2018

Report of the Management Board on the Activity of the Parent Entity and the Giełda Papierów Wartościowych w Warszawie Group in 2018

February 2019

Giełda Papierów Wartościowych w Warszawie S.A. - Warsaw Stock Exchange

registered address: ul. Książęca 4, 00-498 Warsaw, Poland, registered by the District Court for the City of Warsaw in Warsaw, entry no. KRS 8231200000, share capital of PLN 41,972,000 fully paid up. VAT no. 526-025-09-72. LEI 25940039ZHD3Z37GKR71.

This document presents the Report of the Management Board of Giełda Papierów Wartościowych w Warszawie S.A. ("Warsaw Stock Exchange", "GPW", "Exchange", "Parent Entity") on the activity of the Parent Entity and the Giełda Papierów Wartościowych w Warszawie Group ("GPW Group" or "Group") in 2018. The document includes a report on the activity of the parent entity.

The source of data presented in this Report is the GPW Group, unless indicated otherwise.

Statistics of the value and volume of trade are single-counted, unless indicated otherwise.

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I. For the Shareholders

Letter from the President of the Management Board

Dear Shareholders and Investors,

I am proud to present this Report of the Management Board on the Activity of the Giełda Papierów Wartościowych w Warszawie Group (GPW Group) and the separate and consolidated financial statements for 2018.

The year 2018 brought many economic developments which impacted the Warsaw Stock Exchange and the capital market in Poland. It was a time of major decisions which will now be implemented by GPW.

May I start on a personal note. In late April 2018, the GPW Extraordinary General Meeting appointed me President of the Exchange Management Board for a new term of four years. I accepted the position in full knowledge that the credit of confidence was linked to challenges faced by the Warsaw Stock Exchange. I am certain that the strategy #GPW2022, updated in June 2018, and its growth initiatives provide a strong launchpad for this mission.

We closed the year 2018 at a consolidated net profit of PLN 183.7 million (+15.7% year on year compared to the record-breaking 2017) and sales revenues of PLN 346.8 million (down by 1.5% year on year). The operating profit was PLN 170.2 million in 2018 compared to PLN 186.5 million in 2017. EBITDA was PLN 202.0 million in 2018, a decrease of 6% year in year. The GPW Group's financial results were driven among others by financial gains on the sale of interest in the associate Aquis Exchange. We always look for potential business synergies to deliver high returns. We will follow the same criteria in the coming years as we focus on technological development and diversification of sources of revenue.

In 2018, we paid PLN 92.338 million in dividends from the consolidated net profit of 2017 (adjusted for the share of profit of associates). The aggregate dividends paid to the shareholders in the last eight years are more than PLN 660 million. It is the objective of the GPW Management Board to maintain the dividend policy in the coming years and to meet the shareholder's expectations of dividend yield.

Towarowa Giełda Energii, a member of the GPW Group, reported historically high turnover in electricity and gas in 2018. The volume of trading in electricity was 226 TWh, an increase of 102.5% year on year, representing TGE's historical record on the spot and forward markets. The total volume of trading in natural gas was 143.3 TWh in 2018 (up by 3.4% year on year), another record on the commodity exchange.

I want investors and issuers to remember 2018 as a year of milestones and records on GPW. Early in the year, WIG hit an all-time high of 67,933 points on 23 January. The daily value of trading in equities was historically high at PLN 5.4 billion in September.

The successes included a key economic milestone in years as Poland was promoted to Developed Markets by the index agency FTSE Russell, putting us on a par with the world's 24 developed economies including the USA, the UK, Germany, France, Japan and Australia. The promotion came in appreciation of the development of the Polish economy and capital market.

Speaking of development of the exchange, it relies on strategic initiatives including GPW Growth, SLB (Securities Lending and Borrowing), Derivatives Development, GPW Private Market, BondSpot Development, development of benchmarks for the financial market and provision of rating services. We *focus on diversification because we want to be effective by improving our products and investing in new business lines.*

We see great potential in the corporate bond market BondSpot, which we will continue to support and develop. In February 2018, we created an efficient market of rated prime bonds with a market maker supporting liquidity. We believe that development must be bolstered by state-of-the-art technology, including integration of the order book or requests for quotation. The plan involves Polska Agencja Ratingowa, established in partnership with Polski Fundusz Rozwoju and Biuro Informacji Kredytowej on the basis of Instytut Analiz i Ratingu set up by GPW, which will support the development of the bond market and is likely to issue its first ratings later this year.

We will launch a Private Market for start-ups in 2019. This is our response to technological progress including blockchain. And it is not our last word. We will present new ideas, initiatives and technologies. We are planning to launch GPW Ventures, a fund investing in venture capital funds which can divest on the exchange. We look forward to introducing GPW Growth, a training programme for companies preparing them for floatation.

In December 2018, we started to calculate and publish three indices: WIG20dvp, mWIG40dvp and sWIG80dvp (based on cash dividends paid by stocks participating in the underlying indices WIG20, mWIG40, sWIG80). We are planning to introduce more indices and related ETFs, including indices based on mWIG40, a regional index, etc.

At the same time, we focus on our core business, which is well-developed but could always improve. We have more than PLN 566 million in free cash on the Capital Group level, which makes us optimistic about potential strategic projects and opens much space for growth.

I do believe that 2019 will be good for the exchange, not least due to the PPK Act. The market of Employee Capital Plans (PPK) should get its first capital injections this year. The government's Capital Market Development Strategy is a good prognostic.

I wish to thank all our shareholders, investors and issuers for the last year. Have a good and successful 2019!

Yours sincerely,

Marek Dietl, President of the GPW Management Board

Letter from the Chairman of the Supervisory Board

Dear Sir or Madam,

It will be two years this June since I was appointed to the Supervisory Board of the Warsaw Stock Exchange. I have been Chairman of the Board since July 2018. This was a busy time for the Company and its Supervisory Board. In 2018, the Exchange Supervisory Board actively supported the Management Board by a close analysis of its activity and took part in key decisions.

New responsibilities and challenges we faced in 2018 and those we face now will set the course for the Exchange in many years to come. The strategy update #GPW2022, approved by the Management Board and the Supervisory Board, is a cornerstone. I believe that the priority strategic initiatives defined by the Exchange Management Board will provide the expected results, contributing to the value and position of GPW both locally and internationally. On the international level, Poland was promoted from Emerging Markets to Developed Markets by the global rating agency FTSE Russell in 2018.

The Exchange Supervisory Board focused in 2018 both on key projects of special long-term relevance, as well as people. The Exchange Supervisory Board decided on 12 June 2018 to appoint new members, Izabela Olszewska and Piotr Borowski, to the GPW Management Board, acknowledging the contribution of long-time Exchange employees to corporate value creation. It is important to note that the Exchange Management Board was appointed very efficiently. I believe that a strong management team comprised of highly qualified managers is a key to success in business.

The challenges faced by the Exchange Supervisory Board include regulatory issues. In 2018, the Exchange Supervisory Board supervised the implementation of new regulations including MiFID 2, MiFIR and GDPR. This is an issue of special relevance for the entire GPR Group. The capital market is broadly regulated by national and EU law and may be subject to stricter supervision.

The Exchange Supervisory Board was responsible for the selection of an audit firm in 2018 in accordance with the applicable regulations. The Exchange Supervisory Board decided that BDO PL sp. z o.o. s.k. will audit the separate financial statements of GPW and the consolidated financial statements of the GPW Group for 2018-2020.

In 2018, the Exchange Supervisory Board focused on safety of rhe regulated market. The official list of circumstances which the Exchange may consider to be in conflict with the public nature of trading on the exchange took effect in January 2019 based on a joint position of the Exchange Supervisory Board and the GPW Management Board. The new criteria of admission of shares to trading on the regulated market were imposed with a view to greater safety of trading on the markets operated by GPW.

We face many challenges and we realise that capital markets operate under difficult conditions. The GPW Management Board is working to diversify our business with all the active and planned strategic initiatives. We are optimistic about Employee Capital Plans, which will have a positive impact on the capital market by driving demand for shares and bonds listed on the Warsaw Stock Exchange. A strong base of domestic investors will attract even more foreign investors to Poland. The Exchange Management Board focuses on making GPW more attractive to investors by introducing new tick sizes for all shares listed on GPW in 2019, ensuring more precise buy and ask prices of securities, a more precise valuation of companies and smoother trading, as well as harmonisation with MiFID 2 and the standards of trading on developed markets. I expect that the updated strategy #GPW2020 and prudent initiatives of the Management Board supported by the Exchange Supervisory Board will ensure further growth of the GPW Group.

I wish to thank the GPW Management Board and the Members of the Exchange Supervisory Board for their hard work and successful efforts in 2018. I wish in particular to thank Exchange employees. The Exchange is not just a regular company for them. Their work is their mission, which may require a sacrifice but always provides much professional satisfaction. I thank the shareholders of the Exchange for their confidence throughout the year.

Yours sincerely,
Jakub Modrzejewski

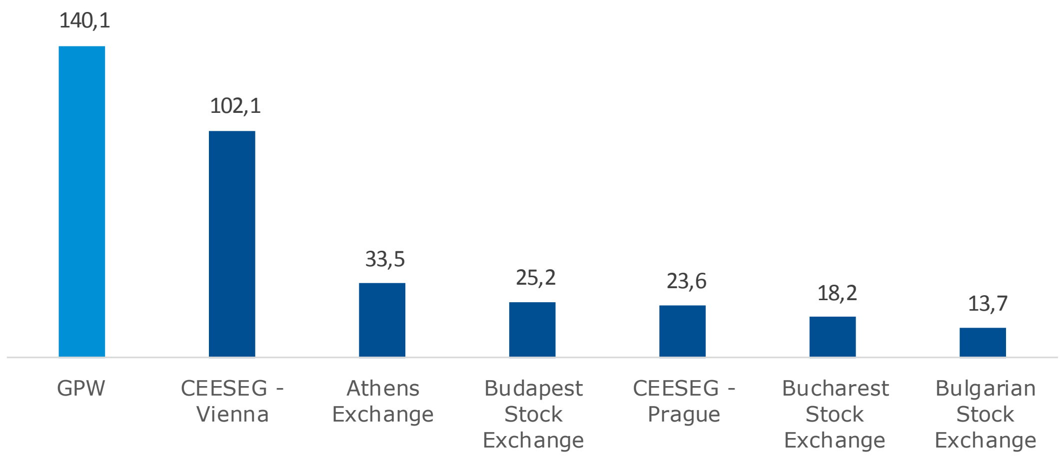
I. 1. Brief Description of the GPW Group

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.

GPW is a renowned institution with strong international recognition. For 25 years, we have helped Polish and European companies to raise capital, provided education, and contributed to economic and social development.

The Warsaw Stock Exchange has the biggest capitalisation of all exchanges in Central and Eastern Europe at EUR 140 billion. It is one of the biggest markets in Europe and lists 823 domestic and 28 foreign companies. It attracts new issuers every year, which ranks GPW the fifth biggest market in Europe as measured by the number of IPOs.[1] Capital raised by companies on GPW in 2018 was EUR 81 million.

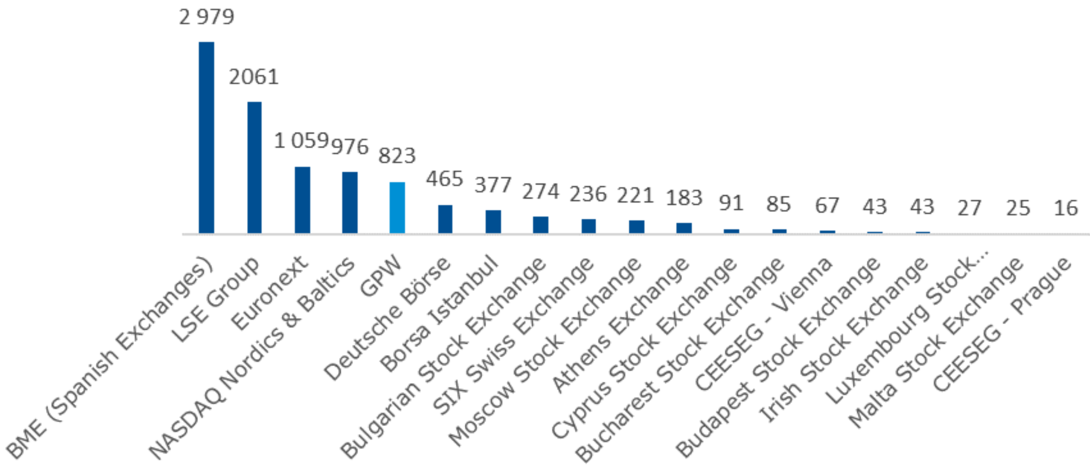
Figure 1 Capitalisation of CEE exchanges (stock markets) at 2018 YE [EUR billion]



Source: FESE, WFE

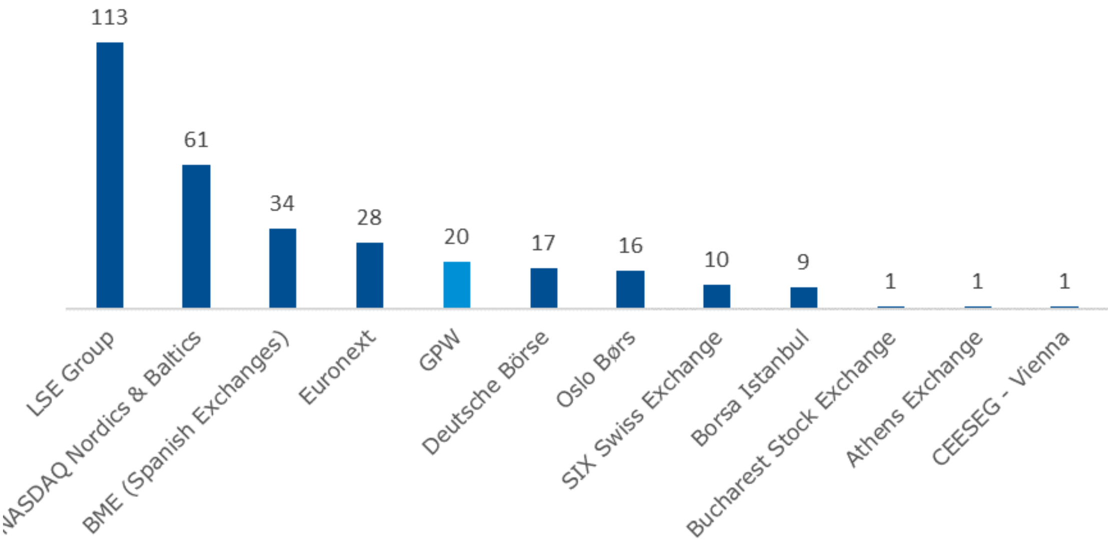
[1] PwC, IPO Watch Europe 2018 report.

Figure 2 Number of domestic companies listed on European exchanges at 2018 YE



Source: FESE, WFE

Figure 3 Number of IPOs on European exchanges in 2018



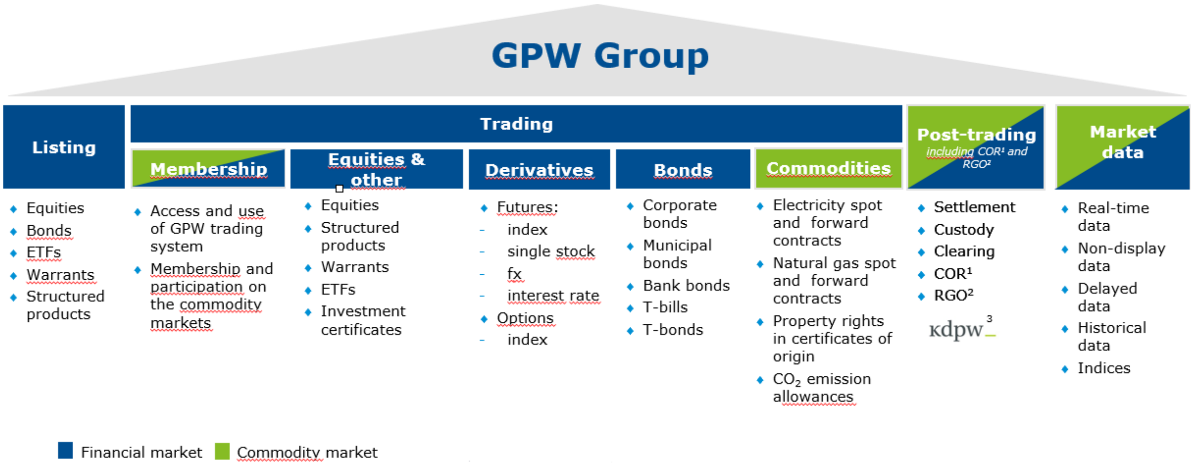
Source: PwC, IPO Watch Europe 2018

Towarowa Giełda Energii S.A. (TGE), GPW's 100% subsidiary, is a pioneer of innovation in trade in exchange-listed commodities. TGE operates markets for the biggest energy companies in Poland. In addition to trade in electricity, the commodity market also offers trade in natural gas and property rights in certificates of origin. 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%); KDPW Group offers post-trade services on the financial market

The Warsaw Stock Exchange Group was comprised of the parent entity and three consolidated subsidiaries as at 31 December 2018. GPW holds a stake in three associates.

Chart 2 GPW Group and associates

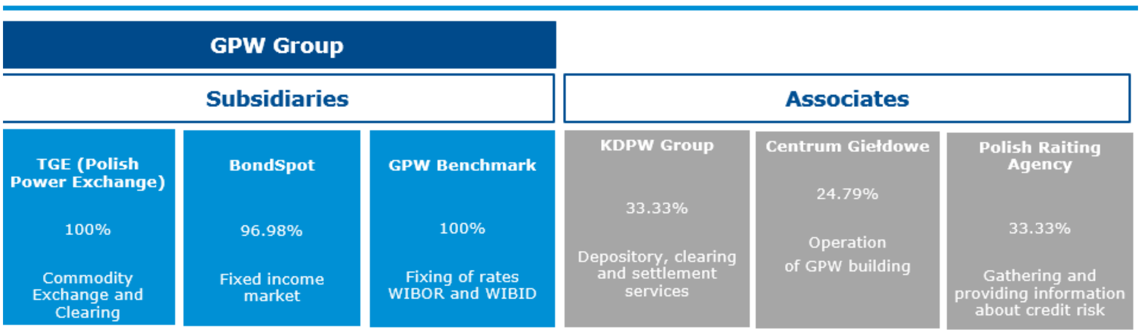


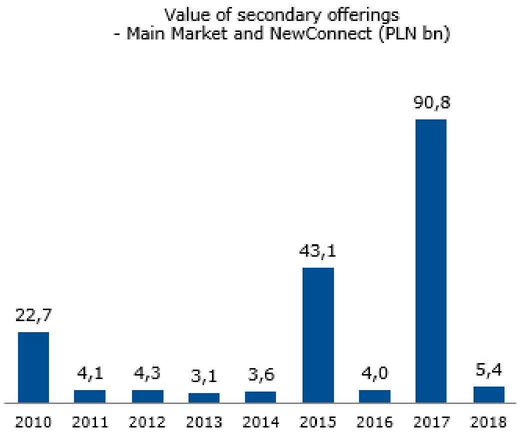
Table 1 Core business of GPW Group companies

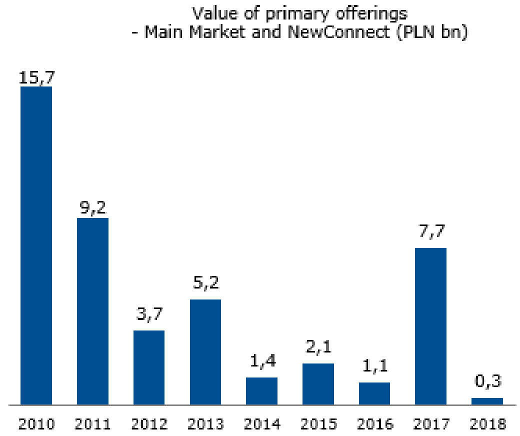
Subsidiary	Business profile
BondSpot S.A.	Operates trade in Treasury and non-Treasury debt securities. Treasury BondSpot Poland, operated by BondSpot, is the electronic wholesale market in Treasury securities authorised by the Ministry of Finance and a part of the Treasury Securities Dealers system in 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

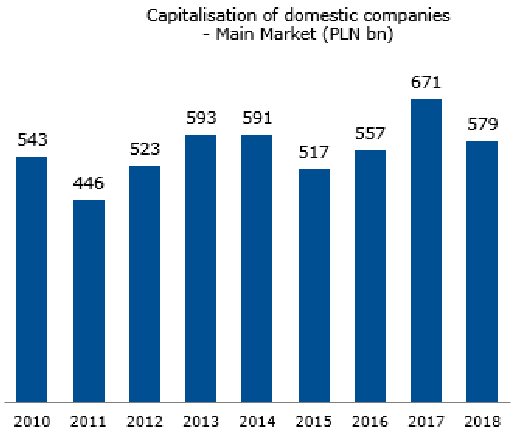
	efficiency certificates; operates the Register of Certificates of Origin of electricity generated from renewable energy sources, high-efficiency cogeneration and agricultural biogas as well as energy efficiency certificates; operates the Register of Guarantees of Origin; operates the Financial Instruments Market.
Izba Rozliczeniowa Giełd Towarowych S.A. (IRGiT, a subsidiary of TGE)	Provides clearing services for all markets operated by TGE. Authorised as a clearing house and settlement institution.
InfoEngine S.A. (a subsidiary of TGE)	Operates an electronic OTC commodity trading platform, provides services to electricity market participants.
GPW Benchmark S.A.	Organiser and administrator of WIBID and WIBOR fixings, the main money market index used for the valuation of most bank loans, derivatives and debt instruments issued in PLN.

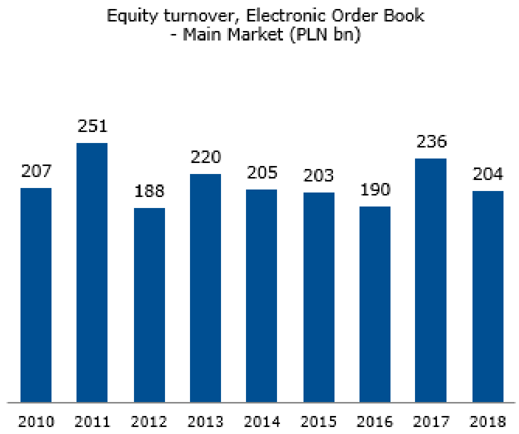
In addition, GPW holds 19.98% of InfoStrefa S.A. (formerly Instytut Rynku Kapitałowego WSE Research S.A.) and 10% of the Ukrainian stock exchange INNEX PJSC. As at 31 December 2018, the Company held an interest in S.C. SIBEX – Sibiu Stock Exchange S.A. ("SIBEX") with its registered office in Romania since 2010. The company was listed on S.C. SIBEX – Sibiu Stock Exchange S.A. The cost of the investment in SIBEX was PLN 1,343 thousand and the fair value determined at the share price was PLN 195 thousand as at 31 December 2017. SIBEX merged with the Bucharest Stock Exchange (BVB) at 1 January 2018. Following the merger, GPW holds 5,232 BVB shares at a par value of RON 10 per share. BVB is listed on the Bucharest Stock Exchange. The interest held by GPW was PLN 101 thousand as at 31 December 2018.

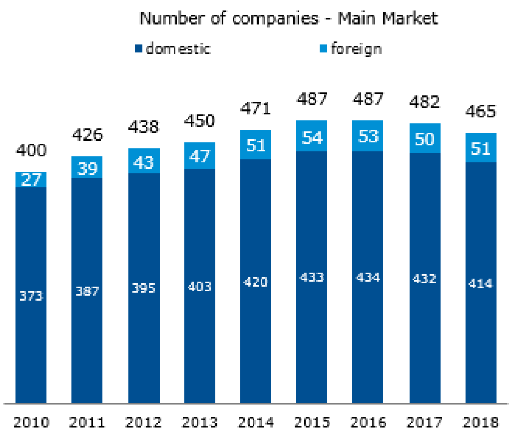
I. 2. Selected Market Data

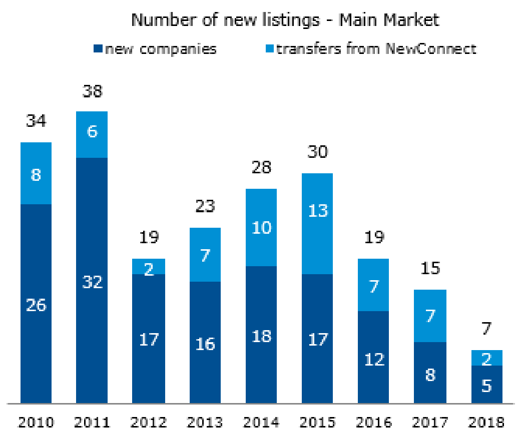




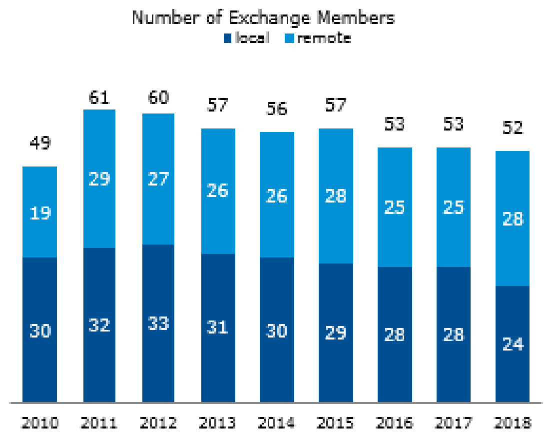


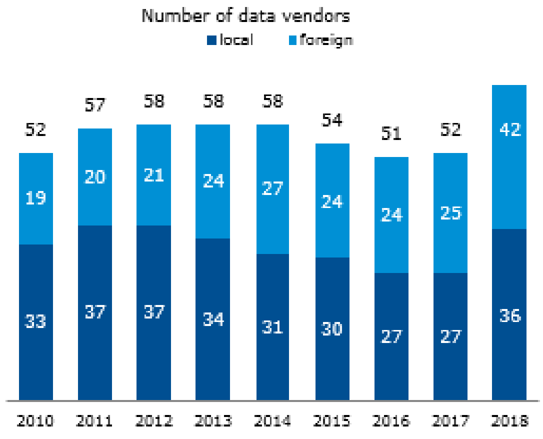


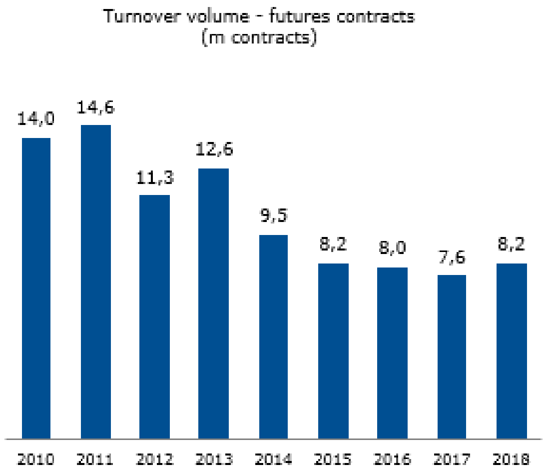


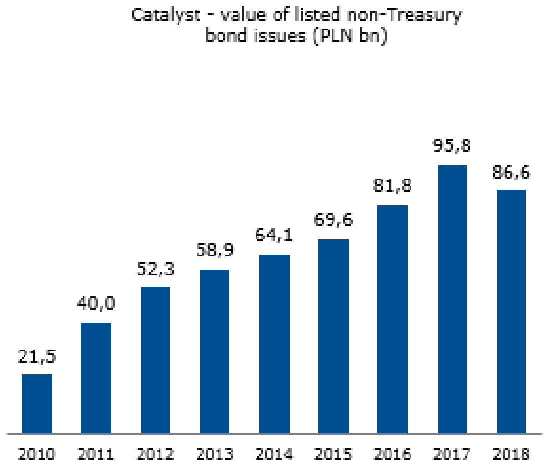


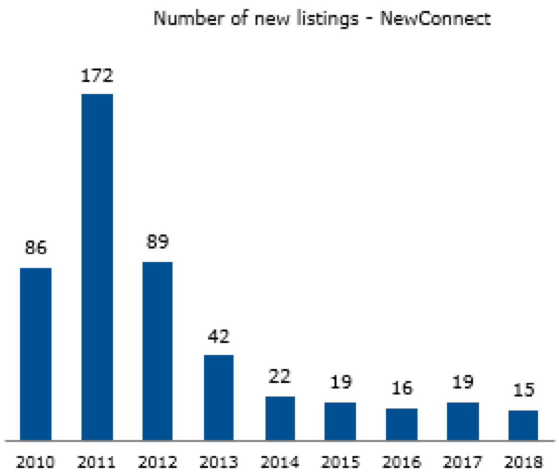
[2] Including dual-listed companies.
[3] There were two SPOs of Banco Santander SA worth PLN 33 billion in aggregate in Q1 2015 and an SPO of UniCredit S.p.A worth PLN 55.9 billion in Q1 2017.

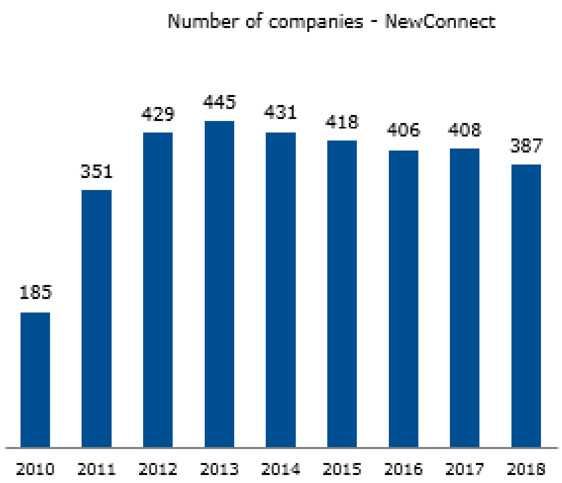

Number of Exchange Members
local
remote
49 61 60 57 56 57 53 53 52
19 29 27 26 26 28 25 25 28
30 32 33 31 30 29 28 28 24
2010 2011 2012 2013 2014 2015 2016 2017 2018

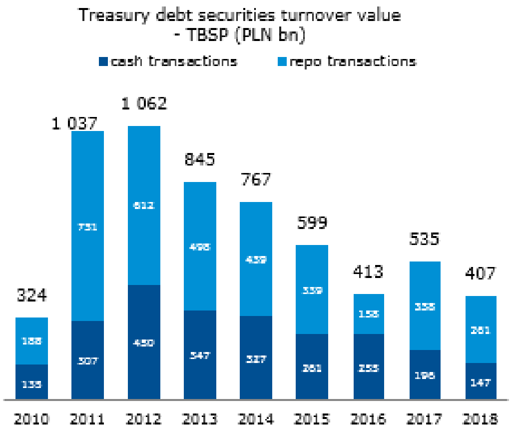

Number of data vendors
local
foreign
52 57 58 58 58 54 51 52
19 20 21 24 27 24 24 25 42
33 37 37 34 31 30 27 27 36
2010 2011 2012 2013 2014 2015 2016 2017 2018

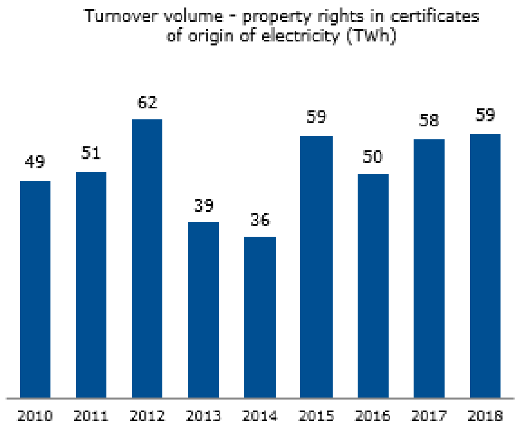

Turnover volume - futures contracts
(m contracts)
14,0 14,6 11,3 12,6 9,5 8,2 8,0 7,6 8,2
2010 2011 2012 2013 2014 2015 2016 2017 2018

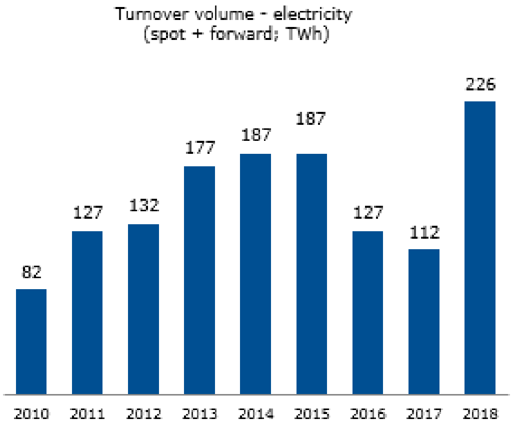

Catalyst - value of listed non-Treasury
bond issues (PLN bn)
21,5 40,0 52,3 58,9 64,1 69,6 81,8 95,8 86,6
2010 2011 2012 2013 2014 2015 2016 2017 2018

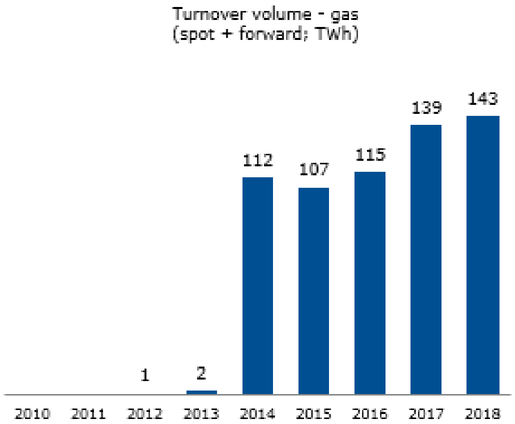

Number of new listings - NewConnect
86 172 89 42 22 19 16 19 15
2010 2011 2012 2013 2014 2015 2016 2017 2018

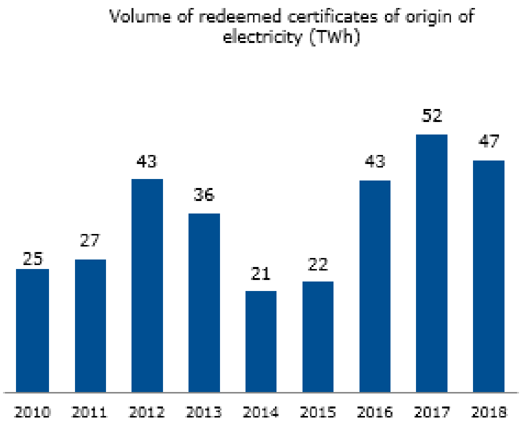

Number of companies - NewConnect
185 351 429 445 431 418 406 408 387
2010 2011 2012 2013 2014 2015 2016 2017 2018

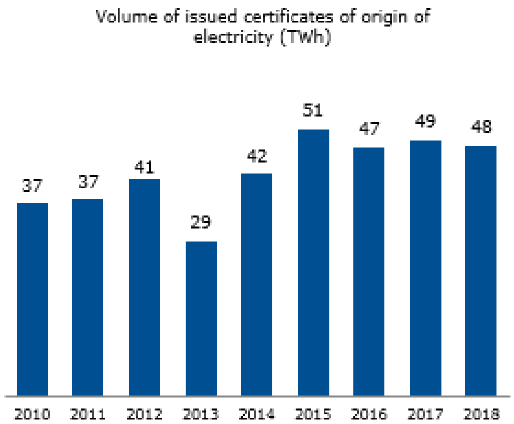












I. 3. Selected consolidated financial data

[4] Trade in gas opened in December 2012.

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

	12-month period ended 31 December			
	2018	2017	2018	2017
	PLN'000		EUR'000[1]	
Sales revenue	**346 781**	**351 956**	**81 360**	**82 665**
Financial market	**191 852**	**208 849**	**45 011**	**49 053**
Trading	124 280	141 336	29 158	33 196
Listing	22 805	24 968	5 350	5 864
Information services and revenue from calculation of reference rates	44 767	42 545	10 503	9 993
Commodity market	**153 555**	**142 088**	**36 026**	**33 373**
Trading	78 547	70 092	18 428	16 463
Register of certificates of origin	28 696	30 628	6 733	7 194
Clearing	45 862	41 019	10 760	9 634
Information services	450	349	106	82
Other revenue	**1 374**	**1 019**	**322**	**239**
Operating expenses	**173 812**	**165 763**	**40 779**	**38 933**
Other income	2 703	3 859	634	906
Impairment losses	3 153	607	740	143
Other expenses	2 314	2 896	543	680
Operating profit	**170 205**	**186 549**	**39 933**	**43 816**
Financial income	54 439	5 550	12 772	1 303
Financial expenses	9 162	11 147	2 150	2 618
Share of profit of associates	10 553	10 059	2 476	2 363
Profit before income tax	**226 035**	**191 011**	**53 031**	**44 864**
Income tax expense	42 334	32 274	9 932	7 580
Profit for the period	**183 701**	**158 737**	**43 099**	**37 283**
Basic / Diluted earnings per share[2] (PLN, EUR)	4,38	3,78	1,03	0,89
EBITDA[3]	**201 977**	**214 874**	**47 387**	**50 468**

[1] Based on the 12M average EUR/PLN exchange rate published by the National Bank of Poland (1 EUR = 4.2623 PLN in 12M 2018 and 1 EUR = 4.2576 PLN in 12M 2017)
[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

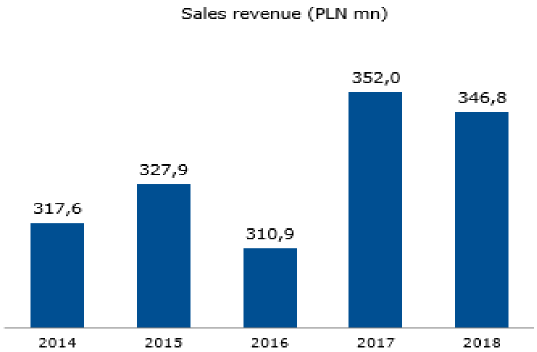
	As at 31 December			
	2018	2017	2018	2017
	PLN'000		EUR'000[1]	
Non-current assets	**580 375**	**596 354**	**134 971**	**142 980**
Property, plant and equipment	108 158	110 784	25 153	26 561
Intangible assets	254 564	263 769	59 201	63 240
Investment in entities measured by equity method	207 267	207 389	48 202	49 723
Deferred tax assets	540	3 803	126	912
Available-for-sale financial assets	-	271	-	65
Financial assets measured at fair value through other comprehensive income	101	-	23	-
Prepayments	5 523	6 116	1 284	1 466
Other non-current assets	4 222	4 222	982	1 012
Current assets	**636 942**	**550 699**	**148 126**	**132 034**
Inventories	64	56	15	13
Receivables in respect of corporate income tax	-	71	-	17
Trade and other receivables	69 437	64 096	16 148	15 367
Contract assets	1 215	-	283	-
Financial assets measured at amortised cost	377 502	-	87 791	-
Other financial assets	-	250 590	-	60 081
Cash and cash equivalents	188 724	235 886	43 889	56 555
TOTAL ASSETS	**1 217 317**	**1 147 053**	**283 097**	**275 013**
Equity of the shareholders of the parent entity	889 948	798 894	206 965	191 540
Non-controlling interests	590	573	137	137
Non-current liabilities	269 333	270 781	62 636	64 921
Current liabilities	57 446	76 805	13 360	18 415
TOTAL EQUITY AND LIABILITIES	**1 217 317**	**1 147 053**	**283 097**	**275 013**

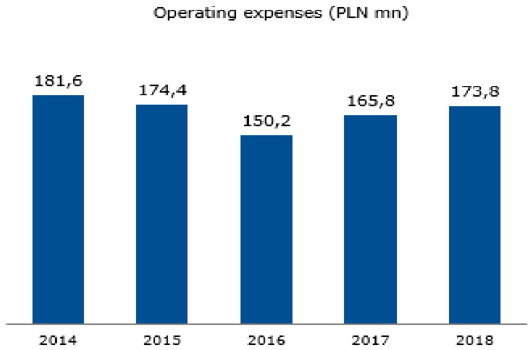
[1] Based on the average EUR/PLN exchange rate of the National Bank of Poland as at 31.12.2018 (1 EUR = 4.3000 PLN) and 31.12.2017 (1 EUR = 4.1709 PLN).

