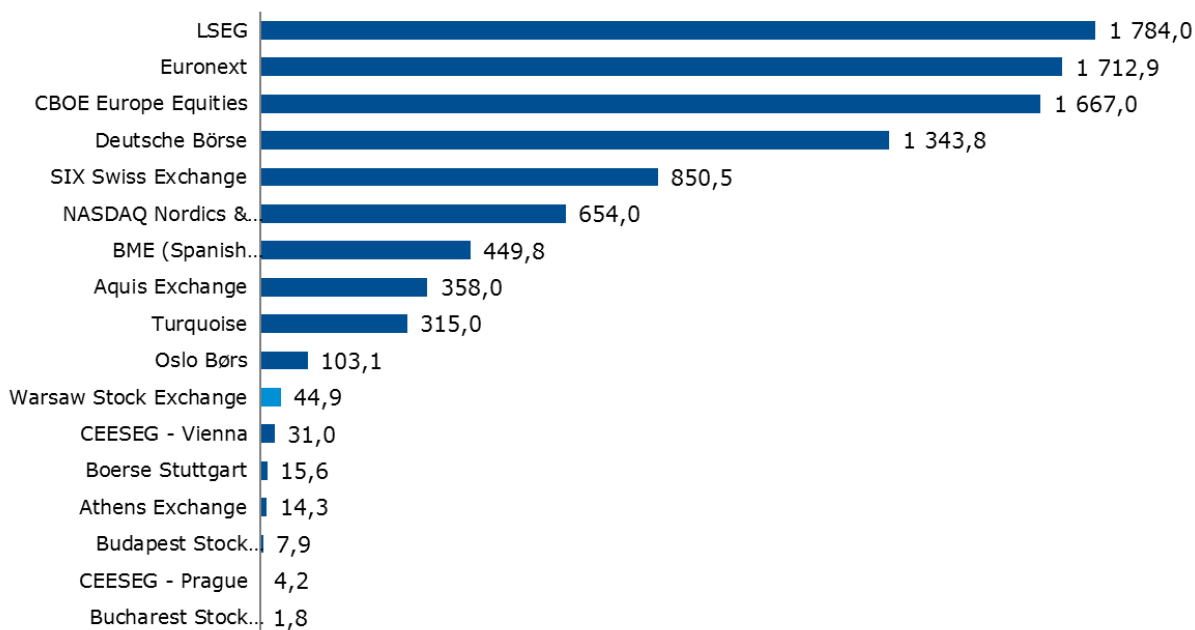
Source: FESE (monthly statistics, December 2019); LSE Group and Deutsche Borse data based on WFE statistics



Equity trade

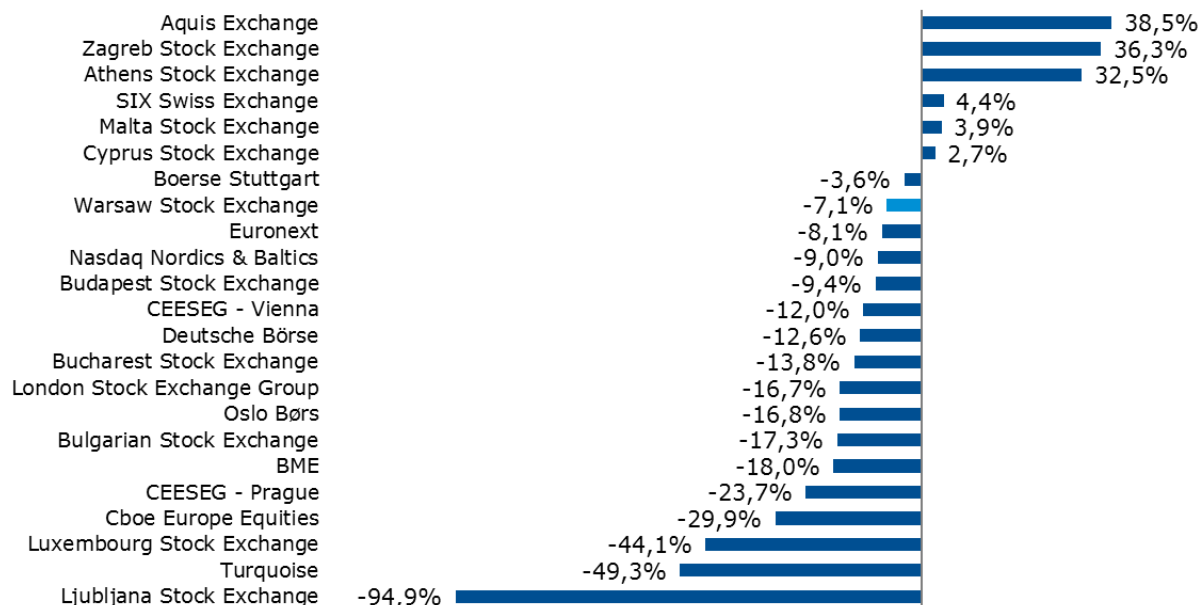
According to FESE’s European Equity Market Report, the European exchange industry is dominated by several large operators. As measured by the volume of trade in stocks on the electronic order book in 2019, the European leader was the London Stock Exchange Group with EUR 1.78 trillion (the group includes the London Stock Exchange and Borsa Italiana in Milan) followed by the Euronext group with EUR 1.71 trillion (the group operates regulated markets in Belgium, France, Ireland, the Netherlands, Portugal and the UK), CBOE Europe Equities with EUR 1.67 trillion, and Deutsche Boerse with EUR 1.34 trillion. According to FESE statistics, the value of trade in stocks on the electronic order book on GPW was EUR 44.9 billion in 2019, equal to a market share of approximately 0.48% in the European market. GPW remained a strong CEE leader by the value of trade in shares in 2019, ahead of CEESEG Vienna.

Figure 12 Value of trade in shares on the electronic order book on European exchanges in 2019 [EUR billion]



Source: FESE (monthly statistics, December 2019)

Figure 13 Change in the value of trade in shares on the electronic order book on European exchanges in 2019 [% change in EUR]



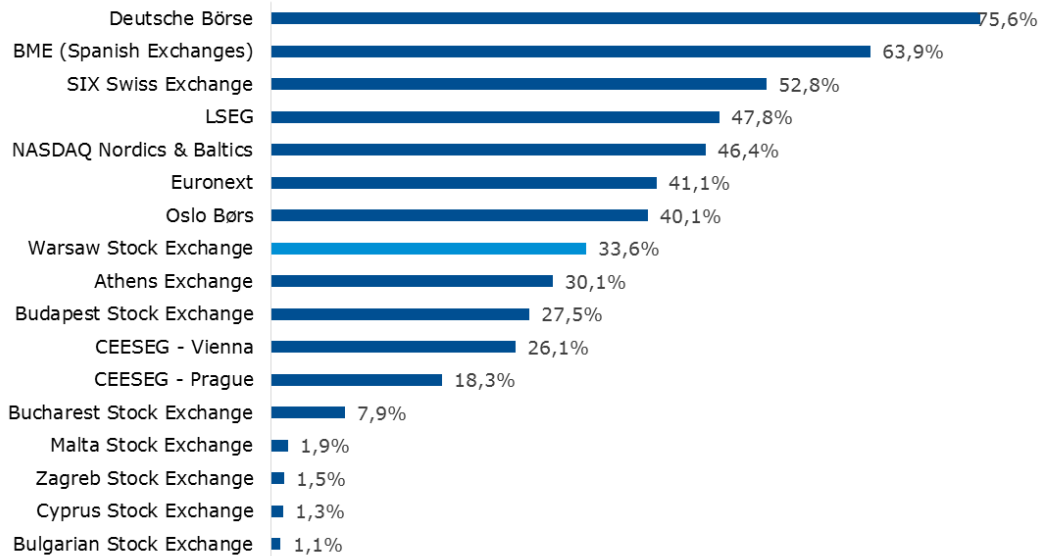
Source: FESE (monthly statistics)



Velocity ratio

Velocity measured as turnover to average monthly capitalisation on European exchanges was 30.4% in 2019 (based on FESE data). The highest velocity ratio was reported by Deutsche Börse, BME, SIX, and the London Stock Exchange Group. GPW's velocity ratio was 33.6% in 2019 vs. 34.4% in 2018.

Figure 14 Velocity¹⁰ on European exchanges in 2019



Source: FESE and for LSEG <https://www.londonstockexchange.com/statistics/monthly-market-report/lseg-monthly-market-report-december-2019.pdf>

GPW's share in the capitalisation of domestic companies on European exchanges was 1.07% in 2016, 1.24% in 2017, 1.19% in 2018, and 0.95% in 2019.

2.1.2. COMMODITY MARKET

Electricity and gas market

- ✓ Trade in electricity and gas on the exchange increased in 2019, reaching historical highs on both markets. The percentage year-on-year increase was similar on those markets: 1.3% on the electricity market (from 226.1 to 228.9 TWh) and 2.0% on the gas market (from 143.3 to 146.1 TWh).
- ✓ The electricity market operated for the first year under a new scheme which requires mandatory trade by producers. While the general obligation was raised from 30 to 100 percent, the scope of exclusions was also extended. Although market making was initiated in April, trade on the forward market dropped by 1.7% year on year (from 198.3 to 195.0 TWh). That was driven among others by stabilising prices after sudden changes in 2018 when prices of CO₂ allowances rose sharply. TGE was expecting turnover on the forward market to drop but the actual decrease was moderate: the turnover fell to a significant extent only in January 2019.
- ✓ As forward trade decreased, the increase in turnover on the electricity market was driven by growing spot trade. Trade on the Day-Ahead Market increased 22.1%, crossing the mark of 30 TWh as early as late November for the first time in the history of the Polish commodity exchange and reaching 33.7 TWh by the year's end. While cross-border trade remained stable, domestic trade increased mainly on the back of regulatory amendments concerning mandatory trade. TGE successfully joined the European intra-day market (SIDC, previously XBID) on 19 November 2019. As a result, TGE offers cross-border trade across the electricity spot market and has expanded the Intra-Day Market trading window to 24 hours per day. Those developments triggered a sharp increase in trading volumes. The annual volume of trade on the market is expected to exceed 1 TWh.
- ✓ Spot prices of gas were record-low in 2019, as were forward prices of gas, reversing a strong uptrend reported in Q2 and Q3 2018. Eventually, the 2020 price dropped to 75 PLN/MWh in December, running close to the mid-2017 prices of next-year contracts. Apart from oil prices, the prices of gas were also driven by growth of the liquified gas market as

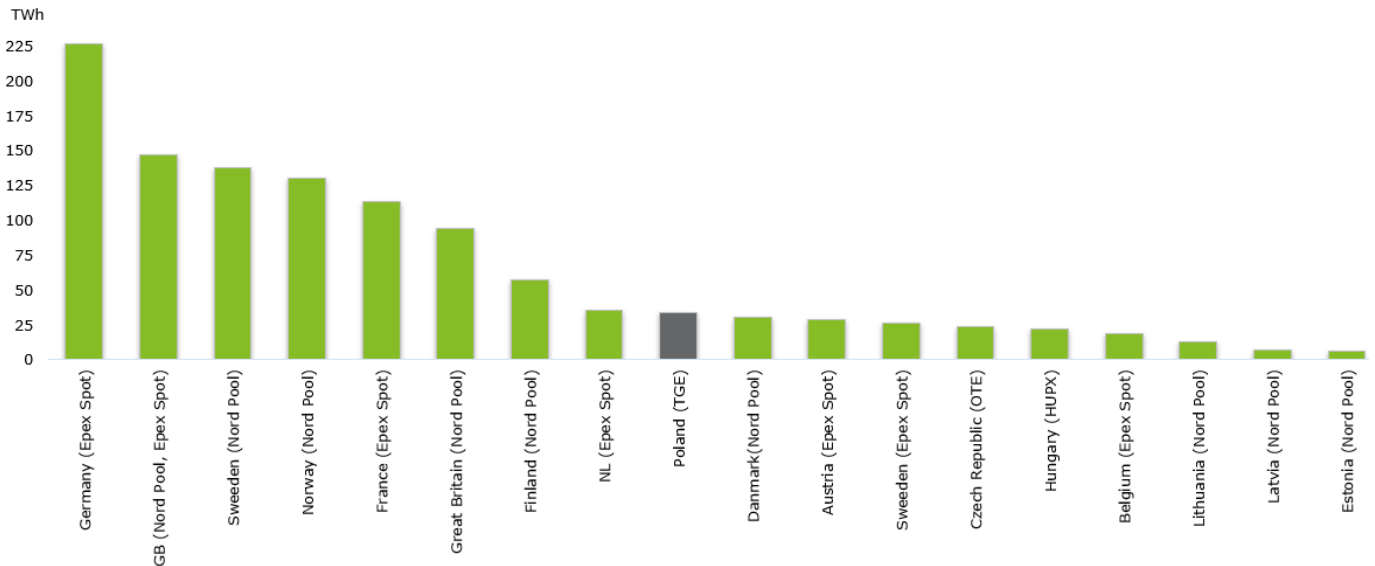
¹⁰ Velocity measured as turnover in 2019 to average capitalisation at the end of each month on exchanges



well as high temperatures. The agreement concerning transfers of Russian gas through Ukraine was extended; otherwise, the conditions could have changed sharply in the last weeks of the year. The share of spot trade in total volumes on the exchange dropped for another year in a row to 15.5% in 2019, in stark contrast to trends in trade on exchanges in Western European markets.

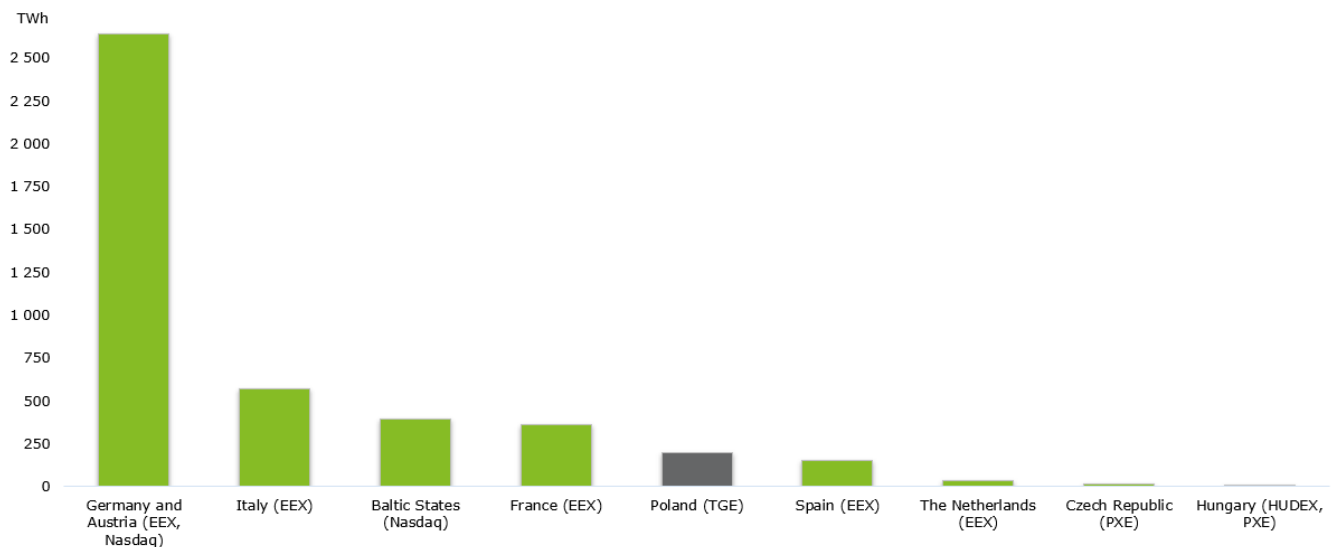
Volume of trade in electricity and gas in European hubs

Figure 15 Volume of trade in electricity on European exchanges in 2019 (spot) [TWh]



Source: TGE based on exchange data

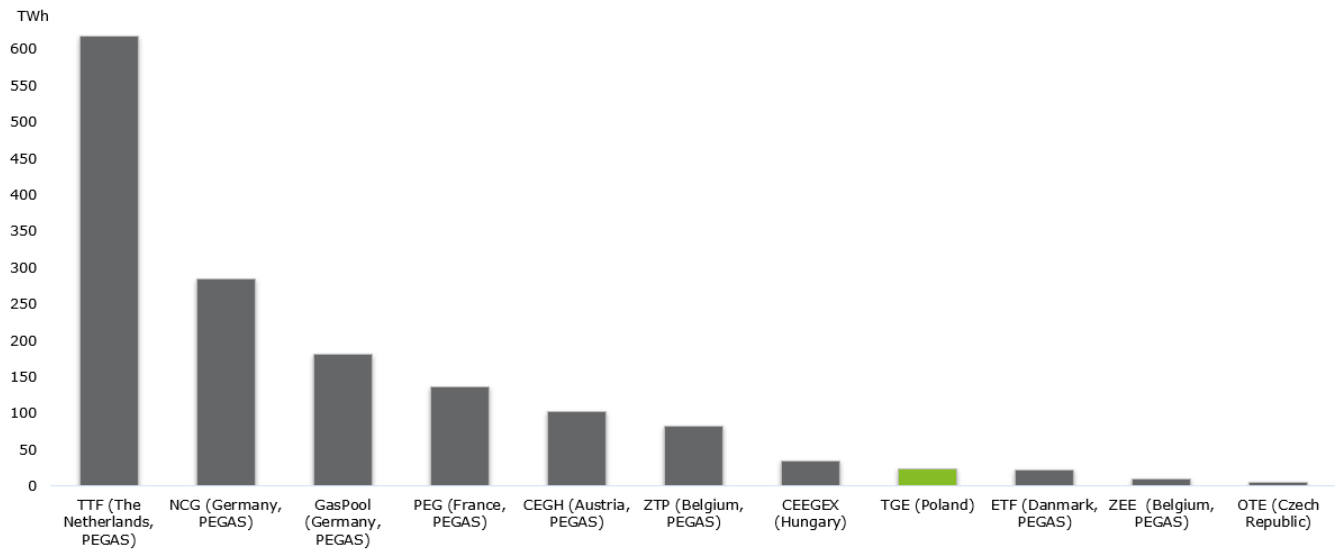
Figure 16 Volume of trade in electricity on European exchanges in 2019 (forward) [TWh]



Source: TGE based on exchange data, estimates for EEX

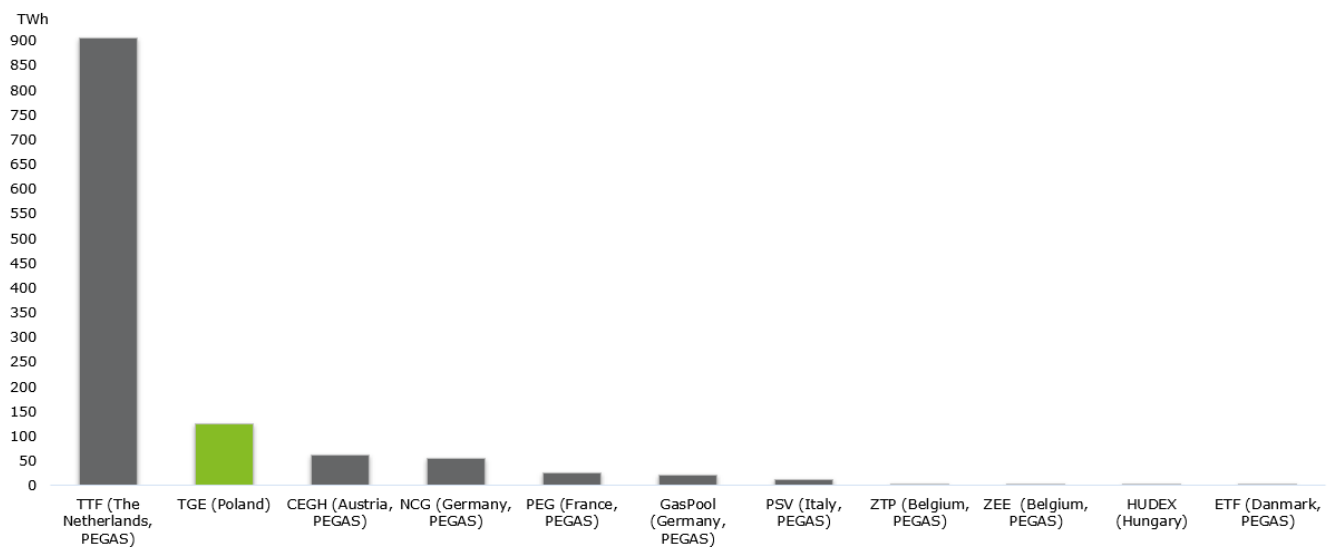


Figure 17 Volume of trade on European gas exchanges in 2019 (spot) [TWh]



Source: TGE based on exchange data

Figure 18 Volume of trade on European gas exchanges in 2019 (forward) [TWh]



Source: TGE based on exchange data

Property rights

- ✓ A new amendment of the Act on Renewable Energy Sources took effect in 2019, leading to a series of RES auctions which took place late in the year. Trade in green and blue certificates on the Property Rights Market reached approximately 25.9 TWh in 2019.
- ✓ The cogeneration certificate system on TGE expired on 30 June 2019.
- ✓ An amendment of the Energy Efficiency Act extended the validity of energy efficiency certificates issued at auctions (PMEF) until 30 June 2021.



2.2. MISSION AND STRATEGY OF THE GPW GROUP

The updated growth strategy of the GPW Group by 2022, #GPW2022, was presented on 27 June 2018. #GPW2022 includes updated specific initiatives to be implemented according to the multiannual growth plan of the Company "Strategy of the Giełda Papierów Wartościowych Group GPW.2020" published on 30 October 2014.

In March 2019, in a regular review of the strategic goals of the GPW Group and an update of the timetables of implementation and the financial framework of strategic initiatives, the Exchange Management Board decided to review the financial targets. The financial targets after the review are as follows:

- ◆ revenue of the GPW Group - PLN 470 million in 2022,
- ◆ EBITDA - PLN 250 million in 2022,
- ◆ ROE - 19% in 2022,
- ◆ C/I under 50% percent after 2022,
- ◆ dividend from the 2019 profit at least PLN 2.4 per share; annual increase in the dividend from the 2020-2022 profits by at least PLN 0.1 per share; however, the dividend will be no less than 60% of the annual consolidated net profit of the GPW Group attributable to the GPW shareholders, adjusted for the share of profit of associates.

Under the strategy #GPW2022, the GPW Management Board pursues with dedication the published strategic initiatives aiming to strengthen the business position of the GPW Group.

Current list of the #GPW2022 strategic initiatives:

1. **Primary Market Development (GPW Growth)** – a comprehensive educational programme supporting SMEs. The project's pillar is the implementation and development of GPW Growth, a programme supporting company value creation through expansion based on external sources of financing, in particular the capital market;
2. **Securities Lending & Borrowing** – improved liquidity on the GPW Group's cash and derivatives markets through promotion and expansion of securities lending and borrowing;
3. **Derivatives Development** – new futures 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;
4. **GPW Private Market** – a platform matching companies and investors on the private market. Expansion of the GPW Group's offer for companies at all stages of growth;
5. **GPW Ventures** – an SPV to invest in venture capital funds (VC) as a passive investor. Financing instrument supporting growth of Polish venture capital and, in the longer term, IPOs in Poland;
6. **BondSpot Development** – a full range of products and services on the debt market, money market and market in derivatives based on bonds and interest rates on a single trading venue;
7. **Polish Rating Agency** – promotion of reliable ratings on the local fixed-income market, generating tangible benefits for the Polish economy in the mid-term;
8. **GPW Data** – business reporting standards ensuring automatic data processing and lower reporting costs for companies, use of big data technologies in collecting data relevant to capital market investments and generating reports, implementation of artificial intelligence (AI) tools supporting local and foreign investors;
9. **GPW TCA TOOL** – Transaction Cost Analysis (TCA). The project will develop a set of innovative tools to identify and analyse transaction costs as a source of information for investors and brokers on data aggregated at micro market level;
10. **Organised Trading Facility (OTF)** – transformation of TGE's forward commodity market into an organised trading facility (OTF) under MiFID II. The Project will allow TGE to further develop forward instruments with physical delivery of electricity and gas and financial instruments;
11. **Waste and Secondary Raw Materials Trading Platform** – electronic trading platform for waste and its recycling/disposal products. The waste platform will implement the EU model of circular economy;

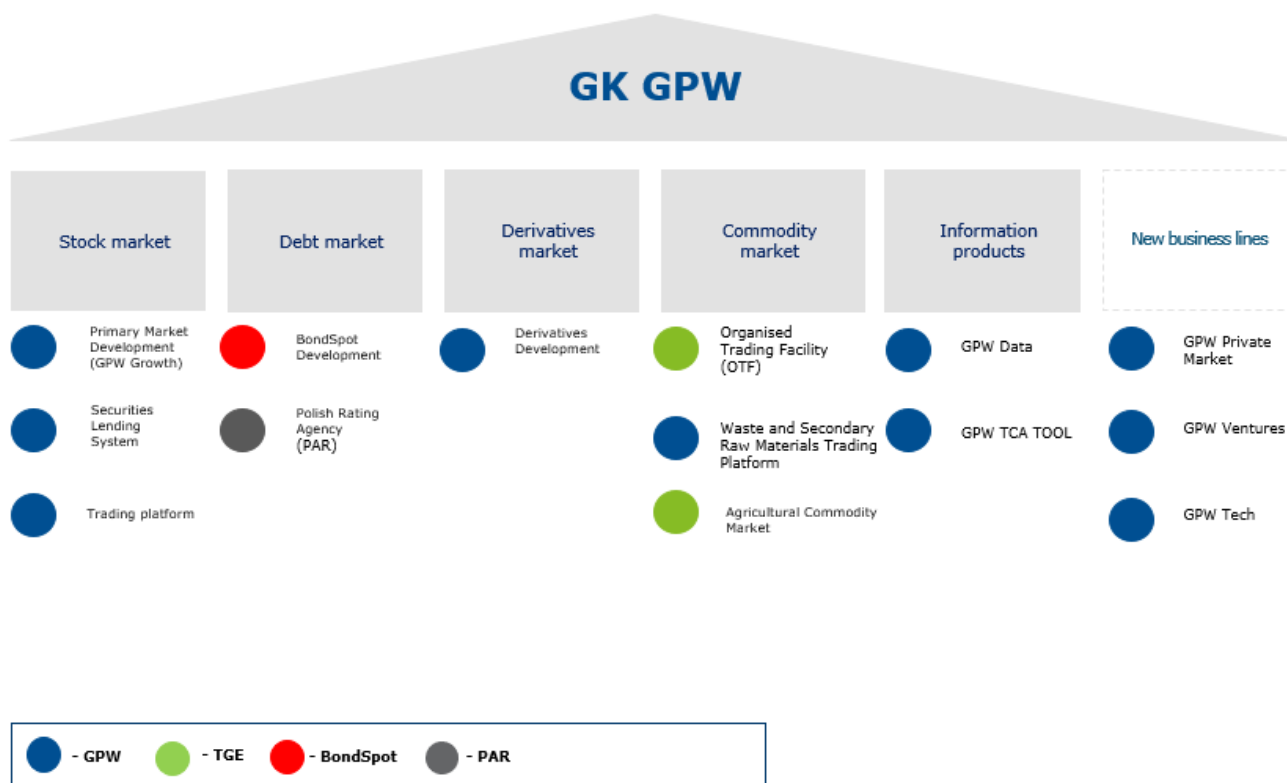
Under the growth strategy #GPW2022, the GPW Management Board pursues with dedication the published strategic initiatives aiming to strengthen the business position of the GPW Group.



- 12. **GPW Tech** – creation of a technology company providing commercial services and selling products to the capital market community;
- 13. **Trading Platform** – research and development work aiming to develop and implement a state-of-the-art integrated Trading Platform with breakthrough capacity and performance parameters and innovative communication protocols and trading algorithms;
- 14. **Agricultural Commodity Market** – the project will develop an electronic organised trading platform for agricultural and food products.

In addition, #GPW2022 includes a number of strategic initiatives which are not public at this stage. Such initiatives will be published depending on progress of work.

Chart 3 Public strategic initiatives under #GPW2022



Source: GPW

The updated growth strategy #GPW2022 provides for creation of shareholder value through the development of existing and new business lines and segments and continued profitability and risk management regime.

The strategy update focuses on four areas of growth of the GPW Group including:

- ◆ development of the core business,
- ◆ growth through diversification and expansion to new business areas,
- ◆ development of new technological solutions,
- ◆ continuation of the attractive dividend policy.

2.3. IMPLEMENTATION OF THE GPW GROUP STRATEGY IN 2019

Strategic initiatives under #GPW2022 were under implementation in 2019. The GPW Group reinforced the human resources of the key projects, and it monitored, reviewed and updated the initiatives. Projects under the updated strategy continued



in 2019. The implementation of the strategy is an on-going process. The initiatives under implementation are monitored and reported monthly and quarterly to the GPW Management Board and the Supervisory Board.

Some of the published strategic initiatives were completed in 2019 and some of them started realization:

- ✓ In March 2019, the Exchange Supervisory Board approved the launch of a new strategic initiatives, **GPW Tech**, which aims to develop a stand-alone technology company providing IT solutions for the capital market. The company GPW Tech was registered on 20 December 2019. The company will become the GPW Group's technological arm.
- ✓ In 2019, GPW launched the development of a proprietary **Trading Platform**. In July 2019, the National Centre for Research and Development (NCBR) and the GPW signed an agreement concerning EU co-financing of research and development dedicated to the creation of GPW's new trading platform. The project is estimated to cost approximately PLN 90 million, including PLN 30.28 million to be co-financed by NCBR. In September 2019, GPW opened a research and development centre in Łódź, where a team of experts will be working on the trading system.
- ✓ In August 2019, GPW launched development work dedicated to **GPW Data**. The National Centre for Research and Development (NCBR) granted EU co-financing to the GPW for its research and development work on GPW Data. The project budget is estimated at approximately PLN 8.3 million, of which PLN 4.2 million will be co-financed by NCBR. The project is expected to be rolled out in the latter half of 2021.
- ✓ In September 2019, the GPW Group Consortium signed a Memorandum concerning a partnership with Elewarr aiming to develop a network of authorised warehouses dedicated to storage of cereals traded on the Food Platform. The development of the **Food Platform** (Agricultural Commodity Market) is a key strategic project supporting the development of the agricultural sector in Poland. The development of an agricultural commodity exchange is a part of the government's Strategy for Responsible Development and a key strategic initiative under #GPW2022. Trade in wheat will open as a pilot in March 2020.
- ✓ In 2019, the GPW Group focused on ESG initiatives (Environmental, Social and Governance). The segment is very relevant to the Group as global assets invested in products based on ESG indices are growing fast. To address this challenge, the new index **WIG-ESG** launched on 3 September 2019 has become the underlying of a passive fund managed by NN Investment Partners TFI.
- ✓ In September 2019, GPW launched **GPW Growth** – a comprehensive educational programme supporting growth and transition of SMEs. The project will boost manager competences of participating companies and help them define directions of growth. The GPW Growth Academy was launched as a part of the programme in September 2019.
- ✓ The **GPW Ventures** project established a new company on 29 November 2019 to operate as a private/passive investor in venture capital funds and a financial vehicle for the development of the Polish venture capital market, improved innovative edge of the market, and more IPOs on GPW. The company was registered as an alternative investment company with a share capital of PLN 3 million.

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 2019, GPW's service offered attractive technologies and state-of-the-art solutions for clients in Poland and beyond. A new client was acquired in 2019.

Equity market

- ◆ **7 companies were newly listed on the Main Market in 2019** (including 5 transfers from NewConnect to the Main Market). 15 companies were newly listed on NewConnect in 2019. GPW promoted the exchange as a potential source of capital for companies. The GPW Growth project initiated in 2019 will support companies in building corporate value through expansion based on external sources of financing, in particular the capital market. Following the launch of Employee Capital Plans (PPK), GPW has seen gradually rising interest in the primary market among potential issuers who are working on IPOs.



◆ **Trading fee reductions:**

- ✓ A reduction of fees for market makers of non-WIG20 shares was effective throughout 2019. 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 2019. HVP is addressed to proprietary traders on the exchange. HVF is addressed to funds trading in heavy volumes.
- ✓ The Super Market Maker programme was in effect in 2019. 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 January 2019. The fee is capped at PLN 330 thousand per issuer per year. 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 as measured by velocity 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: four new futures on WIG.GAMES and macro-indices: WIG.MS-FIN, WIG.MS-BAS and WIG.MS-PET;
- ✓ Development of the structured products segment: in 2019, GPW acquired two new issuers of structured products: Societe Generale and Goldman Sachs;
- ✓ Five new exchange members: Credit Suisse Securities de Valores (Madrid), BofA Securities Europe (Paris), HRTEU Limited (Dublin), Liquidnet EU Limited (Dublin), UBS Europe SE (Frankfurt), Tower Research Capital Europe B.V. (Amsterdam);
- ✓ One new telecom operator: Colt;
- ✓ Development of the ETF segment: three new ETFs based on WIG20TR, mWIG40TR and WIGshort;
- ✓ New client of GPW's colocation service;
- ✓ Two new programmes dedicated to brokers were launched in 2019: the Analytical Coverage Support Programme and the Technology Development Support Programme. Both are two-year pilot programmes.
- ✓ Continued training dedicated to products offered to individual investors in partnership with brokerage houses and capital market institutions: over 50 training sessions were held.

◆ **Continued initiatives making NewConnect more attractive**

The capitalisation of companies listed on NewConnect was PLN 9.7 billion at the end of 2019. NewConnect-listed companies have raised approximately PLN 4.9 billion in IPOs and SPOs on NewConnect since the market opened on 30 August 2007. Over that period, 68 companies have transferred from NewConnect to the GPW Main Market. In 2019, 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 and initiatives addressed to start-ups such as IPO workshops and participation in conferences dedicated to start-ups and new technologies.

In July 2019, NewConnect was approved by the Polish Financial Supervision Authority as an SME Growth Market. The status relaxes certain obligations for issuers, mainly obligations under MAR (requirements for maintaining records of access to inside information and for publication of inside information), as well as prospectus requirements. The European Commission is working to simplify the procedure of transfers from MTFs to regulated markets. The Regulation as regards the promotion of the use of SME growth markets effective as of 31 December 2019 allows SME ATS issuers traded on the SME ATS for at least two years to prepare a "transfer" prospectus.



Debt market

In 2019, 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.

- ◆ 122 series of PLN bonds, 1 series of EUR bonds, 5 series of PLN covered bonds and 4 series of EUR covered bonds were introduced to trading in 2019.
- ◆ 12 new issuers issued and introduced bonds to trading on Catalyst: RCI LEASING POLSKA, POLSKI HOLDING NIERUCHOMOŚCI, MIASTO ZDUŃSKA WOLA, MIASTO SANOK, MIASTO RADOMSKO, KGHM POLSKA MIEDŹ, FABRYKA SPRZĘTU I NARZĘDZI GÓRNICZYCH GRUPA KAPITAŁOWA FASING, GMINA SIECHNICE, MIASTO SŁUPSK, GMINA WOŁOMIN, GMINA MIASTO KOSZALIN, LPP.
- ◆ 1 new issuer issued and introduced covered bonds to trading on Catalyst, i.e., ING BANK HIPOTECZNY S.A.

The biggest bond issues in 2019 were completed by:

- ✓ BGK – PLN 2.0 billion
- ✓ EIB – PLN 1.2 billion
- ✓ CYFROWY POLSAT – PLN 1.0 billion
- ✓ ENEA – PLN 1.0 billion
- ✓ PGE POLSKA GRUPA ENERGETYCZNA – PLN 1.0 billion

Derivatives market

New index futures: in 2019, to meet investor demand, GPW introduced several new classes of futures on the following indices:

- ✓ WIG.GAMES – developers and publishers of computer games,
- ✓ WIG.MS-FIN – banking, insurance, capital market, debt enforcement stocks,
- ✓ WIG.MS-BAS – energy, mining, commodities,
- ✓ WIG.MS-PET – fuels, gas, chemicals.

Commodity market

Key directions of development of the TGE strategy:

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.

According to the company's new strategy by 2022, approved in 2018, the key business objectives of the TGE Group in the coming years include:

- ✓ strengthening TGE's position as the biggest trading venue in energy and energy commodities in Poland by growing the volumes and liquidity of the markets;
- ✓ development of a broad range of products and services for wholesale trade in electricity and gas including exchange and OTC trading and new services of TGE Group companies;
- ✓ development of new trading platforms;



- ✓ strengthening the position of preferred partner of regional Transmission System Operators, regulators and the public administration in the development of national and regional markets of electricity and gas;
- ✓ development of strong, diverse relations with stakeholders in CEE markets.

TGE continued to implement its strategy in 2019, including the key elements:

- ✓ launch of the Financial Instruments Market in July 2019, which offers trade in CO2 emission allowances as one the key measures of TGE's alignment with MiFID II;
- ✓ continued preparation of the transition of the Commodity Forward Instruments Market into an OTF (Organised Trading Facility) under MiFID II according to the application filed with PFSA in December 2018 for an authorisation as an organised trading facility (OTF). TGE expects to be authorised in Q1 2020 and to transform the Commodity Forward Instruments Market into an OTF;
- ✓ successful completion of the pan-European intra-day market XBID in November 2019;
- ✓ continued development of the Agricultural Market. Implemented by a GPW Group consortium (GPW, TGE, IRGiT), the project will establish a food platform and launch spot trade in a selected agricultural commodity (wheat). The pilot will run from March 2020 till the end of August 2020;
- ✓ development of the Secondary Power Market project which will establish a secondary market for the power market based on the TGE Group's technology and organisation to address the needs and capacity of market participants. The work in 2019 focused on the development of a market concept with contributions from market participants, as well as the drafting of necessary legal amendments. The project established a task force comprised of representatives of market participants;
- ✓ continuation of the Data Commercialisation project which will develop and implement a new solution supporting sale of market data, statics, and research based on TGE's IT resources.

Existing business lines – areas of development:

Development of the electricity market

◆ **Development of the spot electricity market**

- ✓ maintaining the position of TGE as the leading Nominated Electricity Market Operator (NEMO) on the local energy market with active acquisition of new wholesale market participants;
- ✓ 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);
- ✓ review and implementation of spot market modifications in line with the "Clean Energy for All Europeans" package in partnership with the transmission system operator.

◆ **Development of the forward electricity market and related markets**

- ✓ 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) following the implementation of MiFID II;
- ✓ acquiring new market makers based on the TGE/IRGiT offer structured in 2019 and its development plans;
- ✓ continuation of other initiatives improving liquidity on the forward market, including the "Top Market Maker" programme, and addressed to TGE's non-market maker clients participating in the "Maker-Taker" programme where variable fees charged to the counterparty initiating a transaction are reduced by up to 75%. The incentives were designed in order to reduce average market spreads, resulting in more liquidity and higher volumes of forward trade in electricity;
- ✓ active participation in continued development of solutions for the operated markets.

Development of the gas market

◆ **Development of the spot gas market**

- ✓ maintenance of liquidity of the Intraday 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.

◆ **Development of the forward gas market**

- ✓ continued preparation of the transition of the Commodity Forward Instruments Market into an OTF (Organised Trading Facility) under MiFID II. TGE has applied to PFSA for a licence to operate an OTF. The terms of trade on the exchange do not change during the application process;
- ✓ acquiring new market makers based on the TGE/IRGiT offer structured in 2019 and its development plans;
- ✓ continuation of the market maker incentive scheme, "Top Market Maker", rewarding one market maker on the gas market every month with additional fee reductions.

Development of TGE Registers

In the fifth year of operation of the Register of Guarantees of Origin, TGE expanded the register's functionalities by offering trade in guarantees of origin of electricity from high-efficiency cogeneration. TGE is considering to introduce into trading guarantees of origin of electricity from biomethane, hydrogen, cool and heat under the European regulations.

Gas hub

The gas hub is a government project under the Strategy for Responsible Development. The project was co-ordinated by the Ministry of Energy on behalf of the public administration. TGE participated in project work and focused on the organisation of trade in gas in the future gas hub. The work included the development of optimum solutions improving the liquidity of the gas market and making it more attractive to Polish and international market participants.

The gas hub project is complementary to the diversification project Northern Gateway and the regional co-operation initiative of the Three Seas. The success of these endeavours will improve the technical capacity of gas supplies from different sources to Poland. The capacity is expected to increase to 61 bn m³ of natural gas per year after 2022.

The gas hub and its integral part, a gas exchange operated by TGE, will in the future concentrate trade in gas in the region.

Information services

Fast growth of the sale of non-display data: in 2019, with focused client acquisition initiatives, GPW has signed 41 new agreements for non-display products covering exchange data and the reference rates WIBID and WIBOR (used in algorithmic trading, risk management, portfolio valuation, systematic internalisers, and other non-display applications);

Continued increase in the number of subscribers: 5 entities from Poland and abroad were licensed as GPW Group data vendors;

Nine new clients in Poland and the UK are now using processed data;

Licence agreements were signed with two companies which use GPW indices in financial instruments: NN Investment Partners TFI with the new index WIG-ESG used in the first passive fund (NN FIO Indeks Odpowiedzialnego Inwestowania), and Goldman Sachs with WIG20;

Modification of the product offer and the business model among others under the requirements 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 (BMR).

Planned initiatives under the GPW Group's Strategy in 2020

In 2020, the GPW Group expects to generate further tangible benefits as a result of its initiatives, thus strengthening the business position of the GPW Group and diversifying its revenue sources in the coming years.

The strategic initiatives selected for further development and implementation in 2020 include:

◆ **Agricultural Commodities Market**

Trade in wheat (pilot running from March to August 2020) in spot transactions with physical delivery under two trading systems:

- ✓ single-price auction system – regular, weekly trading sessions offering trade in standardised contracts for wheat;
- ✓ auctions – ad-hoc selling auctions held by the Exchange on the request of suppliers of the commodity.



To summarise, spot trade in wheat in the single-price auction system and at auctions will open in the first step. The Agricultural Market is a strategic project under the Strategy for Responsible Development by 2020 / 2030. The expected benefits of the Food Platform include:

- ✓ development of agricultural commodity production and state-of-the-art trading systems;
- ✓ improved competitiveness of agricultural and food operators;
- ✓ concentration of supply of domestic agricultural and food commodities;
- ✓ security of transactions and market stability;
- ✓ standardised contracts and terms of trading;
- ✓ reduced transaction costs, mitigated trading and price risks;
- ✓ food security;
- ✓ effective presentation of the domestic offer of agricultural and food commodities.

After the pilot (running from March to August 2020), the market will be developed further including:

- ✓ new spot instruments;
- ✓ new forward contracts;
- ✓ additional commodities (e.g., concentrated apple juice, maize, white sugar, skimmed powder milk, pork semi-carcasses).

The order in which new products will be introduced into trading depends on market conditions.

◆ **Organised Trading Facility (OTF)**

TGE is planning to align its markets with the new Organised Trading Facility. Depending on OTF authorisation, TGE may in the future consider the introduction of new instruments to its offer.

◆ **GPW Private Market**

The GPW Private Market will enable companies on the private market to use a range of financing and development products starting in 2020. The dedicated platform will match companies and potential investors. It is expected to rely on blockchain technology. The Private Market will assist start-ups in raising funding. The new solution will comprise two key modules. One module will support companies in need of capital with crowdfunding campaigns and stock issues addressed to selected investors. The other module will offer secondary trade in shares of such companies.

◆ **Securities Lending & Borrowing System**

GPW is planning to launch the System in partnership with KDPW in 2020. The date of the launch depends on external factors including legislative amendments which are beyond GPW's control. The System will promote short-selling of securities in Poland. Compared with the USA or Western Europe, the Polish market is at an early stage of development of short-selling. Short-selling allows traders to make returns when prices are falling. It is also used to hedge the long end of securities portfolios. Institutional investors use short-selling opportunistically in addition to their core strategies. Used consistently and deliberately, short-selling may mitigate portfolio risks. The Securities Lending & Borrowing System will improve the quality of the order book (by reducing the ask/bid spread and improving order book depth), reduce transaction costs for investors, and drive securities trade on GPW's platforms.

◆ **Trading Platform**

GPW is planning to focus even more on technology development in 2020, which requires additional IT human resources. The research and development centre in Łódź, which is working on the new Trading Platform, is planning to hire approximately 40 staff.

◆ **Waste Trading Platform**



The waste market concept will go operational in 2020. Aligned with the EU model of circular economy, it will offer functionalities and services for the waste market. The Waste Platform is conceived as a pure trading venue, not involved in physical delivery of waste. The structure and functionalities of the platform will depend on forthcoming legislative amendments.

The implementation of the strategy in 2020 will continue to align the technology infrastructure and expand the offer of investment instruments available on the GPW Group's markets. In the opinion of the Management Board, those efforts will provide long-term benefits: establishing relations with new groups of investors and access to additional sources of revenue.

2.3.1. EXTERNAL DRIVERS OF THE GROUP'S GROWTH

Macroeconomic conditions in Poland and globally

Global growth slowed down in 2019 as international trade dwindled in the wake of the trade wars (USA vs. China) and uncertainties on the economic and political front. Poland's economy performed much better in 2019 than expected early in the year. The fiscal stimulus and growing income levels bolstered private consumption while public expenditure drove gross capital formation. The Polish Monetary Policy Council kept the interest rates unchanged in 2019. GDP growth in Poland was 4.1 percent in 2019.

In early 2020, global economic growth remained low but stable. However, with the spread of the coronavirus, the outlook of the global economy sharply declined. Containment measures imposed by many governments, including transport and service restrictions, combined with declining consumer and business sentiment, weakened the activity across many economies. In this context, many governments announced fiscal measures to mitigate the economic impact of the coronavirus and business interruptions. The leading central banks strongly relaxed the monetary policy.

The conditions in the Polish economy were relatively favourable in the early months of 2020. However, the coronavirus epidemic restricted economic activity. Inflation in Poland stood at 4.7% in February 2020. Expectations of weaker economic growth and a sharp drop of global oil prices will drive inflation down in the coming months of 2020. As a result, according to projections of the National Bank of Poland, inflation is likely to remain below NBP's target within the time horizon of the monetary policy.

The Monetary Policy Council cut the interest rates for the first time in more than five years on 17 March 2020:

- the reference rate from 1.5 percent to 1 percent,
- the Lombard rate from 2.5 percent to 1.5 percent,
- the deposit rate unchanged at 0.5 percent,
- the bill of exchange rediscounting rate from 1.75 percent to 1.05 percent.

The National Bank of Poland will provide liquidity to the banking sector through repo operations. NBP will also purchase Treasury bonds on the secondary market in structural open market operations which will change the long-term liquidity mix in the banking sector and help to maintain liquidity on the secondary market in government bonds. NBP will offer credit to refinance new loans issued by banks to companies.

On 18 March 2020, the Polish government presented a support programme composed of five pillars (known as an "anti-crisis shield") to support the economy and mitigate the impact of the coronavirus. According to estimates, the programme is worth PLN 212 billion (ca. 9% of GDP).

2.4. BUSINESS LINES

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.

2.4.1. FINANCIAL MARKET

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.

TRADING

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

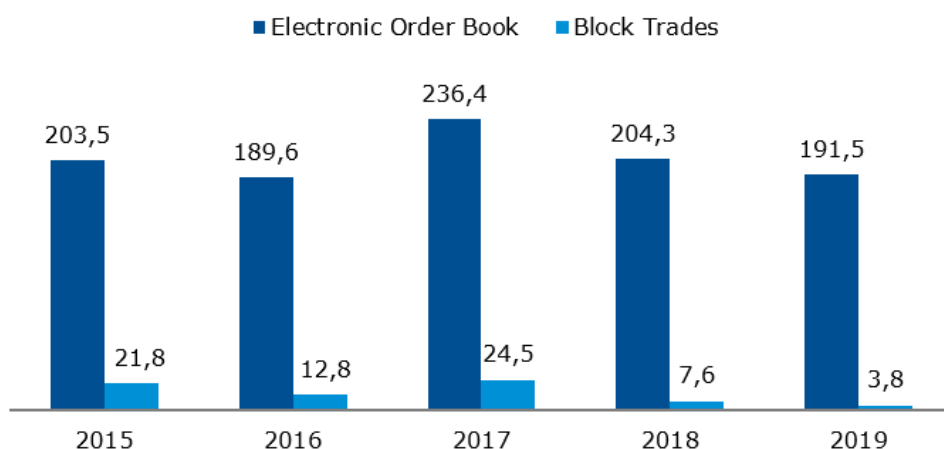
Chart 4 Financial instruments in trading on the GPW Group financial markets



Stock market

The value of trade in shares on the electronic order book (EOB) on the GPW Main Market was PLN 191.5 billion in 2019, representing a decrease of 6.3% year on year (PLN 204.3 billion in 2018). The average daily value of trade on the was PLN 772 million in 2019, a decrease of 6.7% year on year (PLN 827.0 million in 2018). The number of transactions was 17.9 million in 2019, a decrease of 1.1% year on year (18.1 million in 2018). There were 248 trading sessions in 2019 vs. 247 sessions in 2018.

Figure 19 Value of trade in shares on the Main Market [PLN billion]

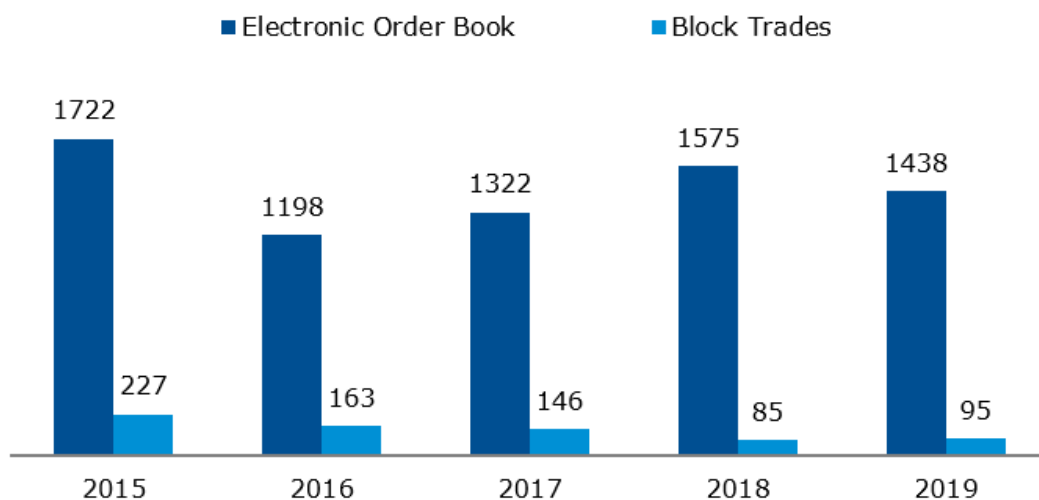


The value of trade on the electronic order book on NewConnect decreased by 8.7% year on year to PLN 1,437 million in 2019 and the value of block trades increased by 11.0% year on year to PLN 94.6 million in 2019. The number of transactions on the electronic order book was 817.5 thousand in 2019, an increase of 8.2% year on year.

GPW organised the second edition of the GPW Innovation Day, an investor event where listed companies, including NewConnect companies, meet with individual and institutional investors, on 2 April 2019. GPW organised in 2019 the second and third edition of the Gaming on the Exchange event dedicated to investing in the dynamically growing computer gaming industry. GPW initiated a new conference series, Business in the Genes, exploring the potential of biotechnology companies in 2019. GPW is planning to hold conferences in a similar format dedicated to investment themes in 2020.

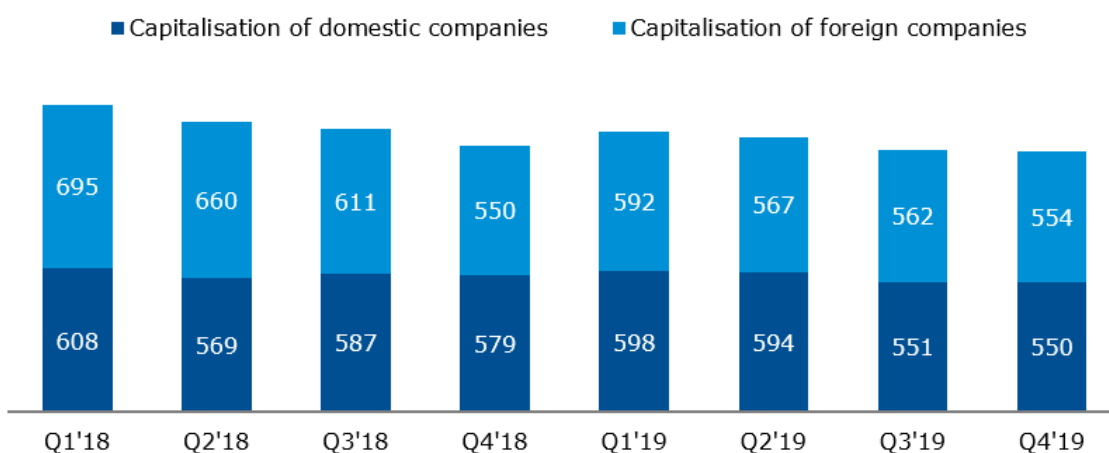
NewConnect is actively promoted among companies which could potentially be interested in listing on NewConnect. A dedicated Department of GPW regularly meets with individual companies and takes part in industry and thematic conferences to promote GPW's alternative market.

Figure 20 Value of trade in shares on NewConnect [PLN million]



The capitalisation of domestic companies listed on the Main Market was PLN 550 billion at the end of 2019. The capitalisation of foreign companies listed on the Main Market was PLN 554 billion at the end of 2019.

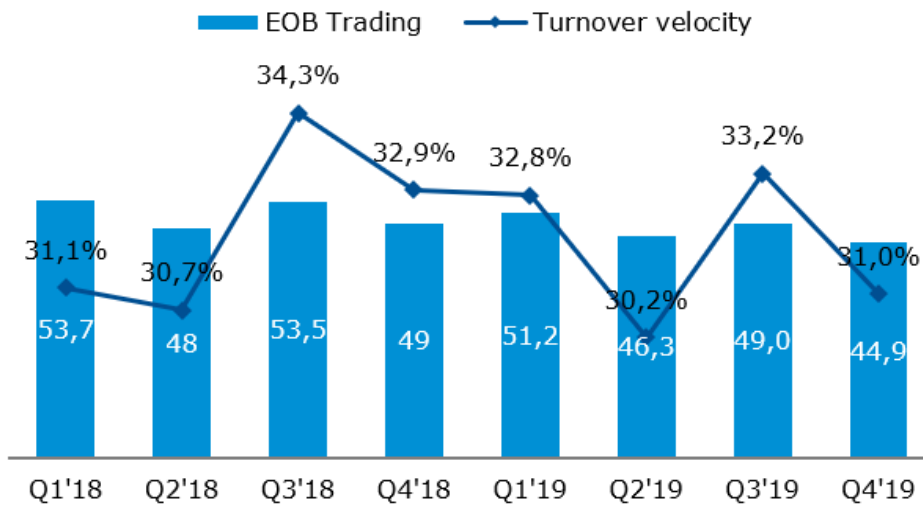
Figure 21 Capitalisation of domestic and foreign companies on the Main Market [PLN billion]



The **velocity ratio** reached the year's high of 33.2% in Q3 2019. The annual velocity ratio was 31.8% in 2019 vs. 32.3% in 2018.



Figure 22 Turnover in shares on the Main Market [PLN billion] and 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.

The colocation service was opened to GPW's clients in Q1 2016. The service is dedicated to algorithmic traders seeking the closest possible access to GPW markets for themselves and for their clients. GPW attracted one new client in 2019. The colocation service is a key part of the capital market infrastructure which supports the segment of electronic liquidity providers and improves liquidity of the order book.