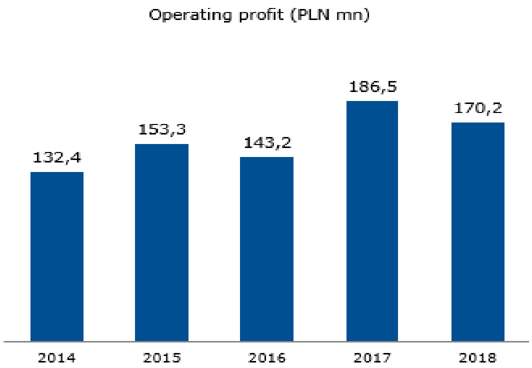
Table 4 GPW Group's selected financial ratios

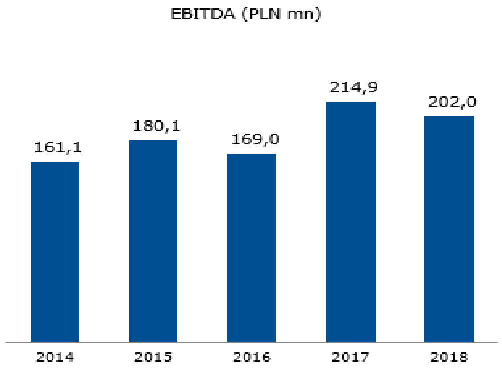
	Year ended / As at 31 December	
	2018	2017
EBITDA margin *(EBITDA/Sales revenue)*	58.2%	61.1%
Operating profit margin (*Operating profit/Sales revenue)*	49.1%	53.0%
Return on quity (ROE) *(Net profit for the last 12 months / Average equity at the beginning and at the end of the last 12 month period*	21.7%	20.7%
Debt to equity *(Interest-bearing liabilities [1]/Equity)*	27.6%	30.7%

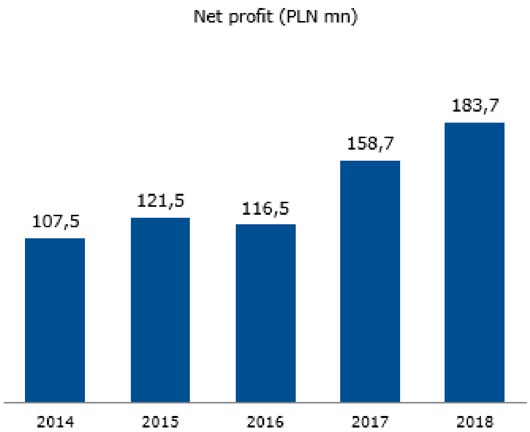
[1] interest and principal payable

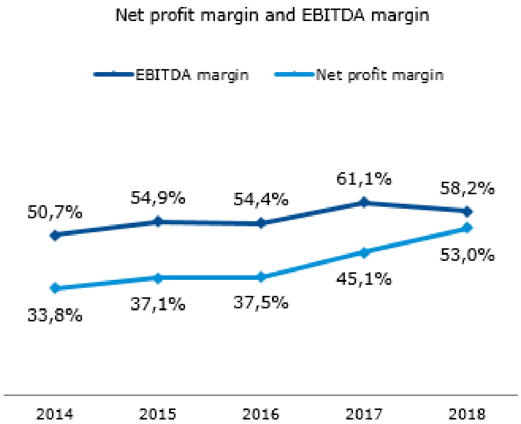












I. 4. Selected separate financial data

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

	Year ended 31 December			
	2018	2017	2018	2017
	PLN'000		EUR'000 [1]	
Sales revenue	**190 880**	**203 443**	**44 783**	**47 783**
Financial market	**181 150**	**196 229**	**42 501**	**46 089**
Trading	114 277	129 749	26 811	30 475
Listing	22 000	24 027	5 162	5 643
Information services	44 873	42 453	10 528	9 971
Commodity market	**423**	**348**	**99**	**82**
Information services	**423**	**348**	**99**	**82**
Other revenue	**9 307**	**6 866**	**2 184**	**1 613**
Operating expenses	**113 007**	**109 916**	**26 513**	**25 816**
Other income	1 115	940	262	221
Impairment gains/(losses) on receivables	2 295	497	538	117
Other expenses	1 633	1 686	383	396
Operating profit	**75 060**	**92 284**	**17 610**	**21 675**
Financial income	107 314	5 042	25 177	1 184
Financial expenses	10 112	8 871	2 372	2 084
Profit before income tax	**172 262**	**88 455**	**40 415**	**20 776**
Income tax expense	20 333	16 776	4 770	3 940
Profit for the period	**151 929**	**71 679**	**35 645**	**16 836**
EBITDA[2]	**95 317**	**111 756**	**22 363**	**26 249**

[1] Based on average annual EUR/PLN exchange rate published by the National Bank of Poland (1 EUR = 4.2623 PLN in 2018 and 1 EUR = 4.2576 PLN in 2017).
[2] EBITDA = operating profit + depreciation and amortisation

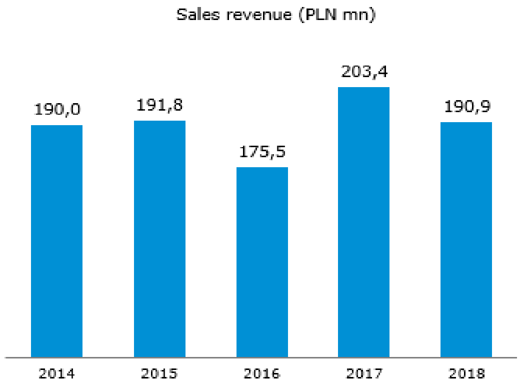
Table 6 Selected data on the statement of financial position, separate, under IFRS, audited

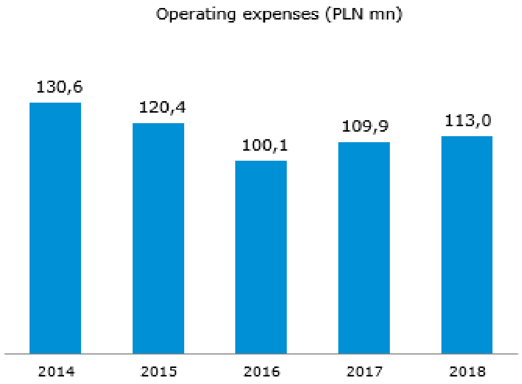
	As at 31 December			
	2018	2017	2018	2017
	PLN'000		EUR'000 [1]	
Non-current assets	**426,635**	**462,760**	**99,217**	**110,950**
Property, plant and equipment	96,362	96,269	22,410	23,081
Intangible assets	56,439	64,741	13,125	15,522
Investment in associates and subsidiaries	264,710	291,944	61,560	69,995
Available-for-sale financial assets	-	271	-	65
Financial assets measured at fair value through other comprehensive income	101	-	23	-
Prepayments	4,801	5,313	1,117	1,274
Other non-current assets	4,222	4,222	982	1,012
Current assets	**358,619**	**275,535**	**83,400**	**66,061**
Inventories	64	56	15	13
Trade and other receivables	25,483	26,272	5,926	6,299
Contract assets	1,015	-	236	-
Available-for-sale financial assets	-	-	-	-
Other financial assets measured at amortised cost	310,090	-	72,114	-
Other financial assets	-	196,461	-	47,103
Cash and cash equivalents	21,967	52,746	5,109	12,646
TOTAL ASSETS	**785,254**	**738,295**	**182,617**	**177,011**
Equity	498,237	438,873	115,869	105,223
Non-current liabilities	263,237	264,574	61,218	63,433
Current liabilities	23,780	34,848	5,530	8,355
TOTAL EQUITY AND LIABILITIES	**785,254**	**738,295**	**182,617**	**177,011**

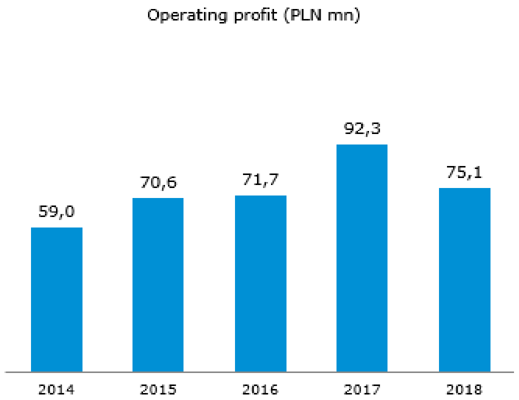
[1] Based on the average EUR/PLN exchange rate of the National Bank of Poland as at 31.12.2018 (1 EUR = 4.3000 PLN) and 31.12.2017 (1 EUR = 4.1709 PLN).

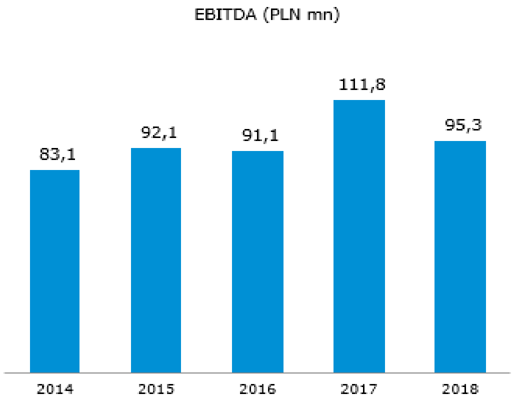
Table 7 GPW's selected financial ratios

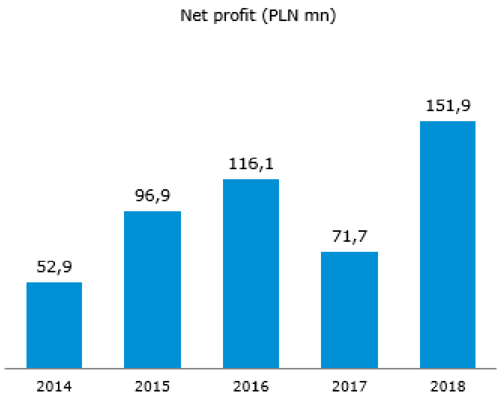
	Year ended / As at 31 December	
	2018	2017
EBITDA margin *(EBITDA/Sales revenue)*	49.9%	54.9%
Operating profit margin (*Operating profit/Sales revenue)*	39.3%	45.4%
Return on quity (ROE) *(Net profit for the last 12 months / Average equity at the beginning and at the end of the last 12 month period*	32.4%	16.0%
Debt to equity *(Interest-bearing liabilities [1]/Equity)* *[1] interest and principal payable*	49.4%	55.9%

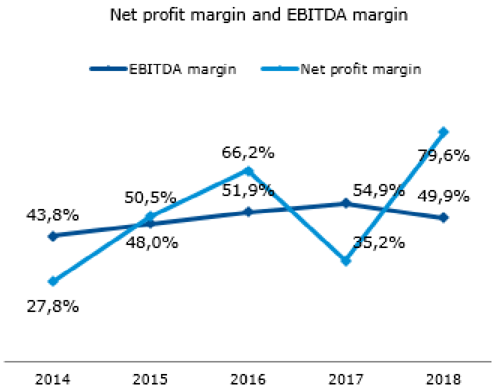












I. 5. GPW on the Capital Market

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 1.54 billion as at the end of 2018, ranking #47 among all domestic stocks on GPW.

The Company is part of the mid-cap index mWIG40 since 19 March 2011 with a 1.74% share in the index portfolio at the end of 2018. GPW shares are also part of the broad market indices (WIG and WIG-Poland), as well as WIGdiv, the GPW regular dividend index. 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). In December 2018, GPW was for the sixth time running included in the RESPECT Index portfolio, which it first joined in 2013. Thus, GPW is one of 31 Polish companies which follow the highest environmental, social and governance standards.

The Company continues its growth trajectory. The updated strategy #GPW2022 lays long-term foundations for the Group's further growth. Our strong cash position and efficient operation protect our position of regional leader even under changing market conditions.

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. mWIG40dvp showed 138.83 points at 21 December 2018 (the day preceding the annual reset of the dividend index). The closing value of mWIG40 was 3,901.23 points at that date.

GPW STOCK PRICE

The GPW stock price ranged in 2018 from PLN 34.05 (20 November 2018) to PLN 48.65 (23 January 2018). The stock price was PLN 36.65 at the end of 2018, compared to PLN 36.6 as at 29 June 2018 and PLN 46.99 as at the end of 2017, falling 22% during the year. Including the dividend of PLN 2.20 per share, the total shareholder return in 2018 was 17.3%. 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]

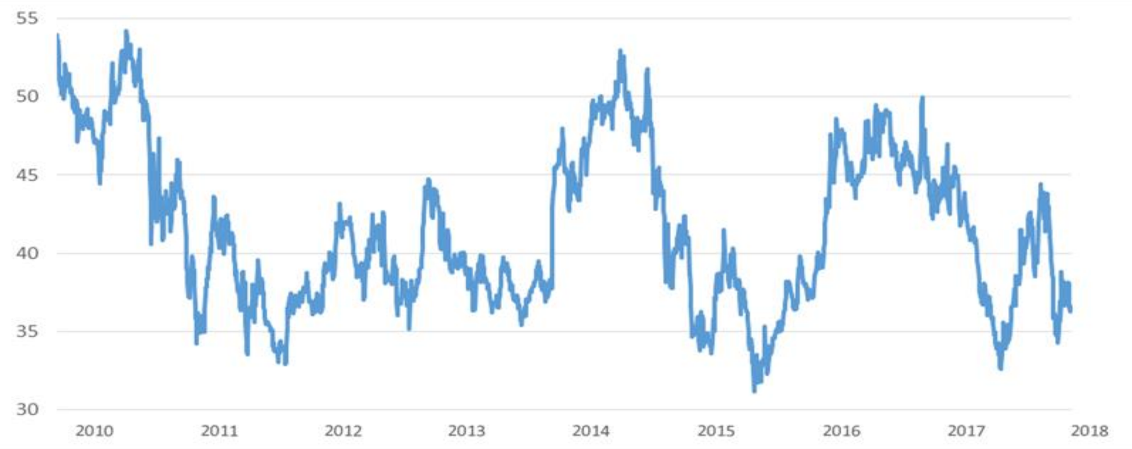


Figure 5 GPW stock price in 2018 v. mWIG40 and WIG [normalised]

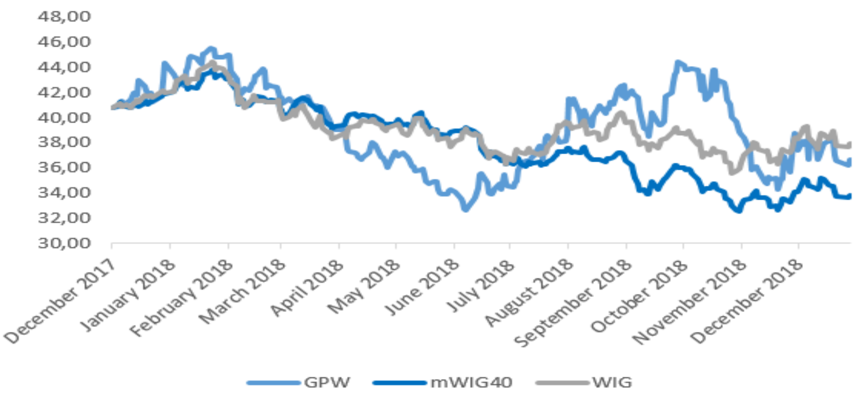


Table 8 Selected statistics of GPW SA stock

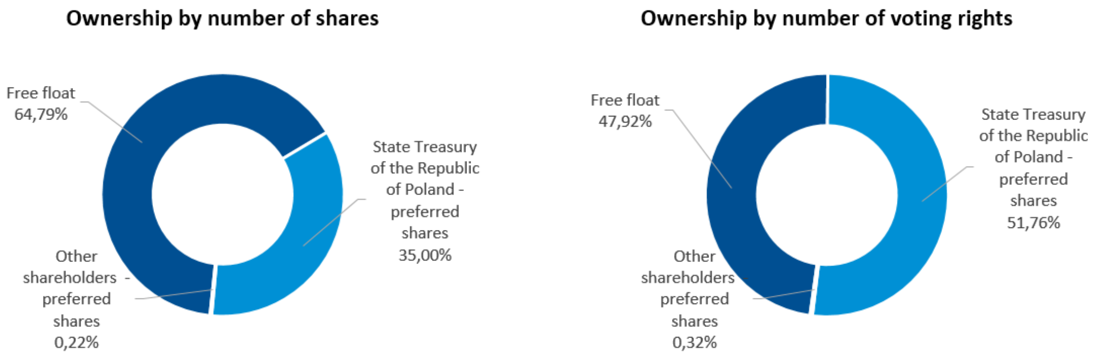
	2018	2017	2016	2015	2014	2013	2012	2011
Earnings per share (PLN)[5]	4.38	3.78	3.12	2.95	2.67	2.70	2.52	3.19
Dividend per share (PLN)[6]	2.20	2.15	2.36	2.40	1.20	0.78	1.44	3.21
Dividend yield[7]	5.8%	4.4%	6.7%	4.9%	3.3%	2.0%	3.8%	6.1%
P/E	8.4	16.9	12.8	12.2	17.1	15.4	15.4	11.1
Maximum share price (PLN)	48.65	49.98	41.57	53.00	48.04	45.10	43.89	54.20
Minimum share price (PLN)	34.05	39.06	31.05	34.53	35.25	34.75	32.10	34.20
Share price at the end of the period (PLN)	36.65	46.99	39.93	35.95	45.70	41.50	38.87	35.25
Average (volume) weighted share price PLN)	36.69	46.05	35.87	44.99	39.52	40.22	37.55	45.84
Return rate on shares	-22.0%	17.7%	11.1%	-21.3%	10.1%	6.8%	10.3%	-28.1%
Total shareholder return (TSR)[8]	-17.3%	23.1%	17.6%	-16.1%	13.0%	8.8%	14.4%	-21.5%
Number of shares (thousand)	41 972	41 972	41 972	41 972	41 972	41 972	41 972	41 972
Capitalisation (PLN million)	1 538	1 972	1 676	1 509	1 918	1 742	1 631	1 480
Free float[9] (PLN million)	997	1 278	1 089	978	1 241	1 127	1 054	948
Free float %	64.8%	64.8%	64.8%	64.8%	64.7%	64.7%	64.6%	64.1%
		14.8						
Volume of trading (million shares)[10]	14.8	10.9	11.8	11.7	14.5	14.8	19.2	25.9
Value of trading (PLN million)	589.5	501.9	424.00	526.4	571.8	596.1	720.7	1 188.5
Number of transactions (thousand)	98.9	90.2	89.7	63.0	68.8	67.3	73.3	170.6
Average volume of trading per session (thousand)	60.1	46.3	47.1	46.6	58.1	60.0	77.1	103.3
Average value of trading per session (PLN thousand)	2 386.5	2 007.7	1 689.1	2 097.4	2 296.2	2 413.4	2 894.2	4 735.0
Average number of transactions per session[10]	400	360.7	357.4	250.9	276.0	272.6	294.2	679.8
Velocity[11]	55.3	27.9%	26.9%	30.8%	31.2%	35.4%	46.2%	67.1%

5 Based on the consolidated profit attributable to the shareholders of the parent entity.
6 Based on last year's profit.
7 Dividend paid / share price at dividend record date.
8 (Annual change of share price + dividend per share) / share price at the end of the previous period.
9 Free-float shares (excluding shares held by the State Treasury and strategic investors).
10 Electronic Order Book (net of block trades).
11 Value of trading (annualised for 2018) / average capitalisation at the beginning and at the end of the period.

GPW SHAREHOLDERS

The State Treasury of the Republic of Poland was the biggest shareholder of GPW and the only shareholder with a stake greater than 5% of the share capital as at 31 December 2018: it holds 14,688,470 shares representing 35.00% of all shares and 51.76% of the total vote.

Figure 6 GPW shareholders as at the end of 2018



Polish open-ended pension funds jointly held 9.7 million GPW shares at the end of 2018, representing 23.0% of the share capital of GPW. According to GPW estimates, approximately 3% of shares were held by other domestic institutional investors (mainly investment funds), 21% directly by domestic individual investors, and 18% by foreign investors.

DIVIDEND FOR GPW SHAREHOLDERS

GPW is a financially stable company and has for many years paid regular high dividends to investors. The dividend yield was 5.8% in 2018.

According to the current strategy, it is the intention of the GPW Management Board to recommend that the General Meeting pay dividend depending on the profitability and the financial capacity of GPW, 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. The dividend is to be paid annually upon the approval of the Company's financial statements by the GPW General Meeting ("General Meeting"). To determine the final amount of dividend to be recommended to the General Meeting, the GPW Management Board will consider among others the following factors:

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

Dividend paid in 2018

GPW has paid the owners a dividend for each year since the company went public. On 2 August 2018, the Company paid PLN 92.3 million in dividend. The dividend of PLN 2.20 per share was paid to GPW shareholders who held shares at 19 July 2018 (record date). The dividend yield in 2018 at the closing price on 2 August 2018 was 5.8%.

Table 9 GPW dividend from profits in 2010-2017

Year for which dividend was paid	Dividend paid [PLN'000]	Dividend per share [PLN]	Dividend pay-out ratio*	Dividend yield**	General Meeting date	Dividend record date	Dividend payment date
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 share price as at the dividend record date*

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

***** Ordinary 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*

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 2018, 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 Ordinary General Meeting on 19 June 2018 and the Extraordinary General Meeting on 23 April 2018 continued on 22 May 2018;
- presentation and live broadcast of the GPW Group's updated strategy #GPW2022 on 27 June 2018;
- non-deal roadshow in the USA and Canada (6 cities),
- participation in seven international financial conferences for global institutional investors co-organised by GPW in London, Stockholm, New York, Paris, Frankfurt, Stegersbach (Austria) and Prague;
- participation in four conferences for institutional investors in Warsaw, including as a co-organiser of one;
- more than 100 one-on-one and group meetings and other contacts with representatives of domestic and international institutional investors.

In 2018, GPW once again presented its milestones, key events and strategic plans in an online Marketing Annual Report available at http://raportrocznygpw.pl/. The report features interactive tools which provide a broad picture of the developments in 2017.

GPW engages individual investors in active dialogue. In addition to information published by the Company on its website, the activities in 2018 focused on proactive communication with investors, distribution of all necessary information, as well as direct contacts with the Company's representatives, including:

- Individual Investor Days and Open Doors Days on 20 and 21 April;
- a chat for investors featuring the GPW Vice-President and CFO;
- 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.

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 2018.

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 2017. 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 2018 from PLN 101.35 on 15 June 2018 to PLN 102.98 on 3 January 2018.

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 2018 from PLN 100.10 on 10 January 2018 to PLN 100.98 on 3 January 2018 and from 24 August to 31 August 2018.

Table 10 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

II. ACTIVITY OF THE GPW GROUP

II. 1 Market Environment

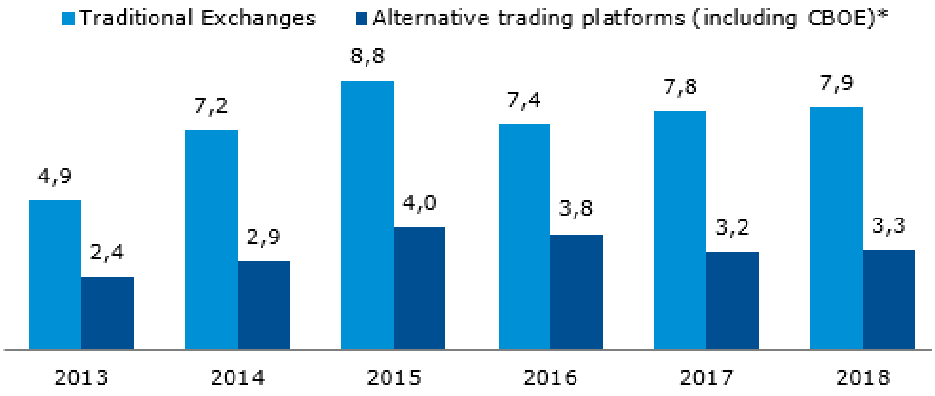
FINANCIAL MARKET

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[12] 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,[13] the biggest stock trading venue in Europe in 2018.

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 for several years by the London-based venue Turquoise and, since 5 November 2018, by CBOE Europe Equities. However, save for several short periods, neither of them reports any trading. This could suggest that smaller markets, such as GPW, tend to concentrate trading.

Alternative trading venues which support trading in Polish stocks offer significantly lower execution costs but are much less competitive in terms of the cost of clearing and settlement. To address potential risks of competitive trading venues, GPW focuses on improvements to the liquidity of the stock market and the quality of the electronic order book. GPW has extended price promotions for electronic traders (HVP, HVF) and implemented incentive schemes for market makers. GPW has launched and improved system functionalities which address the needs of large ticket traders.

Figure 7 Equity trading on European FESE exchanges and alternative trading venues[14] [EUR bn]



*According to FESE, CBOE Europe Equities is classified as a regulated market. On this charts we present it as Alternative trading platform

Source: FESE – European Equity Market Report

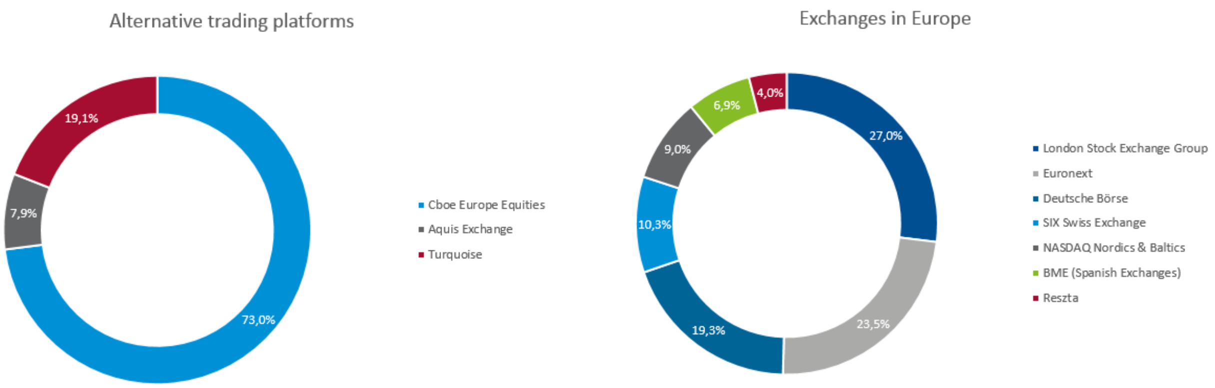
According to FESE classification, in 2018, MTFs (Turquoise, Aquis Exchange) and CBOE Europe Equities (originally an MTF, recently classified as a regulated market by FESE) generated EUR 3.3 trillion or 29.1% of European stock trade on the electronic order book.

[12] OTC (over the counter) market, where trade is made directly between market participants without the mediation of a securities exchange.
[13] Formerly BATS Europe. CBOE Equities Europe is classified as a regulated market under MiFID 2.
[14] MTFs (Turquoise, Aquis Exchange) and former MTF, CBOE Europe Equities (regulated market according to FESE classification)

The total value of trade on the electronic order book in Europe (including exchanges and MTFs) was EUR 11.2 trillion in 2018, an increase of EUR 0.2 trillion or 1.8% year on year.

CBOE Europe Equities was the leader in Europe by the size of trading on the electronic order book in 2018.

Figure 8 Concentration of turnover in stocks on the electronic order book on exchanges and MTFs in Europe in 2018



Source: FESE – European Equity Market Report, WFE

According to the FESE European Equity Market Report[15], traditional exchanges had a much lower concentration of trade in stocks than MTFs in 2018: the top MTF was CBOE Europe Equities.

The top venues which generated the highest turnover in stocks on the electronic order book in Europe in 2018 included: CBOE Europe Equities (EUR 2.4 trillion; share 21.2%), London Stock Exchange Group (EUR 2.1 trillion; share 19.1%), Euronext (EUR 1.9 trillion; share 16.6%) and Deutsche Boerse (EUR 1.5 trillion; share 13.7%). GPW generated 0.43% of the total trade in stocks on the electronic order book in Europe in 2018.

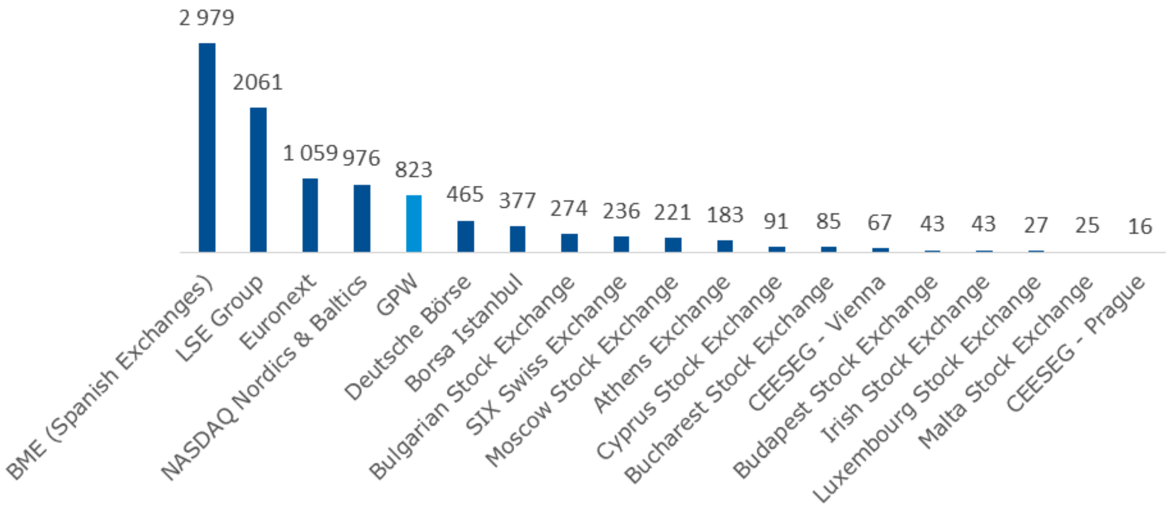
Number of Listed Companies

All European exchanges listed 7,519 domestic companies at the end of 2018. The Spanish exchange BME had the biggest number of listings (2,979 companies) accounting for more than 39.6% of all European listings. GPW ranked fifth with 823 domestic companies representing 10.9% of the total number of domestic companies listed on European exchanges.

GPW's regulated market lists 465 companies (414 domestic companies and 51 foreign companies) and NewConnect lists 387 companies (381 domestic companies and 6 foreign companies). There were 7 IPOs on the main market and 15 IPOs on the alternative market in 2018.

[15] http://www.fese.eu/statistics-market-research/european-equity-market-report

Figure 9 Number of domestic companies listed on European exchanges in 2018



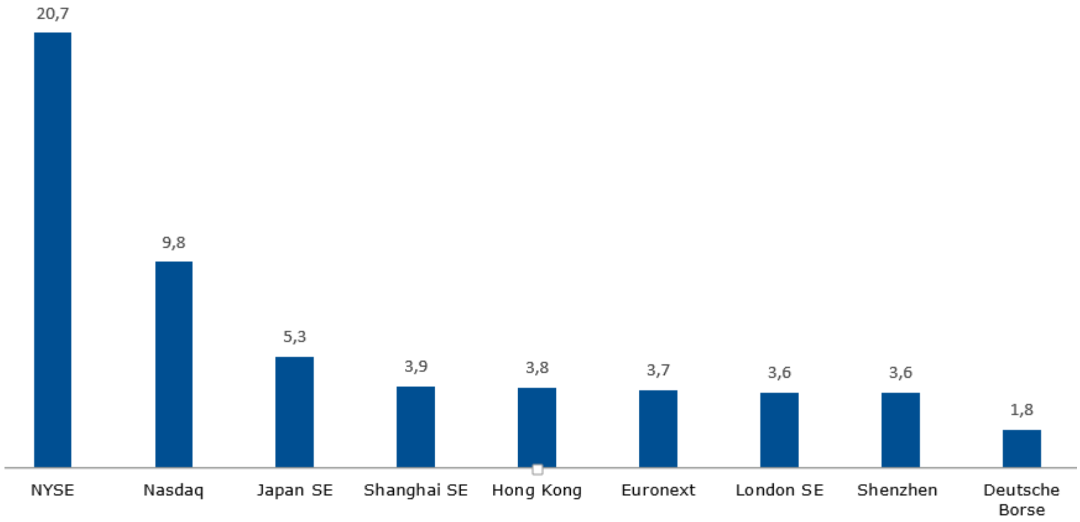
Source: FESE, WFE

Capitalisation of Stock Markets

According to WFE, in 2018, the total capitalisation of all exchanges globally decreased by 12.9% to USD 74.5 trillion at the year's end (source: WFE).[16] The biggest decrease in capitalisation (by 17.8% to USD 23.9 trillion) was reported on the exchanges in Asia and Pacific whose share in the total capitalisation of all exchanges globally was 32.1% at the end of 2018. The US exchanges which have the biggest share in the total capitalisation of all exchanges globally (45.9%) reported a decrease of capitalisation by 6.3% to USD 34.2 trillion. Exchanges in EMEA (Europe, Middle East, Africa), including GPW, reported a decrease of capitalisation of domestic companies by 17.7% year on year to USD 16.4 trillion. With a decrease of capitalisation of domestic companies by 20.3% year on year to USD 160.5 billion, GPW was the 12th biggest EMEA exchange. The biggest global exchange was NYSE with a capitalisation of domestic companies at USD 20.7 trillion at the end of 2018, followed by NASDAQ with a capitalisation of USD 9.8 trillion, Japan Stock Exchange – USD 5.3 trillion, Shanghai SE – USD 3.9 trillion, Hong Kong SE – USD 3.8 trillion, Euronext – USD 3.7 trillion, London SE – USD 3.6 trillion, Shenzhen SE – USD 3.6 trillion and Deutsche Boerse – USD 1.8 trillion.

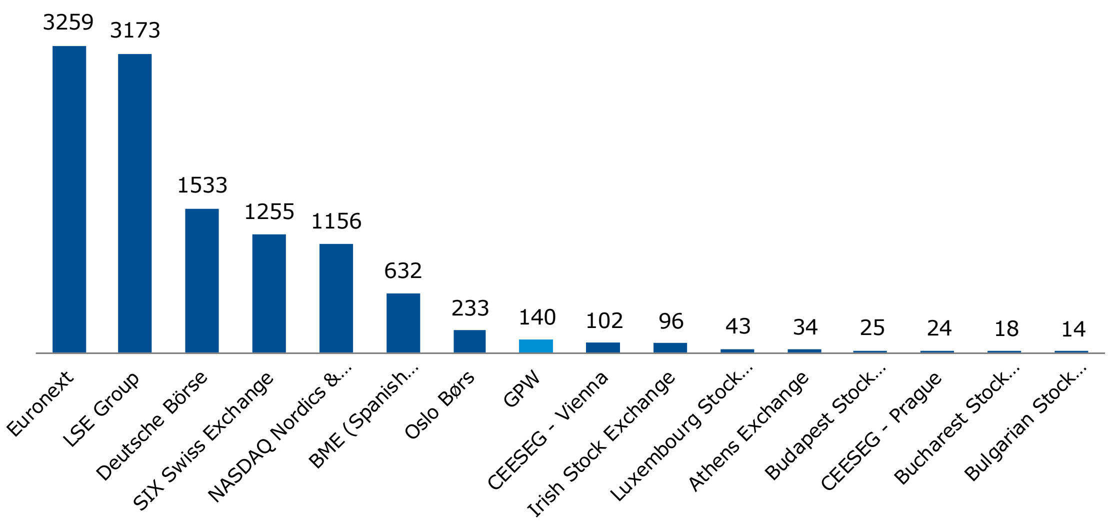
[16] https://focus.world-exchanges.org/issue/january-2019/market-statistics

Figure 10 Capitalisation of domestic companies on exchanges in 2018 according to WFE [EUR trillion]



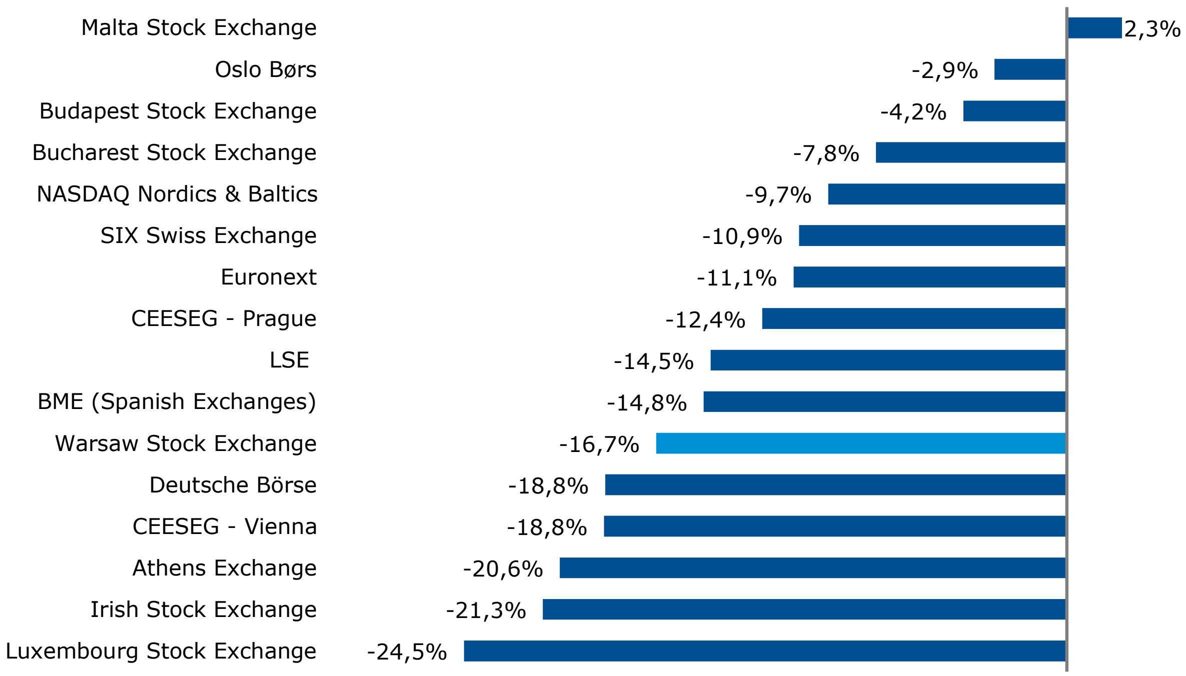
Below are FESE statistics (in EUR billion) of the capitalisation of domestic companies on European exchanges. The biggest exchange is the Euronext Group (EUR 3,259 billion) followed by the LSE Group (EUR 3,173 billion) and Deutsche Boerse (EUR 1,533 billion). With a capitalisation of EUR 140 billion, GPW ranks eighth.

Figure 11 Capitalisation of domestic companies on European exchanges in 2018 [EUR billion]



Source: FESE, (monthly statistics, December 2018); LSE Group data based on WFE statistics and converted from USD to EUR

Figure 12 Change in capitalisation of domestic companies on European exchanges in 2018 [% change in EUR]



Source: FESE (monthly statistics, December 2018); LSE Group data based on WFE statistics and converted from USD to EUR

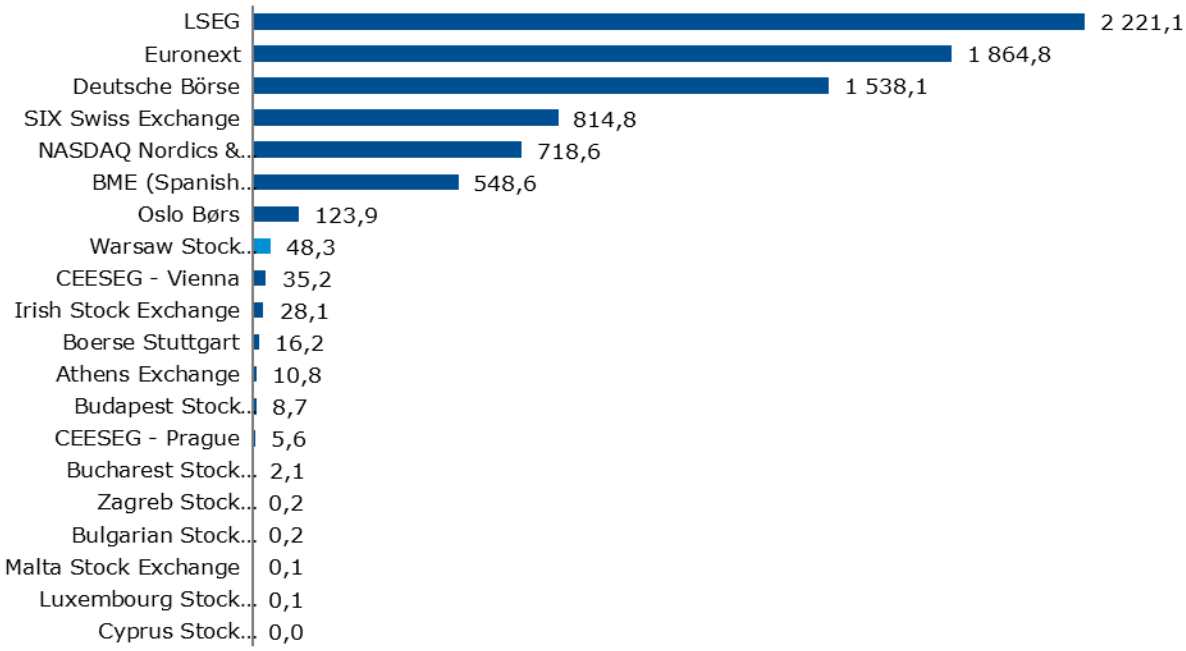
Equity Trade

According to WFE, the total value of trade in shares of domestic companies on the electronic order book was USD 97.4 trillion globally in 2018, an increase of 17.7% year on year, mainly driven by a 35.7% increase (to USD 54.6 trillion) in the value of trade on US stock exchanges which generated 56.1% of total trade in shares globally in 2018. The value of trade in shares on EMEA exchanges increased by 11.1% to USD 13.6 trillion mainly due to an increase in the value of trade on LSE Group, Euronext and Deutsche Boerse. Asian exchanges reported a year-on-year decrease in the value of trade in shares by 3.6% to USD 29.2 trillion.

According to FESE statistics, the value of trade in shares on the electronic order book on GPW decreased by 13.4% to EUR 48.3 billion (in PLN: by 13.6% to PLN 204.3 billion). The value of trade in shares on the electronic order book on European exchanges was EUR 8.0 trillion in 2018 vs. EUR 7.8 trillion in 2017, an increase of 2.6% year on year.

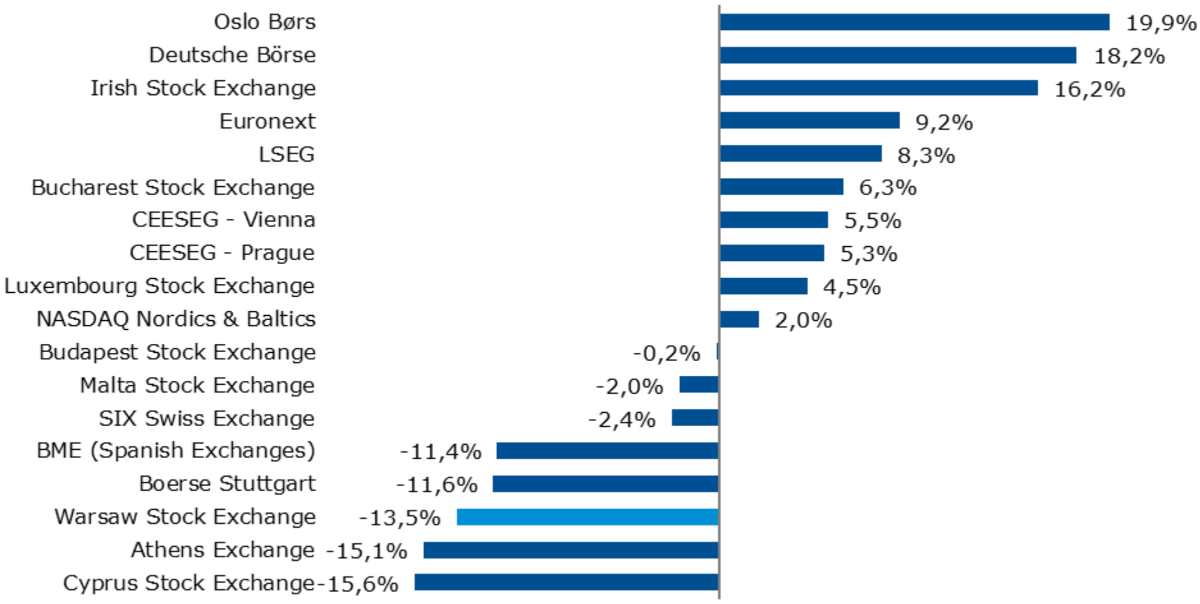
The biggest turnover in shares on the electronic order book on the European market was generated by the LSE Group (EUR 2.2 trillion), followed by Euronext (EUR 1.9 trillion), Deutsche Boerse (EUR 1.5 trillion), SIX Swiss Exchange (EUR 0.8 trillion), Nasdaq Nordiqs&Baltics (EUR 0.7 trillion) and BME (EUR 0.5 trillion). The concentration of the top six exchanges with the highest turnover in shares in 2018 was 96% of the total turnover in Europe. GPW's share in European turnover was 0.6% in 2018.

Figure 13 Value of trade in shares on European exchanges in 2018 [EUR billion]



Source: FESE (monthly statistics, December 2018); LSE Group data based on WFE statistics and converted from USD to EUR

Figure 14 Change in the value of trade in shares on European exchanges in 2018

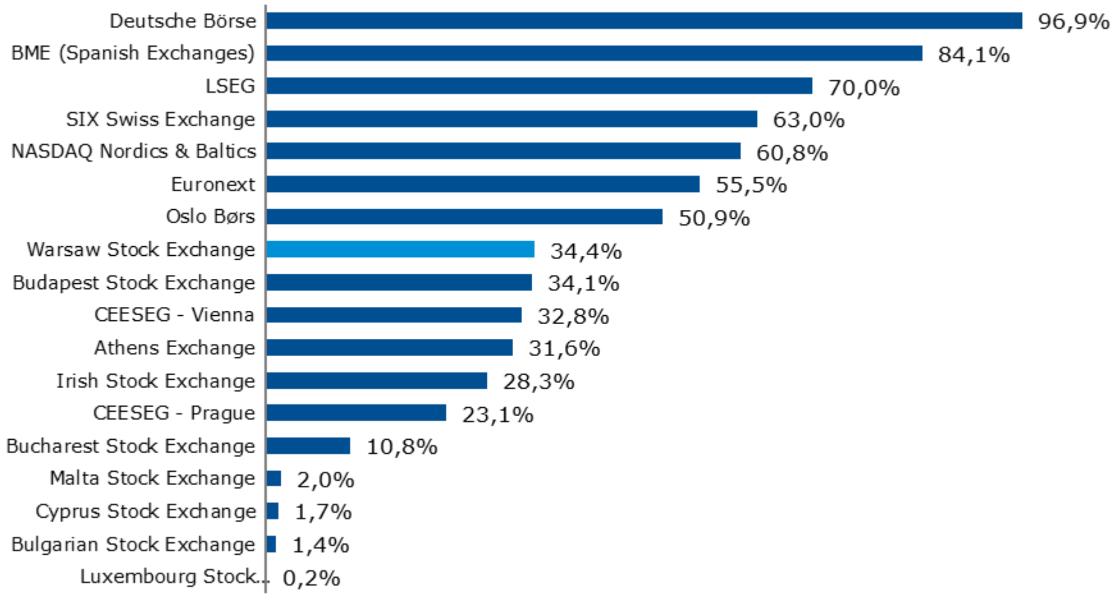


Source: FESE (monthly statistics, December 2018); LSE Group data based on WFE statistics and converted from USD to EUR

Velocity

Velocity measured as turnover to average monthly capitalisation on European exchanges was 37.1% in 2018 (based on FESE data in EUR). The highest velocity ratio was reported by Deutsche Borse, BME and the London Stock Exchange Group. GPW's velocity ratio was 34.4% in 2018.

Figure 15 Velocity[17] on European exchanges in 2018



Source: FESE, WFE for LSEG

To summarise, 2018 was very demanding and challenging for GPW compared to other European exchanges. GPW's share in the capitalisation of domestic companies on European exchanges was 1.07% in 2016, 1.24% in 2017 and 1.19% in 2018.

COMMODITY MARKET

Energy and Gas Market

- ✓ 2018 was a record-breaking year as measured by volumes of trading in electricity and gas on TGE. It was the third consecutive record year on the gas market. The electricity market saw a reversal of the downtrend reported in 2016-2017.
- ✓ The volume of trading in electricity forwards picked up early in the year as turnover grew by more than two-thirds year on year in January and February. March brought a breakthrough as the monthly volume of trading crossed 15 TWh for the first time since November 2015 and reached 17.9 TWh. The prices of CO_2 emission allowances started to rise sharply, causing higher electricity prices and more volatility; as a result, trading volumes grew rapidly. The volumes remained stable until mid-year but the expected increase of the mandatory level of sale on the exchange bolstered trading in H2. Under those circumstances, September 2018 was the best month as measured by turnover on the exchange since 2010: the total volume of spot and forward transactions was 30.8 TWh, including 28.6 TWh of forward transactions. The year closed at a record-high volume of 198.3 TWh on the forward market and 226.1 TWh of total

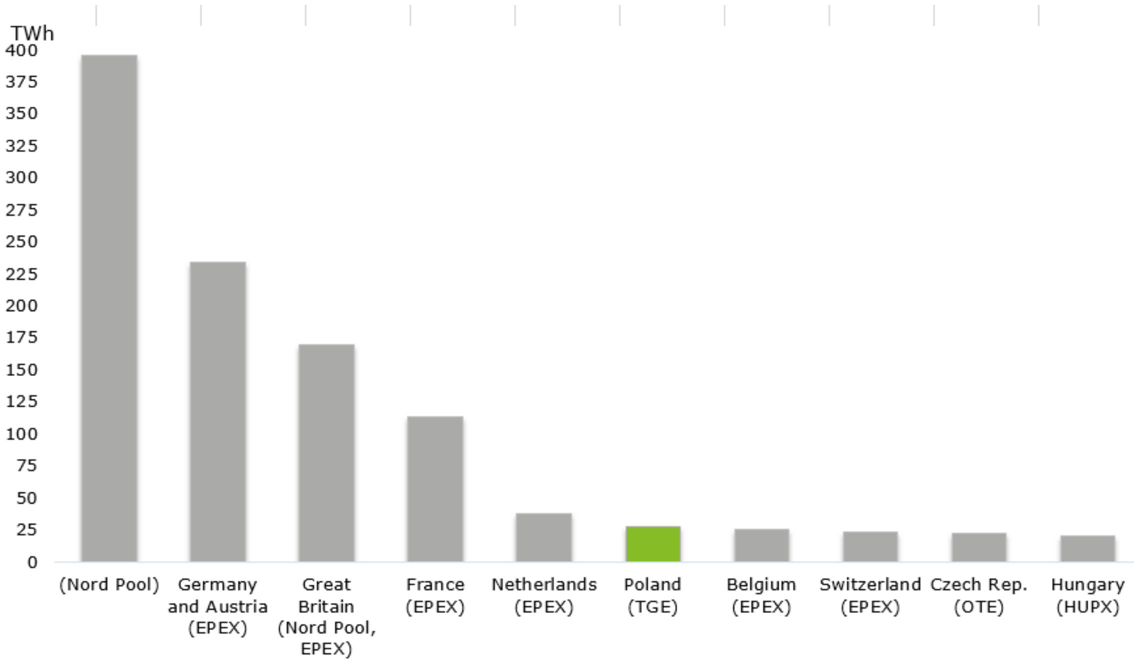
[17] Velocity measured as turnover in 2018 to average capitalisation at the end of each month on exchanges.

turnover (21.0% more than the previous record from 2014 and up by 102.5% year on year). The volume of spot transactions alone increased by 9.8% year on year and reached 27.7 TWh in 2018, which was 0.1 TWh more than the previous record from 2016. The legal amendment which raised the level of mandatory sale of electricity on the public market to 100% of domestic production was signed into law by the President of Poland in December 2018. However, in view of significant new exemptions from the obligation, the amendment may fail to boost trading in electricity on the exchange year on year in 2019.

- ✓ The key regulations governing the gas market remained unchanged; consequently, the key driver of trading on the exchange were sharp changes of prices linked to oil prices, which started to rise in February and dropped rapidly in Q4. Turnover on the TGE spot market was stable year on year in 2018 (down by 1.3% YoY) but high turnover in H2 boosted volumes of forward transactions by 4.3% (119.6 TWh). The total volume of trading in gas on the exchange reached 143.3 TWh, which was 3.4% more than the previous record reported in 2017.
- ✓ In view of all those factors, including rising prices of oil, emission allowances, as well as coal, the prices of electricity and gas on European exchanges rose sharply in 2018. The turnover on spot markets in gas increased rapidly, as well, but the volume of forward transactions dropped significantly. The trend was mainly set by the biggest European hub: TTF in the Netherlands. The volume of spot trading in electricity grew in 2018, mainly driven by the development of the European intraday market in the XBID project. The volume of electricity futures in Europe also increased with the exception of Nasdaq Commodities (mainly the Nordic market) whose turnover declined for a second year running. The marked difference between the German and the Nordic market is also due to the fact that the EEX Group reports trading volumes including cleared transactions outside the sessions; the comparable volume of Nordic contracts traded in Nasdaq was 952 TWh in 2018 (twice the volume traded at sessions, down by 10% YoY).

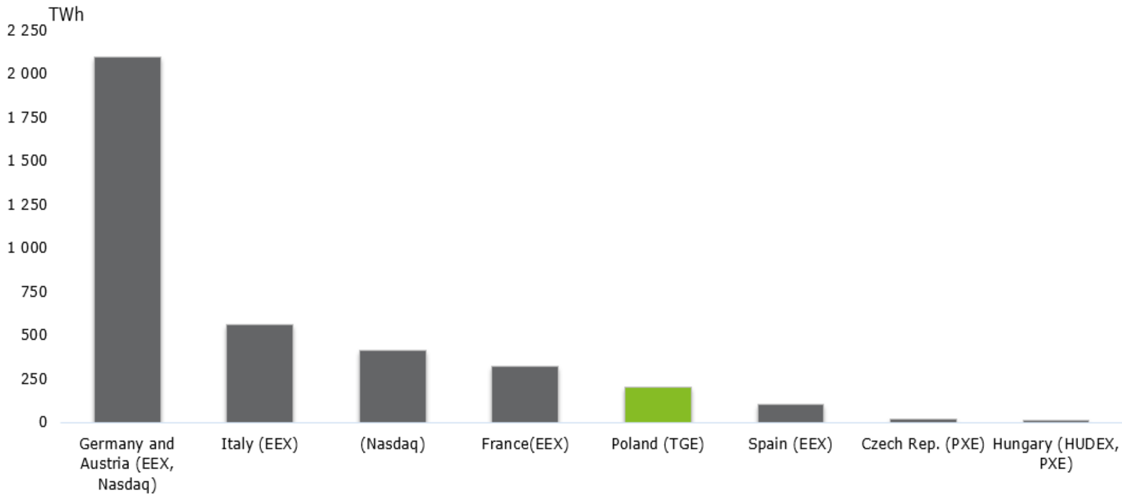
Volumes of Trade in Electricity and Gas in European Hubs

Figure 16 Volume of trade in electricity on European exchanges in 2018 (spot) [TWh]



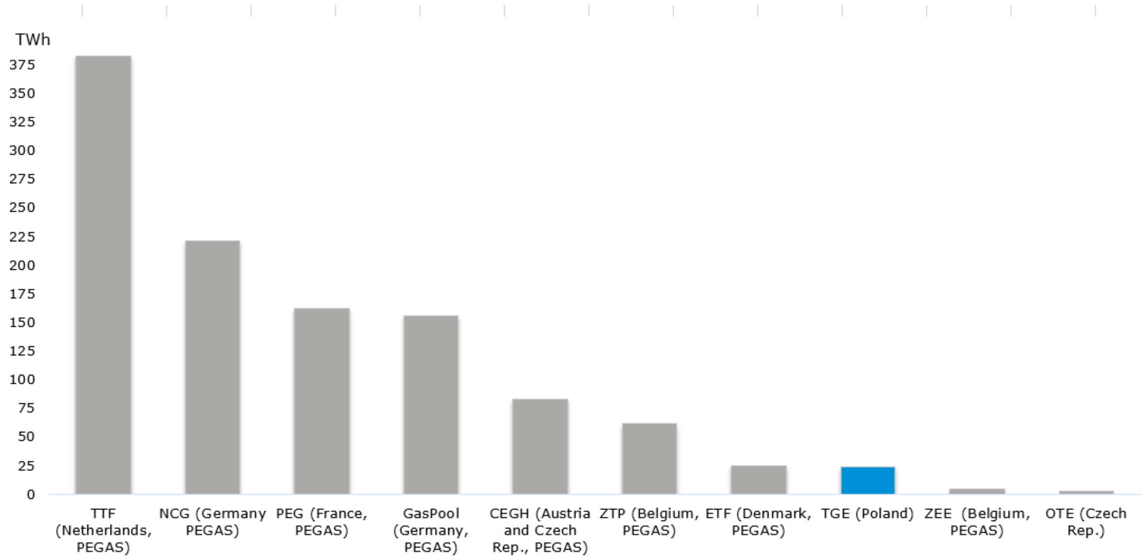
Source: TGE based on exchange data

Figure 17 Volume of trade in electricity on European exchanges in 2018 (forward) [TWh]



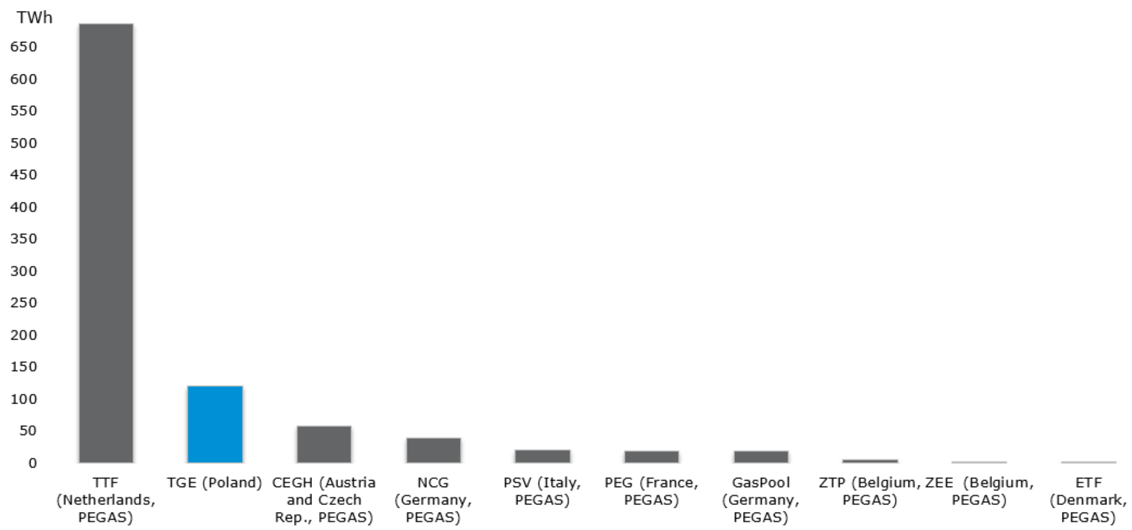
Source: TGE based on exchange data, estimates for EEX

Figure 18 Volume of trade on European gas exchanges in 2018 (spot) [TWh]



Source: TGE based on exchange data

Figure 19 Volume of trade on European gas exchanges in 2018 (forward) [TWh]



Source: TGE based on exchange data

The example of other European countries confirms that the outlook is strong for the exchange energy market and its importance may increase for two reasons. First, when it comes to the electricity market, the volume of transactions on the exchange may increase in relation to the volume of bilateral trading; second, there is room to grow the overall liquidity of trade in commodities. The development of infrastructure supporting imports of both commodities and generation of electricity certainly helps but it is as important for TGE to establish closer relations with traders in order to align its organisation with their specific needs.

Property Rights

- ✓ An amendment of the Act on Renewable Energy Sources which took effect in 2018 triggered a series of RES auctions held at the end of the year. The regulatory amendment increased the mandatory level of green certificates to 19% of sales to end customers in 2019 and 20% in 2020. These numbers include 0.5% allocated exclusively to energy from agricultural biogas. The mandatory levels were raised by 1 percentage point (the allocation to energy from biogas remained unchanged). Following the limitations imposed in 2017 on the option of making substitution payments in order to meet the obligation, the amendments drive bigger volumes of trading on the exchange. The turnover remains high despite the emerging alternative RES support system based on auctions organised by the Energy Regulatory Office. Turnover in green certificates on the Property Rights Market was approximately 30.1 TWh in 2018, the second highest level in TGE's history (after 32.1 TWh in 2014).
- ✓ Another significant legal amendment came with the Act on Promotion of Electricity from Cogeneration, which links to the phasing out of the cogeneration support scheme based on certificates issued and traded on the exchange. The current scheme operates on TGE for production from 2018 and will end after June 2019.

II. 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 the growth strategy update #GPW2022, the GPW Management Board with the approval of the Exchange Supervisory Board presented 14 strategic initatives to strengthen the business position of the GPW Group

#GPW2022 reaffirms the Company's strategic ambitions by 2020 published on 30 October 2014 as follows:

- revenue CAGR 7%,
- EBITDA to double in 2020 vs. 2013,
- cost income under 0.5,
- dividend yield above 60%.

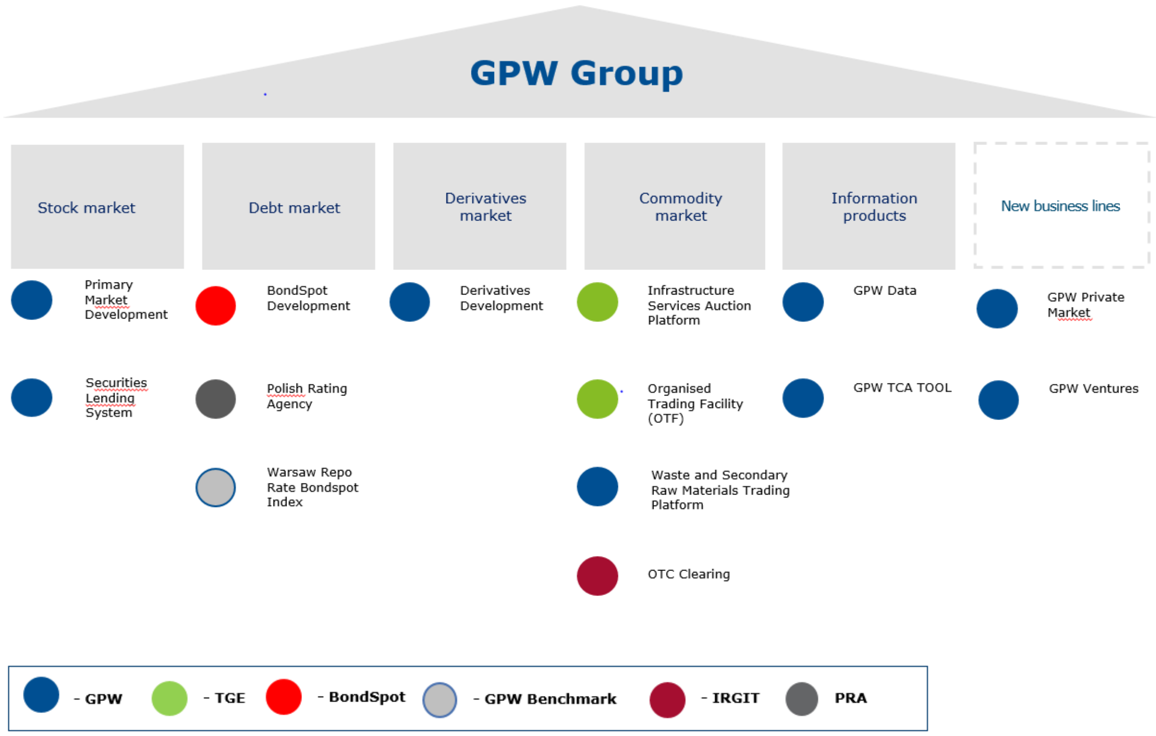
In #GPW2022, the GPW Management Board with the approval of the Exchange Supervisory Board presented 14 strategic initiatives to strengthen the business position of the GPW Group.

#GPW2022 strategic initiatives (in random order):

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. **SLB** – 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 promotion 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. Improvement of GPW Group's innovative edge with investments in technology start-ups;
6. **BondSpot Development** – a full range of products and services on the debt market (Treasury bonds, corporate bonds), money market and market in derivatives based on bonds and interest rates on a single trading venue;
7. **Warsaw Repo Rate, BondSpot and GPW Benchmark** – two new benchmarks on the bond market and the money market, transparent and stable benchmark calculation methods based on transaction data, improved transparency of transactions on the financial market, compliance with Benchmark Regulation No 2016/1011 of 8 June 2016 ("BMR");
8. **Instytut Analiz i Ratingu** (new name: Polska Agencja Ratingowa) – promotion of reliable ratings on the local fixed-income market, generating tangible benefits for the Polish economy in the mid-term;
9. **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;

10. **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;
11. **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;
12. **Infrastructure Services Auction Platform** – auction platform of infrastructure services for the electricity and gas markets;
13. **OTC Clearing** – clearing of electricity and gas forwards on organised trading facilities and in OTC trade;
14. **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.

Chart 3 Strategic initiatives in the #GPW2022 strategy update



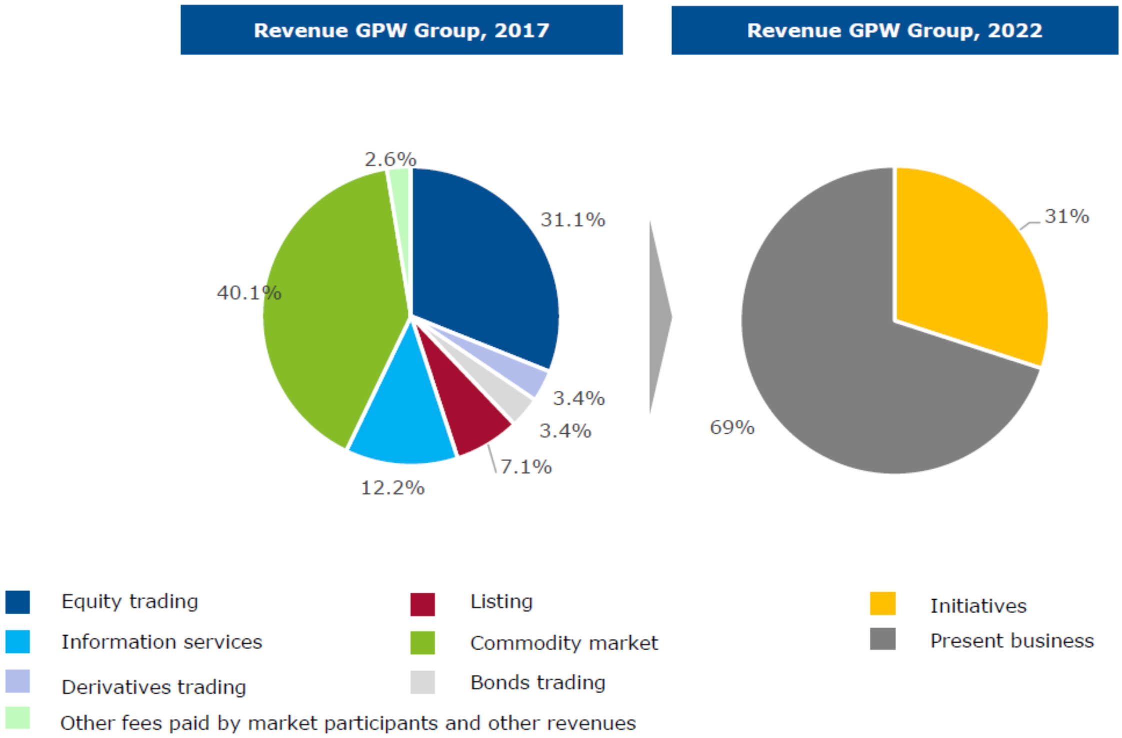
The updated growth strategy #GPW2022 provides for creation of shareholder value through the development of existing and new business lines and segments and continued profitability and risk management regime.

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.

Chart 4 Change of the GPW Group's revenue structure, 2017 vs. 2022



In 2018, the Ministry of Finance in partnership with the European Bank for Reconstruction and Development worked on the Capital Market Development Strategy for Poland.

The draft Capital Market Development Strategy is on the agenda of legislative work of the Council of Ministers published on the official government website. According to the publication, the key objective of the project is to improve access to financing for Polish companies, in particular SMEs, based on reduction of the cost of financing and better diversification of types of financing and sources of capital. The draft is expected to be approved by the government in Q1 2019.

II. 3 Implementation of the GPW Group Strategy in 2018

The GPW Management Board with the approval of the Exchange Supervisory Board presented the updated growth strategy #GPW2022 on 27 June 2018. The strategy includes 14 strategic initiatives.

- The implementation of the strategic initiatives started in early July 2018.
- In late July 2018, the GPW Management Board distributed responsibilities for the initiatives among the GPW Management Board Members and communicated the responsibilities to the companies of the GPW Group, Departments and employees of the GPW Group.
- Projects and their completion dates were defined for the initiatives.
- The following project actions were completed in the early months of implementation of the updated strategy:
  - ✓ Project planning sheets were drafted (organisation, timelines of actions, teams and payments);
  - ✓ Project managers were appointed and recruited;
  - ✓ Project teams were appointed;
  - ✓ Project kick-off meetings were held and actions were initiated;

- ✓ Analysis was launched and business plans were reviewed (budget, timeline);
- ✓ Applications for grants were filed for selected projects;
- ✓ Project sheets were drafted at the end of September 2018 (general information, project description, required costs and benefits, timing, project team).

The business plan of the initiative OTC Clearing was reviewed in Q4 2018 in the implementation of strategic initiatives in view of the changing market environment. The project was eventually stopped.

Strategic initiative 15, Agricultural Commodity Market, was published in Q4 2018. The project will establish an electronic organised platform of trading in agricultural and food products.

Alignment of technology and infrastructure combined with addition of new investment instruments to GPW markets are the key pillars of the strategy #GPW2022. In the opinion of the Management Board, the initiatives will provide long-term benefits, attracting new investor groups and additional sources of revenue. The following actions under the strategy #GPW2022, relevant to the growth of the markets operated by the GPW Group, were completed in 2018.

Technology and security

- **100 percent availability of GPW's trading system:** In 2018, similar to previous years, GPW maintained 100 percent availability of the services provided by GPW's trading system (defined as the ability to place orders, execute trades, set prices, and publish market data).
- **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 2018, GPW's service offered attractive technologies and state-of-the-art solutions for clients in Poland and beyond. A new client was acquired and started to use GPW's colocation service.

Equity market

- **7 companies had their IPOs on the Main Market in 2018** (including 2 transfers from NewConnect to the Main Market). 15 companies were newly listed on NewConnect in 2018. GPW promoted the exchange as a potential source of capital for companies. Work on the GPW Growth project was initiated. The project will develop and implement a scheme of support for companies to create value through expansion using external sources of financing with a focus on the capital market. GPW is aware of interest in the primary market among potential issuers who are working on IPOs.
- **Trading fee reductions:**
  - ✓ A new maker taker price list for transactions in index futures was introduced in May 2018. An additional price list is available to participants of the High Volume Provider programme. The price list promotes passive orders (fee of PLN 0.2) over aggressive orders (PLN 1). Users of the maker taker price list for derivatives are required to maintain a minimum percentage of passive orders at 60% of all orders during the month.
  - ✓ The cap on fees for options in the HVP programme was reduced from PLN 0.70 and PLN 0.60 to PLN 0.50 and PLN 0.35, respectively, in October 2018. The reduction followed from an update of the price list and improved liquidity of the instrument.
  - ✓ A reduction of fees for market makers of non-WIG20 shares was effective throughout 2018. 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.

- ✓ A promotion with no fees for exchange members for trade in bond futures and trade in WIBOR futures was extended in 2018 and is available until the end of February 2019.
- ✓ The Super Market Maker programme was in effect in 2018. The programme supported liquidity of the cash market and the volume of trade in shares of the biggest companies ranking 1 to 20 in the WIG20 portfolio. The programme imposed much higher requirements for market makers' orders on GPW (size, spread, share in turnover) but it also provided eligible participants with reimbursement of part of transaction fees and revenue sharing with the counterparty. 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 2018. 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: three new single-stock futures;
  - ✓ Development of the structured products segment; the number of certificates traded on GPW crossed the mark of 1,100 for the first time ever;
  - ✓ Four new exchange members: JP Morgan A.G., Morgan Stanley Europe S.E., Goldman Sachs Bank Europe S.E;
  - ✓ New external administrator: Fixnetix;
  - ✓ New client of GPW's colocation service;
  - ✓ Continued training dedicated to products offered to individual investors in partnership with brokerage houses: over 50 training sessions in partnership with brokers and capital market institutions.

- ♦ **Continued initiatives making NewConnect more attractive for investors**

The capitalisation of companies listed on NewConnect is ca. PLN 9 billion. The companies have raised ca. PLN 4.9 billion in IPOs and SPOs on NewConnect over 11 years. More than 60 companies have transferred from NewConnect to the GPW Main Market over those 11 years of operation of the alternative market. In 2018, 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 2018, 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.

- ♦ 100 series of PLN bonds and 6 series of EUR bonds were introduced to trading in 2018.

- 6 new issuers issued and introduced bonds to trading on Catalyst: Dino Polska S.A., Benefit Partners SP.Z O.O., Województwo Małopolskie, P.A. NOVA S.A., POZNAŃSKA KORPORACJA BUDOWLANA PEKABEX S.A., JHM DEVELOPMENT S.A.

The year 2017 brought big issues of banks and insurers including:

- ✓ EBI – PLN 2.5 billion
- ✓ SANTANDER – PLN 2.1 billion
- ✓ BGK – PLN 1.2 billion
- ✓ PKO BP – PLN 1.0 billion

Due to adverse market conditions, the value of public bonds issued under a prospectus in 2018 was PLN 910 million (including three issues of PKN Orlen worth PLN 600 million) vs. PLN 1.85 billion in 2017.

Derivatives market

New single-stock futures: to address investor demand, GPW introduced several new classes of single-stock futures in 2018:

- ✓ Single-stock futures were introduced to trading in September 2018 on shares of Livechat S.A., Ten Square Games S.A. and Playway S.A.

Key directions of development of the TGE strategy:

The directions of development programmes of TGE and its subsidiaries match the strategy of the GPW Group, the government programmes supporting the development of the Polish energy industry, market conditions, and the EU's proposed implementation of the European internal energy market.

According to the company's new strategy by 2022, the key business objectives of the TGE Group 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.

Existing business lines – areas of development:

- **Development of the spot electricity market**
  - ✓ Maintaining the position of TGE as Nominated Electricity Market Operator (NEMO) on the local energy market, safeguarding the Polish market against acquisitions by the largest foreign exchanges (EPEX Spot and Nord Pool Spot are NEMOs on the Polish market).
  - ✓ Participation in European energy market integration projects: Market Coupling trade on new cross-border connections, including XBID project for Intraday trade (TGE Intraday Market).

- **Development of the forward electricity market**

- ✓ Continued preparation of the Commodity Forward Instruments Market to become an OTF (Organised Trading Facility) under MiFID 2. Discretion, which is a specific property of OTFs under MiFID 2 and should improve liquidity of trade on TGE, was introduced on the Commodity Forward Instruments Market in late December 2017 and remained applicable throughout 2018. On 20 December 2018, TGE applied to PFSA for a licence to operate an OTF. The terms of trade on the exchange do not change during the application process.
- ✓ Development of a new model of market maker agreements in December 2018 with a public offer (for all Exchange Members) including specific terms and conditions for market makers of exchange-traded products, close alignment between the offer of TGE and IRGiT, new fee reductions (up to 2.5% of basic fees), reduced requirements for order volumes. The new model will be implemented in early February 2019.
- ✓ Decision to launch a new market maker incentive scheme, "Top Market Maker", rewarding one market maker on the electricity market every month with additional fee reductions. The scheme will be implemented in early February 2019 for the rest of the year.
- ✓ Decision to launch a "Maker-Taker" scheme supporting liquidity with reductions of variable fees paid by the trade initiator by 50%. The objective of the incentives is to reduce average market spreads, which will improve liquidity and boost market volumes. The scheme is open from January 2019 to the end of June 2019 subject to continuation, change or termination.

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.
  - ✓ Launch of trade in instruments with delivery of nitrogen-rich gas Lw (Day-Ahead and Intraday Market) on 19 December 2018.
  - ✓ Modification of Intraday market instruments aligning them with the clearing standards of the Transmission System Operator and expectations of market participants.

- ♦ **Development of the forward gas market**

  - ✓ Continued preparation of the Commodity Forward Instruments Market to become an OTF (Organised Trading Facility) under MiFID 2. Discretion, which is a specific property of OTFs under MiFID 2 and should improve liquidity of trade on TGE, was introduced on the Commodity Forward Instruments Market in late December 2017 and remained applicable throughout 2018. On 20 December 2018, TGE applied to PFSA for a licence to operate an OTF. The terms of trade on the exchange do not change during the application process.
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  - ✓ Decision to launch a new market maker incentive scheme, "Top Market Maker", rewarding one market maker on the electricity market every month with additional fee reductions. The scheme was implemented in early February 2019 for the rest of the year.

Development of TGE registers

- ✓ TGE is working to initiate legislative amendments of the Energy Efficiency Act extending the support scheme for energy efficiency, which should increase the volume of white certificates in the TGE Register and their trade. TGE is focusing on on-going marketing and communication to introduce Polish companies and local governments to the benefits of energy efficiency initiatives.

- ✓ TGE is planning to launch a new register of guarantees of origin from cogeneration in H1 2019.

Gas hub

- ✓ The gas hub is a government project under the Strategy for Responsible Development. The project is co-ordinated by the Minister of Energy. TGE participates in project work and focuses on the organisation of trade in gas in the future gas hub. The work includes 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 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 m^3 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.

Market data

- **Dynamic increase in the number of data vendors:** 26 Polish and international companies (including delayed data vendors) were licensed as GPW Group data vendors.
- **Continued fast growth of the sale of non-display data**: In 2018, with focused client acquisition initiatives, GPW attracted 12 new clients for non-display data (used in algorithmic trading, risk management, portfolio valuation, systematic internalisers, and other non-display applications).
- **Continued increase in the number of subscribers of GPW Benchmark, TGE and BondSpot data**
- **Six new clients** in Poland and the USA using processed data.
- **Licence agreements were signed with two companies** which use GPW indices in financial instruments: AgioFunds TFI which uses WIG20TR in Poland's first ETF (Beta ETF WIG20TR) and Expat which uses WIG20 in an ETF (Expat Poland WIG20 UCITS ETF).
- **Modification of the product offer and the business model** under MiFID2 requirements: GPW aligned its agreements and price lists with the new regulations and implemented a new service: KID (Key Information Document), which facilitates investor access to the documentation of structured products, certificates and derivatives.

Implementation of the GPW Group Strategy in 2019

The #GPW2022 strategic initiatives will be implemented in 2019. The GPW Group is planning to add human resources to the key projects and to monitor, review and update the initiatives.

- ✓ The updated strategy will be implemented in 2019. The implementation will be continuous and the initiatives will be monitored with monthly and quarterly reporting to the GPW Management Board and the Exchange Supervisory Board.

- ✓ A number of the 14 strategic initiatives will be completed in 2019.
- ✓ Following the implementation of the first initiatives, 2019 should bring the first specific benefits strengthening the business position of the GPW Group.

EXTERNAL DRIVERS OF THE GROUP'S GROWTH IN 2018

Macroeconomic Conditions in 2018

According to initial estimates of the Central Statistical Office (GUS), Poland's gross domestic product (GDP) stepped up to 5.1% in 2018 after 4.8% in 2016, the highest since 2007.

The key driver of economic growth in 2018 was consumer demand of households, which grew 4.5% year on year, slightly less than in 2017 (4.8%). However, the growth rate of private consumption remained strong, supported by very good conditions on the local job market: historically low unemployment, growing employment, including economic migrants, and the fastest growth of salaries in 10 years. The growth of investments stepped up sharply from 3.9% to 7.3% and the high growth of value added in construction (17%) suggests that it is driven mainly by infrastructure investments supported by continued absorption of European Union funds. Economic activity in other countries was neutral to growth, similar to 2017.

On 24 September 2018, the global rating agency FTSE Russell promoted Poland from Emerging Markets to Developed Markets. The promotion puts Poland among the world's 25 developed economies including the USA, the UK, Germany, France, Japan, Australia. Poland is the first country in a decade to be promoted to Developed Markets and the first Central and Eastern European economy to be named a Developed Market.

FTSE Russell reviewed the classification in view of the regulatory environment, infrastructure and quality of the capital market, the depository and clearing system, as well as the status of the derivatives market.

FTSE Russell indices serve as a benchmark for leading global investment funds. The classification results in moving companies from FTSE indices of Emerging Markets to FTSE indices of Developed Markets.

FTSE Russell is not the only index provider to upgrade Poland from Emerging Markets to Developed Markets. The upgrade of Poland by Stoxx, the Deutsche Boerse Group index operator, coincided with the FTSE Russell decision at the close of trading on 21 September 2018. Poland has been a Developed Market in the classification of both FTSE Russell and Stoxx since 24 September 2018.

Poland is still rated as an Emerging Market by the world's biggest index provider MSCI, which puts companies listed on GPW on the radar of investors active both on emerging and developed markets.