GPW attracted five new Exchange Members in 2019: Credit Suisse Securities de Valores (Madrid), BofA Securities Europe (Paris), HRTEU Limited (Dublin), Liquidnet EU Limited (Dublin), UBS Europe SE (Frankfurt), Tower Research Capital Europe B.V. (Amsterdam).

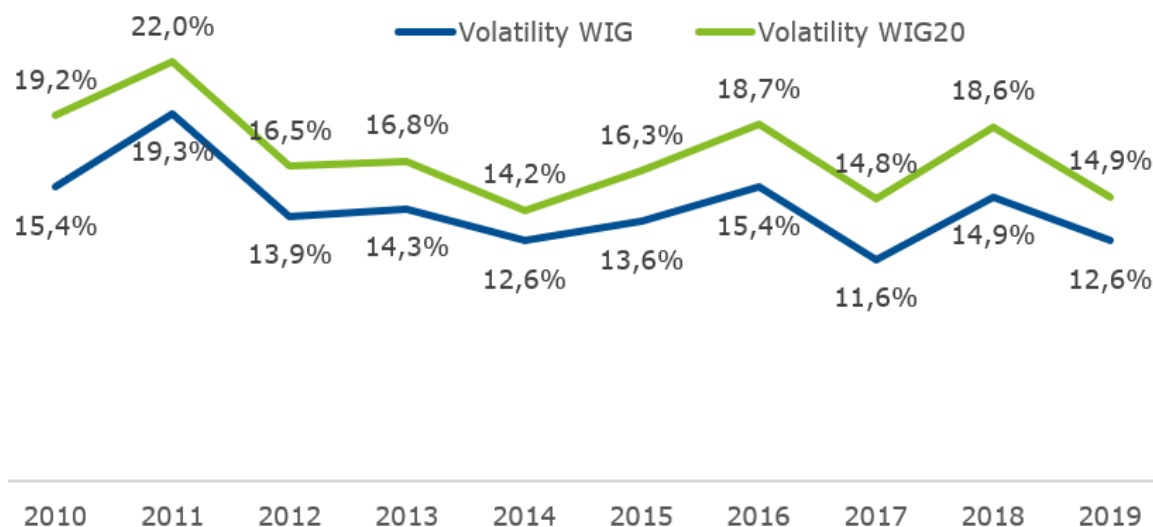
The Super Market Maker programme was in effect in 2019. The programme supported liquidity of the cash market and the volume of trade in shares of the biggest companies participating in the WIG20 portfolio. The programme imposed much higher requirements for market makers' orders on GPW (size, spread) 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.

- ♦ **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 trade 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 trade 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. Trade under the HVP programme is aggregated on a monthly basis.
- ♦ **High Volume Funds (HVF) Programme:** the 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 trade in shares exceeding PLN 5 million or 150 futures and options. The velocity ratio of a fund, calculated as the turnover generated within three months to the fund's net asset value, should be at least 200 percent per three months.

All these initiatives were designed to improve liquidity. However, volatility remains a key parameter impacting investors. After a strong rise in 2018, volatility dropped again in 2019.



Figure 23 Annual volatility of WIG and WIG20



Other cash market instruments

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

Table 13 Number of structured products, investment certificates, ETFs and warrants

As at 31 December (#)	2019	2018	2017	2016	2015
Structured products (certificates)	1 220	1 151	942	784	702
Structured products (bonds)	1	0	1	0	0
Investment certificates	36	33	36	37	30
ETFs	6	3	3	3	3
Warrants	0	0	0	0	0

In total, GPW listed 1,220 structured products that were investment certificates, 1 structured product based on a bond, 36 investment certificates, and 6 ETFs at the end of 2019, and the total value of trade in those instruments was PLN 1.54 billion in 2019 vs. PLN 1.11 billion in 2018 (+39.4% YoY). Structured products had the biggest share in total trade (85.0%), followed by ETFs (11.3%).

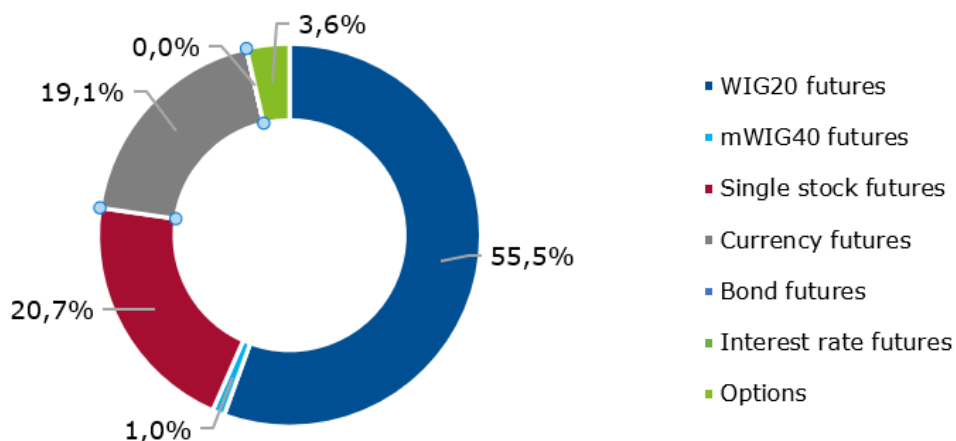
Derivatives market

The Warsaw Stock Exchange operates the biggest derivative market in Central and Eastern Europe. WIG20 futures have for years been the most liquid instrument that generates the highest volume of trading on GPW, representing 55.5% of the volume of trade in all derivatives in 2019 (54.5% in 2018, 59.1% in 2017, 58.7% in 2016, 54.1% in 2015, 63.7% in 2014, 65.4% in 2013).

The volume of trade in single-stock futures accounted for 20.7% of the total volume of derivatives trade in 2019 (15.9% in 2018). The share of currency futures in the volume was 19.1% in 2019 (19.1% in 2018).



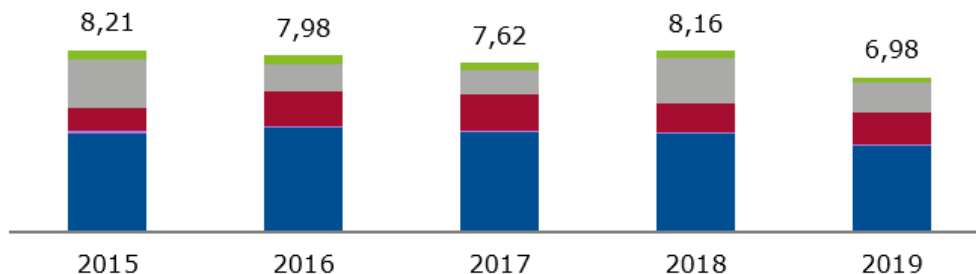
Figure 24 Structure of volume of trade in derivatives in 2019 by category of instrument



The total volume of trade in derivatives was 6.98 million instruments in 2019, a decrease of 14.5% compared to 8.16 million instruments in 2018. The decrease was mainly driven by a falling volume of trade in WIG20 futures, from 4.45 million in 2018 to 3.88 million in 2019, and a decrease of the volume of trade in currency futures, from 2.04 million to 1.33 million contracts. The number of open interest was 171.2 thousand as at 31 December 2019, an increase of 19.2% year on year (143.6 thousand as at 31 December 2018).

Figure 25 Volume of trade in futures, EOB and block trades [million instruments]

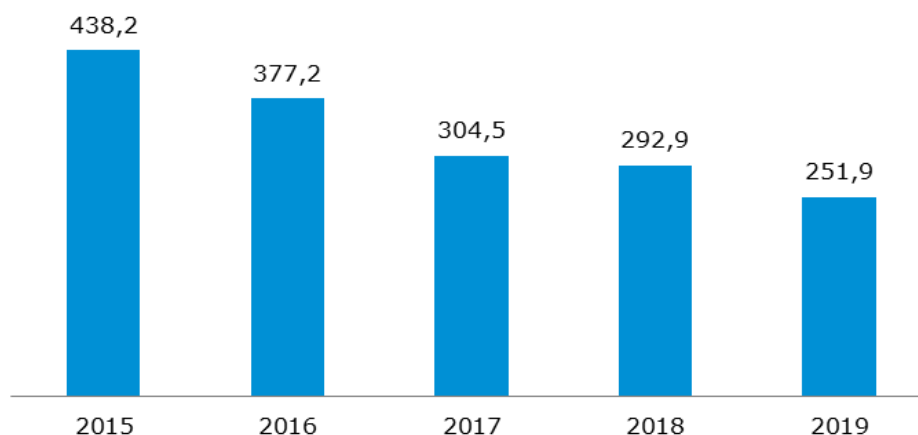
■ WIG20 futures ■ mWIG40 futures ■ Single stock futures
■ Currency futures ■ Other



The total volume of trade in options was 251.9 thousand instruments in 2019, a decrease year on year (292.9 thousand in 2018).



Figure 26 Volume of trade in options, EOB and block trades [thousand instruments]



The activity of investors on the derivatives market is largely driven by the volume of trade on the underlying instrument market but it is even more sensitive to volatility than investor activity on the cash market. The volatility of WIG20 on the cash market was lower in 2019 than in previous years and reached 14.9% in 2019 compared to 18.6% in 2018. 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 102 in 2019 compared to 121 in 2018, 112 in 2017, and 110 in 2016.

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 2019. The share of programme participants in the volume of trade in derivatives on GPW in 2019 was 10.0% for index futures and 10.5% for single-stock futures vs. 9.2% and 9.3%, respectively, in 2018.

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 trade in non-Treasury instruments on the electronic order book on the markets operated within Catalyst was PLN 1,725 million in 2019 vs. PLN 1,629 million in 2018 (an increase of 5.9% year on year) and the value of block trades was PLN 119 million in 2019 vs. PLN 337 million in 2018. The total value of trade in non-Treasury and Treasury instruments on Catalyst was PLN 2,912 million in 2019 vs. PLN 2,571 million in 2018, representing an increase of 13.3% year on year.



Figure 27 Structure of trade on Catalyst (EOB and block trades) in 2019 by instrument

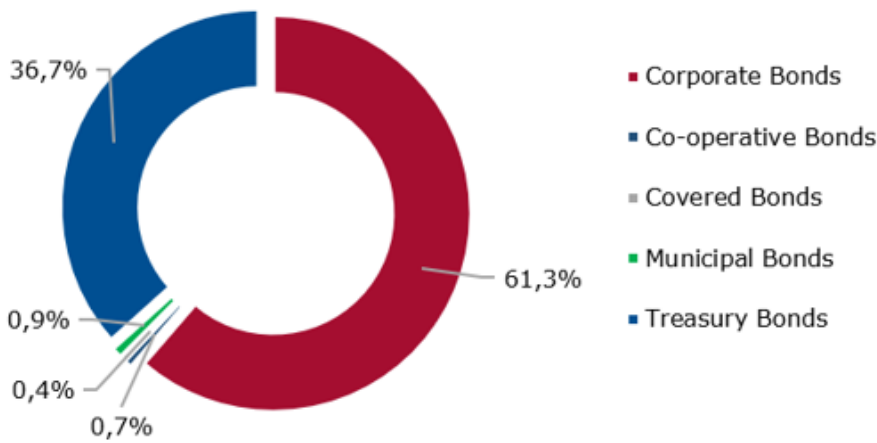


Figure 28 Value of trade on Catalyst, EOB and block trades [PLN million]

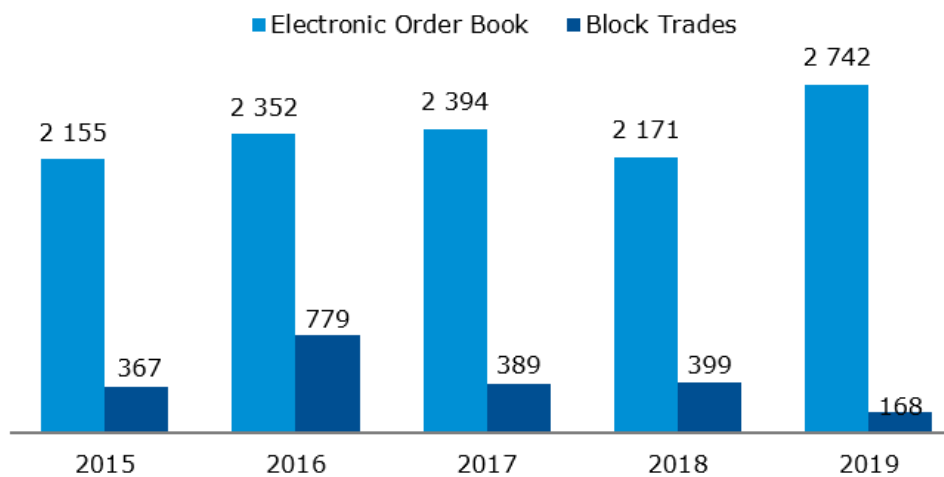
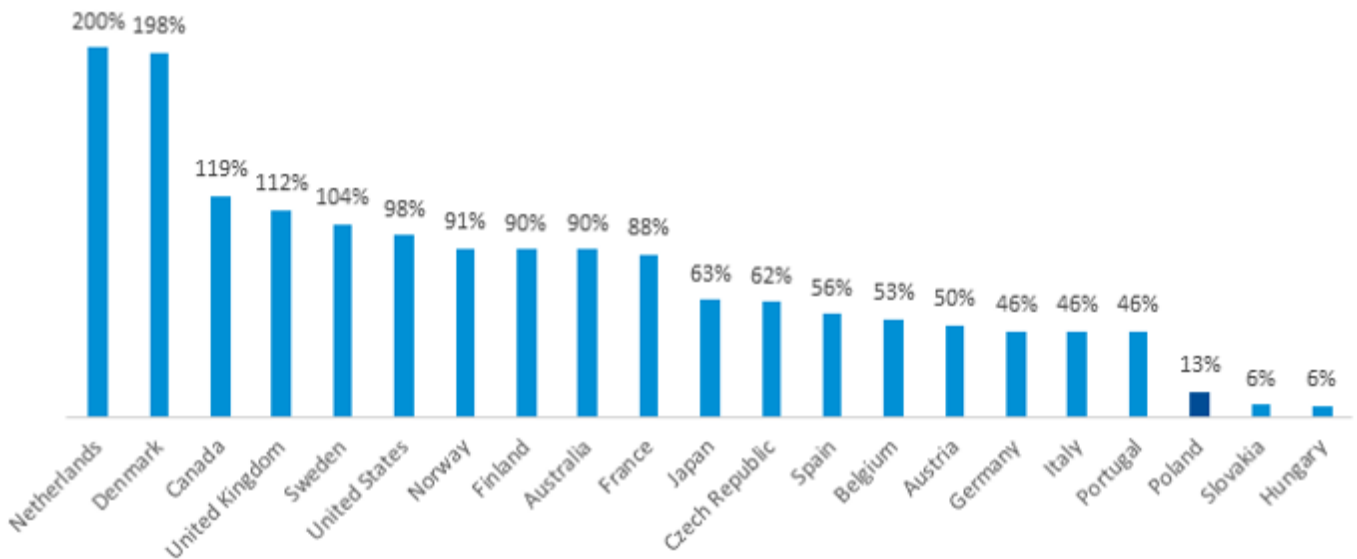


Figure 29 Outstanding non-Treasury bonds to GDP [%]



Source: BIS (non-Treasury bonds as at the end of Q2 2019 – most recent available data); IMF (estimated 2019 GDP, based on "Gross domestic product, current prices, USD")



In 2019, GPW offered a range of initiatives in Poland to introduce companies and local governments to financing options available on all GPW markets. Regional conferences presented ways to raise capital by issuing bonds. Initiatives addressed to local governments included training in bond issues for city treasurers and GPW's participation in conferences dedicated to the debt market in Poland. GPW participated in the 17th Local Government Capital and Finance Forum in Katowice held on 2-3 October 2019. The event promoted among others local government financing with instruments offered on the markets operated by GPW.

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).

Activity of TBSP market participants was bolstered by measures initiated in previous years and continued in 2019, which ensure optimum solutions for a liquid, safe and transparent market, a broad offer of products addressing the needs of market participants, and competitive costs of market participation.

Activity on TBSP in 2019 was driven mainly by market conditions impacting the local interest rate market, which affected the yields and prices on the local Treasury bond market. Those conditions included the plans of the Polish Monetary Policy Council (RPP) to keep the rates unchanged by the end of 2020 (it was lowered in March 2020), as well as a limited supply of bonds at auctions held by the Ministry of Finance, mainly due to a strong public budget and the achievement of the Ministry of Finance's 2019 target sales of Treasury securities in 2018.

Trading on the market was also affected by the banking tax, which encourages banks to keep Treasury securities in their assets as such securities reduce the taxable base. As a result, the share of domestic banks among all holders of Treasury securities has increased to the disadvantage of non-residents. The tax affects the activity of banks on the secondary market of conditional transactions (sell/buy back and repo) by curbing the tenors while also directly impairing trading in repos at the end of each month.

As at 31 December 2019, TBSP had 29 market participants (banks, credit institutions, investment firms).

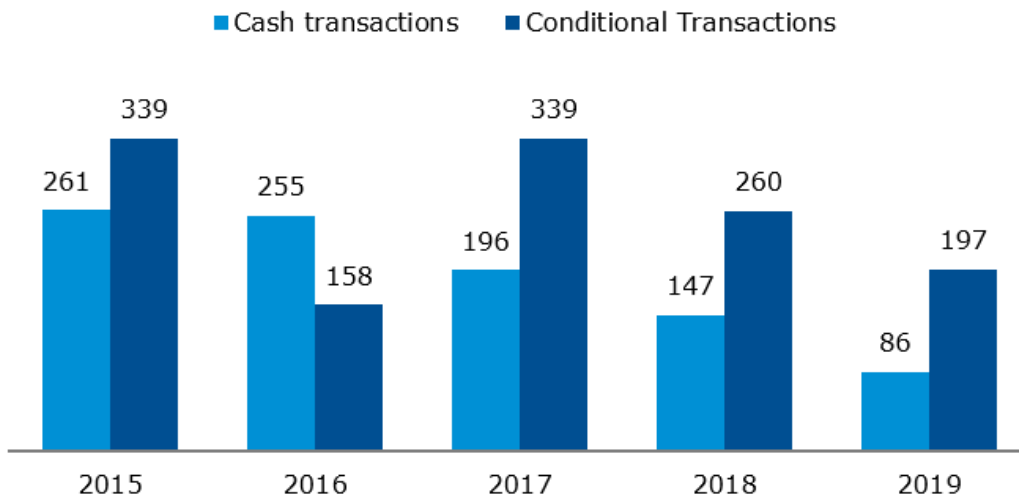
Participation in TBSP changed in 2019 as follows:

- ◆ two market participants discontinued their activity:
 - ✓ Merrill Lynch International stopped operating as a market maker (in August),
 - ✓ Nest Bank S.A. stopped operating as an institutional investor (in July),
- ◆ three entities started operating on the market as market makers (in April):
 - ✓ Morgan Stanley Europe SE,
 - ✓ Barclays Bank Ireland PLC,
 - ✓ BofA Securities Europe SA.

Treasury BondSpot Poland held 248 trading sessions from 1 January to 31 December 2019. The total number of transactions was 7,390. The total value of trade was PLN 282,439.81 million, a decrease of 30.7% year on year. The average value of trade per session was PLN 1,138.87 million. The share of cash transactions and conditional transactions (BuySellBack/SellBuyBack and Repo Classic) in total trade on TBSP was 30.4% (PLN 85,864.16 million) and 69.6% (PLN 196,575.65 million), respectively, in 2019.



Figure 30 Value of trade on Treasury BondSpot Poland [PLN billion]



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 824 companies at the end of 2019 (449 companies on the Main Market and 375 on NewConnect), including 54 foreign issuers (852 listings including 57 foreign issuers at the end of 2018).

Figure 31 Number of domestic and foreign companies – Main Market

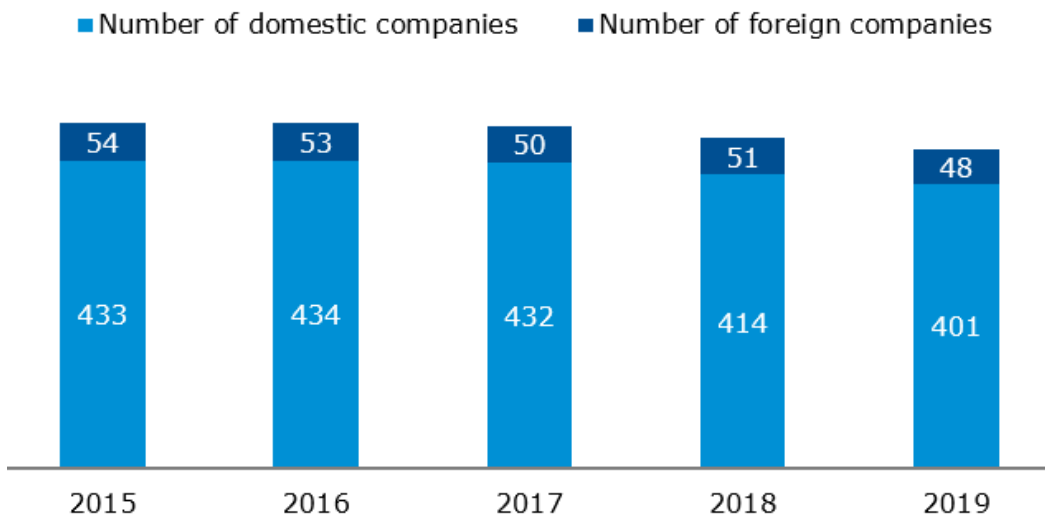


Figure 32 Number of domestic and foreign companies - NewConnect

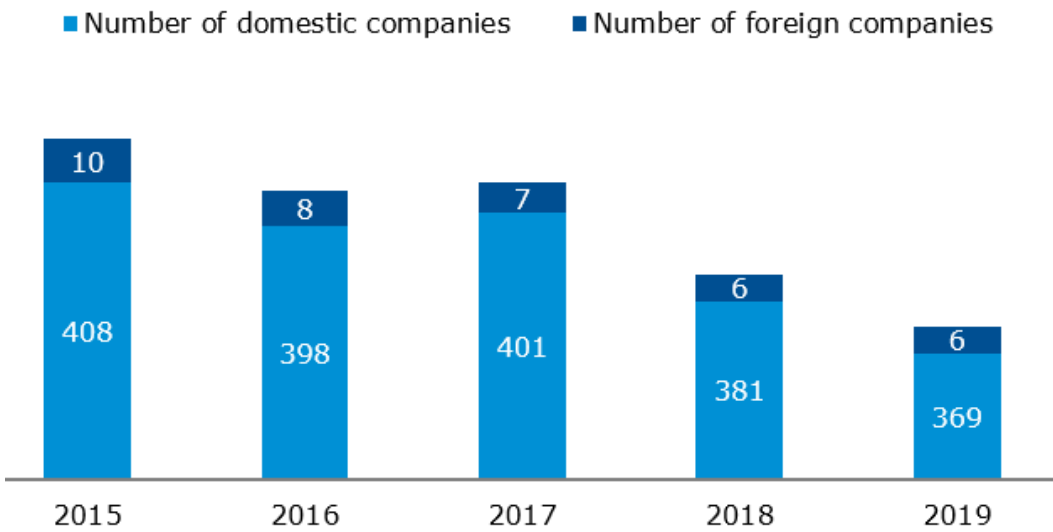
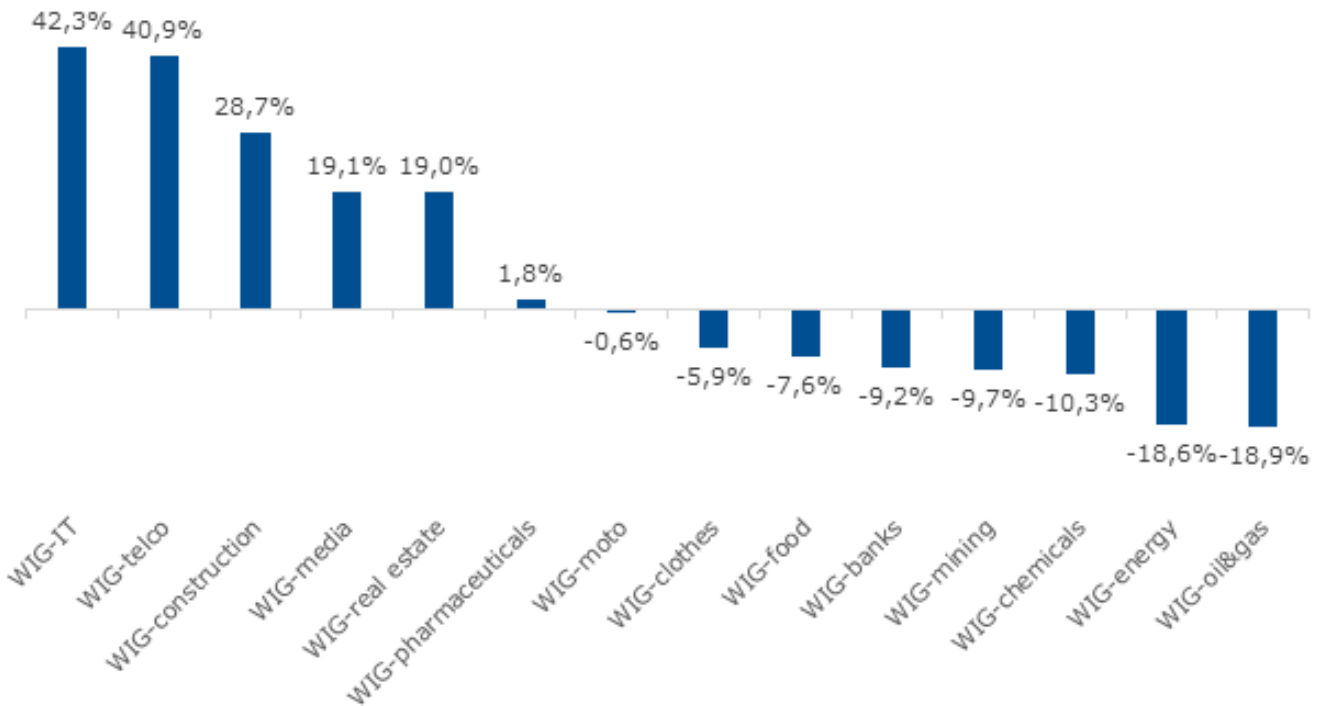


Figure 33 Change in sector indices in 2019 [%]



The total capitalisation of domestic and foreign companies on GPW's two equity markets was PLN 1,113 billion at the end of 2019 vs. PLN 1,136 billion at the end of 2018, a decrease of 2.0% year on year. The change in sector indices was different in different sectors. The biggest return rate in 2019 was generated by WIG-IT, WIG-Telecom, and WIG-Real Estate.

There were 22 new listings on GPW's two stock markets in 2019 (including 5 companies which transferred from NewConnect to the Main Market) vs. 22 new listings in 2018. The total value of IPOs on the two stock markets was PLN 0.076 billion in 2019 (PLN 0.346 billion in 2018) and the value of SPOs was PLN 8.104 billion in 2019 (PLN 5.356 billion in 2018 and PLN 90.8 billion in 2017: the strong increase in the value of SPOs in 2017 was driven by the SPO of UniCredit S.p.A worth PLN 55.9 billion in Q1 2017).



Figure 34 Capitalisation of domestic and foreign companies – Main Market and NewConnect [PLN billion]

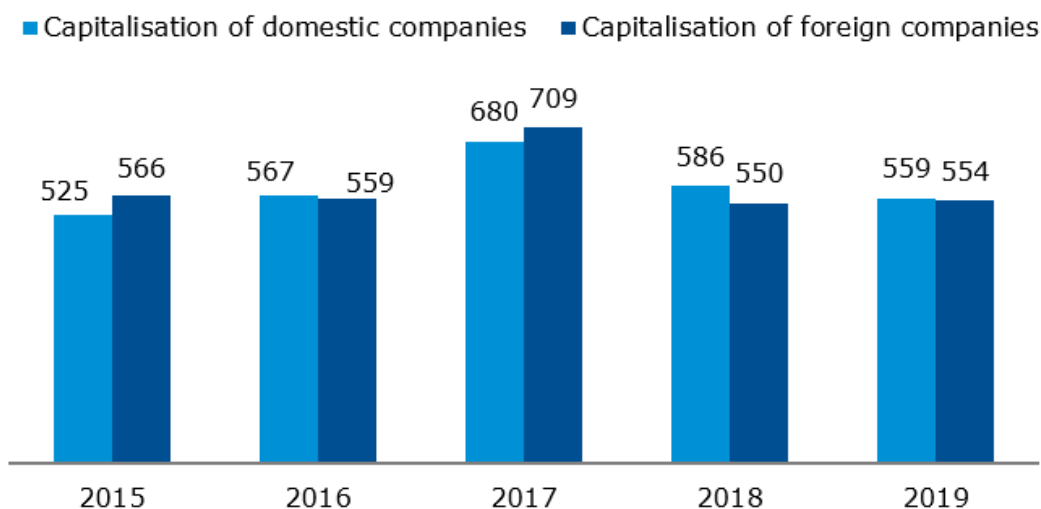
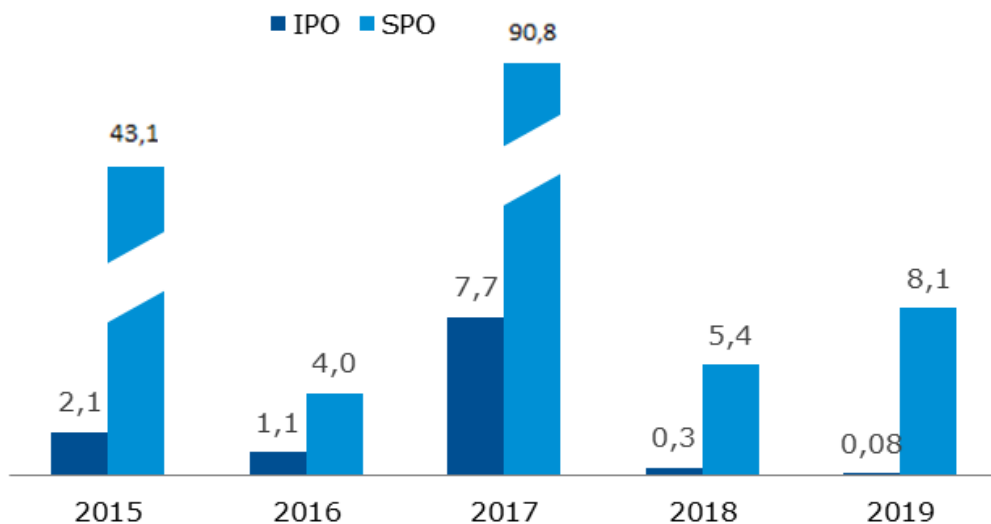


Figure 35 Value of IPOs and SPOs – Main Market and NewConnect [PLN billion]^{11 12}



The nominal value of non-Treasury debt listed on Catalyst was PLN 92.1 billion at the end of 2019, an increase of 6.4% year on year (PLN 86.6 billion at the end of 2018). Catalyst listed 512 series of non-Treasury debt instruments at the end of 2019 vs. 527 in 2018. Issuers whose instruments were listed at the end of 2019 included 27 local governments (vs. 20 in 2018), 99 enterprises (vs. 107 in 2018), and 14 co-operative banks (vs. 16 in 2018). Including the State Treasury, the number of issuers on Catalyst was 145 at the end of 2019 vs. 148 161 at the end of 2018.

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 including: real-time and delayed stock exchange data and statistical and historical data in the form of a statistical e-mail daily bulletin, electronic publications, calculation of indices, other calculations, and index licenses. In addition to data from GPW, TGE, BondSpot and GPW Benchmark, the Company distributed reports of issuers listed on NewConnect and Catalyst to data vendors in 2019.

¹¹ Including dual-listed companies

¹² There were two SPOs of Banco Santander SA worth PLN 33 billion in aggregate in Q1 2015 and an SPO of UniCredit S.p.A worth PLN 55.9 billion in Q1 2017



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.

At the end of 2019, GPW had data vendors in Austria, Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Ireland, the Netherlands, Norway, Switzerland, the United Kingdom, the USA.

As at 31 December 2019, the GPW Group’s information services clients were 83 data vendors, including 37 domestic and 46 foreign ones, with subscribers using professional and basic data feeds.

Figure 36 GPW Group data vendors [#]

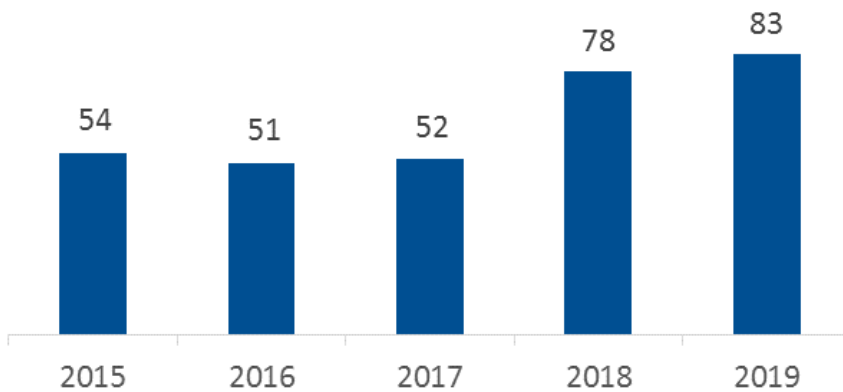
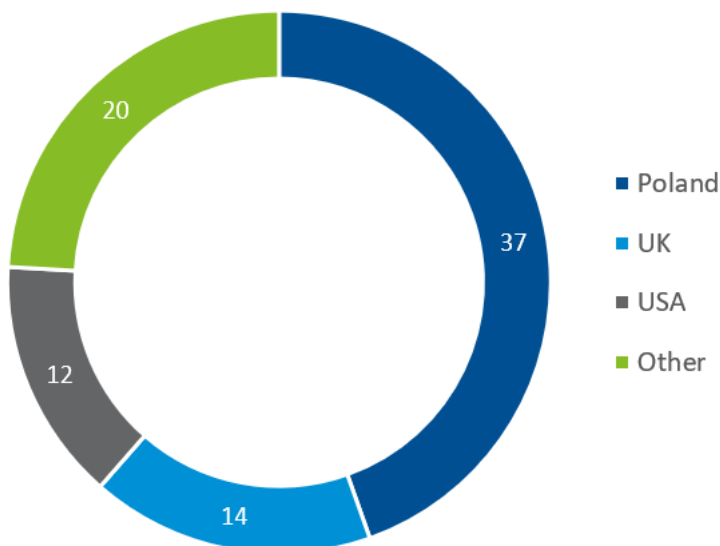


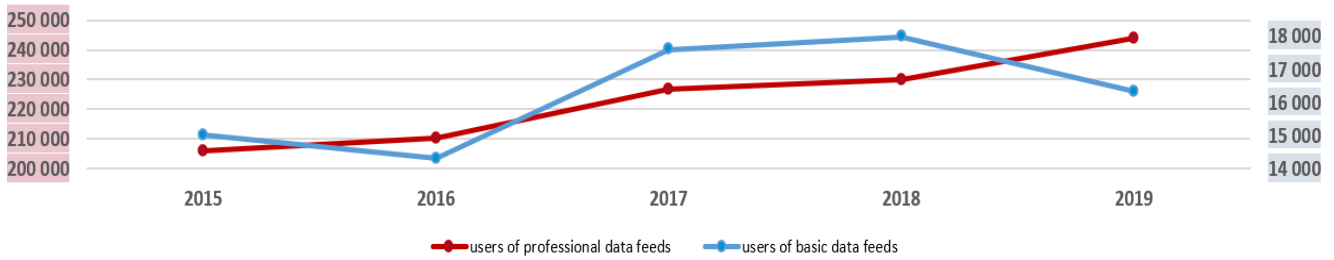
Figure 37 GPW Group data vendors by country [#]



Individual and professional subscribers

The GPW Group reported an increase of the number of real-time data subscribers who are users of basic data feeds.

Figure 38 GPW Group data subscribers [#]



Non-display users of GPW Group data

Following intensive acquisition initiatives, GPW has signed 41 new agreements for selling non-display data (used in algorithmic trading, risk management, portfolio valuation, systematic internalisers, and other non-display applications).

The sale of non-display licences for WIBOR data was a key driver of growth of this business line in 2019.

Figure 39 Non-display users of GPW Group data [#]

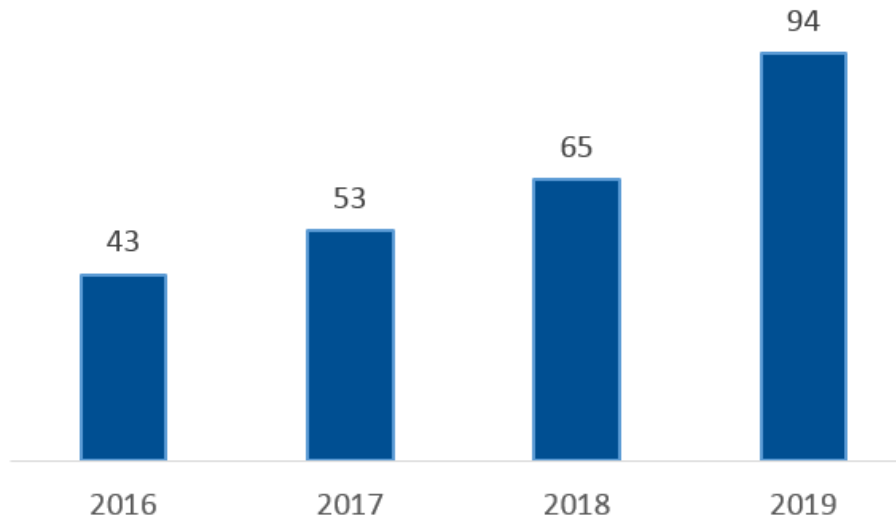
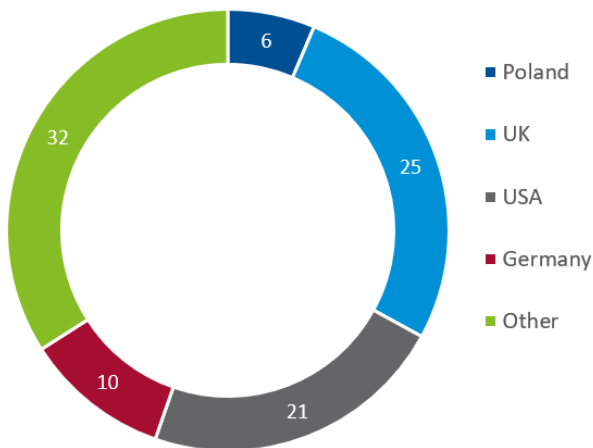


Figure 40 Non-display users of GPW Group data by country [#]



Processed data and benchmarks

In addition to real-time and delayed data, GPW offers a broad range of advanced value-added information products used by financial institutions in analytics. Diverse data and indicators are available in packages addressed to specific segments of the financial market in user-friendly formats.

The main users of processed data and benchmarks in 2019 included investment funds, banks, news agencies, pension funds, brokers and insurers.

Figure 41 Users of processed data and benchmarks [#]

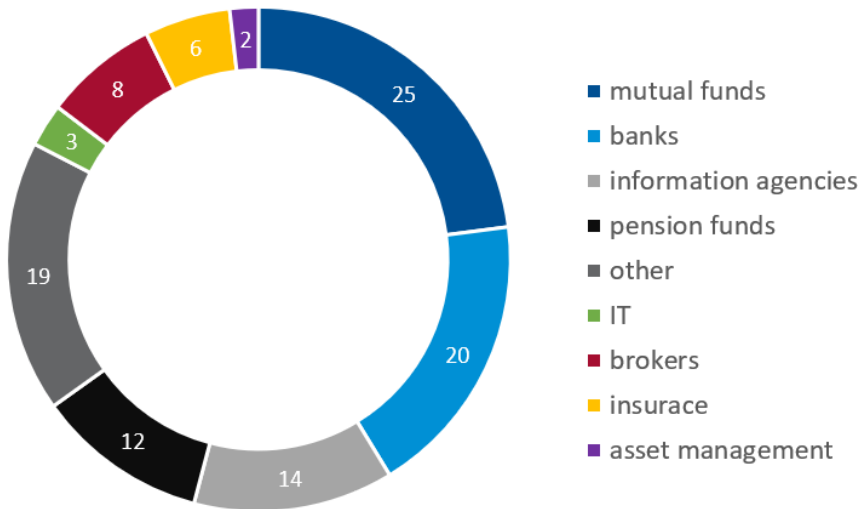
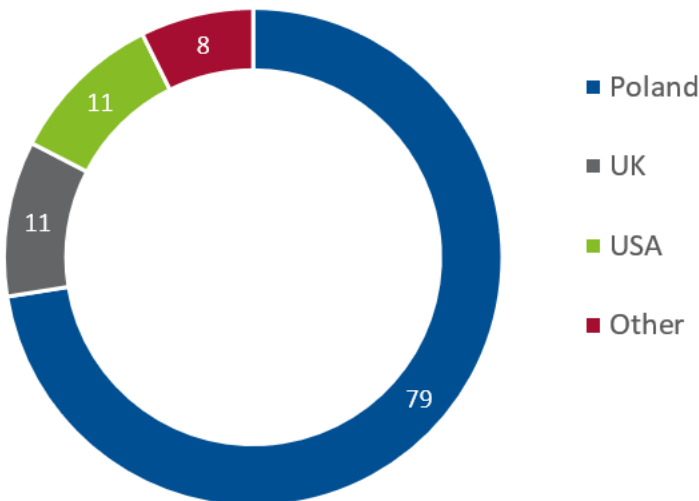


Figure 42 Users of processed data and benchmarks by country [#]



Issuers of financial products – users of GPW indices as the underlying

Index names are registered trademarks. Financial instruments whose name includes an index name require the issuer to sign a licence agreement with GPW.

Two new licence agreements for the use of GPW indices were signed in 2019. The agreement with NN Investment Partners TFI was a milestone: it concerns the use of the new index WIG-ESG in the first passive fund (NN FIO Indeks Odpowiedzialnego Inwestowania) which was newly listed in GPW on 3 September 2019.



GPW signed an agreement with Goldman Sachs concerning the use of WIG20 in certificates.

Figure 43 Issuers of instruments based on GPW indices [#]

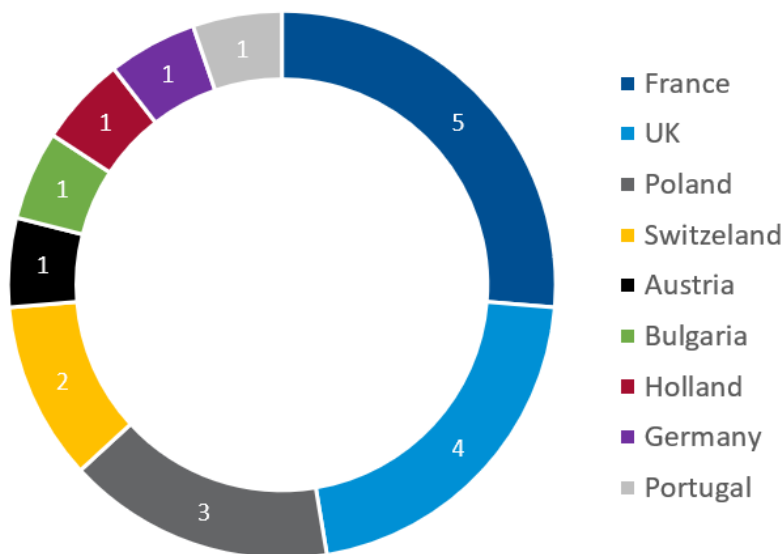


Table 14 Number of data vendors and subscribers, as at 31 December

	2019	2018	2017	2016	2015
Number of real-time data vendors	83	78	52	51	54
– domestic	37	36	27	27	30
– foreign	46	42	25	24	24
Number of real-time data subscribers [thou.]	260.3	247.9	244.4	224.4	220.9
– number of subscribers using professional data feeds	16.3	17.9	17.6	14.3	15
Number of non-display users of GPW data	94	65	53	43	-
Number of licensees using GPW indices as the underlying of financial products	19	17	18	18	18

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;
- ✓ licences for television stations using real-time data feeds for limited presentation in public financial programming;
- ✓ licences for clearing houses to use GPW Group data.

2.4.2. 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 OTC platform InfoEngine. The activity of the Towarowa Giełda Energii Group includes:

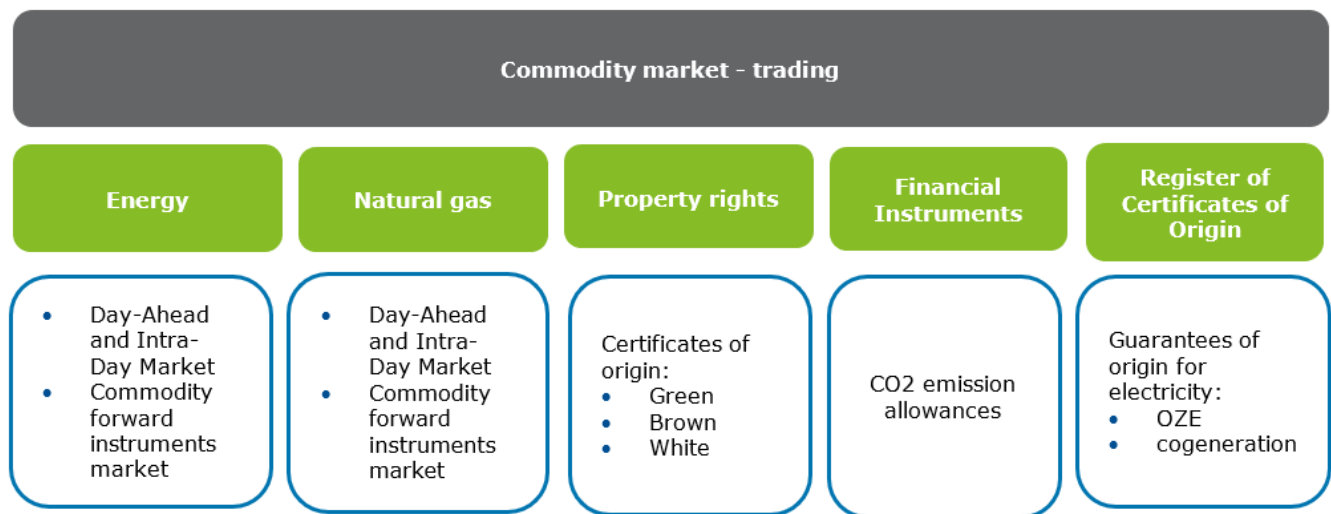
- ♦ operation of a commodity exchange which offers trade in:
 - ✓ electricity;
 - ✓ natural gas;



- ✓ emission allowances;
- ✓ property rights in certificates of origin of electricity, biogas and energy efficiency;
- ✓ commodity derivatives settled in cash;
- ♦ operation of the Register of Certificates of Origin and the Register of Guarantees of Origin;
- ♦ operation of the trade reporting system TGE RRM;
- ♦ clearing of transactions on the commodity exchange.

TRADING

Chart 5 Trading on TGE commodity markets



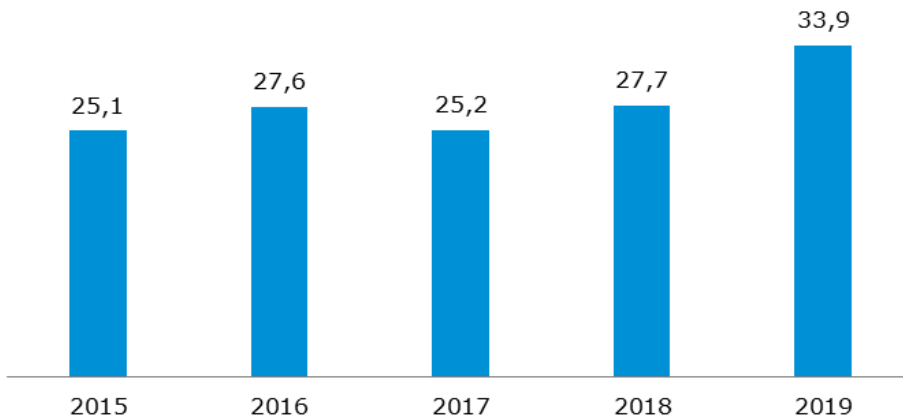
Electricity market

- ✓ Day-Ahead and Intra-Day Market

The volume of trade increased by 22.4% year on year in 2019, setting a historical record of 33.9 TWh. It was the first year that the market benefited from recent changes to the mandatory trade scheme. The increase in trade was also driven by TGE's participation in the international intra-day market, which TGE joined in late November 2019.



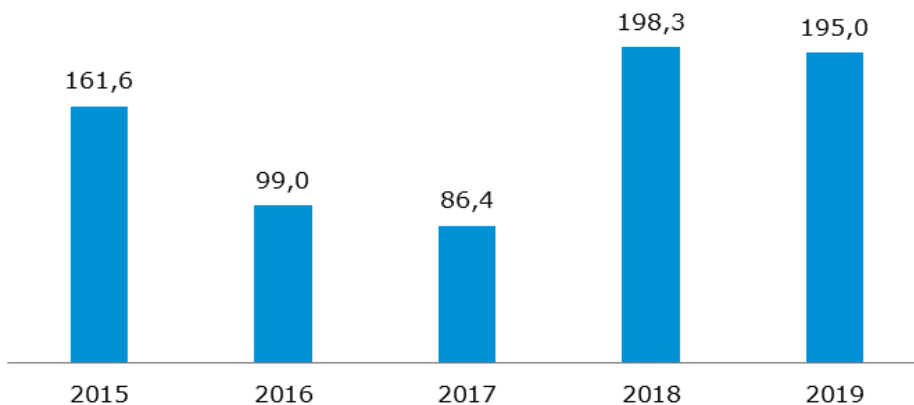
Figure 44 Volume of trade in electricity on the Day-Ahead and Intra-Day Market [TWh]



✓ Commodity Forward Instruments Market in Electricity

The volume of trade dropped by 1.7% year on year to 195.0 TWh in 2019. Despite the year-on-year decrease, it was TGE's second-best trading volume ever, generated despite uncertainties concerning compensation for energy traders for keeping mid-2018 retail prices of energy, stabilisation of wholesale prices, and new exclusions from mandatory trade of produced energy on the competitive market.

Figure 45 Volume of trade in electricity on the Commodity Forward Instruments Market [TWh]



Gas market

- ✓ Day-Ahead and Intra-Day Market in Gas
- ✓ Commodity Forward Instruments Market in Gas

The total volume of trade on the gas markets was 146.1 TWh in 2019, representing an increase of 2.0% year on year and a historical record. The volume of trade on the Day-Ahead and Intra-Day Market in Gas was 22.6 TWh, a decrease of 4.4% year on year. The volume of trade on the Day-Ahead Market in Gas was 16.9 TWh (a decrease of 3.7%) and the volume of trade on the Intra-Day Market in Gas was 5.7 TWh (a decrease of 6.3%). The volume of trade on the Commodity Forward Instruments Market in Gas was record-high at 123.5 TWh, up by 3.2%. The trade was driven by continued year-on-year increase in gas consumption and the gas transmission system input volume in H1 2019. However, the transmission system input volume dropped in Q3. Record-low spot prices did not cause trade to shift to the spot market to a significant extent, and the forward volumes were high.



Figure 46 Volume of trade in natural gas on the Day-Ahead and Intra-Day Market [TWh]

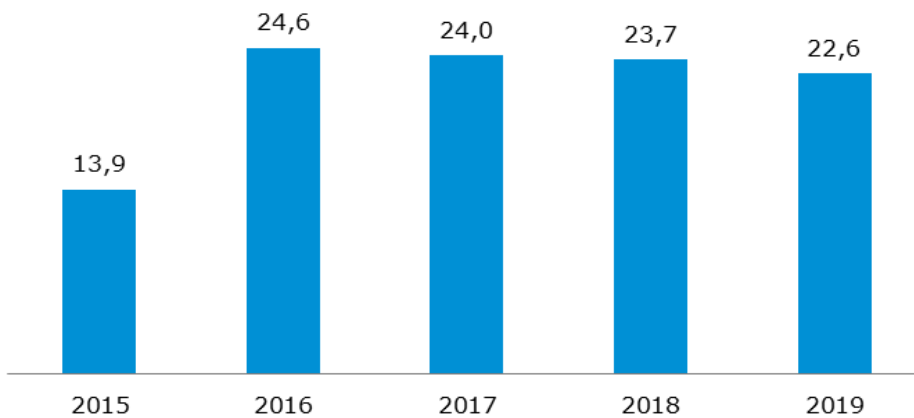
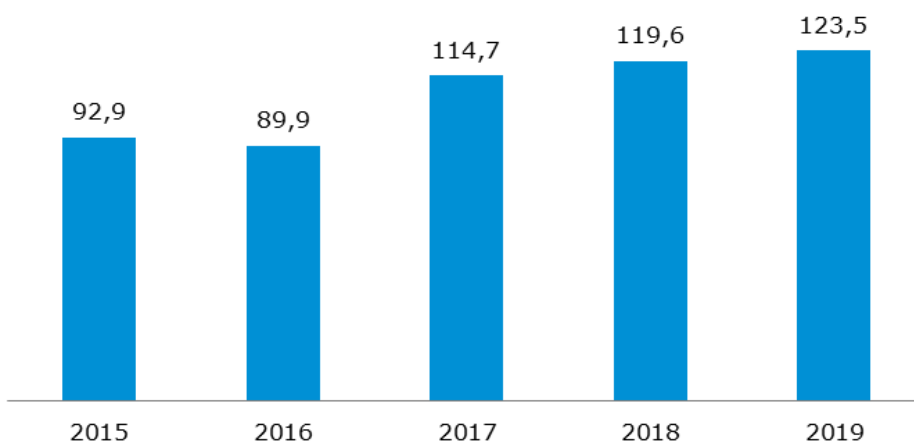


Figure 47 Volume of trade in natural gas on the Commodity Forward Instruments Market [TWh]



Property Rights Market

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

- ◆ from renewable energy sources (PMOZE and PMOZE_A, known as green certificates),
- ◆ in high-efficiency cogeneration (PMGM, known as yellow certificates; P MEC, known as red certificates; and PMMET, known as purple certificates). Note: The scheme expired at the end of June 2019.

Furthermore, the Property Rights Market lists:

- ◆ property rights in certificates of origin of biogas (PMBG, known as brown certificates),
- ◆ property rights in certificates of origin of agricultural biogas (PMOZE-BIO, known as blue certificates),
- ◆ property rights in energy efficiency certificates (PMEF, 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 trade on the Property Rights Market is driven by the number of certificates issued in the Register of Certificates of Origin: increased production of energy generates the obligation to issue more certificates of origin, which in turn generates an increase of the volume of certificates of origin available on the market.



The volume of trading in RES instruments (PMOZE, PMOZE_A and PMOZE-BIO) was 11.7 TWh at sessions and 14.2 TWh off sessions in 2019. Supply dwindled due to stabilisation of prices of green certificates and the phasing out of the support scheme for old RES units (more than 15 years old), affecting the trading volumes of the instrument.

The volume of trade in cogeneration instruments (PMEC, PMGM, PMMET) was 5.2 TWh at sessions and 12.8 TWh off sessions. June 2019 was the last month of the cogeneration support scheme based on energy certificates.

The volume of trade in white certificates (PMEF, PMEF-2018, PMEF-2019, PMEF_F) increased in 2019 to 435.7 ktoe at sessions (up by 52.6%) and 56.5 ktoe off sessions. The volume of trade in energy efficiency certificates was exposed to strong uncertainty in H1 2019 due to late adoption of the Energy Efficiency Act, which extended the PMEF instruments for another two years (until 30 June 2021). PMEF prices per 1 toe dropped from PLN 320 to PLN 25 in H1, boosting speculative trade. As PMEF-2018 is strongly correlated with PMEF, the liquidity of the latter also increased in late June. Following the publication of the Energy Efficiency Act, supply of certificates increased sharply due to the requirement to meet the 2019-2020 obligation, boosting trade volumes significantly. It was also possible to fulfil the obligation for the past three years until 30 June 2019, and many entities did so.

Figure 48 Volume of trade in property rights to certificates of origin [TWh]

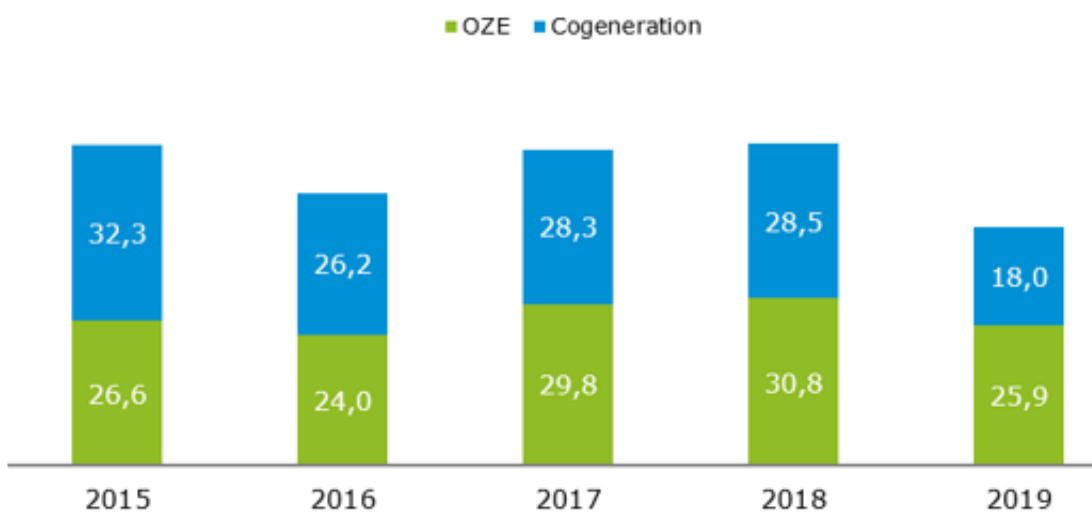
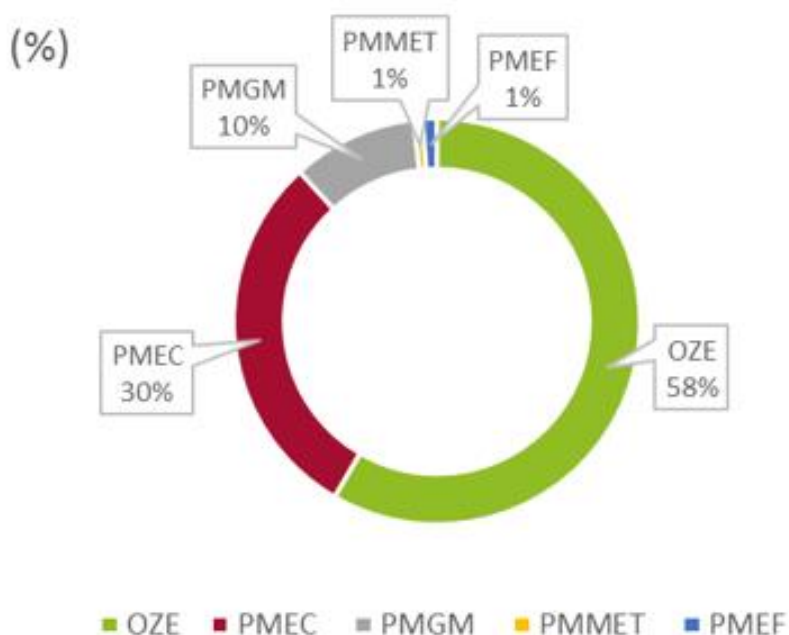


Figure 49 Volume of trade in property rights in 2019 by type of certificate



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 in high-efficiency cogeneration. Note: this scheme expired at the end of June 2019;
- ◆ 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:

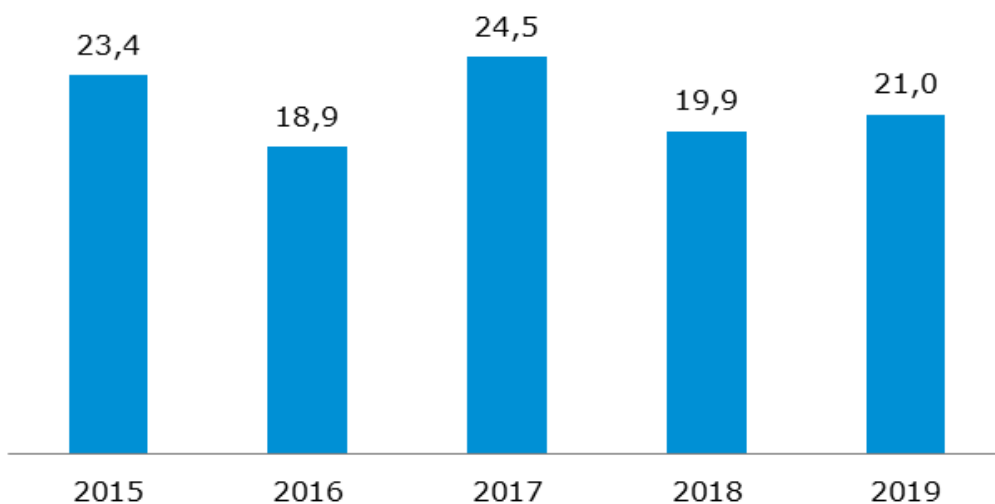
- ◆ to identify entities entitled to property rights in certificates of origin;
- ◆ to identify property rights under certificates of origin and the corresponding quantity of electricity;
- ◆ to register certificates of origin and the resulting property rights;
- ◆ to record transactions in property 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 Office 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 21.0 TWh in 2019, an increase of 5% year on year (19.9 TWh in 2018). The increase in the volume of issued certificates was driven by delayed issuance of certificates by the Energy Regulatory Office.

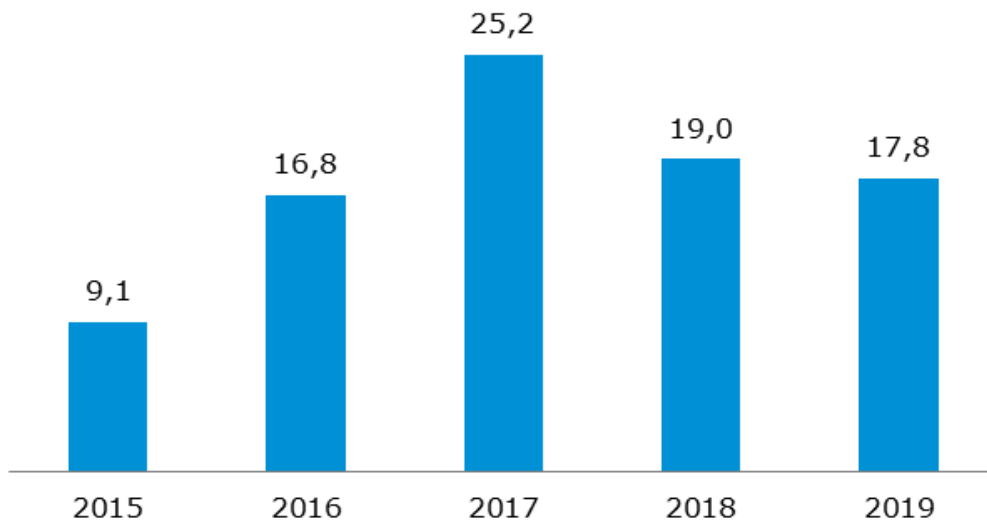
Figure 50 Volume of issued RES property rights [TWh]



The volume of cancelled green certificates was 17.8 TWh in 2019 vs. 19.0 TWh in 2018. Despite an increased obligation to cancel RES certificates of origin (19% in 2019; 17% in 2018), the volumes of cancelled certificates decreased.



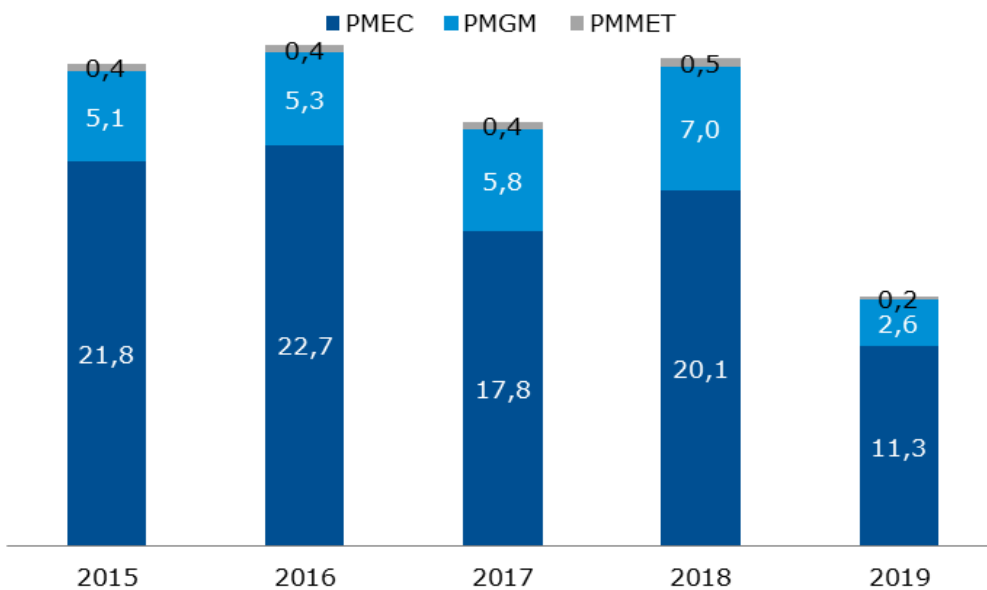
Figure 51 Volume of cancelled RES property rights [TWh]



Cogeneration: red, yellow, and purple certificates

The total volume of issued cogeneration certificates was 14.1 TWh in 2019, a decrease of 49% year on year (27.6 TWh in 2018).

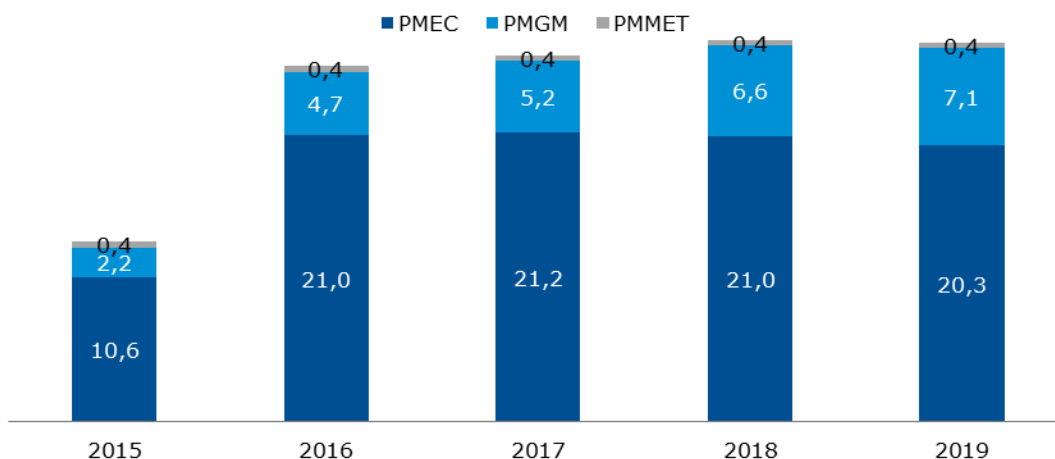
Figure 52 Volume of issued cogeneration property rights [TWh]



The total volume of cancelled red, yellow, and purple certificates was 27.9 TWh in 2019 vs. 28.0 TWh in 2018, a decrease of 1%.



Figure 53 Volume of cancelled cogeneration certificates of origin [TWh]



Energy efficiency: white certificates

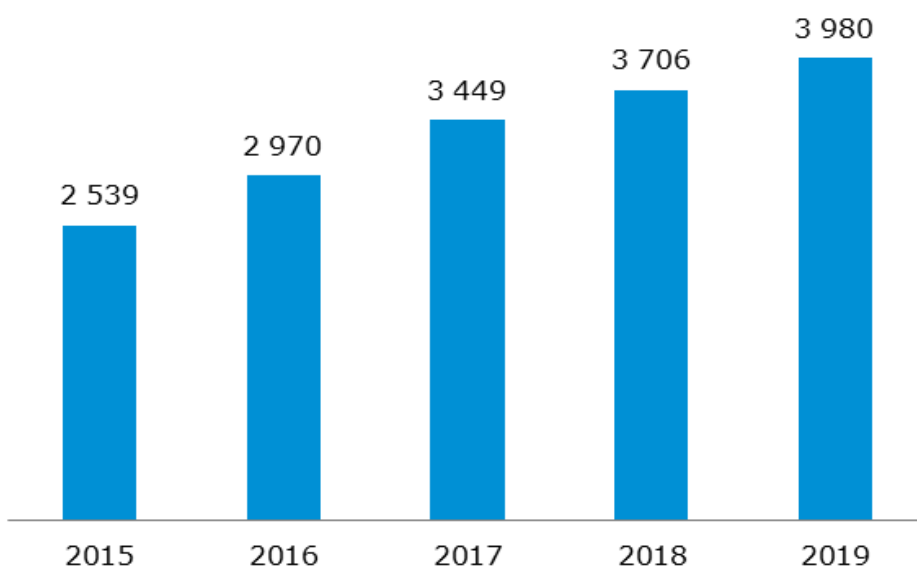
224.1 thousand toe of white certificates were issued in 2019, an increase of 12% year on year compared to 200.6 thousand toe in 2018. The volume of cancelled white certificates was 459.7 thousand toe in 2019 vs. 384.8 thousand toe in 2018, an increase of 19% year on year.

Number of participants of the Register of Certificates of Origin

The Register of Certificates of Origin had 3,980 participants at the end of 2019. In 2019, 274 companies became members of the Register of Certificates of Origin (257 companies in 2018).

A large part of the new members are beneficiaries of white certificates (energy efficiency certificates) following the completion of the fifth tender for energy efficiency projects held by the President of the Energy Regulatory Office. New members also include companies which implement efficiency initiatives.

Figure 54 Number of participants of the TGE Register of Certificates of Origin

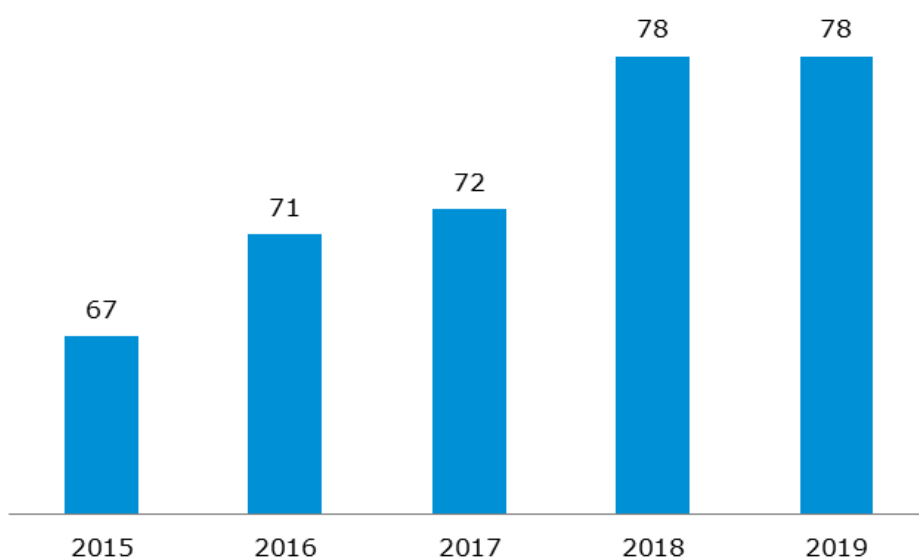


NUMBER OF TGE MEMBERS

Four new companies joined TGE as members in 2019. TGE had 78 members at the end of 2019.

TGE offers regular training programmes and examinations for Exchange Brokers. Participation in training and passing an examination for Exchange Brokers authorises Exchange Members to trade on TGE. In 2019, 50 Exchange Broker certificates were issued, including 11 certificates for Brokers who passed the examination in English. TGE completed 7 training programmes for brokers in 2019.

Figure 55 Number of TGE members



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 Office 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. 3.4 TWh of cogeneration guarantees were uploaded into the system. The number of applications for participation in the Register of Guarantees of Origin increased sharply in Q4 2019 following the addition of photovoltaic installations developed by auction winners.

The Register of Guarantees of Origin had 619 participants at the end of 2019. 180 members joined in 2019 (107 members joined in 2018).

Table 15 Register of Guarantees of Origin

	Issued	Sold	Transferred
	TWh	GWh	GWh
2015	7.23	635	732
2016	12.3	591	702
2017	12.6	2548	2875
2018	17.0	16848	13645
2019	21.5	19138	14693



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.

Until the end of 2019, there were:

- ✓ 29,116,567 reported operations on exchange orders,
- ✓ 13,482,463 reported exchange orders,
- ✓ 5,807,359 reported exchange transactions,
- ✓ 216,832 reported OTC transactions,
- ✓ 226,226 exchange reports sent to ARIS,
- ✓ 50,719 OTC reports sent to ARIS,
- ✓ reporting services for 600 clients - ACER has registered 651 entities, which means that TGE reports for nearly 92% of participants of the Polish energy market,
- ✓ 1,767 users have access to TGE RRM.

INFORMATION SERVICES ON THE COMMODITY MARKET

Information services on the financial market and the commodity market are described in section II.4 *Information services on the financial market*.

CLEARING

Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT) offers clearing services on all markets operated by Towarowa Giełda Energii S.A. (TGE). 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.

In 2019, IRGiT provided clearing services as an exchange clearing house (GIR) for the TGE Exchange Commodity Market and as a clearing house and settlement institution for the Financial Instruments Market which reopened in 2019. The total volume of cleared transactions in electricity was 629 TWh, the total volume of cleared transactions in gas was 454 TWh, and the total volume of cleared transactions in property rights was 88 TWh in 2019. IRGiT served nearly 60 direct members and more than 200 entities operating via brokers in 2019.

In 2019, IRGiT continued to pursue its development plans aligned with the TGE Group strategy and the project map for 2018-2020, including initiatives implemented under the Warsaw Stock Exchange strategy.

The key projects pursued in 2019 included the development of a model for securing and clearing transactions in the common European electricity market mechanism (Intra-Day Market XBID); preparations for the launch of an Agricultural and Food Commodity Market; and development of the risk management system.

In November 2019, IRGiT started to clear the XBID Intra-Day Market operated by TGE. In this project, IRGiT developed a model for securing, clearing and financial settlement of transactions on the market trading 24/7 in EUR.

In the development of the Agricultural and Food Commodity Market, IRGiT developed a model for securing, clearing and financial settlement of transactions on the market in the single-price system and at auctions.

In the improvement and optimisation of the collateral system in 2019, new rules for offsetting of initial deposits and additional margins were developed for members of energy groups. The new model offers netting of initial margins and provides up to 80% reductions of margins within energy groups. In the improvement and optimisation of the risk management system in 2019, IRGiT was working to optimise the costs of exchange trade and improve safety of market participants.

In 2019, IRGiT continued to pursue its policy of active education of market members concerning risk management and the collateral and clearing system organised by IRGiT. The IRGiT Risk Committee met four times in 2019. It is IRGiT's advisory body in matters of regulation and arrangements concerning risk management in IRGiT's clearing services. IRGiT representatives participated in meetings of the Electricity and Gas Market Committee held by TGE; meetings with the Association of Energy Trading in the framework of the Collateral System Optimisation Group; and industry events such as



the Energy Fair and Montel Market Insights. IRGiT representatives took part in plenary sessions, calls, and other work of the Policy Committee, the Risk Committee, and the Legal Committee of the European Association of CCP Clearing Houses (EACH).

In 2019, IRGiT established relations with the Baltic-Finnish gas exchange GET Baltic. IRGiT provides advisory services in the development of a risk management system and a collateral and clearing model for the gas exchange operated by GET Baltic for Lithuania, Latvia, Estonia, and Finland.

2.5. INTERNATIONAL ACTIVITY OF THE GPW GROUP

The Warsaw Stock Exchange works to reinforce its position as the CEE leader through expansion of the international client base including issuers, brokers, investors, and data vendors, and through initiatives designed to promote the Polish capital market and Polish companies among international investors.

In 2019, GPW continued to develop the liquidity support programmes (HVP and HVF) where the biggest volume of trade is generated by remote exchange members. GPW continued to promote the Polish market and GPW-listed companies internationally by holding investor events in partnership with brokers and investment banks around the world and by participating in international conferences and investor meetings. The investor event series Polish Capital Market Days initiated in 2015 included 10 meetings in 2019: in London, New York, Stockholm, Warsaw, Paris, Frankfurt, Vienna, and Prague.

The GPW Group aims at close relations with all stakeholder groups internationally. We are constantly aligning our product offer, improving infrastructure, launching cross-border projects, and engaging our international partners in dialogue.

In 2019, steps were taken to develop the commodity market, its participation and contribution to the integration of European energy markets.

2.5.1. GPW REPRESENTATIVE OFFICES OUTSIDE POLAND

The Representative in London was hired in June 2013 to enhance GPW's acquisition activities on the UK market. In 2019, the Representative focused on supporting relations with GPW's business partners including exchange members, investors and providers of technology services for GPW and its clients. The Representative was involved in matters relating to the United Kingdom leaving the European Union ("Brexit") and the communication of market changes including the planned pension reform.

The Representative Offices 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.

2.5.2. 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 translates into our operations and distribution initiatives. The needs of investors have evolved globally over the years. Investors are looking for solutions which could support a comprehensive perspective on investments at the lowest cost possible. Investors active on Developed Markets, including Poland since September 2018 (according to FTSE Russell), increasingly tend to prefer passive asset management. To address the trend, GPW develops new products, including ETFs, and improves its relations with key international partners. In 2019, GPW continued to focus on the development of the business network including acquisition of new exchange members, investors, and technology providers. International sales initiatives on the secondary market focused on Europe and the USA. In 2019, GPW acquired six foreign exchange members: Credit Suisse Securities de Valores (Madrid), BofA Securities Europe (Paris), HRT EU Limited (Dublin), Liquidnet EU Limited (Dublin), UBS Europe SE (Frankfurt), Tower Research Capital Europe B.V. (Amsterdam). All new remote members joined in preparation of global investment banks operating from London for the United Kingdom leaving the European Union ("Brexit"). GPW had 51 members, including 22 local and 28 remote members as at 31 December 2019.



Table 16 Share of local and remote GPW members in trade in shares on the Main Market

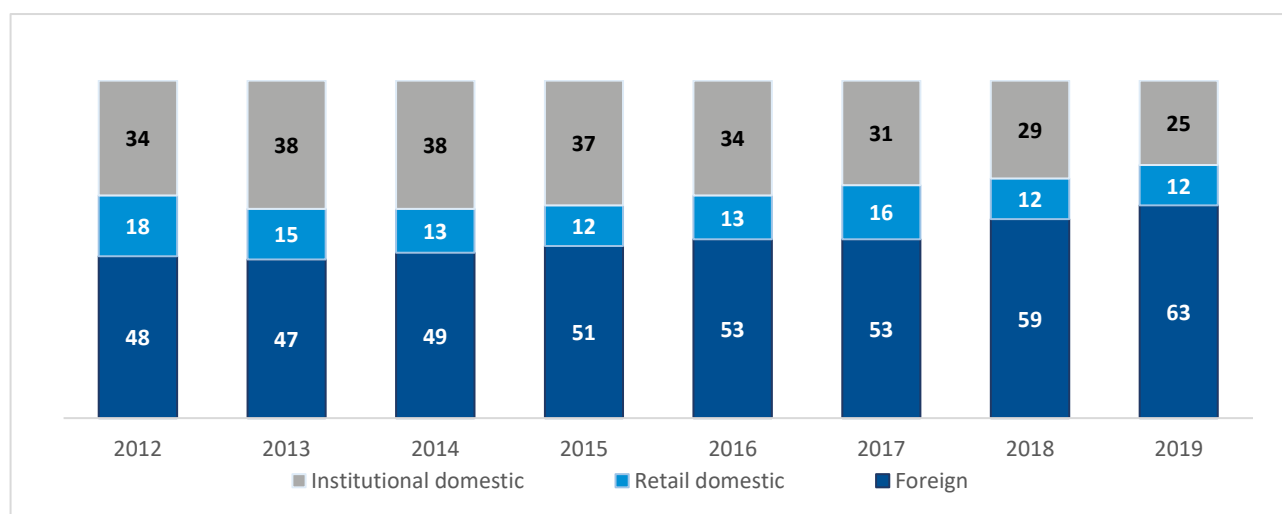
	2019	2018	2017	2016	2015
Local	50.10%	51.50%	61.50%	62.40%	67.70%
Remote	49.90%	48.50%	38.50%	37.60%	32.30%

2.5.3. SHARE OF FOREIGN INVESTORS IN TRADE ON GPW MARKETS

Foreign investors had the biggest share in turnover in shares on the GPW Main Market in 2019. They generated 63 percent of trade in shares, an increase of 4 percentage points year on year. Foreign investors accounted for 66 percent of trade in H2 2019, i.e., 5 percentage points more than in H1 2019, representing the highest share in the past 10 years. The share of domestic institutional investors was 23 percent in H2 2019, a decrease of 3 percentage points vs. H1 2019 and a decrease of 6 percentage points compared to 2018. Individual investors generated 11 percent of turnover on the GPW Main Market in H2 2019, a decrease of 1 percentage point year on year.

The most active categories of domestic institutions in H2 2019 included market makers (a share of 37 percent) followed by investment funds (27 percent) and pension funds (13 percent).

Figure 56 Share of investors in trade in shares on the Main Market [%]



Domestic individual investors were in the lead on the derivatives market in 2019 with a share of 47 percent of the trading volume in futures and 43 percent in options in 2019. The share of foreign investors increased by 1 percentage point year on year to 18 percent in futures and by 2 percentage points to 28 percent in options. The share of institutional investors in the volume of trade in futures remained stable at 35 percent and their share in option trade increased by 1 percentage point to 29 percent of the total volume. Of all domestic institutions, market makers generated 54 percent of trade in futures and 42 percent of trade in options in H2 2019. The share of foreign investors and individual investors in structured products was 50 percent and 48 percent, respectively.



Figure 57 Share of investors in trade on the futures market [%]

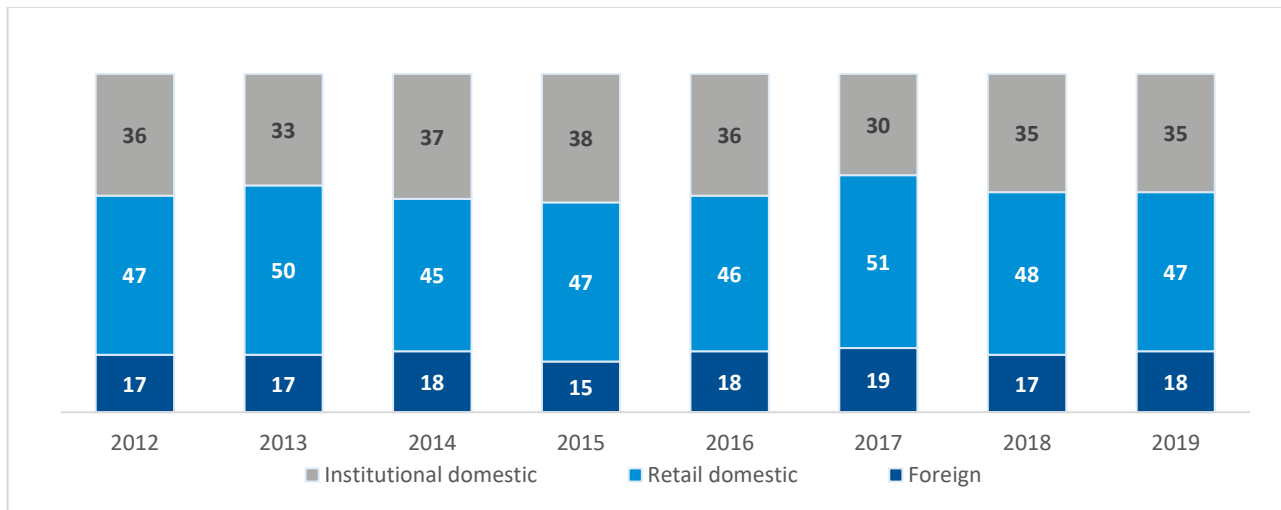
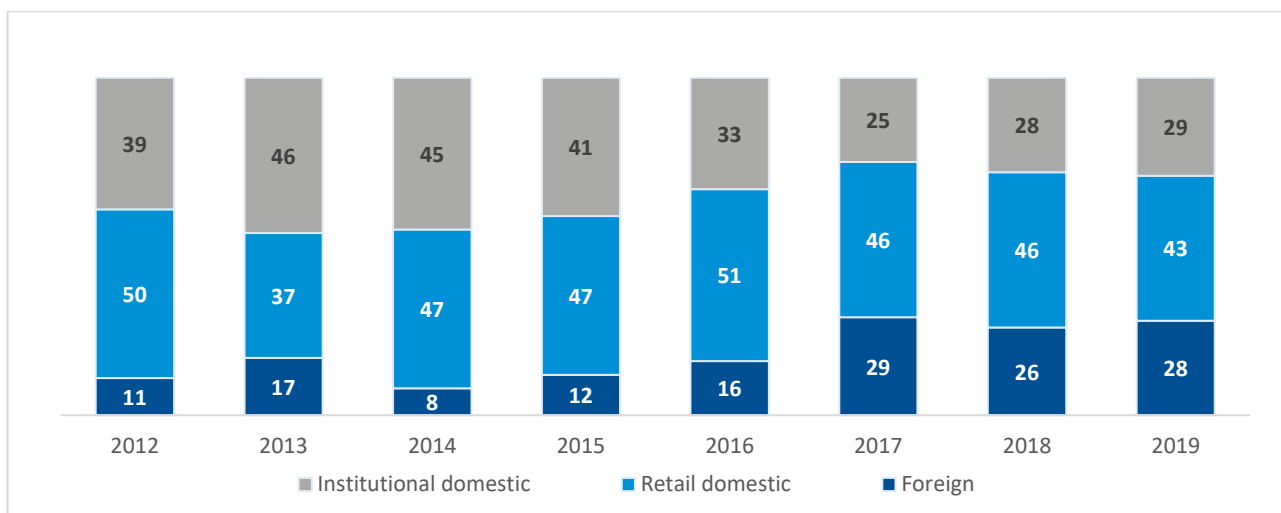


Figure 58 Share of investors in trade on the options market [%]



Detailed results of the survey of the share investors in trade in financial instruments are available on the GPW website: <https://www.gpw.pl/analizy>.

2.5.4. REGIONAL INITIATIVES: LAUNCH OF THE CEEPLUS INDEX

In 2019, the Three Seas region exchanges signed a memorandum of understanding establishing a new index, CEEplus. Published since 4 September 2019, the index portfolio includes the biggest and most liquid stocks of companies listed on the Central European exchanges in Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. The base value of the index was 1,000.00 points at 30 August 2019. The GPW is responsible for the calculation and publication of the index until the end of 2019. As of 1 January 2020, the calculation and publication of the index will be a responsibility of GPW Benchmark. Stocks participating in the index have to meet the liquidity criterion: average value of trading per session of at least EUR 90 thousand in the last six months. The participation of stocks in the index depends on their free float and is capped according to the 5/10/40 rule (participation of the biggest stock capped at 10%, aggregate participations of stocks weighing more than 5% capped at 40%). The participation of stocks from any single country in the index portfolio is capped at 50%. The memorandum of understanding concerning the new regional index is a part of collaboration among the capital



markets of the region. The project will ensure that the CEE exchanges speak in a stronger voice in debates concerning the EU capital markets. The initiative opens the European Union to a coherent position of the entire region.

2.5.5. INTERNATIONAL ACTIVITY OF TGE IN 2019

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 intraday markets in the Cross-Border Intra-Day project (XBID). According to European terminology, physical markets of electricity are defined as Single Day Ahead Coupling (SDAC) and Single Intraday Coupling (SIDC).

Each of the two markets includes regional initiatives including:

- ✓ Price Coupling of Regions – PCR, on the day-ahead market,
- ✓ Multi-Regional Coupling – MRC, on the day-ahead market,
- ✓ Interim Coupling – on the day-ahead market,
- ✓ CORE Flow Based Market Coupling, on the day-ahead market,
- ✓ XBID (SIDC) intraday market project,
- ✓ MNA – Multi-NEMO Arrangements, for the Polish day-ahead market,
- ✓ NC –NEMO Committee, co-ordination and project work on the day-ahead and intraday markets.

Price Coupling of Regions – PCR

PCR standardises IT solutions on the European day-ahead electricity markets 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 zones. 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.

Multi-Regional Coupling – MRC

MRC is a pan-European project of operating integration of day-ahead markets in electricity and Europe's biggest and most liquid market which covers ca. 90% of European demand for energy. In July 2015, TGE became a full member of MRC by signing the Day-Ahead Operational Agreement (DAOA), which supports co-operation of 14 energy exchanges and 27 transmission system operators. TGE was supported by MRC since 2010 and became an active full-fledged MRC operator as of 14 November 2017 based on the Swe-Pol Link with Sweden and the Lit-Pol Link with Lithuania. 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. TGE's participation in the project is part of its on-going business on the day-ahead market.

CORE FB MC (previously CEE FB MC)

CORE FB MC is a day-ahead market project which covers Central Europe and will integrate the Central European and CEE CORE markets with MRC by Q3 2021. Operators will design algorithms to calculate available cross-border transmission capacities according to the flow based allocation methodology, which TSO consider to be optimal.

In addition to CORE, in December 2018, regional operators approved Interim Coupling, a project of early launch of a cross-border day-ahead market on the borders of Germany, Poland, the Czech Republic, Slovakia, Hungary and Romania under the simplified NTC/ATC capacity allocation methodology. The project will open the Western and Southern borders of Poland to cross-border trading in Q3 2020.



Intraday market projects – XBID and LIP

The European electricity market XBID launched in June 2018 in Western and Northern Europe for intraday trading in electricity. TGE joined the project in June 2018 and opened the market in the “second wave” which started on 19 November 2019.

XBID implementation required the implementation of local software LTS supporting interaction with the XBID system. In March 2019, TGE signed an agreement with Deutsche Boerse AG, including use of the M7 Trading system.

XBID development is expected to continue in 2020, including further geographic expansion with the accession of Italy and Greece, software development, and initiation of the implementation of auctions on the intra-day market. XBID trade is now based on continuous trading. Slovakia is expected to join in 2021, which will require a new LIP (Local Implementation Project) with the participation of TGE.

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

Multi-NEMO Arrangements - MNA, for the Polish day-ahead 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 Office. The process is expected to be completed with the implementation of the Multi-NEMO model in Q3 2020.

NEMO Committee – NC

The NEMO Committee groups all European NEMOs and co-ordinates NEMOs’ joint projects on the intraday and day-ahead 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 Office 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 Intraday Coupling) under the XBID model. The Interim NEMO Committee and the NEMO Committee have developed other documents for the markets including the specifications and requirements for algorithms, minimum and maximum prices, and operating procedures. TGE prepared the Polish version of the documents and submitted them to the Energy Regulatory Office, which gave its approval.

The NEMO Committee is focusing on research and preparations for a single SDAC and SIDC management structure, which is likely to be implemented by the end of 2020.

2.5.6. THE GPW GROUP AS A MEMBER OF INTERNATIONAL ORGANISATIONS AND INITIATIVES**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, President of the GPW Management Board, was elected Member of the Board of the Federation of European Securities Exchanges. 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.

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. SSE had over 90 members at the end of 2019.

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 European commodity and financial energy exchanges 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.

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 more than 40 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.

Association of Futures Markets (AFM)

AFM is an organisation of 23 financial and commodity exchanges around the world. AFM has its headquarters in Budapest (Hungary). AFM holds its AFM Annual Conferences as a platform for exchange of information and experience between exchanges. The mission of the Association is to promote and encourage the development of new derivatives markets and to support their growth. TGE is an AFM member since 2014.

Co-operation with the Polish-Lithuanian Chamber of Commerce

In 2015, TGE became a member of the Polish-Lithuanian Chamber of Commerce which works to create conducive conditions for Polish-Lithuanian economic initiatives, dynamic trade exchange between the two countries, investment flows, and elimination of barriers to co-operation of businesses in Poland and Lithuania. The Chamber supports the exchange of expertise and experience among its members. The Chamber holds monthly club meetings for its members to facilitate networking and sharing of experience. In 2019, TGE speakers took part in the Baltic Energy Forum and the Polish-Lithuanian Forum with a presentation on "The role of Polish gas exchange in the market integration process in the Baltic region".

EACH – European Association of CCP Clearing Houses

European Association of CCP Clearing Houses (EACH) AISBL, established in Belgium in 1992 as a forum for European clearing houses – central counterparties (CCP) in and outside the EU.



EACH has 19 CCP members in 15 countries which exchange information, expertise and experience, in particular in areas of clearing and risk management.

IRGIT representatives take part in plenary meetings, teleconferences and work of the Policy Committee, the Risk Committee and the Legal Committee of the European Association of CCP Clearing Houses EACH. IRGIT takes active part in consultations of draft European regulations. KDPW_CCP is a member of EACH.

2.6. DEVELOPMENT OF THE GPW GROUP IN 2020

INTERNAL DRIVERS

In 2020, the GPW Group will continue to implement strategic initiatives under the strategy #GPW2022 aiming to improve the key business pillars of the GPW Group (stock market, debt market, derivatives market, commodity market, information services for investors and issuers) and to develop new areas of activity with a special focus on technology development in the GPW Group. It is our ambition to continuously expand the customer base, provide new products for investors, and implement new technologies ensuring reliable state-of-the-art services on the capital market (for more information concerning the implementation of the strategic initiatives in 2020, see section 2.3 Implementation of the GPW Group strategy in 2019).

GPW is planning to pay a dividend equal to at least 60% of the year's consolidated net profit of the GPW Group attributable to the shareholders of GPW adjusted for the share of profit of associates. The dividend from the 2019 profit will be no less than PLN 2.4 per share; dividends from the profits of 2020-2022 will increase by no less than PLN 0.1 per share annually.

The Company is planning to further invest in organic growth while monitoring potential acquisition opportunities as a complementary growth track.

Being aware of its corporate responsibility, the GPW Group is planning to contribute to the development and promotion of the rules of sustainable development on the Polish capital market in 2020. In the coming years, we are planning to pursue initiatives supporting issuers and investors in order to ensure necessary communication and understanding of the role and importance of ESG. As a public company, GPW will focus on ESG across its organisation. We are planning to further develop GPW's product range incorporating ESG aspects and to establish co-operation in CEE to develop new solutions.

EXTERNAL DRIVERS

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

The GPW Group's activity and financial results largely depend on economic conditions.

In the first months of the 2020 in Poland, economic conditions were relatively favourable. However, coronavirus epidemic, due to its detrimental impact on sentiments, together with measures limiting its' spread – will abbreviate economic activity in some sectors. These effects might be amplified by simultaneous slump in economic activity in many countries. At the same time, further ahead, they will probably be mitigated by stimulus packages introduced in many countries. Inflation in Poland stood at 4.7% YoY in February 2020. Expected economic slowdown in the nearest future together with the significant fall in global oil prices will contribute to marked decrease in inflation. Consequently, forecasts indicate a higher probability of inflation decreasing more quickly in 2020 than anticipated before. In these circumstance on March 17th, the Council decided to cut the National Bank of Poland (NBP) interest rates. The Council decided to cut the reference rate by 0.5 percentage points, i.e. to 1.00%. At the same time, the Council set the remaining NBP interest rates at the following levels: lombard rate at 1.50%; deposit rate at 0.50%; rediscount rate at 1.05%; discount rate at 1.10%.

According to the National Bank of Poland chairman Adam Glapinski, Poland's GDP will likely slow down to ca. 2% in 2020, and not pointing to a recession even in the most pessimistic scenario. GDP growth in 2021 should be very strong, better than assumed by NBP.

Due to coronavirus epidemic, Polish government announced a sizable fiscal package amounted to PLN 212bn (EUR 47 bn / USD 52 bn) or 9% of Polish GDP. The package will boost infrastructure and healthcare spending, and help struggling companies to pay salaries, to avoid layoffs and allow them to defer social security payments.

The economic impact of the Covid-19 pandemic has introduced extraordinary volatility in global financial markets, as participants are obliged to reassess their valuations of all investments and associated derivatives as the situation develops.



In an environment where uncertainty makes it unusually hard to price assets and for market-makers to operate, exchanges are providing the only way to establish consensus on these valuations in real time. As such, world exchanges expect to continue to operate for as long as normal during trading days. CCPs, meanwhile, continue to take prompt action with respect to the credit risk associated with participants' open positions.

Volatility has reached levels comparable with the Global Financial Crisis of 2008. The situation is made more challenging by high levels of indebtedness and already low interest rates. World exchanges and CCPs share best practice to mitigate risk, and coordinate responses during the crisis.

It is currently problematic to precisely determine the overall impact of the COVID-19 pandemic situation on the economy and its sectors.

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 exchanges, 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 2019. 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.

Capital Market Development Strategy (SRRK)

The Polish Government adopted the Capital Market Development Strategy (SRRK) on 1 October 2019. The Strategy was published on 25 October 2019. The Strategy aims to improve access to financing for Polish companies, in particular small and medium-sized enterprises which generate approximately three-fourths of Poland's GDP. The average cost of capital will be reduced, contributing to long-term growth of the Polish economy.

The goals of the Capital Market Development Strategy include:

- to take measures improving the efficiency of administrative procedures concerning capital market participants by 2020;
- to take measures improving the scale of capital raised by Polish companies, market liquidity, effectiveness of intermediary institutions, and private savings by 2023.

The Strategy lists the top 20 barriers to the development of the capital market in Poland and suggests how to resolve them with 90 initiatives.

The initiatives include improvement of savings and investments in Poland as well as better education of the general public in matters concerning the financial market.

Specific goals of the strategy include:

1. to improve the scale of capital raised by companies on the capital market;
2. to improve market liquidity;
3. to improve the efficiency of intermediary institutions;
4. to improve the share of savings in the economy;
5. to make administrative procedures more efficient.

On March 6, 2020, the Minister of Finance appointed Antoni Repa as plenipotentiary for the Capital Market Development Strategy (SRRK). The main task of the attorney will be the implementation of 90 demands provided for in the SRRK, which



is to ensure greater popularity of the capital market and make it perceived as a place for investing savings. Facilitation, transparency and pro-investor solutions are in turn to attract Poles' savings as well as foreign capital.

The GPW Group is currently working to identify the initiatives relevant to the Group and to develop an implementation plan. The GPW Group has thus far identified 33 initiatives relevant to the Group and 6 initiatives relevant to subsidiaries which are members of the GPW Group.

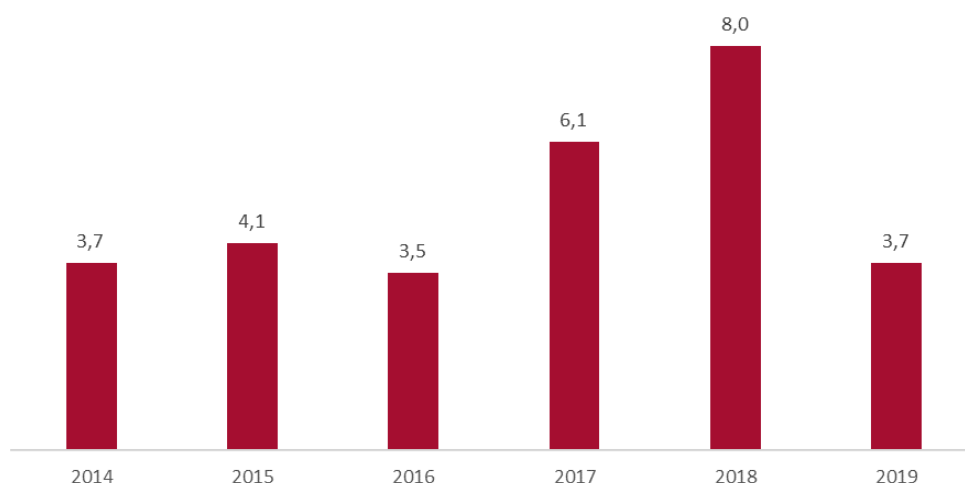
Final shape of the pension system reform in Poland: open-ended Pension Funds (OFE)

On Thursday, 13 February 2020, the Sejm approved an Act transferring funds from Open-ended Pension Funds (OFE) to Individual Pension Accounts (IKE). According to the Act, approximately PLN 153.3 billion of savings invested in OFE (as at 31 December 2019) will be transferred to IKE. The operation is scheduled on 27 November 2020. As of that date, pension fund managers (PTE) which now manage open-ended pension funds (OFE) will become investment fund managers (TFI) managing specialty open-ended investment funds (SFIO) into which OFE will be transformed. OFE have 15.7 million members.

The reform framework provides as follows:

- ✓ 100% of assets managed by OFE will be automatically transferred to IKE.
- ✓ The transfer of assets from OFE to IKE will be subject to a "conversion fee" at 15% of the asset value. Fund managers will pay the fee to the Social Security Institution (ZUS) in two tranches: 70 percent of the fee by 11 December 2020 and the remaining 30 percent by 31 October 2021.
- ✓ OFE assets may be transferred to the Social Security Institution (ZUS). No "conversion fee" will be charged for such transfers. The assets will be managed by the Demographic Reserve Fund (FRD). Assets invested in ZUS may be withdrawn on reaching retirement age, subject to income tax.
- ✓ OFE members may decide whether to transfer assets from OFE to ZUS and file the relevant declaration between 1 June and 1 August 2020. In the absence of a declaration, assets will be transferred to IKE on 27 November 2020.
- ✓ It is expected that approximately 20 percent of OFE members will file a declaration requesting the transfer of assets from OFE to ZUS, which means that approximately PLN 30 billion will be transferred to FRD. The assets will be managed by TFI PFR (TFI Polskiego Funduszu Rozwoju).
- ✓ Future payments of pensions from IKE will not be subject to taxation. Pension payments will be available on reaching retirement age (60 years for women/65 years for men). IKE assets will be privately held and eligible for inheritance purposes.
- ✓ Up to 31 August 2020, OFE will gradually transfer funds from OFE members' accounts to individual subaccounts in ZUS on a monthly basis starting 10 years before retirement age. Launched in 2014, the system reduces the inflow of capital to the Polish stock market. According to estimates, the attrition of cash flows caused by the system in 2019 was approximately PLN 3.7 billion. OFE have transferred PLN 29.1 billion to ZUS since the launch of the system.

Figure 59 Amounts transferred from OFE to ZUS in the system of monthly transfers [PLN billion]



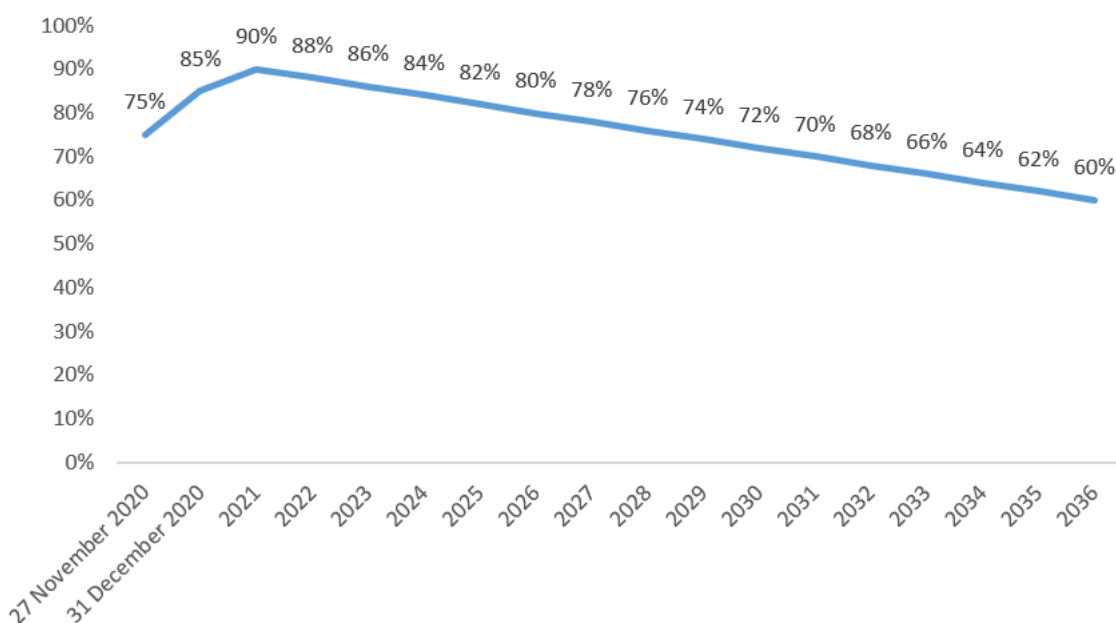
Source: GPW's own estimates, Analityz Online

- ✓ OFE will be transformed into TFIs comprised of two sub-funds:



- pension subfund;
 - pre-retirement subfund.
- The vast majority of OFE assets (estimated at over 95 percent) will be transferred to the pension subfund.
- ✓ Members' assets will be gradually transferred to the pre-retirement subfund starting 5 years before retirement age. Assets of members who are 5 years of less before retirement age at the effective date of the Act will be transferred immediately to the pre-retirement subfund.
 - ✓ Specialty open-ended investment funds managing IKE, established as a result of the transformation of OFE, will invest on the capital market subject to pre-determined risk levels. The minimum allocation of fund assets in domestic shares by the pension subfund established as a result of the transformation of OFE into IKE is fixed by law.
 - ✓ According to expectations, the minimum investment of the pension subfund in shares will be 75 percent as at the conversion date, i.e., 27 November 2020, and 85% as at 31 December 2020. OFE invested 76.29 percent of assets in domestic shares as at 31 December 2019.

Figure 60 Minimum allocation in domestic shares by the pension subfund established as a result of the transformation of OFE



Source: Ministry of Funds and Regional Policy

Table 17 OFE portfolios as at 31 December 2019, allocation by asset class

	PLN mn	% of AuM
Equities	127 451,59	83,11
polish	116 987,57	76,29
foreign	10 464,02	6,82
Bonds	14 785,45	9,64
municipal (PL)	2 035,14	1,33
mortgage bonds (PL)	3 227,19	2,1
corporate and other (PL)	8 839,24	5,76
Cash	11 067,71	7,22
AuM	153345,77	100
polish	142 841,69	93,15
foreign	10 504,08	6,85

Source: KNF, PAP Biznes, Anality Online



Over the past few years, the Polish stock market has been suffering due to the net sell-off of shares by OFE. The negative trend may reverse in 2020 and beyond, following the expiration of the system of gradual monthly transfers, the transformation of OFE into IKE, and the launch of Employee Capital Plans (PPK). The net cash flows invested in domestic shares should be positive in 2020+.

On March 16th 2020, with reference to the coronavirus epidemic, Paweł Borys president of the Polish Development Fund (PFR), suggested the possibility of postponing the OFE reform date. Until the signing and publication of this document, no official decisions regarding possible delay of the reform of OFE have been made.

Launch of 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 savings will bolster long-term growth and stability of the economy. The PPK Act of 4 October 2018 took effect on 1 January 2019. To ensure a smooth implementation, the Act is implemented in phases depending on the size of the employer and it applies as follows:

- ✓ from 1 July 2019 – companies which have at least 250 employees as at 31 December 2018 (completed, see details below);
- ✓ from 1 January 2020 – companies which have at least 50 employees as at 30 June 2019,
- ✓ from 1 July 2020 – companies which have at least 20 employees as at 31 December 2019;
- ✓ from 1 January 2021 – other companies and entities of the public sector irrespective of the number of employees.

PPK will 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.

Under PPK, employees and employers will pay two contributions to PPK accounts: a mandatory basic contribution and a voluntary additional contribution. Active PPK participants will be eligible to use special subsidies from the Labour Fund. The savings will be 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 18 Structure of PPK target-date funds

Time left to the defined date (reaching 60 years old)	Equities	Debt
>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 reaching the defined date (60 years)	<15%	>85%

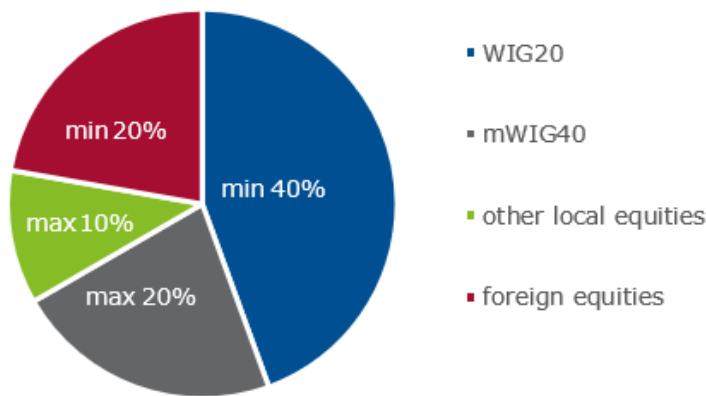
Source: Polish Ministry of Finance

The Act specifies 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.



Figure 61 PPK equity portfolio structure [%]



Source: Polish Ministry of Finance

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.

Participation of companies which have 250+ employees in PPK was 39 percent.

The first phase of PPK implementation covering companies with 250+ employees closed on 12 November 2019. By that date, close to 4 thousand companies with 250+ employees each were required to select a financial institution to manage the scheme. The scheme will be implemented in smaller companies in six-month intervals until January 2021. It will eventually cover the public sector, as well.

Table 19 PPK implementation timetable

Size of company (number of employees)	number of potential participants (mn)	Start
>250	3,3	01.07.2019
50-249	2	01.01.2020
20-49	1,1	01.07.2020
others	5,1	01.01.2021
Total	11,5	

Source: Polish Ministry of Finance

On March 13th 2020, due to the coronavirus epidemic, the Polish Development Fund (PFR) has submitted a request to the Ministry of Finance and the Ministry of Development and extension of the deadlines for applying PPK at the 2nd stage for large companies (50-249 employees) to data created for stage III (20-49). On March 28th Polish Parliament approved new deadlines. According to PFR, changing the deadlines should make it easier for employers to implement the PPK program.

The PPK participation rate of companies with 250+ employees in the first phase was 39 percent. The participation rate including companies which opted for PPE after the effective date of the PPK Act was 41 percent. Measured by the number of all employees who use PPK or PPE, the participation rate is 44 percent of all employees of companies with 250+ employees.



Table 20 PPK participation rate of companies with 250+ employees

	number of employees [mn]	number of potential participants [mn]	Participation [%]
Participation in ECP in companies 250+	2,9	1,1	39
Participation in ECP in companies 250+ and privet PPE opened after 1.12.2018 in companies 250+	3,1	1,3	41
Participation in ECP in companies 250+ and all privet PPE in companies 250+	3,6	1,55	44

Source: PFR

PPK assets stood at PLN 275.3 million as at 31 January 2020. Speaking about the participation rate in the first phase of the PPK scheme, PFR President Paweł Borys said that the rate should reach 40% after the completion of the scheme roll-out, equal to approximately 4 million members. According to PFR estimates, PPK assets will rise to approximately PLN 1.1 billion as at the end of April 2020 and approximately PLN 3 billion as at the end of 2020. According to PFR, PPK participation rates will increase in the long term as the scheme becomes more popular.