II. 4Business 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.

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

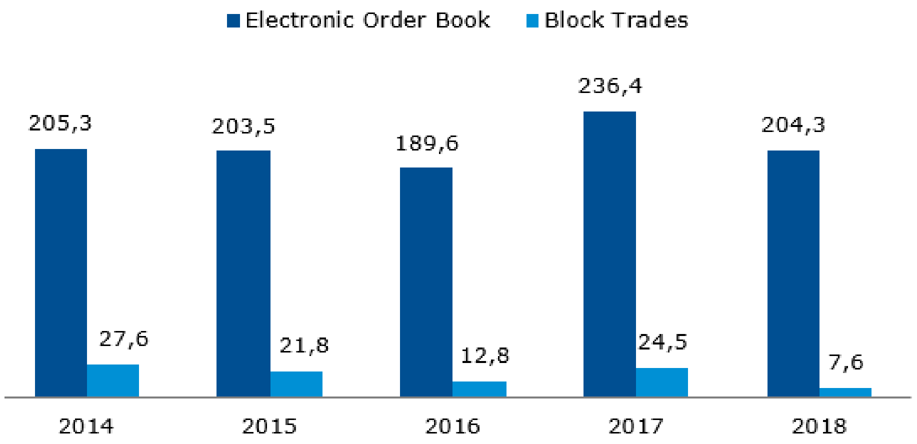
Trading encompasses trade in financial instruments on the Main Market and on GPW regulated markets NewConnect and Catalyst, and on Treasury BondSpot Poland.

Chart 5 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 204.3 billion in 2018, representing a decrease of 13.6% year on year (PLN 236.4 billion in 2017). The average daily value of trade on the was PLN 827.0 million, a decrease of 12.6% year on year (PLN 945.8 million in 2017). The number of transactions was 18.1 million in 2018, a decrease of 9.9% year on year (20.0 million in 2017). There were 247 trading sessions in 2018, three less than in 2017. FTSE Russell promoted Poland from Emerging Markets to Developed Markets in Q3 2018, which triggered record-high turnover in shares on 21 September at PLN 5.4 billion.

Figure 20 Value of trade in shares on the Main Market [PLN billion]



The value of trade on the electronic order book on NewConnect increased by 19.1% year on year to PLN 1,575 million in 2018 and the value of block trades decreased by 41.8% year on year to PLN 85.2 million in 2017. The number of transactions on the electronic order book was 755.4 thousand in 2017, a decrease of 11.2% year on year.

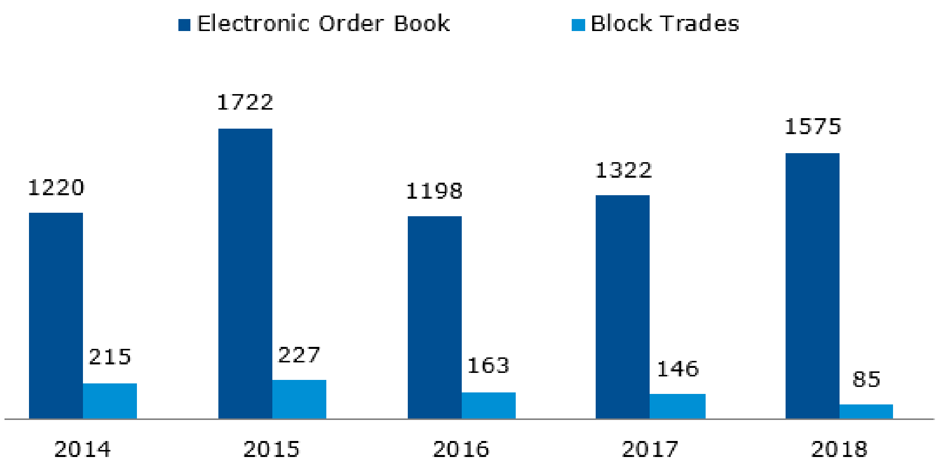
GPW organised the GPW Innovation Day, an investor event where listed companies meet with individual and institutional investors, on 17 April 2018.

The event gathered 31 institutional investors who held one-on-one meetings with 18 companies listed mainly on NewConnect.

The event brought together 200 individual investors. GPW is planning to hold the event again in 2019.

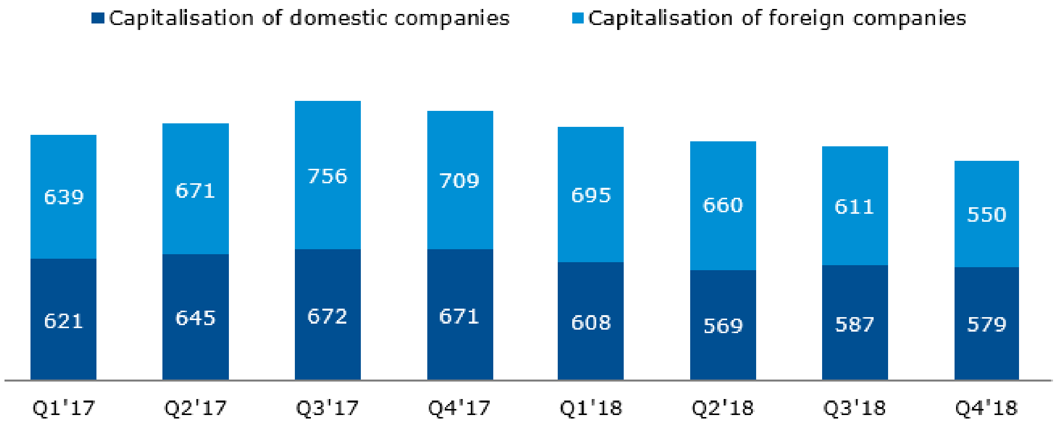
NewConnect is actively promoted among companies which could potentially be interested in listing on NewConnect. A dedicated Department of GPW regularly meets with individual companies and takes part in industry conferences to promote GPW's alternative market.

Figure 21 Value of trade in shares on NewConnect [PLN million]



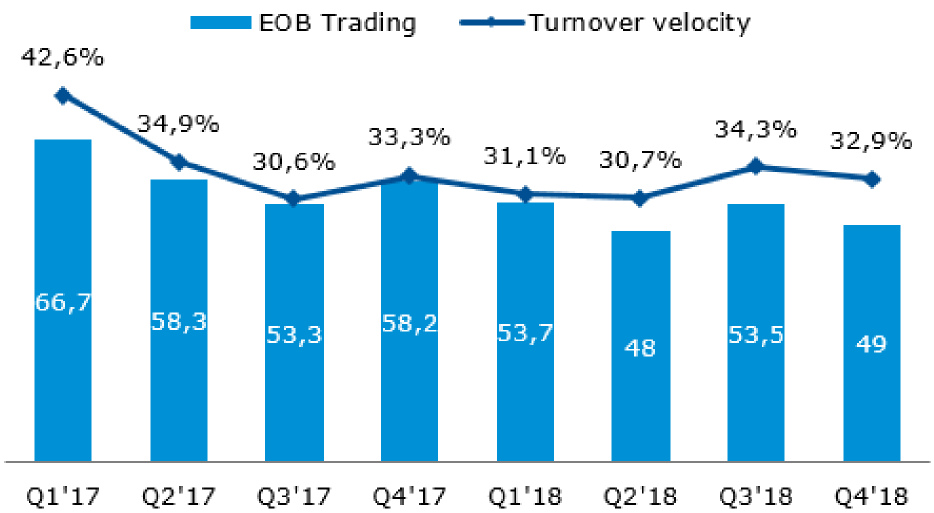
The capitalisation of domestic companies listed on the Main Market was PLN 579 billion at the end of 2018. The capitalisation of foreign companies listed on the Main Market was PLN 550 billion at the end of 2018.

Figure 22 Capitalisation of domestic and foreign companies on the Main Market [PLN billion]



Velocity reached its high of 42.6% in Q1 2017. The velocity ratio decreased in the later quarters of 2017. Velocity was 35.3% in 2017 compared to 35.2% in 2016. Velocity dropped to 31.1% in Q1 2018 and 30.7% in Q2, reaching 34.3% in Q3. Velocity dropped to 32.9% in Q4. The average velocity was 32.3% in 2018.

Figure 23 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 2018. The colocation service is a key part of the capital market infrastructure which supports the prop and algo trading segment and improves liquidity of the order book.

GPW attracted four new Exchange Members in 2018: JP Morgan A.G., Morgan Stanley Europe S.E., Goldman Sachs Bank Europe S.E, Michael Strom Dom Maklerski S.A.

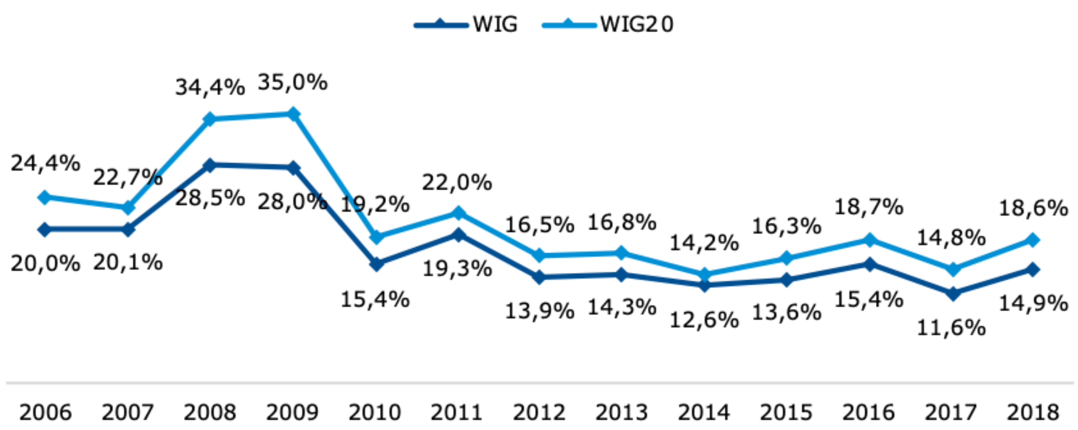
The Super Market Maker programme was in effect in 2018. The programme supported liquidity of the cash market and the volume of trade in shares of the biggest companies participating in the WIG20 portfolio. The programme imposed much higher requirements for market makers' orders on GPW (size, spread, share in turnover) but it also provided eligible participants with reimbursement of part of transaction fees and revenue sharing with the counterparty. Similar schemes which encourage market makers to offer better quotes are available for all classes of derivatives.

The HVP and HVF programmes were modified in 2018 and price promotions under the programmes were extended until 28 February 2019. HVP and HVF are special promotional programmes addressed to active investors on the stock and derivative market.

- **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 new thresholds are PLN 2.5 million on the cash market and 75 futures contracts or options on the derivative market.
- **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 on the derivatives market. The condition of generating average turnover at PLN 5 million on the cash market was waived until the end of March 2017. 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 sharp drop in 2017, volatility increased in 2018.

Figure 24 Annual volatility of WIG and WIG20



Other Cash Market Instruments

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

Table 11 Number of structured products, investment certificates, ETFs and warrants

As at 31 December (#)	2018	2017	2016	2015	2014
Structured products (certificates)	1151	942	784	702	744
Structured products (bonds)	0	1	0	0	4
Investment certificates	33	36	37	30	31
ETFs	3	3	3	3	3
Warrants	0	0	0	0	76

In total, GPW listed 1,151 structured products that were investment certificates, 36 investment certificates and 3 ETFs at the end of 2018, and the total value of trade in those instruments was PLN 1.1 billion in 2018, a decrease of 10.6% year on year. Structured products had the biggest share in total trade (79.9%), followed by ETFs (13.6%).

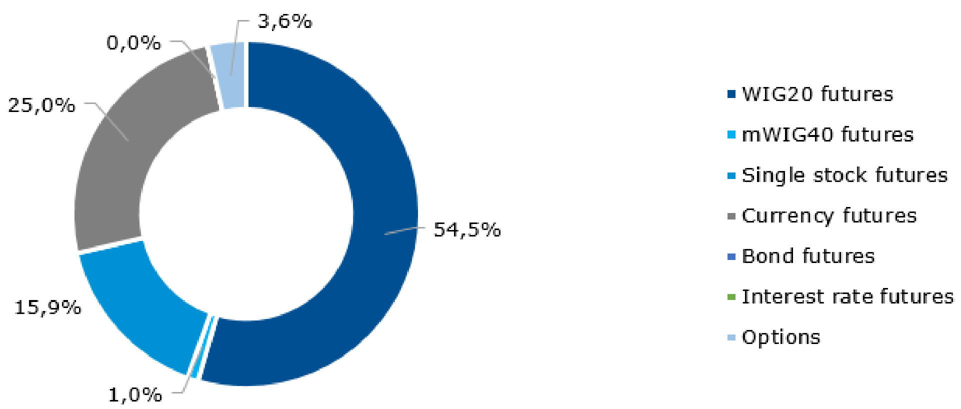
Derivative Market

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 54.5% of the volume of trade in all derivatives 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 15.9% of the total volume of derivative trade in 2018 (21.7% in 2017). The share of currency futures in the volume was 25.0% in 2018 (14.1% in 2017).

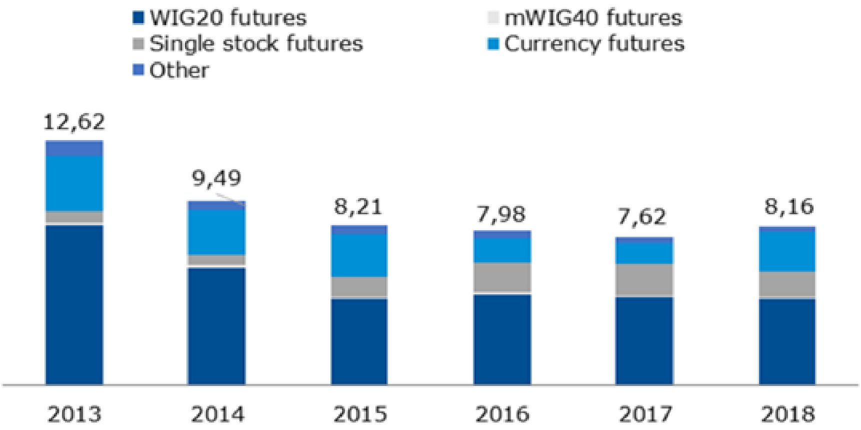
In 2018, GPW introduced to trading single-stock futures on shares of high-tech companies: Livechat, Playway and Ten Square Games. The multiplier (number of shares per contract) was 100 for all futures. Single-stock futures allow investors to use leverage, generate potential better returns on the upside and downside of stocks, and hedge against the price risk of the underlying.

Figure 25 Structure of volume of trade in derivatives in 2018 by category of instrument



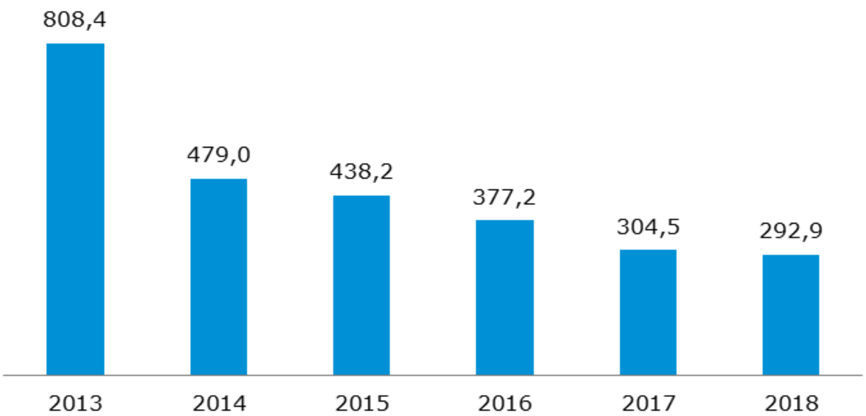
The total volume of trade in derivatives was 8.2 million instruments in 2018, an increase of 7.1% compared to 7.6 million instruments in 2017. The increase was mainly driven by a growing volume of trade in currency futures by 89.9% year on year to 2.0 million instruments and a decrease of the volume of trade in index futures by 1.2% year on year to 4.5 million contracts. The number of open interest was 143.6 thousand as at 31 December 2018, an increase of 2.5% year on year (140.1 thousand as at 31 December 2017).

Figure 26 Volume of trade in futures, EOB and block trades [million instruments]



The total volume of trade in options was 292.9 thousand instruments in 2018, a decrease year on year (304.5 thousand in 2017).

Figure 27 Volume of trade in options, EOB and block trades [thousand instruments]



The activity of investors on the derivative 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 higher in 2018 than in previous years and reached 18.6% in 2018 compared to 14.8% in 2017. 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 121 in 2018 compared to 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.

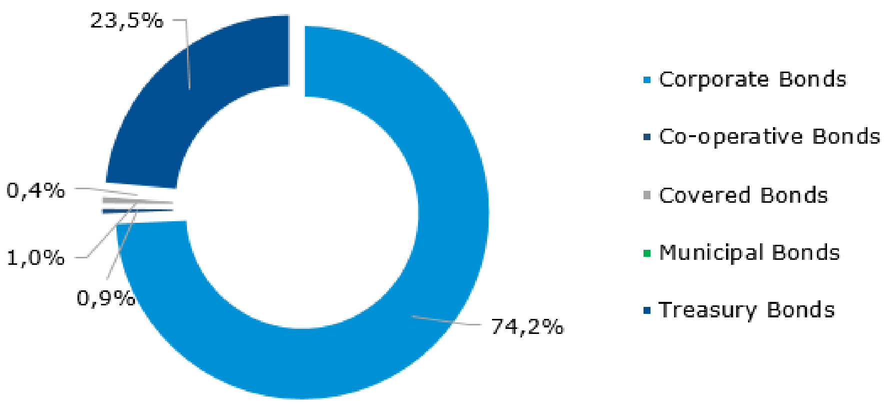
Liquidity on GPW's financial derivative market was additionally supported by the HVP and HVF programmes which continued in 2018. The share of programme participants in the volume of trade in derivatives on GPW in 2018 was 9.2% for index futures and 9.3% for single-stock futures.

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.

Figure 28 Structure of trade on Catalyst (EOB and block trades) in 2018 by instrument



The value of trade in non-Treasury instruments on the electronic order book on the markets operated within Catalyst was PLN 1,629 million in 2018 as compared to PLN 1,514 million in 2017 (an increase of 7.6% year on year) and the value of block trades was PLN 337 million in 2018 as compared to PLN 386 million in 2017. The total value of trade in non-Treasury and Treasury instruments on Catalyst was PLN 2,571 million in 2018 as compared to PLN 2,783 million in 2017, representing a decrease of 7.6% year on year.

Figure 29 Value of trade on Catalyst, EOB and block trades [PLN million]

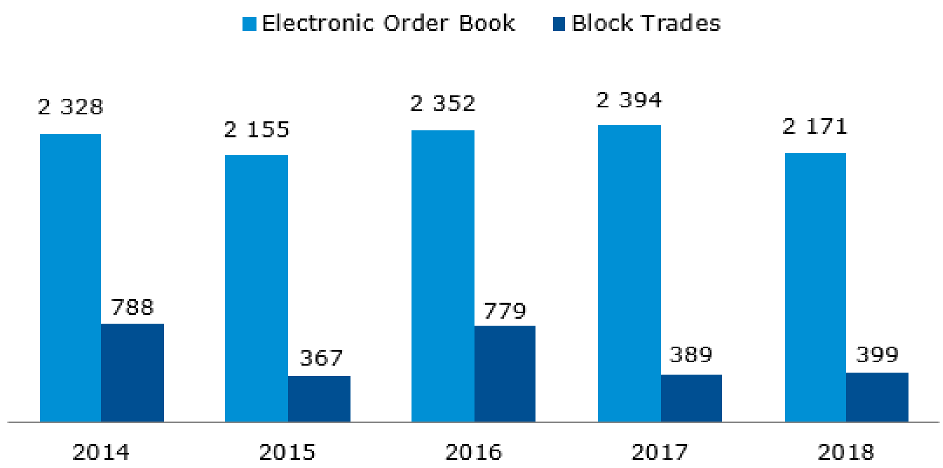
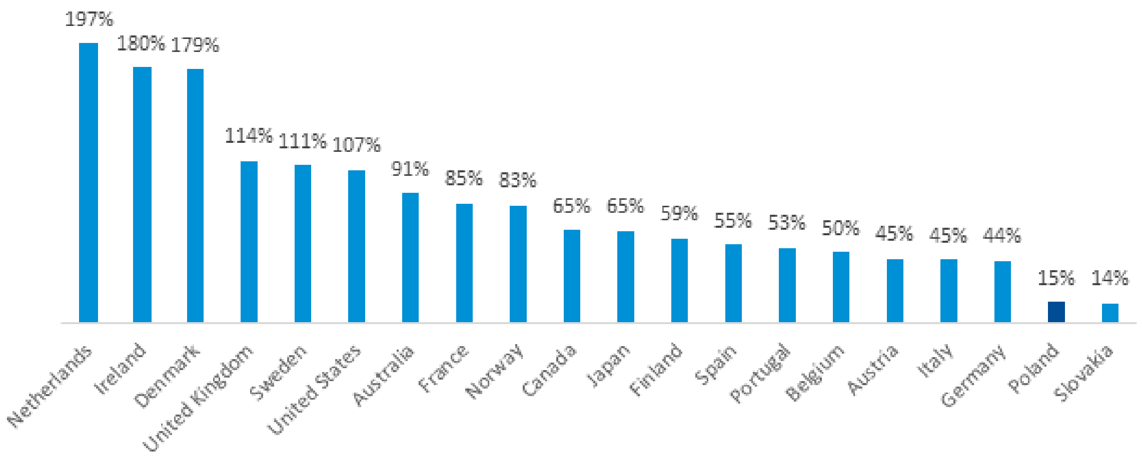


Figure 30 Outstanding non-Treasury bonds to GDP [%]



Source: BIS (non-Treasury bonds as at the end of Q2 2018), IMF (estimated 2018 GDP)

In 2017, 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 Local Government Capital and Finance Forum in Katowice. GPW and Dziennik Gazeta Prawna jointly organised the ranking Perły Samorządu to promote financing of local governments with financial instruments offered on 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 2018, 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 2018 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 relatively low inflation readings and the plans of the Polish Monetary Policy Council (RPP) 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 2018 target sales of Treasury securities in 2017.

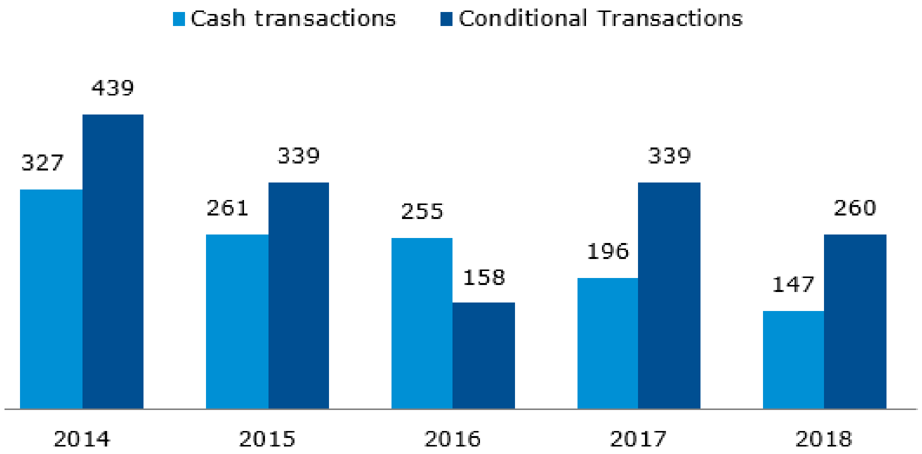
Activity of participants of the Treasury securities market, in particular repo transactions, was directly impacted by high liquidity in the local banking system and the impact of the Act on Tax on Certain Financial Institutions, which took effect in 2016. The tax affects the activity of banks on the 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 with the intention of limiting the impact of opening transactions which add to taxable assets; this indirectly affects trading on the cash market.

As at 31 December 2018, TBSP had 28 market participants (banks, credit institutions, investment firms).

Participation in TBSP changed in 2018 as follows:

- five market participants discontinued their activity;
  - ✓ Raiffeisen Bank Polska S.A. stopped operating as a market maker (in October) following a merger as a part of Raiffeisen Bank Polska S.A. was taken over by Bank BGŻ BNP Paribas S.A. as of 1 November 2018,
  - ✓ UBS Ltd stopped operating as a market maker (in January),
  - ✓ UniCredit Bank AG stopped operating as a market taker (in April),
  - ✓ Otwarty Fundusz Emerytalny PZU „Złota Jesień" stopped operating as an institutional investor (in May)
  - ✓ Natixis S.A. stopped operating as a market taker (in August),
- Merrill Lynch International changed its status from market taker to market maker (in September);
- Raiffeisen Bank International AG started operating as a market maker (in September).

Figure 31 Value of trade on Treasury BondSpot Poland [PLN billion]



Treasury BondSpot Poland held 247 trading sessions from 1 January to 31 December 2018. The total number of transactions was 9,502. The total value of trade was PLN 407,328.54 million, a decrease of 23.8% year on year. The average value of trade per session was PLN 1,649.10 million. The share of cash transactions and conditional transactions (BuySellBack/SellBuyBack and Repo Classic) in total trade on Treasury BondSpot Poland was 36.05% (PLN 146,839.05 million) and 63.95% (PLN 260,489.49 million), respectively, in 2018.

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 852 companies at the end of 2018 (465 companies on the Main Market and 387 on NewConnect), including 57 foreign issuers (890 listings including 57 foreign issuers at the end of 2017).

Figure 32 Number of domestic and foreign companies – Main Market

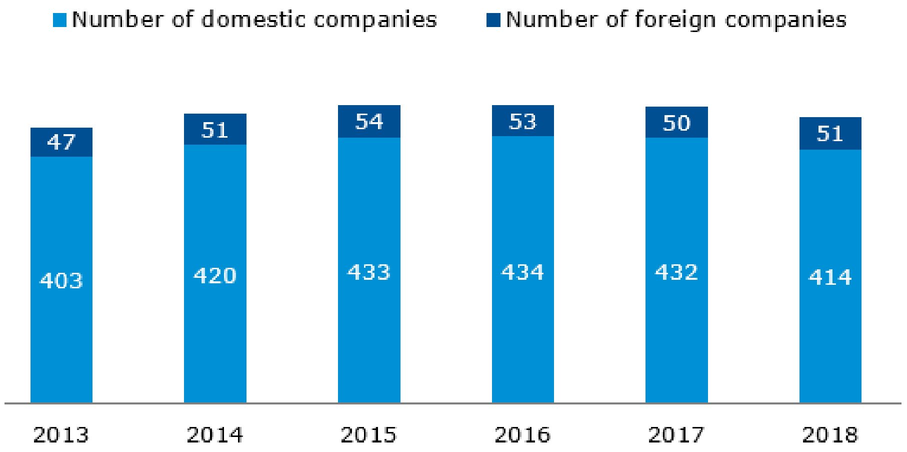
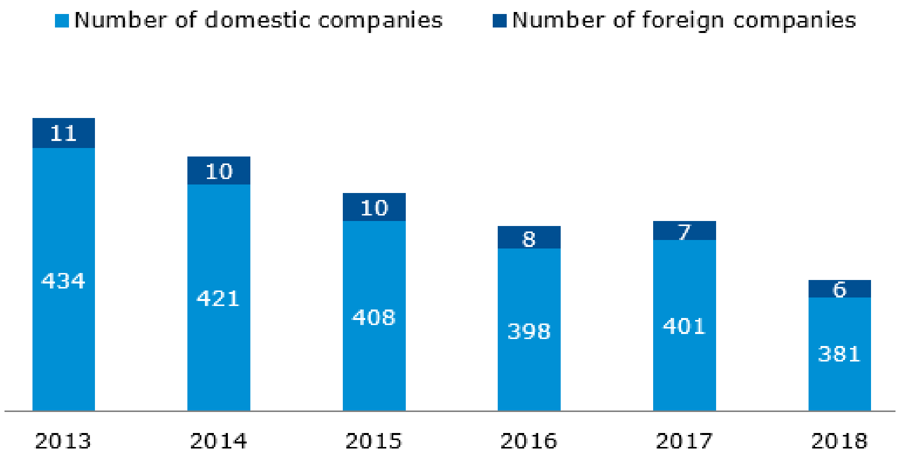


Figure 33 Number of domestic and foreign companies - NewConnect



The total capitalisation of domestic and foreign companies on GPW's two equity markets was PLN 1,136 billion at the end of 2018 compared to PLN 1,389 billion at the end of 2017, a decrease of 18.3% year on year. The change of capitalisation was different in different sectors. The biggest year-on-year increase of capitalisation by sector was reported by commercial banks (PLN 191.1 billion), extraction and production operators (PLN 102.6 billion), insurers (PLN 37.9 billion) and energy companies (PLN 32.6 billion).

Figure 34 Change of capitalisation of domestic companies in 2018 – 20 sectors with the biggest change of capitalisation year on year by value [PLN billion]

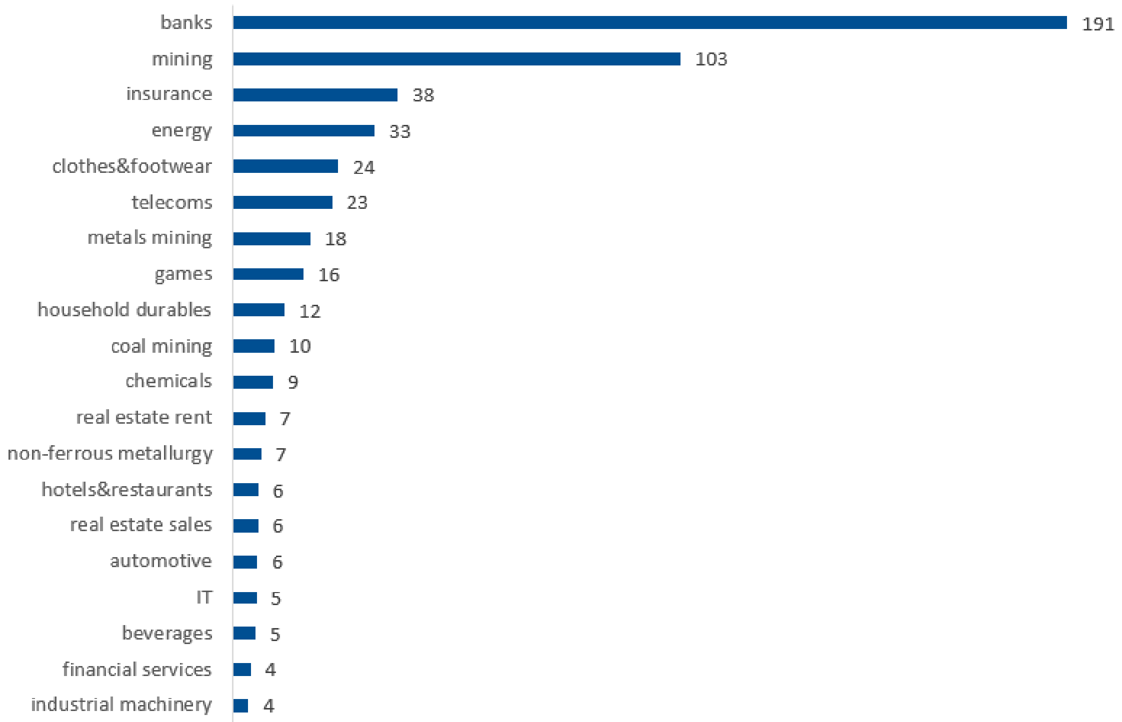
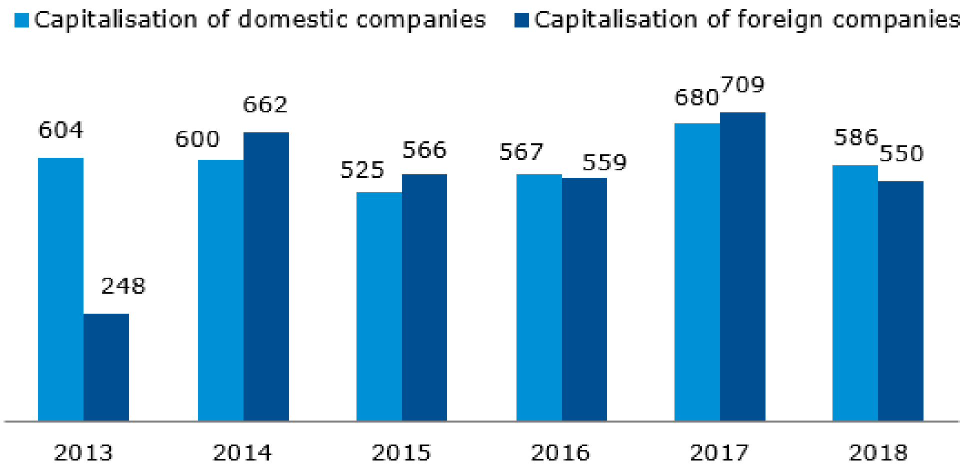
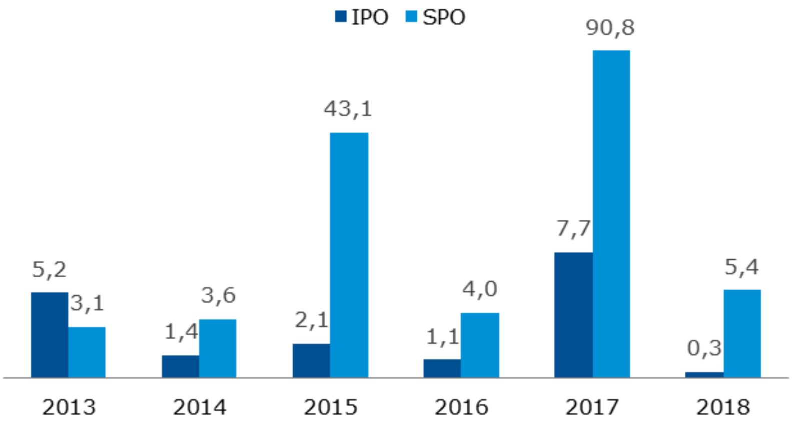


Figure 35 Capitalisation of domestic and foreign companies – Main Market and NewConnect [PLN billion]



There were 22 IPOs on GPW's two stock markets in 2018 (including 2 companies which transferred from NewConnect to the Main Market) compared to 34 IPOs in 2017. The total value of IPOs on the two stock markets was PLN 0.346 billion in 2018 (PLN 7.7 billion in 2017) and the value of SPOs was PLN 5.356 billion in 2018 (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 36 Value of IPOs and SPOs – Main Market and NewConnect [PLN billion][18] [19]



The nominal value of non-Treasury debt listed on Catalyst was PLN 86.6 billion at the end of 2018, a decrease of 9.6% year on year (PLN 95.9 billion at the end of 2017). Catalyst listed 527 series of non-Treasury debt instruments at the end of 2018. Issuers whose instruments were listed at the end of 2018 included 20 local governments, 107 enterprises and 16 co-operative banks. Including the State Treasury, the number of issuers on Catalyst was 148 at the end of 2018 compared to 161 at the end of 2017. The total nominal value of non-Treasury debt instruments listed on Catalyst was PLN 86.6 billion at the end of 2017, as compared to PLN 95.8 billion at the end of 2017.

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 within the GPW Group 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: real-time stock exchange data and statistical and historical data in the form of a statistical e-mail daily bulletin, electronic publications, calculation of indices, index licenses and other calculations. In addition to data from GPW, TGE, Treasury BondSpot and GPW Benchmark, the Company distributed reports of issuers listed on NewConnect and Catalyst to data vendors in 2018.

The sale of stock exchange 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:

Data Vendors

Specialised data vendors deliver data made available by the Company to investors and other market participants. Amongst the vendors there are information agencies, investment firms, internet portals, IT companies and other entities.

At the end of 2018, GPW had data vendors in Austria, Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Ireland, the Netherlands, Norway, Switzerland, the United Kingdom, the USA,.

[18] Including dual-listed companies.
[19] 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.

As at 31 December 2018, the GPW Group's information services clients were 78 data vendors, including 36 domestic and 42 foreign ones, with subscribers using professional and basic data feeds.

Figure 37 GPW Group data vendors

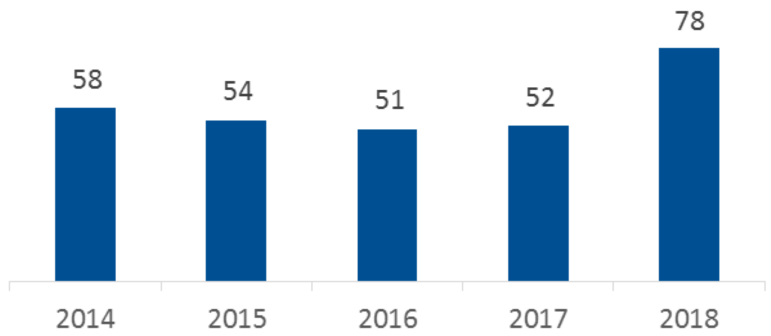
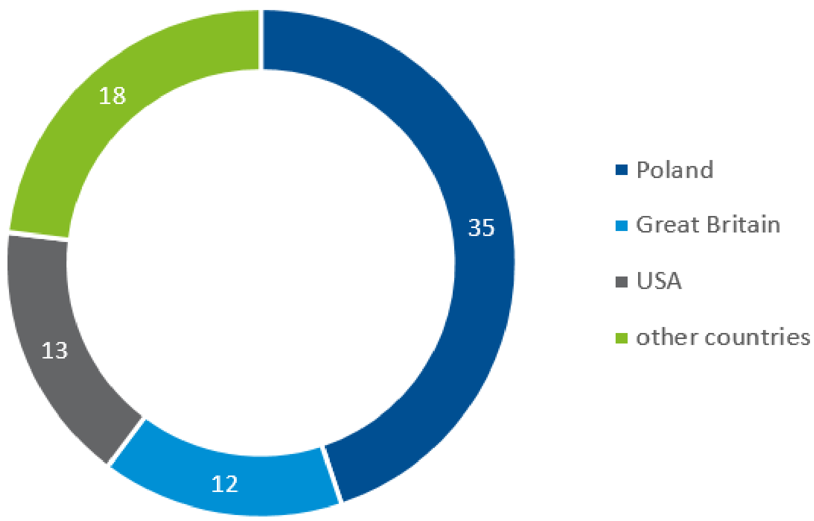


Figure 38 GPW Group data vendors by country [%]



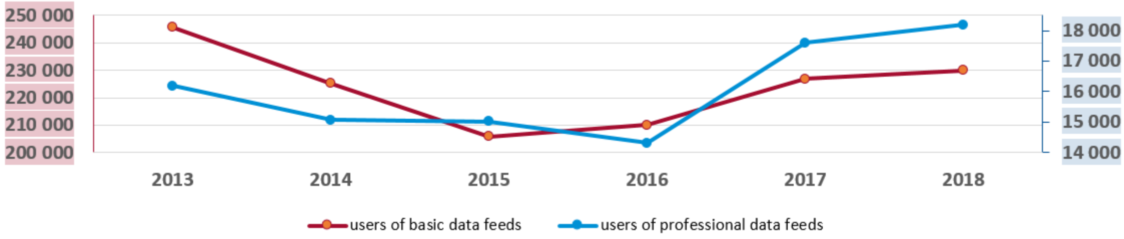
GPW modified its 2018 price list as required by MiFID 2, including disaggregation of data feeds by class of assets. As a result, data vendors no longer need to pay for the full data feed; instead, they only pay for data from selected markets, reducing the total cost.

The GPW Group added new products to its offer in 2018: in addition to licences for real-time data distribution, the Company sold licences for delayed data distribution. Delayed data are also available on the public websites of certain real-time data vendors and on the GPW website.

Individual and Professional Subscribers

The GPW Group reported an increase of the number of real-time data subscribers, including both users of basic and professional data feeds.

Figure 39 GPW Group data subscribers



The number of subscribers of GPW Benchmark, TGE and Bondspot data continued to increase, as presented in the figure above in aggregate with GPW data.

Non-display Users of GPW Group Data

Following intensive acquisition initiatives, GPW attracted 7 new clients for non-display data in 2018 (used in algorithmic trading, risk management, portfolio valuation, systematic internalisers, and other non-display applications).

A new price list was published in 2018, including fees for non-display use of WIBOR data.

The sale of non-display licences was, next to the sale of WIBOR data, the key driver of growth of this business line in 2018.

Figure 40 Non-display users of GPW Group data

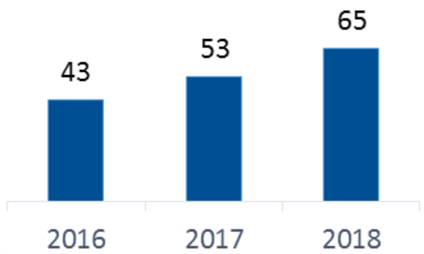
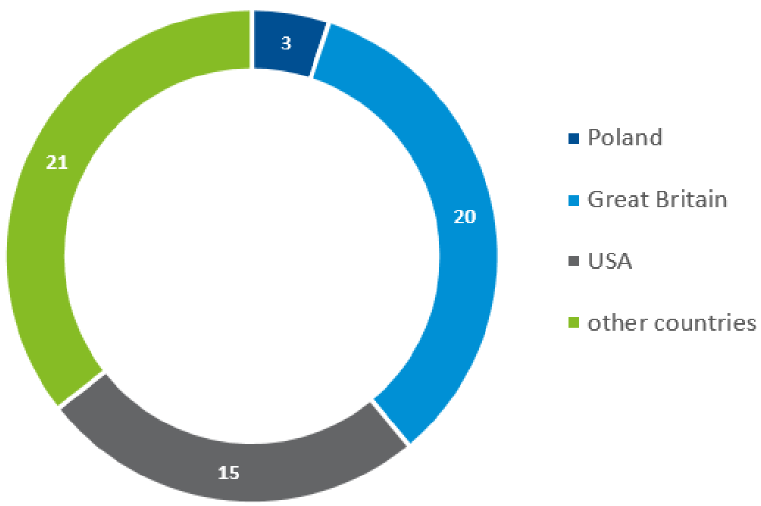


Figure 41 Non-display users of GPW Group data by country [%]



Processed Data and Indicators

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 indicators in 2018 included investment funds, banks, news agencies, pension funds, brokers and insurers.