Table 21 PPK assets [PLN million]

	XII.2019	I.2020
PKO TFI	28,7	96
Nationale-Nederlanden PTE	11,3	37
TFI PZU	9	36,3
NN Investment Partners	9,4	24,9
Aviva Investors Poland TFI	3,6	15,6
AXA TFI	4,6	11,7
Pekao TFI	3,1	9,9
TFI Allianz Polska	2,4	7,7
Investors TFI	1,7	7,1
Santander TFI	2,4	5,6
BNP Paribas TFI	2,3	5
Generali Investments	1,9	4,8
PTE Pocztylion-Arka	0,1	4,2
Esaliens TFI	1,7	4,1
Millennium TFI	1,2	2,6
Compensa TUnŻ VIG	0,9	*0,9
Skarbiec TFI	0,1	0,4
Aegon PTE	0,2	*0,2
BPS TFI	0	0,006
PFR TFI	0	0,002
Total	84,7	**275,3

Source: Anality.pl based on data from institutions and IZFiA; *as at 31 December 2019; **PFR TFI data

Rebalancing of MSCI Emerging Markets

Poland was promoted from emerging markets to developed markets by FTSE and Stoxx in 2018. However, most funds (as measured by assets under management) still rely on MSCI indices, where GPW remains an emerging market. MSCI completed MSCI Emerging Markets rebalancing in 2019 in three steps: May, August, and November.



- ✓ In May, one half of Saudi Arabian stocks were added to MSCI Emerging Markets, the weight of A class Chinese stocks was raised from 5 to 10 percent, and Argentine stocks were added to the index. Poland's weight in MSCI Emerging Markets dropped from 1.14 percent to 1.09 percent.
- ✓ In August, the second half of Saudi Arabian stocks were added to MSCI Emerging Markets and the weight of Chinese stocks was raised to 15 percent. Poland's weight in MSCI Emerging Markets dropped from 1.09 percent to 1.06 percent.
- ✓ In November, the weight of A class Chinese stocks was raised to the target 20 percent and mid-sized class A Chinese stocks were added to the index. Poland's weight in MSCI Emerging Markets dropped from 1.06 percent to 0.96 percent.

As a result of the modifications, the total participation of the Polish market in MSCI Emerging Markets dropped from 1.14 percent to 0.96 percent, triggering additional supply of Polish stocks, which affected the performance of Warsaw Stock Exchange indices in 2019. According to analysts' estimates, the outflows from passive funds based on MSCI in Poland totalled approximately USD 0.4 billion / PLN 1.5-1.6 billion in 2019.

On 18 December 2019, MSCI announced the inclusion of Kuwait in MSCI EM during the index revision in May 2020. According to initial estimates, Poland's participation in the index should not change considerably (-0.01 pps), remaining stable at 0.96 percent, and outflows from Polish stocks should be much smaller (according to current estimates, approximately USD 27 million). The next announced index modification should not affect the Polish stock market to a significant degree; however, minor adjustments may be expected in the portfolios of institutional investors positioned in relation to MSCI EM.

The decision of the United Kingdom to leave the European Union may have far-reaching consequences for the financial markets and their participants. The GPW Group strives to ensure uninterrupted market access for exchange members established in the UK and investors placing orders in GPW-traded instruments via such exchange members. The Company works with its clients and the regulators, and consistently follows and monitors the needs of all stakeholder groups. The risk that access to the market may deteriorate was negligible, affecting two exchange members at the end of 2019 who failed to initiate the migration of their operations to group members active in the EU.

Financial and commodity market regulation

- ◆ **Prospectus Regulation** – Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC ("Prospectus Regulation") entered into force on 21 July 2019. The Act of 16 October 2019 amending the Act on Public Offering and the Conditions of Introducing Financial Instruments to an Organised Trading System and on Public Companies and amending certain other Act, adopted in enforcement of the Regulation, which implements the Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 (as regards the encouragement of long-term shareholder engagement), introduced requirements which go beyond the scope of the Regulation: each next offering addressed to fewer than 150 persons in a given calendar year requires the preparation of an information memorandum which must be approved by PFSA. This could largely restrict the execution of offerings addressed to fewer than 150 persons. Due to rising issuance costs and longer and more complex capital raising procedures, issuers including SMEs may be unable to raise necessary funds by issuing debt or equities. Those restrictions could adversely impact the capitalisation of such issuers, including public companies, and opportunities of their business growth. Some public companies may be expected to use bank loans; however, considering banks' capital requirements and credit ratings, this form of financing will not be available to all companies. The entry into force of the Act enforcing the Prospectus Regulation and implementing Directive (EU) 2017/828 of the European Parliament and of the Council did not complete the implementation of those regulations in the Polish legal system as requisite national regulations have not yet been issued. Work is in progress to draft regulations concerning the admission of financial instruments which are not securities to trading on the regulated market, the procedures for the publication of offers to buy or convert shares of public companies and the terms and conditions of the acquisition of shares under such offers, and the terms and conditions for a memorandum relating to a public offering or seeking admission of financial instruments to trading on the regulated market.
- ◆ **Regulation of the European Parliament and of the Council on European Crowdfunding Service Providers (Crowdfunding Regulation)** – the proposal aims to regulate the status of crowdfunding platforms on the financial market. Existing crowdfunding regulations vary from country to country depending on the local legislation. Some Member States have dedicated crowdfunding regulations while others apply brokerage regulations. Issues arising in the context of cross-border crowdfunding services were a key trigger initiating the drafting of pan-European legislation applicable to crowdfunding platforms. Common requirements for crowdfunding platform operators will ensure that they can freely provide crowdfunding services, including cross-border services. The draft Regulation defines the rights and obligations of crowdfunding project participants and requires platform operators and businesses seeking funding to comply with obligations including the publication of information for investors



and offering rules. Platform operators should remain neutral, which is why the draft imposes restrictions on investments of operators' shareholders in projects financed on the platform.

The draft should be approved in H1 2020, but its final wording is not yet known. The key issues pertaining to the regulation, which could affect GPW in the context of its crowdfunding project, is the status of the crowdfunding platform authorisation. The initial draft provided for optional EU authorisation. That would allow crowdfunding platform operators in the Member States to continue providing the service under national law, if applicable in the Member State; only if they decided to expand to other Member States would they be required to obtain EU authorisation. However, a subsequent version of the draft provides that crowdfunding platforms may only be operated by entities authorised under the Regulation; as a result, crowdfunding platform operators operating under national law would be required to comply with the EU requirements. The draft provides for a transitional period for such operators.

◆ **The Act amending certain Acts in connection with the transfer of assets from open-ended pension funds to individual pension accounts**

The draft Act is in the legislative process in Parliament. According to the draft Act, open-ended pension funds (OFE) will be converted into investment funds managing individual pension accounts to which OFE assets will be transferred. Each member will have a choice: the default option is the transfer of assets from OFE to IKE with subsequent voluntary payments. Members who decide to transfer to pillar I will have their OFE assets put into personal accounts in the Social Security Institution (ZUS), to be managed by the Demographic Reserve Fund (FRD).

According to the draft law, OFE will be converted into speciality open-ended investment funds (SFIO) within the meaning of the Act of 27 May 2004 on Investment Funds and Management of Alternative Investment Funds; pension fund managers (PTE) which are managing OFE will be converted into investment fund managers (TFI). Investment funds which manage assets transferred from OFE (to IKE) will be required to comply with minimum thresholds of investment in shares of companies listed on the regulated market in Poland and bonds convertible to shares of such companies, as well as subscription rights and rights to shares listed on that market, and shares, subscription rights and rights to shares subject to a public offering in Poland. The maximum thresholds of investment in domestic shares are subject to modification in the legislative process; their final levels will impact the situation on GPW.

Furthermore, the draft provides for transfers of assets from OFE (held by individuals who opt for ZUS instead of IKE) to the Demographic Reserve Fund (FRD), which will largely strengthen FRD. FRD assets will be managed by an investment fund whose sole shareholder is the Polish Development Fund (PFR) under a diversified investment policy.

◆ **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.

The Regulation provides for a transitional period until 1 January 2020 for providers of indices used as benchmarks to align with the requirements under the Regulation and seek the authorisation of the supervisor.

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 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 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 key benchmark WIBOR.

Given that the application was submitted before 1 January 2020, GPW Benchmark uses the transitional provisions of the Regulation and may continue to provide the WIBID and WIBOR reference rates while supervised entities may continue to use the rates among others in contracts and financial instruments after 1 January 2020.

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.

◆ **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 Office (URE). Auction winners who offer the lowest price for energy generation will 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 *II.7. Risks and threats*. A new 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).

- ◆ **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 Office 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 Office 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 Office 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 intraday 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 Office, 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 Office in June 2017, defined the operating rules of single electricity markets: SDAC (Single Day Ahead Coupling) under the PCR model and SIDC (Single Intraday Coupling) under the XBID model. The INC platform has developed other documents for the day-ahead and intraday 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 Office. The European spot market was to be launched by June 2018, i.e., within 12 months following the approval of the MCO Plan by the regulators, but the exchanges are expecting to continue joint work in the NEMO Committee at least in 2019 – 2021.
- ◆ **Greenhouse Gas Emission Allowances Trading Act** effective as of September 2015 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) 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, 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 operators which produce electricity to sell no less than 100% of electricity produced within the year (previously 30%) among others on commodity exchanges, subject to a long list of exemptions. Energy companies trading in gas fuels are required to sell at least 55% of natural gas on an exchange. The amendments will impact the activity of certain participants of TGE. This could affect the liquidity of trade in electricity and the attractiveness of the commodity market for other participants, impacting the volume of trade in such commodities and the resulting revenue. Furthermore, under Article 105 of the Act on Promotion of Electricity from High-efficiency Generation, guarantees of origin issued under Article 9y-9zb of the Energy Law expired as of 31 December 2019. The Act governs those guarantees of origin which were already issued.

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.

- ◆ **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 consolidated text of the Financial Instrument Rules was published by the TGE Management Board on 29 May 2019 following approval by the Polish Financial Supervision Authority on 18 April 2019. The Financial Instruments Market is authorised to offer trade in emission allowances.

Furthermore:

- ✓ under the Act on Trading in Financial Instruments, on 8 November 2019, TGE submitted an application for authorisation to operate an Auction Platform (CO₂) where two-day contracts will be sold on the spot market – Article 3(30a) of the Act of Trading in Financial Instruments, i.e., renewal of the December 2016 licence;
- ✓ under the Act on Trading in Financial Instruments, on 20 December 2018, TGE submitted an application to the Polish Financial Supervision Authority for its authorisation to operate an OTF within the meaning of the Act. The OTF Rules presented by TGE provide for trade in instruments on the following markets: Forward Market of Products with delivery of electricity (RTPE), Forward Market of Products with delivery of gas (RTPG), Forward Market of Property Rights (RTPM). "Instrument" is understood as a forward contract on the OTF which creates rights or obligations and may or may not be a financial instrument, where an instrument which is not a financial instrument is physically settled (within the meaning of Directive 2014/65/EU, section C point 6). On 12 February 2020, TGE presented amended OTF Rules in the course of the proceedings and requested an amendment of the RTG Rules (deletion of RTT from which trade will be transferred to the OTF).

2.7. RISKS AND THREATS

The operation of the Warsaw Stock Exchange Group is exposed to various risks, both external related to the market conditions, the legal and regulatory environment, and internal 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.

2.7.1. GPW RISK MANAGEMENT

The goal of GPW risk management is to ensure that all material risks of GPW's activity are properly measured, 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 GPW Risk Management Strategy approved by the GPW Management Board and regularly reviewed to bring it in line with changes of the GPW risk profile and the market environment.

The key role in the risk management system is that of the Exchange Supervisory Board supported by the Audit Committee in supervising the GPW risk management system through on-going monitoring and assessment of 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 drafts and implements GPW's risk management strategy and takes the key decisions affecting the risk levels. The GPW risk management process is monitored and controlled by the Compliance and Risk Department. Business process owners and participants are responsible for on-going risk management, including identification of risks in the area of their responsibility, monitoring, controlling and taking actions to mitigate such risk. Effective operations and assessment of the effectiveness of the risk management system as well as its adequacy for the GPW risk profile are regularly 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, a dedicated risk management section of the corporate portal available to employees, and on-going advice.

Chart 6 GPW risk management process



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

- ◆ **Risk identification** – identification of existing and potential sources of risk which impact or may impact GPW's financial position.
- ◆ **Risk assessment** – analysis of internal and external threats to GPW's operation in order to determine the risk profile.
- ◆ **Risk prevention or acceptance** – application of any of the following strategies:
 - ✓ risk mitigation;
 - ✓ risk transfer, e.g., transfer of risks of a threat in whole or in part to a third party;
 - ✓ risk avoidance by taking no action involving the threat;



- ✓ risk acceptance.
- ◆ **Risk review** – periodic review of the effectiveness of the existing risk management system and its adequacy for the GPW risk profile.
- ◆ **Risk monitoring** – monitoring the gap between risks and projections or benchmarks. Risk monitoring is an early warning system and triggers management actions when adverse change to the GPW risk profile is identified.
- ◆ **Risk reporting** – regular reporting of risk measurements, taken or recommended actions to the GPW authorities.

GPW's risk management strategy covers the following risks:

- ◆ Non-financial risks:
 - ✓ business risk, including: economic environment risk, strategic risk, competition risk, project risk,
 - ✓ operational risk, including legal risk,
 - ✓ compliance risk,
 - ✓ reputation risk.
- ◆ Financial risks:
 - ✓ credit risk,
 - ✓ liquidity risk,
 - ✓ market risk.

2.7.2. RISKS RELATED TO THE MARKET ENVIRONMENT

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 also have an adverse impact on the activity of the Company, its financial position and results.

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 impact investors' perception of risks and their activity on financial and commodity markets. 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 of other countries

The economic situation and market conditions in other countries could impact the perception of the Polish economy and its financial markets. Although the economic situation of other countries could be materially different from the economic situation in Poland, investors' risk aversion caused by the economic situation of other countries could reduce the volume of trade in financial instruments on GPW. In particular, an economic slowdown or crisis in Europe or unexpected economic crises in other parts of the world, especially caused by difficulties of some countries with the repayment of debt, could affect the assessment of investment risk in European economies and consequently cause a shift to safe havens, which could have an adverse impact on investors' activity and sentiment and consequently an adverse impact on the activity of the Group, its financial position and results.

Risk of the economic situation in Poland

The conditions in the Polish economy 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, the volume of transactions, as well as activities related to issuing new securities. 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 Company's revenue may decrease; even combined with a strict cost discipline, this could reduce the GPW Group's profits. 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 GPW 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 GPW and consequently also the Group's revenue.

Risk of market and political events beyond the GPW Group's control

The volume of trading, the number of new listings and demand for the GPW Group's products and services are affected by economic, political and market developments, both domestic and global, that are beyond the Group's control, including in particular:

- ◆ general trends in the global and domestic economy and on financial markets;
- ◆ changes in monetary, fiscal and tax policies;
- ◆ the level and volatility of interest rates;
- ◆ inflation pressures;
- ◆ changes in foreign exchange rates;
- ◆ adoption of the euro as the currency of Poland (causing potential changes to monetary and fiscal policy or causing changes in the allocation of investor portfolios);
- ◆ change of Poland's credit rating;
- ◆ institutional or individual investors' behaviour;
- ◆ volatility in the prices of securities and other financial instruments;
- ◆ availability of short-term and long-term funding;
- ◆ availability of alternative investment opportunities;
- ◆ legislative and regulatory changes;
- ◆ unforeseen market closures or other disruptions in trading; and
- ◆ natural disasters and acts of god, epidemics, terrorist attacks, technical malfunctions and other events described in the State of Natural Disaster Act of 18 April 2002

These events could have a significant impact on the activity of GPW Group clients, mainly issuers and investors. Their low activity could affect the Company's trading and listing revenue, revenue from introduction of financial instruments, and consequently information services, and it could affect the GPW Group's profit.

Risk of competition from other 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. Their activity 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.

2.7.3. RISKS RELATED TO THE LEGAL ENVIRONMENT

Risk related to amendments of national laws and regulations

The GPW Group operates primarily in Poland. The Polish legal system and regulatory environment can be subject to significant unanticipated changes and its laws and regulations may be subject to conflicting official interpretations. The capital market



and the commodity market are widely subject to government regulation and may be subject to increasingly strict supervision. Regulatory change may affect the GPW 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. Furthermore, institutions other than the authorities (e.g., KDPW, KDPW_CCP) could impose rules which impact the Group similar to laws, affecting the competitiveness and attractiveness of the markets operated by the Group. Attrition of a significant proportion of clients for the Group's services or less active investor trading on GPW could have an adverse impact on the activity of the Group, its financial position and results.

The ability of the Group to comply with the applicable laws and regulations largely depends on its ability to develop and maintain the adequate systems and procedures. There is no guarantee that the Group will be in a position to comply with future amendments of laws and regulations or that such amendments will have no adverse impact on the activity of the Group, its financial position and results.

Regulatory risk related to EU law

European Union regulation increasingly impacts the GPW 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 profit.

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. The Group has never before failed to comply with regulatory requirements and recommendations of the supervisory authority.

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 GPW Group. As at the end of 2019, open-ended pension funds generated approximately 6.7% of trading in shares on the GPW Main Market and held shares representing 21.3% of the capitalisation of domestic companies and 42.4% of shares traded on the Main Market (among shareholders holding less than 5% of the shares of a public company or classified as financial investors). Legislative amendments announced by the Ministry of Economic Development in July 2016, which would replace open-ended pension funds with other collective investment undertakings and restrict or 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 including shares on GPW, a reduction of the number and value of shares and bonds admitted and introduced to trading on GPW, and consequently a reduction of the GPW Group's revenue and profit.

Risks of application of the Energy Law

Changes to the mandatory public sale of electricity and natural gas may have an adverse impact on the activity of GPW's subsidiary, TGE, and its financial standing. The Energy Law requires energy companies which generate electricity to sell no less than 100% of electricity produced within a year on commodity exchanges or via NEMOs (subject to certain exceptions). Energy companies trading in gas fuels are required to sell at least 55% of high-methane natural gas introduced to the transmission grid within the year on an exchange. Amendments to or cancellation of these requirements could reduce the activity of certain participants of TGE. This could restrict the liquidity of trade in electricity and natural gas and the attractiveness of the commodity market for other participants, affecting the volume of trade in such commodities and the resulting revenue.

Risk of the Renewable Energy Sources Act

TGE operates among other things trade in property rights to certificates of origin of electricity from renewable energy sources as well as the Register of Certificates of Origin. The Renewable Energy Sources Act implemented a new support scheme for



the production of energy from renewable energy sources based on auctions, which is to replace the existing support system. The existing system of green certificates of origin will expire on or before 31 December 2035. The support scheme may be phased out even earlier as certificates of origin are available within 15 years after the first day of power generation in an installation. For RES installations which were the first to produce energy eligible for green certificates of origin in 2005, the period of 15 years under the Act will expire in 2020, after which the existing support scheme will be gradually phased out.

Risk of TGE's alignment with the MiFID II package

TGE started trade in CO2 allowances on the Financial Instruments Market following authorisation by the Polish Financial Supervision Authority in July 2019 in alignment with MiFID II.

Efforts continued with a view to obtaining a licence to operate an OTF into which the Commodity Forward Instruments Market will be transformed in the alignment of the TGE markets with the requirements of the Directive. According to TGE, the launch of the OTF following the authorisation by the Polish Financial Supervision Authority expected in Q1 2020 will complete the alignment of the TGE markets with the requirements of MiFID II.

Risk of alignment of GPW and TGE with the requirements of the cybersecurity law

By decision of 8 November 2018 issued in connection with the National Cybersecurity System Act of 5 July 2018, the Polish Financial Supervision Authority nominated GPW and TGE as operators of key services: operation of regulated markets. A new Regulation of the Minister of Digital Affairs of 4 December 2019 concerning organisational and technical conditions for providers of cybersecurity services and internal organisation of operators of key services responsible for cybersecurity, published on 23 December, extends the requirements under the National Cybersecurity System Act. The Regulation defines the requirements and provides that they should be fulfilled following a risk analysis, which is expected to be carried out in Q2 2020. As a result, risks which require mitigation are likely to be identified. On 18 November 2019, the Polish Financial Supervision Authority initiated an inspection of TGE's compliance with the requirements of the Act. The inspection was closed on 18 December 2019 and the inspection report is pending. Recommendations provided in the report will be analysed in connection with the solutions in place at GPW in order to take corrective measures across the GPW Group.

Risk of amendments to and interpretations of tax regulations

The Polish tax system is not stable. Tax regulations are frequently amended, often to the disadvantage of taxpayers. Interpretations of regulations are also changed frequently. 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. Frequent amendments of laws governing corporate taxation 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.

Risk of inconsistency between Polish and Union tax regulations, for instance concerning VAT

The risk of inconsistency between local (Polish) tax regulations and the Union's VAT Directive concerns doubts as to the accounting policy of a taxpayer where invoices for purchases are recognised and input VAT is deducted on the basis of such invoices in a given financial period if they include invoices received after the end of the period but before the deadline for the submission of tax receipts, i.e., in practice, by the 25th day of the following month. That policy could generate the risk that tax authorities will follow the literal wording of Polish regulations 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 would not be met).

Risk of internal regulations of the Company

The ability of the Group to comply with all applicable laws in a changing regulatory environment is largely dependent on the implementation and maintenance of a compliance, audit and reporting system as well as on the ability to attract and retain qualified staff responsible for the processes. The Group's policies and procedures of identification, monitoring and management of compliance risk could be insufficiently efficient. Management of legal and regulatory risk requires among other things that the rules and procedures applicable in the Group support adequate monitoring, registration and verification of many transactions and events. The Group can give no guarantee that its policies and procedures will be effective at all times or that it will be able at all times to adequately monitor and properly assess compliance risks to which it is or may be exposed. Non-compliance with laws and standards could reduce the activity of participants, issuers and investors, adversely impacting the activity of the Group, its financial position, results and outlook.

Risk of potential litigation due to the Group's 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 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 potential breach of competition laws by the Company

GPW has a dominant position on the Polish market. Consequently, the Company is 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 the Company 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 on the Company 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.

2.7.4. OPERATIONAL RISKS

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, there is a 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 the reputation of the Company. No events have ever had a material adverse impact on the reputation of the Group or trust of clients.

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 the 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. 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. Trade unions are entitled to coordinate and consult opinion-making activities (including those related to restructuring of the Company). No industrial action has ever been filed by Group employees. However, there is no guarantee that the Group will not be involved in a future dispute which could have an adverse impact on its reputation, activity, revenue, results or financial position.

Risk of trading systems malfunction

Safety and continuity of trading are among the key functions of GPW. The Group's operations are strongly dependent on the effective functioning of its trading systems, which are subject to the risk of outages and security breaches. The reliability of the Group's trading systems is as important as their efficiency. In the event that any 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 market, 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, financial position or results.

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 and communication 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, causing client attribution and reduction of the volume of trade, which could have an adverse impact on the activity of the Group, its financial position and results.

Risks of necessary upgrades of GPW's trading system

Following an analysis of development scenarios for GPW and the GPW Group, in view of fast changing information technology, including an evolution of trading system technology, GPW took measures to replace its technology within no more than 4-5 years. In September 2019, GPW initiated a research and development project aiming to develop a proprietary, modular, scalable trading system dedicated to GPW and its subsidiaries and to foreign exchanges of Central and Eastern Europe (CEE) seeking IT solutions matching their needs and specificity. According to the development strategy for the Polish capital market, on which the Exchange is a key institution, a proprietary IT solution allows to optimise operating costs and risks of the platform. The Project may generate significant capital expenditures of the Company, partly to be refinanced with a grant from the National Centre for Research and Development (NCBR). The project aims to replace the legacy system UTP, which has been in operation for 7 years.

If the Project fails, it will likely be necessary to reopen the option of replacing the system with a new trading system acquired from a foreign vendor. There can be no guarantee that the capital expenditures of the Company required to replace the trading system will have no material adverse impact on the activity of the Group, its financial position and results.

Risk of the Group's risk management methods

The Group is exposed to market risk, regulatory risk, and financial risks including credit risk and liquidity risk of the Group's investment portfolio, market risk generated by changes in prices of financial assets, as well as operational risk of its activity. The Group has a property insurance cover against risks including natural disasters, theft and burglary, vandalism, improper use of electronic equipment and inadequate power parameters. Furthermore, the Group has third-party liability insurance covering members of the Management Boards and Supervisory Boards (D&O). The Company has no third-party liability insurance for its operations, including potential damage incurred by Exchange Members and participants of trading due to IT system malfunctions. The Company believes that it has sufficient protection under the agreements signed with Exchange



Members and participants of trading. These risk management measures and insurance policies may be insufficient to protect the Group against all risks to which it is exposed. The Group may not be in a position to effectively manage its risks, which could have an adverse impact on the activity of the Group, its revenue, results and financial position.

Risk of dependence of the Group's activity on third parties over which the Group has limited or no control

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, and are not widely used in Poland or elsewhere. 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 and GPW Group's inability to make alternative arrangements in a timely manner could strongly affect the Group's operation, financial position and results.

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 activity 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 Group's financial results.

Risk of actions taken by the Company's dominant shareholder where such actions are not in the interest or go against the interest of the Company or its other shareholders

According to the GPW Articles of Association, the voting rights of shareholders who hold more than 10% of votes at the General Meeting are capped. However, the limitation does not apply to the Company's dominant shareholder, the State Treasury, which holds 14,688,470 preferred shares of GPW with voting rights (each share confers two votes according to the GPW Articles of Association). The State Treasury held 51.77% of the total vote as at the end of 2019. Furthermore, the limitation on the voting rights does not apply to shareholders who hold more than 10,493,000 series A preferred shares (i.e., more than 25% of all preferred shares of the Company). Consequently, the State Treasury controls the Company and any other shareholder may use the exemption if it acquires more than 10,493,000 preferred shares (i.e., more than 25% of all preferred shares of the Company) from the State Treasury.

A shareholder holding the majority of votes at the General Meeting may elect most of the members of the Exchange Supervisory Board and may control the composition of the Management Board. With its corporate rights, the State Treasury or another dominant shareholder that acquires shares of the Company from the State Treasury may directly influence resolutions passed by the authorities of the Company. The State Treasury has, and a dominant shareholder that buys shares from the State Treasury may have, material influence over the activity of the Company, including the development of its strategy and directions of growth, the election of members of the Supervisory Board (subject to the regulations concerning the election of independent members) and of the Management Board. The Company is unable to anticipate how the State Treasury or another dominant shareholder will exercise its rights and how their actions may impact the activity of the Company, its revenue and financial results, and its ability to implement the strategy. The Company is unable to anticipate whether the policies and actions of the State Treasury or another dominant shareholder will be aligned with the interests of the Company. It should be noted that changes of shareholders of GPW could result in a change of the entity which has material influence over the Company or a situation where GPW has no dominant shareholder.

Risk of provision of Reference Rates WIBID and WIBOR

In 2017, the GPW Group acting through the subsidiary GPW Benchmark S.A. took over the provision of the interest-rate benchmarks WIBID and WIBOR and initiated alignment of the methodology with the requirements of Regulation (EU) No 2016/1011 (BMR). In the process, GPW Benchmark carried out open consultations with financial market participants and key institutions, including regular consultations with Fixing Participants. Following the alignment, GPW Benchmark submitted on 6 December 2019 an application to the Polish Financial Supervision Authority requesting authorisation as an administrator of interest-rate benchmarks including the key interest-rate benchmark WIBOR.



The authorisation request was filed in December 2019, ensuring continued application of the Reference Rates WIBID and WIBOR after 1 January 2020, i.e., after the end of the transitional period for non-key benchmarks (WIBID). In connection with the activities of GPW Benchmark S.A. concerning interest-rate benchmarks, the GPW Group is exposed to a risk of potential delays in the proceedings before the Polish Financial Supervision Authority and of delayed alignment of Fixing Participants with the new requirements. The risk that the authorisation for the Reference Rates WIBID and WIBOR will be refused is largely mitigated by the alignment of the benchmark methodology and the implementation of new requirements defined in the reviewed documentation; however, the Company continues to monitor that risk. The next steps in the alignment and review of the methodology of the Reference Rates WIBID and WIBOR will follow the requirements of the Regulation and will include public consultations. As a part of analytical work, GPW Benchmark published in 2019 the benchmark methodology as well as the results of simulations of alternative interest-rate benchmarks. Provision of alternative benchmarks mitigates systemic risks generated by concentration of contracts and financial instruments which are mainly use the Reference Rates WIBID and WIBOR.

Risk of provision of capital market indices and benchmarks

On 27 November 2019, GPW Benchmark S.A. was authorised by the Polish Financial Supervision Authority as an administrator of significant and non-significant regulated data and non-interest-rate benchmarks and was entered in the ESMA register. As of the beginning of December 2019, GPW Benchmark took full control of the provision of indices of the GPW Main Market, NewConnect and TBSP including WIG20, mWIG40 and sWIG80.

Risks of Administrator

The authorisation to operate as an administrator imposes the obligation to review and validate the methodology of benchmarks under BMR. As a result, GPW Benchmark will be exposed to operational risk and compliance risk due to oversight and control of the provision of benchmarks.

As a supervised entity, GPW Benchmark is exposed to the risk of non-compliance with the provisions of Regulation (EU) No 2016/1011 (BMR) which lay down the obligations of benchmark administrators, and to the risk of resulting supervisory sanctions. If such risks materialise, they could have an adverse effect to the reputation of the entire GPW Group.

Competition risk – 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 under Article 23(1) of the Treasury Securities Dealers Rules of 15 December 2018 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 reduced benefits of the Company’s investment in KDPW

The Company holds 33.33% of KDPW equity. 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.

Risks of TGE’s participation in European electricity market projects

TGE’s strategy for the spot electricity market follows from the decision of the European Council of February 2011 and the obligation defined by the EU Member States’ governments to jointly build an integrated market. Unfortunately, according to



the analysis of the financial impact of the participation of exchanges, including TGE, in the European market integration projects, their refinancing is exposed to risks.

However, TGE needs to engage in the European market projects in view of the political and regulatory decisions. In the absence of TGE's action or investment, TGE could suffer adverse market effects including declining trading on electricity markets, obstacles to the operation of the forward market and, in the longer term, also the financial market. TGE could miss the opportunity to grow, especially that big exchanges such as EPEX SPOT and NordPool will operate as competitive NEMOs on the Polish energy market.

Market solutions under implementation follow from the applicable regulations (CACM) and project documentation (MCO PLAN, MNA). The expected completion date of the current phase is 2020, including third-wave XBID and CORE. It should be noted that the key beneficiaries of an integrated market are market participants, especially energy consumers. Hence, the EU has agreed to respect a socially acceptable cost base, including under CACM.

Poland is the only CEE country to adopt a competitive NEMO model. Risks to TGE materialise with competitive operation of other exchanges on the Polish electricity market. The scale of risks to TGE is augmented by the fact that TGE is supervised by the Polish Financial Supervision Authority as a licensed commodity exchange while being supervised together with IRGIT by the Energy Regulatory Office as a NEMO.

TGE may also consider expanding to other markets. TGE will decide whether to launch as a NEMO on foreign markets following an in-depth financial analysis and risk analysis, for instance, return on investment in trade on new markets. Activity on other markets will require additional expenditures, including participation in NEMO costs on foreign markets, additional licence costs and HR expenses.

Risk of regulatory fees

GPW 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.

2.7.5. FINANCIAL RISKS

Financial risks, such as price risk, credit risk, cash flow risk, liquidity risk to which the entity is exposed, are discussed in the notes to the GPW Group's consolidated financial statements.

Risk of interest rate hikes

The Company is exposed to a risk of interest rate changes due to debt instruments issued by GPW at variable interest rates maturing on 31 January 2022. A sharp increase of the interest rates including the reference rate of the bonds could boost the cost of servicing the liabilities under the bonds and have an adverse effect on GPW's financial position and results.

Risk of material periodic volatility of revenue and profits due to 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 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.

Risk of 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 2019 (according to GPW data), only one Exchange Member had a share of more than 10% of trade in stocks on the electronic order book on the Main Market and 21 Exchange Members had a share between 1% and 8.5%. Furthermore, four Exchange



Members had a share of more than 10% each in the volume of trade in futures, jointly representing 58% 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% of the Group's total sales revenue in 2019. In that period, the top five companies with the biggest share in trade on GPW generated 47.5% of the average monthly value of trade in shares on the electronic order book on the Main Market while the top 10 companies generated 67.1%. 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 the Group's second largest source of revenue from trading on the financial market and accounted for 5.7% of the Group's sales revenue from trading on the financial market and 3.2% of the Group's total revenue in 2019. The vast majority of the Group's revenue from trade in derivatives was generated by trade in a single product: WIG20 futures. 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 trade in electricity and gas outside the exchange

The GPW Group's revenue from trade in commodities depends among other things on the propensity of producers to sell energy and gas on the exchange above the required mandatory level and on the activity of traders. The mandatory sale on the exchange currently applies to 100% of produced energy (subject to certain exceptions) and 55% of high-methane natural gas introduced to the transmission grid. Trading on the exchange above the required mandatory volumes is up to energy and gas producers to decide. The Group has no direct control of the volume, value and number of transactions on the exchange. The Group's revenue depends among other things on the attractiveness of trade in commodities compared to other exchanges and trading platforms. Reduced supply of energy or activity of trading participants could have a material adverse impact the activity of the Group, its financial position and results.

Risk of insufficient insurance cover

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 covered by no insurance or by limited insurance only. Consequently, the Group may have insufficient insurance cover against all damage that it could potentially incur. In the event of damage that is not covered by insurance or damage exceeding the sum insured, it may erode the Group's capital. Furthermore, the Group may be required to redress damage caused by events not covered by insurance. The Group may also have liability for debt and other financial commitments related to such damage. Furthermore, the Group cannot guarantee that there will be no future material damage exceeding the Group's insurance cover. Any damage not covered by insurance or damage exceeding the sum insured could have an adverse impact on the activity of the Group, its financial position and results.

2.7.6. OTHER RISKS

Other risks, which are unknown or considered irrelevant at this time, may also have a material negative effect on the GPW Group's operation, financial position and results.

2.8. OTHER INFORMATION

Material agreements

The GPW Group concluded no material agreements in 2019.

Research and development

The GPW Group's research focuses on prospects of development of new trading platforms and products. The initiatives completed in 2019 are described in section II.3. *Implementation of the GPW Group's Strategy in 2019.*

Litigation

GPW is not a party to any litigation where the value of liabilities or receivables would represent at least 10% of its equity.



3. CORPORATE GOVERNANCE

3.1. STATEMENT OF COMPLIANCE WITH CORPORATE GOVERNANCE RULES

TERMS AND SCOPE OF COMPLIANCE WITH CORPORATE GOVERNANCE RULES

GPW accepted the corporate governance rules laid down by the trading organiser as of the date of admission of the Company's shares to trading on the regulated market on 5 November 2010. As of 1 January 2016, GPW follows the Code of Best Practice for GPW Listed Companies 2016 ("Code of Best Practice"). The Code of Best Practice is available on the GPW website (<http://www.gpw.pl>) under the listed companies corporate governance tab.

GPW complies with all of the recommendations of the Code of Best Practice applicable to the Company. GPW complies with the rules of the Code of Best Practice applicable to the Company with the exception of Rule VI.Z.2, which requires that the period between the allocation of options or other instruments linked to the company's shares under the incentive scheme and their exercisability should be no less than two years. The non-compliance is due to the fact that the Company's incentive schemes approved before the effective date of the Code of Best Practice for GPW Listed Companies 2016 used phantom shares as a part of the incentive package for Management Board Members. The period of time between the allocation of phantom shares and their exercise date was 1 year. That incentive scheme applied until management contracts were signed with the members of the Management Board in connection with the Act of 9 June 2016 on Rules of Remuneration of Managers of Certain Companies. In December 2019, in connection with the final assessment of the performance of Management Board Members in 2017, phantom shares were awarded to one Management Board Member under a management contract which was valid for a part of that year and provided for phantom shares as a part of the incentive package.

Furthermore, concerning Recommendation I.R.2 of the Code of Best Practice, GPW announced that the Company's sponsorship and charity policy is defined in the Company's internal regulations. The sponsorship policy is governed by the Warsaw Stock Exchange Sponsorship Rules effective as of 12 February 2018 and the charity policy is governed by the Donation Procedure effective as of 26 April 2018. The Company's sponsorship and charity expenditure in 2019 was in line with the applicable procedures.

In 2019, GPW complied with the rules and recommendations of the Code of Best Practice for GPW Listed Companies 2016 and the Corporate Governance Rules for Supervised Institutions issued by the Polish Financial Supervision Authority. As a trade operator, GPW is the guardian of compliance of GPW-listed companies with those standards.

3.1.1. SPONSORSHIP AND CHARITY INITIATIVES IN 2019, PROMOTION AND EDUCATION

Sponsorship expenses stood at PLN 488.6 thousand, including mainly support for events dedicated to the capital market: conferences organised by the Chamber of Brokerage Houses (IDM) – "Market of the Future, Future of the Market: Capital Market and Challenges of Innovative Economies"; congresses hosted by the Association of Listed Companies (SEG); the 8th CFO Congress of Listed Companies and the 11th Investor Relations Congress of Listed Companies; a conference for individual investors and capital market participants organised by the Association of Individual Investors (SII) – "WallStreet 23"; and the National Investor Survey OBI 2019. As a part of its sponsorship initiatives, GPW supported the 17th Local Government Capital and Finance Forum organised by Międzykomunalna Spółka Akcyjna "MUNICIPOLIUM", the biggest professional event for local governments in Poland which brings together local government managers and leaders of the biggest cities, districts and regions.

GPW sponsored industry events including: an investor congress in Vienna and an investor congress for real estate companies hosted by Erste Group Bank AG; Best of Poland in Frankfurt hosted by Commerzbank in co-operation with mBank.

GPW worked with several partners to provide direct support for the sale of GPW's products and services by co-organising industry conferences: Polish Capital Markets Day in Stockholm hosted by Wood&Co; CEE Investor Day in New York hosted by Ipopema and Auerbach; Spring European MidCup Event in Paris hosted by CF&B Communication; Winter Wonderland Emerging Europe Conference in Prague hosted by Wood&Co; Innovation Conference in Warsaw hosted by Erste Group Bank AG.

GPW organised the second edition of the GPW Innovation Day in Warsaw, an event dedicated to technology SMEs listed on the Main Market and NewConnect, where they meet with individual and institutional investors. GPW organised in 2019 the second and third edition of the Gaming on the Exchange event dedicated to investing in the dynamically growing computer gaming industry. GPW initiated a new conference series, Business in the Genes, exploring the potential of biotechnology companies in 2019.

GPW once again partnered with the international event Trading CEE hosted by the global news portal Global Investor Group. The event focused on the development of securities and derivatives markets in Central and Eastern Europe. The 2019 event



discussed the future of CEE exchanges; ESG as an investment strategy; passive investment; global capital flow trends; fin-tech solutions; the market after MiFID II.

As a part of its efforts in education, promotion and information concerning the capital market, GPW worked with many organisations, associations, chambers of commerce, and institutions hosting events and conferences. GPW supported Instytut Studiów Wschodnich, the organiser of the 29th Economic Forum in Krynica under the theme: "The Europe of Tomorrow. 'Strong' Meaning What?"

GPW worked with Ringier Axel Springer Polska during the 4th Polish Capital Congress; the Gdańsk Institute for Market Economics (IBnGR) during the Corporate & Investment Banking Congress and the Consumer Finance Congress; the Lesław A. Paga Foundation in training and educational projects dedicated to the capital market; the Chamber of Funds and Asset Management (IZFiA) during the 14th Fund Forum; CFA (CFA Institute Research Challenge); Kongres 590 Spółka z ograniczoną odpowiedzialnością (Kongres 590).

In 2019, in partnership with CFA and the Chamber of Funds and Asset Management (IZFiA), GPW held four events of the Financial Market Women's Club, a platform for meetings, exchange and knowledge sharing, which supports women's professional advancement in finance.

GPW's donations in 2019 totalled PLN 3,663.3 thousand including PLN 1,500.0 thousand to the Polish National Foundation. The donation to the GPW Foundation was PLN 2,143.0 thousand including PLN 1,600.0 thousand for the PPK Life-long Investing Programme, PLN 143 thousand for the online investment game "Online School Exchange Game", PLN 400.0 thousand for the statutory activity of the Foundation. GPW provided donations to the World Association of Home Army Soldiers (PLN 20 thousand) and Caritas Polska (PLN 266.74).

In 2019, TGE was a partner of many events in the energy industry, including the EuroPower congress, the European Economic Congress, and the Lower Silesia Energy Congress. The total sponsorship expenditure stood at PLN 514 thousand.

3.2. INTERNAL CONTROL SYSTEM AND RISK MANAGEMENT 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 on Auditors, Audit Firms, and Public Supervision;*
- › *the Articles of Association of the Warsaw Stock Exchange;*
- › *the Accounting Rules of the Warsaw Stock Exchange and the accounting rules 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 or eliminate 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.

Until the end of 2018, the Company's auditor controlled financial statements every quarter. Quarterly financial statements for Q1 and Q3 as well as financial statements for six months were reviewed by the auditor while the annual financial statements were audited. As of 2019, according to regulations and market practice, the consolidated financial statements are examined by the Company's auditor every 6 months: the H1 report is reviewed and the annual report is audited.

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 companies. Auditors 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 five 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 2019 and to review the interim financial statements of GPW and the GPW Group in the year ended 31 December 2019 was BDO PL spółka z ograniczoną odpowiedzialnością sp. k., with its seat in Warsaw at ul. Postępu 12, 02-676 Warsaw, entered by the National Chamber of Auditors in the list of entities authorised to audit financial statements, entry no. 3355.



Table 22 Auditor's fees for services provided to GPW Group (net) [PLN'000]

Service	Financial year ended 31 December 2019	Financial year ended 31 December 2018
Audit of annual financial statements**	164	164
Review of financial statements**	85	142*

* fee for services provided by KPMG Audyt Sp. z o. o. sp.k

** the fee is only for professional audit and review of separate and consolidated financial statements of the parent entity for the year. Since 2019, the auditor reviews only the six-month financial statements of GPW and the GPW Group.

With respect to control and monitoring of the independence of the audit firm which audits the issuer's financial statements, BDO 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.

BDO provided no non-audit services and no prohibited services to GPW or its subsidiaries in 2019.

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

The Company follows the principles of diversity, as 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. In particular, it strives for a gender balance of the candidates, taking into account their qualifications, knowledge and experience necessary to serve as Exchange Management Board Members. In all processes including recruitment, performance appraisal, promotion and professional development, GPW's HR policy integrates diversity issues including gender, education, age and professional experience in recognition of the fact that diversity and equal opportunities are important competitive advantages necessary to recruit and retain qualified employees and use their full professional potential. The Company will work to formalise the existing diversity rules in a diversity policy covering all employees of the GPW Group.



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 23 GPW shareholders

Shareholder	Stake in the share capital		Votes at the general meeting	
	Number of shares	%	Number of votes	%
State Treasury of the Republic of Poland - preferred shares (series A)	14 688 470	35.00%	29 376 940	51.77%
Other shareholders - preferred shares (series A)	84 000	0.20%	168 000	0.30%
Other shareholders - bearer shares (free float; series B)	27 199 530	64.80%	27 199 530	47.93%
Total	41 972 000	100%	56 744 470	100%

As at 31 December 2019, and as at the date of preparation of this report, the State Treasury of the Republic of Poland was the only shareholder holding directly or indirectly at least 5% of the overall number of votes at the GPW General Meeting.

Amongst all persons managing and supervising the Company, its shares bought in public offering (25 shares) were held as at the balance-sheet date by Dariusz Kułakowski, Member of the GPW Management.

According to the Company's best knowledge, persons managing and supervising the Company do not hold shares in its related parties or GPW bonds.

The Company did not purchase its own shares in 2019. 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 date of preparation of this report, the State Treasury of the Republic of Poland holds 14,688,470 series A registered shares preferred as to vote (one share gives two votes at the General Meeting); consequently, the State Treasury may exercise 51.77% 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.

Only acquisition of more than 10,493,000 preferred shares (i.e., more than 25% of all preferred shares of the Company) from the State Treasury would enable another shareholder to use the aforementioned exemption. 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 including the Vice-Presidents of the Management Board are elected by the Exchange Supervisory Board. As 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, it may control the composition of the Management Board directly or indirectly. 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.

The composition of the GPW Management Board did not change in 2019.

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, 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 date of preparation 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 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 approved in Resolution No. 23 of the Annual General Meeting on 17 June 2019 brought the Articles of Association in line with the amendment of Act of 16 December 2016 on Management of State Assets approved in the Act of 21 February 2019 amending the Act on Management of Public Assets and certain other Acts, effective as of 29 March 2019.

The relevant resolution of the GPW General Meeting was published in Current Report 15/2019 available on the Company's website in the *Investor Relations* tab. The amendments of the Articles of Association were approved by the Polish Financial Supervision Authority and registered by the Court, as announced by the Company in Current Report 27/2019 available on the Company's website in the *Investor Relations* tab. The consolidated text of the Company's Articles of Association was approved by the Exchange Supervisory Board on 6 November 2019.

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.

The General Meeting decides about the organisation and operation of the Company, elects Members of the Exchange Supervisory Board and the President of the Management Board.

3.8.2. PROCEDURES OF THE GENERAL MEETING

The General Meeting is the supreme authority of the Exchange. The General Meeting is summoned and operates under the Code of Commercial Companies and Partnerships, the Company's Articles of Association (in particular Articles 8 - 12) and the General Meeting Rules. The Articles of Association and the General Meeting Rules are available on the GPW website under the *Regulations* tab.

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 the announcement about the General Meeting contains information that such type of participation in the Meeting is admissible. Such participation includes: real-time broadcast of the General Meeting, two-way communication in real time where shareholders may 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.

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 and the General Meeting Rules.

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.

3.8.4. GENERAL MEETINGS IN 2019

The Annual General Meeting of GPW was held on 17 June 2019 with an agenda including review and approval of the Management Board's report on the activity of the GPW Group including the Company's activity report and the financial statements of the Company and the GPW Group for 2018, 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 2018 profit distribution, review of documents of the Exchange Supervisory Board, resolutions concerning distribution of the Company's profit for 2018, vote of discharge of duties to the Members of the Exchange Supervisory Board and the Exchange Management Board, changes in the composition of the Exchange Supervisory Board, approval of amendments of the Company's Articles of Association, appointment of Judges of the Exchange Court, resolutions concerning the rules of remuneration of Members of the Exchange Management Board and the Exchange Supervisory Board. The resolutions of the Annual General Meeting of 17 June 2019 were published in Current Report 15/2019 of 17 June 2019 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. 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;
- ◆ 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;
- ◆ assessing the Exchange Management Board's proposals on the distribution of profits or covering the losses;
- ◆ presenting to the General Meeting a written report on the findings of the above assessment;



- ◆ considering and presenting opinions on the items to be placed on the General Meeting's agenda;
- ◆ presenting to the General Meeting an annual report on the works of the Exchange Supervisory Board;
- ◆ 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 as at the end of 2019 is presented in the table below.

Table 24 Composition of the Exchange Supervisory Board as at 31 December 2019 and as at the date of this report



Name	Function	Independence
Jakub Modrzejewski	Chairman of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Janusz Krawczyk	Deputy Chairman of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Piotr Prażmo	Secretary to the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Bogusław Bartczak	Member of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Krzysztof Jajuga	Member of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Filip Paszke	Member of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board
Eugeniusz Szumiejko	Member of the Exchange Supervisory Board	Independent Member of the Exchange Supervisory Board

* According to submitted declarations, all Members of the Exchange Supervisory Board meet the independence criteria defined in § 14(1) of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.

Until 1 October 2019, the Exchange Supervisory Board was comprised of six members. On 1 October 2019, the General Meeting elected Krzysztof Jajuga as a member of the Exchange Supervisory Board. Since then, the Exchange Supervisory Board has been comprised of seven members.

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 composition of the Exchange Supervisory Board Committees as at 31 December 2019 and as at the date of this report was as follows:

STRATEGY COMMITTEE

- Mr Bogusław Bartczak – Chairman of the Committee
- Mr Krzysztof Jajuga - Member of the Committee
- Mr Jakub Modrzejewski - Member of the Committee
- Mr Filip Paszke - Member of the Committee

REGULATION AND CORPORATE GOVERNANCE COMMITTEE

- Mr Jakub Modrzejewski - Chairman of the Committee
- Mr Filip Paszke - Member of the Committee
- Mr Piotr Prażmo - Member of the Committee

REMUNERATION AND NOMINATIONS COMMITTEE

- Mr Janusz Krawczyk - Chairman of the Committee
- Mr Jakub Modrzejewski - Member of the Committee
- Mr Piotr Prażmo - Member of the Committee
- Mr Bogusław Bartczak – Member of the Committee

AUDIT COMMITTEE

- Mr Piotr Prażmo - Chairman of the Committee
- Mr Krzysztof Jajuga – Member of the Committee



- Mr Filip Paszke – Member of the Committee

The Strategy Committee was comprised of Bogusław Bartczak as Chairman and Janusz Krawczyk, Jakub Modrzejewski and Filip Paszke as Members from the beginning of 2019 to 6 November 2019. On 6 November 2019, following the resignation of Janusz Krawczyk from the Strategy Committee, Krzysztof Jajuga was appointed to the Committee. As of 6 November 2019, the Committee was comprised of Bogusław Bartczak as Chairman and Krzysztof Jajuga, Jakub Modrzejewski and Filip Paszke as Members.

The composition of the Regulation and Corporate Governance Committee did not change in 2019. The Regulation and Corporate Governance Committee was comprised of Jakub Modrzejewski as Chairman and Piotr Prażmo and Filip Paszke as Members as at 31 December 2019.

The composition of the Remuneration and Nomination Committee did not change in 2019. The Remuneration and Nomination Committee was comprised of Janusz Krawczyk as Chairman and Bogusław Bartczak, Jakub Modrzejewski and Piotr Prażmo as Members as at 31 December 2019.

Table 25 Composition and powers of Supervisory Board Committees as at 31 December 2019

Strategy Committee		
Bogusław Bartczak Krzysztof Jajuga Jakub Modrzejewski Filip Paszke	Chairman Member Member Member	<ul style="list-style-type: none"> • issues opinions on GPW's strategy and its updates, • issues opinions on implementation of GPW's strategy, • issues opinions on proposals of GPW's strategic alliances, • issues opinions on proposals of GPW's acquisition of stakes in entities of strategic significance, • issues opinions on materials related to exchange fees.
Regulation and Corporate Governance Committee		
Jakub Modrzejewski Piotr Prażmo Filip Paszke	Chairman Member Member	<ul style="list-style-type: none"> • drafts and presents to the Exchange Supervisory Board opinions concerning the fulfilment of obligations under the Exchange Rules and the Alternative Trading System Rules • initiates and issues opinions on proposed changes in regulations, • prepares position statements of the Supervisory Board and the Management Board, • initiates, issues opinions and monitors activities related to the implementation of the corporate governance rules by GPW, • initiates, issues opinions and monitors activities supporting the implementation of the corporate governance rules in listed companies.
Remuneration and Nominations Committee		
Janusz Krawczyk Jakub Modrzejewski Piotr Prażmo Bogusław Bartczak	Chairman Member Member Member	<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; • 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 the Exchange Management Board;
- defining management objectives for 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 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 Exchange Management Board Members and Exchange Supervisory Board Members;
- authorising the Exchange Management Board to perform functions on authorities of other businesses;
- resolving disputes between the Exchange Management Board and the Supervisory Board;
- regular, at least annual, evaluation of the structure, size and composition of the Exchange Management Board and changes to the distribution of responsibilities between the Exchange Management Board Members, 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 Exchange Management Board Members and reporting the evaluation results to the Exchange Management Board;
- regular, at least annual, evaluation of the Exchange Management Board's policy of selection and appointment of managers, and presentation of recommendations;
- other personnel matters within the competences of the Exchange Supervisory Board or the Committee.

* According to submitted declarations, all members of the Strategy Committee, the Regulation and Corporate Governance Committee, and the Remuneration and Nomination Committee meet the independence criteria defined in § 14(1) of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.

The powers of the Supervisory Board Committees are presented above as per the Rules of the Committees.

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, risk management including compliance risk, and ICT security and IT.

The responsibilities of the Audit Committee include:

- ◆ monitoring of the financial reporting process;
- ◆ monitoring of financial audits;
- ◆ control and monitoring of the independence of the auditor and the audit firm;
- ◆ assessment of the independence of the auditor;



- ◆ 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;
- ◆ presentation of recommendations to select an audit firm to the Exchange Supervisory Board;
- ◆ presentation of recommendations ensuring accurate financial reporting in the Company;
- ◆ issuing opinions on financial statements and motions of the Management Board concerning distribution of profits or coverage of losses;
- ◆ reporting the outcome of reviews to the Exchange Supervisory Board and defining how the reviews ensured accurate financial reporting;
- ◆ reviewing additional reports for the Audit Committee presented by the audit firm responsible for the audit;
- ◆ issuing opinions on annual financial plans of the GPW Group and GPW, presenting recommendations to the Exchange Supervisory Board;
- ◆ issuing opinions on reports of the Exchange Management Board on the implementation of the financial plans of the GPW Group and GPW;
- ◆ monitoring the efficiency of GPW's internal control system;
- ◆ 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 audit 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 DWW Director and approving the remuneration of the Director of the Internal Audit Department, approving the budget of the Department, reviewing and issuing opinions on the rules of the Internal Audit Department, reviewing and issuing opinions on annual internal audit plans, enabling direct communication of the Director of the Internal Audit Department with the Audit Committee;
- ◆ monitoring the efficiency of internal audit;
- ◆ 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;
- ◆ issuing opinions on the Risk Management Strategy;
- ◆ monitoring the efficiency of the risk management system;
- ◆ monitoring the efficiency of the business continuity system;
- ◆ monitoring the efficiency of the ICT security and IT management system based on regular reports.

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. 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 was comprised of Piotr Prażmo as Chairman and Bogusław Bartczak and Filip Paszke as Members from the beginning of January 2019 to 6 November 2019. On 6 November 2019, following the resignation of Bogusław Bartczak from the Audit Committee, Krzysztof Jajuga was appointed to the Committee. The Audit Committee was comprised of Piotr Prażmo as Chairman and Krzysztof Jajuga and Filip Paszke as Members as at 31 December 2019.



Table 26 Composition of the Audit Committee as at 31 December 2019 and as at the date of this report

Name	Function	Independence
Piotr Prażmo*	Chairman	Independent Member of the Exchange Supervisory Board
Krzysztof Jajuga*	Member	Independent Member of the Exchange Supervisory Board
Filip Paszke*	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 with the knowledge and skills in accounting or financial audits are Krzysztof Jajuga and Piotr Prażmo, Member of the Association of Chartered Accountants (ACCA) and FCCA.

All Members of the Audit Committee have the knowledge and skills in the industry gained over many years of practice on the financial market.

The Audit Committee of the Exchange Supervisory Board met with the auditor in connection with the audit of the financial statements for 2019. The key auditor participated in those meetings.

The Audit Committee worked at meetings (12 meetings were held in 2019), voting in a circular procedure, 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 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. 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;

The Exchange Management Board is the Company's executive body and consists of three to five members. The Exchange Management Board was comprised of 5 members as at 31 December 2019 and as at the date of this report.



- ◆ 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.

3.10.2. POWERS OF THE 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:

- 1) 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;
- 2) a report on compliance with best practice defined by the Prime Minister under the Act of 16 December 2016 on Management of State Assets.

3.10.3. COMPOSITION OF THE GPW MANAGEMENT BOARD

The tables below present the composition of the GPW Management Board as at the end of 2018 and 2019:

Table 27 Composition of the Exchange Management Board as at the end of 2019

Name	Function
Marek Dietl	President of the Management Board
Jacek Fotek	Vice-President of the Management Board
Izabela Olszewska	Member of the Management Board
Piotr Borowski	Member of the Management Board
Dariusz Kułakowski	Member of the Management Board

On 23 April 2018, the GPW Extraordinary General Meeting appointed Marek Dietl as President of the GPW Management Board of the new term of office.