Figure 42 Users of processed data and indicators [%]

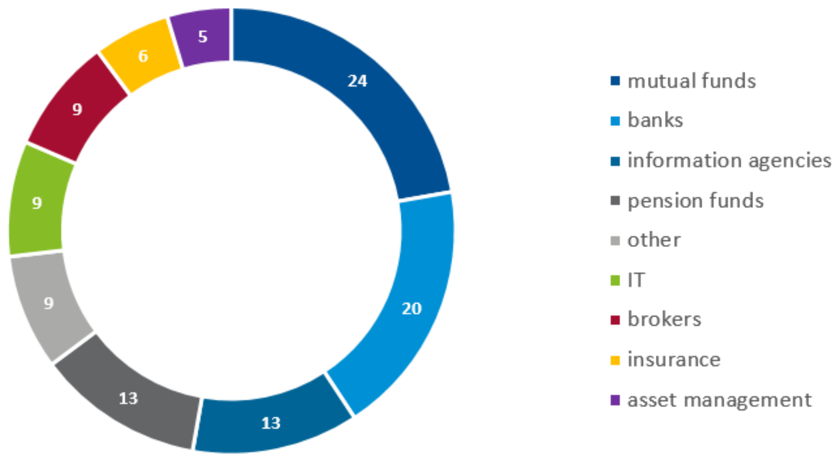
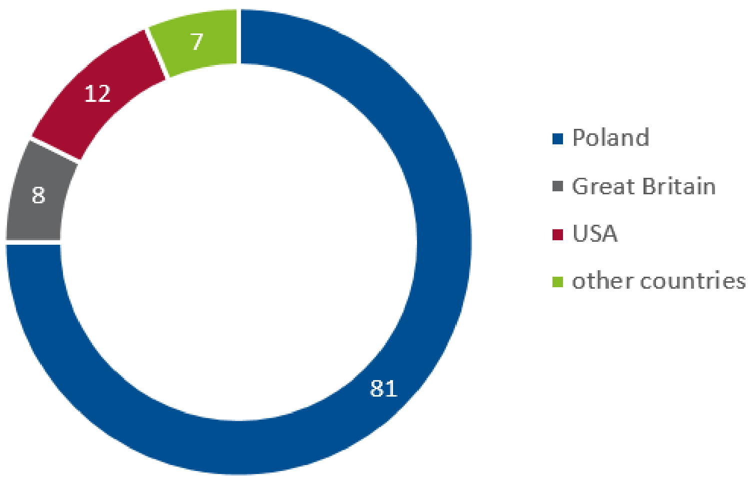


Figure 43 Users of processed data and indicators by country



GPW launched a new value-added service in 2018: Key Information Document (KID), which gives investors easy access to the documentation of structured products, certificates and derivatives. We acquired 13 clients of this service.

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 2018. The agreement with AgioFunds TFI for the use of WIG20TR was a great milestone. It is Poland's first ETF (Beta ETF WIG20TR), listed on the Warsaw Stock Exchange since 7 January 2019.

The other licence agreement was signed with Expat for the use of WIG20 in an ETF (Expat Poland WIG20 UCITS ETF).

Figure 44 Issuers of instruments based on GPW indices [#]

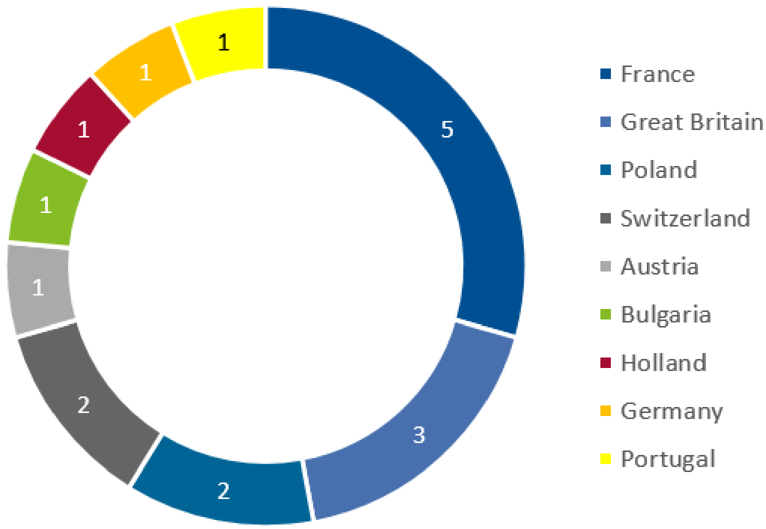


Table 12 Number of data vendors and subscribers, as at 31 December

	2018	2017	2016	2015	2014
Number of real-time data vendors	78	52	51	54	58
– domestic	36	27	27	30	31
– foreign	42	25	24	24	27
Number of real-time data subscribers [thou.]	248.2	244.4	224.6	22.1	240.9
– number of subscribers using professional data feeds	18.2	17.8	14.3	15	15.1
Number of non-display users of GPW data	59	53	43	-	-
Number of licensees using GPW indices as the underlying of financial products	17	18	18	18	16

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;
- ✓ calculation of indices for clients;
- ✓ 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.

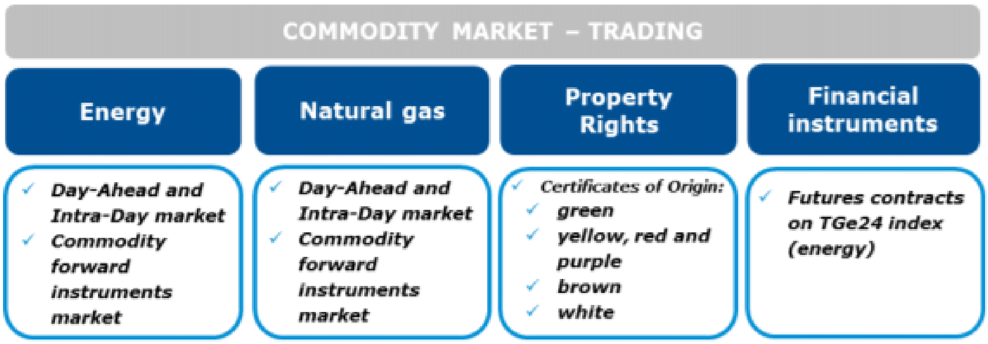
COMMODITY MARKET

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 6 Trading on TGE commodity markets



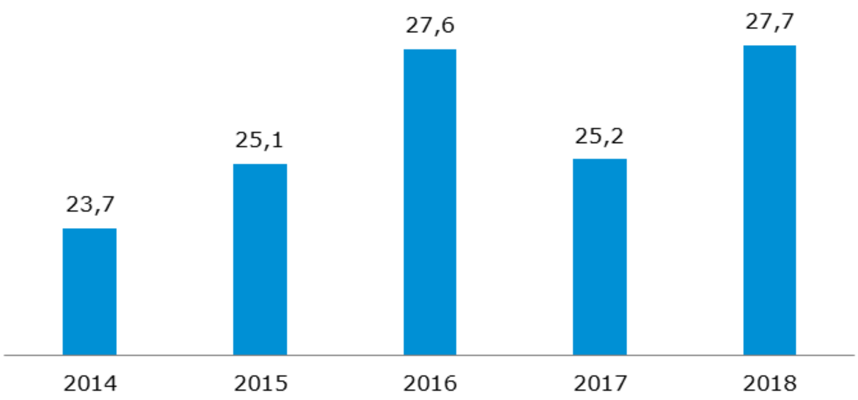
Electricity Market

- ✓ Day-Ahead and Intra-Day Market

The Day-Ahead and Intra-Day Market is a market in electricity with physical delivery and offers short-term electricity buy and sell transactions (spot market). This market lists hourly instruments for each hour of delivery day as well as block instruments. Trade on the Day-Ahead Market takes place two days before and one day before the day of delivery. Trade on the Intra-Day Market takes place one day before the day of delivery and on the day of delivery.

The volume of trading in increased by 9.8% year on year in 2018, setting a historical record of 27.7 TWh. The drivers include continued growth of cross-border flows at the connections with Sweden and Lithuania.

Figure 45 Volume of trade in electricity on the Day-Ahead and Intra-Day Market [TWh]

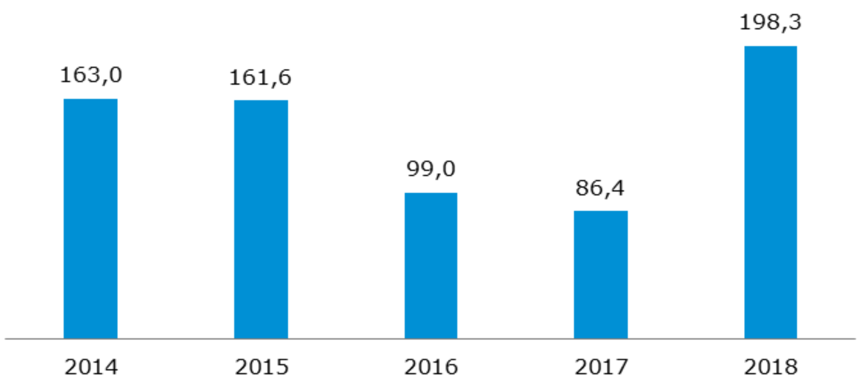


- ✓ Commodity Forward Instruments Market in Electricity

The Commodity Forward Instruments Market in electricity offers trade in standard forward instruments for delivery of the same quantity of electricity on every hour of delivery. Contracts are executed on a weekly, monthly, quarterly and annual basis.

The volume of trading increased by 129.5% year on year and was historically high at 198.3 TWh in 2018. The key drivers included a strong volatility of prices caused by fundamentals and the expected increase of the level of mandatory sales of electricity on the public market, which was introduced in December.

Figure 46 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 gas exchange in Poland opened on 20 December 2012. The Commodity Forward Instruments Market opened first, followed by the Day-Ahead Market in Gas.

The Day-Ahead Market in Gas lists the following types of contracts: BASE with delivery on 24 hours of the next day of the same quantity of gas in every hour of the day, and WEEKEND with delivery on two days (Saturday and Sunday) of the same quantity of gas in every hour of the day (between 47 and 49 hours). On 30 July 2014, TGE launched the Intra-Day Market in Gas. The Intra-Day Market in Gas lists hourly instruments with delivery on the day of trading.

The total volume of trade on the gas markets was 143.3 TWh in 2018, representing an increase of 3.4% year on year and a historical record. The volume of trade on the Day-Ahead and Intra-Day Market in Gas was 23.7 TWh, a decrease of 1.3% year on year. The volume of trade on the Day-Ahead Market in Gas was 17.6 TWh (a decrease of 8.6%) and the volume of trade on the Intra-Day Market in Gas was 6.1 TWh (an increase of 28.5% and a historical record). The volume of trade on the Commodity Forward Instruments Market in Gas was record-high at 119.6 TWh.

Figure 47 Volume of trade in natural gas on the Day-Ahead and Intra-Day Market [TWh]

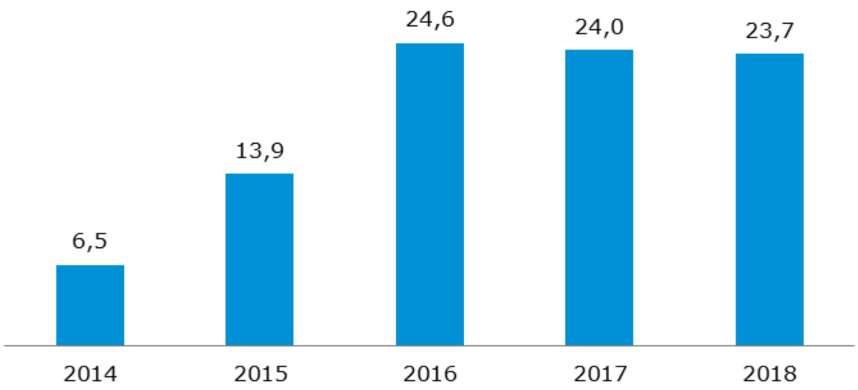
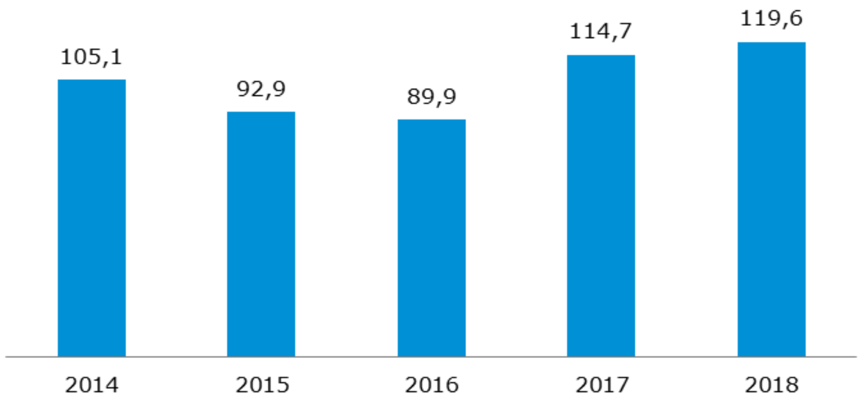


Figure 48 Volume of trade in natural gas on the Commodity Forward Instruments Market [TWh]



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; PMEC, known as red certificates; and PMMET, known as purple certificates),

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, cogeneration, 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 15.1 TWh at sessions and 15.6 TWh off sessions in 2018. The total turnover in those instruments increased by 3.5% year on year. The volume of trading in cogeneration instruments (PMEC, PMGM, PMMET) was 7.9 TWh at sessions and 20.7 TWh off sessions. The volume of trading in white certificates (PMEF) off sessions decreased to 44.5 ktoe. The volume of trading in white certificates at sessions was 285.5 ktoe (an increase of 15.5%).

Figure 49 Volume of trade in property rights to certificates of origin [TWh]

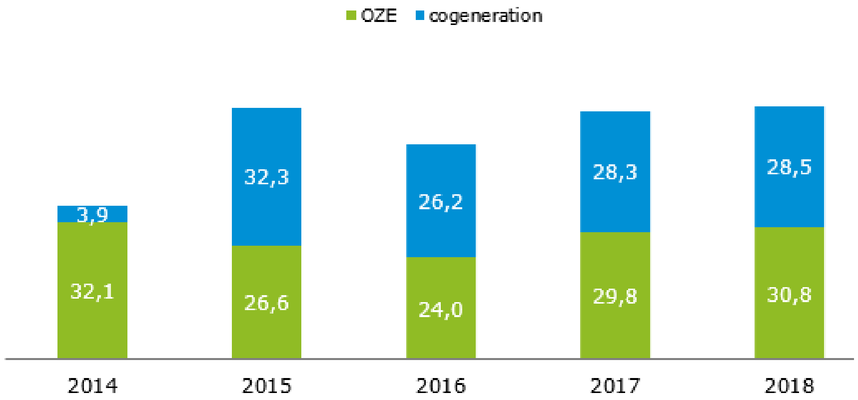
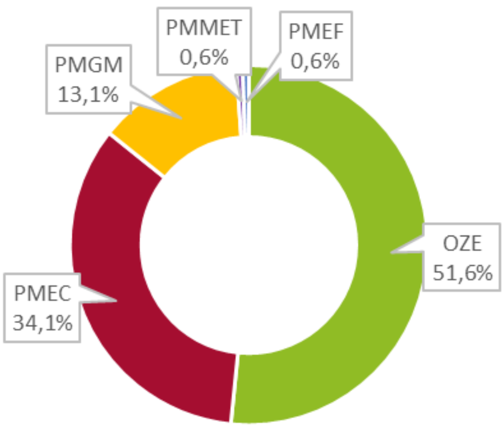


Figure 50 Structure of the volume of trade in property rights in 2018 by type of certificate



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;
- 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;
- recording of property rights under such certificates.

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

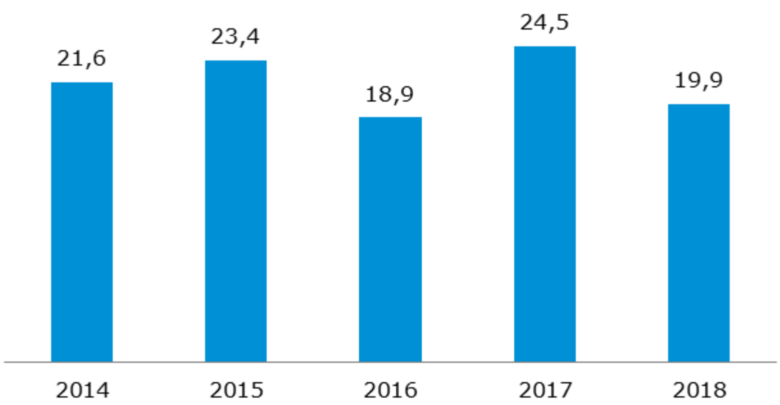
- to identify entities entitled to property rights in certificates of origin;
- to identify property rights under certificates of origin and the corresponding quantity of electricity;
- to register certificates of origin and the resulting property rights;
- to record transactions in property rights and 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

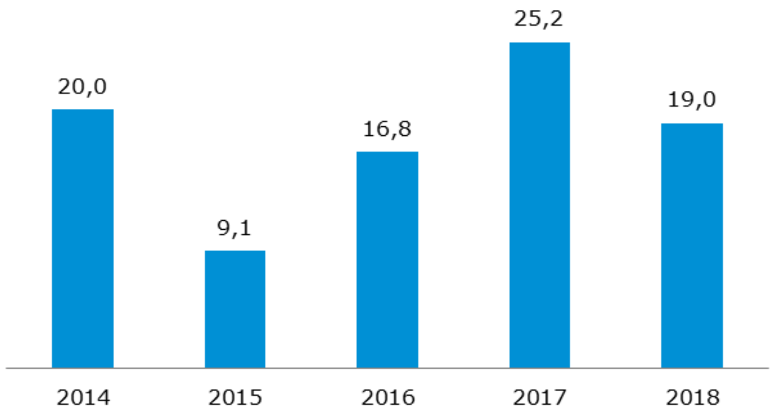
The volume of issued green certificates was 19.9 TWh in 2018, a decrease of 18.5% year on year. The decrease in the volume was caused by delayed issuance of certificates by the Energy Regulatory Office.

Figure 51 Volume of issued RES property rights [TWh]



The volume of green certificates cancelled was 19.0 TWh in 2018 vs. 25.2 TWh in 2017. Despite an increased obligation to cancel RES certificates of origin (18% in 2018, 16% in 2017), strong fluctuations resulted from delayed reporting of cancelled certificates by the Energy Regulatory Office.

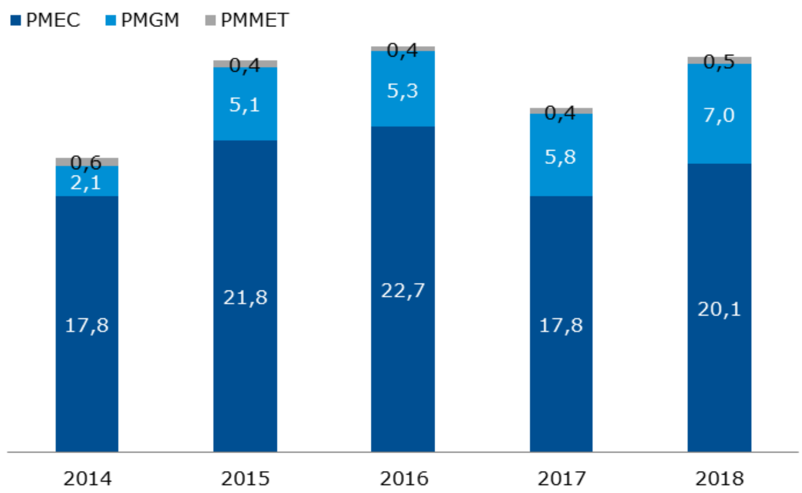
Figure 52 Volume of cancelled RES property rights [TWh]



Cogeneration: Red, Yellow, and Purple Certificates

The total volume of issued cogeneration certificates was 27.6 TWh in 2018, an increase of 14.9% year on year (24.0 TWh in 2017).

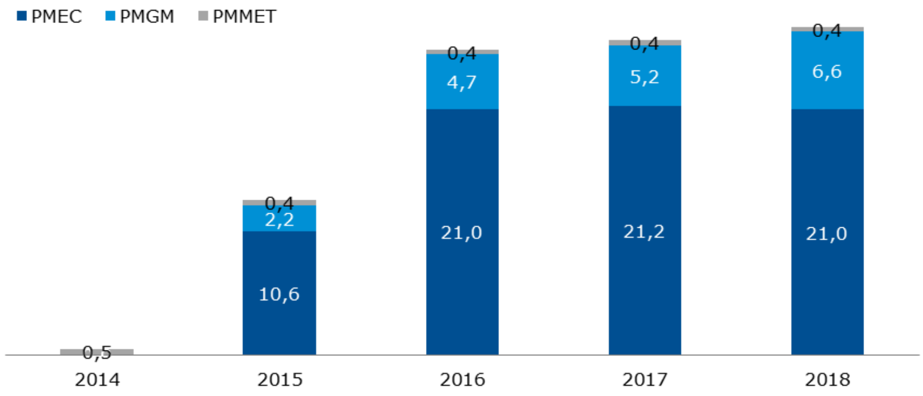
Figure 53 Volume of issued cogeneration property rights [TWh]



The total volume of red, yellow, and purple certificates cancelled was 28.0 TWh in 2018 compared to 26.9 TWh in 2017, an increase of 4.3%.

Cogeneration volumes are regular and stable. Thanks to efficient issuance and cancellation of certificates by the Energy Regulatory Office in 2018, the volumes increased modestly. The support scheme for cogeneration based on certificates ends in 2018 (trading in certificates for 2018 production will end in June 2019).

Figure 54 Volume of cancelled cogeneration certificates of origin [TWh]



Energy Efficiency: White Certificates

200 thousand toe of white certificates were issued in 2018, a decrease of 63.5% year on year compared to 549 thousand toe in 2017. The volume of cancelled white certificates was 384 thousand toe in 2018 vs. 148 thousand toe in 2017, an increase of 159.7% year on year.

The marked decrease in the volume of issued certificates follows from a change of the form of issued certificates of energy efficiency. A record-breaking fifth tender for energy efficiency projects was closed in 2017. In 2018, certificates were issued on new terms, causing the volumes to drop. The decrease in turnover was driven by smaller supply and a sharp decrease of certificate prices. After the fifth tender was closed in 2017, some market players decided to sell certificates as soon as they were recorded in the Register of Certificates of Origin. The increase in cancellations was augmented by changes to the rules of mandatory cancellation of white certificates, which limited the option of paying the substitution fee, and the possibility of meeting the obligation for previous years by the end of June 2019.

Number of Participants of the Register of Certificates of Origin

The Register of Certificates of Origin had 3,705 participants at the end of 2018. In 2018, 261 companies became members of the Register of Certificates of Origin (474 companies in 2017).

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 55 Number of participants of the TGE Register of Certificates of Origin

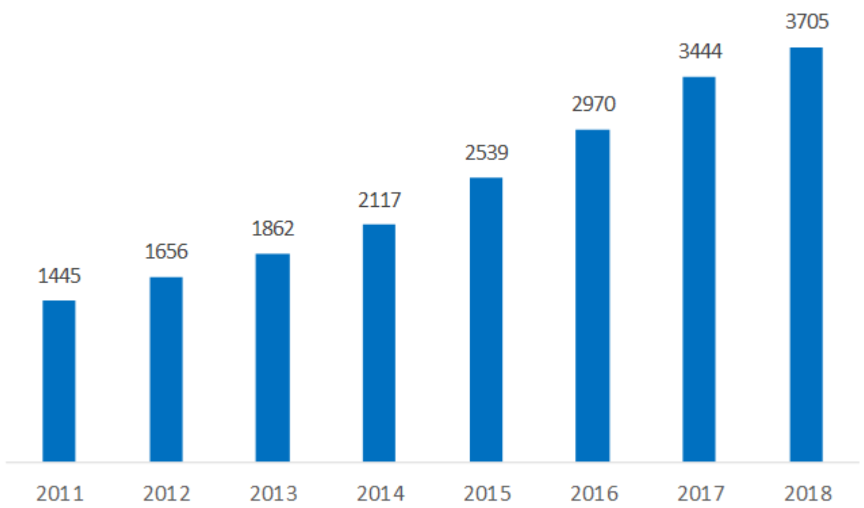
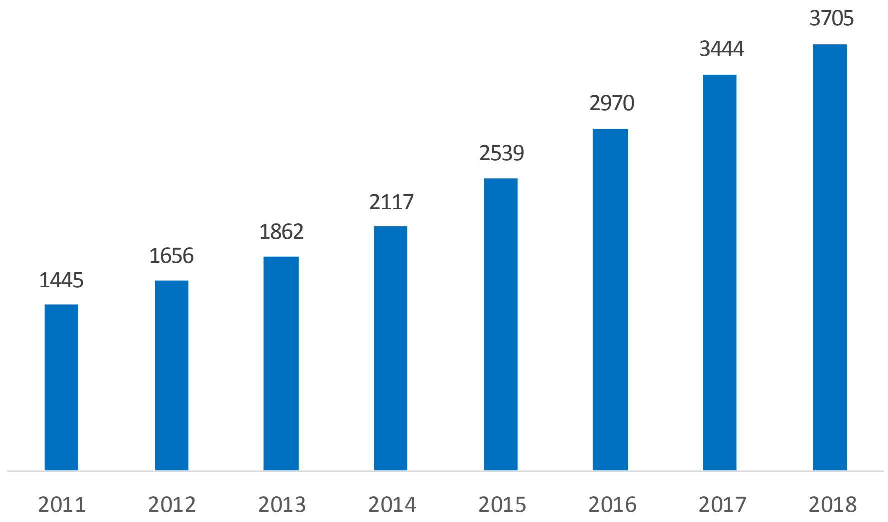


Figure 56 Number of participants of the TGE Register of Certificates of Origin

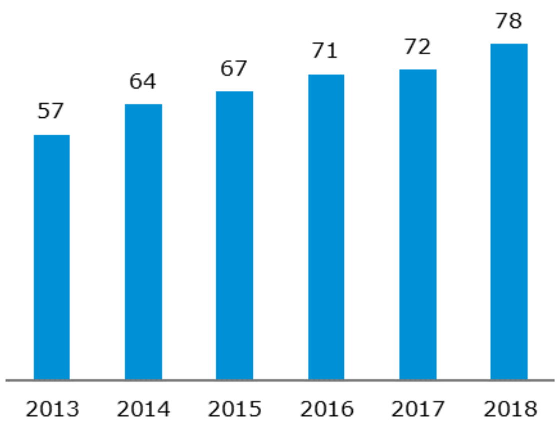


NUMBER OF TGE MEMBERS

Seven new companies joined TGE as members and one left in 2018. TGE had 78 members at the end of 2018, an increase of 8% year on year.

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. TGE completed 11 training programmes for brokers in 2018.

Figure 57 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.

The Register of Guarantees of Origin had 438 participants at the end of 2018.

Table 13 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

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: 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 2018, there were:

- ✓ 22,425,539 reported operations on exchange orders,
- ✓ 10,821,259 reported exchange orders,
- ✓ 4,466,249 reported exchange transactions,
- ✓ 157,855 reported OTC transactions OTC,
- ✓ 165,687 exchange reports sent to ARIS,
- ✓ 39,095 OTC reports sent to ARIS,
- ✓ Reporting services for 583 clients - ACER has registered 605 entities, which means that TGE reports for nearly 100% of participants of the Polish energy market,
- ✓ 1,644 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 (IRGiT), which is a subsidiary of TGE, offers clearing of transactions of TGE members on its markets.

In 2018, IRGiT continued operations launched in 2010 as an exchange clearing house for the TGE Exchange Commodity Market. IRGiT clears all volumes of transactions in electricity, gas and property rights on the exchange market in Poland. The total volume of cleared transactions in electricity was 526 TWh, the total volume of cleared transactions in gas was 470 TWh and the total volume of cleared transactions in property rights was 119 TWh in 2018.

IRGiT continued alignment of its services with MiFID 2 in 2018. The clearing model developed in 2017 was incorporated into IRGiT regulations.

The Rules of the Exchange Settlement Institution approved in 2018 enable IRGiT to clear transactions from the Exchange Commodity Market and OTFs. The Rules of the Clearing House and Settlement Institution approved in 2018 enable IRGiT to clear financial instruments traded on OTFs and the TGE Financial Instruments Market.

IRGiT focused on optimising its collateral system in 2018. IRGiT improves its offer of risk management and collateral services.

In 2018, IRGiT continued to pursue its policy of active education of market members concerning risks of trading on the exchange and the role of IRGiT's collateral system. IRGiT participants took part in meetings of the Electricity and Gas Market Committee held by TGE and meetings with the Association of Energy Trading in the framework of the Collateral System Optimisation Group.

II. 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 market and Polish companies among international investors.

The GPW Group aspires to meet the needs of clients from around the world. We continue to align our offer and infrastructure with their needs.

In 2018, GPW continued to develop 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 seven meetings in 2018: in London, Stockholm, Warsaw, Paris, Frankfurt, Stegersbach and Prague.

In 2018, steps were taken to develop the commodity market, its participation and contribution to the integration of European energy markets.

GPW REPRESENTATIVE OFFICES OUTSIDE POLAND

The Representative in London was hired in June 2013 to enhance GPW's acquisition activities on that market. In 2018, 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 Offices in London has no separate legal personality and does not carry on 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.

DEVELOPMENT OF A NETWORK OF FOREIGN INVESTMENT FIRMS – EXCHANGE MEMBERS

GPW is client-centric and focuses on close relations with international market participants, which supports innovative products and services and drives growth on the markets operated by GPW.

GPW is the biggest exchange in CEE 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 2018, GPW focused 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 2018, GPW acquired three foreign exchange members: JP Morgan A.G, Morgan Stanley Europe S.E., Goldman Sachs Bank Europe S.E., as global investment banks seated in London were preparing for a hard Brexit. GPW had 56 members, including 27 local and 29 remote members at 31 December 2018. The share of remote exchange members in total trading increased significantly. The key drivers of the growing share of global brokers included MiFID 2, effective as of 2018, and the resulting changes to fees for analytic coverage (unbundling). The share of foreign exchange members in EOB trading in shares was 48.5% in 2018 compared to 38.5% in 2017.

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

	2018	2017	2016	2015
Local	51.5%	61.5%	62.4%	67.7%
Remote	48.5%	38.5%	37.6%	32.3%

ATTRACTING FOREIGN ISSUERS

GPW aspires to strengthen its position of a regional financial hub making the Warsaw Stock Exchange the market of first choice for investors and issuers in Central and Eastern Europe. GPW took many initiatives to promote the Polish capital market among issuers in the CEE region. A series of meetings under the motto "Raising Growth Capital on the Polish Market" offered by GPW together with financial institutions present in Poland introduces local companies to the options of raising funds for growth on the Polish capital market.

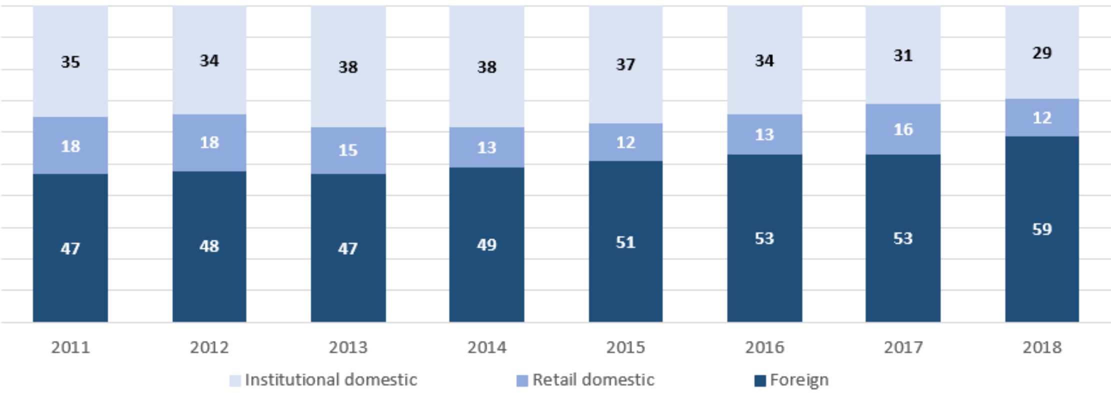
As at the end of 2018, the GPW markets listed shares of 57 foreign companies, including 51 foreign companies listed on the Main Market and 6 companies on NewConnect, with a total capitalisation of PLN 549.8 billion compared to PLN 709.1 billion in 2017. Foreign companies listed on GPW as at 31 December 2018 originate from 20 countries, mainly the Netherlands (7 issuers), Luxembourg (7 issuers), Estonia (6 issuers) and Cyprus (5 issuers). 28 companies are dual-listed and 29 are single-listed on GPW.

SHARE OF FOREIGN INVESTORS IN TRADING ON GPW MARKETS

According to GPW's research, foreign investors had the biggest share in turnover in shares on the GPW Main Market in 2018, the same as in previous years. They generated 59% of turnover in shares, an increase of 6 percentage points year on year. The share of domestic institutional investors was 29%, a decrease of 2 percentage points year on year. Individual investors generated 12% of turnover in 2018, a decrease of 4 percentage points year on year. The increase of the share of foreign investors in turnover in equities on GPW was clearly driven by the promotion of Poland to Developed Markets. As international institutions aligned their investment portfolios, their trading on GPW increased.

The most active categories of domestic institutions in H2 2018 included investment funds (share of 33%), followed by market makers (30%), exchange members (12%) and pension funds (11%, down by 3 percentage points year on year).

Figure 58 Share of investors in trade in shares on the Main Market [%]



Domestic individual investors were in the lead on the derivatives market in 2018 with a share of 48% of the trading volume. Their share in trading in options was 46%. The share of domestic institutions in the volume of trade in futures was 35% and the share of foreign investors was 17% in 2018. Foreign investors had a 26% share in trading in options in 2018, a decrease of 3 percentage points year on year.

Figure 59 Share of investors in trade on the futures market [%]

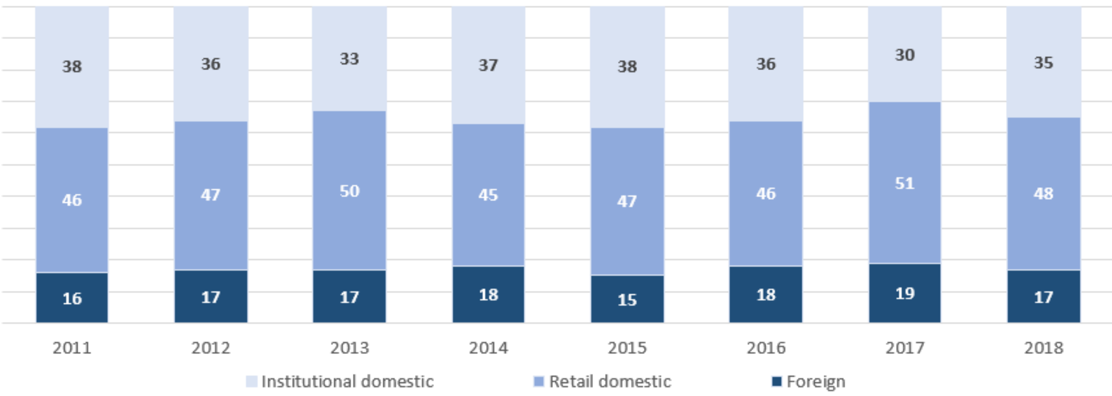
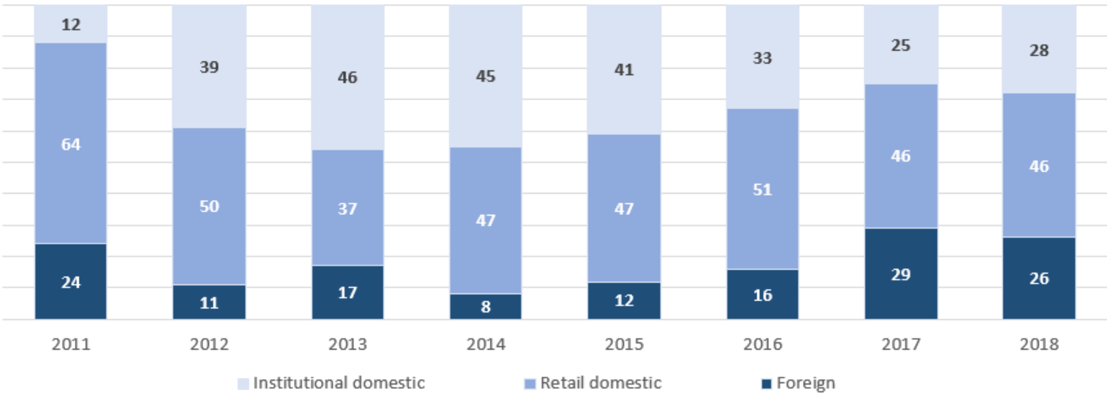


Figure 60 Share of investors in trade on the options market [%]



INTERNATIONAL ACTIVITY OF TGE IN 2018

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).

TGE participates in the development of the day-ahead market according to Resolution No 50/10/VI/15 of the TGE Supervisory Board of 27 April 2015, under which TGE signed a co-operation agreement with PSE and the agreements necessary to join PCR on 26 October 2016. In the development of the intraday market, Resolution No 4 of the TGE Extraordinary General Meeting of 15 June 2018 approved accession to the framework agreements of co-operation in the development of the intraday market IDOA and ANIDOA. Consequently, TGE signed a range of other agreements to support the development and operation of XBID.

Each of the two markets includes regional initiatives and specific areas and projects defined by stakeholder groups including:

- Price Coupling of Regions – PCR, on the day-ahead market,
- Multi-Regional Coupling – MRC, on the day-ahead market,
- CORE Day Ahead Flow Based Market Coupling, on the day-ahead market,
- Intraday market projects: European - XBID and regional – LIP 15 and LIP 16,
- MNA – Multi-NEMO Arrangements, for the Polish day-ahead market,
- INC – Interim NEMO Committee, co-ordination and project work on the day-ahead and intraday markets.

Price Coupling of Regions – PCR (day-ahead market)

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 Europe. PCR is used across the European Union.

Towarowa Giełda Energii S.A. is a full member of PCR since October 2015 and a project co-owner together with the exchanges Nord Pool, Epex Spot, GME, OMIE, OTE, OPCOM and HENEX. 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 electricity market mechanisms.

Multi-Regional Coupling – MRC (day-ahead market)

MCR is a pan-European project of operating integration of spot 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. TGE's participation in the project is part of its on-going business on the day-ahead market.

CORE Day Ahead Flow Based Market Coupling (previously CEE FB MC) (day-ahead market)

CORE is a day-ahead market project which covers Central and Eastern Europe and integrates the Central European and CEE markets with MRC by Q4 2020. 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 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 H1 2020.

XBID LIP (intraday market)

The European electricity market XBID launched in June 2018 in Western and Northern Europe for intraday trading in electricity without the operational participation of TGE. However, TGE is a formal participant of the project as it signed accession agreements in June and July 2018. TGE co-operates with stakeholders in the neighbouring markets as a member of Local Implementation Projects – LIP 16 and LIP 15, which gives TGE the technical ability of establishing operational connections to XBID in H2 2019.

The implementation of LIP 15 and LIP 16 requires the implementation of local software LTS supporting interaction with the XBID system. TGE has sourced and analysed bids and opened negotiations of the contract with the selected bidder. The process will be completed in early 2019 when the contract is signed and the software is implemented, aligning TGE with the timeline of XBID second-wave tests and ensuring its readiness for operational accession to XBID in 2019.

MNA – Multi-NEMO Arrangements (Polish day-ahead market)

MNA is based on initiatives of stakeholders in the Polish price area, including TGE, NORD POOL, 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 June 2019.

INC – Interim NEMO Committee, co-ordination and project work (intraday and day-ahead markets)

The Interim NEMO Committee (INC), responsible for co-ordinating NEMOs' joint projects on the intraday and day-ahead markets, was appointed in 2017 under the Interim NEMO Co-operation Agreement (INCA) signed 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 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 INC platform has 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 All NEMO Co-operation Agreement (ANCA) is expected to be signed in 2019 as a framework agreement for the European market. Research and preparations are underway to develop management structures shared by SDAC and SIDC, expected to launch by the end of 2019.