In view of the end of term of the Exchange Management Board, following a selection procedure, the Exchange Supervisory Board appointed four Members of the GPW Management Board for a new term starting on 26 July 2018. Two Members of the previous term were re-elected: Jacek Fotek, who remained the Chief Financial Officer (CFO), and Dariusz Kułakowski, who became the Chief Information Officer (CIO). Two newly appointed Members of the Management Board had been affiliated with the Warsaw Stock Exchange for many years and had professional experience in the capital market: Izabela Olszewska



as Management Board Member responsible for business and sales development (CSO), and Piotr Borowski as Management Board Member for operations and regulation (COO).

The decision of the Exchange Supervisory Board concerning the two new Management Board Members took effect as of 1 August 2018 upon the approval of the Polish Financial Supervision Authority granted on 13 July 2018.

All this information was published in current reports and is available on the GPW website in the Investor Relations tab.

The composition of the Exchange Management Board did not change in 2019.

On 2 March 2020, Mr Jacek Fotek, Vice-President of the Exchange Management Board, resigned from the Exchange Management Board effective on 30 April 2020. The Company announced the resignation in Current Report No. 2/2020.

3.10.4. GPW ORGANISATIONAL CHART

Chart 7 Organisational chart of GPW as at 31 December 2018

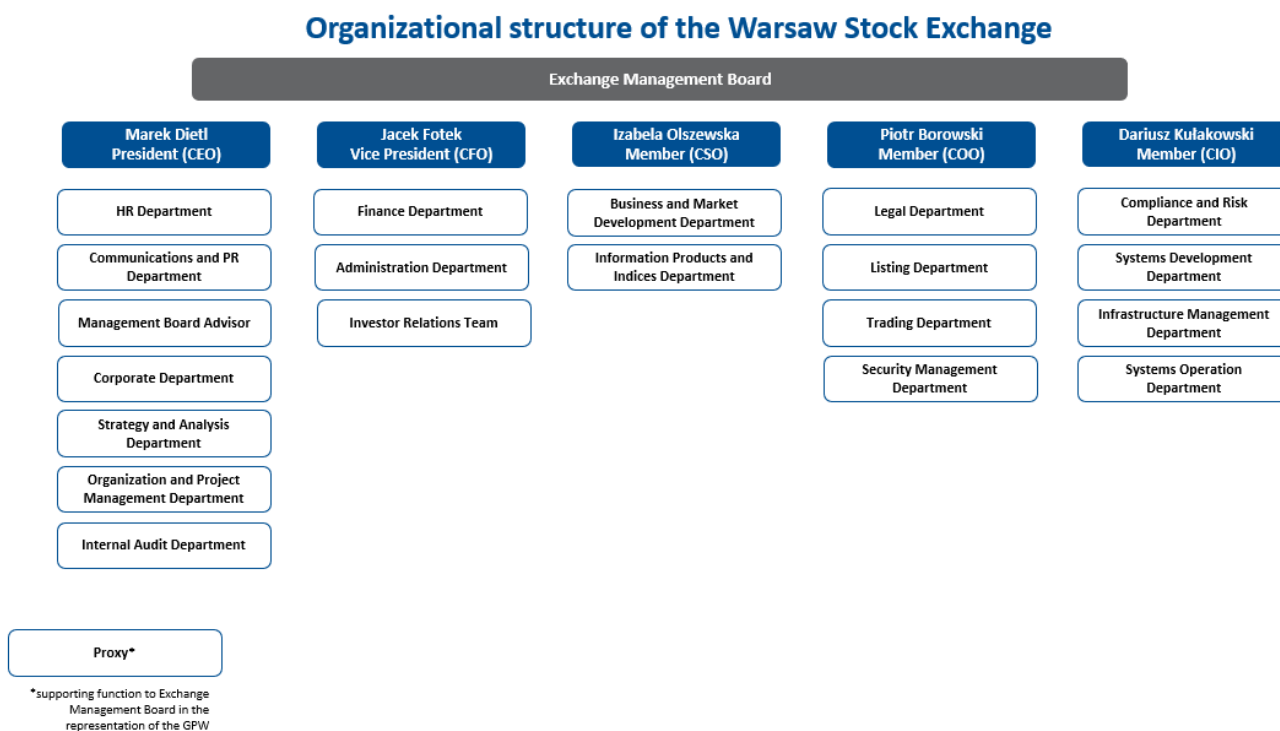


Chart 8 Organisational chart of GPW as at 3 January 2019

Organizational structure of the Warsaw Stock Exchange

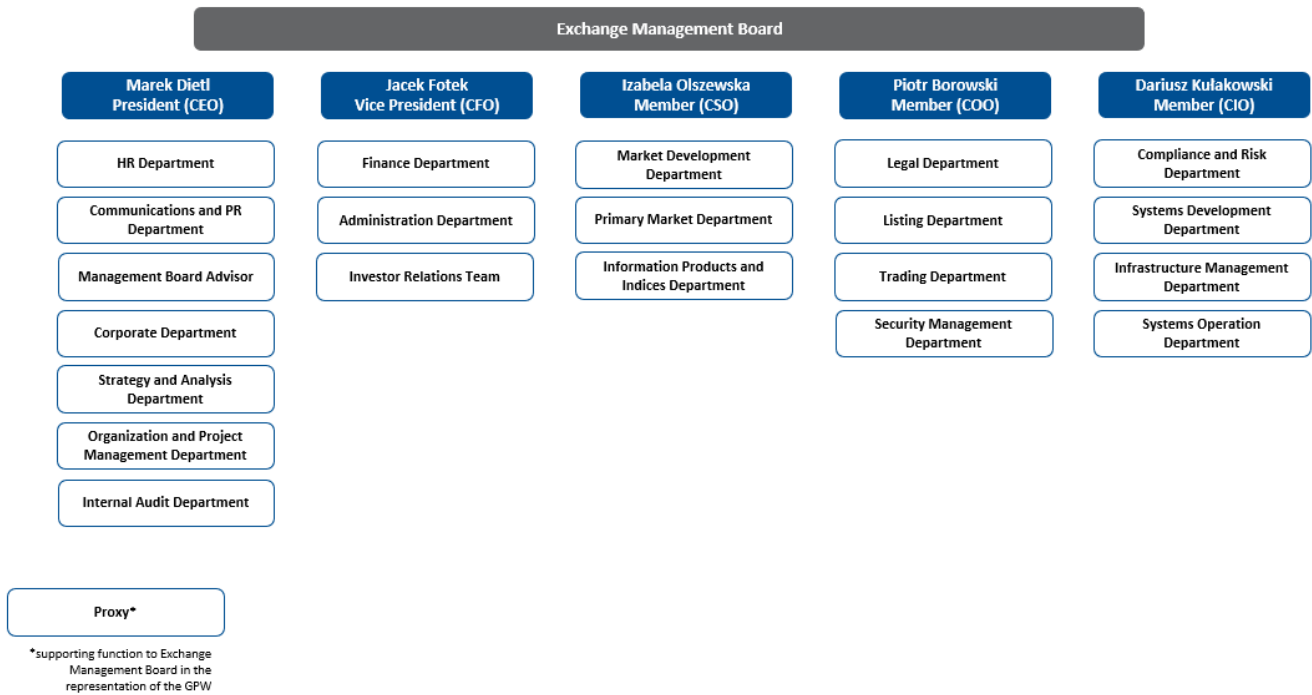
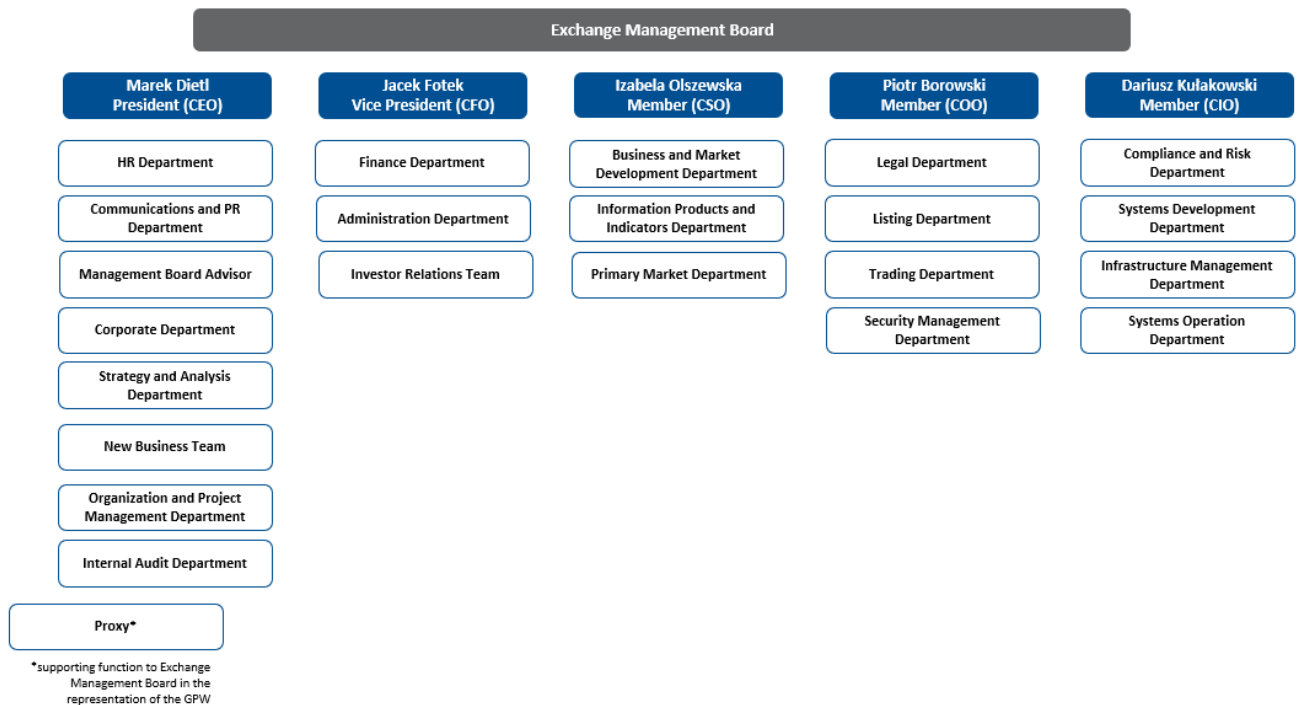


Chart 9 Organisational chart of GPW as at 1 January 2020 and as at the date of publication of this report

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, partial reimbursement of commuting costs, the Employee Pension Scheme, a canteen system. GPW employees can use loans including housing and medical loans, as well as payments from the Company Social Benefits Fund. Managers are entitled to a flat-rate reimbursement of the cost of a vehicle.

For more information on the GPW employee policy, including the training policy, the recruitment policy and employee volunteering, see section 4.4 *Responsible human resources policy*.

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.

The system of defining the rules of remuneration of the Members of the Exchange Management Board was approved in Resolution 3 of the Extraordinary General Meeting of 30 November 2016. The amendments introduced in the Resolution derive from the provisions of Article 2(1) of the Act of 9 June 2016 on Rules of Remuneration of Managers of Certain



Companies (Journal of Laws of 2016, item 1202). The Resolution was amended by Resolution 42 of the Annual General Meeting of 19 June 2017 and Resolution 36 of the Annual General Meeting of 17 June 2019.

The existing remuneration system was implemented in the Company in March 2017. 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, 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).

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 (Journal of Laws of 2016, item 2259).

The previous remuneration system for the Members of the Exchange Management Board was based on a long-term incentive system. It consisted of a fixed part (basic remuneration), a variable part (incentive system, i.e., discretionary annual bonus), as well as fringe benefits to the extent defined by the Exchange Supervisory Board.

The variable part of remuneration, i.e., the discretionary annual bonus, could be awarded provided that the following criteria were met:

- ✓ the Company reported a net profit for the financial year for which the discretionary bonus was to be awarded;
- ✓ the member of the Exchange Management Board was employed as at the 30th day after the publication of the consolidated financial statements of the GPW Group;
- ✓ the Members of the Exchange Management Board were granted a vote of discharge of their duties for the last bonus year.

The amount of the bonus for Members of the Management Board depended on semi-annual appraisal of performance and the Company's results performed by the Exchange Supervisory Board, as well as verification of results of work of the Exchange Management Board Members in previous bonus years.

The Exchange Supervisory Board performed an annual appraisal which could determine the grant and the amount of the discretionary bonus awarded to a Management Board Member. The maximum amount of the discretionary annual bonus was capped as a percentage of annual basic remuneration. Payments of the awarded discretionary bonus were made as follows:

- ✓ 30% of the awarded bonus paid on a one-off basis;
- ✓ 30% paid in phantom shares, which are paid out one year after the award;¹³
- ✓ 40% of the awarded bonus was added to the bonus bank and settled in equal parts in the next three years subject to positive reassessment by the Supervisory Board of the work taken in the period of the bonus.

The discretionary bonuses to the Exchange Management Board under the previous remuneration scheme will have been settled by the end of 2020.

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).

¹³ The amounts of bonus – one-off payment represent benefits paid in 2017 and due as at the end of 2018; the amounts of bonus – bonus bank and bonus – phantom shares for 2017 represent provisions.



Table 28 Remuneration and benefits of Members of the Exchange Management Board paid in 2019 [PLN thousand]

Członek Zarządu	Wynagrodze nie podstawowe	Wynagrodze nie zmienne	Premia wypłata jednorazowa	- Premia bank premi	- Premia akcje fantomowe	- Pozostałe świadczenia	Świadcze- nia po okresie zatrudnienia	Razem
Piotr Borowski	396	0	0	0	0	21	0	417
Marek Dietl	422	111	0	0	0	17	0	550
Jacek Fotek	392	306	0	0	0	41	0	739
Dariusz Kułakowski	397	287	29	0	0	35	0	748
Izabela Olszewska	395	0	0	0	0	22	0	417
Razem	2002	704	29	0	0	136	0	2871

Table 29 Remuneration and benefits of Members of the Exchange Management Board paid in 2018 [PLN thousand]

Członek Zarządu	Wynagrodze nie podstawowe	Wynagrodze nie zmienne	Premia wypłata jednorazowa	- Premia bank premi	- Premia akcje fantomowe	- Pozostałe świadczenia	Świadcze- nia po okresie zatrudnienia	Razem
Piotr Borowski	160	0	0	0	0	2	0	162
Michał Cieciorowski	114	0	0	11	32	0	192	349
Marek Dietl	422	0	0	0	0	1	0	423
Jacek Fotek	382	0	0	0	0	7	0	389
Dariusz Kułakowski	383	0	0	30	31	7	0	451
Izabela Olszewska	159	0	0	0	0	4	0	163
Karol Półtorak	0	0	0	24	13	1	0	38
Mirosław Szczepański	0	0	0	19	0	1	0	20
Paweł Tamborski	0	0	0	34	0	1	0	35
Grzegorz Zawada	0	0	0	28	25	1	0	54
Razem	1620	0	0	146	101	25	192	2084

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 2017-2019.

3.11.3. TERMS OF EMPLOYMENT OF GPW MANAGEMENT BOARD MEMBERS

The current four-year term of office of the Management Board of the Warsaw Stock Exchange started on 26 July 2018.

In 2019, the Management Board of Giełda Papierów Wartościowych w Warszawie was comprised of Marek Dietl as President, Jacek Fotek as Vice-President, Dariusz Kułakowski as Member of the Management Board, Piotr Borowski as Member of the Management Board, and Izabela Olszewska as Member of the Management Board.

Management contracts were signed with all Members of the Management Board of Giełda Papierów Wartościowych w Warszawie.

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 30 Members of the Exchange Management Board, as at 31 December 2019

Member of the Management Board	In office from	In office to	Function
Marek Dietl	27 September 2017	for a determined period, i.e., until the end of the mandate	President of the Management Board
Jacek Fotek	14 March 2017	for a determined period, i.e., until the end of the mandate	Vice-President of the Management Board
Dariusz Kułakowski	25 July 2014	for a determined period, i.e., until the end of the mandate	Member of the Management Board
Piotr Borowski	1 August 2018	for a determined period, i.e., until the end of the mandate	Member of the Management Board
Izabela Olszewska	1 August 2018	for a determined period, i.e., until the end of the mandate	Member of the Management Board

The Exchange Supervisory Board inserted non-competition clauses effective for the term of the contract and after termination into the management contracts. If a management contract of a Management Board Member who performed the function for at least 3 months is terminated, the Management Board Member is entitled to damages for a period of six months equal to 100% of the remuneration paid in equal monthly instalments. The non-competition clause may be terminated by agreement of the parties or by the Company with a notice of one month or effective immediately in the case of a breach of the clause by the manager.

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.

According to the Resolution of the Extraordinary General Meeting of the Company of 30 November 2016, the monthly remuneration of the Exchange Supervisory Board Members was determined as equal to 1.5 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).

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 31 Remuneration of the GPW Supervisory Board members [PLN thousand]

Exchange Supervisory Board Member	For the year ended 31 December 2019	For the year ended 31 December 2018
Wojciech Nagel	0	41
Eugeniusz Szumiejko	79	79
Krzysztof Kaczmarczyk	0	55
Jakub Modrzejewski	87	87
Bogusław Bartczak	86	86



Piotr Prażmo	86	82
Filip Paszke	79	79
Jajuga Krzysztof	20	0
Janusz Krawczyk	86	0

Exchange Supervisory Board Members held no supervisory or management functions in any other entities in the GPW Capital Group..

3.11.5. EVALUATION OF THE REMUNERATION POLICY

The Company's remuneration policy based on an incentive system directly supports the implementation of GPW's business strategy. The Company's remuneration system is based on fixed remuneration and variable remuneration under the incentive system. The remuneration system also includes other factors such as: 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 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 seven consolidated subsidiaries as at 31 December 2019. GPW holds a stake in four associates.

On 18 February 2019, the Management Board of GPW Benchmark S.A. acting within its powers vested under the articles of association passed a resolution increasing the Company's share capital, within the limits of authorised capital, by PLN 1,000,000 to PLN 2,900,000 through an issue of 20,000 series E ordinary registered shares. All new issue shares were taken up by the Company's sole shareholder, the Warsaw Stock Exchange. The Company's share capital increase was registered on 29 July 2019.

The company GPW Ventures ASI S.A. was established on 13 February 2019. All of its shares were taken up by the Warsaw Stock Exchange. The company was entered into the register of alternative investment companies by the Polish Financial Supervision Authority on 31 October 2019 and into the business register of the National Court Register on 2 December 2019. The core business of the Company is to pool assets of many investors in order to invest such assets in the interest of the investors according to an investment policy, and to manage an alternative investment company.

The company GPW TECH S.A. was established on 16 October 2019. According to the GPW Group's strategy, the core business of the company is to develop, maintain and commercialise IT solutions supporting the financial market, in particular the capital market. The company was entered into the business register of the National Court Register on 20 December 2019.

The Group has no branches or establishments.

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 *III.10. Exchange Management Board*. The section below outlines changes in other companies participating in the GPW Group as at the end of 2019.

BondSpot S.A.

As at 31 December 2019, the Management Board of BondSpot S.A. was comprised of the following persons:



Mariusz Bieńkowski – President of the Management Board,

Jacek Fotek - Chairman of the Supervisory Board delegated to temporarily perform the functions of Vice-President of the Management Board

Until 11 October 2019, Piotr Woliński was the President of the Management Board and Mariusz Bieńkowski was the Vice-President. On 22 November 2019, a resolution of the Extraordinary General Meeting appointed Mariusz Bieńkowski President of the Management Board effective as of 26 November 2019.

Towarowa Giełda Energii S.A.

As at 31 December 2019, the Management Board of TGE was comprised of three persons:

- Piotr Zawistowski - President of the Management Board,
- Paweł Ostrowski - Vice-President of the Management Board,
- Piotr Listwoń - Vice-President of the Management Board.

The composition of the company's Management Board did not change in 2019.

IRGiT S.A.

As at 31 December 2019, the Management Board of IRGiT S.A. was comprised of two persons:

- Andrzej Kalinowski – President of the Management Board,
- Łukasz Goliszewski – Vice-President of the Management Board.

Seweryn Szwarocki resigned as Vice-President of the Management Board on 31 December 2017. The Supervisory Board of IRGiT appointed Łukasz Goliszewski Vice-President of the Management Board on 4 April 2019.

InfoEngine S.A.

As at 31 December 2019, the Management Board of InfoEngine S.A. was comprised of one member. Dariusz Katulski was the President of the Management Board, appointed to that function by a resolution of the Extraordinary General Meeting on 22 July 2019.

From 1 January 2019, Grzegorz Żarski, Member of the Supervisory Board, was acting President of the Management Board, delegated to perform that function temporarily. Radosław Łuczak was appointed President of the Management Board by a resolution of the Extraordinary General Meeting on 2 May 2019. Following Radosław Łuczak's resignation, a resolution of the Supervisory Board of 10 May 2019 delegated Grzegorz Żarski, Member of the Supervisory Board, to temporarily perform the functions of President of the Management Board.

GPW Benchmark S.A.

As at 31 December 2019, the Management Board of GPW Benchmark S.A. was comprised of two persons:

- Zbigniew Minda – President of the Management Board,
- Aleksandra Bluj – Vice-President of the Management Board.

The composition of the company's Management Board did not change in 2019.

GPW Ventures ASI S.A.

As at 31 December 2019, the Management Board of GPW Ventures ASI S.A. was comprised of:

- Piotr Gębala – President of the Management Board,
- Paweł Tymendorf – Member of the Management Board.

GPW TECH S.A.

As at 31 December 2019, the Management Board of GPW TECH S.A. was comprised of two persons:

- Witold Wiliński – President of the Management Board,
- Dariusz Kułakowski - Vice-President of the Management Board.



4. CORPORATE SOCIAL RESPONSIBILITY (CSR)

4.1. CSR STRATEGY OF THE GPW GROUP

The Warsaw Stock Exchange and the companies of the GPW Group pursue their business operations in compliance with the highest business standards and taking into account social, ethical and environmental factors.

Since 2013, GPW is a member of the Sustainable Stock Exchanges, a UN initiative of 93 global exchanges which pursue sustainable and responsible business and promote the highest ESG (Environment, Social, Governance) standards on their home markets through initiatives addressed to market participants.

GPW has for many years promoted highest ESG standards (Environment, Social, Governance) among listed companies. Until 2019, GPW's flagship project promoting companies dedicated to sustainability and ESG was the RESPECT Index. The index showcased participating companies as attractive investment targets offering quality reporting, investor relations, corporate governance, as well as liquidity.

Since 1 January 2020, the Exchange no longer calculates or publishes the RESPECT Index.

Starting in September 2019, GPW publishes a new index, WIG-ESG. It covers companies participating in WIG20 and mWIG40 – the biggest companies listed on GPW. Similar to other indices, the weights of participating companies depend on their free float adjusted based on an ESG ranking and an assessment of compliance with the Code of Best Practice for GPW-Listed Companies 2016. With WIG-ESG, GPW launched an index with a clear investment purpose. GPW published both WIG-ESG and the RESPECT Index until the end of 2019. GPW Benchmark will only publish WIG-ESG as of 1 January 2020.

In 2019, GPW continued to pursue its CSR (Corporate Social Responsibility) strategy.

The mission of the GPW Group is to support economic growth and build an investment culture by ensuring highest standards and safety of trading in a professional and responsible process. The Group's CSR strategy provides for the implementation of the mission and for building of the Group's value while respecting the interests of the environment of the Group's companies based on dialogue and co-operation with all stakeholder groups.

The Warsaw Stock Exchange Group not only focuses on its sustainable and responsible business but also drives responsible behaviour of its market participants.



The 2030 Agenda for Sustainable Development approved by all 193 UN Member States defines 17 Sustainable Development Goals and 169 targets to be achieved globally by 2030. The GPW Group actively supports 5 selected Sustainable Development Goals (SDGs) which are relevant to the activity of the Exchange and its subsidiaries in view of their role on the Polish financial and commodity markets and the relevant stakeholder groups.

The GPW Group's CSR strategy is based on four main pillars:

- ◆ education,
- ◆ market relations and dialogue,
- ◆ responsible human resources policy,
- ◆ protection of the natural environment.



Chart 10 Main areas of the GPW Group’s CSR strategy



4.2. EDUCATION

According to the GPW Group’s CSR strategy, education is the foundation of the general public’s trust in the capital and commodity markets and their institutions. Hence, a key objective of the GPW Group is to foster a culture of investing while raising awareness of the mechanisms of capital and commodity markets in order to encourage Poles to invest their savings and urge companies to raise growth capital on the capital market.

4.2.1. THE GPW FOUNDATION

Education is a foundation of trust in the capital market and its participants. In pursuit of its mission, the Warsaw Stock Exchange has for years engaged in educational campaigns addressed to students, investors and professionals on the capital market. To amplify the reach and efficiency of their educational initiatives, the GPW Group companies established the GPW Foundation. The mission of the GPW Foundation is to develop and adapt the educational offer concerning the capital market and the exchange. The GPW Foundation pursues its mission by organising and implementing school and educational projects for school and university students. The Foundation’s programmes are also dedicated to investors and professionals active on the financial market.



Educational projects and initiatives implemented by the GPW Foundation in 2019:

Go4Poland - Wybierz Polskę! – a programme designed to seek talents among Polish students of foreign universities and to encourage them to work in Polish companies and institutions. In the Programme, the GPW Foundation works with businesses, institutions and student initiatives including student clubs and associations which promote returns of students to Poland to have a career in Polish companies and the public administration. The Programme is open to Polish students and graduates of universities around the world, including students participating in exchange programmes at foreign universities and Polish students from the Polish diaspora who are advanced speakers of Polish. Go4Poland-Wybierz Polskę! is a platform of communication for Polish students and graduates of foreign universities with companies and institutions which offer paid internships. The Foundation initiated the fourth round of the programme in 2019, adding two key components: a mentoring programme, and meetings of the Programme Board which defines the directions of the programme. The key part of the programme comprised of workshops and the final conference of the fourth edition took place in June 2019 while internships were offered from June to September 2019. 150 participants enrolled in the fourth edition of the programme and the conferences brought together 180 participants. 32 internship positions were announced, 22 internships were completed. 14 partner workshops were opened. More than 20 business partners joined the fourth edition of the programme.

Knowledgeable investors and participants of GPW markets equipped with the right tools create value, inspire trust and confidence.

School visits to GPW – the Foundation offers school visits to the GPW head office for students of secondary schools and senior students of primary schools. Visits include a presentation by Foundation representatives as well as a multimedia demo class for school students. As part of the project, around 9,000 students in 227 groups visited GPW in 2019.

Product training – training offered by the Foundation in partnership with brokers who are Exchange Members, addressed to existing and prospective investors and other interested parties. The training themes included GPW-listed financial instruments. Seven product training sessions were offered in 2019. In addition, exchange experts presented the exchange and listed instruments at scientific conferences organised by universities across Poland and for groups of students visiting GPW. The product training sessions and initiatives addressed to students reached approximately 1,700 participants.

Online School Exchange Game (SIGG) – an educational project addressed to students of secondary schools and senior students of primary schools. The 17th edition of the project was offered by GPW in partnership with the GPW Foundation and the Lesław A. Paga Foundation. The project included a final game hosted by the Exchange in April with the participation of the 20 winning teams from all over Poland. Enrolment in the next edition of the project opened in October 2019.

SIGG is an online investment game. Students supervised by a teacher appoint teams of 2 to 4 participants. Each participating team has one investment account and a pool of virtual cash. The participants first learn about financial instruments traded on the Warsaw Stock Exchange (shares, ETFs, futures) and then jointly make virtual transactions in the account. The educational module of the 17th project edition included a dozen e-learning sessions combined with gamification. The participants invest virtual cash but their orders are executed based on actual buy and sell orders from the market.

The game consists of three steps:

- Step 1: trading in shares and ETFs;
- Step 2: trading in futures;
- Finals on the GPW Trading Floor (held on 16 April 2019).

The 17th edition of the project had 18,746 participating students. The 18th edition of the project included 18 thousand students and 800 teachers.

Summer Online Exchange School – The GPW Foundation in partnership with the Association of Exchange Investors (SIG) completed a series of online training sessions of the Summer Online Exchange School. Ten training sessions were offered from 3 July to 4 September 2019. The programme was addressed to beginners in exchange investing across Poland. The training participants were 1,560 unique users, on average 216 per session. The project featured speakers from brokerage houses that are Exchange Members: Noble Securities, Noble Securities, ING Group, DM BOŚ, DM mBanku, DM PKO BP and Santander Securities.



Niebanalnie o giełdzie – In July 2019, the GPW Foundation closed the first edition of an educational project addressed to teachers who teach subjects related to economics. The programme closed with a conference hosted on the GPW Trading Floor. As a part of the project, the GPW Foundation offered 10 local training rounds (including 1 pilot) in 9 Polish cities (each training round included 3 lectures and methodology workshops), as well as a competition for a lesson plan about the capital market. The project engaged approximately 400 teachers who teach subjects related to economics.

The objective of the project was to improve the skills of teachers of primary schools (grade 7 and 8) and secondary schools who teach subjects related to economics in order to develop knowledge about savings and investing and promote rational behaviour of young people, including a presentation of capital markets, investment instruments and their critical review, as well as psychological factors driving investing and saving preferences, and the ability to rate investment risks. The project is national in scope and offered free of charge to participants.

In July 2019, the Foundation started preparations for the second edition of the project scheduled in 2020 including 16 training sessions for teachers as well as methodology workshops.

Financial Education and Entrepreneurship Congress – initiated by four foundations: the Warsaw Institute for Banking (WIB), the GPW Foundation, the Lesław A. Paga Foundation and the THINK Knowledge Society Foundation, the third edition of the Financial Education and Entrepreneurship Congress took place at the Copernicus Science Centre in Warsaw on 27 March 2019. The event brought together 350 representatives of 100 financial, educational and training institutions and organisations.

The key part of the Congress was a plenary session including the **keynote debate dedicated to the "Directions of development of financial education and entrepreneurial attitudes in a world of modern technology"** featuring representatives of the key conference patrons including GPW CEO Marek Dietl. In connection with the 3rd edition of the Congress, the GPW Foundation in partnership with WIB carried out their first-ever survey of financial knowledge of Poles and presented the findings at a press conference accompanying the event. The Congress was accompanied by Financial Education Fairs, where the GPW Foundation had its stand.

PPK: Life-long Investing – from April to December 2019, the GPW Foundation offered the training programme "PPK: Life-long Investing" with the objective of providing substantive expert support to companies implementing Employee Capital Plans (PPK). The Foundation provided approximately 500 training sessions across Poland featuring some 30 trainers, most of whom are Exchange School teachers. We worked closely with the Polish Development Fund (PFR) and developed a repository of training materials. In view of the specificity of the Foundation's activities and its close links to GPW, we focused on providing reliable knowledge concerning general economic and demographic conditions, which are one of the key reasons why the Employee Capital Plans were introduced into Polish law and the economy. We focused on the PPK framework and practical implementation in companies. With the "PPK: Life-long Investing" programme, the Foundation understood the importance of economic education offered by impartial experts. As a representative of GPW, focusing on the provision of expert knowledge, we laid the foundation for informed decisions of both employers and employees. Nothing can change people's minds more than credibility and professionalism. The experience we gained and the follow-up evaluation of the training provided the Foundation opened up a host of ideas for economic education addressed to all generations.

To address social needs and provide education in capital markets, the Foundation offered a donation to sextuplets born in 2019. The donation was given to each child as an investment in ETFs.

Knowledge-Skills-Competences: Innovative acceleration model for cross-sector co-operation in the development of the Polish capital market. The project will span 24 months with financing from the Ministry of Science and Higher Education, aiming to strengthen Poland's capital market by developing a model for cross-sector co-operation. An optimum model of co-operation between researchers, businesses (including investors, issuers, SMEs) and the economic and legislative environment will help them network, exchange best practice and expertise, and learn from each other.

Project outcomes (short-term): to establish relations among stakeholders in capital market development

Project outcomes (long-term): to develop product and process innovations (fin-tech), attract investors and issuers to Poland's capital market, boost the competitiveness of Poland's capital market.



4.2.2. EXCHANGE SCHOOL

A flagship educational programme arranged by GPW for many years, the Exchange School has been co-ordinated since 2016 by the GPW Foundation under the auspices of the Warsaw Stock Exchange. As part of the Exchange School, the GPW Foundation offers courses at two levels: "101 of Investing on the Exchange" and "Exchange for Intermediate Users". Each course consists of 14 hours of lectures in 5 thematic modules. Courses are delivered by experienced academics and capital market practitioners.

- ◆ 101 of Investing on the Exchange
 - ◆ Capital market and financial instruments
 - ◆ How the Exchange works
 - ◆ Impact of the economic environment on the Exchange
 - ◆ Selecting and evaluating stocks
 - ◆ Managing a portfolio of financial instruments
- ◆ Exchange for Intermediate Users
 - ◆ Impact of the economic environment on the Exchange
 - ◆ How the Exchange works
 - ◆ Derivatives and turbo certificates
 - ◆ Fundamental analysis
 - ◆ Technical analysis

In 2019, the project was carried out in partnership with 15 universities across Poland and included training co-ordinated by the GPW Foundation and offered at the GPW head office. In total, 20 courses were completed in the academic year 2018/2019 (15 "101 of Investing on the Exchange" courses and 5 "Exchange for Intermediate Users" courses) reaching 661 participants.

4.2.3. GPW EDUCATIONAL ACTIVITIES OF GPW

The Warsaw Stock Exchange also engages in many educational initiatives addressed to issuers and market participants including:

- ◆ **Turbo Challenge Game** – an educational competition organised in partnership with Nowe Usługi S.A., a partner of ING Bank NV, offering virtual investment of cash in exchange-listed ING Turbo certificates, equities and ETF units. GPW is a competition co-organiser and founder of prizes. The objective of the competition is to educate investors and to promote exchange-traded structured products. The competition had 2,585 enrolled contestants who closed at least one transaction each, the biggest number in history and an increase of 48% year on year.
- ◆ **Competition for MA and BA theses with awards from the President of the Warsaw Stock Exchange** – in 2019, GPW opened a new edition of the competition for MA and BA theses about the capital market with awards from the President of the Warsaw Stock Exchange. The programme encourages students to improve their knowledge about the capital market, its infrastructure institutions and modern financial instruments. The competition is open to authors of theses submitted for a degree in Poland from January to December of the previous calendar year. 37 theses were entered in the competition.
- ◆ **The "Exchange: It's Simple" Portal** – in October 2019, GPW launched a new educational portal gieldatoposte.pl which introduces investors to the exchange and the capital market. The portal features extensive information about WIG.GAMES and macrosector futures. The portal provides educational materials addressed both to beginners and intermediate advanced investors. It also brings news of upcoming events hosted by GPW across Poland.
- ◆ **Conference series: "Long-term Investing on GPW"** – a series of conferences were hosted by GPW in 2019 in partnership with the main partner PKN Orlen and with other partners: the Association of Individual Investors (SII), CFA Poland and BM PKO SA. The project included four conferences addressed to beginners and intermediate advanced investors. The events took place in Warsaw, Gdańsk, Wrocław and Rzeszów, attended by approximately 400 participants, mainly beginners and intermediate advanced investors. The event in Wrocław attracted the biggest and most active audience. As a key part of the programme, the debate on "How to attract individual investors to actively participate in the capital market" brought together representatives of BM PKO BP, PKN Orlen, GPW, SII, CFA Poland and, in Wrocław, of Bankier.pl.



- ◆ **GPW Growth** – in October 2019, GPW launched GPW Growth, a #GPW2022 strategic initiative and a comprehensive programme of support for growth of small and medium-sized enterprises based on their identified needs. The programme is addressed to CEOs, Board Members and Directors responsible for key goals of companies. The unique project features networking events with the participation of experts and business practitioners, workshops, case studies, one-on-one meetings, and international study visits. In addition, companies will be promoted among business and finance professionals. GPW Growth is organised by GPW and its partners including the Polish Development Fund (PFR), the EY Academy of Business, Inicjatywa Firm Rodzinnych, Dialog – Klub Dyrektorów Finansowych, as well as the programme patrons: the Ministry of Entrepreneurship & Technology and CFA Society Poland.

4.2.4. RESPECT INDEX AND ESG INDEX

The Warsaw Stock Exchange has for many years promoted highest ESG standards (Environment, Social, Governance) among listed companies. Previously GPW published the RESPECT Index, which served an educational function throughout 10 years in operation. Since 3 September 2019, GPW publishes a new index: WIG-ESG, which covers companies participating in WIG20 and mWIG40. Similar to other indices, the weights of participating companies depend on their free float adjusted based on an ESG ranking and an assessment of compliance with the Code of Best Practice for GPW-Listed Companies 2016. GPW published both WIG-ESG and the RESPECT Index until the end of 2019. Only WIG-ESG will be published as of 1 January 2020 by GPW Benchmark.

The RESPECT Index project was a flagship initiative of the Warsaw Stock Exchange and a part of its educational efforts in support of social responsibility of GPW listed companies and responsible investing in Poland.

The index portfolio included companies listed on the GPW Main Market which followed the highest standards of corporate governance, disclosures and investor relations taking into account environmental, social and governance (ESG) factors in their business. The companies were audited and the index portfolio was revised once per year in the second half of the year. The index portfolio included the biggest listed companies participating in the indices WIG20, mWIG40 and sWIG80. The companies were selected in three steps of verification carried out by GPW and the Association of Listed Companies in the areas listed above as well as an audit performed by the project partner since the first edition: Deloitte.

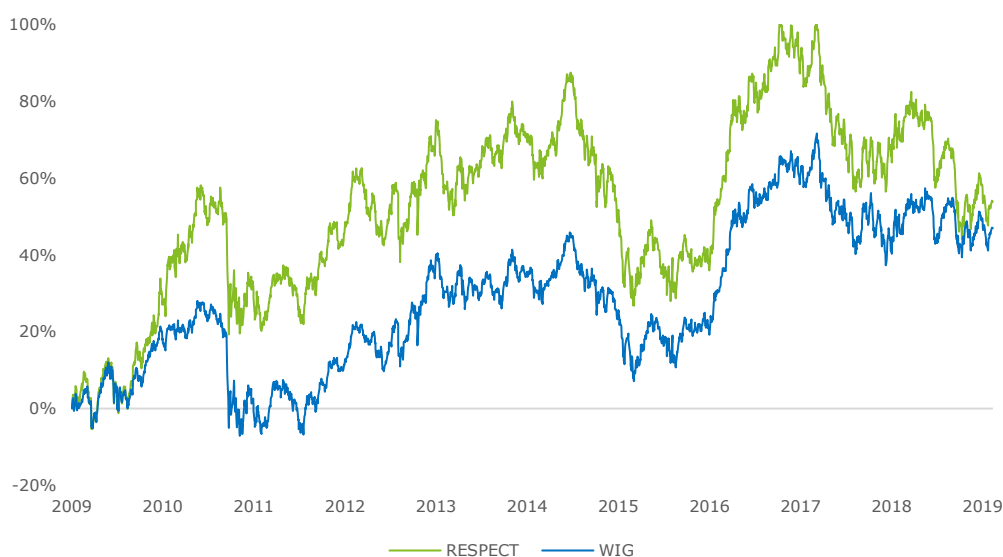
The RESPECT Index portfolio included between 16 and 31 companies in each of the twelve editions of the survey, last held in the autumn of 2018. The final index portfolio of the twelfth edition, audited by Deloitte, was comprised of 31 companies, including two new participants (Amrest Holding SE, CCC S.A.), as well as PKN Orlen S.A.

In summary, the twelve editions had more than 40 participants.

Initiated in 2009 as CEE's first responsible company index, RESPECT Index was the first such index in Poland.

GPW published both WIG-ESG and the RESPECT index until the end of 2019. Only WIG-ESG will be published as of 1 January 2020.

Figure 62 Performance of the RESPECT Index and WIG [% change]



On 3 September 2019, GPW started to publish WIG-ESG, an index which includes stocks participating in WIG20 and mWIG40. Their weights depend on free-float shares adjusted for ESG rankings provided by Sustainalytics and an assessment of compliance with the principles of the Code of Best Practice. WIG-ESG is the underlying of a passive fund managed by NN Investment Partners TFI.

The ESG ranking of companies, one of the criteria of index weights, is based on Sustainalytics reports. The international provider of ESG services Sustainalytics determines company scorings based on information publicly available from companies, including corporate annual reports, non-financial reports and websites. Sustainalytics' ESG risk ratings measure the exposure of an industry to specific risks related to the ESG criteria and assess the management of such risks by the company. Sustainalytics works with global providers of indices and investment firms active on global capital markets.

The weights of index participants also depend on the degree of compliance with the corporate governance principles laid down in the Code of Best Practice for GPW Listed Companies 2016. Based on companies' public statements of compliance, the Exchange will determine weights of the companies depending on the number of respected principles and the quality of published statements.

Index data are published every minute from the opening to the closing of each trading session. The participation of the biggest stocks in the index portfolio is capped according to the 5/10/50 rule (the weight of the biggest company is capped at 10%, the companies with weights exceeding 5% cannot jointly weigh more than 40% of the index). WIG-ESG is a total return index. The first product based on the index is a fund of NN Investment Partners TFI.

Following the start of publication of the WIG-ESG index, GPW engages in educational initiatives to promote ESG in investment decisions. On 25 November 2019, GPW co-hosted ESG Warsaw, a conference dedicated to the impact of non-financial factors on investors' decisions. The event was held in partnership with NN Investment Partners TFI, CFA Society Poland, and Erste Securities Polska.

4.2.5. EDUCATIONAL ACTIVITIES ON THE COMMODITY MARKET

Towarowa Giełda Energii (TGE) also pursues educational initiatives addressed to market participants in order to develop and promote transparent trade in products offered by TGE and to raise the awareness of the benefits of trade on TGE. Such initiatives are addressed both to market participants and TGE members, as well as the mass media.

In 2019, TGE offered a series of training programmes and examinations for commodity exchange brokers. The programme prepares candidates for exchange brokers who represent exchange members in trading on TGE markets. Each training ends with an examination. Brokers who pass the exam and get certified are authorised to trade on behalf of exchange members. TGE offered 7 training sessions and issued 50 certificates to brokers in 2019, including 11 brokers who passed the examination in English.

In view of the opening of the European XBID Day-Ahead Market in November 2019, TGE offered dedicated training to exchange members in September and a media workshop "The Common Electricity Market in Europe. The position of Poland and the role of TGE" in November.

TGE continued its partnership with universities. During the Energy Week, a project of the Energy Student Science Club at the Warsaw School of Economics, TGE was a conference partner and co-organiser of the expert debate "Sharp increase of electricity prices: reasons and consequences." TGE was a partner of the Energy Academy project of the Lesław A. Paga Foundation and the Go4Poland project of the GPW Foundation.

In June 2019, TGE in partnership with Izba Rozliczeniowa Giełd Towarowych (IRGiT) organised the 12th edition of the Trading Forum as a platform for the exchange of opinions and development of new solutions in collaboration with direct participants of the markets operated by TGE. The three-day event featured two discussion panels: "The role of market participants in providing liquidity on the exchange" and "Financial instruments vs. physical delivery", as well as many presentations.

4.3. MARKET RELATIONS AND DIALOGUE

Pursuant to the CSR strategy, the key objectives of the GPW Group include the development of corporate culture and behaviours of capital and commodity market participants in Poland according to high standards of corporate governance and disclosure requirements. This goal is pursued through efforts made in partnership and dialogue with capital and commodity market stakeholders.

4.3.1. PUBLICATION OF MACROSECTOR INDICES

To address the needs of market participants, GPW started to publish macrosector indices.



On 18 March 2019, GPW started to publish WIG.GAMES (game developer index) and macrosector indices including: banking-insurance-capital market-debt collection, fuels-gas-chemicals, and energy-mining-resources. The macroindices will be the underlying of futures, in line with GPW's published strategic initiative.

The new indices group companies in selected sectors of similar specificity. The number of companies participating in the indices will be fixed, based on classification by liquidity, with a cap on the share of the biggest participants. The introduction of the new indices which may be the underlying of futures helps to develop the derivatives market.

On 24 June 2019, GPW started to publish WIGtech. The index covers high-tech companies listed on the Main Market active in biotechnology, games, IT, telecommunication, and new technologies. The index may in the future be the underlying of financial instruments including futures. The new index addresses current trends in the economy and on the capital market. High-tech companies play an increasing role in the economy and on the exchange. GPW provides funding opportunities to innovative companies which are instrumental to technological progress.

4.3.2. PUBLICATION OF THE THREE SEAS EXCHANGES INDEX CEEPLUS

The CEOs of exchanges in the Visegrad Group countries (Poland, Czech Republic, Slovakia, Hungary), Croatia, Romania and Slovenia signed a letter of intent concerning the publication of a new index of the Three Seas exchanges, CEEplus, at the Economic Forum in Krynica Zdrój on 4 September 2019. The letter of intent concerning the new regional index is a part of collaboration among the capital markets of the region. The project will ensure that the CEE exchanges speak in a stronger voice in debates concerning the EU capital markets. The initiative opens the European Union to a coherent position of the entire region.

The index portfolio includes more than 100 most liquid stocks of domestic companies listed on the Central and Eastern European exchanges in Bratislava, Bucharest, Budapest, Ljubljana, Prague, Warsaw, and Zagreb. Stocks participating in the index have to meet the liquidity criterion: average value of trading per session of at least EUR 90 thousand within six months. The participation of stocks in the index will depend on their free float and will be capped according to the 5/10/40 rule (participation of the biggest stock capped at 10%, aggregate participations of stocks weighing more than 5% capped at 40%). The participation of stocks from any single country in the index portfolio will be capped at 50%.

The index is published on a daily basis according to closing prices converted at the exchange rate of the National Bank of Poland for local currencies, the euro, and the US dollar. CEEplus is a price index and the underlying of a TFI PZU passive fund inPZU CEEplus. GPW was responsible for the calculation and publication of the index until the end of 2019. As of 1 December 2019, GPW Benchmark is the administrator of exchange indices of the GPW Main Market, NewConnect and TBSP, including WIG20, mWIG40 and sWIG80, and starting on 1 January 2020 also WIG-ESG and CEEplus.

4.3.3. PROGRAMME SUPPORTING TECHNOLOGICAL DEVELOPMENT OF THE CAPITAL MARKET

The Programme was developed following consultations with brokers. It offers discounts on some exchange fees to brokers who invest in their technological capacity and thus improve the quality of their service.

The initiative is designed to improve the competitiveness of Exchange Members and make the capital market more attractive.

Technological development is a part of the long-term growth strategy of the Warsaw Stock Exchange and the capital market. Guided by this objective, the GPW management in communication with the broker community decided to launch an innovative Programme for Exchange Members as of 1 March 2019.

The Programme will cover a range of investments, including the acquisition of licences, improvement of the technological capacity of market makers and the institutional sell-side, the development and acquisition of applications for retail investors. The Programme is addressed to all GPW members operating directly on the Main Market in shares and derivatives and on NewConnect as at 28 February 2019 who applied for participation in the Programme.

4.3.4. ANALYTICAL COVERAGE SUPPORT PILOT PROGRAMME

GPW launched the Analytical Coverage Support Pilot Programme in March 2019. The objective of the Programme is to extend the analytical coverage of companies participating in mWIG40 and sWIG80. The Programme is addressed to companies and Exchange Members who meet the criteria laid down in the regulations.

Analytical reports are a key tool of risk assessment in investment decisions. They are a source of information about the business and the financial standing of companies listed on the exchange.

The Exchange's Analytical Coverage Support Programme was developed in consultation with brokerage houses, which will prepare analytical reports financed by GPW. To join the Programme, companies needed to present an application to GPW



and meet specific criteria, including participation in mWIG40 or sWIG80 (as at 25 March 2019), a capitalisation of more than PLN 50 million and a free float over 20 percent.

44 companies and 12 brokers enrolled in the Programme. According to the rules of the Programme, 40 companies were eligible as participants. Ten of them were never covered by analysts and another 12 only worked with a single analyst. Eight companies participate in mWIG40 and 32 in sWIG80.

The Programme will increase the number of published analyses of companies participating in mWIG40 and sWIG80 while providing local and international investors with broader access to up-to-date analyses. Together with the technology support programme, this is a part of a package of measures developed by GPW in partnership with brokers.

Twelve Exchange Members joined the Programme and will be covered by research.

4.3.5. SURVEY: IMPACT OF ESG FACTORS ON INVESTMENT DECISIONS

GPW carried out a fourth survey of capital market participants concerning the impact of ESG factors on investment decisions. The survey results were compiled in a report published on the GPW website.

According to the survey, nearly 70% of respondents can see an increase of ESG investments in the last three years. 88% of respondents believe that companies whose strategies are based on good ESG practice may be considered by investors as lower risk.

According to respondents, adoption of legislation is the best way to encourage investors and shareholders to consider good ESG practice. More than half of respondents know GPW's new index WIG-ESG.

A high 88% of respondents believe that companies whose strategy is based on good ESG practice (environmental, social, governance) may be perceived as lower risk and thus better investment targets, according to the survey of capital market participants concerning the impact of ESG factors on investment decisions carried out by the Warsaw Stock Exchange. That figure represents a strong increase compared to the survey completed three years ago, when 65% of respondents stressed the importance of ESG factors. GPW carried out the survey for the fourth time.

Respondents appreciate the indices provided by GPW which track share prices of socially responsible companies. All survey participants are aware of the RESPECT Index and more than half know about the newly launched index WIG-ESG.

Survey participants mentioned circumstances which would prompt them to consider ESG factors more broadly in their investment decisions and exercise of shareholders' rights. Capital market experts participating in the survey consider the key issues in both those areas to include the adoption of necessary legislation as well as more extensive reporting by companies, such as social responsibility reports and non-financial reporting.

4.3.6. EVENT: "RING THE BELL FOR GENDER EQUALITY"

On the occasion of the International Women's Day, securities exchanges around the world hosted events to attract the attention of the international community to the issue of equality of women and men. Last year's event brought together 85 exchanges globally!

Similar to previous years, GPW participated in the project in 2019.

The event "Ring the Bell for Gender Equality" was held on 8 March 2019 in the presence of ambassadors and representatives of international organisations including UNFPA and the World Bank, as well as regional and local CEOs.

"Ring the Bell for Gender Equality" is an initiative of the United Nations Global Compact, UN Women, the Sustainable Stock Exchanges Initiative, the International Finance Corporation, the World Federation of Exchanges and Women in ETFs. Ringing the bell is symbolic as it draws attention to the key role of the private sector in promoting gender equality and equal rights for women, both in the job market and in society at large. Last year's motto "Think equal, build smart, innovate for change" was initiated by UN Women to inspire business in innovative steps towards gender equality and empowerment of women across the different areas of social life.

The key recommendations for responsible companies include: to raise awareness within and outside the organisation by introducing gender equality standards at the work place; to deliver training and host educational meetings; to communicate business benefits of general equality to companies.

The Warsaw event was dedicated to the implementation of standards of ethics in companies as a tool of enforcing women's rights in organisations.

The event was a part of the programme "Standards of Ethics in Poland" operated by Global Compact Network Poland with partners and experts over the last five years.



The event featured a presentation of "CEOs for Ethics", a compilation of best practice of companies which implement standards of ethics, conceived at a meeting hosted by the international CEO Roundtable.

4.3.7. FINANCIAL MARKET WOMEN'S CLUB

The Financial Market Women's Club was founded by three leading institutions of the financial market: CFA Society Poland, the Warsaw Stock Exchange, and the Chamber of Fund and Asset Managers. The initiative is dedicated to women who are professionals in the financial sector and auxiliary industries, in particular women managers. The Club hosts conferences and business meetings with experts and speakers from Poland and abroad.

The mission of the project is to create a valuable and smart space where participants can exchange opinions, expertise and experience and build relational capital and industrial intellectual capital. The initiative addresses the professional needs of women in finance and promotes the financial sector as a place of diversity.

The inaugural conference of the Financial Market Women's Club took place on 6 March 2018. Meetings are held regularly throughout the year (once per quarter).

4.3.8. IR EXCELLENCE PROGRAMME – EVALUATING THE QUALITY OF INVESTOR RELATIONS IN PUBLIC COMPANIES

GPW carried out the IR Excellence Programme in 2019, which evaluated the quality of investor relations in public companies. The Programme covered 160 companies, including all companies participating in WIG20, mWIG40, sWIG80, as well as 20 companies from the gaming industry

In Phase 1 of the IR Excellence Programme, GPW delivered dedicated individual reports to issuers. The programme also included a re-evaluation of investor relations (Phase 2, December 2019).

The initiative was carried out by GPW in partnership with Closir, the provider of investor relations research based on an innovative online platform, who jointly launched an IR policy quality review programme for public companies. The IR Excellence Programme was developed to evaluate IR activities from the perspective of availability of information, especially to foreign investors. The programme covered 160 companies participating in WIG20, mWIG40, sWIG80, as well as 20 selected companies from the gaming industry (listed on the Main Market and NewConnect) which are aligning their business with the regulatory requirements applicable on the capital market.

The programme looked into the availability of selected information, in particular in English, on the corporate websites of issuers listed on GPW. The investor relations website introduces the company and provides key corporate information, in particular to foreign investors.

As a part of the IR Excellence Programme, GPW delivered training in successful IR policies to companies that wish to improve their score.

The next step is a re-evaluation of the IR activity of listed companies compared to their scores in Phase 1. The re-evaluation will review the implementation of recommendations and provide the final quality assessment of GPW-listed companies' IR policies. The Programme will be wrapped up in March 2020.

4.3.9. CONSULTATION COMMITTEES

In addition to irregular dialogue with the stakeholders, in the event of material business decisions, GPW is also engaged in on-going consultations with market participants within the Consultation Committees established in 2013. The Committees are advisory bodies active in the key areas of GPW's operation. The Committees bring together representatives of the capital market community: investors, issuers, brokers, funds, academics, lawyers, as well as representatives of the Polish Financial Supervision Authority. Consultations with the Committees on the Exchange's business decisions help to develop solutions optimal to all GPW stakeholder groups.

As at 31 December 2019, GPW had the following Consultation Committees:

- ◆ Alternative Trading System Development Committee - Board of Authorised Advisers
- ◆ Compliance Committee
- ◆ Corporate Governance Committee (change of name, Resolution No. 352/2019 of the Exchange Management Board)
- ◆ Derivatives Market Committee



Two other committees cover the commodity market:

- ◆ **Gas Market Committee** – an advisory body since 2014 assisting the development of solutions creating a friendly environment for the development of trade in natural gas on the exchange.
- ◆ **Energy Market Committee** – established in 2015, it brings together exchange members and representatives of TGE and IRGiT. Its responsibilities include giving opinions and tabling proposals for the development of exchange-traded commodities listed on TGE.

Two consultation meetings of the combined committees took place in 2019, each attended by 100 participants.

4.3.10. OVERSIGHT COMMITTEES UNDER BMR

The Oversight Committee for the WIBID and WIBOR Reference Rates was appointed under the new WIBID and WIBOR documentation effective as of 1 February 2018.

The Oversight Committee was appointed by GPW Benchmark in order to supervise all aspects of the reference rates. The members of the Oversight Committee were nominated by the key institutions of the financial sector representing interests of reference rate users, including the Polish Bank Association (ZBP), the ACI Polska Association, and the Office of Competition and Consumer Protection (UOKiK).

The GPW Benchmark Oversight Committee was appointed in compliance with the requirements of Regulation (EU) 2016/1011 of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds, in order to ensure substantive supervision of all aspects of the reference rates.