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 19 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.

To achieve those objectives, the Commission published an action plan which proposes a gradual development of a Capital Market Union by 2019.

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

The proposed initiatives are diverse, ranging from EU legislation to support for bottom-up industry initiatives. The Capital Market Union project supports and supplements the Investment Plan for Europe designed to activate investment in the EU.

In the opinion of GPW, the main focus should be on initiatives which facilitate market access, improve market transparency and encourage mid-term and long-term investing. However, the Capital Market Union concept should take into account the importance of regional capital markets to the national economies.

Sustainable Stock Exchanges (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 83 members at the end of 2018.

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.

Association of European Energy Exchanges 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 50 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 European exchanges in PCR working groups

Price Coupling of Regions (PCR) was established to develop a solution that would link day-ahead markets in electricity using a unique algorithm for the calculation of energy prices across Europe (Euphemia) and to ensure effective allocation of cross-border transmission capacities. This is key to achieving the overarching EU objective of creating a harmonised European electricity market in order to improve liquidity, efficiency and social welfare.

TGE's co-operation and participation in 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 November 2018, TGE speakers took part in the Polish-Lithuanian Forum "Gas market – challenges and opportunities for cooperation in the CEE 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.

II. 6 Development of the GPW Group in 2019

The development of the GPW Group in 2019 will be driven among others by the following internal and external factors.

INTERNAL DRIVERS

Implementation of the Updated Strategy #GPW2022:

- The implementation of the #GPW2022 strategic initiatives will facilitate the operation of the GPW Group's key business pillars (equity market, debt and money market, derivatives market, commodity market, information services for investors and issuers) and its expansion to new business segments (including Private Market, GPW Ventures).
- Continued optimisations to enhance organisation and improve integration within the GPW Group.

GPW's Potential Decisions to Modify Trading Fees

GPW was working in 2018 to align its trading fees with both legal conditions and market expectations. The new solutions effective as of 2018 include:

- a new maker taker price list for transactions in index futures;
- reduction of the cap on fees for options in the HVP programme;
- reduced fees on transactions of market makers in non-WIG20 stocks throughout 2018;
- the Super Market Maker programme active in 2018;
- extended promotional fees for introduction to trading of structured products (ETP) and option warrants.

The price lists on the financial and commodity markets will be reviewed and modified, as necessary, in 2019. The objective is to support liquidity, improve the quality of the electronic order book, and attract new investor groups.

EXTERNAL DRIVERS

Macroeconomic Situation, the Government's Economic Policy, Conditions on the Exchange

GPW's results will be driven in equal measure by the activity of investors on the capital market and by the overall economic conditions.

According to European Commission forecasts, GDP growth will gradually slow down, reaching 3.5% in 2019[20] and 3.2% in 2020. According to the forecast, public investments will continue to grow steadily in 2019, mainly with the support of European funds. Private investments will continue to grow, as well, in connection with access to the production capacity. Growth of salaries will bolster private consumption while growing inflation and a slow-down on the job market will have the opposite effect. Consequently, overall growth in consumption will be moderate compared to 2018. According to the Commission

[20] European Commission, Winter 2019 Interim Economic Forecast

forecast, the growth of exports and imports will slow down compared to 2018 in view of weaker foreign demand.

The expected average inflation is 2.3% in 2019, rising to 2.7% in 2020. Price rises are mitigated by fixed energy prices for households. However, prices of most categories of goods and services will gradually increase, additionally boosted by fast growing salaries.

According to economists, Poland's growth rate will decrease quarter after quarter. Private consumption will remain the key driver of GDP growth as the incomes of households will remain strong. Infrastructure investments will continue to grow albeit slower than in 2018 due to supply limitations in construction. The outlook of private investments in machinery remains bleak. Growth will be curbed by smaller foreign demand due to weaker conditions in the global economy.

This forecast is largely in line with the Monetary Policy Council scenario. Consequently, NBP's interest rates should remain unchanged for a longer time. The Monetary Policy Council remained dovish in 2018 and early 2019. After the January meeting of the Council, NBP Governor Adam Glapiński said that in his opinion the rates will remain stable not only until the end of 2020 but also until the end of term of the Council in 2022. The Council's communications and statements of its members, including the NBP Governor, suggest that the majority of the Council Members look to stabilise the cost of money in the long term.

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 biggest stock trading venue in Europe in 2018.

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. However, save for several short periods, neither of them reports any trading. This could suggest that smaller markets, such as GPW, tend to concentrate trading.

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.

Final Shape of the Pension System Reform in Poland: Open-ended Pension Funds (OFE) and Employee Capital Plans (PPK)

In July 2016, the Government published a proposal of a further reform of the pension system involving the nationalisation of a part of savings in open-ended pension funds (OFE) and a transfer of 25% of liquid assets (cash, foreign stocks, bonds) to a Demographic Reserve Fund. The remaining 75% of the assets (Polish stocks) would remain in open-ended pension funds, which would eventually be transformed into traditional investment funds. The details of the planned pension system reform are still unknown. According to the original plan, the reform was expected to take effect in 2018 but the date has been delayed.

Employee Capital Plans (PPK) are a universal savings scheme under the Act of 4 October 2018 developed by the government in partnership with the Polish Development Fund (PFR), employer organisations and trade unions. PPK savings will bolster growth of the economy and provide a safety net for pension savings in Poland.

PPK will automatically cover all employees aged 18 to 54 years whose pension contributions are paid by the employer (to the exclusion of self-employed individuals, uniformed services, and farmers). Individuals aged 55 to 69 may participate in PPK subject to a declaration. Automatic enrolment in the scheme (without additional formal requirements) will encourage participation and ensure a high turnout.

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 eligible to set up Employee Capital Plans are required to:

- ✓ have at least 3 years of experience in management of (open-ended) investment funds, pension funds or open-ended pensions funds; for insurers – at least 3 years of experience in offering insurance with capital funds;
- ✓ have equity (or authorised equity) of at least PLN 25 million, including at least PLN 10 million in liquid assets (investments defined for money market funds);
- ✓ operate a specific number of target-date funds or subfunds.

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. 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.

Debt instruments 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.

Promotion of Poland as Developed Market in FTSE Russell and Stoxx Rankings

On 24 September 2018, the global rating agency FTSE Russell promoted Poland from Emerging Markets to Developed Markets. The promotion puts Poland among the world's 25 developed economies. In addition, Stoxx, the Deutsche Boerse Group index operator, also promoted Poland to Developed Markets on the same date. Eight Polish WIG20 stocks were included in the Stoxx Europe 600 portfolio.

The decisions of FTSE Russel and Stoxx represent a fundamental change in the perception of Poland by global investors. The promotion of Poland will attract new investors to Polish stocks and open opportunities for the entire capital market.

On 21 September 2018, directly before the promotion of Poland, the value of trading in stocks on the electronic order book on the main market was historically high at more than PLN 5.4 billion (the previous daily record was PLN 3.35 billion on 12 May 2010).

Poland is still rated as an Emerging Market by the world's biggest index provider MSCI, which puts companies listed on GPW on the radar of investors active on Developed Markets (FTSE Russell, Stoxx) as well as investors focusing on Emerging Markets (MSCI). In the long term, this unique position may attract more capital to the Warsaw Stock Exchange. Volatility of volumes and prices on GPW may be higher in the coming months as institutional investors, including mainly investment funds, realign their portfolios.

Financial and Commodity Market Regulation

- **MiFID 2 and the financial market** – Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (EU Official Journal L 173 of 12.06.2014 p. 349) (MiFID 2) took effect on 2 July 2014. The Member States were required to harmonise national laws with the Directive by 3 January 2018. The Act of 1 March 2018 amending the Act on Trading in Financial Instruments and certain other Acts, which took effect on 21 April 2018, implements MiFID 2 in Polish law.

  The Act requires the Company to implement detailed rules for outsourcing contracts and to comply with additional regulations concerning members of the Company's authorities including a limitation on the number of positions held on the authorities of other companies. The Act requires operators of regulated markets to appoint a nomination committee of adequate size, structure and scope, responsible among others for recommending candidates to the management board and for regular assessments of the management board.

  The Act does not end the implementation of the MiFID 2/MiFIR package in the Polish legal system pending national implementing regulations. Work continues to draft regulations defining the specific conditions for regulated markets and alternative trading systems as well; as specific criteria for members of the management board and the supervisory board of a regulated market operator including repute, knowledge, competences and experience.

- **MiFID 2 / MiFIR and the commodity market** – Similar to 2017, alignment of TGE and market participants with MiFID 2 requirements was a priority in 2018.

  In the first step, discretion, defined in communication with and approved by the Polish Financial Supervision Authority, was introduced on the Commodity Forward Instruments Market on 29 December 2017.
  In Q1 2018, TGE actively participated in the final work implementing the Directive in Polish law. The law ensures alignment of the TGE markets with the MiFID 2 requirements in the optimum way for market participants and TGE.
  In 2018, TGE completed the alignment of its technical infrastructure with MiFID 2 requirements, the implementing regulations, the amended Act on Trading in Financial Instruments, including new requirements for trading venues and reporting to supervisory authorities.

  On 30 March 2018, TGE filed an application with the Polish Financial Supervision Authority for amendments to the Rules of Trading on the TGE Financial Instruments Market. The application is a part of the alignment of TGE's market structure with the MiFID 2 requirements. TGE is planning to open trading in CO2 emissions, which are financial instruments under MiFID 2, on the Financial Instruments Market. The approval of amendments to the Rules is pending before PFSA. Once approved, they will allow TGE to offer trading in emission allowances on the regulated market.

TGE focused in H2 2018 on the drafting of documentation necessary to apply to the Polish Financial Supervision Authority for a licence as an organised trading facility (OTF). As agreed with market participants and the regulator, the Commodity Forward Instruments Market will be transformed into an OTF in order to align TGE's market structure with the MiFID 2 requirements. According to the applicable law, TGE had 12 months to file the application after the effective date of amendments to the Act on Trading in Financial Instruments (21 April 2018). TGE filed the application for an OTF licence with PFSA on 21 December 2018.

The harmonisation of TGE's markets with MiFID 2 requirements will be completed when trading on the Financial Instruments Market is resumed and the Commodity Forward Instruments Market is transformed into an organised trading facility (OTF) under a PFSA licence.

- **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) takes effect on 21 July 2019. To put in it effect, a draft act is pending approval amending the Act on Public Offerings and Conditions of Introduction of Financial Instruments to an Organised Trading System and on Public Companies and amending other acts in implementation of 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.
  The draft Act introduces a measure which is not part of the Prospectus Regulation: each subsequent offering addressed to less than 150 persons (private placement in the current legal system) in a calendar year will require an information memorandum to be drafted and approved by PFSA. The measure could largely limit offerings addressed to less than 150 persons. With a higher cost of issue and a longer and more complex process of raising capital, issuers including SMEs may be unable to raise financing by issuing debt or equity. The limitation could affect the capitalisation of issuers, including public companies, and their outlook. Some public companies are likely to apply for bank loans. However, bank loans are not available to all companies due to banks' capital requirements and credit ratings.
  The draft Act introduces changes to delisting of public companies which are unrelated to the Prospectus Regulation or Directive 2017/828. The draft requires the Company as a trading venue operator (regulated market and alternative trading system) to issue permissions for delisting in organised trading (in the current legal system, this is a responsibility of PFSA, which reverts the decision approving shares in uncertificated form). In the absence of legal tools available to operators of trading systems, the draft could impair effective review of delisting criteria and affect the timing of delisting, which could impact the safety of delisting procedures.

- **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.

  For GPW Benchmark, the Regulation provides detailed rules of administration of WIBID and WIBOR reference rates including the mandatory authorisation by PFSA as administrator of WIBID and WIBOR reference rates by the end of 2019.
  Until 1 January 2020 or the date of authorisation or its refusal, GPW Benchmark will use the transitional period allowed under the Regulation for WIBID and WIBOR reference rates and supervised entities may use the rates, for instance in contracts and financial instruments. New WIBID and WIBOR documentation effective as of 1 February 2018 aligns the organisation of fixings with the requirements of the Regulation. GPW Benchmark takes steps to fully comply with the regulatory requirements of benchmark calculation in order to apply for the necessary authorisation of the supervisory authority as an administrator.

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 will be held by the Energy Regulatory Office. Auction winners who offer the lowest price for energy generation will receive support for a period of 15 years. The existing system of green certificates of origin will be 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 but it had no impact on the revenue of the TGE Group. The potential impact of amendments to RES regulations on the business of TGE is discussed in section *II.7. Risks and Threats*.
- **CO_2 Trading Act** effective as of September 2015 enables TGE to grow a new business segment by becoming the national platform authorised to organise CO_2 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 CO_2 allowances platform on 20 December 2016. 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 Environment. 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.
- **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 eliminates tenders: from now on, certificates of origin of energy efficiency will be 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 will be 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, will start 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.
- **CACM Regulation – TGE as NEMO in the market competition mode**l: 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 requires 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, 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 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 INC at least in 2019.

- **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 at least 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 expire as of 31 December 2019. The Act governs those guarantees of origin which were already issued.
- **Act on Trading in Financial Instruments** of 29 July 2005 (Journal of Laws No. 183, item 1538, as amended). On 23 February 2015, the Ministry 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. A procedure is pending before the Polish Financial Supervision Authority to amend the Rules of Trading on the Financial Instruments Market in order to allow for trade in emission allowances on the TGE market.

  Furthermore, on 20 December 2018, TGE filed an application with PFSA to be authorised as an OTF under the Act. The OTF Rules presented by TGE provide for trading in instruments on the following markets: Market in Futures on Products with Delivery of Electricity (RTPE), Market in Futures on Products with Delivery of Gas (RTPG), Market in Futures on Property Rights (RTPM). Instruments are understood as futures contracted on OTF, creating rights or obligations, which are or are not financial instruments, where instruments which are not financial instruments are settled physically (within the meaning of Directive 2014/65/EU, Section C.6).

II. 7 Risks and Threats

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

In pursuit of its strategic goals, in view of the special sensitivity of different business segments to many risks beyond the control of the GPW Group, the GPW Group actively manages its risks aiming to mitigate or eliminate their potential adverse effect on the Group's results.

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 approved by the Exchange Management Board. Risk management is a responsibility of the Exchange Management Board supported by the Risk Management Committee. The Company's Management Board drafts, approves 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 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 7 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, actions taken or recommendations to withhold 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.

The order in which individual risks are discussed below does not reflect the extent of their relative importance for the Group, the probability of their occurrence or their potential impact on the GPW Group's operations.

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; and
- unforeseen market closures or other disruptions in trading.

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.

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 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 2018, open-ended pension funds generated approximately 3.7% of trading in shares on the GPW Main Market and held shares representing 21.5% of the capitalisation of domestic companies and 41.5% 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 a large surplus 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 issues 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 at least 100% of electricity produced within a year among others on commodity exchanges (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 or Origin. The Renewable Energy Sources Act implements 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 over the years. Furthermore, the Renewable Energy Sources Act allows market players eligible for support under certificates of origin to move to the auction system earlier than after 15 years. Consequently, some of them may move to the auction system early, which could affect the results of the Group.

Risk of expiry of the cogeneration support scheme

The existing support scheme for cogeneration will expire after the 2018 obligations are settled. After that date, the TGE Group will no longer enjoy benefits from the operation of the Register, organisation of trading and clearing of property rights in cogeneration certificates.

Risk of TGE's alignment with the MiFID 2 package

TGE manages the risk by implementing the project "TGE's Alignment with MiFID 2". Solutions introduced by the Act implementing MiFID 2 to the Polish legal system, developed with a major contribution of TGE, allow for alignment of TGE's markets with the MiFID 2 requirements in the most optimal way for market participants and TGE. With a view to the legislative amendments, in March 2018, prior to the effective date of the Act, acting in communication with the Polish Financial Supervision Authority, TGE filed an application for amendment of the Rules of Trading of TGE's Financial Instruments Market in order to open trading in CO2 emission allowances on the market in the alignment of the markets with the legal requirements under MiFID 2. In another major risk management step, on 20 December 2018, TGE filed an application with the Polish Financial Supervision Authority to be licenses as an organised trading facility (OTF). The Commodity Forward Instruments Market will be transformed into an OTF in order to align TGE's market structure with the MiFID 2 requirements. The harmonisation of TGE's markets with MiFID 2 requirements will be completed when trading on the Financial Instruments Market is resumed and the Commodity Forward Instruments Market is transformed into an organised trading facility (OTF) under a PFSA licence.

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. The Act lays down requirements for operators of key services as well as their implementation deadlines: within 3, 6 and 12 months after the decision nominating them as operators of key services.

Consequently, GPW and TGE are working to align with the legal requirements. The measures addressing the requirements to be met within 3 months have been largely completed (although some of them are continuous). The requirements to be met within 6 months (by 8 May 2019) may generate the following material risks:

- ✓ risk of the requirement of having in place a "continuous monitoring system covering the IT system used to provide the key service." GPW and TGE do not have the human resources necessary to meet the requirement internally. The companies are planning to use a third-party service of a special provider to meet the requirement. GPW is running a procedure to appoint a SOC (Security Operation Center) provider for GPW and TGE. The timeline of GPW's alignment with the requirement of continuous monitoring depends among others on such third-party provider. Furthermore, the organisation of work must be modified to ensure that GPW and TGE employees can react to incidents reported by the SOC. This requires amendments to the GPW Work Rules and the TGE Work Rules necessary to ensure that the incident follow-up function can be performed outside the business hours and on bank holidays;
- ✓ risk of the requirement of "drafting, implementing and updating documentation concerning cybersecurity of the IT system used to provide the key service." Since such documentation should include "documentation concerning the information security management system produced in compliance with PN-EN ISO/IEC 27001", far-reaching measures are necessary in order to review the existing documentation and to produce new documentation compliant with the norm.

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 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 property 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.

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 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 activity, revenue, results or financial position.

Risk of trading system 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 system and other integrated IT systems could delay 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

The trading system UTP was implemented by the Company on 15 April 2013. The Company has recently implemented a major system upgrade to align it with applicable regulatory requirements (MiFID 2/MiFIR). Although UTP now represents the highest global standard and meets growing requirements of market participants, there is no guarantee that it need not be upgraded in the next five years. This could require material investments of the Company.

There can be no guarantee that the capital expenditures of the Company required to upgrade UTP or replace IT hardware 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, as well as operational risk of its activity. The Group has an 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. 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 requires 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 51.76% of the total vote as at the end of 2018. 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 the take-over of the functions of fixing organiser

The GPW Group acting through the subsidiary GPW Benchmark S.A. took over the preparation of WIBID and WIBOR reference rates from the existing organiser of the fixing, the ACI Polska Association, on 30 June 2017. GPW Benchmark S.A. continues to harmonise with Regulation (EU) No 2016/1011 of the European Parliament and of the Council. GPW Benchmark applies for the authorisation as administrator within the meaning of the Regulation. GPW Benchmark S.A. is required to apply to the Polish Financial Supervision Authority for the authorisation as administrator of WIBID and WIBOR reference rates within the transitional period of harmonisation with the Regulation until the end of 2019. GPW Benchmark continues the alignment of GPW Group reference rates subject to the transitional period, including WIG indices, with the Regulation. GPW Benchmark has developed the concept of a Warsaw Repo Rate. The initiative is implemented in partnership with BondSpot S.A. Potential disputes or reservations concerning the preparation of reference rates by the Group company could have an adverse impact on its perception by market participants and on its reputation, and entail third-party liability of the Group. Once the status of administrator is granted in connection with the application of Regulation 2016/2011 as of the beginning of 2018, any breach of the administrator's obligations could lead to civil, administrative or criminal liability.

Business risk of TBSP's loss of reference Treasury securities market status

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. upon initiating the procedure under § 23 (1) of the Treasury Securities Dealers Rules at the request of more than 50% of Treasury Securities Dealers.

TBSP generates most of the Group's revenue from trade in Treasury securities. The Group's revenue from trade in Treasury securities depends among others on the terms of trade in Treasury securities compared to competitive trading venues and OTC trade and on TBSP's reference market status. The Group has no direct control of the volume, value and number of transactions in Treasury securities on TBSP but it takes steps to make the market more attractive, including the provision of a broad range of functionalities and quality services offered on competitive terms. There can be no guarantee that the terms and conditions of the Treasury Securities Dealers competition will not change, directly or indirectly affecting the volume of trading on TBSP and consequently the revenue from TBSP.

In January 2019, Treasury BondSpot Poland was once again appointed by Treasury Securities Dealers for an undetermined period of time and approved by the Ministry of Finance as the electronic market which is the reference trading platform of Treasury debt.

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 the 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 and organisational parameters 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, the initiative is unlikely to provide financial benefits. 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 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. As a result, the key objective of TGE in the next few years is to defend its existing revenue base, which does not ensure that the company will deliver profitability at levels satisfactory to the owner.

As an important factor impacting TGE's activity on the spot market, the nomination as NEMO implies a new strategic and business dimension and consequently new challenges and risks. Challenges faced by TGE include the following objectives:

- ✓ to ensure appropriate operating and safety procedures of the spot electricity market under the European models PCR and XBID and their efficient implementation;
- ✓ to ensure good relations with market participants and other stakeholders (administration, regulators, supervisory authorities, transmission network operators);
- ✓ to review conformity of IT software and hardware with the qualitative and quantitative standards of the European projects and quickly respond to changing need of the projects;
- ✓ to monitor the operation of other NEMOs and secure information impacting TGE's business decisions;
- ✓ to train staff, learn from companies with longer seniority in the projects, arrange examinations.

The objectives of TGE on the European spot electricity market include:

- ✓ to implement a strategy of maintaining TGE's position as a reliable, professional electricity exchange;
- ✓ to safeguard conditions of TGE's survival and efficient operation as an energy exchange on the domestic and European spot market in view of competition among exchanges;

- ✓ to perform the functions defined in the Guarantee Letter issued by the President of the Energy Regulatory Office, including TGE's full membership of PCR and performance of NEMO functions based on a guarantee of refinancing of investments;
- ✓ to ensure contractual and technical capabilities of active full-fledged participation in market development projects and implementation of the EU market mechanisms jointly with other European exchanges.

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 indicating whether the marketing and capital expenditures will pay off. At this point, all suggests that seeking the status of NEMO on other markets will mainly entail additional costs to TGE, including participation in NEMO costs on other markets, additional licensing costs, as well as HR costs.

International project management is a responsibility of steering committees and work groups. As a party to international market agreements and a participant of projects, TGE is required to delegate its representatives to work groups and project steering committees.

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. In 2015, the fees paid by the GPW Group and KDPW represented close to 100% of the capital market supervision budget of the Polish Financial Supervision Authority. The Act of 12 June 2015 amending the Act on Capital Market Supervision and certain other Acts extended the group of entities which finance market supervision and modified the amount of fees contributed by different institutions. As a result, the fees paid by the GPW Group decreased substantially (by about one half) as of January 2016 but reached PLN 12.5 million in 2018, the highest since the amendment took effect. 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.

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 with variable interest maturing on 31 January 2022. A sharp increase of the interest rates including the base 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 2018 (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 20 Exchange Members had a share between 1% and 9%. Furthermore, there were four Exchange Members that had a share of more than 10% each in the volume of trade in futures, jointly representing 62.2% 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 27.1% of the Group's total sales revenue in 2018. In that period, the top five companies with the biggest share in trade on GPW generated 45.6% of the average monthly value of trade in shares on the electronic order book on the Main Market while the top 10 companies generated 62.6%. 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 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 9.7% of the Group's sales revenue from trading on the financial market and 3.5% of the Group's total revenue in 2018. 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 dependence of the Group's revenue from trade in commodities on the propensity of producers to sell energy and gas on the exchange

The 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. The mandatory sale on the exchange currently applies to 100% of produced energy (subject to certain exceptions) and 55% of gas. 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, impacting the ability of the Company to pay for and redeem the bonds and impacting the value of the bonds.

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.

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.

II. 8 Other Information

MATERIAL AGREEMENTS

The GPW Group concluded no material agreements in 2018.

RESEARCH AND DEVELOPMENT

The GPW Group's research focuses on prospects of development of new trading platforms and products. The initiatives completed in 2018 are described in section *II.3. Implementation of the GPW Group's Strategy in 2018.*

LITIGATION

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

III. CORPORATE GOVERNANCE

III. 1. Statement of Compliance with Corporate Governance Rules

TERMS AND SCOPE OF COMPLIANCE WITH CORPORATE GOVERNANCE RULES

In 2018, 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.

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. The Code 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 for GPW Listed Companies 2016 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 management contracts with the members of the Exchange Management Board concluded in connection with the Act of 9 June 2016 on Rules of Remuneration of Managers of Certain Companies do not provide for an incentive scheme based on options or other instruments linked to the company's shares.

Furthermore, concerning Recommendation I.R.2, 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.

GPW donated PLN 1.97 million in 2018, including PLN 1.5 million to the Polish National Foundation. Other donations were made to the GPW Foundation (PLN 416 thousand in total: PLN 260 thousand for its statutory activity and PLN 201 thousand for the organisation of the Online School Exchange Game), the University of Warsaw (PLN 10 thousand), Europejska Fundacja na rzecz osób potrzebujących (PLN 5,462) and Caritas Diecezji Łowickiej (PLN 1,020).

Sponsorship expenses stood at PLN 880.4 thousand including mainly support for events dedicated to the capital market: conferences organised by the Chamber of Brokerage Houses (IDM) – "Capital Market in Support of the Innovative Economy", the Association of Listed Companies (SEG) – the Seventh CFO Congress of Listed Companies, a conference for individual investors organised by the Association of Individual Investors (SII) – "WallStreet 2018" presenting GPW's offer for individual investors, a conference in Stegersbach organised by Erste Group Bank AG, and the Sixteenth Local Government Capital and Finance Forum organised by Międzykomunalna Spółka Akcyjna "MUNICIPIUM".

GPW worked with partners to provide direct support for the sale of GPW's products and services by co-organising industry conferences: Polish Capital Markets Day in London, Stockholm, New York, Warsaw, Paris, Frankfurt, Stegersbach and Prague. GPW organised the first edition of the GPW Innovation Day in Warsaw dedicated to small and mid-sized technology companies listed on the Main Market and NewConnect, which brought together individual and institutional investors. GPW was once again a partner of the FOW Trading CEE event, which discussed both cash and derivatives markets.

The event "Charting Poland's Future: Spotlight on Growth & Innovation" organised by Bloomberg Live took place in London on 25 September 2018. The event was co-organised by the Warsaw Stock Exchange as well as Bank Pekao S.A., KDPW, the Polish Development Fund (PFR), PKO Bank Polski and Powszechny Zakład Ubezpieczeń S.A. The event took place on the occasion of the Market Open ceremony, celebrating Poland's promotion to Developed Markets in the FTSE Russell classification on 24 September 2018. The promotion put Poland among the world's 25 developed economies.

Poland is the first country in a decade to be promoted to Developed Markets and the first CEE country to be promoted. Poland was promoted to Developed Markets in recognition of the development of the Polish economy and the local capital market.

GPW also worked with foundations, associations, chambers of commerce and institutions in events and conferences dedicated to the economy and the capital markets, including the Eastern Studies Institute Foundation in the organisation of the 28th Economic Forum in Krynica under the motto *Europe of Common Values or Europe of Common Interests*, the Lesław A. Paga Foundation (mainly training and educational projects devoted to the capital markets), the Chamber of Fund and Asset Managers (13th Fund Forum) and the CFA Association (Gala Investment Summary).

In addition, GPW is subject to the Corporate Governance Rules for Supervised Institutions issued by the Polish Financial Supervision Authority on 22 July 2014 as a set of rules governing internal and external relations of supervised institutions, including relations with shareholders and clients, their organisation, the operation of internal supervision and the key internal systems and functions, as well as the statutory authorities and the rules of their co-operation. The Corporate Governance Rules for Supervised Institutions are available on the website of the Polish Financial Supervision Authority (http://www.knf.gov.pl) under the corporate governance tab.

The Exchange complies with the rules laid down in the Corporate Governance Rules for Supervised Institutions with the exception of the rules defined in § 10.2, § 12.1 and § 28.4, and except the rules defined in § 53, § 54.1-3, § 55, § 56, § 57, which are inapplicable to GPW's business profile as GPW does not manage assets on clients' account. GPW does not comply with two additional rules defined in § 49.4 and § 52.2 which are inadequate in view of GPW's organisational structure. GPW's organisation includes the Internal Audit Department and the Compliance and Risk Department headed by the Compliance Officer.

Non-compliance with the rule defined in § 10.2, concerning the introduction of personal entitlements or other special entitlements for shareholders, and in § 12.1, which provides that shareholders shall be responsible for an immediate capital increase of the supervised institution, is due to the incomplete privatisation of the Company by the State Treasury. Non-compliance with the rule defined in § 28.4, which provides that the General Meeting shall assess whether the established remuneration policy contributes to the development and security of the operations of the supervised institution, is due to the excessively broad range of the remuneration policy to be assessed by the General Meeting. The remuneration policy for key managers other than the members of the supervisory board and the management board should be assessed by their employer, i.e., the Company represented by the Management Board and controlled by the Supervisory Board.

For more information on the Company's compliance with the Code of Best Practice for GPW Listed Companies 2016 and the Corporate Governance Rules for Supervised Institutions, see the Company's website under the GPW corporate governance tab.

III. 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 Reporting Section is responsible for enforcing internal and external regulations. The Financial Reporting Section is responsible for preparing financial statements 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 will be examined by the Company's auditor every 6 months: the H1 report will be reviewed and the annual report will be 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.

III. 3. Auditor

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 2017 and to review the interim financial statements of GPW and the GPW Group in the year ended 31 December 2018 is KPMG Audyt spółka z ograniczoną odpowiedzialnością spółka komandytowa ("KPMG Audyt"), entered in the list of entities authorised to audit financial statements, entry no. 3546.

The agreement between GPW and KPMG Audyt was concluded on 21 October 2015 and covers the audit of the annual consolidated financial statements for the financial years 2015, 2016 and 2017 and the review of the interim separate and consolidated financial statements for each quarter of 2016, 2017 and 2018.

Following the expiry of the agreement with the auditor, the GPW Group selected a new audit firm in 2018. 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 2018 is BDO PL spółka z ograniczoną odpowiedzialnością sp. k. with its registered office in Warsaw, ul. Postępu 12, 02-676 Warsaw, entered by the National Board of Auditors in the list of entities authorised to audit financial statements, entry no. 3355.

The agreement between GPW and BDO PL was signed on 24 September 2018. The agreement covers the audit of the annual consolidated financial statements for the financial years 2018, 2019 and 2020 and the review of the interim separate and consolidated financial statements for 2019 and 2020.

The fees of auditors increased, mainly due to changes of legislation: implementation of new EU regulations applicable to public-interest entities, amendments of the Act on Auditors, Audit Firms, and Public Supervision which first apply to the audit of GPW's financial statements for 2017, and amendments to the accounting standards. The amendments resulted in:

- extended scope of auditor reporting with respect to audits of financial statements of public-interest entities;
- additional communication between the auditor and the Audit Committee;
- extended scope of audit and review due to additional disclosures in financial statements in areas related to key audit issues, additional disclosures in financial statements concerning the expected impact of the first application of new accounting standards (IFRS 16 Leases) and additional disclosures concerning the first year of application of new standards (IFRS 15 Revenue from Contracts with Customers, IFRS 9 Financial Instruments).

  The full impact of the changes, which increased the fees of the former auditor (KPMG) and the new auditor (BDO), is evidend in 2018.

Table 15 Auditor’s fees for services provided to GPW Group (net) [PLN]

Service	2018	2017	2016
Audit:			
♦ annual separate financial statements of GPW and consolidated financial statements of the GPW Group for the financial year ended 31 December	164 000*	80 000	80 000
♦ annual separate financial statements of subsidiaries for the financial year ended 31 December	90 000	69 600	69 600
Review of interim financial statements:			
♦ consolidated, for the period 01.01. – 31.03	105 000**	24 600	24 600
♦ separate and consolidated, for the period 01.01 – 30.06.	31 600	31 600	31 600
♦ separate and consolidated, for the period 01.01. – 30.09.	24 600	24 600	24 600

** The amount refers to an audit by BDO, including only the audit of the separate and consolidated financial statements for the financial year ended 31 December 2018.*

*** The amount refers to a review of the interim financial statements in 2018 by KPMG.*

No recommendations were presented in 2018 to ensure accuracy of the financial reporting process.

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

The GPW Group’s auditor provided no non-audit services in 2018.

The GPW Group’s audit firm provided no prohibited services to GPW or its subsidiaries in 2018.

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 GPW Group’s audit firm or 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 Group’s auditor 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 GPW and the GPW Group.

III. 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 developed and approved by the Exchange Supervisory Board, in the selection of Members of the GPW Management Board. 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.

III. 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:

- 14,779,470 series A preferred registered shares, and
- 27,192,530 series B ordinary bearer shares.

27,192,530 series B ordinary bearer shares are introduced to trading on GPW (64.79% of all shares representing 47.92% 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.

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 16 GPW shareholders

Shareholder	Stake in the share capital		Votes at the General Meeting	
	Number of shares	Stake	Number of votes	Stake
State Treasury of the Republic of Poland - preferred shares (series A)	14 688 470	35.00%	29 376 940	51.76%
Other shareholders - preferred shares (series A)	91 000	0.22%	182 000	0.32%
Other shareholders - bearer shares (free float; series B)	27 192 530	64.79%	27 192 530	47.92%
Total	41 972 000	100%	56 751 470	100%

As at 31 December 2018, 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 Board.

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 2018. The Company has no employee share scheme; accordingly, it has no control system for an employee share scheme.

III. 6. Controlling Rights and Restrictions of Rights from Shares

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 51.76% 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, 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 competition procedure which verifies and evaluates the qualifications of candidates and selects the best candidate. The terms and conditions of the competition procedure are defined by the Exchange Supervisory Board.

On 12 June 2018, 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 upon the approval of the Polish Financial Supervision Authority for the changes to the composition of the Exchange Management Board as of 1 August 2018.

The GPW Management Board of the new term of office is headed by Marek Dietl as President (CEO), appointed by the GPW General Meeting on 23 April 2018.

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.

III. 7. 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.

III. 8. 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 § 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 GPW Ordinary General Meeting held on 19 June 2018 approved no amendments of the GPW Articles of Association. The most recent amendments of the GPW Articles of Association approved on 19 June 2017 were amendments to the powers of the authorities of the Company, appointment of Management Board Members, disposal of fixed assets in line with the Act of 16 December 2016 on Management of Public Assets and in line with new regulations applicable to the Company, including the Act of 9 June 2016 on Rules of Remuneration of Managers of Certain Companies and the Act of 11 May 2017 on Auditors, Audit Firms, and Public Supervision.

The relevant resolution of the GPW General Meeting was published in Current Report 36/2017 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 Reports 44/2017 and 44/2017/K 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 20 November 2017.

III. 9. General Meeting

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 defining the terms of remuneration of Members of the Exchange Supervisory Board and the Exchange Management Board, approval of any disposal of fixed assets or giving them for use to another person for a period longer than 180 days within a calendar year in an amount greater than 5% of the total assets, and acquisition of fixed assets or acquisition, taking up, or disposal of shares of another company in an amount greater than PLN 100 million or in an amount greater than 5% of total assets in the case of acquisition of fixed assets or 10% of total assets in the case of acquisition, taking up, or disposal of shares of another company.

PROCEDURES OF THE GENERAL MEETING

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.

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 § 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 ordinary 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.

A 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 General Meeting tab.

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.

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.

GENERAL MEETINGS IN 2018

The Extraordinary General Meeting of GPW was summoned on 23 April 2018 with an agenda including changes in the composition of the Exchange Management Board and changes in the composition of the Exchange Supervisory Board, as well as a resolution to sell interest in Aquis Exchange Limited. The Extraordinary General Meeting of the Company on 23 April 2018 decided, at the request of the State Treasury, to adjourn the meeting. The Extraordinary General Meeting was resumed on 22 May 2018.

The resolutions of the Extraordinary General Meeting of 23 April 2018 continued on 22 May 2018 were published in Current Reports 14/2018 of 23 April 2018 and 19/2018 of 22 May 2018 available on the Company's website in the Investor Relations tab.

The Ordinary General Meeting of GPW was summoned on 19 June 2018 with an agenda including review and approval of the Management Board's report on the activity of the Company and the GPW Group and the financial statements of the Company and the GPW Group for 2017, review of reports of the Exchange Supervisory Board on the assessment of those reports and financial statements, review of documents of the Exchange Supervisory Board, resolutions concerning distribution of the Company's profit for 2017, 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. The resolutions of the Ordinary General Meeting of 19 June 2018 were published in Current Report 29/2018 of 19 June 2018 available on the Company's website in the Investor Relations tab.

III. 10. Supervisory Board and Committees

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 Commercial Companies Code, 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 below. A candidate must be nominated not 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 Ordinary General Meeting.

At least two members of the Exchange Supervisory Board need to meet the criteria for independence laid down below. If an Exchange Supervisory Board member is elected in breach of the criteria for independence, such election will be ineffective in respect of the Company, and if the Exchange Supervisory Board member no longer meets the criteria for independence during the term of his/her office, his/her mandate shall expire.

The criteria for independence are met by a person who:

- is not a related person in respect of the Company (except for being the Exchange Supervisory Board member),
- is not a related person in respect of the Company's parent or subsidiary or a subsidiary of the Company's parent or a related person in respect of an entity in which the Company holds more than 10% of share capital;
- is not a relative by blood or marriage to the second degree of the person referred to above;

- is not a relative by blood or marriage to the second degree of the Company's shareholder holding more than 5% of all votes in the Company;
- is not a related person in respect of a Company's shareholder holding more than 5% of all votes in the Company as well as a related person in respect of such shareholder's parent or subsidiary or a subsidiary of such shareholder's parent;
- is not a relative by blood or marriage to the second degree of the person referred to in the item above.

According to the GPW Articles of Association, a "related person" means a person who:

- is a member of the governing body of a legal person and, in the case of a partnership, a partner or a general partner;
- is employed, mandated or otherwise legally engaged by the entity the relationship with whom is being determined. The above shall apply to the persons who during the least 3 years preceding their election as the Exchange Supervisory Board members have been employed, mandated or otherwise legally engaged by the Company.

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;
- assessing the financial statements for the preceding financial year and the Exchange Management Board's report on the Company's operations including information on expenses for representation, expenses for legal services, marketing services, public relations and social communication services, and management advisory services;
- 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;
- approving the Exchange Management Board Rules at the request of the Exchange Management Board;
- adopting the Exchange Supervisory Board Rules;
- adopting the Exchange Rules at the request of the Exchange Management Board and amendments to these Rules;
- determining the terms and conditions of contracts and remuneration of the Members of the Exchange Management Board according to a resolution of the General Meeting referred to in § 9(1a)(2) of the Articles of Association;
- representing the Company in contracts and disputes between the Company and the Exchange Management Board members;
- consenting to the Company entering into a contract which has a material impact on the financial or legal position of the Company with a shareholder who holds at least 5% of the total vote or with a related party;
- determining the rules on which the Exchange Management Board members buy and sell securities listed on the stock exchange operated by the Company;
- appointing the chartered auditor to audit the Company's financial statements;
- approving, at the request of the Exchange Management Board, the financial plan and the report on its implementation;
- presenting to the General Meeting an annual concise assessment of the Company's situation, including the internal control system and the system of managing the risks material for the Company;
- presenting to the General Meeting an annual report on the work of the Exchange Supervisory Board;
- considering and presenting opinions on the items to be placed on the General Meeting's agenda;
- approving the execution of a donation agreement or other similar agreement in an amount exceeding PLN 20,000 or 0.1% of the total assets or a debt cancellation agreement or other

similar agreement in an amount exceeding PLN 50,000 or 0.1% of the total assets of the Company;

- approving the execution or amendment of an agreement concerning legal services, marketing services, public relations and social communication services or management advisory services where the total fee for the services exceeds PLN 500,000 net per year or where the fee is not capped;
- approving the acquisition by the Company, otherwise than in a tender, of fixed assets in an amount exceeding 0.1% of the total assets of the Company.

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 Company 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 the acquisition or disposal of shares or other interest in commercial companies or partnerships where their amount at purchase or sale price is more than 1/10 of the share capital of the Company, subject to § 9(1a)(3)(c) and (d) and § 9(2)(2) 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 2018 is presented in the table below.

Table 17 Composition of the Exchange Supervisory Board as at 31 December 2018 and as at the date of this report

Name	Function	Independence
Jakub Modrzejewski**	Chairman 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
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, meets the independence criteria defined in:
1) § 14 of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.,
2) Rule II.Z.4 of the Code of Best Practice for GPW Listed Companies 2016,
3) Article 129 of the Act of 11 May 2017 on Auditors, Audit Firms and Public Supervision

** According to submitted declarations, meets the independence criteria defined in:
1) § 14 of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.