In order to engage many other institutions and stakeholders, the status of Oversight Committee Observer is available to institutions which actively participate in the alignment of WIBID and WIBOR with the requirements of the Regulation and the development of the offer of benchmarks for the Polish financial market. The GPW Benchmark Oversight Committee Observers include the Ministry of Finance, the National Bank of Poland, the Polish Bank Association, the ACI Polska Association, the Bank Guarantee Fund, and the Office of Competition and Consumer Protection

GPW Benchmark also has an Oversight Committee for Capital Market Benchmarks established on 1 December 2019.

The Oversight Committee was appointed in compliance with the requirements of Regulation (EU) 2016/1011 of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds, in order to ensure substantive supervision of all aspects of regulated data benchmarks and non-interest-rate benchmarks, including the Exchange Indices of the GPW Main Market, New Connect and TBSP.

The Committee was appointed on 1 December 2019. Its rules of procedure are defined in the Rules of the Oversight Committee for Capital Market Benchmarks.

4.4. RESPONSIBLE HUMAN RESOURCES POLICY

With their unique skills and experience, GPW Group employees are an important group of the Group's stakeholders. The organisational culture of the Group is based on engagement, values and effective internal communication as well as investment in continuous employee development.

In 2019, the Company continued initiatives focused on efficient management of HR, payroll, social and bonus processes to address business needs and support the implementation of the Exchange's strategy. GPW makes best efforts to harmonise the human resources policy across companies of the Group.

Introduced in 2019, the Exchange Employee Remuneration Rules define three key components. One of those is an employee remuneration policy which lays down the conditions of remuneration in GPW job positions. The key objective of the remuneration policy is to ensure transparent and coherent remuneration rules for all GPW employees tied to the corporate strategy. As a key part of the remuneration policy,

GPW is a responsible employer as it rewards and promotes employee trust and engagement by offering development opportunities at a safe and inspiring work place.



it ensures competitive pay and payroll in the company in relation to other organisations on the Warsaw financial market. The remuneration policy is a part of GPW's incentive scheme.

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.

GPW carries out Employee Satisfaction Surveys where employees can share their opinions concerning satisfaction with their job and the work conditions in GPW. The survey provides an essential understanding of the level of employees' job satisfaction, expectations, and areas for improvement. It is crucial to create the right work conditions and a friendly work environment which are fundamental to employees' engagement and productivity, contributing to the strategic goals defined in the Exchange's strategy.

Table 32 Headcount of GPW and the GPW Group as at 31 December*

	2019	2018
Number of GPW employees	230	208
Number of GPW Group employees	413	363

* excluding Members of the GPW Group Management Boards

Table 33 Headcount of GPW by type of employment as at 31 December*

	2019	2018
Total GPW	230	208
- <i>Full-time employment agreement</i>	213	196
- <i>Part-time employment agreement</i>	17	12
- <i>Contract (umowa zlecenia)</i>	16	9
- <i>Contract (umowa o dzieło)</i>	4	0
Total GPW Group	413	363
- <i>Full-time employment agreement</i>	381	339
- <i>Part-time employment agreement</i>	32	24
- <i>Contract (umowa zlecenia)</i>	17	11
- <i>Contract (umowa o dzieło)</i>	6	1

* excluding Members of the GPW Group Management Boards

Table 34 Headcount of GPW by education as at 31 December*

	2019	2018
Total GPW	230	208
- <i>Vocational education</i>	0	0
- <i>Secondary education</i>	25	22
- <i>Tertiary education</i>	205	186
Total GPW Group	413	363
- <i>Vocational education</i>	0	0
- <i>Secondary education</i>	63	54
- <i>Tertiary education</i>	350	309

* excluding Members of the GPW Group Management Boards

GPW had 230 employees as at 31 December 2019, including 205 employees with tertiary education and 25 employees with secondary education.



4.4.1. GPW RECRUITMENT POLICY

The GPW Group pursues a transparent recruitment policy. GPW's recruitment policy focuses on recruiting top-class specialists for all areas of the Company's operation. The development of human resources and employee competences includes rotation in job positions within GPW and the Group. The success and reputation of the GPW Group depend not only on the quality of provided services but also on the way that we work. Our principles and values ensure compliance of the GPW Group with laws and regulations as well as fair and ethical conduct.

GPW defined clear rules for recruitment, laid down in the GPW Recruitment Policy. Priority in recruitment is given to existing GPW Group employees as internal candidates because we support the development of our employees. GPW employees are additionally integrated into recruitment through a referral programme where candidates are nominated for vacancies.

Table 35 GPW employee rotation as at 31 December¹⁴

	2019	2018
GPW employee rotation	9.06%	10%
GPW Group employee rotation	10.73%	12.13%

GPW hired 42 new persons (including employees dedicated to the implementation of GPW's strategy) and terminated employment of 20 persons in 2019. By comparison, GPW hired 35 new persons and terminated employment of 20 persons in 2018. The GPW Group hired 92 new persons and terminated employment of 42 persons in 2019.

In the recruitment process, the GPW Group follows the diversity policy and combats all forms of discrimination, in particular on grounds of sex, age, disability, race, religion, nationality, political creed, union membership, ethnicity, denomination, sexual orientation, and employment for a determined or undetermined period, full-time or part-time.

4.4.2. GPW DIVERSITY POLICY

Diversity and openness: these values are an inalienable part of the Exchange's business and a foundation of its recruitment and employment policies. As a socially responsible employer, the Exchange respects the principles of equal treatment and prevents all forms of discrimination.

The Exchange's diversity policy creates a work environment in which everyone feels appreciated and respected and can pursue their talents and skills, contributing to the success of the Exchange.

Table 36 GPW headcount by gender as at 31 December*

	2019	2018
Number of GPW employees	230	208
- Women	107	101
- Men	123	107
Number of GPW Group employees	413	363
- Women	168	149
- Men	245	214

* excluding Members of the GPW Group Management Boards

Table 37 Women in management as at 31 December [%]

	2019	2018
GPW		
Women on the Management Board	20	20

¹⁴ The turnover ratio is the number of employees whose employment agreements were terminated during the year to the average headcount during the year.



Women on the Supervisory Board	0	0
Women in senior management	37.5	44
Women in middle management	44.44	45
GPW Group		
Women on the Management Board	14.29	13.33
Women on the Supervisory Board	21.62	20
Women in senior management	29.17	31.25
Women in middle management	46.88	45.83

Table 38 GPW headcount by age as at 31 December*

	2019	2018
GPW employees	230	208
- younger than 30 years	23	15
- from 30 to 50 years old	166	154
- older than 50 years	41	39
GPW Group employees	413	363
- younger than 30 years	67	42
- from 30 to 50 years old	287	263
- older than 50 years	59	58

* excluding Members of the GPW Group Management Boards

4.4.3. GPW TRAINING POLICY

To help employees improve their knowledge and competences, GPW provides employee training in expert knowledge, interpersonal skills, and personal development.

In 2019, we were focusing on Management Board and manager development in the context of a new incentive scheme. Our managers developed their skills by conducting development interviews with employees. GPW provided training in mindfulness and mental health prophylactics.

GPW employees pursued development opportunities through individual development tracks based on expert training. GPW employees improved their professional qualifications by participating in conferences, congresses and seminars.

Pursuant to its HR policy, the Exchange co-financed employees' post-graduate and training programmes. As a result, GPW employees jointly spent 909 days in training in 2019.

The average number of training days per GPW FTE was 4 days in 2019.

The average number of training days by employee category is presented in the table below.

The GPW Group invests in employee development and supports professional advancement and learning. It inspires employees to develop and stay creative by tapping the potential of diversity and collaboration.

Table 39 Average number of training days per FTE

	2019
Total GPW	4
- blue-collar workers	0
- administrative staff*	12
- junior staff**	3
- managers***	5
- Management Board****	7

* job positions outside the core business



4.4.4. GPW INCENTIVE SYSTEM

GPW's HR policy is largely based on employee engagement; hence, the Company attaches special importance to employee incentives. The basic salary offered by GPW is tied to the employee's potential, competences and performance.

According to the Bonus Rules, the incentive system covers all GPW employees other than the Management Board. The objective is to incentivise employees' superior performance based on individual and group targets. The system includes appraisal of employees' key competences. The appraisal identifies the employee's strengths and areas for improvement. The process helps to identify the employees' potential as a basis for internal recruitment and succession, training programmes matching the Company's needs, and the measurement of success of GPW's employee development initiatives.

Every GPW employee has wide access to fringe benefits including: health care, reimbursement of commuting costs, the Employee Pension Scheme, a canteen system, loans including housing and medical loans, as well as payments from the Company Social Benefits Fund.

4.4.5. TRAINEESHIPS AND INTERNSHIPS

The Warsaw Stock Exchange puts a strong emphasis on capital market education and learning of young people.

For many years, the Exchange has offered traineeship opportunities to university students. The students major in different disciplines including Economics, Finance, and Marketing. GPW runs Go4Poland, a programme addressed to Polish students of foreign universities. Under the programme, two students were accepted for one-month paid traineeships where they could discover the specificity of work at GPW and acquire new competences hands-on. We also accepted four interns for one month each in 2019.

The initiatives addressed to students to 2019 included the competition for MA and BA theses with awards from the President of the Warsaw Stock Exchange. The authors of the winning MA theses were offered one-month paid internships at the Exchange.

4.5. STANDARDS OF ETHICS IN BUSINESS

4.5.1. GPW CODE OF ETHICS

In addition to improvement of professional qualifications, GPW also takes steps to develop its value-based corporate culture which is unique in awarding and applying employee initiatives that improve the effectiveness of the organisation.

The GPW Employee Code of Ethics defines the core values applicable to all activities of the Company. The Code of Ethics outlines the principles and values to be followed by all GPW employees; it disseminates and promotes a culture of compliance with the law and decision-making based on ethical criteria in the following areas: mutual relations among employees, relations with customers and counterparties, relations with competitors, communication, promotion and advertising; and it lays down sanctions for non-compliance. The document has been signed by all GPW employees.

Pursuant to the GPW Group's CSR strategy, the Company's Code of Ethics was implemented in the companies Towarowa Giełda Energii and BondSpot.

4.5.2. TRANSPARENT COMPANY OF THE YEAR

In 2019, GPW was named the Transparent Company of the Year in the mWIG40 category for a third consecutive time. The ranking identifies the most transparent companies participating in the three main indices: WIG20, mWIG40 and sWIG80. This year, the awards went to 42 listed companies.

The ranking was based on a survey which covered the following areas: financial reporting, investor relations, corporate governance. A questionnaire with 23 questions was distributed to companies participating in WIG20, mWIG40 and sWIG80. The maximum score was 34 points.

The ranking is organised by the financial paper *Parkiet* and Instytut Rachunkowości i Podatków under the auspices of the Warsaw Stock Exchange in partnership with Kancelaria Prof. Wierzbowski i Partnerzy.

4.5.3. ANTI-CORRUPTION AND WHISTLEBLOWING STANDARDS

On 8 October 2018, the Warsaw Stock Exchange joined the "Anti-corruption and whistleblowing standards recommended for compliance systems in companies listed on markets organised by the Warsaw Stock Exchange" developed by experts representing different groups of capital market participants on the GPW Compliance Consultation Committee: Marcin Gomola (T-Mobile Polska S.A), Monika Gorgoń (Warsaw Stock Exchange), dr Wojciech Nagel (Warsaw Stock Exchange), Marek



Słomski (Advisor to the Management Board of the Chamber of Brokerage Houses IDM), Dr Anna Partyka-Opiela (DZP), Agnieszka Chojnacka (Nationale Nederlanden Towarzystwo Ubezpieczeń na Życie S.A.), Izabela Kozłowska (NBP), Marcin Góral (PZU S.A.), Mariusz Witalis (EY), Katarzyna Zielińska (Mercedes-Benz Polska), Tomasz Wypych (PKN ORLEN S.A.), Marcin Szczepański (Siemens Polska), Sławomir Chmielewski (Orange Polska S.A.), Marcin Prell (Santander Bank Polska S.A.), Wojciech Graczyk (Innogy Polska S.A.).

The publication provides recommendations for organisations' compliance function as well as tools which mitigate the risk of unethical behaviour enabling corruption and conflicts of interest. The standards address expected regulatory amendments, such as the Act on Liability of Collective Entities, and define "due diligence" required in anti-corruption processes and procedures. The document does not require companies to report their compliance with the guidelines.

4.5.4. WHISTLEBLOWING POLICY

GPW follows high standards of ethics and expects its employees to do the same, among others by reporting any reasonable suspicion of infringement of internal regulations and applicable standards. GPW has in place a Whistleblowing Procedure which defines how GPW employees may anonymously report identified or suspected infringements. The Whistleblowing Procedure ensures that all reports are handled in confidence and with due diligence.

Reports may be provided on infringements of employee obligations, infringements of the Code of Ethics, as well as suspected abuse or illegal disclosure of inside information or professional secret and manipulation of financial instruments.

4.6. OCCUPATIONAL HEALTH AND SAFETY POLICY

GPW's priorities include a healthy, safe and friendly work environment which supports the development of the professional potential of all Exchange employees. Under its occupational health and safety policy, the Company works to prevent accidents at work, occupational diseases and potential incidents, to continuously improve occupational health and safety, ergonomics and fire protection, to improve employee qualifications, and to integrate their role and engagement in occupational health and safety initiatives. GPW's occupational health and safety policy was integrated into the subsidiaries TGE and BondSpot in 2015. There was one minor accident at work at GPW in 2019.

Occupational health and safety training introduces employees to the principles of safe and ergonomic work and the applicable evacuation procedures.

4.7. CHARITY INITIATIVES AND EMPLOYEE VOLUNTEERING

In their volunteering work, Group companies support the youth education and care centre in Franciszków and two family children's homes in Ruszków. In 2019, Group employees invited the children to a Christmas event: Santa Claus on the Exchange. GPW Group employees carried out a collection of sweets to prepare Christmas presents. The Management Boards of GPW and IRGiT also presented sweets to all the children, as well as small gifts for their age. Younger kids participating in the Santa Claus on the Exchange event took part in games and contests while teenagers were taken by GPW Group volunteers to a bowling alley and an exhibition at the Central House of Technology.

The GPW Group supports social engagement of employees by integrating them around volunteer initiatives.

In 2019, GPW provided GPW Group employees with Christmas Gift Cards supporting the Wooden Puppet programme of the Polish Humanitarian Action (PAH), contributing to funding of meals for kids in Polish schools and day-care centres.

4.8. ENVIRONMENTAL IMPACT REDUCTION

Pursuant to the new CSR strategy, all GPW Group companies have in place a uniform environmental policy designed to reduce the companies' environmental impact and raise environmental awareness of Group employees. As the companies



operate in the financial industry, the main areas of the environmental policy include: waste management and recycling; paper consumption; water consumption; energy consumption; fuel consumption and CO₂ emissions; as well as employee education through internal communications.

Furthermore, in view of its activity and role on the Polish capital and commodity market, the GPW Group may indirectly impact the environment by promoting good behaviour of issuers and investors, for instance through promotion of and education in responsible investing and through the products and services it offers.

In 2019, GPW pursued educational initiatives promoting ESG factors in investment decisions (see: Respect Index and ESG Index).

4.8.1. WASTE MANAGEMENT AND RECYCLING

According to its Waste Management Procedure, GPW delivers solid waste for treatment by recycling or disposal. Since February 2014, the Company segregates waste. Decommissioned computer hardware and other devices, such as phones, printers and office equipment, etc., are sold to the Company's employees at auctions.

No auctions of IT hardware were held in 2019. However, two auctions offered equipment other than IT hardware, where 284 objects were put for sale. Another 94 objects were recycled without being put on auction.

No company cars were sold at auction or to third parties in 2019.

A part of the air-conditioning system in the former GPW server room was recycled in 2019.

4.8.2. COMMODITY, ENERGY, FUEL CONSUMPTION

In 2019, the Exchange continued communications targeting employees and visitors to promote environmental behaviour with regard to consumption of commodities such as water and paper.

GPW continuously monitors its consumption of commodities.

Table 40 Water and paper consumption

COMMODITY CONSUMPTION – GPW	unit	2019
Water consumption	m ³	3 480.22
Paper consumption	sheets	554 117

Energy consumption

Centrum Giełdowe has in place advanced environmental 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 installations 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.

Table 41 Power and heat consumption

ENERGY CONSUMPTION – GPW	unit	2019
Power	kWh	1 173 415.59
	MWh	1173.42
	GJ	4 224.3
Heat	kWh	949422.22
	MWh	949.42
	GJ	3 417.92



CO2 emissions

Power	kg	897 666.3
Heat	kg	726 306.3

* CO2 emissions converted under the KOBIZE guidelines of December 2019, Wskaźniki emisyjności CO₂, SO₂, nox, CO i pyłu całkowitego dla energii elektrycznej na podstawie informacji zawartych w krajowej bazie o emisjach gazów cieplarnianych i innych substancji za 2018 rok, emissions ratio in [kg/MWh] for end consumers of electricity: CO₂ – 765 kg/MWh (also used for heat conversion)

Fuel consumption

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).

Table 42 Fuel consumption

FUEL CONSUMPTION – GPW	unit	2019
Gasoline	litre	8 882
	GJ	319.75
Diesel	litre	1 309
	GJ	51.84
CO2 emissions		
Gasoline	kg	22 158.66
Diesel	kg	3 841.34

* converted based on the following indicators: 1 l gasoline = 10 kWh, 1 l diesel = 11 kWh, 1 kWh = 0.0036 GJ; CO2 emissions converted under the KOBIZE guidelines of December 2019, *Wartości opałowe (WO) i wskaźniki emisji CO2 (WE) w roku 2017 do raportowania w ramach Systemu Handlu Uprawnieniami do Emisji za rok 2020*, gasoline to CO₂ – 69.3 kg/GJ, diesel to CO₂ – 74.10 kg/GJ

4.8.3. PRODUCTS AND SERVICES

GPW Group companies offer products and services which indirectly support environmental efforts and impact the attitudes of participants of the markets operated by the Group companies. The Respect Index was such a product on the financial market, recently replaced by WIG-ESG.

In its core business, Towarowa Giełda Energii maintains a Register of Certificates of Origin since 2005, which is a part of the support scheme for RES electricity producers. Certificates of origin certify that a quantity of power was generated from a licensed renewable energy source. Certificates of origin include certificates of origin of agricultural biogas and certificates of energy efficiency ("white certificates").

Since November 2014, TGE operates a Register of Guarantees of Origin. Guarantees of origin of energy are an element of the EU's environmental policy and disclose the type of source and fuel used to generate power.

As power itself cannot be labelled, a system has been put in place where documents (guarantees) are generated together with power and expire when delivered to the end consumer. Guarantees of origin of energy from renewable energy sources (RES) are an additional important incentive for the growth of the sector. TGE's Register of Guarantees of Origin is addressed to producers of energy from renewable energy sources, traders, brokers and all interested parties who need certification of the origin of electricity from renewable energy sources.

In October 2019, TGE added cogeneration guarantees to the Register of Guarantees of Origin.



5. FINANCIAL POSITION AND ASSETS OF THE GPW GROUP

5.1. SUMMARY OF RESULTS

The GPW Group generated revenue of PLN 336.1 million in 2019 vs. PLN 346.8 million in 2018, representing a decrease of 3.1% or PLN 10.7 million. The revenue included revenue from the financial market of PLN 185.0 million and revenue from the commodity market of PLN 149.9 million. The Group's operating expenses stood at PLN 181.1 million in 2019 vs. PLN 173.8 million in 2018, representing an increase of 4.2% or PLN 7.3 million. The Group's operating profit was PLN 156.3 million in 2019 vs. PLN 170.2 million in 2018.

The GPW Group generated EBITDA¹⁵ of PLN 193.2 million in 2019, a decrease of PLN 8.8 million compared to PLN 202.0 million in 2018.

The GPW Group generated an operating profit of PLN 156.3 million in 2019 vs. PLN 170.2 million in 2018, representing a decrease of 8.2% or PLN 13.9 million. The decrease of the operating profit year on year in 2019 was a result of lower revenue and higher expenses of the Group. The revenue decreased both on the financial market and on the commodity market. The revenue on the financial market decreased by 3.6% or PLN 6.9 million, and the highest decrease was reported for revenue from trade in equities and equity-related instruments. The revenue on the commodity market decreased by 2.4% or PLN 3.6 million, and the highest year-on-year decrease was reported for revenue from property rights due to the discontinuation of trade in cogeneration property rights in June 2019.

The net profit of the Group stood at PLN 119.3 million in 2019 vs. PLN 183.7 million in 2018, representing a decrease of 35.0% or PLN 64.4 million. The decrease of the net profit was driven by a lower operating profit, down by PLN 13.9 million, higher financial expenses, up by PLN 16.5 million, as well as impairment of investments at PLN 1.1 million in 2019 vs. gains on investments at PLN 45.8 million recognised in 2018. The 2018 gains were generated by the sale of investment in the associate Aquis (PLN 45.4 million gains on the sale). The higher financial expenses in 2019 were due to provisions set up against VAT payable for 2014 – 2019 in the subsidiary IRGiT. The provisions were set up in the amount of PLN 15.5 million. GPW's EBITDA¹⁶ stood at PLN 84.9 million in 2019, a decrease of 10.9% compared to PLN 95.3 million in 2018.

GPW generated a separate operating profit of PLN 61.5 million in 2019 vs. PLN 75.1 million in 2018. The decrease of the operating profit of GPW year on year was due to lower sales revenues, which dropped by PLN 7.3 million or 3.8% in 2019, and higher operating expenses, which rose by PLN 6.3 million or 5.6%.

GPW's net profit was PLN 115.1 million in 2019 vs. PLN 151.9 million in 2018, a decrease of 24.2% or PLN 36.8 million. The decrease of GPW's net profit by PLN 36.8 million year on year in 2019 was due to a lower operating profit in 2019, down by PLN 13.6 million, as well as a one-off event recognised in 2018: the sale of interest in the associate Aquis and realised gains at PLN 32.2 million.

TGE's EBITDA was PLN 68.1 million in 2019 vs. PLN 69.1 million in 2018. Its operating profit was PLN 58.1 million in 2019 vs. PLN 60.6 million in 2018. The decrease in the operating profit by PLN 2.5 million was mainly due to lower sales revenue, which dropped by PLN 4.7 million in 2019, higher operating expenses, which rose by PLN 1.3 million, and higher other operating income, up by PLN 3.4 million. The net profit stood at PLN 75.1 million in 2019 vs. PLN 64.0 million in 2018. The increase of the net profit in 2019 was due to a higher net financial income driven by a higher dividend paid by IRGiT at PLN 28.2 million in 2019, up by PLN 13.3 million year on year.

The subsidiary IRGiT generated an operating profit of PLN 34.4 million in 2019 vs. PLN 33.9 million in 2018, representing an increase of 1.6% or PLN 0.6 million. IRGiT generated a net profit of PLN 13.8 million in 2019 vs. PLN 28.2 million in 2018, representing a decrease of 51.0% or PLN 14.4 million. The significant decrease of the net profit in 2019 was due to provisions set up against VAT payable for 2014 – 2019 in the amount of PLN 15.5 million following a tax review and analyses concerning the recognition of the date of origination of VAT obligations in the case of deliveries of electricity and gas and the recognition of the date of origination of the right to input VAT deductions.

BondSpot generated an operating profit of PLN 0.4 million in 2019, stable year on year. The net profit stood at PLN 0.5 million in 2019 vs. PLN 0.6 million in 2018, representing a decrease of 19.0% or PLN 0.1 million.

Detailed information on changes in revenues and expenses is presented in the sections below.

¹⁵ GPW Group's operating profit before depreciation and amortisation.

¹⁶ GPW's operating profit before depreciation and amortisation.



Table 43 Consolidated profit and loss account of GPW Group by quarter in 2019 and 2018 and by year in 2017 – 2019

PLN'000	2019				2018				2019	2018	2017
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1			
Sales revenue	80,268	82,517	89,140	84,156	88,455	85,743	86,647	85,936	336,081	346,781	351,956
Financial market	43,627	46,429	45,448	49,486	48,083	47,134	47,063	49,572	184,990	191,852	208,849
Trading	27,110	29,901	28,429	32,015	30,601	30,679	30,103	32,897	117,455	124,280	141,336
Akcje i inne instrumenty o charakterze udziałowym	20,417	22,015	20,893	24,124	22,510	23,772	22,910	24,890	87,449	94,082	109,564
Instrumenty pochodne	2,582	2,902	2,448	2,679	3,215	2,626	2,996	3,231	10,611	12,068	11,888
Inne opłaty od uczestników rynku	1,313	2,373	2,611	2,537	1,947	1,805	1,730	1,914	8,834	7,396	7,498
Instrumenty dłużne	2,649	2,466	2,370	2,576	2,819	2,395	2,390	2,750	10,061	10,354	11,958
Inne instrumenty rynku kasowego	149	145	107	99	110	81	77	112	500	380	428
Listing	4,282	5,013	5,063	5,271	5,661	5,385	5,835	5,924	19,629	22,805	24,968
Information services and revenue from the calculation of benchmarks	12,235	11,515	11,956	12,200	11,821	11,070	11,126	10,750	47,906	44,767	42,545
Commodity market	35,951	36,011	43,428	34,550	39,983	38,126	39,233	36,213	149,940	153,555	142,088
Trading	18,347	18,816	22,098	15,906	20,819	20,344	19,646	17,738	75,167	78,547	70,092
Register of certificates of origin	5,072	6,183	8,956	7,604	6,098	6,549	8,923	7,126	27,815	28,696	30,628
Clearing	12,356	10,840	12,203	10,871	12,949	11,130	10,532	11,251	46,270	45,862	41,019
Information services	176	172	171	169	117	103	132	98	688	450	349
Other revenue	691	76	264	120	389	483	351	151	1,151	1,374	1,019
Operating expenses	47,373	36,119	43,335	54,322	42,431	43,028	39,993	48,360	181,149	173,812	165,763
Depreciation and amortisation	9,417	8,899	9,415	9,187	7,907	7,948	8,093	7,825	36,918	31,772	28,325
Salaries	15,620	15,329	15,202	15,185	14,987	13,230	13,218	13,630	61,336	55,065	50,764
Other employee costs	4,325	3,856	4,095	4,219	3,316	3,254	3,415	3,780	16,495	13,765	12,081
Rent and maintenance fees	759	1,095	1,082	1,034	2,372	2,299	1,945	2,506	3,970	9,122	9,505
Fees and charges	448	(5,747)	434	13,285	126	3,790	244	9,268	8,420	13,428	6,553
incl. PFSA fees	22	(6,159)	1	12,888	4	3,506	5	9,023	6,752	12,538	5,579
External service charges	15,292	11,498	11,545	10,131	11,941	11,149	11,507	9,923	48,466	44,520	53,194
Other operating expenses	1,512	1,190	1,559	1,283	1,782	1,357	1,571	1,430	5,544	6,140	5,341
Other income	1,514	1,896	1,876	1,330	1,282	284	293	844	6,616	2,703	3,859
Gains on reversed impairment/(losses) on impairment of receivables	(1,836)	(341)	1,407	(1,131)	(1,686)	384	(375)	(1,476)	(1,901)	(3,153)	(607)
Other expenses	839	933	919	654	830	330	373	781	3,345	2,314	2,896
Operating profit	31,734	47,020	48,169	29,379	44,790	43,053	46,199	36,163	156,302	170,205	186,549
Financial income *	1,809	2,605	2,402	2,095	2,592	1,789	2,279	1,867	8,911	8,527	5,550
Financial expenses	17,845	3,283	2,306	2,115	2,597	2,168	2,124	2,132	25,549	9,021	11,147
Gains on investment/(losses) on impairment of investment in other entities *	-	(1,089)	-	-	(65)	-	45,912	(76)	(1,089)	45,771	-
Share of profit/(losses) of entities measured by equity method	1,942	4,692	3,639	989	1,923	3,412	4,472	746	11,262	10,553	10,059
Profit before tax	17,640	49,946	51,903	30,348	46,643	46,086	96,738	36,568	149,837	226,035	191,011
Income tax	6,441	8,813	9,353	5,896	9,506	8,466	17,705	6,657	30,503	42,334	32,274
Profit for the period	11,199	41,133	42,550	24,452	37,137	37,620	79,033	29,911	119,334	183,701	158,737

*) presentation change regarding the recognition of profit realized on the sale of shares in Aquis in 2018, as well as losses due to impairment of investments in other entities

Source: Consolidated Financial Statements, Company

Note: For some items, the sum of the amounts in the columns or lines of the tables presented in this Report may not be exactly equal to the sum presented for such columns or lines due to rounding off. Some percentages presented in the tables in this Report have also been rounded off and the sums in such tables may not be exactly equal to 100%. Percentage changes between comparable periods were calculated on the basis of the original amounts (not rounded off).



Table 44 Consolidated statement of financial position of GPW Group by quarter in 2017 - 2019

PLN '000	2019				2018				2017
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Non-current assets	590,114	585,647	586,167	598,181	580,501	575,558	579,001	581,130	596,787
Property, plant and equipment	101,968	97,303	100,642	104,498	108,158	106,156	108,245	108,691	110,784
Right-to-use assets	22,725	23,406	24,254	25,510	-	-	-	-	-
Intangible assets	246,649	247,314	246,780	250,073	254,564	254,491	258,320	260,918	263,769
Investment in entities measured by equity method	210,327	208,384	204,763	207,885	207,267	203,273	199,929	195,986	207,389
Investment in non-consolidated subsidiaries	4,000	-	0	-	-	-	-	-	-
Subleasing receivables*	523	774	1,167	1,140	-	-	-	-	-
Deferred tax assets	464	706	1,432	1,934	666	1,296	2,233	4,905	4,236
Financial assets measured at fair value through other comprehensive income	120	130	105	103	101	200	204	197	-
Prepayments	2,043	1,953	2,801	2,816	5,523	5,920	5,848	6,211	6,116
Other non-current assets	1,295	5,677	4,222	4,222	4,222	4,222	4,222	4,222	4,222
Current assets	666,680	645,424	771,938	733,234	636,942	618,212	693,339	612,468	550,418
Inventories	47	46	47	52	64	64	60	54	56
Corporate income tax receivable	4,132	114	-	-	-	0	0	0	0
Trade and other receivables	45,232	56,169	73,154	66,452	69,437	78,747	68,509	87,399	63,886
Subleasing receivables*	190	237	392	396	-	-	-	-	-
Contract assets	2,415	1,797	2,503	2,007	1,215	2,122	1,946	-	-
Financial assets measured at amortised cost	328,998	333,693	217,711	361,705	377,502	364,221	380,982	201,402	-
Other current assets	4,382	-	-	-	-	-	-	-	250,590
Cash and cash equivalents	281,284	253,368	478,131	302,622	188,724	173,058	241,842	311,462	235,886
Assets held for sale	-	-	-	-	-	-	-	12,151	-
Total assets	1,256,794	1,231,071	1,358,105	1,331,415	1,217,443	1,193,770	1,272,340	1,193,598	1,147,205
Equity	873,486	859,105	821,208	911,884	887,800	850,617	813,089	826,608	796,519
Share capital **	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865
Other reserves	1,089	1,185	1,145	898	1,267	1,126	1,194	1,349	1,347
Retained earnings **	807,927	793,458	755,610	846,531	822,078	785,038	747,447	760,813	730,734
Non-controlling interests	605	597	588	590	590	588	583	581	573
Non-current liabilities	283,502	282,639	281,172	281,049	269,026	268,290	265,955	264,884	270,781
Liabilities under bond issue	244,350	244,253	244,156	244,058	243,961	243,864	243,767	243,670	243,573
Employee benefits payable	960	929	1,005	1,071	1,147	1,130	1,239	1,454	1,454
Lease liabilities*	16,204	17,238	18,486	19,634	-	-	-	-	-
Contract liabilities	572	-	-	-	-	-	-	-	-
Accruals and deferred income	6,389	5,444	4,753	4,894	5,033	5,173	5,313	5,452	5,592
Deferred tax liability **	5,386	4,257	2,314	994	7,050	6,358	3,941	2,682	7,108
Other liabilities	9,641	10,518	10,458	10,398	11,835	11,765	11,695	11,626	13,054
Current liabilities	99,807	89,327	255,724	138,482	60,617	74,863	193,296	102,106	79,905
Liabilities under bond issue	1,932	2,097	1,893	2,068	1,938	2,099	1,899	2,070	1,938
Trade payables	11,561	13,788	31,902	19,855	8,575	7,905	18,775	23,849	21,303
Employee benefits payable	17,175	16,474	13,624	12,970	14,278	11,684	10,525	8,141	12,958
Finance lease liabilities	-	-	-	-	-	-	-	15	31
Lease liabilities*	5,181	5,051	5,011	5,359	-	-	-	-	-
Corporate income tax payable **	1,555	5,241	8,552	10,388	6,329	4,166	11,788	4,736	9,112
Contract liabilities	4,364	12,015	22,219	32,676	3,581	12,533	22,375	33,037	-
Accruals and deferred income	767	559	559	559	559	559	563	559	7,386
Provisions for other liabilities and charges	15,563	95	95	48	68	68	68	67	210
Other liabilities	41,709	34,007	171,870	54,559	25,289	35,849	127,303	29,632	26,967
Total equity and liabilities	1,256,794	1,231,071	1,358,105	1,331,415	1,217,443	1,193,770	1,272,340	1,193,598	1,147,205

* The Group implemented IFRS 16 Leases as of 1 January, which requires the recognition of almost all contracts which meet the criteria of leases in the statement of financial position

** Items adjusted by CIT tax liabilities for previous years at TGE in the presented periods of 2018

Source: Consolidated Financial Statements, Company



5.2. PRESENTATION OF THE FINANCIALS

5.2.1. REVENUE

The Group has three revenue-generating segments:

- financial market,
- commodity market,
- other revenues.

Revenues from the financial market include revenues from:

- trading;
- listing;
- information services and calculation of reference rates.

Trading revenue includes fees paid by market participants in respect of:

- transactions on markets of equities and equity-related instruments;
- transactions in derivative financial instruments;
- transactions in debt instruments;
- transactions in other cash market instruments;
- other fees paid by market participants.

Revenues from transactions in equities and equity-related securities are the Group's main source of trading revenues and its main source of sales revenues in general.

Revenues from transactions in derivative financial instruments are the second biggest source of trading revenues on the financial market. Transactions in WIG20 index futures account for the majority of revenues from transactions in derivatives.

Revenues from other fees paid by market participants include mainly fees for services providing access to and use of the trading system.

Revenues from transactions in debt instruments were the third largest source of trading revenues on the financial market in 2019. Revenues from transactions in debt instruments are generated by the Catalyst market as well as the Treasury BondSpot Poland market operated by BondSpot S.A., a subsidiary of GPW.

Revenues from transactions in other cash market instruments include fees for trading in structured products, investment certificates, and ETF (Exchange Traded Fund) units.

Listing revenues include two elements:

- one-off fees paid for introduction of shares and other instruments to trading on the exchange;
- periodic listing fees.

Revenues from information services mainly include fees paid by data vendors for real-time market data as well as historical and statistical data. Real-time data fees include fixed annual fees and monthly fees based on the data vendor's number of subscribers and the scope of data feeds used by a subscriber. Revenues from real-time information services include revenue from WIBOR and WIBID reference rates.

Revenues of the Group in the commodity market segment include revenues of TGE and IRGiT as well as revenues of InfoEngine from its activity as a trade operator and the entity responsible for balancing.

Revenue on the commodity market includes the following:

- trading,
- operation of the Register of Certificates of Origin,
- clearing,
- information services.

Trading revenue on the commodity market includes:

- revenue from trading in electricity (spot and forward),
- revenue from trading in natural gas (spot and forward),
- revenue from trading in property rights (spot and forward),
- other fees paid by market participants (members).



Other fees paid by commodity market participants include:

- fixed market participation fees,
- trade cancellation fees,
- position transfer fees,
- trade reporting fees in RRM (Registered Reporting Mechanism),
- system access fees,
- guarantee fund resources management fees,

as well as revenues of InfoEngine as a trade operator and the entity responsible for balancing.

Revenues of the sub-segment "clearing" include revenues of the company IRGiT, which clears and settles exchange transactions concluded on TGE, manages the resources of the clearing guarantee system and determines the amount of credits and debits of IRGiT members resulting from their transactions.

The Group's other revenues include revenues of GPW and the TGE Group, among others, from educational services, space lease, and sponsorship.

The Group's sales revenues amounted to PLN 336.1 million in 2019, a decrease of 3.1% (PLN 10.7 million) year on year.

The decrease in sales revenues year on year in 2019 was driven by a decrease in revenues from the financial market segment by 3.6% (PLN 6.9 million) and a decrease in revenues from the commodity market by 2.4% (PLN 3.6 million).

The decrease in revenues from the financial market was mainly driven by a decrease in revenue from trading in equities, down by 5.5% or PLN 6.8 million, owing to a decrease of the value of trade on the equity market. Listing revenue decreased by 13.9% or PLN 3.2 million in 2019. Revenue from information services continued to grow: it increased by 7.0% or PLN 3.1 million year on year in 2019. The highest increase by 7.1% or PLN 2.9 million year on year in 2019 was reported for revenue on real-time information and the calculation of reference rates.

The decrease in revenue on the commodity market was mainly driven by a decrease of trading revenue by 4.3% or PLN 3.4 million, including a decrease in revenue from trading in property rights in certificates of origin by 9.6% or PLN 3.6 million. Revenue from clearing increased by 0.9% or PLN 0.4 million.

The revenue of GPW stood at PLN 183.6 million in 2019, a decrease of 3.8% or PLN 7.3 million year on year. The revenue of TGE stood at PLN 98.3 million in 2019 vs. PLN 103.0 million in 2018, a decrease of 4.6% or PLN 4.7 million. The revenue of IRGiT was PLN 50.3 million in 2019, an increase of 1.5% or PLN 0.7 million year on year. The revenue of BondSpot S.A. stood at PLN 11.1 million in 2019 and PLN 11.4 million in 2018.

The revenue of the GPW Group by segment is presented below.



Table 45 Consolidated revenues of the GPW Group and revenue structure in 2017 - 2019

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Financial market	184,990	55%	191,852	55%	208,849	59%	(6,862)	-3.6%
Trading revenue	117,455	35%	124,280	36%	141,336	40%	(6,825)	-5.5%
Equities and equity-related instruments	87,449	26%	94,082	27%	109,564	31%	(6,633)	-7.1%
Derivative instruments	10,611	3%	12,068	3%	11,888	3%	(1,457)	-12.1%
Other fees paid by market participants	8,834	3%	7,396	2%	7,498	2%	1,438	19.4%
Debt instruments	10,061	3%	10,354	3%	11,958	3%	(293)	-2.8%
Other cash instruments	500	0%	380	0%	428	0%	120	31.6%
Listing revenue	19,629	6%	22,805	7%	24,968	7%	(3,176)	-13.9%
Listing fees	17,458	5%	19,732	6%	20,013	6%	(2,274)	-11.5%
Introduction fees, other fees	2,171	1%	3,073	1%	4,955	1%	(902)	-29.4%
Information services and revenue from calculation of reference rates	47,906	14%	44,767	13%	42,545	12%	3,139	7.0%
Real-time information and revenue from calculation of reference rates	44,049	13%	41,142	12%	39,529	11%	2,907	7.1%
Indices and historical and statistical information	3,857	1%	3,625	1%	3,016	1%	232	6.4%
Commodity market	149,940	45%	153,555	44%	142,088	40%	(3,615)	-2.4%
Trading revenue	75,167	22%	78,547	23%	70,092	20%	(3,380)	-4.3%
Electricity	16,339	5%	18,395	5%	8,815	3%	(2,056)	-11.2%
Spot	4,021	1%	3,023	1%	2,680	1%	998	33.0%
Forward	12,318	4%	15,372	4%	6,135	2%	(3,054)	-19.9%
Gas	12,137	4%	10,809	3%	10,846	3%	1,328	12.3%
Spot	2,329	1%	2,511	1%	2,441	1%	(182)	-7.2%
Forward	9,808	3%	8,298	2%	8,405	2%	1,510	18.2%
Property rights in certificates of origin	34,193	10%	37,817	11%	39,614	11%	(3,624)	-9.6%
Other fees paid by market participants	12,498	4%	11,526	3%	10,817	3%	972	8.4%
Register of certificates of origin	27,815	8%	28,696	8%	30,628	9%	(881)	-3.1%
Clearing	46,270	14%	45,862	13%	41,019	12%	408	0.9%
Information services	688	0%	450	0%	349	0%	238	52.9%
Other revenue *	1,151	0%	1,374	0%	1,019	0%	(223)	-16.2%
Total	336,081	100%	346,781	100%	351,956	100%	(10,700)	-3.1%

* Other revenues include the financial market and the commodity market

Source: Consolidated Financial Statements, Company

The Group earns revenue both from domestic and foreign clients. The table below presents revenue by geographic segment.

Table 46 Consolidated revenues of the GPW Group by geographical segment in 2017 - 2019

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Revenue from foreign customers	99,935	30%	93,296	27%	83,535	24%	6,639	7%
Revenue from local customers	236,146	70%	253,485	73%	268,421	76%	(17,339)	-7%
Total	336,081	100%	346,781	100%	351,956	100%	(10,700)	-3%

Source: Consolidated Financial Statements, Company

The average EUR/PLN exchange rate was 4.30 EUR/PLN in 2019, 4.26 EUR/PLN in 2018, and 4.26 EUR/PLN in 2017.

The Group is not dependent on any single client as no client has a share exceeding 10% of the total sales revenue.



FINANCIAL MARKET

TRADING

The revenues of the Group from trading on the financial market stood at PLN 117.5 million in the year ended 31 December 2019 vs. PLN 124.3 million in 2018. The revenues decreased by 5.5% or PLN 6.8 million.

The share of trading revenue in the total revenue on the financial market was 63.5% in 2019 vs. 64.8% in 2018. The biggest share in trading revenue (83.3%) is that of the revenue on the Main Market, which stood at PLN 97.6 million in 2019. The remaining share in revenue is that of Treasury BondSpot Poland, NewConnect and Catalyst.

Equities and equity-related instruments

Revenues of the Group from trading in **equities and equity-related instruments** amounted to PLN 87.4 million in 2019 vs. PLN 94.1 million in 2018.

The value of trade in equities on the Main Market was PLN 195.3 billion in 2019 and decreased by 7.8% year on year, including a decrease of trade on the electronic order book by 6.3% and a decrease of the value of block trades by 49.8%. As a result, the trading revenue from equities decreased by 7.1% year on year in 2019. The main drivers of the decrease in trading year on year included:

- changes in MSCI EM including the addition of Argentina and Saudi Arabia and changes in the weight of A class Chinese stocks. The estimated outflow of capital from Poland is approximately PLN 4.8 billion (source: Wood&Co);
- negative transfers from pension funds. In 2019, the Social Security Institution (ZUS) transferred PLN 3.1 billion to pension funds (OFE) while OFE transferred PLN 6.9 billion to ZUS (negative PLN 3.7 billion net);
- the Polish market was relatively weak in 2019: WIG20 lost 5.6% during the year while global indices hit historical highs (S&P500 +30%);
- a range of geopolitical factors curb investors' risk appetite, including trade wars between USA and China, no definitive solution to Brexit, tensions between the USA and Iran.

Table 47 Data for the markets in equities and equity-related instruments

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Financial market, trading revenue: equities and equity-related instruments (PLN million)	87.4	94.1	109.6	(6.6)	-7.1%
Main Market:					
Value of trading (PLN billion)	195.3	211.9	261.0	(16.6)	-7.8%
Volume of trading (billions of shares)	11.0	12.8	15.4	(1.7)	-13.7%
NewConnect:					
Value of trading (PLN billion)	1.5	1.7	1.5	(0.1)	-7.7%
Volume of trading (billions of shares)	1.3	1.5	2.8	(0.2)	-10.9%

Source: Company

Derivatives

Revenues of the Group from transactions in derivatives on the financial market amounted to PLN 10.6 million in 2019 vs. PLN 12.1 million in 2018, representing a decrease of PLN 1.5 million or 12.1 %.

The total volume of trade in derivatives in 2019 decreased by 14.5% year on year. The volume of trade in WIG20 futures, which account for the majority of revenue from trading in derivatives, dropped by 12,8% year on year. The volume of trade in currency futures decreased from 2.0 million in 2018 to 1.3 million in 2019, i.e., by 34.8%. However, fees on currency futures are the lowest among all futures, hence their impact on revenue is much smaller.



Table 48 Data for the derivatives market

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Financial market, trading revenue: derivatives (PLN million)	10.6	12.1	11.9	(1.5)	-12%
Volume of trading in derivatives (millions of contracts):	7.0	8.2	7.6	(1.2)	-14%
incl.: Volume of trading in WIG20 futures (millions of contracts)	3.9	4.4	4.5	(0.6)	-13%

Source: Company

Other fees paid by market participants

Revenues of the Group from **other fees** paid by market participants stood at PLN 8.8 million in 2019, up by 19.4% or PLN 1.4 million stable year on year. The fees mainly include fees for access to and use of the trading system (among others, licence fees, connection fees and maintenance fees). The sharp increase of the revenue in 2019 was driven by an increase in the number of members and an increase in the number of connections with the trading system. In view of the market situation, mainly including Brexit and the migration of GPW members to continental Europe, next year's revenue could revert to the levels reported in 2018.

In March 2019, GPW launched a three-year Technology Development Support Programme for the purposes of technological development in the brokerage business. The Programme grants discounts to exchange members who meet the criteria set in the rules. Applications for participation in the programme were accepted until 31 March 2019. The granted total discount limit was PLN 6 million for the duration of the Programme. As at 31 December 2019, six exchange members took active part in the Programme and the actual discount granted to them stood at PLN 649.4 thousand. Due to the application of IFRS 15 Revenue from Contracts with Customers, the Exchange is required to recognise the discount for all members approved in the Programme over the entire duration of the Programme. The amount charged to revenue under IFRS 15 was PLN 1,764.7 thousand as at 31 December 2019.

Debt instruments

Revenues of the Group from transactions in **debt instruments** stood at PLN 10.1 million in 2019 vs. PLN 10.4 million in 2018, representing a decrease of 2.8% or PLN 0.3 million. The majority of the Group's revenues (PLN 9.3 million in 2019) from the debt instruments segment was generated by Treasury BondSpot Poland (TBSP).

The decrease of revenues from transactions in debt instruments year on year in 2019 was driven by lower revenue on TBSP. The decrease of revenue on TBSP year on year in 2019 was driven mainly by a lower value of cash transactions, which has the biggest share in the Company's revenue.

The total value of transactions in Polish Treasury securities on TBSP was PLN 282.4 billion in 2019, representing a decrease of 30.7% year on year. The decrease affected both cash and conditional transactions. The value of cash transactions was PLN 85.9 billion in 2019, representing a decrease of 42% year on year. The value of conditional transactions was PLN 196.6 billion in 2019, representing a decrease of 25% year on year.

Activity on TBSP in 2019 was driven mainly by market conditions impacting the local interest rate market, which affected the yields and prices on the local Treasury bond market. Those conditions included the monetary policy of the Polish Monetary Policy Council (RPP) which expects to keep the rates unchanged by the end of 2020, as well as a limited supply of bonds at auctions held by the Ministry of Finance, mainly due to a strong public budget and the achievement of the Ministry of Finance's 2019 target sales of Treasury securities.

Trade is also affected by the bank tax, whose structure encourages banks to keep Treasury securities in their assets as they reduce the balance of assets which is the tax base. This implies a higher share of local banks among all holders of Treasury securities and a falling share of active non-residents. The tax structure also affects the activity of banks on the secondary market in sell/buy-back and repo transactions: on the one hand, it shortens the maturity of transactions and, on the other hand, directly limits trading activity on the repo market at the end of each month.

The decrease in trading was also driven by an increase in the activity of interbank market brokers present on the Polish market remotely from other EU Member States and Switzerland. They take advantage of the OTF opportunities available under MiFID II in a discretionary and more flexible way than regulated markets and alternative trading systems such as BondSpot.



The value of trading on Catalyst stood at PLN 2.9 billion in 2019, an increase of 13% year on year. However, revenues from Catalyst have a small share in the Group's total revenues from transactions in debt instruments: Treasury BondSpot Poland has a predominant share in this market segment.

Table 49 Data for the debt instruments market

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Financial market, trading revenue: debt instruments (PLN million)	10.1	10.4	12.0	(0.3)	-3%
Catalyst:					
Value of trading (PLN billion)	2.9	2.6	2.8	0.3	13%
incl.: Value of trading in non-Treasury instruments (PLN billion)	1.8	2.0	1.9	(0.1)	-6%
Treasury BondSpot Poland, value of trading:					
Conditional transactions (PLN billion)	196.6	260.5	338.5	(63.9)	-25%
Cash transactions (PLN billion)	85.9	146.8	196.2	(61.0)	-42%

Source: Company

Other cash market instruments

The Group's revenues from transactions in other cash market instruments amounted to PLN 500 thousand in 2019 vs. PLN 380 thousand in 2018. The revenues include fees for trading in structured products, investment certificates, ETF units and warrants. The biggest increase in revenue was reported for trading in structured certificates.

LISTING

Listing revenues of the Group on the financial market amounted to PLN 19.6 million in 2019 vs. PLN 22.8 million in 2018. Revenues from **listing fees** amounted to PLN 17.5 million in 2019 vs. PLN 19.7 million in 2018. The main driver of revenues from listing fees is the number of issuers listed on the GPW markets and their capitalisation at the end of the previous year. Revenues from **fees for introduction and other fees** decreased by PLN 0.9 million year on year and amounted to PLN 2.2 million in 2019 vs. PLN 3.1 million in 2018. The revenues are driven mainly by the number and value of new listings of shares and bonds on the GPW markets, as well as the structure of IPOs. The value of IPOs and SPOs decreased significantly year on year in 2019.

The value of IPOs and SPOs on the **Main Market and NewConnect** was PLN 8.2 billion in 2019 vs. PLN 5.7 billion in 2018. The value of IPOs on the Main Market and NewConnect was PLN 76 million in 2019 vs. PLN 345 million in 2018. The value of SPOs increased from PLN 5.4 billion in 2018 to PLN 8.1 billion in 2019, including one issue of PLN 7.3 billion. Although the total amount of issues introduced to the market increased in 2019, the structure of the issues with one single issue at PLN 7.3 billion means that the Group's revenue did not increase year on year due to the applicable limits of fees for introduction of instruments into trading. Seven companies were newly listed on the Main Market and 22 companies were delisted in 2019. The capitalisation of the delisted companies was PLN 26.5 billion, adding to the decrease of trading in 2019.

Listing revenues on the GPW Main Market decreased by 13.3% year on year to PLN 15.9 million in 2019. The table below presents the key financial and operating figures for the Main Market.



Table 50 Data for the GPW Main Market

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Main Market					
Listing revenue (PLN million)	15.9	18.4	20.1	-2.4	-13.3%
Total capitalisation of listed companies (PLN billion)	1,103.8	1,128.5	1,379.9	-24.7	-2.2%
including: Capitalisation of listed domestic companies	550.2	578.9	671.0	-28.7	-5.0%
including: Capitalisation of listed foreign companies	553.6	549.6	708.9	4.0	0.7%
Total number of listed companies	449	465	482	-16	-3.4%
including: Number of listed domestic companies	401	414	432	-13	-3.1%
including: Number of listed foreign companies	48	51	50	-3	-5.9%
Value of offerings (IPO and SPO) (PLN billion)	8.1	5.6	98.2	2.5	45.7%
Number of new listings (in the period)	7	7	15	0	0.0%
Capitalisation of new listings (PLN billion)	1.3	1.6	16.7	-0.4	-21.6%
Number of delistings	22	25	20	-3	-12.0%
Capitalisation of delistings* (PLN billion)	26.5	18.4	8.1	8.1	44.3%

* based on market capitalisation at the time of delisting

Source: Company

Listing revenues from **NewConnect** were PLN 2.0 million in 2019 vs. PLN 2.1 million in 2018. The table below presents the key financial and operating figures.

Table 51 Data for NewConnect

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
NewConnect					
Listing revenue (PLN million)	2.0	2.1	2.2	-0.2	-7.7%
Total capitalisation of listed companies (PLN billion)	9.7	7.4	9.6	2.3	31.4%
including: Capitalisation of listed domestic companies	9.1	7.2	9.4	1.9	27.2%
including: Capitalisation of listed foreign companies	0.6	0.2	0.2	0.4	159.7%
Total number of listed companies	375	387	408	-12	-3.1%
including: Number of listed domestic companies	369	381	401	-12	-3.1%
including: Number of listed foreign companies	6	6	7	0	0.0%
Value of offerings (IPO and SPO) (PLN million)	83.7	145.4	301.2	-61.8	-42.5%
Number of new listings (in the period)	15	15	19	0	0.0%
Capitalisation of new listings (PLN billion)	0.5	0.6	1.0	(0.1)	-15.4%
Number of delistings*	27	36	15	-9	-25.0%
Capitalisation of delistings** (PLN billion)	1.3	1.0	1.1	0.3	33.7%

* includes companies which transferred to the Main Market

** based on market capitalisation at the time of delisting

Source: Company

Listing revenues from **Catalyst** stood at PLN 1.7 million, a decrease of 24.4% year on year in 2019. The Group reported a decrease in revenue from listing fees and the revenue from fees for introduction although the value of issued and introduced non-Treasury debt instruments increased year on year in 2019. The main reason why the recognised fees for introduction were lower in 2019 is the application of IFRS 15 Revenue from Contracts with Customers and the recognition of the revenue



for introduction to trading earned in 2019 over time. The Exchange Management Board decided to no longer recognise one-off revenue from the introduction of debt instruments to trading as of 1 January 2019; however, the total adjustment on the recognition of the fees under IFRS 15 was recognised in Q4 2019. The revenue from fees for introduction of debt instruments to trading was adjusted by PLN 763.9 thousand and taken to deferred income. The amount was recognised under contract liabilities on the balance sheet as at 31 December 2019, including non-current liabilities of PLN 572.2 thousand and current liabilities of PLN 191.7 thousand. The Exchange Management Board decided not to adjust retained earnings as at 31 December 2018 due to the change in the recognition of the revenue for the period before 1 January 2019 (the adjustment would be immaterial).

table below presents the key financial and operating figures.

Table 52 Data for Catalyst

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Catalyst					
Listing revenue (PLN million)	1.73	2.29	2.62	-0.56	-24.4%
Number of issuers	145	148	161	-3	-2.0%
Number of issued instruments	562	575	608	-13	-2.3%
including: non-Treasury instruments	512	527	566	-15	-2.8%
Value of issued instruments (PLN billion)	796.9	777.2	751.7	19.7	2.5%
including: non-Treasury instruments	92.1	86.6	95.8	5.5	6.3%

Source: Company

INFORMATION SERVICES

Revenues from information services on the financial and commodity market amounted to PLN 48.6 million in 2019 vs. PLN 45.2 million in 2018.

Table 53 Data for information services

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Revenues from information services and WIBID and WIBOR reference rate services * (PLN million)	48.6	45.2	42.9	3.4	7.5%
Number of data vendors	83	78	52	5	6.4%
Number of subscribers ('000 subscribers)	262.1	248.0	244.4	14.1	5.7%

* revenues from information services contain financial market data and commodity market data

Source: Company

The increase in revenue from information services in 2019 was driven by:

- acquisition of new clients of GPW Group information services (mainly data vendors and non-display data users);
- fees for non-display use of WIBID/WIBOR rates (in automatic trading, risk management applications, etc.) effective as of 1 January 2019 and acquisition of many licence clients
- increase in the number of subscribers of TGE data and licences for TGE data vendors;
- a broad range of products containing processed data, acquisition of new clients, changes to fees in this product segment.

COMMODITY MARKET

Revenues on the commodity market include mainly the revenues of the TGE Group.

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 the clearing sub-segment operated by IRGiT.

Revenues of the GPW Group on the commodity market stood at PLN 149.9 million in 2019 vs. PLN 153.6 million in 2018.