Wojciech Nagel resigned as Chairman of the Exchange Supervisory Board on 19 June 2018. The GPW Extraordinary General Meeting elected Janusz Krawczyk to the Exchange Supervisory Board on 19 June 2018.

On 22 August 2018, GPW was notified of the resignation of Krzysztof Kaczmarczyk as Member of the Exchange Supervisory Board effective as of 20 August 2018. Consequently, the Exchange Supervisory Board was comprised of six members after the resignation.

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 Articles of Association and the Exchange Supervisory Board Rules available on the GPW website under the About the Company tab.

Composition of Supervisory Board Committees as at 31 December 2018.

STRATEGY COMMITTEE

- Bogusław Bartczak – Chairman
- Janusz Krawczyk - Member
- Jakub Modrzejewski - Member
- Filip Paszke - Member

REGULATION AND CORPORATE GOVERNANCE COMMITTEE

- Jakub Modrzejewski - Chairman
- Filip Paszke - Member
- Piotr Prażmo - Member

REMUNERATION AND NOMINATIONS COMMITTEE

- Janusz Krawczyk - Chairman
- Jakub Modrzejewski - Member
- Piotr Prażmo - Member
- Bogusław Bartczak – Member

AUDIT COMMITTEE

- Piotr Prażmo - Chairman
- Bogusław Bartczak – Member
- Filip Paszke – Member

The Strategy Committee was comprised of Bogusław Bartczak as Chairman and Wojciech Nagel and Filip Paszke as Members from the beginning of 2018 to 19 June 2018. As of 19 June 2018, following his resignation from the Exchange Supervisory Board, Wojciech Nagel was no longer a Member of the

Committee. Janusz Krawczyk was appointed to the Committee on 16 July 2018 and Jakub Modrzejewski was appointed to the Committee on 10 September 2018. As of 10 September 2018, the Committee was comprised of Bogusław Bartczak as Chairman and Janusz Krawczyk, Jakub Modrzejewski and Filip Paszke as Members.

The Regulation and Corporate Governance Committee was comprised as at 1 January 2018 of Krzysztof Kaczmarczyk as Chairman and Jakub Modrzejewski and Filip Paszke as Members. On 20 August 2018, following his resignation from the Exchange Supervisory Board, Krzysztof Kaczmarczyk was no longer the Chairman of the Committee. On 10 September 2018, Piotr Prażmo was appointed a Member of the Committee and Jakub Modrzejewski was appointed the Chairman of the Committee. As at 31 December 2018, the Regulation and Corporate Governance Committee was comprised of Jakub Modrzejewski as Chairman and Piotr Prażmo and Filip Paszke as Members.

The Remuneration and Nomination Committee from 1 January 2018 to 19 February 2018 was comprised of Wojciech Nagel as Chairman and Piotr Prażmo and Jakub Modrzejewski as Members. On 19 February 2018, Bogusław Bartczak was appointed a Member of the Committee. As of 19 June 2018, following his resignation from the Exchange Supervisory Board, Wojciech Nagel was no longer the Chairman of the Committee. On 16 July 2018, Janusz Krawczyk was appointed a Member of the Committee. On 10 September 2018, Janusz Krawczyk was appointed the Chairman of the Committee. As at 31 December 2018, the Remuneration and Nomination Committee was comprised of Janusz Krawczyk as Chairman and Bogusław Bartczak, Jakub Modrzejewski and Piotr Prażmo as Members.

Table 18 Composition and powers of Supervisory Board Committees as at 31 December 2018

Strategy Committee		
Bogusław Bartczak* Janusz Krawczyk* Jakub Modrzejewski** Filip Paszke*	Chairman Member Member Member	♦ issues opinions on GPW's strategy and its updates, ♦ issues opinions on implementation of GPW's strategy, ♦ issues opinions on proposals of strategic alliances, ♦ issues opinions on proposals of 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	♦ 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	Issues recommendations for the Exchange Supervisory Board as follows: ♦ 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;
- 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.

* According to submitted declarations, meets the independence criteria defined in:
1) § 14 of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.,
2) Rule II.Z.4 of the Code of Best Practice for GPW Listed Companies 2016,
3) Article 129 of the Act of 11 May 2017 on Auditors, Audit Firms and Public Supervision

** According to submitted declarations, meets the independence criteria defined in:
1) § 14 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 Exchange Supervisory Board.

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;
- 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;

- reviewing the rules and the efficiency of the compliance system including findings of compliance audits;
- approving decisions to hire or dismiss the Director of the Compliance and Risk Department acting as Compliance Officer;
- issuing opinions and approving 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. 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 as at 1 January 2018 of Krzysztof Kaczmarczyk as Chairman and Bogusław Bartczak, Piotr Prażmo and Filip Paszke as Members. On 20 August 2018, following his resignation from the Exchange Supervisory Board, Krzysztof Kaczmarczyk was no longer the Chairman of the Committee. On 10 September 2018, Piotr Prażmo was appointed the Chairman of the Committee. As at 31 December 2018, the Audit Committee was comprised of Piotr Prażmo as Chairman and Bogusław Bartczak and Filip Paszke as Members.

Table 19 Composition of the Audit Committee as at 31 December 2018 and as at the date of this report

Name	Function	Independence
Piotr Prażmo*	Chairman	Independent Member of the Exchange Supervisory Board
Bogusław Bartczak*	Member	Independent Member of the Exchange Supervisory Board
Filip Paszke*	Member	Independent Member of the Exchange Supervisory Board

* According to submitted declarations, meets the independence criteria defined in:
1) § 14 of the Articles of Association of Giełda Papierów Wartościowych w Warszawie S.A.,
2) Rule II.Z.4 of the Code of Best Practice for GPW Listed Companies 2016,
3) Article 129 of the Act of 11 May 2017 on Auditors, Audit Firms and Public Supervision

The Member of the Audit Committee with the knowledge and skills in accounting or financial audits is 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 the presence of the Exchange Management Board in connection with the audit of the financial statements for 2018. The key auditor participated in those meetings.

In 2018, the Audit Committee of the Supervisory Board negotiated with selected audit firms and drafted recommendations for the Exchange Supervisory Board to select an audit firm responsible for the audit of the financial statements of GPW and the GPW Group for the financial years 2018-2020.

The Audit Committee worked at meetings (9 meetings were held in 2018) and through on-going exchange of views and opinions.

III. 11. Exchange Management Board

APPOINTMENT AND DISMISSAL OF MANAGEMENT BOARD MEMBERS

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 2018 and as at the date of this report.

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 competition 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 competition 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.

Given 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 experience in financial market institutions, and a spotless reputation as regards the functions they perform. If a company running an exchange organises an alternative trading system, the above conditions should also be satisfied by the persons directing those activities, unless members of the Exchange Management Board direct the organisation of the alternative trading system. Furthermore, eligible as Members of the Exchange Management Board are persons who have at least 5 years of employment, at least 3 years of experience in management positions or in self-employment. Not eligible as a Member of the Exchange Management Board is any person who meets any of the following criteria:

- is a social liaison or employee of the office of a Deputy, Senator or Member of the European Parliament under an employment agreement, work contract or similar agreement;
- is a member of a body of a political party which represents the political party and is authorised to assume obligations;
- is employed by a political party under an employment agreement, work contract or similar agreement;
- is elected to a trade union of the company or a trade union of a member of the group of companies;
- his or her social or professional activity creates a conflict of interests for the business of the Company.

Changes to the composition of the Exchange Management Board require the consent of the Polish Financial Supervision Authority, which is granted at the request of the Exchange Supervisory Board. The Polish Financial Supervision Authority may 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.

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 § 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 Management Board has, however, no authority to issue or buy out shares.

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.

COMPOSITION OF THE EXCHANGE MANAGEMENT BOARD

The tables below present the composition of the GPW Management Board as at the end of 2017 and 2018.

Table 20 Composition of the Exchange Management Board as at the end of 2017

Name	Function
Marek Dietl	President of the Management Board
Michał Cieciórski	Vice-President of the Management Board
Jacek Fotek	Vice-President of the Management Board
Dariusz Kułakowski	Member of the Management Board

On 3 April 2018, Michał Cieciórski, Vice-President of the GPW Management Board, resigned effective as of 23 April 2018.

Table 21 Composition of the Exchange Management Board as at the end of 2018 and as at the date of this report

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 19 June 2017, the Ordinary General Meeting passed a resolution appointing Marek Dietl as President of the Exchange Management Board effective as of the date of delivery to GPW of the decision of the Polish Financial Supervision Authority approving the change on the Exchange Management Board. On 26 September 2017, the Polish Financial Supervision Authority approved the change on the Exchange Management Board and the appointment of Marek Dietl as President of the Exchange Management Board. The decision was delivered to GPW on 27 September 2017.

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.

ORGANISATIONAL CHART OF GPW S.A.

Chart 8 Organisational chart of GPW as at 31 December 2017

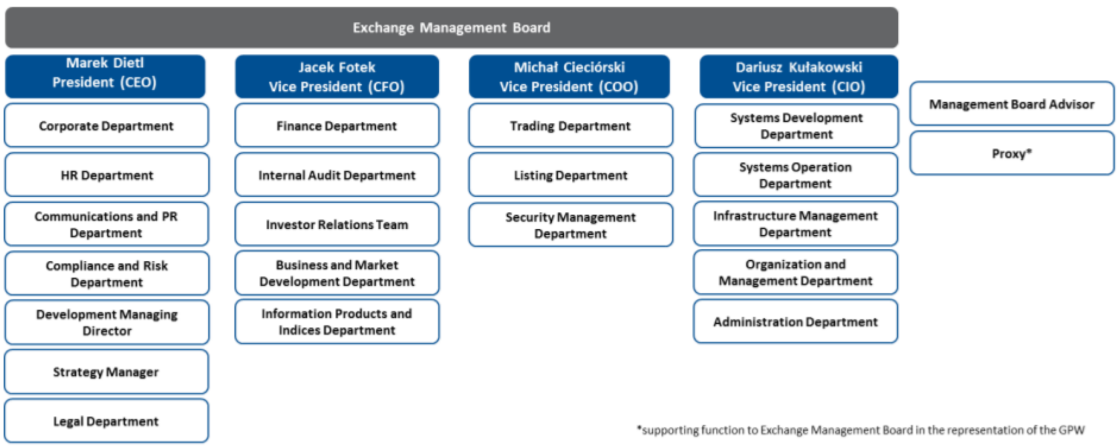


Chart 9 Organisational chart of GPW as at 31 December 2018

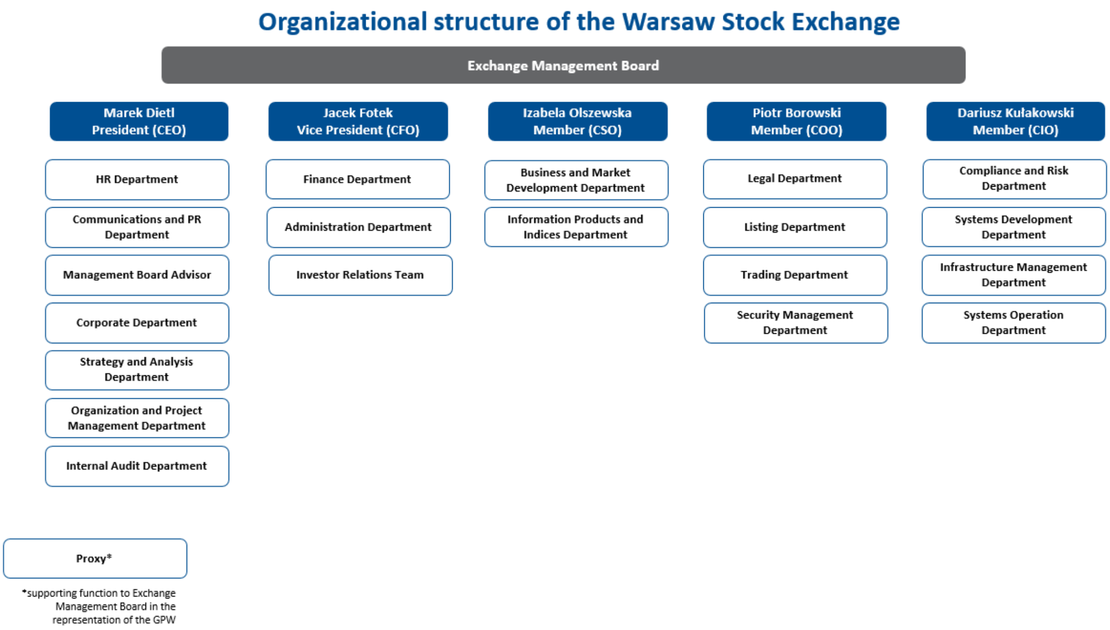


Chart 10 Organisational chart of GPW as at 3 January 2019 and as at the date of publication of this report

III. 12. Remuneration Policy

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 is linked to the employee's potential, competences and performance.

The bonus system covers all GPW employees other than the Exchange Management Board Members. It provides a simple and clear mechanism of calculating and distributing the bonus pool. The overall bonus pool available for bonuses for all eligible GPW employees in a bonus year depends on the profit on sales generated by GPW.

The system is designed to incentivise employees for superior performance by achieving individual targets and evaluating employee attitudes; it incentivises managers to motivate their employees. The bonus system includes an annual employee appraisal which covers the employee's overall performance in the bonus year, identifies the employee's strengths and areas for improvement. The annual appraisal includes an assessment of the employee's individual targets and attitudes throughout the bonus year as well as the employee's overall performance in the bonus year as the basis for determining the amount of the bonus.

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 IV.4 *Responsible Human Resources Policy*.

REMUNERATION POLICY FOR EXCHANGE 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 new 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 Ordinary General Meeting of 19 June 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). The existing remuneration system was implemented in the Company in March 2017.

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 of 9 June 2016 on Rules of Remuneration of Managers of Certain Companies, (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 Public Assets (Journal of Laws of 2016, item 2259) concerning the exercise of rights attached to shares and the requirements for candidates for members of supervisory authorities and management authorities in GPW's subsidiaries.

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;[21]
- ✓ 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 2020.

[21] 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.

In addition to the foregoing, the Company has no incentive or bonus schemes based on the issuer's equity (including schemes based on bonds with pre-emptive rights, convertible bonds, subscription warrants, or stock options).

Table 22 Remuneration and benefits of Members of the Exchange Management Board paid and due for 2018 (PLN thousand)[22]

Management Board Member	Basic salary	Holiday equivalent	Bonus – one-off payment	Bonus – bonus bank	Bonus – phantom shares	Other benefits	Benefits after termination	Total
Piotr Borowski	160	0	0	0	0	2	0	162
Michał Cieciórski	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
Total	**1620**	**0**	**0**	**146**	**101**	**25**	**192**	**2084**

Table 23 Remuneration and benefits of Members of the Exchange Management Board paid and due for 2017 (PLN thousand)[23]

Management Board Member	Basic salary	Holiday equivalent	Bonus – one-off payment	Bonus – bonus bank	Bonus – phantom shares	Other benefits	Benefits after termination	Total
Dariusz Kułakowski	452	74	25	19	0	14	0	584
Michał Cieciórski	450	0	25	0	0	2	0	477
Małgorzata Zaleska	276	53	0	0	0	10	0	339
Jacek Fotek	306	0	0	0	0	4	0	310
Paweł Dziekoński	187	50	0	0	0	4	0	241
Marek Dietl	110	0	0	0	0	0	0	110
Zawada Grzegorz	0	0	20	20	0	1	0	41
Tamborski Paweł	0	0	0	34	0	1	0	35
Półtorak Karol	0	0	10	19	0	1	0	30
Szczepański Mirosław	0	0	0	19	0	1	0	20
Total	**1781**	**177**	**80**	**111**	**0**	**38**	**0**	**2187**

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 2017-2018.

TERMS OF EMPLOYMENT CONTRACTS WITH MEMBERS OF THE EXCHANGE MANAGEMENT BOARD

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

As at 1 January 2018, the Management Board of Giełda Papierów Wartościowych w Warszawie was comprised of Marek Dietl as President, Jacek Fotek as Vice-President, Michał Cieciórski as Vice-President,

[22] 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 2018 represent provisions.
[23] The amounts of bonus – one-off payment represent benefits paid in 2016 and due as at the end of 2017; the amounts of bonus – bonus bank and bonus – phantom shares for 2017 represent provisions.

and Dariusz Kułakowski as Member of the Management Board. Michał Cieciórski, Vice-President of the GPW Management Board, resigned as of 23 April 2018.

Izabela Olszewska and Piotr Borowski were appointed as new Members of the Management Board of Giełda Papierów Wartościowych w Warszawie as of 1 August 2018.

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 24 Members of the Exchange Management Board, as at 31 December 2018

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.

Following the termination of his management contract, Michał Cieciórski, Vice-President of the GPW Management Board, was entitled to a six-month no-competition fee. The no-competition agreement was terminated on 23 August 2018. Consequently, Michał Cieciórski received a fee for 4 months.

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 Ordinary 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 25 Remuneration of the Supervisory Board members [PLN thousand]

Exchange Supervisory Board Member	Year ended 31 December 2018	Year ended 31 December 2017
Jarosław Grzywiński*	0	115
Wojciech Nagel	41	87
Eugeniusz Szumiejko	79	68
Krzysztof Kaczmarczyk	55	46
Jakub Modrzejewski	87	46
Bogusław Bartczak	86	46
Piotr Prażmo	82	42
Filip Paszke	79	42
Marek Słomski	0	41
Marek Dietl	0	41
Grzegorz Kowalczyk	0	27
Jarosław Dominiak	0	20
Janusz Krawczyk	46	0

** Member of the Exchange Supervisory Board delegated to temporarily perform the function of President of the GPW Management Board from 15 March to 15 June 2017.*

Wojciech Nagel was also a Member of the TGE Supervisory Board up to 19 June 2018. Other Exchange Supervisory Board Members held no supervisory or management functions in GPW subsidiaries.

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 recognition, career development and work conditions, which contributes to the Company's organisational culture and facilitates the implementation of the business strategy.

The remuneration policy differentiates between pay levels depending on the job position, performance and competences. The variable component provides flexibility and aligns the system with the implementation of GPW's strategy. The incentive system links the Company's management with the goals of the GPW strategy and cascades the goals to employees, thus supporting GPW's business.

The extensive system of employee benefits is competitive on the market while ensuring cost efficiency for the Company. As a part of the HR strategy, the remuneration policy consistently helps to recruit, retain and incentivise employees.

III. 13. Changes of Main Management Rules of GPW and the GPW Group

CHANGES IN THE GPW GROUP STRUCTURE

The Giełda Papierów Wartościowych w Warszawie Group was comprised of the parent entity and three consolidated subsidiaries as at 31 December 2018. GPW holds a stake in three associates. GPW sold its interest in the associate Aquis Exchange Limited in June 2018.

On 8 June 2018, in connection with an IPO, shares of the associate Aquis Exchange Limited were allocated. GPW held 20.31% of votes and economic rights. As a result, GPW sold Aquis shares at GBP 2.69 per share on 14 June 2018. The value of the sale of GPW's interest in Aquis was GBP 12,396,327 gross. The sale of the interest is shown in GPW's accounts at the FX rate of GBP/PLN 4.8582. The financial income on the transaction recognised in the consolidated accounts was PLN 45.4 million.

On 31 July 2018, the General Meeting reduced the share capital of Polska Agencja Ratingowa S.A. by PLN 1,927,000.00 to PLN 2,173,000.00. The company's share capital was reduced through a reduction of the par value of its shares from PLN 1,00 to PLN 0.53 per share.

On 31 July 2018, the General Meeting increased the share capital of Polska Agencja Ratingowa S.A. by PLN 4,346,000.00 from PLN 2,173,000.00 to PLN 6,519,000.00. The share capital was increase through an issue of 8,200,000 series B ordinary registered shares.

As a result, as at 31 December 2018, shares of Polska Agencja Ratingowa S.A. were held by Giełda Papierów Wartościowych w Warszawie S.A., Polski Fundusz Rozwoju S.A. and Biuro Informacji Kredytowej S.A. Consequently, Polska Agencja Ratingowa S.A. was no longer a subsidiary of GPW and was recognised as an associate. The new name of the company Polska Agencja Ratingowa S.A. and the amendments of its Articles of Association following the share capital increase were registered on 31 October 2018

The Group has no branches or establishments.

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 2018.

BondSpot S.A.

As at 31 December 2018, the Management Board of BondSpot S.A. was comprised of two persons:

- Piotr Woliński – President of the Management Board,
- Mariusz Bieńkowski – Vice-President of the Management Board.

Agnieszka Gontarek was the President of the Management Board up to 29 June 2018. Piotr Woliński was appointed President of the Management Board as of 30 June 2018. Mariusz Bieńkowski was appointed Vice-President of the Management Board of BondSpot as of 2 July 2018.

Towarowa Giełda Energii S.A.

As at 31 December 2018, the Management Board of TGE was comprised of two persons:

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

As at 1 January 2018, the Management Board of TGE was comprised of two persons: Piotr Zawistowski as President of the TGE Management Board and Paweł Ostrowski as Vice-President of the TGE Management Board. Piotr Listwoń was appointed Vice-President of the Management Board as of 26 April 2018.

IRGiT S.A.

In 2018, the Management Board of IRGiT S.A. was comprised of two persons:

- Andrzej Kalinowski – President of the Management Board,
- Seweryn Szwarocki – Vice-President of the Management Board.

InfoEngine S.A.

Przemysław Zaleski resigned as President of the Management Board of InfoEngine as of 24 July 2018. Grzegorz Żarski, delegated by the Supervisory Board of InfoEngine, is acting President of the Management Board of InfoEngine as of 27 July 2018.

GPW Benchmark S.A.

As at 31 December 2018, 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.

Rafał Wyszkowski was the President of the Management Board of GPW Benchmark up to 23 May 2018. Aleksandra Bluj was appointed Vice-President of the Management Board of GPW Benchmark by the Supervisory Board of GPW Benchmark as of 23 April 2018. Zbigniew Minda was appointed President of the Management Board of GPW Benchmark by the Extraordinary General Meeting of GPW Benchmark as of 18 September 2018.

Instytut Analiz i Ratingu S.A.; as of 31 October 2018: Polska Agencja Ratingowa S.A.

As at 31 December 2018, the Management Board of Polska Agencja Ratingowa SA was comprised of the following persons:

- Wojciech Lipka – President of the Management Board,
- Marcin Żołyński – Vice-President of the Management Board.

IV. Corporate Social Responsibility

IV. 1. CSR Strategy of the GPW Group

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

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 83 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.

The year 2018 was a time of further development of the RESPECT Index project. RESPECT Index is the corporate social responsibility index published by GPW since 2009. The project completed the eleventh ESG survey of listed companies. The results of the survey proved that public companies listed on GPW improve their CSR and sustainable development standards year after year, including the Warsaw Stock Exchange which has participated in the survey for five years as a public company.

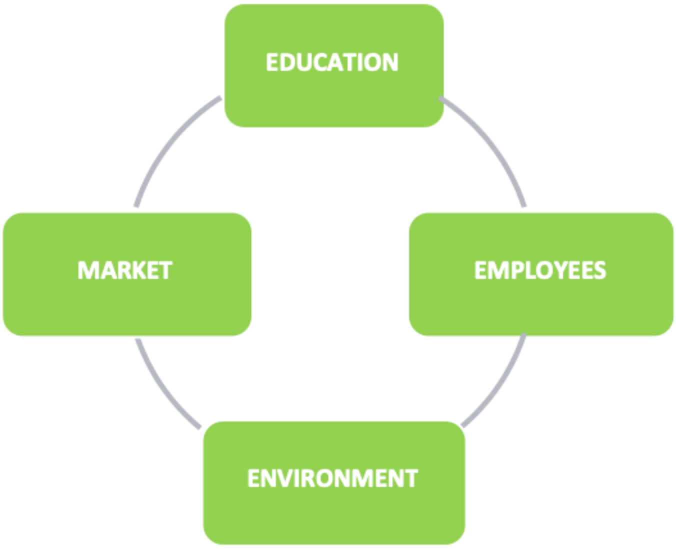
In 2018, GPW continued to pursue its CSR (Corporate Social Responsibility) strategy, revised in 2015 to cover a broader range of Governance and Social aspects and implemented in the GPW Group.

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 GPW Group's CSR strategy is based on four main pillars important to the activity of GPW and its subsidiaries as well as their role in the Polish financial and commodity markets:

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

Chart 11 Main areas of the GPW Group's CSR strategy



IV. 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.

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 in May 2015.

The mission of the GPW Foundation is to develop and adapt the educational offer. The Foundation pursues its mission by organising and implementing school and educational projects for school and university students, investors, offering internships, supporting university students and graduates on the job market and supporting investors and professionals active on the financial and commodity markets.

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

The educational projects and initiatives implemented by the GPW Foundation in 2018 included:

- **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 third round of the programme in 2018. The key part of the programme comprised of workshops and the final conference of the second edition took place in June 2018 while internships were offered from June to September 2018. 231 participants enrolled for the third edition of the programme and the conferences brought together 130 participants.

- **School visits to GPW** – an online reservation system available on the GPW website allows teachers to manage bookings and confirm dates of school visits at their convenience. Visits include a presentation by a Foundation representative as well as a multimedia demo class for school students. As part of the project, around 8,700 school students in 240 groups visited GPW in 2017. The Foundation's online database has registered nearly 600 teachers.
- **Product training** – training offered at the GPW premises by the Foundation in partnership with brokers who are Exchange Members, addressed to existing and prospective investors and other interested parties. The training themes include GPW-listed financial instruments. Six product training sessions and an educational conference featuring financial bloggers were offered in 2018. 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 1,800 participants.
- **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. The objective of the competition was to educate investors and to promote exchange-traded structured products. The competition had 1,741 enrolled contestants, the biggest number in history.
- **Online School Exchange Game (SIGG)** – an educational project addressed to junior and senior high school students. The 16th edition of the project was offered by GPW in partnership with the GPW Foundation and the Lesław A. Paga Foundation. 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 participants use virtual cash but their orders are executed based on actual buy and sell orders from the market. The goal of each time is to earn investment gains.

  The game consists of three steps:

  - Step 1: trading in shares and ETFs;
  - Step 2: trading in futures;
  - Finals on the GPW Trading Floor (17 April 2018).

  The 16th edition of the project had more than 18 thousand participating students grouped in over 7 thousand teams supervised by 900 teachers.

- **Competition for PhD, MA and BA theses with awards from the President of the Warsaw Stock Exchange –** in 2018, GPW opened a new edition of the competition for PhD, 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. 73 theses (15 PhD theses, 29 MA theses and 29 BA theses) were entered in the competition. The winners of the competition were announced on 19 December 2018 at a gala on the GPW Trading Floor.
- **Summer Online Exchange School** – The GPW Foundation in partnership with the Association of Exchange Investors (SIG) completed a new series of online training sessions of the Summer Online Exchange School. The training participants were 1,635 unique users. The project featured speakers

from brokerage houses that are Exchange Members: Noble Securities, ING Securities, DM BOŚ, DM mBanku and DM PKO BP. The training sessions had between 92 and 268 participants.

- **Exchange School Academy** – GPW in partnership with the GPW Foundation organised a series of film screenings related to capital markets and investing in 2018. Each screening was opened by a debate between a journalist and a special guest – expert in the field presented in the movie, as well as the expert's presentation outlining and discussing the main themes of the film. The project was addressed to an audience interested in the capital market. Four screenings held from February to June 2018 brought together 200 viewers.

- **Niebanalnie o giełdzie** – In the autumn of 2018, the GPW Foundation launched a new educational project addressed to teachers who teach subjects related to economics.

  To contribute to quality education in economics, the project aims 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, the Warsaw Stock Exchange, 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.

  As a part of the project, the GPW Foundation is planning 10 local training rounds (including 1 pilot) in 9 Polish cities in 2019 (each training round to include 3 lectures and methodology workshops), a national conference at GPW in Warsaw, a competition for a lesson plan about the capital market, production and publication of an educational video on the GPW Foundation website, and publication of lesson plans on the GPW Foundation website. The project will engage both teachers participating directly in training and all interested teachers who can access the publications.

  The project is organised by the GPW Foundation in partnership with the Warsaw Stock Exchange and KDPW. The National Bank of Poland is a project partner under an economics educational programme. The project patrons include the Ministry of Finance, the Ministry of National Education, the Ministry of Entrepreneurship and Technology, the Education Development Centre, the Polish Financial Supervision Authority, as well as educational centres which will provide local training.

- **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 second edition of the Financial Education and Entrepreneurship Congress took place at the PGE National Stadium in Warsaw on 15 March 2018. The event brought together 350 representatives of 100 financial, educational and training institutions and organisations.

  The event opened with a debate on challenges to financial education in Poland featuring speakers from the Ministry of Finance, the Social Security Institution (ZUS), the Warsaw Stock Exchange and the Polish Bank Association (ZBP). A panel discussion "Investing: Myths and Reality. What Do I Need to Know to Invest Better?" was organised on the initiative of the GPW Foundation. The Congress was accompanied by an exhibition venue, where the GPW Foundation put up an information stand to promote its projects and offer an educational competition for participants.

- In 2018, GPW partnered with Dom Maklerski Noble Securities in the educational programme **"#InwestStory"**, which included 14 meetings held across Poland for active exchange investors, beginners, and the academic community, bringing together around 700 participants.

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 2018, the GPW Foundation added the IPO course "Raising Capital on the Exchange" to the Exchange School programme. It is addressed to companies which are considering or working to go public. Training is customised to the needs of each company. The programme is addressed mainly to senior managers, chief accountants, CFOs and IR officers. Training is delivered by capital market experts with extensive experience with IPOs.

The Silesian University of Technology and the University of Warmia and Mazury joined the group of institutions which provide Exchange School programmes in 2018. A memorandum of understanding was signed with the University of Silesia to support promotional initiatives. The project involves 14 academic centres across Poland and the GPW Foundation is talking to another two institutions interested in joining the project.

We completed 20 courses (14 courses "101 of Investing on the Exchange", 6 courses "Exchange for Intermediate Users") with a total of 645 participants in 2018.

RESPECT INDEX

The RESPECT Index project is 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 includes companies listed on the GPW Main Market which follow the highest standards of corporate governance, disclosures and investor relations taking into account environmental, social and governance (ESG) factors in their business. The companies are audited and the index portfolio is revised once per year in the second half of the year. The index portfolio includes the biggest listed companies participating in the indices WIG20, mWIG40 and sWIG80. The companies are 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.

Initiated in 2009 as CEE's first responsible company index, it was the first such index in Poland and remains a benchmark for listed companies which aspire to CSR excellence.

The index requirements take into account the industrial specificity of companies. The survey questionnaire includes questions dedicated to all companies as well as questions for companies which pursue a specific business according to the classification deployed by GPW: Industry, Finance, and Services. The participation of each company in the index is defined on the same terms as for the other GPW indices, taking into account free-float shares, where the weight of the biggest companies is capped at 25% where the number of index participants is under 20 or 10% otherwise.

The RESPECT Index portfolio included between 16 and 31 companies in the twelve editions of the survey, last held in the autumn of 2018. The current index portfolio of the twelfth edition, audited by Deloitte, is comprised of 31 companies, including two new participants (Amrest Holding SE, CCC S.A.), as well as a returning company, PKN Orlen S.A., absent for one year from the portfolio. This year's edition of the RESPECT Index has the biggest number of participants. The index has evolved since its inception. The requirements for companies have been steadily raised to increasingly accommodate trends typical of mature capital markets, meet stakeholders' requirements, and provide a full picture of the reported ESG factors.

This year's edition awarded the first RESPECT Certificate. Certificates are addressed to companies which cannot participate in the RESPECT Index but wish to be recognised for compliance with the requirements of corporate social responsibility on GPW. Certificates are awarded to companies which comply with the same requirements as the index participants after they complete the survey questionnaire and score the required number of points. Provident Polska is the first company to win a RESPECT Certificate.

Furthermore, companies which care about the quality of relations with counterparties were awarded for the first time in partnership with the Energy Regulatory Office.

The questionnaire now used to evaluate participants of the RESPECT Index covers the following areas:

- **Social** – occupational health and safety, human resources management, relations with suppliers, dialogue with stakeholders, social reporting;
- **Environmental** – environmental management, reduction of the environmental impact, biodiversity, environmental aspects of products and services;
- **Governance** – strategic management, corporate governance, risk management, fraud management, internal audit and control system, relations with customers.

The twelve editions to date have had more than 40 participants. This year's edition features two new participants as well as a returning company, PKN Orlen S.A. Eight companies have participated in all of the index editions. They are the market leaders consistently improving on their corporate social responsibility commitments.

Index participants are selected on the basis of a score won in the survey. The average score of all companies was 63.6 points, a modest increase year on year. The index participants include 18 processing companies, 9 financial institutions, and 4 service providers. The average score of processing companies was 65.2 points, the average score of financial institutions was 64.2 points, and the average score of service providers was 55.5 points.

The RESPECT Index performance corroborates the fundamental notion of responsible investing whereby investment in companies managed in a sustainable way which respect the environment and the interests of all stakeholders involves lower risk and generates above-average returns. From the first publication of the index on 19 November 2009 to the end of 2018, the RESPECT Index return rate was 71%, compared to return on WIG20 at 47% over the same period.

Figure 61 Performance of the RESPECT Index and WIG [% change]

EDUCATIONAL INITIATIVES 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.

In 2018, 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 11 training sessions issued 87 certificates to brokers in 2018, including 25 brokers who passed the examination in English.

In 2018, TGE organised a training round for the Ministry of Energy and the Energy Regulatory Office where those institutions were introduced in detail to the operation of TGE.

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 workshop "The Role of the Gas Exchange in Poland and in the Region." TGE was the partner of the debate "All You Ever Wanted to Know About Energy Prices but Were Afraid to Ask" held by the association Young Leaders in Energy.

In June 2018, TGE in partnership with Izba Rozliczeniowa Giełd Towarowych (IRGiT) organised the 11th 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 a discussion panel "Growth Potential of the Polish Gas Market", presentations and integration activities.

In December 2018, TGE celebrated its 15th anniversary as a licensed commodity exchange. On this occasion, TGE held a debate "Commodity Exchange Market in Europe: The Outlook" with the participation of TGE Members and representatives of supervisory authorities, European exchanges and the media.

IV. 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.

MEMORANDUM OF UNDERSTANDING OF THE MINISTRY OF DIGITAL AFFAIRS AND GPW CONCERNING BLOCKCHAIN APPLICATIONS

The Ministry of Digital Affairs and the Warsaw Stock Exchange entered into a memorandum of understanding concerning blockchain applications in the public sector. The objective of the MoU is to promote the use of blockchain on the capital markets and to implement similar solutions wherever they can improve the effectiveness, efficiency and productivity of processes in the economy and in the administration.

The co-operation between the Ministry of Digital Affairs and GPW may help to develop proposed requirements for projects using blockchain and open public data, which follows the technological megatrends (including Artificial Intelligence and the Internet of Things).

On the capital market, blockchain may become an important driver of the bond and lending markets, the new private market, as well as post-trade, e-voting and online clearing systems

GPW committed itself to providing extensive support in the digitisation of the public administration. Up to now, only 5 percent of the world's leading exchanges use blockchain while 70 percent are working on blockchain implementations. By focusing on blockchain implementation, we can be one of the world's leaders. On the capital market, blockchain may become an important driver of the bond and lending markets, the new private market, as well as post-trade, e-voting and online clearing systems.

The priorities of the Ministry of Digital Affairs and GPW are to develop security standards for economic transactions and the public administration, to build a sandbox (test environment) supporting the evaluation of new solutions for the public administration and the economy, and to create requirements for solutions including the tokenisation of documents, securities and rights in order to support the security and efficiency of economic transactions and processes of the administration. Blockchain is a technology which supports secure and transparent transactions as well as storage and organisation of information. Thanks to cryptography, blockchain transactions need not be verified by intermediary institutions. Blockchain provides reliable identification systems. Blockchain applications will help to develop a friendly and secure environment for high-tech companies in Poland.

PUBLICATION OF DIVIDEND INDICES

To address the needs of market participants, the Warsaw Stock Exchange started to publish dividend indices.

The Warsaw Stock Exchange started to calculate and publish three dividend indices: WIG20dvp, mWIG40dvp, and sWIG80dvp in December 2018.

The dividend indices track cash dividends paid by the stocks participating in the underlying index (respectively: WIG20, mWIG40, sWIG80). The indices will track aggregate dividends paid by the stocks participating in the underlying index (respectively: WIG20, mWIG40, sWIG80) in the calendar year.

The publication of the new indices is an additional source of information about dividends paid in our market. Such information is particularly relevant for investors who are looking for attractive and stable returns. Dividend indices are also an important source of information for investors trading in index derivatives (futures and options) whose valuation must include dividends. In the future, GPW in planning to offer trade in dividend index futures which allow investors to hedge against the dividend risk of derivatives.

The new indices will not aggregate dividends paid in previous years and they are reset at the end of each year. Every year, the indices start at 0 (no dividend paid) and start to aggregate dividend from scratch. The index value at the year's end will represent the sum of dividends paid by the stocks participating in the underlying index throughout the year. The indices will be reset at the first trading session after the third Friday in December.

The indices only include ordinary cash dividends, including advance dividends. The indices are recalculated to include paid dividends at the trading session when shares are first traded without dividend. The indices are published in the single-price system at 11:00. The dividend indices will be calculated back to 2 January 2007.

SUPPORT FOR DEVELOPMENT OF POLAND'S ETF MARKET

On 26 November 2018 at the headquarters of the Warsaw Stock Exchange, representatives of GPW, AgioFunds TFI, Beta Securities Poland and Dom Maklerski BOŚ have signed a memorandum of understanding to support product development on the Polish capital market and to educate investors. AgioFunds TFI will issue Poland's first ETF. Dom Maklerski BOŚ will be the offeror and market maker of the Beta ETFs.

The Warsaw Stock Exchange is working to develop new financial products to make the Polish capital market more attractive. Development of the ETF market will attract new Polish and international investors to Poland's capital market.

Beta Securities Poland in partnership with AgioFunds TFI and DM BOŚ are working to develop and launch Beta ETFs, GPW's first ETFs replicating the main indices of Polish and international stocks and bonds. The Beta ETFs based on WIG20TR addresses the needs of investors. It is the first product of this kind to be issued under Polish law, developed and managed by Polish experts using the experience of Israel's advanced ETF market. It is an easy and transparent way for investors to participate in the value and development of Polish blue chips participating in WIG20TR, the total return index which includes dividends paid to shareholders. Dividends add in the long term to the value of WIG20TR.

The objective is to offer a recognised, proven investment instrument which is popular on the markets all around the world owing to its broad range of applications. ETFs are a leading segment of the capital markets on all of the biggest stock exchanges, as well as being a central part of investment portfolios. The global ETF market is worth more than USD 5,000 billion and includes over 5,700 ETF products which replicate a range of stock, bond, and commodity indices.

GPW now lists three ETFs issued by Lyxor Asset Management (ETFSP500, ETFDAX, ETFW20L) and the Beta ETF WIG20TR issued by AgioFunds TFI in partnership with Beta Securities Poland.

INVESTMENT AGREEMENT TO SET UP A JOINT RATING AGENCY

GPW, the Polish Development Fund (PFR), Biuro Informacji Kredytowej (BIK) and Instytut Analiz i Ratingu (IAiR) signed an investment agreement which provides for a partnership between GPW, PFR and BIK to develop a recognisable, strong local rating agency based on IAiR. GPW, PFR and BIK expect that the shareholder structure of Instytut Analiz i Ratingu should correspond to the equal equity investment of each of them in IAiR (1/3 each). The planned equity injection will enable the entity to launch full-fledged operation until it breaks even. The investment agreement signed by GPW, PFR, BIK and IAiR follows an agreement signed on 28 November 2017 concerning co-operation in the development of Instytut Analiz i Ratingu in order to compile and provide credit risk ratings of entities, including mainly issuers of bonds.

The main objective of the joint rating agency will be to build a rating culture in Poland by providing services to a broad group of clients, including mainly small and medium-sized enterprises (SMEs). The mission of the agency will be to bridge a gap on the Polish market with regard to access to local risk ratings and research. The rating agency will also bolster the role of the debt market in financing the economy and help to improve the quality of the Polish capital market by facilitating the risk valuation for investors on the exchange.

An independent rating agency will improve the credibility, transparency and safety of transactions in the economy, mainly by facilitating risk assessment for financial and non-financial market players. The creation of a rating agency will open access to unique economic research and risk ratings in the segment of small and mid-sized enterprises. This is yet another initiative supporting the development of Poland's capital market.

The development of a rating agency is a part of the Plan for Responsible Development as well as a strategic initiative of the updated strategy #GPW2022 presented by the Warsaw Stock Exchange on 27 June 2018. Furthermore, GPW acting through its subsidiary BondSpot worked to open a special Prime segment of Catalyst listing rated bonds and to take steps necessary to allow banks to trade directly in corporate bonds on Catalyst.

INDIVIDUAL INVESTOR DAY AND OPEN DOOR DAY ON GPW

GPW organised the Individual Investor Day and the Open Door Day on 20 and 21 April. The two-day event was addressed to a broad group of stakeholders, including everyone interested in discovering the inner workings of the exchange.