The decrease of revenues on the commodity market year on year in 2019 was mainly driven by a decrease in revenues from trade in property rights in certificates of origin by 9.6% or PLN 3.6 million and a decrease in revenue from trade in electricity, which stood at PLN 16.3 million vs. PLN 18.4 million in 2018, representing a decrease of 11.2% or PLN 2.1 million. Trading revenues on the commodity market from transactions in gas increased by 12.3% or PLN 1.3 million year on year. Other fees paid by market participants increased by 8.4% or PLN 1.0 million.

Revenue from the operation of the register of certificates of origin decreased by 3.1% or PLN 0.9 million year on year. Revenue from clearing increased by 0.9% or PLN 0.4 million. Revenue from information services on the commodity market stood at PLN 688 thousand vs. PLN 450 million in 2018.

TRADING

Revenues from trading on the commodity market stood at PLN 75.2 million in 2019, a decrease of 4.3% or PLN 3.4 million compared to PLN 78.5 million in 2018.

The Group's revenues from trade in electricity amounted to PLN 16.3 million in 2019 vs. PLN 18.4 million in 2018. Revenues from trade in electricity included revenue on the spot market at PLN 4.0 million and revenue on the forward market at PLN 12.3 million. The total volume of trade on the energy markets operated by TGE amounted to 228.9 TWh in 2019 vs. 226.1 TWh in 2018. The volume of trade in electricity decreased year on year in 2019 due to a decrease in the volume of forward trade and the fact that TGE introduced a pilot programme supporting liquidity on the market "Maker – Taker" and reduced fees for market makers by 50% as of 1 January 2019. The volume of forward transactions decreased by 1.7% year on year.

The Group's revenues from trade in gas amounted to PLN 12.1 million in 2019, an increase of PLN 12.3% or PLN 1.3 million year on year. The revenue from spot transactions stood at PLN 2.3 million and the revenue from forward transactions at PLN 9.8 million in 2019. The volume of trade in natural gas on TGE was 146.1 TWh in 2019 vs. 143.3 TWh in 2018. The volume of trade on the Day-ahead and Intraday Market in gas (RDNiBg) was 22.6 TWh in 2019 vs. 23.7 TWh in 2018. The volume of trade in gas on the Commodity Forward Instruments Market (RTT) was 123.5 TWh, an increase of 3.2% year on year.

The Group's revenue from trade in property rights stood at PLN 34.2 million in 2019 vs. PLN 37.8 million in 2018, a decrease of PLN 3.6 million. The volume of trade in property rights stood at 44.4 TWh in 2019 vs. 59.6 TWh in 2018.

The decrease in the revenue from trade in property rights was driven by a decrease in trade in OZE and OZE BIO property rights by PLN 3.8 million and a decrease of the revenue from trade in cogeneration property rights by PLN 2.4 million combined with an increase in the revenue from trade in property rights in energy efficiency by PLN 2.6 million. The decrease in trade in cogeneration property rights was due to the expiry of certificates as of 31 December 2018, their final cancellation by 30 June 2019 and discontinuation of trade in June 2019. The increase in the revenue from trading in property rights in energy efficiency was due to an extension of the validity of all tender certificates to 30 June 2021.

The volume of trade in property rights in green certificates of origin of electricity was 25.9 TWh in 2019 vs. 30.8 TWh in 2018. The revenue from trade in property rights in green certificates of origin of electricity (PMOZE and PMOZE BIO) represented 65.5% and 69.4%, respectively, of the Group's total revenue from trade in property rights in the periods under review. The share of revenue from cogeneration decreased from 16.2% in 2018 to 10.8% in 2019. The revenue from trade in property rights of energy efficiency (white certificates) decreased in 2019. The revenue stood at PLN 8.1 million in 2019 and PLN 5.5 million in 2018. The share of revenue from white certificates in total revenue from trade in property rights was 23.7% in 2019.

Revenues of the Group from other fees paid by commodity market participants amounted to PLN 12.5 million in 2019 vs. PLN 11.5 million in 2018, an increase of 8.4% (PLN 1.0 million). Other fees paid by commodity market participants included fees paid by TGE market participants at PLN 6.5 million, revenues of InfoEngine from the activity of trade operator at PLN 2.1 million, and revenues of IRGiT at PLN 3.9 million including participation fees, fees for participation in TGE markets, and other fees.

Other fees paid by market participants are driven mainly 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 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.

The revenue from exchange fees had the biggest share of all these and accounted for 67.7% of revenues from other fees in TGE. Revenue from exchange fees stood at PLN 4.4 million in 2019, an increase of 7.1% year on year. The Exchange Commodity Market had 78 members as at 31 December 2019, six more than a year earlier.



Table 54 Data for trading on the commodity market

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Commodity market - trading revenue (PLN million)	75.2	78.5	70.1	-3.4	-4.3%
Volume of trading in electricity					
Spot transactions (TWh)	33.9	27.7	25.2	6.2	22.4%
Forward transactions (TWh)	195.0	198.3	86.4	-3.3	-1.7%
Volume of trading in gas					
Spot transactions (TWh)	22.6	23.7	24.0	-1.0	-4.4%
Forward transactions (TWh)	123.5	119.6	114.7	3.8	3.2%
Volume of trading in property rights (TGE) (TWh)	44.4	59.6	59.5	-15.2	-25.6%

Source: Company

REGISTER OF CERTIFICATES OF ORIGIN

Revenues from the operation of the **Register of Certificates of Origin** amounted to PLN 27.8 million in 2019 vs. PLN 28.7 million in 2018, representing a decrease of 3.1%. The year-on-year decrease of the revenues from the operation of the Register of Certificates of Origin was driven by a decrease of the volumes of cancelled property rights (by 3%) and issued property rights (by 26%). The year-on-year decrease in revenue by PLN 0.9 million in 2019 was driven by an increase of the revenue from the RES register from PLN 18.8 million to PLN 19.3 million, a decrease of the revenue from cogeneration from PLN 7.0 million to PLN 4.6 million, an increase in the revenue from energy efficiency from PLN 2.0 million to PLN 2.3 million, and an increase in the revenue from guarantees of origin from PLN 0.8 million to PLN 1.7 million.

Table 55 Data for the Register of Certificates of Origin

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Commodity market - revenue from operation of the Register of Certificates of Origin of electricity (PLN million)	27.8	28.7	30.6	-0.9	-3%
Issued property rights (TWh)	35.3	47.7	49.0	-12.4	-26%
Cancelled property rights (TWh)	46.0	47.4	52.3	-1.3	-3%

Source: Company

CLEARING

The Group earns revenue from the **clearing activities** of IRGiT, which is a subsidiary of TGE. The revenue stood at PLN 46.3 million in 2019 vs. PLN 45.9 million in 2018. The increase in the revenue by PLN 0.4 million or 0.9% was driven by increased volumes of trade on the markets operated by TGE. The revenue from clearing was PLN 11.3 million on the electricity market, PLN 21.2 million on the gas market, and PLN 13.8 million on the property rights market.

OTHER REVENUES

The Group's other revenues amounted to PLN 1.2 million in 2019 vs. PLN 1.4 million in 2018. The Group's other revenues include revenues from educational and PR services, space lease, and sponsorship. The year-on-year decrease of other revenues in 2019 was driven by lower revenues from sponsorship as well as the impact of IFRS 16 on the presentation of revenues from office space lease.



5.2.2. OPERATING EXPENSES

Total operating expenses of the **GPW Group** amounted to PLN 181.1 million in 2019, representing an increase of 4.2% (PLN 7.3 million) year on year. The increase of operating expenses was driven by an increase of depreciation and amortisation charges by PLN 5.1 million, an increase of salaries and other employee costs by PLN 9.0 million, an increase of external service charges by PLN 3.9 million, combined with a decrease of fees and charges by PLN 5.0 million, including fees paid to PFSA for market supervision by PLN 5.8 million, as well as a decrease of rent and other maintenance fees by PLN 5.2 million and a decrease of other operating expenses by PLN 0.6 million.

Separate operating expenses of **GPW** stood at PLN 119.3 million in 2019, representing an increase of PLN 6.3 million or 5.6% year on year. The increase of the operating expenses year on year in 2019 was driven by an increase of depreciation and amortisation charges by PLN 3.2 million, an increase of salaries and other employee costs by PLN 6.1 million, an increase of external service charges by PLN 4.1 million, combined with a decrease of rent and other maintenance fees by PLN 4.4 million and a decrease of fees and charges by PLN 2.7 million. The fees paid by GPW to PFSA for market supervision decreased by PLN 3.3 million in 2019.

Operating expenses of **TGE** stood at PLN 43.9 million in 2019 vs. PLN 42.6 million in 2018. The year-on-year increase of the operating expenses in 2019 was mainly driven by an increase of depreciation and amortisation charges by PLN 1.4 million or 17.0%, an increase of external service charges by PLN 2.0 million or 16.0%, and an increase of salaries and other employee costs by PLN 1.6 million or 11.3%. Fees and charges decreased by PLN 1.5 million, including the supervision fees paid to PFSA by PLN 1.5 million or 46.9%, and rent and other maintenance fees decreased by PLN 2,3 million or 84,3%.

Operating expenses of **IRGiT** stood at PLN 16.0 million in 2019, representing an increase of PLN 0.6 million year on year. Similar to other GPW Group companies, IRGiT paid a lower supervision fee to PFSA: PLN 1.4 million in 2019 vs. PLN 2.4 million in 2018.

Operating expenses of **BondSpot** remained stable year on year at PLN 10.8 million as at 31 December 2019.

Table 56 Consolidated operating expenses of the GPW Group and structure of operating expenses in 2017 - 2019

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Depreciation and amortisation	36,918	20%	31,772	18%	28,325	17%	5,146	16%
Salaries	61,336	34%	55,065	32%	50,764	31%	6,271	11%
Other employee costs	16,495	9%	13,765	8%	12,081	7%	2,730	20%
Rent and other maintenance fees	3,970	2%	9,122	5%	9,505	6%	(5,152)	-56%
Fees and charges	8,420	5%	13,428	8%	6,553	4%	(5,008)	-37%
including: PFSA fees	6,752	4%	12,538	7%	5,579	3%	(5,786)	-46%
External service charges	48,466	27%	44,520	26%	53,194	32%	3,946	9%
Other operating expenses	5,544	3%	6,140	4%	5,341	3%	(596)	-10%
Total	181,149	100%	173,812	100%	165,763	100%	7,337	4%

Source: Consolidated Financial Statements, Company

The table above presents changes in the structure of expenses in 2017 – 2019 and changes between 2019 and 2018.

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.

The comments below concerning operating expenses items are based on **consolidated figures of the GPW Group**.

Depreciation and amortisation

Depreciation and amortisation charges stood at PLN 36.9 million in 2019, representing an increase of 16.2% (PLN 5.1 million) compared to PLN 31.8 million in 2018. The increase in depreciation and amortisation charges year on year in 2019 was driven mainly by the implementation of the new standard IFRS 16 Leases in all companies of the Group. The implementation of the Standard eliminated the differentiation between operating leases and finance leases. Consequently, lessees recognise nearly all leases in the statement of financial position, including leases of office space, car parks, colocation, perpetual usufruct, and cars. Such leases were previously presented under the relevant segments of operating expenses but are now split between amortisation and depreciation, financial expenses, and fees and charges. In 2019, the depreciation charges representing the balance of right-to-use assets and subleases stood at PLN 5.1 million.



It should be noted that IFRS 16, which has a significant impact on the presentation in the financial statements, does not affect the operations of the Group companies or the cash flows in 2019.

Salaries and other employee costs

Salaries and other employee costs of the Group amounted to PLN 77.8 million in 2019, representing an increase of PLN 9.0 million or 13.1% compared to PLN 68.8 million in 2018.

The increase of salaries and related charges in the GPW Group year on year in 2019 was driven by an increase of costs by PLN 6.1 million in GPW, by PLN 1.6 million in TGE, by PLN 1.0 million in IRGiT, and by PLN 0.8 million in in GPW Benchmark.

The increase of salaries and other employee costs in GPW year on year in 2019 was mainly driven by an increase of basic salaries by PLN 3.6 million, an increase of supplementary remuneration by PLN 1.1 million, and an increase of other employee costs including social security charges by PLN 1.5 million. The increase of salaries in 2019 was driven by a gradual increase in the headcount caused by an additional workload related to the implementation of projects under the published strategy of the Group, as well as partial alignment of salaries with changing conditions and remuneration on the job market as of Q4 2019. The increase in supplementary salary costs was driven by short-term contracts concerning the development of the Group's strategy.

The increase of salaries and other employee costs in TGE year on year in 2019 was driven by an increase of salaries by PLN 1.0 million and an increase of other employee costs including social security charges by PLN 0.7 million. The increase of salaries in TGE was driven by an increase of the headcount in the implementation of strategic projects and accession to international markets.

The increase of salaries and other employee costs in IRGiT year on year in 2019 was driven by an increase of the headcount and the resulting increase in salaries by PLN 0.7 million and an increase of other employee costs including social security charges by PLN 0.3 million.

The increase of salaries in GPW Benchmark year on year in 2019 was driven by an increase of salaries by PLN 0.7 million and an increase of other employee costs including social security charges by PLN 0.1 million. The increase of salaries in GPW Benchmark was driven by an increase of the headcount.

The headcount of the Group was 397 FTEs as at 31 December 2019 vs. 350 FTEs as at 31 December 2018. The increase of the headcount of the Group year on year in 2019 resulted from workforce additions in GPW, TGE, IRGiT and GPW Benchmark. The increase of the headcount of GPW in 2019 was a result of the implementation of the Group's strategy.

Table 57 GPW Group headcount

# FTEs	As at 31 December		
	2019	2018	2017
GPW	223	204	189
Subsidiaries	174	146	139
Total	397	350	328

Source: Company

Rent and other maintenance fees

Rent and other maintenance fees of the GPW Group amounted to PLN 4.0 million in 2019 vs. PLN 9.1 million in 2018. The decrease of rent in 2019 was due to the fact that the Group implemented IFRS 16 without restating comparative numbers, as per paragraph C5(b) of IFRS 16, which implies that the 2018 and 2019 numbers are not comparable. Office space, colocation and car park lease contracts are classified as leases as of 2019 and recognised in depreciation and amortisation, fees and charges, and financial expenses. Rent and other maintenance fees mainly include maintenance fees.

Fees and charges

Fees and charges stood at PLN 8.4 million in 2019, a decrease of 37.3% (PLN 5.0 million) year on year. The main component of fees and charges of the Group are fees paid to the Polish Financial Supervision Authority, which increased sharply and stood at PLN 12.5 million for the Group in 2018. The supervision fee stood at PLN 6.8 million at Group level in 2019. Following the change of the system of financing the cost of market supervision and of the range of entities participating in the financing as of the beginning of 2016, supervision fees vary greatly from year to year. However, the amount of the fees is beyond the Group's control and cannot be anticipated.



External service charges

External service charges amounted to PLN 48.5 million in 2019 vs. PLN 44.5 million in 2018, representing an increase of 8.9% or PLN 3.9 million.

Table 58 Consolidated external service charges of the GPW Group and structure of external service charges in 2019 and 2018

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
IT cost:	23,755	49%	22,940	52%	32,467	61%	815	4%
<i>IT infrastructure maintenance</i>	17,881	37%	15,998	36%	15,752	30%	1,883	12%
<i>TBSP maintenance service</i>	1,501	3%	1,466	3%	1,091	2%	35	2%
<i>Data transmission lines</i>	3,986	8%	5,102	11%	5,242	10%	(1,116)	-22%
<i>Software modification</i>	387	1%	374	1%	10,382	20%	13	3%
Office and office equipment maintenance:	3,498	7%	3,355	8%	3,325	6%	143	4%
<i>Repair and maintenance of installations</i>	901	2%	1,026	2%	1,012	2%	(125)	-12%
<i>Security</i>	1,570	3%	1,412	3%	1,396	3%	158	11%
<i>Cleaning</i>	662	1%	533	1%	528	1%	129	24%
<i>Phone and mobile phone services</i>	365	1%	384	1%	389	1%	(19)	-5%
International (energy) market services	1,272	3%	1,857	4%	2,003	4%	(585)	-32%
Leasing, rental and maintenance of vehicles	413	1%	711	2%	659	1%	(298)	-42%
Transportation services	137	0%	137	0%	139	0%	-	0%
Promotion, education, market development	5,372	11%	5,424	12%	4,618	9%	(52)	-1%
Market liquidity support	1,321	3%	908	2%	522	1%	413	45%
Advisory (including: audit, legal services, business consulting)	7,394	15%	6,697	15%	6,213	12%	697	10%
Information services	2,584	5%	261	1%	956	2%	2,323	890%
Training	1,054	2%	973	2%	813	2%	81	8%
Mail fees	135	0%	75	0%	95	0%	60	80%
Bank fees	183	0%	172	0%	123	0%	11	6%
Translation	343	1%	349	1%	364	1%	(6)	-2%
Other	1,005	2%	661	1%	897	2%	344	52%
Total	48,466	100%	44,520	100%	53,194	100%	3,946	9%

Source: Consolidated Financial Statements, Company

The increase of external service charges year on year in 2019 was driven by changes in the following cost items:

- ◆ IT infrastructure maintenance – an increase of PLN 1.9 million due to the cost of IT hardware and software maintenance services;
- ◆ data transmission lines – a decrease of PLN 1.1 million, mainly driven by a decrease of the cost by PLN 0.7 million in GPW and by PLN 0.4 million in TGE. The decrease of the cost in those companies was due to optimisation of infrastructure services in the GPW Group;
- ◆ building and office equipment maintenance – an increase of PLN 0.1 million due to rising costs of security and cleaning services following a pay raise for employees of those service providers;
- ◆ international energy market services – a decrease of PLN 0.6 million due to a bigger number of participants of international energy market projects contributing to project costs, resulting in a lower share of Poland and TGE in the costs;
- ◆ car lease and maintenance – a decrease of PLN 0.3 million due to a different presentation of the costs following the application of IFRS 16;



- ◆ promotion, education, market development – a decrease of PLN 0.1 million due to a higher cost in 2018 related to sponsorship of a Bloomberg conference in London focusing on the promotion of Poland from Emerging Markets to Developed Markets and the costs of Open Door Days;
- ◆ market liquidity support – an increase of PLN 0.4 million due to recognition of market making costs in 2018;
- ◆ advisory – an increase of PLN 0.7 million due mainly to the cost of advisory for strategic projects and the cost of tax review in the GPW Group;
- ◆ information services – an increase of PLN 2.3 million due mainly to:
 - a lower comparative base in 2018 due to the release of provisions for sales of NYSET services at PLN 0.2 million in Q1 2018; and
 - the implementation of GPW's Analytical Coverage Support Pilot Programme.
- ◆ other expenses – increase of PLN 0.3 million due to among others services for the Private Market project.

The Analytical Coverage Support Pilot Programme aims to:

- Increase the number of published analytical reports covering companies participating in mWIG40 and sWIG80;
- Improve the availability of up-to-date analytical reports to local and international investors;
- Improve the liquidity of trading in stocks participating in the Programme.

The Programme was open to members who met the criteria defined in the programme rules until 22 April 2019. Twelve members joined the Programme who jointly cover 40 issuers. The cost of analytical support is PLN 100 thousand net per company covered over a period of 2 years. The expected cost of the Programme is ca. PLN 4.0 million net in the two years. The costs of the Programme recognised in 2019 was PLN 1.8 million.

Other operating expenses

Other operating expenses amounted to PLN 5.5 million in 2019 vs. PLN 6.1 million in 2018, representing a decrease of PLN 0.6 million or 9.7%. Other operating expenses in 2019 included mainly the cost of material and energy consumption at PLN 2.9 million, industry organisation membership fees at PLN 0.6 million, insurance at PLN 0.3 million, business travel at PLN 1.1 million, conference participation at PLN 0.4 million, and other costs at PLN 0.2 million. The cost of material and energy consumption reported the highest decrease year on year in 2019 by 11.5% or PLN 0.4 million, followed by the cost of business travel, down by 16.1% of PLN 0.2 million.

5.2.3. OTHER INCOME AND EXPENSES

Other income of the Group stood at PLN 6.6 million in 2019 vs. PLN 2.7 million in 2018. Other income includes damages received, gains on the sale of property, plant and equipment (PLN 0.1 million), medical services re invoiced to employees (PLN 0.4 million), an annual correction of input VAT (PLN 1.0 million), TGE's income from PSE in the Price Coupling of Regions (PCR) project (PLN 1.7 million), revenue from grants for the Agricultural Market project (PLN 1.8 million), as well as other income (PLN 1.6 million). The biggest income item in 2019 was the revenue from grants for the Agricultural Market project paid by KOWR in respect of food platform implementation services.

Other expenses of the Group amounted to PLN 3.3 million in 2019 vs. PLN 2.3 million in 2018, representing an increase of PLN 1.0 million. Other expenses include donations paid, losses on the sale of property, plant and equipment, impairment losses on receivables, and provisions against damages.

Donations paid in 2019 stood at PLN 2.8 million vs. PLN 488 thousand in 2018 and included GPW's donation of PLN 2.7 million to the GPW Foundation and PLN 20.0 thousand to the World Association of Home Army Soldiers. In addition, TGE paid donations including PLN 3 thousand to Stowarzyszenie Otwarte Drzwi, PLN 3 thousand to the Dziecięca Fantazja Foundation, and PLN 7 thousand to the Stowarzyszenie Hospicjum im. Św. Wawrzyńca in Gdynia.

GPW paid a donation of PLN 1.5 million on a cash basis to the Polish National Foundation (PFN) in 2019 and in 2018. The costs of those periods only include differences between the amount paid in the period and the liability due in 2019 discounted as at 31 December 2016. As a result, the discount on the donation to PFN recognised in the costs is PLN 280.8 thousand in 2019 and PLN 316.0 thousand in 2018

The accounting presentation follows from the fact that the management of the Group reviewed the treatment of donations paid to PFN in the Group's financial statements for 2016-2018 in the light of IAS 37 Provisions, Contingent Liabilities and Contingent Assets as at 30 September 2018. The analysis concluded that the payments to PFN are donations and that the liability of GPW to make all payments to PFN according to the founding deed of the Foundation arose when GPW joined the Foundation and signed its founding deed.



5.2.4. GAINS ON REVERSED IMPAIRMENT LOSSES ON RECEIVABLES / IMPAIRMENT LOSSES ON RECEIVABLES

As of 1 January 2018, following alignment with IFRS 9, the Group recognises a separate profit and loss account line: Gains on reversed impairment losses on receivables / Impairment losses on receivables, without adjusting comparative data (the GPW Group Management Board decided to use the exemption under IFRS 9 7.2.15). Impairment losses on receivables are measured on the basis of expected credit loss in the lifetime of debt. The expected credit loss charged to the Group's results was PLN 1.9 million in 2019, a decrease of 39.7% year on year (PLN 3.2 million in 2018).

5.2.5. FINANCIAL INCOME AND EXPENSES

Financial income of the Group amounted to PLN 8.9 million in 2019, representing an increase of PLN 0.4 million compared to PLN 8.5 million in 2018.

Financial income mainly includes interest on bank deposits and financial instruments, i.e., corporate bonds and certificate of deposits, as well as net positive FX differences.

Total interest income stood at PLN 8.8 million in 2019 vs. PLN 7.5 million in 2018. The Group's other financial income decreased by PLN 0.9 million year on year in 2019; it mainly included positive FX differences in 2018.

Financial expenses of the Group stood at PLN 25.5 million in 2019 vs. PLN 9.0 million in 2018, an increase of PLN 16.5 million.

The significant increase of financial expenses year on year in 2019 was mainly due to provisions set up against VAT payable for 2014 – 2019 in the subsidiary IRGiT. The provisions were set up in the amount of PLN 15.5 million as at 31 December 2019. The provisions were set up following a tax review and additional analyses concerning the recognition of the date of origination of VAT obligations in the case of deliveries of electricity and gas and the recognition of the date of origination of the right to input VAT deductions as well as the calculation of the potential impact of a change of IRGiT's current policy on IRGiT's tax payable. The details of the provisions for VAT corrections are presented in section 5.3 Atypical factors and events.

In addition, financial expenses include interest on tax liabilities in respect of CIT for previous years at PLN 1.0 million in TGE and interest on leases under IFRS 16 at PLN 0.7 million.

Interest on TGE's tax liabilities in respect of CIT for previous years results from a review of payments of corporate income tax ("CIT") for previous years carried out by an independent tax advisor. As a result of the review, TGE was issued a recommendation to correct CIT for 2012-2016. TGE submitted corrections of CIT receipts and paid the resulting amounts due to the tax office. Following the correction, TGE paid outstanding CIT at PLN 3.7 million plus interest at PLN 1.2 million to the tax office. The late payment interest at PLN 1.0 million was recognised in the GPW Group's financial expenses in 2019. PLN 0.2 million of interest was recognised in 2018 expenses. The CIT correction is presented in detail in Note 6.10 to the Consolidated Financial Statements for 2019.

The second biggest item of financial expenses in 2019 after VAT provisions in IRGiT is the interest cost of GPW's series C, D and E bonds (including the cost of the issue recognised over time), which stood at PLN 7.7 million in 2019 and was stable year on year.

The series C bonds bear interest at a fixed rate of 3.19% p.a. The series D and E bonds bear interest at a floating rate equal to WIBOR 6M plus a margin. The margin of series D and E bonds is 0.95%. The interest on the bonds is paid semi-annually. The series D and E bonds are due for redemption on 31 January 2022.

The interest rate on the series D and E bonds was 2.73% in H1 2019 and 2.74% in H2 2019.

5.2.6. GAINS ON INVESTMENT/(LOSSES) ON IMPAIRMENT OF INVESTMENT IN OTHER ENTITIES

In 2019, gains on investment/(losses) on impairment of investment in other entities were recognised in the profit and loss account. The losses stood at PLN 1.1 million as at 31 December in respect of the impairment of the investment in PAR.

On 24 July 2018, the European Securities and Markets Authority ("ESMA") refused to register PAR as an institution authorised to provide credit ratings, which in the opinion of the Exchange Management Board met the criteria of impairment of the investment in PAR. Another impairment loss on the investment in PAR was recognised at PLN 1,089 thousand as at 30 September 2019. Following the recognition of the PAR impairment allowance, the value of the investment was nil in the GPW Group's statement of financial position as at 31 December 2019.

Gains on investment/(losses) on impairment of investment in other entities stood at PLN 45.8 million in 2018, mainly driven by gains on the sale of interest in the associate Aquis at PLN 45.4 million.



5.2.7. SHARE OF PROFIT OF ENTITIES MEASURED BY EQUITY METHOD

The Group's share of profit of equities measured at equity method stood at PLN 11.3 million in 2019 vs. PLN 10.6 million in 2018. The increase was mainly driven by a higher profit of the KDPW Group.

The Group's share of the **KDPW Group** profit was PLN 11.4 million in 2019 vs. PLN 11.2 million in 2018.

The share in the net profit of Centrum Giełdowe was PLN 0.5 million in 2019 vs. PLN 0.4 million in 2018. Polska Agencja Ratingowa (formerly IAiR) was recognised in the profit of companies measured by equity method as at 31 December 2019 as it became a joint venture following a change of shareholders in Q4 2018. The share of loss of PAR was PLN 0.6 million as at 31 December 2019; that amount represents the share of profit of PAR until the investment was fully impaired in 2019.

The share of profit of entities measured by equity method in 2018 included the loss of Aquis. The interest in Aquis was sold in Q2 2018 and the gains on the sale were recognised in financial income of 2018.

Table 59 Profit/loss of entities measured by equity method

PLN'000	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Grupa KDPW S.A.	34,216	33,651	37,693	565	2%
Centrum Giełdowe S.A.	2,027	1,779	2,896	248	14%
Polska Agencja Ratingowa S.A.	(1,934)	(543)	-	(1,391)	256%
Aquis Exchange Limited *	-	-	(15,874)	-	-
Razem	34,309	34,887	24,714	(578)	-2%

* the data as at 31 March 2018, in Q2 2018 GPW sold shares in Aquis

Source: Consolidated Financial Statements, Company

Table 60 GPW's share of profit/loss of entities measured by equity method

PLN'000	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Grupa KDPW S.A.	11,405	11,217	12,565	188	1.7%
Centrum Giełdowe S.A.	502	441	718	61	13.9%
Polska Agencja Ratingowa S.A.	(645)	(181)	-	(464)	256.3%
Aquis Exchange Limited *	-	(924)	(3,224)	924	-100.0%
Razem	11,262	10,553	10,059	710	6.7%

* the data as at 31 March 2018, in Q2 2018 GPW sold shares in Aquis

Source: Consolidated Financial Statements, Company

5.2.8. INCOME TAX

Income tax of the Group was PLN 30.5 million in 2019 vs. PLN 42.3 million in 2018. The effective income tax rate was 18.5% in 2019 and 18.7% in 2018 vs. the standard Polish corporate income tax rate of 19%. The income tax paid by the Group was PLN 40.7 million in 2019 vs. PLN 41.7 million in 2018.

On 28 September 2016, the following companies: Giełda Papierów Wartościowych w Warszawie S.A., Towarowa Giełda Energii S.A., BondSpot S.A. and GPW Centrum Usług S.A., entered into a notarised agreement creating the GPW Tax Group ("GPW TG" or "TG") for a period of three years from 1 January 2017 to 31 December 2019.

On 7 November 2019, GPW and the aforementioned subsidiaries signed a new agreement extending the term of the GPW Tax Group for another tax year, from 1 January 2020 to 31 December 2020. In December 2019, GPW received the decision of the tax office which registered the agreement extending the term of the Tax Group.



The companies participating in TG are not treated individually but collectively as one corporate income taxpayer under the Corporate Income Tax Act. Such taxpayer's income is determined as the surplus of the sum of incomes of the companies participating in TG over the sum of their losses.

As the Company Representing the Tax Group, Giełda Papierów Wartościowych w Warszawie S.A. is responsible for the calculation and payment of quarterly corporate income tax advances of the Tax Group pursuant to the Corporate Income Tax Act.

While income taxes of the companies participating in TG are no longer paid individually, the companies are still required to individually pay other taxes including VAT and local taxes.

5.3. ATYPICAL FACTORS AND EVENTS

GPW Benchmark as the organiser of WIBID and WIBOR reference rate fixings

The GPW Group acting through its subsidiary GPW Benchmark took over the provision of WIBID and WIBOR reference rates from the previous fixing organiser, the Financial Markets Association ACI Polska as of 30 June 2017.

The alignment of WIBID and WIBOR with the new requirements started in February 2018 with the implementation of the new reference rate documentation. On 1 May 2018, GPW Benchmark S.A. introduced the Agreement for Use of WIBID and WIBOR Reference Rates. According to the Reference Rate Rules, the rates shall be used in financial instruments and contracts under the Regulation exclusively on the terms of the Agreement. The Agreement for Use the Reference Rates is signed by all entities which use the rates under BMR, including banks and investment funds.

The take-over of the responsibilities for WIBID and WIBOR takes place in phases including: starting the organisation of fixings, which took place on 30 June 2017; aligning the documentation concerning the obligation of contributors, completed with the implementation of the model agreement as of 1 May 2018; review of the reference rate calculation methodology, completed on the effective date of the adjusted documentation on 4 February 2020; and obtaining the authorisation to perform the functions of administrator, which GPW Benchmark requested on 6 December 2019.

Under Commission Delegated Regulation (EU) 2019/482 of 22 March 2019 published on 25 March 2019, the Warsaw Interbank Offered Rate (WIBOR) was recognised as a critical benchmark. The Commission decision, issued by application of the Polish Financial Supervision Authority (KNF) following a positive opinion of the European Securities and Markets Authority (ESMA), confirms the systemic role of WIBOR in the functioning of the financial market in Poland. GPW Benchmark is aligning with the BMR requirements in close collaboration with banks – fixing participants and with institutions responsible for financial market supervision and consumer protection.

In connection with the implementation of the strategy of development of an excellence centre for indices and benchmarks, GPW Benchmark took over as the administrator of GPW indices as of 1 December 2019, including the leading indices WIG20, mWIG40, sWIG80, NCIndex and TBSP.Index (which is currently owned by BondSpot), as well as WIG-ESG and CEEplus as of 1 January 2020. GPW Benchmark became their administrator following the alignment of all benchmarks prepared by the GPW Group with the BMR requirements, including optimisation of index provision and management processes ensuring their high quality, supervision of calculation methods, transparency and availability to investors.

Reduction of the GPW Group's costs of supervision over the capital market

The Act of 12 June 2015 amending the Capital Market Supervision Act and certain other Acts largely extended the list of entities required to finance supervision (by adding, among others, banks, insurers, investment funds, public companies, brokerage houses and foreign investment firms) and changed the amount of contributions of entities. A Regulation of the Minister of Finance which took effect on 1 January 2016 defines the methodology of calculation and the method and time limits for payment of fees by obligated entities. As a result, the cost of fees paid by the GPW Group was reduced significantly as of January 2016 (from PLN 22.0 million in 2015 to PLN 9.1 million in 2016 and PLN 5.6 million in 2017). However, the fee increased to PLN 12.5 million in 2018, the highest figure after the change. The fee for supervision dropped once again in 2019 and amounted to PLN 6.8 million at GPW Group level. The GPW Group does not control the amount of the fees and cannot reliably predict the final amount to be paid to PFSA in the given year; as a result, it cannot predict the impact of the fees on the Group's cash flows. An increase of the fees could have an adverse impact on the Group's business, financial position and results.



Start of work aiming to launch the Food Platform

On 29 January 2019, a consortium comprised of the Warsaw Stock Exchange, Towarowa Giełda Energii and Izba Rozliczeniowa Giełd Towarowych signed an agreement to implement the Food Platform project with Krajowy Ośrodek Wsparcia Rolnictwa (National Centre for Agricultural Support, KOWR). The Food Platform project is a part of the government's Strategy for Responsible Development and a key strategic initiative under #GPW2022. KOWR is the leader of a consortium comprised of Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej (Institute of Agricultural and Food Economics, IERiGŻ) and Instytut Biotechnologii Przemysłu Rolno-Spożywczego (Institute of Biotechnology of the Agricultural and Food Industry, IBPRS). The project is funded by Narodowe Centrum Badań i Rozwoju (National Centre for Research and Development, NCBR) under the GOSPOSTRATEG Programme. The objective of the project is to open an electronic trading platform for agricultural products. In the Food Platform project, GPW provided a feasibility study and drafted operational documents defining the structure of the agricultural market. In September 2019, the GPW Group consortium signed a memorandum of understanding with Elewarr to develop a system of warehouses authorised for the storage of grains traded on the Food Platform building on the grain silos owned by Elewarr and its subsidiaries. The Food Platform is scheduled to launch in 2020. The project pilot will offer trade in one agricultural product: consumption wheat. An underlying market with physical delivery will be established first while the launch of a forward market will be considered at a later stage.

Start of research and development work on the development of a proprietary Trading Platform with co-financing from NCBR grants

On 3 July 2019, the Exchange Management Board decided to launch a project aimed at research and development work on the development of a proprietary trading system with co-financing from grants of the National Centre for Research and Development (NCBR). At this stage, the total amount of expenditure connected with the implementation of the project is estimated at PLN 90 million. The Exchange Management Board decided to conclude an agreement with the National Centre for Research and Development concerning the co-financing of the project "Research and development work for the development and implementation of a state-of-the-art integrated Trading Platform of ground-breaking performance and capacity parameters and innovative communication protocols and trading algorithms" in the amount of PLN 30.3 million.

The Company has used the Universal Trading Platform (UTP) since 2013. The decision to initiate research and development work in order to develop a proprietary Trading Platform is significant to continued operation of the Exchange among others due to:

- the strategic impact of the decision which determines the competitive position of GPW;
- the amount of capital expenditures and operating expenses for the Trading Platform;
- impact on the market environment, in particular Exchange Members.

The development and implementation of a new trading system will diversify the revenue thanks to potential sale of the system to other exchanges, help to launch new products added to the offer of GPW, and make GPW more attractive to capital market participants. The development of the Trading Platform will boost the reputation of GPW, as well.

According to the project timeline, the Trading Platform will be implemented by the end of June 2023.

"GPW Data Platform" project

On 21 August 2019, the National Centre for Research and Development (NCBR) published a list of evaluated projects proposed in the Operational Programme Smart Development 2014-2020. The projects selected for co-financing include the project of the Warsaw Stock Exchange "GPW Data platform: an innovative Artificial Intelligence system supporting investment decisions on the capital market". The project cost is estimated at PLN 8.3 million, including NCBR co-financing at PLN 4.2 million. The GPW Data project is a part of GPW's strategic initiatives in the Exchange's information services business segment. The project is aligned with the Capital Market Development Strategy which provides among others for the introduction of electronic reporting standards in the Inline eXtensible Business Reporting Language (iXBRL). The GPW Data project is based on machine learning and artificial intelligence. It will enable capital market participants to make faster decisions when investing on the exchange. The GPW Data system will support fast access to, analysis and processing of market data, as well as the development of investors' proprietary trading algorithms based on AI. The project is scheduled to be rolled out in 2021.

TGE's opening of the cross-border intra-day energy market XBID

The Polish Power Exchange (TGE) joined the international intra-day energy market XBID (Cross-border Intra-day) on 19 November 2019. XBID connects the European intra-day markets as an addition to the day-ahead market. It supports continuous trade (24/7) and matches orders across zones.



TGE's renewed NEMO status

On 2 December 2019, Towarowa Giełda Energii S.A. was once again authorised by the energy Regulatory Office as a nominated energy market operator eligible to operate Polish day-ahead and intra-day markets within 4 years until 2 December 2023.

As a NEMO, TGE can operate on markets with no NEMO monopoly, opening an opportunity of TGE's expansion to foreign markets.

Discontinued trade in cogeneration certificates

The existing support scheme for producers of electricity in cogeneration was based on transferrable (yellow and red) certificates of origin, traded on TGE from 28 December 2007 to 30 June 2019. The new support scheme effective as of 1 January 2019 provides for no market trade and imposes an administrative system of auctions, guarantee premiums, and individual cogeneration premium rounds, currently supervised by the Energy Regulatory Office.

Launch of GPW Growth

GPW Growth is a #GPW2022 strategic initiative and a comprehensive programme supporting the growth of small and medium-sized companies based on their identified needs. As a part of the programme, the GPW Growth Academy opened in October 2019 and continues until June 2020.

IRGiT's co-operation with the Lithuanian gas exchange GET Baltic

On 16 September 2019 in Vilnius, an advisory services agreement was signed between GPW's subsidiary IRGiT and the Baltic-Finnish gas exchange GET Baltic. The scope of IRGiT's services includes the development of a risk management system, and a collateral and clearing model for the natural gas exchange operated by GET Baltic for Lithuania, Latvia, Estonia and from 1st January 2020 Finland. GET Baltic is creating a new collateral and clearing model which will provide more favourable conditions for Baltic and Finnish participants of the gas exchange to trade on both spot and forward markets, adding up to liquidity, competition and attractiveness of region. The integration of gas markets in the Baltic region is a process aimed at connecting gas markets into homogeneous balancing zones. It takes place at many levels – infrastructural, regulatory and business. Poland, with its central location will establish, in the near future, a physical connection to Denmark and Sweden via the Baltic Pipe, and to Lithuania, Latvia, Estonia and Finland via the GIPL. This will create new opportunities for the development of cross-border trade and the creation of a liquid regional gas market.

Provisions against VAT corrections in IRGiT

According to the tax risk management policy of the GPW Group, as of 2017, tax accounts of all Group members, including IRGiT, have been reviewed on an annual basis by an independent tax advisor. In addition, following one of such reviews, in order to verify the tax risk identified in the review, the IRGiT Management Board requested independent advisors to provide opinions concerning the recognition of the date of origination of a VAT tax payable in respect of deliveries of electricity and gas and the recognition of the date of origination of the right to an input VAT deduction and to calculate the potential impact of a potential change to IRGiT's current approach on IRGiT's tax payable.

On the basis of opinions presented by independent tax advisors, IRGiT's approach was found to be correct in the light of Union law but potentially controversial under national tax regulations. Based on the literal wording of national tax regulations, it could be found that IRGiT occasionally recognises the tax payable in respect of electricity and gas sale invoices too early and that in some financial periods it recognises the right to an input VAT deduction too early. The application of the literal wording of such regulations would result in a correction of VAT accounts since December 2014 (for all periods not subject to the statute of limitation), giving rise to a VAT payable and interest to be paid by IRGiT.

Furthermore, the opinions point out that the matter is not unequivocal and may give rise to different interpretations. According to the advisors, there are arguments to conclude among others that:

- according to the VAT Directive, the methodology of input VAT deductions currently applied by IRGiT is correct and all conditions of input VAT deductions are met;
- potential payable in respect of prior uncorrected periods, subject to the statute of limitation, could be considered to be in breach of the principle of value added tax neutrality.

In view of the uncertainty concerning the amount of the potential VAT payable, guided by the principle of prudence, in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets, the IRGiT Management Board decided to set up provisions of PLN 15.5 million as at 31 December 2019, including interest, as the best possible estimate of the IRGiT



Management Board concerning the potential payable as at 31 December 2019 due in the case of a potential change of the methodology of recognising the date of origination of tax payable. The provisions were charged to financial expenses.

There is a relatively low risk due to the expiration of the five-year statute of limitation. In the case of a potential correction of tax accounts for the period not subject to the statute of limitation (December 2014), IRGiT would be required to report once again the output VAT originally declared in the tax accounts submitted for November 2014 and paid when due, which is no longer subject to a correction due to the expiration of the statute of limitation. According to the tax opinion received by IRGiT, the risk that the competent authorities may decide that IRGiT should report and pay the output VAT twice when making such potential correction is relatively low because the interpretation of national law, not subject to harmonisation, would result in a breach of a higher-rank norm arising from Union law. Acting in the interest of GPW shareholders, pursuant to IAS 37.92, the Company is not disclosing the estimated amount of the potential payable as it is in the process of confirming the adequacy of its approach.

As at the date of these financial statements, IRGiT is awaiting the scheduling of a hearing before the Regional Administrative Court in the case of an appeal against an individual interpretation issued by tax authorities concerning the date of origination of the right to deduct VAT. IRGiT's VAT for the years 2014 – 2019 is presented in detail in Note 6.11 to the Consolidated Financial Statements of the GPW Group for the year ended 31 December 2019.

5.4. GROUP'S ASSETS AND LIABILITIES STRUCTURE

The total assets of the Group were PLN 1.3 billion as at 31 December 2019, an increase of 3.2% compared to PLN 1.2 billion as at 31 December 2018.

5.4.1. ASSETS

The Group's **non-current assets** stood at PLN 590.1 million representing 47% of total assets as at 31 December 2019 compared to PLN 580.5 million or 48% of total assets as at 31 December 2018.

In the implementation of IFRS 16 Leases, the Group recognised a right-to-use asset of PLN 22.7 million in non-current assets as at 31 December 2019 (including the right of perpetual usufruct of land at PLN 4.2 million, reclassified from prepayments). The Group recognised sublease receivables at PLN 0.5 million as at 31 December 2019.

As at 31 December 2019, the Group recognised investment in non-consolidated subsidiaries at PLN 4.0 million: the investment in GPW Ventures (PLN 3.0 million) and GPW TECH (PLN 1.0 million). The companies were established in 2019.

Financial assets measured at fair value through other comprehensive income include minority interest in Bucharest Stock Exchange (BVB, formerly SIBEX). The valuation of the interest was PLN 120 thousand as at 31 December 2019.

Prepayments mainly include IT hardware support. Other non-current assets are margins securing energy market transactions at InfoEngine.

The Group's **current assets** stood at PLN 666.7 million representing 53% of total assets as at 31 December 2019 vs. PLN 636.9 million or 52% of total assets as at 31 December 2018.

The increase of current assets by 4.7% year on year in 2019 was driven by an increase of the sum of cash and cash equivalents as well as financial assets measured at amortised cost, which jointly increased to PLN 610.3 million from PLN 566.2 million as at 31 December 2018. Looking at an increase or decrease of the Group's cash assets, those lines need to be considered in conjunction because they represent the total amount of cash held by the Group. At a given point in time, such funds may be invested in larger part in instruments with maturities over 3 months, and such larger part is then presented under assets measured at amortised cost; or they may be invested in larger part in instruments with maturities up to 3 months, and such larger part is then presented under cash and cash equivalents.

As at 31 December 2019, financial assets measured at amortised cost stood at PLN 329.0 million including corporate bonds at PLN 90.0 million and bank deposits at PLN 239.0 million.

The Group recognised current sublease receivables at PLN 0.2 million as at 31 December 2019. Other current assets included prepayments for intangible assets, including PLN 4.2 million prepayments for the acquisition of a new licence from the UTP vendor under the 2010 contract. For more information on the prepayment, see the Group's financial statements for 2019, Note 3.8.



Table 61 Consolidated statement of financial position of the GPW Group at the year's end in 2017 – 2019 (assets)

PLN'000	As at 31 December					
	2019	%	2018	%	2017	%
Non-current assets	590,114	47%	580,501	48%	596,787	52%
Property, plant and equipment	101,968	8%	108,158	9%	110,784	10%
Right-to-use assets	22,725	2%	-	0%	-	0%
Intangible assets	246,649	20%	254,564	21%	263,769	23%
Investment in entities measured by equity method	210,327	17%	207,267	17%	207,389	18%
Investment in non-consolidated subsidiaries	4,000	0%	-	0%	-	0%
Sublease receivables	523	0%	-	0%	-	0%
Deferred tax assets	464	0%	666	0%	4,236	0%
Available-for-sale financial assets	-	0%	-	0%	271	0%
Financial assets measured at fair value through other comprehensive income	120	0%	101	0%	-	0%
Prepayments	2,043	0%	5,523	0%	6,116	1%
Other non-current assets	1,295	0%	4,222	0%	4,222	0%
Current assets	666,680	53%	636,942	52%	550,418	48%
Inventory	47	0%	64	0%	56	0%
Corporate income tax receivable	4,132	0%	-	0%	0	0%
Trade receivables and other receivables	45,232	4%	69,437	6%	63,886	6%
Sublease receivables	190	0%	-	0%	-	0%
Contract assets	2,415	0%	1,215	0%	-	0%
Financial assets measured at amortised cost	328,998	26%	377,502	31%	-	0%
Other financial assets	4,382	0%	-	0%	250,590	22%
Cash and cash equivalents	281,284	22%	188,724	16%	235,886	21%
Total assets	1,256,794	100%	1,217,443	100%	1,147,205	100%

Source: Consolidated Financial Statements, Company

5.4.2. EQUITY AND LIABILITIES

The **equity** of the Group stood at PLN 873.5 million representing 71% of the Group's total equity and liabilities as at 31 December 2019 vs. PLN 887.8 million or 73% of total equity and liabilities as at 31 December 2018.

Non-controlling interests stood at PLN 0.6 million as at 31 December 2019 and as at 31 December 2018.

Non-current liabilities of the Group stood at PLN 283.5 million representing 23% of the Group's total equity and liabilities as at 31 December 2019 vs. PLN 269.0 million or 22% of total equity and liabilities as at 31 December 2018. The main item of the Group's non-current liabilities were GPW's liabilities under outstanding series C bonds due for redemption on 6 October 2022 and series D and E bonds due for redemption on 31 January 2022. The series D and E bonds were issued on 2 January 2017, which is when the company recognised the liability on the books.

Non-current deferred income included the grant received by TGE for assets in the PCR project at a carrying value of PLN 5.0 million as at 31 December 2019, including PLN 4.5 million presented as non-current and PLN 0.5 million presented as current. The carrying value of the grant was PLN 5.6 million as at 31 December 2018, including PLN 5.0 million presented as non-current and PLN 0.6 million presented as current. Deferred income as at 31 December 2019 also included grants received for the Agricultural Market project at PLN 0.8 million and for the New Trading Platform project at PLN 0.8 million.

The year-on-year increase in total non-current liabilities (by 5.4%) was due to the implementation of IFRS 16 in 2019. As a result, the Group recognised lease liabilities of PLN 21.4 million as at 31 December 2019, including PLN 16.2 million presented as non-current and PLN 5.2 million presented as current.

Other non-current liabilities include mainly the liability of the parent entity to the Polish National Foundation at PLN 8.4 million as at 31 December 2019 (PLN 8.3 million as at 31 December 2018).

Current liabilities of the Group stood at PLN 99.8 million representing 8% of the Group's total equity and liabilities as at 31 December 2019 vs. PLN 60.6 million or 5% of total equity and liabilities as at 31 December 2018.

The year-on-year increase in current liabilities as at 31 December 2019 was driven by an increase of:



- ✓ trade payables,
- ✓ employee benefits payable,
- ✓ the implementation of IFRS 16 Leases,
- ✓ provisions for other liabilities and charges,
- ✓ other liabilities.

The key item in provisions for other liabilities is a provision for VAT payable of IRGiT at PLN 15.5 million. Other current liabilities as at 31 December 2019 included mainly TGE's VAT payable of the current period at PLN 24.7 million, TGE's CIT payable in the Tax Group at PLN 2.1 million, IRGiT's energy purchase settlements at PLN 1.6 million, GPW's contracted investments at PLN 6.4 million (PLN 11.1 million at Group level), and current liabilities to PFN at PLN 1.3 million.

Table 62 Consolidated statement of financial position of the GPW Group at the year's end in 2017 - 2019 (equity and liabilities)

PLN'000	As at 31 December					
	2019	%	2018	%	2017	%
Equity	873,486	70%	887,800	73%	796,519	69%
Share capital	63,865	5%	63,865	5%	63,865	6%
Other reserves	1,089	0%	1,267	0%	1,347	0%
Retained earnings	807,927	64%	822,078	68%	730,734	64%
Non-controlling interests	605	0%	590	0%	573	0%
Non-current liabilities	283,502	23%	269,026	22%	270,781	24%
Liabilities under bond issue	244,350	19%	243,961	20%	243,573	21%
Employee benefits payable	960	0%	1,147	0%	1,454	0%
Lease liabilities	16,204	1%	-	0%	-	0%
Contract liabilities	572					
Accruals and deferred income	6,389	1%	5,033	0%	5,592	0%
Deferred income tax liability **	5,386	0%	7,050	1%	7,108	1%
Other liabilities	9,641	1%	11,835	1%	13,054	1%
Current liabilities	99,807	8%	60,617	5%	79,905	7%
Liabilities under bond issue	1,932	0%	1,938	0%	1,938	0%
Trade payables *	11,561	1%	8,575	1%	21,303	2%
Employee benefits payable	17,175	1%	14,278	1%	12,958	1%
Finance lease liabilities	-	0%	-	0%	31	0%
Lease liabilities	5,181	0%	-	0%	-	0%
CIT payable **	1,555	0%	6,329	1%	9,112	1%
Contract liabilities	4,364	0%	3,581	0%	-	0%
Accruals and deferred income *	767	0%	559	0%	7,386	1%
Provisions for other liabilities and charges	15,563	1%	68	0%	210	0%
Other current liabilities	41,709	3%	25,289	2%	26,967	2%
Total equity and liabilities	1,256,794	100%	1,217,443	100%	1,147,205	100%

* As of January 2018 deferred income is presented separately as contract liabilities

** items adjusted by CIT tax liabilities for previous years at TGE in the presented periods of 2018

Source: Consolidated Financial Statements, Company



5.5. 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. Details of how financial risks are identified and managed have been described in the Consolidated Financial Statements.

In 2019, 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 existing liabilities. The current liquidity ratio amounted to 7.9 as at 31 December 2019 vs. 10.5 as at 31 December 2018 (ratio after adjustment of data as at 31 December 2018 for the correction of TGE's CIT payable for previous years).

GPW and its subsidiaries manage financial liquidity in accordance with the "Current Assets Allocation Procedure" adopted by the Management Board. Pursuant to this document, 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 current assets in bank deposits, GPW invests in certificates of deposit and corporate bonds, and the average duration of a financial asset portfolio in GPW was approximately 117 days in 2019 vs. approximately 106 days in 2018.

In the opinion of the Management Board of the parent entity, GPW's financial assets and financial risk management process is effective and ensures timely meeting of payment obligations.

No threats have been identified to GPW's liquidity. In connection with the outbreak of the SARS-CoV-2 pandemic, liquidity risk is considered to be low in the short term and the mid term. The impact of the coronavirus on the financial standing of the Group has been assessed, as presented in Note 2.6 to the Consolidated Financial Statements of the GPW Group for the year ended 31 December 2019.

The risks inherent in financial instruments held are described in Note 2 to the Consolidated Financial Statements of the Giełda Papierów Wartościowych w Warszawie S.A. Group for the year ended 31 December 2019.

5.6. CASH FLOWS

The Group generated positive cash flows from **operating activities** at PLN 191.1 million in 2019 vs. positive cash flows of PLN 136.5 million in 2018.

The cash flows from **investing activities** were positive at PLN 44.4 million in 2019 vs. negative cash flows of PLN 84.2 million in 2018. The positive cash flows from investing activities were mainly driven by a surplus of expired investments in bank deposits, bonds and certificates exceeding new investments in such instruments.

The cash flows from **financing activities** were negative at PLN 142.7 million in 2019, mainly due to the dividend paid by GPW at PLN 133.4 million (PLN 92.3 million in 2018) and interest paid on bonds issued by GPW at PLN 7.3 million, similar to 2018.

Table 63 Consolidated cash flows of the GPW Group

PLN'000	Cash flows for the 12-month period ended		
	2019	2018	2017
Cash flows from operating activities	191,087	136,482	159,264
Cash flows from investing activities	44,448	(84,170)	(186,629)
Cash flows from financing activities	(142,675)	(99,669)	(99,784)
Net increase / (decrease) in cash	92,860	(47,357)	(127,022)
<i>Impact of change of fx rates on cash balances in foreign currencies</i>	<i>(300)</i>	<i>195</i>	<i>241</i>
Cash and cash equivalents - opening balance	188,724	235,886	362,667
Cash and cash equivalents - closing balance	281,284	188,724	235,886

Source: Consolidated Financial Statements, Company



5.7. CAPITAL EXPENDITURE

The Group's total capital expenditure amounted to PLN 16.7 million in 2019, including expenditure for property, plant and equipment at PLN 9.2 million and expenditure for intangible assets at PLN 7.5 million. The Group's total capital expenditure amounted to PLN 21.2 million in 2018, including expenditure for property, plant and equipment at PLN 13.0 million and expenditure for intangible assets at PLN 8.3 million.

The Group's capital expenditure in 2019 included mainly GPW's acquisition of network devices (hardware and cables), expenditures of the GPW Tech project, and a new central integration bus. Capital expenditure for intangible assets included GPW's investments in a new index calculator, the GRC system, the new Trading System and GPW Data, as well as TGE's expenditures in the Food Platform project and TGE's accession to the European cross-border intraday market XBiD as well as the Data Commercialisation project.

Contracted investments in plant, property and equipment were PLN 115 thousand as at 31 December 2019 including mainly the acquisition of IT hardware for the new Trading Platform. Contracted investments in intangible assets were PLN 1.3 million, including mainly the GRC system, server time synchronisation software, the new Indexator in GPW, as well as TGE's EPIA, XBID and Food Platform.

Contracted investments in plant, property and equipment were PLN 253 thousand as at 31 December 2018 including mainly the acquisition of IT hardware and software. Contracted investments in intangible assets were PLN 1,100 thousand as at 31 December 2018 including mainly the trade surveillance system in GPW and the acquisition of the 2PI application in TGE.

5.8. RATIO ANALYSIS

5.8.1. DEBT AND FINANCING RATIOS

In the period under review, the debt of the Group posed no threat to its going concern and capacity to meet liabilities on time. The ratio of net debt to EBITDA remained negative, the same as in 2018, due to negative net debt (cash exceeds interest-bearing liabilities).

The debt to equity ratio increased year on year in 2019 mainly due to an increase of debt including lease liabilities.

5.8.2. LIQUIDITY RATIOS

The current liquidity ratio was 6.7 as at 31 December 2019 compared to 10.5* as at 31 December 2018. The decrease of the ratio was due to an increase in current liabilities which grew faster than current assets as at 31 December 2019. The current liquidity ratio remained safe as the Group's current assets are several times higher than its current liabilities.

The coverage ratio of interest costs under the bond issue decreased in 2019 year on year mainly due to the Group's lower EBITDA. However, it is safe as the Group generated cash flows from operating activities which were several times higher than necessary to cover current liabilities under the bond issue.

* ratio after adjustment of data for 2018 for the correction of TGE's CIT payable

5.8.3. PROFITABILITY RATIOS

The operating profit ratio and the net profit ratio decreased year on year in 2019 due to a lower operating profit and net profit.



Table 64 Key financial indicators of the GPW Group

		As at / For the 12-month period ended 31 December		
		2019	2018	2017
Debt and financing ratios				
Net debt / EBITDA (for a period of 12 months)	1), 2)	(1.3)	(1.2)	(0.9)
Debt to equity	3)	30.6%	27.7%	28.9%
Liquidity ratios				
Current liquidity	4)	6.7	10.5	8.3
Coverage of interest on bonds	5)	26.6	27.7	27.3
Return ratios				
EBITDA margin	6)	57.5%	59.6%	57.8%
Operating profit margin	7)	46.5%	50.6%	48.5%
Net profit margin	8)	35.5%	42.0%	56.7%
Cost / income	9)	53.9%	48.0%	50.9%
ROE	10)	13.6%	21.8%	23.1%
ROA	11)	9.6%	15.5%	16.1%

1) Net debt = interest-bearing liabilities less liquid assets of GPW Group (as at balance-sheet date)

2) EBITDA = GPW Group operating profit + depreciation and amortisation (for a period of 12 months; net of the share of profit of associates)

3) Debt to equity = interest-bearing liabilities / equity (as at balance-sheet date)

4) Current liquidity = current assets / current liabilities (as at balance-sheet date)

5) Coverage of interest on bonds = EBITDA / interest on bonds (interest paid and accrued for a period of 12 months)

6) EBITDA margin = EBITDA / GPW Group revenue (for a period of 12 months)

7) Operating profit margin = GPW Group operating profit / GPW Group revenue (for a period of 12 months)

8) Net profit margin = GPW Group net profit / GPW Group revenue (for a period of 12 months)

9) Cost / income = GPW Group operating expenses / GPW Group revenue (for a period of 12 months)

10) ROE = GPW Group net profit (for a period of 12 months) / Average equity at the beginning and at the end of the last 12 month period

11) ROA = GPW Group net profit (for a period of 12 months) / Average total assets at the beginning and at the end of the last 12 month period

Source: Company

5.9. OTHER INFORMATION

5.9.1. CURRENT AND EXPECTED FINANCIAL POSITION

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 2019. Consequently, no explanations are provided for the differences between the financial results disclosed in the Annual Report and any previously published forecasts.



5.9.2. INVESTMENTS AND LINKS TO OTHER ENTITIES

GPW has organisational and equity links to the Group subsidiaries and associates. The description of the Group and associates is to be found in section 1 of this Report.

Equity links of GPW to the companies from outside the Group as at 31 December 2019 included interest in foreign companies: the Bucharest Stock Exchange (BVB) – 0.06% replacing the investment in S.C. Sibex - Sibiu Stock Exchange S.A. as well as INNEX PJSC – 10%. The valuation of GPW' interest in the Bucharest Stock Exchange stood at PLN 120 thousand as at 31 December 2019 and PLN 101 thousand as at 31 December 2018.

The company InfoStrefa was liquidated in 2019. The carrying amount of the investment was nil as at 31 December 2018. The Exchange held 19.98% of InfoStrefa as at 31 December 2018.

In addition to the stake in the above-mentioned companies, as well as in the Group members, associates and joint venture, GPW's major domestic investments as at 31 December 2019 include bank deposits and corporate bonds.

Details of the parent entity's investments were disclosed in Notes 3.3 and 3.4 to the Separate Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the year ended 31 December 2019.

Transactions of the Group with related parties are described in Note 6.4 to the Consolidated Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the year ended 31 December 2019 and in Note 6.4 to the Separate Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the year ended 31 December 2019.

5.9.3. CREDIT AND LOAN AGREEMENTS SIGNED AND TERMINATED DURING THE FINANCIAL YEAR

The Group signed and terminated no credit and loan agreements.

5.9.4. LOANS GRANTED IN THE FINANCIAL YEAR

Details of loans granted are presented above.

The Group granted no other loans in 2019.

5.9.5. GUARANTEES AND SURETIES GRANTED AND ACCEPTED DURING THE FINANCIAL YEAR

In June 2019, a new agreement was signed, granting TGE a bank guarantee in favour of NordPool at PLN 5.4 million valid from 1 July 2019 to 30 June 2020 and another guarantee at EUR 3.6 million valid from 1 December 2019 to 30 April 2020. In July 2019, the principal amount of the former guarantee was raised from EUR 5.4 million to PLN 6.3 million valid from 12 July 2019 to 30 June 2020 and the principal amount of the latter guarantee was reduced to EUR 2.7 million. The guarantee amounts were changed due to changes of risk factors published by Nord Pool. On 22 November 2019, TGE signed additional agreements concerning bank guarantees in favour of Nord Pool at EUR 1.7 million valid from 1 December 2019 to 30 April 2020 and EUR 300 thousand valid from 27 November 2019 to 30 June 2020. In addition, TGE signed a EUR 2.1 million guarantee agreement valid from 17 December 2019 to 2 January 2020. The additional guarantees signed in Q4 2019 related to TGE's start of operations on the international intra-day energy market XBiD. TGE started operations on XBiD on 19 November 2019. The amount of the required guarantees is subject to change depending on volumes of trade on the cross-border electricity market XBiD and the resulting risk factors.

On 5 July 2017, TGE granted a surety of PLN 1.0 million for its subsidiary InfoEngine S.A. in favour of Polskie Sieci Energetyczne S.A. against the clearing of transactions on the balancing energy market. On 25 January 2019, the surety issued by TGE to PSE for InfoEngine was annexed in order to extend it and raise the surety amount from PLN 1 million to PLN 2 million.

The Group granted and accepted no other guarantees and sureties in 2019.

5.9.6. MATERIAL TRANSACTIONS OF THE ISSUER AND SUBSIDIARIES WITH RELATED PARTIES ON TERMS OTHER THAN AT ARM'S LENGTH IN THE FINANCIAL YEAR

In 2019, 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 detail in Note 6.4 to the Consolidated Financial Statements for the year ended 31 December 2019.

5.9.7. CONTINGENT LIABILITIES AND ASSETS

The Group had no contingent liabilities or contingent assets as at 31 December 2019 other than described below.



Contingent assets

“State-of-the-art Trading Platform” project

On 15 July 2019, GPW presented an own blank bill of exchange to NCBR securing obligations under the Agreement concerning the co-financing of a project financed under the Operational Programme Smart Development Sub-measure 1.1.1 Industrial research and development work implemented by enterprises. The project co-financed in the amount of PLN 30.3 million is “Research and development work for the development and implementation of a state-of-the-art integrated Trading Platform of ground-breaking performance and capacity parameters and innovative communication protocols and trading algorithms”.

According to the agreement and the bill-of-exchange declaration, NCBR may complete the bill of exchange with the amount of provided co-financing which may be subject to refunding, together with interest accrued at the statutory rate of overdue taxes from the date of transfer of the amount to GPW’s account to the day of repayment. NCBR may also complete the bill of exchange with the payment date and insert a “no protest” clause. The bill of exchange may be completed upon the fulfilment of conditions laid down in the Agreement of 3 July 2019 between GPW and NCBR. The bill of exchange shall be returned to GPW or destroyed at the written request of GPW after the project sustainability period defined in the project co-financing agreement.

“GPW Data platform” project

On 14 October 2019, GPW presented an own blank bill of exchange to NCBR securing obligations under the Agreement of 30 September 2019 concerning the co-financing of the project “GPW Data platform: an innovative Artificial Intelligence system supporting investment decisions on the capital market” financed under the Operational Programme Smart Development Sub-measure 1.1.1 Industrial research and development work implemented by enterprises. According to the agreement and the bill-of-exchange declaration, NCBR may complete the bill of exchange with the amount of provided co-financing which may be subject to refunding, together with interest accrued at the statutory rate of overdue taxes from the date of transfer of the amount to GPW’s account to the day of repayment. NCBR may also complete the bill of exchange with the payment date and insert a “no protest” clause. The bill of exchange may be completed upon the fulfilment of conditions laid down in the Agreement of 30 September 2019 between GPW and NCBR. The bill of exchange shall be returned to GPW or destroyed at the written request of GPW after the project sustainability period defined in the project co-financing agreement.

VAT correction in IRGiT

There is a relatively low risk due to the expiration of the five-year statute of limitation. In the case of a potential correction of tax accounts for the period not subject to the statute of limitation (December 2014), IRGiT would be required to report once again the output VAT originally declared in the tax accounts submitted for November 2014 and paid when due, which is no longer subject to a correction due to the expiration of the statute of limitation. According to the tax opinion received by IRGiT, the risk that the competent authorities may decide that IRGiT should report and pay the output VAT twice when making such potential correction is relatively low because the interpretation of national law, not subject to harmonisation, would result in a breach of a higher-rank norm arising from Union law. Acting in the interest of GPW shareholders, pursuant to IAS 37.92, the Company is not disclosing the estimated amount of the potential payable as it is in the process of confirming the adequacy of its approach.

Contingent assets

TGE’s CIT payable

In September 2019, TGE submitted a correction of CIT receipts for 2012-2016 and paid the resulting amounts due to the tax office and interest. The correction concerned among others a conversion of IRGiT’s debt to TGE into shares of IRGiT at PLN 10 million in 2013. In view of inconsistent interpretations of the tax authorities regarding the tax treatment of the transaction, TGE took steps to recover the paid amount of tax at PLN 1.9 million.

Due to uncertainty of the recovery, the Group recognised a contingent asset of PLN 1.9 million as at 31 December 2019.

5.9.8. EVENTS AFTER THE BALANCE-SHEET DATE WHICH COULD SIGNIFICANTLY IMPACT THE FUTURE FINANCIAL RESULTS OF THE ISSUER

PSE’s surety for InfoEngine

On 21 February 2020, the surety issued by TGE for InfoEngine in favour of PSE was annexed to extend its term until 28 February 2022.



PAR loan agreement

On 28 February 2020, the Warsaw Stock Exchange, Polski Fundusz Rozwoju S.A. and Polska Agencja Ratingowa S.A. signed an agreement concerning a short-term loan of PLN 200 thousand each from GPW and PFR to Polska Agencja Ratingowa until 31 March 2020 to pay its outstanding debt. The loan bears interest at 3.4% p.a.

Launch of the Food Platform in March 2020

In the first half of March 2020, the GPW Group launched the Food Platform (Agricultural Market) which will offer trade in agricultural commodities. The Agricultural Market will be operated by TGE. In the first three months, the market will operate as a pilot: no fees will be charged and the operation will fine-tune the platform's procedures. The first product to be traded on the exchange is wheat. Other agricultural products will be introduced in future, including maize, rape, concentrated apple juice, sugar, milk powder. The Food Product project is co-ordinated by Krajowy Ośrodek Wsparcia Rolnictwa (KOWR) and financed by the National Centre for Research and Development (NCBR).

Special donation in connection with the SARS-CoV-2 pandemic

In March 2020, the Exchange Management Board decided to make a special donation of PLN 1 million for the acquisition of SARS-CoV-2 test equipment by the District Sanitary Stations in Siedlce and Radom.

Changes on the GPW Management Board

On 2 March 2020, Mr Jacek Fotek, Vice-President of the Exchange Management Board, resigned from the Exchange Management Board effective on 30 April 2020.

TGE guarantee agreement

In March 2020, TGE signed an agreement concerning a bank guarantee in favour of Nord Pool at EUR 800 thousand valid from 1 April 2020 to 30 April 2020 securing transactions in the cross-border electricity market.

There were no other events after the balance-sheet date which could significantly impact the future financial results of the issuer.

6. FINANCIAL POSITION AND ASSETS OF GPW

6.1. SUMMARY OF RESULTS

GPW generated revenues of PLN 183.6 million in 2019, a decrease of 3.8% or PLN 7.3 million compared to 2018. Operating expenses stood at PLN 119.3 million in 2019, representing an increase of 5.6% or PLN 6.3 million compared to 2018.

GPW's EBITDA¹⁷ was PLN 84.9 million in 2019, a decrease of 10.9% or PLN 10.4 million compared to PLN 95.3 million in 2018. The Company generated a separate operating profit of PLN 61.5 million in 2019 compared to PLN 75.1 million in 2018, a decrease of 18.1% or PLN 13.6 million year on year.

¹⁷ GPW S.A.'s operating profit before depreciation and amortisation



The decrease of the operating profit year on year in 2019 was mainly a result of lower sales revenue (down by PLN 7.3 million) combined with higher operating expenses (up by PLN 6.3 million). The Company's sales revenue decreased mainly due to lower revenue from trading in equities and equity-related instruments (down by PLN 6.6 million). Operating expenses increased mainly due to higher salaries and other employee costs (up by PLN 6.1 million) and higher external service charges (up by PLN 4.1 million) combined with a decrease of fees and charges (down by PLN 2.7 million) including lower fees paid to PFSA for supervision.

GPW's net profit was PLN 115.1 million in 2019 compared to PLN 151.9 million in 2018, a decrease of 24.2% or PLN 36.8 million. The decrease of GPW's net profit was due to a lower operating profit (down by PLN 13.6 million) in the absence of gains on investments in other entities, which had been earned in 2018. In 2018, the Company reported gains on the sale of investment in the associate Aquis at PLN 32.2 million, which was a key contribution to the 2018 net profit.

Detailed information on changes in revenues and expenses is presented in the sections below.

Table 65 Separate profit and loss account of GPW by quarter in 2018 and 2019 and by year in 2017 – 2019

PLN'000	2019				2018				2019	2018	2017
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1			
Sales revenue	44,839	46,244	44,345	48,171	47,915	47,519	46,570	48,876	183,599	190,880	203,443
Financial market	40,089	43,308	42,510	46,441	45,234	44,725	44,537	46,654	172,348	181,150	196,229
Trading	24,566	27,557	26,162	29,552	27,859	28,359	27,806	30,253	107,837	114,277	129,749
Listing	4,027	4,789	4,865	5,103	5,496	5,212	5,632	5,660	18,784	22,000	24,027
Information services	11,496	10,962	11,483	11,786	11,879	11,154	11,099	10,741	45,727	44,873	42,453
Commodity market	173	172	171	169	115	103	105	100	685	423	348
Information services	173	172	171	169	115	103	105	100	685	423	348
Other revenue	4,577	2,764	1,664	1,561	2,566	2,691	1,928	2,122	10,566	9,307	6,866
Operating expenses	32,367	26,172	27,590	33,188	28,126	28,479	26,454	29,948	119,317	113,007	109,916
Depreciation and amortisation	7,026	5,431	5,568	5,423	5,067	5,027	5,165	4,998	23,448	20,257	19,472
Salaries	9,358	9,583	8,808	8,900	8,702	7,571	7,721	8,038	36,649	32,032	29,391
Other employee costs	2,694	2,632	2,691	2,787	2,240	2,275	2,273	2,514	10,804	9,302	7,968
Rent and maintenance fees	746	1,076	1,068	1,015	2,292	2,240	1,938	1,829	3,905	8,299	7,472
Fees and charges	299	(2,935)	290	7,146	30	2,289	181	4,987	4,800	7,487	3,865
incl. : PFSA fees	-	(3,264)	-	6,842	1	2,056	1	4,805	3,578	6,863	3,099
External service charges	10,920	9,485	7,990	6,881	8,543	8,056	8,088	6,470	35,276	31,157	37,783
Other operating expenses	1,323	900	1,173	1,038	1,252	1,021	1,088	1,112	4,434	4,473	3,965
Other income	95	10	168	1,004	284	128	94	609	1,277	1,115	940
Gains on reversed impairment/(losses) on impairment of receivables	(792)	(337)	1,264	(891)	(1,160)	292	(391)	(1,036)	(756)	(2,295)	(497)
Other expenses	826	911	932	646	790	362	90	390	3,315	1,633	1,686
Operating profit	10,949	18,834	17,255	14,450	18,123	19,098	19,729	18,111	61,488	75,060	92,284
Financial income *	773	1,685	72,423	1,325	1,342	1,074	71,523	1,136	76,206	75,075	5,042
Financial expenses	2,468	2,002	2,215	2,057	2,218	1,942	1,916	1,967	8,742	8,043	8,871
Gains on investment/(losses) on impairment of investment in other entities *	-	(2,173)	-	-	(75)	-	30,321	(76)	(2,173)	30,170	-
Profit before tax	9,254	16,344	87,463	13,718	17,172	18,230	119,657	17,204	126,779	172,262	88,455
Income tax	2,368	3,167	3,241	2,880	3,453	3,581	9,940	3,359	11,656	20,333	16,776
Profit for the period	6,886	13,177	84,222	10,838	13,719	14,649	109,717	13,845	115,123	151,929	71,679

* presentation change regarding the recognition of profit realized on the sale of shares in Aquis in 2018, as well as losses due to impairment of investments in other entities

Source: Separate Financial Statements, Company



Table 66 Separate statement of financial position of GPW by quarter in 2017 – 2019

PLN '000	2019				2018				2017
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Non-current assets	435,342	432,198	439,070	442,721	426,635	426,560	429,365	432,853	462,760
Property, plant and equipment	95,416	91,425	93,671	94,120	96,362	94,868	95,510	94,359	96,269
Right-to-use assets	14,329	9,016	9,013	9,670	-	-	-	-	-
Intangible assets	49,829	50,764	52,756	54,413	56,439	57,474	59,795	62,271	64,741
Investment in associates and joint ventures	11,652	11,652	13,825	13,825	13,825	11,652	11,652	11,652	36,959
Investment in subsidiaries	255,885	251,885	250,885	250,885	250,885	253,058	253,058	254,985	254,985
Financial assets measured at fair value through other comprehensive income	6,363	11,406	12,601	13,221	-	-	-	-	-
Available-for-sale financial assets	-	-	-	-	-	-	-	-	271
Financial assets measured at fair value through other comprehensive income	120	130	105	103	101	200	204	197	-
Prepayments	1,748	1,698	1,992	2,262	4,801	5,086	4,924	5,167	5,313
Other non-current assets	-	4,222	4,222	4,222	4,222	4,222	4,222	4,222	4,222
Current assets	357,422	353,027	482,170	407,449	358,619	348,867	443,934	332,097	275,535
Inventories	47	47	48	51	64	64	60	54	56
Corporate income tax receivable	4,132	114	-	-	-	-	-	-	-
Trade receivables and other receivables	30,128	32,415	104,289	39,872	25,483	28,585	99,723	39,223	26,272
Sublease receivables	2,302	3,563	4,114	4,096	-	-	-	-	-
Contract assets	940	1,665	1,720	1,858	1,015	1,946	1,818	-	-
Financial assets held for sale	-	-	-	-	-	-	-	25,307	-
Financial assets measured at amortised cost	267,687	277,545	178,519	306,026	310,090	296,530	303,331	149,731	-
Other financial assets	4,222	-	-	-	-	-	-	-	196,461
Cash and cash equivalents	47,964	37,678	193,480	55,546	21,967	21,742	39,002	117,782	52,746
Total assets	792,764	785,225	921,240	850,170	785,254	775,427	873,299	764,950	738,295
Equity	479,843	473,026	459,828	509,074	498,237	484,535	469,887	452,508	438,873
Share capital	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865
Other reserves	(187)	(119)	(140)	(141)	(142)	(125)	(125)	(125)	(125)
Retained earnings	416,165	409,280	396,103	445,350	434,514	420,795	406,147	388,768	375,133
Non-current liabilities	275,299	276,219	275,269	274,988	263,237	262,430	260,006	258,842	264,574
Liabilities on bonds issue	244,350	244,253	244,156	244,059	243,961	243,864	243,767	243,670	243,573
Employee benefits payable	682	595	595	595	595	560	669	884	883
Lease liabilities	15,826	16,808	18,011	19,159	-	-	-	-	-
Contract liabilities	572	-	-	-	-	-	-	-	-
Accruals and deferred income	809	70	-	-	-	-	-	-	-
Deferred tax liability	4,705	3,975	2,049	777	6,846	6,241	3,875	2,662	7,064
Other liabilities	8,355	10,518	10,458	10,398	11,835	11,765	11,695	11,626	13,054
Current liabilities	37,622	35,980	186,143	66,108	23,780	28,462	143,406	53,600	34,848
Liabilities on bonds issue	1,932	2,097	1,893	2,067	1,938	2,099	1,899	2,070	1,938
Trade payables	7,970	7,034	11,348	13,980	4,498	4,689	9,766	11,137	11,954
Employee benefits payable	10,579	9,711	7,758	6,684	9,095	6,934	6,722	5,281	8,481
Lease liabilities	5,024	4,873	4,835	5,241	-	-	-	-	-
CIT payable	-	-	3,339	5,755	1,373	422	7,779	1,047	5,685
Contract liabilities	1,390	8,863	17,484	26,100	11	8,650	17,209	25,771	-
Accruals and deferred income *	231	-	-	-	-	-	-	-	21
Provisions for other liabilities and charges	95	95	95	47	68	68	68	68	211
Other liabilities	10,401	3,307	139,391	6,234	6,797	5,600	99,963	8,226	6,558
Total equity and liabilities	792,764	785,225	921,240	850,170	785,254	775,427	873,299	764,950	738,295

* As of 2018, deferred income is presented under contract liabilities

Source: Separate Financial Statements, Company



6.2. PRESENTATION OF THE FINANCIALS

6.2.1. REVENUE

The Company has the following revenue-generating segments:

- ◆ financial market,
- ◆ commodity market including only information services on the commodity market,
- ◆ other revenues.

Revenues from the financial market include revenues from:

- ◆ trading;
- ◆ listing;
- ◆ information services and calculation of reference rates.

Trading revenue includes fees paid by market participants in respect of:

- ◆ transactions on markets of equities and equity-related instruments;
- ◆ transactions in derivative financial instruments;
- ◆ transactions in debt instruments;
- ◆ transactions in other cash market instruments;
- ◆ other fees paid by market participants.

Revenues from transactions in equities and equity-related securities are the Company's main source of trading revenues and its main source of sales revenues in general.

Revenues from transactions in derivative financial instruments are the second biggest source of trading revenues on the financial market. Transactions in WIG20 index futures account for the majority of revenues from transactions in derivatives.

Revenues from other fees paid by market participants include mainly fees for services providing access to and use of the trading system.

Revenues from transactions in debt instruments are generated by the Catalyst market.

Revenues from transactions in other cash market instruments include fees for trading in structured products, investment certificates, warrants, and ETF (Exchange Traded Fund) units.

Listing revenues include two elements:

- ◆ one-off fees paid for introduction of shares and other instruments to trading on the exchange;
- ◆ periodic listing fees.

Revenues from information services mainly include fees paid by data vendors for real-time market data on the financial market and the commodity market as well as historical and statistical data on the financial market. Real-time data fees include fixed annual fees and monthly fees based on the data vendor's number of subscribers and the scope of data feeds used by a subscriber. Revenues from information services include revenue from WIBOR and WIBID reference rates.

The Company's other revenues include revenues from space lease and sponsorship, as well as services provided to GPW Group companies.

The Company's sales revenues amounted to PLN 183.6 million in 2019, a decrease of 3.8% (PLN 7.3 million) year on year. 94% of the revenue was generated by the financial market (95% in 2018), a small fraction by information services on the commodity market, and close to 6% by other revenue (5% in 2018).

The increase of other sales revenue was mainly driven by services provided to subsidiaries, which expand year after year in order to optimise the use of the Group's resources.



Table 67 Separate revenues of GPW and revenue structure in 2017 – 2019

PLN'000	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Financial market	172,348	94%	181,150	95%	196,229	96%	(8,802)	-5%
Trading	107,837	59%	114,277	60%	129,749	64%	(6,440)	-6%
Equities and equity-related instruments	87,449	48%	94,082	49%	109,564	54%	(6,633)	-7%
Derivative instruments	10,611	6%	12,068	6%	11,888	6%	(1,457)	-12%
Other fees paid by market participants	8,834	5%	7,398	4%	7,498	4%	1,436	19%
Debt instruments	443	0%	349	0%	371	0%	94	27%
Other cash instruments	500	0%	380	0%	428	0%	120	32%
Listing	18,784	10%	22,000	12%	24,027	12%	(3,216)	-15%
Listing fees	17,049	9%	19,305	10%	19,570	10%	(2,256)	-12%
Introduction fees, other fees	1,735	1%	2,695	1%	4,457	2%	(960)	-36%
Information service	45,727	25%	44,873	24%	42,453	21%	854	2%
Real-time information	41,852	23%	41,224	22%	39,412	19%	628	2%
Historical and statistical information and indices	3,875	2%	3,649	2%	3,041	1%	226	6%
Commodity market	685	0%	423	0%	348	0%	262	62%
Information services	685	0%	423	0%	348	0%	262	62%
Other revenue	10,566	6%	9,307	5%	6,866	3%	1,259	14%
Total	183,599	100%	190,880	100%	203,443	100%	(7,281)	-4%

Source: Separate Financial Statements, Company

The Company earns revenue both from domestic and foreign clients. The table below presents revenue by geographic segment.

Table 68 Separate revenues of GPW by geographical segment in 2017 – 2019

PLN'000	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Revenue from foreign customers	90,688	49%	84,816	44%	75,610	37%	5,872	6.9%
Revenue from local customers	92,911	51%	106,064	56%	127,833	63%	(13,153)	-12.4%
Total	183,599	100%	190,880	100%	203,443	100%	(7,281)	-3.8%

Source: Separate Financial Statements, Company

The average EUR/PLN exchange rate was 4.30 EUR/PLN in 2019, 4.26 EUR/PLN in 2018, and 4.26 EUR/PLN in 2017. The Company is not dependent on any single client as no client has a share exceeding 10% of the total sales revenue.



FINANCIAL MARKET

TRADING

The revenues of the Company from trading on the financial market stood at PLN 107.8 million in the year ended 31 December 2019 compared to PLN 114.3 million in 2018, a decrease of 5.6% or PLN 6.4 million.

The share of trading revenue in the total revenue on the financial market was 59% in 2019 compared to 60% in 2018. The biggest share in trading revenue (90.5%) is that of the revenue on the Main Market, which stood at PLN 97.6 million in 2019. The remaining share in revenue is that of NewConnect and Catalyst.

Revenue from:

- ◆ trading in equities and equity-related instruments,
- ◆ trading in derivatives,
- ◆ other fees paid by market participants,

is presented in section 5.2.1.

Debt instruments

Revenues of the Company from transactions in **debt instruments** stood at PLN 0.44 million in 2019, an increase of 26.9% year on year (PLN 0.35 million in 2018).

The revenue of the Company from transactions in debt instruments is generated by the Catalyst market.

Table 69 Data for the debt instruments market

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Financial market, trading revenue: debt instruments (PLN million)	0.44	0.35	0.37	0.09	26.9%
Catalyst:					
Value of trading (PLN billion)	2.87	2.25	2.33	0.62	27.6%
incl.: Value of trading in non-Treasury instruments (PLN billion)	1.82	1.67	1.45	0.16	9.3%

Source: Company

Other cash market instruments

Revenue from trading in other cash market instruments is presented in section 5.2.1.

LISTING

Listing revenues of the Company on the financial market amounted to PLN 18.8 million in 2019 compared to PLN 22.0 million in 2018.

Revenues from **listing fees** amounted to PLN 17.0 million in 2019 compared to PLN 19.3 million in 2018. The main driver of revenues from listing fees is the number of issuers listed on the GPW markets and their capitalisation at the year's end. The capitalisation of listed companies as at the end of 2018, which determined the amount of fees charged in 2019, was lower than at the end of 2017, which determined the amount of fees charged in 2018.

Revenues from **fees for introduction and other fees** amounted to PLN 1.7 million in 2019 compared to PLN 2.7 million in 2018. The listing revenue on the GPW Main Market and on NewConnect is presented in section 5.2.1.

Listing revenues from Catalyst decreased by 40.5% year on year in 2019 despite an increase of the value of non-Treasury bonds in issue. The sharp decrease resulted from the application of IFRS 15 and the adjustment of figures in Q4 2019. The adjustments are presented in section 5.2.1. The table below presents the key separate financial and operating figures for Catalyst.



Table 70 Data for Catalyst

	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Catalyst					
Listing revenue (PLN million)	0.9	1.5	1.7	-0.6	-40.5%
Number of issuers	143	142	148	1	0.7%
Number of issued instruments	553	556	573	-3	-0.5%
including: non-Treasury instruments	503	508	531	-5	-1.0%
Value of issued instruments (PLN billion)	794.9	770.8	743.0	24.0	3.1%
including: non-Treasury instruments	90.1	80.2	87.1	9.9	12.3%

Source: Company

INFORMATION SERVICES

Revenues from information services on the financial market and the commodity market amounted to PLN 46.4 million in 2019 compared to PLN 45.3 million in 2018.

Table 71 Data for Data for information services

PLN'000	Year ended 31 December			Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	2018	2017		
Revenues from information services and WIBID and WIBOR reference rate services * (PLN million)	46.4	45.3	42.8	1.1	2.5%
Number of data vendors	83	78	52	5	6.4%
Number of subscribers ('000 subscribers)	262.1	248.1	244.8	14.0	5.7%

Source: Company

Revenue from information services is presented in section 5.2.1.

OTHER REVENUES

The Company's other revenues amounted to PLN 10.6 million in 2019 compared to PLN 9.3 million in 2018. The Company's other revenues include revenues from educational and PR services, space lease, services provided to GPW Group companies, and sponsorship. The revenue from services provided to GPW Group companies increased particularly sharply in 2019 following continued expansion of the scope of such services in order to optimise the use of existing resources.

6.2.2. OPERATING EXPENSES

Total operating expenses stood at PLN 119.3 million in 2019, representing an increase of 5.6% (PLN 6.3 million) year on year. The cost/income ratio increased to 65.0% in 2019 from 59.2% in 2018. The increase of operating expenses in 2019 was mainly driven by an increase of salaries and other employee costs and an increase of external service charges.



Table 72 Separate operating expenses of GPW and structure of operating expenses in 2017 – 2019

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
Depreciation and amortisation	23,448	20%	20,257	18%	19,472	18%	3,191	15.8%
Salaries	36,649	31%	32,032	28%	29,391	27%	4,617	14.4%
Other employee costs	10,804	9%	9,302	8%	7,968	7%	1,502	16.1%
Rent and other maintenance fees	3,905	3%	8,299	7%	7,472	7%	(4,394)	-52.9%
Fees and charges	4,800	4%	7,487	7%	3,865	4%	(2,687)	-35.9%
<i>including PFSA fees</i>	3,578	3%	6,863	6%	3,099	3%	(3,285)	-47.9%
External service charges	35,276	30%	31,157	28%	37,783	34%	4,119	13.2%
Other operating expenses	4,434	4%	4,473	4%	3,965	4%	(39)	-0.9%
Total	119,317	100%	113,007	100%	109,916	100%	6,310	5.6%

Source: Separate Financial Statements, Company

The Company is not dependent on any single supplier or provider as no contractor has a share exceeding 10% of the total expenses of the Company.

Depreciation and amortisation

Depreciation and amortisation charges stood at PLN 23.4 million in 2019, representing an increase of 15.8% (PLN 3.2 million) compared to PLN 20.3 million in 2018. The increase of depreciation and amortisation charges year on year was mainly due to the application of IFRS 16 and the recognition of depreciation and amortisation of right-to-use assets. Net depreciation and amortisation charges on right-to-use assets and subleases stood at PLN 2.9 million in 2019.

Salaries and other employee costs

Salaries and other employee costs amounted to PLN 47.5 million in 2019, representing an increase of 14.8% (PLN 6.1 million) compared to PLN 41.3 million in 2018.

GPW's separate salaries and other employee costs are described in the consolidated report under Operating expenses – Salaries and other employee costs.

The headcount of the Company was 223 FTEs as at 31 December 2019 compared to 204 FTEs as at 31 December 2018. The increase of the headcount of the Company year on year in 2019 was a result of the hiring of human resources required in the implementation of the strategy.

Table 73 Employment in GPW

# FTEs	As at 31 December		
	2019	2018	2017
GPW	223	204	189
Total	223	204	189

Source: Company

Rent and other maintenance fees

Rent and other maintenance fees amounted to PLN 3.9 million in 2019 compared to PLN 8.3 million in 2018, representing a decrease of 52.9% year in year. The decrease of rent in 2018 was driven by the fact that under C5(b) of IFRS 16, the Group implemented IFRS 16 without restating its comparative data; consequently, 2018 and 2019 data are not comparable. Starting in 2019, leases of office space, colocation, and car park space are classified as leases whose cost is recognised in depreciation, fees and charges, and financial expenses.



Fees and charges

Fees and charges stood at PLN 4.8 million in 2019, a decrease of 35.9% (PLN 2.7 million) year on year. The main component of fees and charges of the Company are fees paid to the Polish Financial Supervision Authority. The rules for the payment of such fees changed as of the beginning of January 2016 with the extension of the group of entities which pay the cost of market supervision. The supervision fees stood at PLN 3.6 million in 2019 as compared to PLN 6.9 million paid in 2018. The cost of fees paid to PFSA in 2019 decreased by 47.9% year on year. The amount of the supervision fee is beyond the Company's control.

External service charges

External service charges amounted to PLN 35.3 million in 2019 compared to PLN 31.2 million in 2018.

Table 74 Separate external service charges of GPW and structure of external service charges in 2017 - 2019

PLN'000, %	Year ended 31 December						Change (2019 vs 2018)	Change (%) (2019 vs 2018)
	2019	%	2018	%	2017	%		
IT cost:	14,233	40%	13,794	44%	23,722	63%	439	3.2%
<i>IT infrastructure maintenance</i>	10,463	30%	9,521	31%	10,018	27%	942	9.9%
<i>Data transmission lines</i>	3,523	10%	4,178	13%	4,218	11%	(655)	-15.7%
<i>Software modification</i>	247	1%	95	0%	9,486	25%	152	160.0%
Office and office equipment maintenance:	3,286	9%	3,025	10%	2,768	7%	261	8.6%
<i>Repair and maintenance of installations</i>	827	2%	951	3%	870	2%	(124)	-13.0%
<i>Security</i>	1,550	4%	1,325	4%	1,181	3%	225	17.0%
<i>Cleaning</i>	648	2%	502	2%	449	1%	146	29.1%
<i>Phone and mobile phone services</i>	261	1%	247	1%	268	1%	14	5.7%
Leasing, rental and maintenance of vehicles	232	1%	204	1%	159	0%	28	13.7%
Transportation services	91	0%	95	0%	91	0%	(4)	-4.2%
Promotion, education, market development	3,884	11%	4,039	13%	3,804	10%	(155)	-3.8%
Market liquidity support	1,321	4%	910	3%	521	1%	411	45.2%
Advisory (including: audit, legal services, business consulting)	4,601	13%	4,806	15%	2,918	8%	(205)	-4.3%
Information services	5,643	16%	2,977	10%	2,212	6%	2,666	89.6%
Training	697	2%	516	2%	621	2%	181	35.1%
Mail fees	54	0%	35	0%	40	0%	19	54.3%
Bank fees	103	0%	60	0%	42	0%	43	71.7%
Translation	269	1%	289	1%	318	1%	(20)	-6.9%
Other	862	2%	407	1%	567	2%	455	111.8%
Total	35,276	100%	31,157	100%	37,783	100%	4,119	13.2%

Source: Separate Financial Statements, Company

The increase of external service charges by PLN 4.1 million year on year in 2019 was mainly driven by an increase of the cost of *information services* by PLN 2.7 million from PLN 3.0 million in 2018 to PLN 5.6 million in 2019. The increase of the cost of information services was mainly driven by the launch of the *Analytical Coverage Support Programme*, which is presented under *External service charges* in section 5.2.2 Operating expenses.

In addition, the following cost lines also increased:

- ◆ IT infrastructure maintenance – up by PLN 0.9 million,
- ◆ market liquidity support – up by PLN 0.4 million,
- ◆ training – up by PLN 0.2 million,
- ◆ security services – up by PLN 0.2 million,
- ◆ cleaning services – up by PLN 0.1 million,
- ◆ other expenses – up by PLN 0.5 million.



The following cost lines decreased:

- ◆ data transmission lines – down by PLN 0.7 million,
- ◆ promotion, education, market development – down by PLN 0.2 million,
- ◆ advisory – down by PLN 0.2 million,
- ◆ system repair and maintenance - down by PLN 0.1 million.

The drivers of the increase or decrease of different categories of GPW's external service charges are presented in the consolidated report in section 5.2.2.

Other operating expenses

Other operating expenses decreased by 0.9% or PLN 39 thousand year on year in 2019. Other operating expenses amounted to PLN 4.4 million, including the cost of material and energy consumption at PLN 2.5 million, industry organisation membership fees at PLN 0.4 million, non-life insurance at PLN 0.2 million, business travel at PLN 0.8 million, conference participation at PLN 0.3 million, and other costs at PLN 0.2 million.

6.2.3. OTHER INCOME AND EXPENSES

Other income of GPW stood at PLN 1.3 million in 2019 compared to PLN 1.1 million in 2018. Other income in 2019 included mainly gains on the sale of property, plant and equipment (PLN 0 in 2019 and PLN 0.4 million in 2018), medical services invoiced to employees at PLN 0.3 million (similar to 2018), the annual correction of input VAT at PLN 0.9 million (vs. PLN 0.4 million in 2018), and other income (small amount in 2019 vs. PLN 0.1 million in 2018).

Other expenses of GPW increased to PLN 3.3 million in 2019 compared to PLN 1.6 million in 2018 mainly due to higher donations paid. Donations totalled PLN 2.8 million in 2019 vs. PLN 478 thousand in 2018. Donations are presented in section 5.2.3.

6.2.4. FINANCIAL INCOME AND EXPENSES

Financial income of the Company stood at PLN 76.2 million in 2019 compared to PLN 75.1 million in 2018. Financial income includes mainly dividends paid by subsidiaries and associates, interest on bank deposits, and positive FX differences.

The year-on-year increase of financial income in 2019 was driven by higher dividends received by GPW. GPW received PLN 71.0 million in dividends in 2019, including PLN 63.9 million from the subsidiary TGE, PLN 6.6 million from the associate KDPW, and PLN 0.4 million from Centrum Giełdowe. Dividend income stood at PLN 69.7 million in 2018.

Income from interest on bank deposits and current accounts was PLN 4.0 million in 2019 compared to PLN 3.0 million in 2018. GPW earned financial income on certificates of deposit and corporate bonds at PLN 1.0 million in 2019 compared to PLN 1.6 million in 2018. Total revenue from investments of free cash stood at PLN 4.9 million in 2019 compared to PLN 4.6 million in 2018. Positive FX differences decreased by PLN 0.7 million.

Financial expenses of the Company stood at PLN 8.7 million in 2019 compared to PLN 8.0 million in 2018. The higher financial expenses in 2019 were mainly driven by negative FX differences at PLN 375 thousand and interest of finance leases under IFRS 16 at PLN 697 thousand.

The largest item of the Company's financial expenses is the interest cost under outstanding bonds. The cost of GPW's bonds is presented in section 5.2.4.

6.2.5. GAINS ON INVESTMENT/(LOSSES) ON IMPAIRMENT OF INVESTMENT IN OTHER ENTITIES

Gains on investment/(losses) on impairment of investment in other entities were recognised in a dedicated line of the profit and loss account as at 30 September 2019 under IAS 1. The impairment losses stood at PLN 2.2 million as at 31 December 2019 due to impairment losses on the investment in PAR.

In its 2019 financial statements, GPW changed the presentation of comparative data for 2018 by moving losses on investment in other entities and realised gains on sale of interest to gains on investment/(losses) on impairment of investment in other entities. The item stood at PLN 30.2 million in 2018, mainly due to gains on the sale of interest in the associate Aquis at PLN 32.2 million.

6.2.6. INCOME TAX

Income tax of the Company was PLN 11.7 in 2019 and PLN 20.3 million in 2018. The **effective income tax rate** was 9.2% in 2019 and 11.8% in 2018 as compared to the standard Polish corporate income tax rate of 19%. The difference between the effective tax rate and the standard tax rate in 2019 was mainly due to non-taxable dividends paid by subsidiaries and associates and shown in profit before tax. The Company uses a tax relief for dividends paid by subsidiaries and associates



as it holds more than 10% of their stake for a period longer than two years. GPW received PLN 71 million in dividends in 2019.

The income tax paid by GPW in 2019 was PLN 30.4 million compared to PLN 35.7 million paid in 2018.

6.2.7. ATYPICAL FACTORS AND EVENTS IMPACTING PROFITS

Atypical factors and events impacting profits are presented in section 5.3.

6.2.8. COMPANY'S ASSETS AND LIABILITIES STRUCTURE

The total assets of the Company were PLN 792.8 million as at 31 December 2019 compared to PLN 785.3 million as at 31 December 2018.

ASSETS

The Company's **non-current assets** stood at PLN 435.3 million representing 55% of total assets as at 31 December 2019 compared to PLN 426.6 million or 54% of total assets as at 31 December 2018. The increase of non-current assets was driven by the recognition of right-to-use assets and sublease receivables.

The Company's **current assets** stood at PLN 357.4 million representing 45% of total assets as at 31 December 2019 compared to PLN 358.6 million or 46% of total assets as at 31 December 2018. Current assets decreased modestly year on year in 2019. The change was driven by a decrease of cash flows recognised as assets shown as cash and cash equivalents as well as financial assets measured at amortised costs, which include bank deposits over 3 months as well as certificates of deposit and corporate bonds. The Company invested free cash in those instruments in 2019 and in 2018. The decrease was driven by trade receivables, which increased by 18.2%, and mainly by the payment of dividend by GPW, which was PLN 41.4 million more in 2019 than in 2018 (GPW paid PLN 133.6 million in dividend in 2019 vs. PLN 92.3 million paid in 2018).

Table 75 Separate statement of financial position of GPW at the year's end in 2017 - 2019 (assets)

PLN'000	As at 31 December					
	2019	%	2018	%	2017	%
Non-current assets	435,342	55%	426,635	54%	462,760	63%
Property, plant and equipment	95,416	12%	96,362	12%	96,269	13%
Right-to-use assets	14,329	2%	-	0%	-	0%
Intangible assets	49,829	6%	56,439	7%	64,741	9%
Investment in associates and joint ventures	11,652	1%	13,825	2%	36,959	5%
Investment in subsidiaries	255,885	32%	250,885	32%	254,985	35%
Sublease receivables	6,363	1%	-	0%	-	0%
Available-for-sale financial assets	-	0%	-	0%	271	0%
Financial assets measured at fair value through other comprehensive income	120	0%	101	0%	-	0%
Prepayments	1,748	0%	4,801	1%	5,313	1%
Other non-current assets	-	0%	4,222	1%	4,222	1%
Current assets	357,422	45%	358,619	46%	275,535	37%
Inventories	47	0%	64	0%	56	0%
Corporate income tax receivables	4,132	1%	-	0%	-	0%
Trade receivables and other receivables	30,128	4%	25,483	3%	26,272	4%
Sublease receivables	2,302	0%	-	0%	-	0%
Contract assets	940	0%	1,015	0%	-	0%
Financial assets measured at amortised cost	267,687	34%	310,090	39%	-	0%
Other current assets	4,222	1%	-	0%	196,461	27%
Cash and cash equivalents	47,964	6%	21,967	3%	52,746	7%
Total assets	792,764	100%	785,254	100%	738,295	100%

Source: Separate Financial Statements, Company



EQUITY AND LIABILITIES

The **equity** of the Company stood at PLN 479.8 million representing 61% of the total equity and liabilities as at 31 December 2019 compared to PLN 498.2 million or 63% of total equity and liabilities as at 31 December 2018.

Non-current liabilities of the Company stood at PLN 275.3 million representing 35% of the Group's total equity and liabilities as at 31 December 2019 compared to PLN 263.2 million or 34% of total equity and liabilities as at 31 December 2018. Non-current liabilities in respect of outstanding bonds remained stable year on year as at 31 December 2019. Non-current liabilities of GPW include outstanding series D and E bonds maturing in 2022 and series C bonds also maturing in 2022.

The increase of non-current liabilities was due to the recognition of lease liabilities following the application of IFRS 16 as well as the recognition of contract liabilities, which represent deferred income, following the application of IFRS 15 to revenue from the introduction of securities to trading on Catalyst.

Other non-current liabilities decreased year on year from PLN 11.8 million as at 31 December 2018 to PLN 8.3 million as at 31 December 2019.

The main item of other non-current liabilities (PLN 8.3 million in 2019) is the non-current liability to the Polish National Foundation (PFN)

Current liabilities of the Company stood at PLN 37.6 million representing 5% of the total equity and liabilities as at 31 December 2019 compared to PLN 23.8 million or 3% of total equity and liabilities as at 31 December 2018. The increase of current liabilities was driven by an increase of trade payables by PLN 3.5 million, the recognition of current lease liabilities at PLN 5.0 million, the recognition of contract liabilities which represent deferred income at PLN 1.3 million following the application of IFRS 15, and an increase of other current liabilities by PLN 3.6 million. Other current liabilities include contracted investments at PLN 6.6 million, current liabilities to PFN at PLN 1.3 million, and liabilities in respect of other taxes at PLN 1.7 million.

Table 76 Separate statement of financial position of GPW at the year's end in 2017 - 2019 (equity and liabilities)

PLN'000	As at 31 December					
	2019	%	2018	%	2017	%
Equity	479,843	61%	498,237	63%	438,873	59%
Share capital	63,865	8%	63,865	8%	63,865	9%
Other reserves	(187)	0%	(142)	0%	(125)	0%
Retained earnings	416,165	52%	434,514	55%	375,133	51%
Non-current liabilities	275,299	35%	263,237	34%	264,574	36%
Liabilities on bonds issue	244,350	31%	243,961	31%	243,573	33%
Employee benefits payable	682	0%	595	0%	883	0%
Lease liabilities	15,826	2%	-	0%	-	0%
Contract liabilities	572	0%	-	0%	-	0%
Accruals and deferred income	809	0%	-	0%	-	0%
Deferred tax liability	4,705	1%	6,846	1%	7,064	1%
Other liabilities	8,355	1%	11,835	2%	13,054	2%
Current liabilities	37,622	5%	23,780	3%	34,848	5%
Liabilities on bonds issue	1,932	0%	1,938	0%	1,938	0%
Trade payables	7,970	1%	4,498	1%	11,954	2%
Employee benefits payable	10,579	1%	9,095	1%	8,481	1%
Lease liabilities	5,024	1%	-	0%	-	0%
CIT payable	-	0%	1,373	0%	5,685	1%
Contract liabilities	1,390	0%	11	0%	-	0%
Accruals and deferred income *	231	0%	-	0%	21	0%
Provisions for other liabilities and other charges	95	0%	68	0%	211	0%
Other liabilities	10,401	2%	6,797	1%	6,558	1%
Total equity and liabilities	792,764	100%	785,254	100%	738,295	100%

* As of 2018, deferred income is presented under performance obligations

Source: Separate Financial Statements, Company



6.2.9. LIQUIDITY, FINANCIAL ASSETS AND FINANCIAL RISK MANAGEMENT OF THE COMPANY

The activities of the Company are exposed to three types of financial risks: market risk, credit risk, and liquidity risk. Details of how financial risks are identified and managed have been described in the Separate Financial Statements.

In 2019, the Company's liquidity risk, which means inability to timely meet its payment obligations, was negligible in view of material financial assets held and positive cash flows from operating activities which exceeded the value of existing liabilities. The current liquidity ratio decreased to 9.5 from 15.1 as at 31 December 2018; it means that the Company's current assets are several times higher than its current liabilities.

GPW manages financial liquidity in accordance with the "Current Assets Allocation Procedure" adopted by the Management Board. Pursuant to this document, 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, at the same time, to maximise its financial income. In practical terms, this means that the Company invested its current assets in bank deposits, certificates of deposit, and corporate bonds in 2019 and the average duration of a financial asset portfolio was approximately 117 days in 2019 and approximately 106 days in 2018.

In the opinion of the Management Board, the Company's financial assets and financial risk management process is effective and ensures timely meeting of payment obligations.

No threats have been identified to the Company's liquidity.

The risks inherent in financial instruments held are described in Note 2 *Financial Risk Management* to the Separate Financial Statements for the year ended 31 December 2019.

6.2.10. CASH FLOWS

The Company generated positive cash flows from **operating activities** at PLN 66.9 million in 2019, an increase compared to positive cash flows of PLN 62.7 million in 2018.

The cash flows from **investing activities** were positive at PLN 104.5 million in 2019 compared to positive cash flows of PLN 5.9 million in 2018. The positive cash flows from investing activities in 2019 were due to a surplus of proceeds over investments; the key events in 2018 included receipts on the sale of financial assets measured at amortised cost and the dividend received from subsidiaries and associates.

The cash flows from **financing activities** were negative at PLN 145.1 million in 2019, mainly due to the dividend paid to the shareholders at PLN 133.4 million. The cash flows from financing activities were negative at PLN 99.6 million in 2018 and the dividend paid to the shareholders was PLN 92.3 million.

Table 77 Separate cash flows of GPW

PLN'000	Cash flows for the 12-month period ended 31 December		
	2019	2018	2017
Cash flows from operating activities	66,852	62,740	85,990
Cash flows from investing activities	104,475	5,880	(130,963)
Cash flows from financing activities	(145,066)	(99,588)	(98,387)
Net increase / (decrease) in cash and cash equivalents	26,261	(30,968)	(143,360)
<i>Impact of change of fx rates on cash balances in foreign currencies</i>	(264)	189	423
Cash and cash equivalents - opening balance	21,967	52,746	195,681
Cash and cash equivalents - closing balance	47,964	21,967	52,746

Source: Separate Financial Statements, Company

6.2.11. CAPITAL EXPENDITURE

The Company's total capital expenditure in 2019 amounted to PLN 10.5 million including expenditure for property, plant and equipment at PLN 6.4 million and expenditure for intangible assets at PLN 4.2 million. The Company's total capital expenditure in 2018 amounted to PLN 11.9 million including expenditure for property, plant and equipment at PLN 9.9 million and expenditure for intangible assets at PLN 2.0 million.

The capital expenditure for property, plant and equipment and intangible assets in 2019 related to maintenance of IT infrastructure, including purchase of network devices (hardware, cables), fixed assets under the GPW Tech project, the central integration bus, the new index calculator, the GRC system, the New Trading System, and the GPW Data project.



The capital expenditure for property, plant and equipment and intangible assets in 2018 related to maintenance of IT infrastructure, including purchase of servers. GPW invested in the refurbishment of a former server room and adaptation of office space for subsidiaries. The capital expenditure for intangible assets in 2018 included investments in software, as well as new document flow functionalities, new modules of the trading surveillance system, and a project management system.

Contracted investments in plant, property and equipment were PLN 115 thousand as at 31 December 2019, including mainly the acquisition of IT hardware for the New Trading Platform. Contracted investments in intangible assets were PLN 253 thousand, including mainly the GRC system, server time synchronisation software, and the new Indexator in GPW.

Contracted investments in plant, property and equipment were PLN 194 thousand as at 31 December 2018, including mainly the acquisition of IT hardware and software. Contracted investments in intangible assets were PLN 479 thousand as at 31 December 2018, including the trade surveillance system.

6.3. RATIO ANALYSIS

6.3.1. DEBT AND FINANCING RATIOS OF THE COMPANY

In the period under review, the debt of the Company posed no threat to its going concern and capacity to meet liabilities on time. The ratio of net debt to EBITDA increased year on year in 2019 and was positive with a value of 0.5 as at 31 December 2019 due to interest-bearing liabilities exceeding liquid assets. However, liquid assets used to calculate the ratios only included bank deposits and current accounts, excluding investment in bonds and certificates. Those investments as at 31 December 2019 were higher than in 2018. As a result, liquid assets did not cover 100% of interest-bearing liabilities. In addition, interest-bearing liabilities increased due to lease liabilities. However, the liabilities are current and non-current liabilities which are not due. The debt to equity ratio increased year on year in 2019 due to a decrease in equity as at 31 December 2018 and an increase of debt with lease liabilities. Interest-bearing liabilities stood at PLN 267.1 million as at 31 December 2019 and PLN 245.9 million as at 31 December 2018.

6.3.2. LIQUIDITY RATIOS

The current liquidity ratio was 9.5 as at 31 December 2019, a decrease compared to 15.1 as at 31 December 2018. The decrease of the current liquidity ratio was due to an increase in current liabilities from PLN 23.8 million in 2018 to PLN 37.6 million as at 31 December 2019 combined with a modest decrease of current assets from PLN 358.6 million to PLN 357.4 million. However, the liquidity ratio remained safe.

The coverage ratio of interest costs under the bond issue decreased to 11.7 as at 31 December 2019 compared to 13.1 as at 31 December 2018. However, the ratio remained strong as the Company generated cash flows from operating activities which were several times higher than necessary to cover current liabilities under the bond issue.

6.3.3. PROFITABILITY RATIOS

The profitability ratios EBITDA, EBIT, and net profit decreased year on year in 2019 due to a decrease of revenue and an increase of expenses, causing a reduction in the operating profit and the net profit. The Company's cost/income ratio increased as the revenues dropped and expenses rose in 2019. Return on assets (ROA) and return on equity (ROE) decreased year on year in 2019 but remained higher than in 2017. The net profit of the year 2018 was exceptional due to a one-off: the sale of interest in the associate Aquis and gains on the sale.



Table 78 Key financial indicators of GPW Data for Catalyst

		As at / For the 12-month period ended 31 December		
		2019	2018	2017
Debt and financing ratios				
Net debt / EBITDA for 12 months	1), 2)	0.5	(0.1)	(0.0)
Debt to equity	3)	55.7%	49.4%	55.9%
Liquidity ratios				
Current liquidity	4)	9.5	15.1	7.9
Coverage of interest on bonds	5)	11.7	13.1	15.4
Return ratios				
EBITDA	6)	46.3%	49.9%	54.9%
Operating profit margin	7)	33.5%	39.3%	45.4%
Net profit margin	8)	62.7%	79.6%	35.2%
Cost / income	9)	65.0%	59.2%	54.0%
ROE	10)	23.5%	32.4%	16.0%
ROA	11)	14.6%	19.9%	9.5%

1) Net debt = interest-bearing liabilities less liquid assets of GPW (as at balance-sheet date)

2) EBITDA = GPW operating profit + depreciation and amortisation (for a period of 12 months)

3) Debt to equity = interest-bearing liabilities / equity (as at balance-sheet date)

4) Current liquidity = current assets / current liabilities (as at balance-sheet date)

5) Coverage of interest on bonds = EBITDA / interest on bonds (interest paid and accrued for a period of 12 months)

6) EBITDA margin = EBITDA / GPW revenue (for a period of 12 months)

7) Operating profit margin = GPW operating profit / GPW revenue (for a period of 12 months)

8) Net profit margin = GPW net profit / GPW revenue (for a period of 12 months)

9) Cost / income = GPW operating expenses / GPW revenue (for a period of 12 months)

10) ROE = GPW net profit (for a period of 12 months) / Average equity at the beginning and at the end of the last 12 month period

11) ROA = GPW net profit (for a period of 12 months) / Average total assets at the beginning and at the end of the last 12 month period



GLOSSARY

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

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 Stock 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 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

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

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



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SIGNATURES OF MANAGEMENT BOARD MEMBERS

Marek Dietl – President of the Management Board

Jacek Fotek – Vice-President of the Management Board

Dariusz Kułakowski – Member of the Management Board

Izabela Olszewska – Member of the Management Board

Piotr Borowski – Member of the Management Board

WARSAW, 3rd April, 2020