The GPW Open Door Day was held under the motto "Exchange Means Value." The first day was addressed to professional investors as well as beginners. The second day was open to all visitors, including kids and youth, who wanted to visit the Exchange and understand how investing works.

The Individual Investor Day (20 April) presented GPW's current offer and enabled an exchange of views about the market. The day featured many presentations by recognised capital market experts discussing current affairs of the exchange. GPW offered a range of meetings, lectures, debates, presentations and workshops for investors. The event was addressed to individual investors, institutional investors, existing and potential issuers, brokers, authorised advisers, consultants, other capital market institutions and the media.

The objective of the Open Door Day was to promote the exchange among the broad audience. The programme featured many attractions for families with children, including "Kids Know Better" – a debate with kids about the exchange, lectures about the exchange for children, an adventure game "Secrets of the Exchange Bell", movies about the exchange and the capital market.

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. Three more events were held as a part of the initiative during 2018.

CONSULTATION COMMITTEES

In addition to irregular dialogue with the stakeholders concerning 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 the end of 2018, GPW had the following Committees:

- Alternative Trading System Development Committee - Board of Authorised Advisers
- Compliance Committee
- Corporate Governance Committee
- Derivatives Market Committee
- Exchange Indices 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 2018, each attended by 100 participants.

GPW BENCHMARK OVERSIGHT COMMITTEE

The Oversight Committee 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 CONSULTATION PAPER

In October 2018, GPW Benchmark S.A. published a consultation paper for WIBID and WIBOR Fixing Participants concerning the considered development concepts of methodologies of WIBID and WIBOR as well as alternative benchmarks. The paper includes a number of questions about the concepts under consideration and provides extensive information. It presents the directions of work undertaken by GPW Benchmark, taking into account the specificity of the Polish money market and global trends of benchmark reform. The consultations will summarise the Fixing Participants' opinions and comments. The summary will be published on www.gpwbenchmark.pl after a meeting with banks and leading financial institutions in Poland.

GPW Benchmark invited all stakeholders to participate in the consultations and to provide comments and feedback to questions. The comments will inform further alignment of WIBID and WIBOR with the BMR requirements and the development of new benchmarks.

IV. 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 2018, 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.

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.

Table 26 Headcount of GPW and the GPW Group as at 31 December

	2018	2017	2016
Number of GPW employees	208	193	*187*
Number of GPW Group employees	363	341	*340*

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 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.

Table 27 GPW personnel structure by gender as at 31 December

	2018	2017	2016
Number of GPW employees	208	193	187
- Women	101	95	89
- Men	107	98	98
Number of GPW Group employees	363		
- Women	149		
- Men	214		

In the recruitment process, the GPW Group follows the principles of diversity 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.

Table 28 GPW employee rotation as at 31 December[24]

	2018	2017	2016
GPW employee rotation	10%	16%	20%
GPW Group employee rotation	12.13%		

GPW employed 35 new persons and terminated employment of 20 persons in 2018. By comparison, GPW employed 35 new persons and terminated employment of 29 persons in 2017. The Group employed 64 new persons and terminated employment of 42 persons in 2018.

GPW TRAINING POLICY

Training plays an important role in the process of employee professional development and improvement of qualifications. GPW intensified its training initiatives in 2018, including a programme which launched several training projects for GPW employees, key managers and other employees. As a result, 1,282 man-days of training were provided within 9 training modules to GPW employees in 2018. According to its HR policy, the Exchange co-financed post-graduate courses of employees. In order to improve their professional competences, GPW Group employees participated in conferences, congresses and seminars to improve their professional expertise. In support of employee development, GPW offered a range of initiatives which improve management competences and time and stress management skills.

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 creativity and collaboration.

GPW employees received training in GDPR, which took effect in May 2018. A digital gamification project "Inspiration Trip" addressed employee development needs and spanned all of 2018.

The average number of training days per GPW FTE was 6.16 in 2018.

Table 29 GPW personnel by education, as at 31 December

	2018	2017	2016
Total GPW	208	193	187
- Vocational education	0	0	0
- Secondary education	22	23	19
- University education	186	170	168
Total GPW Group	363	193	187
- Vocational education	0	0	0
- Secondary education	54	23	19
- University education	309	170	168

GPW had 208 employees at the end of 2018, including 186 employees with university education and 22 employees with secondary education.

[24] The turnover ratio is the number of employees whose employment agreements were terminated during the year to the average employment during the year.

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 targets. The system includes appraisal of employee attitudes. The appraisal identifies the employee's strengths and areas for improvement.

Every Exchange 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.

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.

In 2015, pursuant to the GPW Group's CSR strategy, the Company's Code of Ethics was implemented in the companies Towarowa Giełda Energii and BondSpot.

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 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 accident at work at GPW in 2018.

EMPLOYEE VOLUNTEERING AND CHARITY INITIATIVES

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

Employee volunteering is one of the forms of GPW's corporate social responsibility activities. In their volunteering work, Group companies support the youth education and care centre in Franciszków and two family children's homes in Ruszków. Group employees prepare Christmas gifts every year. In the past years, GPW employees collected clothing and provided the centre with equipment including sports equipment.

In 2018, GPW supported the Association Wiosna, organiser of the Szlachetna Paczka campaign, by contributing towards financial support for poor families.

In summer 2018, GPW supported Caritas Diecezji Łowickiej, the organiser of summer camps for children and youth from poor and dysfunctional homes.

TRAINEESHIPS AND INTERNSHIP

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. Furthermore, GPW runs a programme addressed to Polish students of foreign universities in the GO4Poland programme.

IV. 5. 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 CO_2 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 on responsible investing and through the products and services it offers. In 2017, the GPW Group relocated most of the Group companies (except GPW InfoEngine S.A.) to the head office of the parent entity. Consequently, all initiatives that reduce environmental impact at the building housing the principal offices of GPW were shared by the GPW Group subsidiaries.

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. More than a third of waste produced by GPW in 2018 was segregated and recycled. Decommissioned computer hardware and other devices, such as phones, printers and office equipment, etc., is sold to the Company's employees at auctions. Two auctions were held in 2018 and 188 pieces of equipment other than IT hardware were offered. Car auctions were also held in 2018, offering five passenger cars from GPW's company car fleet.

CONSUMPTION OF COMMODITIES

In 2018, 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. The Company's paper consumption increased by 5.78 percent year on year in 2018. The Company's water consumption measured by fees paid increased by 4.7 percent year on year in 2018.

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. The Company's energy consumption decreased by 1.2% at cost year on year in 2018.

FUEL CONSUMPTION AND CO_2 EMISSIONS

GPW's car fleet only includes vehicles which conform to applicable emission standards (EURO-4 or EURO-5). According to legal requirements, GPW pays environmental fees (for business cars). A hybrid car, whose fuel consumption is more efficient compared to traditional vehicles, was added to the corporate car fleet in 2018.

Fuel consumption in the Company decreased by ca. 5% year on year at cost in 2018 (as measured by the volume of fuel consumption by company cars in the corporate fleet).

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 is such a product on the financial market.

In its core business, Towarowa Giełda Energii maintains a Register of Certificates of Origin and operates trade in property rights which are an integral element of the system of support for producers of electricity from renewable energy sources and cogeneration.

Furthermore, 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.

V. FINANCIAL POSITION AND ASSETS OF THE GPW GROUP

V. 1. Summary of results

The GPW Group generated revenue of PLN 346.8 million in 2018 compared to PLN 352.0 million in 2017, representing a decrease of 1.5% or PLN 5.2 million. The revenue included revenue from the financial market of PLN 191.9 million and revenue from the commodity market of PLN 153.6 million. The Group's operating expenses stood at PLN 173.8 million in 2018 compared to PLN 165.8 million in 2017, representing an increase of 4.9% or PLN 8.0 million. The Group's operating profit was PLN 170.2 million in 2018 compared to PLN 186.5 million in 2017.

The GPW Group generated EBITDA[25] of PLN 202.0 million in 2018, a decrease of PLN 12.9 million compared to PLN 214.9 million in 2017.

The GPW Group generated an operating profit of PLN 170.2 million in 2018 compared to PLN 186.5 million in 2017, representing a decrease of 8.8% or PLN 16.3 million. The decrease of the operating profit year on year in 2018 was mainly a result of lower revenue and higher expenses of the Group. The revenue decreased on the financial market. The revenue on the financial market decreased by 8.1% or PLN 17.0 million, and the highest decrease was reported for revenue from trade in equities and equity-related instruments. The revenue on the commodity market increased by 8.1% or PLN 11.5 million, and the highest year-on-year increase was reported for revenue from trade in electricity.

The net profit of the Group stood at PLN 183.7 million in 2018 compared to PLN 158.7 million in 2017, representing an increase of 15.7% or PLN 25.0 million. The increase of the net profit was driven by a higher balance of financial income and expenses, up by PLN 50.9 million, as financial income increased by PLN 48.9 million, mainly due to the sale of interest in the associate Aquis, and financial expenses decreased. Higher financial expenses in 2017 were due to the interest cost of TGE following a VAT correction required by a modification of the tax policy applied to services provided by TGE.

GPW's EBITDA[26] stood at PLN 95.3 million in 2018, a decrease of 14.7% compared to PLN 111.8 million in 2017.

GPW S.A. generated a separate operating profit of PLN 75.1 million in 2018 compared to PLN 92.3 million in 2017. The decrease of the operating profit of **GPW S.A.** year on year was due to lower sales revenues, which dropped by PLN 12.6 million or 6.2% in 2018, and higher operating expenses, which rose by PLN 3.1 million or 2.8%.

GPW S.A.'s net profit was PLN 151.9 million in 2018 compared to PLN 71.7 million in 2017, an increase of 112% or PLN 80.2 million. The increase of the net profit year on year in 2018 was due to the dividend paid by the subsidiary TGE and gains on the sale of interest in the associate Aquis.

TGE's EBITDA was PLN 69.1 million in 2018 compared to PLN 68.1 million in 2017. Its operating profit was PLN 60.6 million in 2018 compared to PLN 62.0 million in 2017. The decrease in operating profit by PLN 1.4 million was mainly due to lower other operating income, which dropped by PLN 2.9 million or 80.1% in 2018. The net profit stood at PLN 64.0 million in 2018 compared to PLN 69.3 million in 2017. The decrease of the net profit in 2018 was due to a lower positive net financial income following a lower dividend paid by IRGiT at PLN 14.9 million in 2018, down by PLN 5.1 million year on year.

The subsidiary IRGiT generated an operating profit of PLN 33.9 million in 2018 compared to PLN 30.2 million in 2017, representing an increase of 12.2% or PLN 3.7 million. IRGiT generated a net profit of PLN 28.2 million in 2018 compared to PLN 24.9 million in 2017, representing an increase of 13.6% or PLN 3.4 million.

[25] GPW Group's operating profit before depreciation and amortisation.

[26] GPW's operating profit before depreciation and amortisation.

BondSpot generated an operating profit of PLN 0.4 million in 2018 compared to PLN 3.2 million in 2017, representing a decrease of 86.1% or PLN 2.8 million. The net profit stood at PLN 0.6 million in 2018 and PLN 2.8 million in 2017, representing a decrease of 79.0% or PLN 2.2 million.

Detailed information on changes in revenues and expenses is presented in the sections below.

Table 30 Consolidated profit and loss account of GPW Group by quarter in 2018 and 2017 and by year in 2016 – 2018

	2018				2017				2018	2017	2016
PLN'000	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1			
Sales revenue	**88,455**	**85,743**	**86,647**	**85,936**	**92,169**	**81,119**	**87,635**	**91,034**	**346,781**	**351,956**	**310,862**
Financial market	**48,083**	**47,134**	**47,063**	**49,572**	**51,875**	**48,851**	**52,500**	**55,623**	**191,852**	**208,849**	**183,698**
Trading	30,601	30,679	30,103	32,897	34,621	31,903	35,966	38,846	124,280	141,336	119,079
Listing	5,661	5,385	5,835	5,924	6,278	6,278	6,065	6,347	22,805	24,968	23,930
Information services	11,821	11,070	11,126	10,750	10,976	10,670	10,469	10,430	44,767	42,545	40,689
Commodity market	**39,983**	**38,126**	**39,233**	**36,213**	**40,215**	**31,989**	**34,770**	**35,115**	**153,555**	**142,088**	**125,254**
Trading	20,819	20,344	19,646	17,738	20,170	16,699	17,643	15,580	78,547	70,092	60,857
Register of certificates of origin	6,098	6,549	8,923	7,126	7,963	5,768	7,783	9,114	28,696	30,628	24,907
Clearing	12,949	11,130	10,532	11,251	11,990	9,435	9,258	10,336	45,862	41,019	39,163
Information services	117	103	132	98	92	87	86	85	450	349	327
Other revenue	**389**	**483**	**351**	**151**	**79**	**279**	**365**	**296**	**1,374**	**1,019**	**1,910**
Operating expenses	**42,431**	**43,028**	**39,993**	**48,360**	**48,978**	**32,505**	**37,765**	**46,515**	**173,812**	**165,763**	**150,155**
Depreciation and amortisation	7,907	7,948	8,093	7,825	7,566	7,342	7,024	6,393	31,772	28,325	25,793
Salaries	14,987	13,230	13,218	13,630	14,122	12,239	11,897	12,506	55,065	50,764	49,860
Other employee costs	3,316	3,254	3,415	3,780	3,070	2,867	3,002	3,142	13,765	12,081	11,300
Rent and maintenance fees	2,372	2,299	1,945	2,506	2,098	2,187	2,613	2,607	9,122	9,505	9,444
Fees and charges	126	3,790	244	9,268	233	(5,524)	229	11,615	13,428	6,553	10,009
incl. PFSA fees	*4*	*3,506*	*5*	*9,023*	*3*	*(5,781)*	-	*11,357*	*12,538*	*5,579*	*9,121*
External service charges	11,941	11,149	11,507	9,923	20,347	12,183	11,650	9,014	44,520	53,194	38,587
Other operating expenses	1,782	1,357	1,571	1,430	1,544	1,209	1,350	1,238	6,140	5,341	5,162
Other income	1,282	284	293	844	1,767	1,731	31	330	2,703	3,859	1,736
Impairment gains/(losses) on receivables	1,686	(384)	375	1,476	607	-	-	-	3,153	607	-
Other expenses	830	330	373	781	40	395	954	1,507	2,314	2,896	19,213
Operating profit	**44,790**	**43,053**	**46,199**	**36,163**	**44,310**	**49,950**	**48,947**	**43,342**	**170,205**	**186,549**	**143,230**
Financial income	2,592	1,789	48,191	1,867	1,284	1,334	1,538	1,394	54,439	5,550	12,950
Financial expenses	2,662	2,168	2,124	2,208	2,438	(1,339)	2,497	7,551	9,162	11,147	12,079
Share of profit of associates	1,923	3,412	4,472	746	1,910	3,609	3,045	1,495	10,553	10,059	3,518
Profit before income tax	**46,643**	**46,086**	**96,738**	**36,568**	**45,066**	**56,233**	**51,032**	**38,680**	**226,035**	**191,011**	**147,619**
Income tax expense	9,506	8,466	17,705	6,657	5,754	9,320	9,173	8,027	42,334	32,274	31,145
Profit for the period	**37,137**	**37,620**	**79,033**	**29,911**	**39,312**	**46,913**	**41,859**	**30,653**	**183,701**	**158,737**	**116,474**

**As of 1 January 2018, on the application of IFRS 9, the Group reports a line of impairment losses of receivables while comparative data have not been restated (exception under 7.2.15 of IFRS 9).*

Source: Consolidated Financial Statements, Company

Comment: The Warsaw Stock Exchange announces 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. As a result, the management decided to retrospectively change the accounting treatment of payments to PFN by discounting the future payments committed by GPW as at 31 December 2016 and by their one-off recognition. GPW also adjusted the cost of payments to PFN previously recognised in the Group's statement of comprehensive income for 2016 and 2017. The adjustments are presented in detail in the consolidated part of this report in the section Other income and expenses.

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 31 Consolidated statement of financial position of GPW Group by quarter in 2016 – 2018

	2018				2017				2016
PLN'000	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Non-current assets	**580,375**	**575,125**	**578,568**	**580,697**	**596,354**	**594,774**	**597,220**	**597,334**	**597,287**
Property, plant and equipment	108,158	106,156	108,245	108,691	110,784	112,036	113,777	116,716	119,130
Intangible assets	254,564	254,491	258,320	260,918	263,769	264,694	267,158	268,268	269,593
Investment in entities measured by equity method	207,267	203,273	199,929	195,986	207,389	205,221	201,590	198,577	197,231
Deferred tax assets	540	863	1,800	4,472	3,803	1,796	3,349	3,261	1,809
Available-for-sale financial assets	-	-	-	-	271	280	278	278	288
Financial assets measured at fair value through other comprehensive income	101	200	204	197	-	-	-	-	-
Prepayments	5,523	5,920	5,848	6,211	6,116	6,525	6,846	6,012	5,014
Other non-current assets	4,222	4,222	4,222	4,222	4,222	4,222	4,222	4,222	4,222
Current assets	**636,942**	**618,283**	**693,410**	**612,539**	**550,699**	**513,493**	**615,476**	**592,548**	**560,561**
Inventories	64	64	60	54	56	54	53	60	57
Receivables in respect of corporate income tax	-	71	71	71	71	95	71	559	428
Trade and other receivables	69,437	78,747	68,509	87,399	64,096	63,768	89,069	165,243	113,262
Contract assets	1,215	2,122	1,946	-	-	-	-	-	-
Financial assets measured at amortised cost	377,502	364,221	380,982	201,402	-	-	-	-	-
Assets held for sale	-	-	-	12,151	-	-	-	-	-
Other financial assets	-	-	-	-	250,590	162,646	70,470	153,546	84,147
Cash and cash equivalents	188,724	173,058	241,842	311,462	235,886	286,930	455,813	273,140	362,667
Total assets	**1,217,317**	**1,193,408**	**1,271,978**	**1,193,236**	**1,147,053**	**1,108,267**	**1,212,696**	**1,189,882**	**1,157,848**
Equity	**890,538**	**853,355**	**815,827**	**829,346**	**799,467**	**759,686**	**712,752**	**761,096**	**730,592**
Share capital	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865
Other reserves	1,267	1,126	1,194	1,349	1,347	1,128	1,106	1,035	1,184
Retained earnings	824,816	787,776	750,185	763,551	733,682	694,132	647,246	695,646	665,018
Non-controlling interests	590	588	583	581	573	561	535	550	525
Non-current liabilities	**269,333**	**268,290**	**265,955**	**264,884**	**270,781**	**271,200**	**269,452**	**269,111**	**155,436**
Liabilities under bond issue	243,961	243,864	243,767	243,670	243,573	243,475	243,378	243,281	123,459
Employee benefits payable	1,147	1,130	1,239	1,454	1,454	1,468	1,838	2,274	1,832
Finance lease liabilities	-	-	-	-	-	-	-	17	32
Accruals and deferred income	5,033	5,173	5,313	5,452	5,592	5,996	6,064	6,132	6,200
Deferred income tax liability	7,357	6,358	3,941	2,682	7,108	7,286	5,276	4,588	9,675
Other liabilities	11,835	11,765	11,695	11,626	13,054	12,975	12,896	12,819	14,238
Current liabilities	**57,446**	**71,763**	**190,196**	**99,006**	**76,805**	**77,381**	**230,492**	**159,675**	**271,820**
Liabilities under bond issue	1,938	2,099	1,899	2,070	1,938	2,100	1,896	2,069	122,882
Trade payables	8,575	7,905	18,775	23,849	21,303	6,169	3,496	6,199	6,387
Employee benefits payable	14,278	11,684	10,525	8,141	12,958	10,515	8,060	5,812	8,114
Finance lease liabilities	-	-	-	15	31	48	64	62	62
Corporate income tax payable	3,158	1,066	8,688	1,636	6,012	4,587	7,597	13,188	16,154
Credits and loans	-	-	-	-	-	20,021	59,958	59,798	-
Contract liabilities	3,581	12,533	22,375	33,037	-	-	-	-	-
Accruals and deferred income *	559	559	563	559	7,386	15,641	37,194	41,722	7,144
Provisions for other liabilities and charges	68	68	68	67	210	191	318	317	333
Other current liabilities	25,289	35,849	127,303	29,632	26,967	18,109	111,909	30,508	110,744
Total equity and liabilities	**1,217,317**	**1,193,408**	**1,271,978**	**1,193,236**	**1,147,053**	**1,108,267**	**1,212,696**	**1,189,882**	**1,157,848**

** As of 2018, deferred income is presented under contract liabilities*

Source: Consolidated Financial Statements, Company

V. 2. Presentation of the financials

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 2018. 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 market participants include TGE fees, including revenues from the operation of RRM, 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, office space lease, and sponsorship.

The Group's sales revenues amounted to PLN 346.8 million in 2018, a decrease of 1.5% (PLN 5.2 million) year on year.

The decrease in sales revenues year on year in 2018 was driven by a decrease in revenues from the financial market segment by 8.1% (PLN 17.0 million). The decrease was mainly driven by a decrease in revenue from trading in equities owing to a decrease of the value of trade on the equity market. The revenue on the commodity market increased by PLN 11.5 million or 8.1% year on year in 2018. The increase of revenue on the commodity market was mainly driven by revenue from trade in electricity as well as clearing.

The revenue of TGE stood at PLN 103.0 million in 2018 compared to PLN 97.1 million in 2017. The revenue of IRGiT was PLN 49.6 million in 2018 compared to PLN 44.3 million in 2017. The revenue of BondSpot S.A. stood at PLN 11.4 million in 2018 and PLN 13.0 million in 2017.

The revenue of the GPW Group by segment is presented below.

Table 32 Consolidated revenues of GPW Group and revenue structure in 2016 - 2018

	Year ended 31 December						Change (2018 vs 2017)	Change (%) (2018 vs 2017)
PLN'000, %	2018	%	2017	%	2016	%		
Financial market	**191,852**	**55%**	**208,849**	**59%**	**183,698**	**59%**	**(16,997)**	**-8.1%**
Trading revenue	124,280	36%	141,336	40%	119,079	38%	(17,056)	-12.1%
Equities and equity-related instruments	94,082	27%	109,564	31%	89,520	29%	(15,482)	-14.1%
Derivative instruments	12,068	3%	11,888	3%	12,202	4%	180	1.5%
Other fees paid by market participants	7,396	2%	7,498	2%	6,836	2%	(102)	-1.4%
Debt instruments	10,354	3%	11,958	3%	10,111	3%	(1,604)	-13.4%
Other cash instruments	380	0%	428	0%	410	0%	(48)	-11.2%
Listing revenue	22,805	7%	24,968	7%	23,930	8%	(2,163)	-8.7%
Listing fees	19,732	6%	20,013	6%	19,918	6%	(281)	-1.4%
Introduction fees, other fees	3,073	1%	4,955	1%	4,012	1%	(1,882)	-38.0%
Information services and revenue from calculation of reference rates	44,767	13%	42,545	12%	40,689	13%	2,222	5.2%
Real-time information and revenue from calculation of reference rates	41,142	12%	39,529	11%	37,933	12%	1,613	4.1%
Indices and historical and statistical information	3,625	1%	3,016	1%	2,756	1%	609	20.2%
Commodity market	**153,555**	**44%**	**142,088**	**40%**	**125,254**	**40%**	**11,467**	**8.1%**
Trading revenue	78,547	23%	70,092	20%	60,857	20%	8,455	12.1%
Electricity	18,395	5%	8,815	3%	10,191	3%	9,580	108.7%
Spot	3,023	1%	2,680	1%	2,976	1%	343	12.8%
Forward	15,372	4%	6,135	2%	7,215	2%	9,237	150.6%
Gas	10,809	3%	10,846	3%	9,235	3%	(37)	-0.3%
Spot	2,511	1%	2,441	1%	2,655	1%	70	2.9%
Forward	8,298	2%	8,405	2%	6,580	2%	(107)	-1.3%
Property rights in certificates of origin	37,817	11%	39,614	11%	32,003	10%	(1,797)	-4.5%
Other fees paid by market participants	11,526	3%	10,817	3%	9,428	3%	709	6.6%
Register of certificates of origin	28,696	8%	30,628	9%	24,907	8%	(1,932)	-6.3%
Clearing	45,862	13%	41,019	12%	39,163	13%	4,843	11.8%
Information services	450	0%	349	0%	327	0%	101	28.9%
Other revenue	**1,374**	**0%**	**1,019**	**0%**	**1,910**	**1%**	**355**	**34.8%**
Total	**346,781**	**100%**	**351,956**	**100%**	**310,862**	**100%**	**(5,175)**	**-1.5%**

Source: Consolidated Financial Statements, Company

The Group earns revenue both from domestic and foreign clients. The table below presents revenue by geographic segment.

Table 33 Consolidated revenues of GPW Group by geographical segment in 2016 - 2018

	Year ended 31 December						Change (2018 vs 2017)	Change (%) (2018 vs 2017)
PLN'000, %	2018	%	2017	%	2016	%		
Revenue from foreign customers	93,296	27%	83,535	24%	71,917	23%	9,761	11.7%
Revenue from local customers	253,485	73%	268,421	76%	238,945	77%	(14,936)	-5.6%
Total	**346,781**	**100%**	**351,956**	**100%**	**310,862**	**100%**	**(5,175)**	**-1.5%**

Source: Consolidated Financial Statements, Company

The average EUR/PLN exchange rate was 4.26 EUR/PLN in 2018, 4.26 EUR/PLN in 2017, and 4.36 EUR/PLN in 2016.

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 124.3 million in the year ended 31 December 2018 compared to PLN 141.3 million in 2017.

The share of trading revenue in the total revenue on the financial market was 64.8% in 2018 compared to 67.7% in 2017. The biggest share in trading revenue (85.8%) is that of the revenue on the Main Market, which stood at PLN 105.5 million in 2018. 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 94.1 million in 2018 compared to PLN 109.6 million in 2017.

The value of trading in equities on the Main Market was PLN 211.9 million in 2018 and decreased by 18.8% year on year, including a decrease of trading on the electronic order book by 13.6% and a decrease of the value of block trades by 69.1%. As a result, the trading revenue from equities decreased by 14.1% year on year in 2018.

It should be noted that 2017 was a record year as measured by the value of trading in equities: the average monthly turnover was PLN 21.7 billion (including trading on the electronic order book and block trades). The value of trading decreased to PLN 17.7 billion per month in 2018; however, it was higher than in 2016, when the average monthly turnover was PLN 16.9 billion. The main drivers of the decrease in trading year on year included:

- change of market conditions and drop of GPW's main indices. WIG20 gained more than 26% in 2017 but lost 7.5% in 2018. Market conditions did not favour investing in equities so investors opted for other classes of assets providing positive returns;
- less activity of domestic institutional investors (investment funds and pension funds).

Table 34 Data for the markets in equities and equity-related instruments

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Financial market, trading revenue: equities and equity-related instruments *(PLN million)*	**94.1**	**109.6**	**89.5**	**(15.5)**	**-14.1%**
Main Market:					
Value of trading (PLN billion)	211.9	261.0	202.3	(49.1)	-18.8%
Volume of trading (billions of shares)	12.8	15.4	14.0	(2.6)	-17.0%
NewConnect:					
Value of trading (PLN billion)	1.7	1.5	1.4	0.2	13.1%
Volume of trading (billions of shares)	1.5	2.8	3.5	(1.3)	-47.1%

Source: Company

Derivatives

Revenues of the Group from transactions in derivatives on the financial market amounted to PLN 12.1 million in 2018 compared to PLN 11.9 million in 2017, representing an increase of PLN 0.2 million or 1.5%.

The total volume of trading in derivatives in 2018 increased by 7.1% year on year in 2018. The volume of trading in WIG20 futures, which account for the majority of revenue from trading in derivatives, dropped by 1.3% year on year and the revenue increased by only 1.5%.

The volume of trading in currency futures increased from 1.1 million contracts in 2017 to 2.0 million in 2018 (up by 89.9%). However, fees on currency futures are the lowest among all futures, hence their impact on revenue is much smaller.

Table 35 Data for the derivatives market

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Financial market, trading revenue: derivatives *(PLN million)*	**12.1**	**11.9**	**12.2**	**0.2**	**1.5%**
Volume of trading in derivatives (millions of contracts):	8.2	7.6	8.0	0.5	7.1%
incl.: Volume of trading in WIG20 futures (millions of contracts)	4.4	4.5	4.7	(0.1)	-1.3%

Source: Company

Other fees paid by market participants

Revenues of the Group from other fees paid by market participants stood at PLN 7.4 million in 2018 and was stable year on year (PLN 7.5 million in 2017). The fees mainly include fees for access to the trading system (among others, licence fees, connection fees and maintenance fees) as well as fees for use of the system.

Debt instruments

Revenues of the Group from transactions in **debt instruments** stood at PLN 10.4 million in 2018 compared to PLN 12.0 million in 2017, representing a decrease of 13.4% or PLN 1.6 million. The majority of the Group's revenues (PLN 9.7 million in 2018) from the debt instruments segment is generated by Treasury BondSpot Poland (TBSP).

The decrease of revenues from transactions in debt instruments year on year in 2018 was driven by lower revenue on TBSP.

The decrease of revenue on TBSP year on year in 2018 was driven mainly by a lower value of both cash and conditional transactions.

The total value of transactions in Polish Treasury securities on TBSP was PLN 407.3 billion in 2018, representing a decrease of 23.8% year on year. The decrease affected both cash and conditional transactions. The value of conditional transactions was PLN 260.5 billion in 2018, representing a decrease of 23.0% year on year. The value of cash transactions was PLN 146.8 billion in 2018, representing a decrease of 25.2% year on year.

Activity on TBSP in 2018 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 relatively low inflation readings and the plans of the Polish Monetary Policy Council (RPP) 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 2018 target sales of Treasury securities in 2017.

Activity of participants of the Treasury securities market, in particular repo transactions, was directly impacted by high liquidity in the local banking system and the impact of the Act on Tax on Certain Financial Institutions, which took effect in 2016. 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 with the intention of limiting the impact of opening transactions which add to taxable assets; this indirectly affects trading on the cash market.

The value of trading on Catalyst decreased by 7.6% year on year in 2018. However, revenues from Catalyst have a small share in the Group's total revenues from transactions in debt instruments.

Table 36 Data for the debt instruments market

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Financial market, trading revenue: debt instruments *(PLN million)*	**10.4**	**12.0**	**10.1**	**(1.6)**	**-13.4%**
Catalyst:					
Value of trading (PLN billion)	2.6	2.8	3.1	(0.2)	-7.6%
incl.: Value of trading in non-Treasury instruments (PLN billion)	2.0	1.9	2.1	0.1	3.5%
Treasury BondSpot Poland, value of trading:					
Conditional transactions (PLN billion)	260.5	338.5	158.3	(78.0)	-23.0%
Cash transactions (PLN billion)	146.8	196.2	254.5	(49.3)	-25.2%

Source: Company

Other cash market instruments

Revenues from transactions in other cash market instruments amounted to PLN 380 thousand in 2018 compared to PLN 428 thousand in 2017. The revenues include fees for trading in structured products, investment certificates, ETF units and warrants. The biggest decrease by PLN 40 thousand affected trading in structured certificates.

LISTING

Listing revenues of the Group on the financial market amounted to PLN 22.8 million in 2018 compared to PLN 25.0 million in 2017.

Revenues from **listing fees** amounted to PLN 19.7 million in 2018 compared to PLN 20.0 million in 2017. 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.

Revenues from **fees for introduction and other fees** decreased by PLN 1.9 million year on year and amounted to PLN 3.1 million in 2018 compared to PLN 5.0 million in 2017. The revenues are driven mainly by the number and value of new listings of shares and bonds on the GPW markets. The value of IPOs and SPOs decreased significantly year on year in 2018.

The value of IPOs on the Main Market and NewConnect dropped from PLN 7.7 billion in 2017 to PLN 0.3 billion in 2018. The value of SPOs dropped from PLN 90.8 billion in 2017 to PLN 5.4 billion in 2018.

The SPO of UniCredit worth PLN 55.9 billion and the SPO of Banco Santander S.A. worth PLN 30.1 billion in 2017 largely contributed to the high value of SPOs in 2017.

Listing revenues on the GPW Main Market decreased by 8.7% year on year in 2018 to PLN 18.4 million. The table below presents the key financial and operating figures for the Main Market.

Table 37 Data for the GPW Main Market

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Main Market					
Listing revenue (PLN million)	**18.4**	**20.1**	**19.6**	**-1.7**	**-8.7%**
Total capitalisation of listed companies *(PLN billion)*	1,128.5	1,379.9	1,115.7	-251.3	-18.2%
including: Capitalisation of listed domestic companies	578.9	671.0	557.1	-92.0	-13.7%
including: Capitalisation of listed foreign companies	549.6	708.9	558.6	-159.3	-22.5%
Total number of listed companies	465	482	487	-17	-3.5%
including: Number of listed domestic companies	414	432	434	-18	-4.2%
including: Number of listed foreign companies	51	50	53	1	2.0%
Value of offerings *(IPO and SPO) (PLN billion)* *	5.6	98.2	4.9	-92.7	-94.3%
Number of new listings *(in the period)*	7	15	19	-8	-53.3%
Capitalisation of new listings *(PLN billion)*	1.6	16.7	5.6	-15.1	-90.2%
Number of delistings	25	20	19	5	25.0%
Capitalisation of delistings** (PLN billion)	18.4	8.1	7.3	10.3	127.3%

** including SPO of UniCredit S.p.A. at PLN 55,9 billion in Q1 2017 and SPO of Banco Santander S.A. at PLN 30,1 billion in Q3 2017*

*** based on market capitalisation at the time of delisting*

Source: Company

Listing revenues from NewConnect were PLN 2.1 million in 2018 compared to PLN 2.2 million in 2017. The table below presents the key financial and operating figures.

Table 38 Data for NewConnect

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
NewConnect					
Listing revenue *(PLN million)*	**2.1**	**2.2**	**2.3**	**-0.1**	**-4.6%**
Total capitalisation of listed companies *(PLN billion)*	7.4	9.6	9.8	-2.2	-23.2%
including: Capitalisation of listed domestic companies	7.2	9.4	9.5	-2.3	-24.0%
including: Capitalisation of listed foreign companies	0.2	0.2	0.3	0.0	12.9%
Total number of listed companies	387	408	406	-21	-5.1%
including: Number of listed domestic companies	381	401	398	-20	-5.0%
including: Number of listed foreign companies	6	7	8	-1	-14.3%
Value of offerings *(IPO and SPO) (PLN billion)*	0.1	0.3	0.2	-0.2	-51.7%
Number of new listings *(in the period)*	15	19	16	-4	-21.1%
Capitalisation of new listings *(PLN billion)*	0.6	1.0	0.5	(0.4)	-44.2%
Number of delistings*	36	15	30	21	140.0%
Capitalisation of delistings** (PLN billion)	1.0	1.1	1.3	-0.1	-13.2%

** includes companies which transferred to the Main Market*

*** based on market capitalisation at the time of delisting*

Source: Company

Listing revenues from Catalyst decreased year on year in 2018. The decrease resulted from a decrease in the number of listed instruments: 575 at the end of 2018 compared to 608 at the end of 2017. The table below presents the key financial and operating figures.

Table 39 Data for Catalyst

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Catalyst					
Listing revenue *(PLN million)*	**2.3**	**2.6**	**2.1**	**-0.3**	**-12.4%**
Number of issuers	148	161	176	-13	-8.1%
Number of issued instruments	575	608	566	-33	-5.4%
including: non-Treasury instruments	527	566	525	-39	-6.9%
Value of issued instruments *(PLN billion)*	777.2	751.7	707.4	25.5	3.4%
including: non-Treasury instruments	86.6	95.8	81.8	-9.1	-9.5%

Source: Company

INFORMATION SERVICES

Revenues from information services on the financial and commodity market amounted to PLN 45.2 million in 2018 compared to PLN 42.9 million in 2017.

Table 40 Data for information services

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Revenues from information services and WIBID and WIBOR reference rate services * *(PLN million)*	**45.2**	**42.9**	**41.0**	**2.3**	**5.4%**
Number of data vendors	78	52	51	26	50.0%
Number of subscribers ('000 subscribers)	248.1	244.4	224.6	3.7	1.5%

** revenues from information services contein financial market data and commodity market data*

Source: Company

The increase in revenue from information services in 2018 was driven by:

- acquisition of new clients of GPW Group information services (mainly data vendors and non-display data users, including systematic internalisers);
- sale of WIBID/WIBOR data throughout 2018 (in 2017, they were only sold in H2, as of 1 July 2017);
- introduction (as of 1 January 2018) of fees for distribution of delayed data from GPW and for use of GPW data by Service Facilitators who support data vendors in distribution;
- sharp increase in the number of subscribers using GPW Benchmark data and a significant increase in the number of subscribers using BondSpot and TGE data;
- launch of new 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 153.6 million in 2018 compared to PLN 142.1 million in 2017.

The increase of revenues on the commodity market year on year in 2018 was mainly driven by an increase in revenues from trade in electricity, which stood at PLN 18.4 million compared to PLN 8.8 million in 2017, representing an increase of 108.7% or PLN 9.6 million. Trading revenues from other fees paid by market participants increased by PLN 0.7 million. Revenues from clearing on the commodity market increased by a high 11.8% or PLN 4.8 million. Revenues from transactions in gas were stable year on year and stood at PLN 10.8 million in 2018. Revenues from trading in certificates of origin decreased by 4.5% or PLN 1.8 million and revenues from the operation of the register of certificates of origin decreased by 6.3% or PLN 1.9 million year on year.

Revenue from information services on the commodity market includes information services sold via GPW's channels. Revenue from information services on the commodity market stood at PLN 450 thousand in 2018, comparing to PLN 349 thousand in 2017.

TRADING

Revenues from trading on the commodity market stood at PLN 78.5 million in 2018, an increase of PLN 8.5 million compared to PLN 70.1 million in 2017.

The Group's revenues from trade in electricity amounted to PLN 18.4 million in 2018 compared to PLN 8.8 million in 2017. Revenues from trade in electricity included revenue on the spot market at PLN 3.0 million and revenue on the forward market at PLN 15.4 million. The total volume of trading on the energy markets operated by TGE amounted to 226.1 TWh in 2018 compared to 111.7 TWh in 2017. The volume of trade in electricity increased mainly for forward transactions in view of the increase of the obligation to trade in electricity on the regulated market and the adoption of a law on energy prices.

The market in electricity is sensitive to changes in the legal and international environment. The increase in trade on the electricity market in 2018 was driven by the amendment of the obligation to sell electricity on the exchange under the Energy Law, which took effect in December 2017. The amendment raised the mandatory volume of sale on a commodity exchange to not less than 30% of electricity produced during the year. Another amendment of the Energy Law, which imposed an obligation to sell 100% of electricity on the exchange, was adopted on 9 November 2018 and took effect on 1 January 2019. Although the change only took effect in 2019, it partly impacted trading in 2018, as well. The obligation to sell electricity on the exchange was 15% in 2017. Legislative changes of the obligation percentage are aimed at capping potential increase of wholesale electricity prices.

The Group's revenues from trade in gas amounted to PLN 10.8 million in 2018 and were stable year on year. The revenue from spot transactions stood at PLN 2.5 million and the revenue from forward transactions at PLN 8.3 million in 2018. The volume of trade in natural gas on TGE was 143.3 TWh in 2018 compared to 138.7 TWh in 2017. The volume of trade in gas increased sharply for forward transactions by 4.3% year on year.

The Group's revenue from the operation of trading in property rights stood at PLN 37.8 million in 2018 compared to PLN 39.6 million in 2017, a decrease of PLN 1.8 million. The volume of trading in property rights stood at 59.6 TWh in 2018 compared to 59.5 TWh in 2017. The change of revenue from trading in property rights does not correspond directly to the change of trading volumes due to different fees for different types of property rights.

The volume of trade in property rights in green certificates of origin of electricity was 30.8 TWh in 2018 compared to 29.8 TWh in 2017. The revenue from trade in property rights in green certificates of origin of electricity (PMOZE) represented 69.4% and 66.6%, respectively, of the Group's total revenue from trade in property rights in the periods under review. The share of revenue from cogeneration increased from 14.8% in 2017 to 16.2% in 2018. The revenue from trade in property rights of energy efficiency (white certificates) decreased in 2018. The revenue stood at PLN 5.5 million in 2018 and PLN 7.0 million in 2017. The share of revenue from white certificates in total revenue from trade in property rights was 14.4% in 2018.

Revenues of the Group from other fees paid by commodity market participants amounted to PLN 11.5 million in 2018 compared to PLN 10.8 million in 2017, an increase of 6.6% (PLN 0.7 million). Other fees paid by commodity market participants included fees paid by TGE market participants at PLN 6.2 million, revenues of InfoEngine from the activity of trade operator at PLN 2.0 million, and revenues of IRGiT at PLN 3.3 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 66.3% of revenues from other fees. Revenue from exchange fees stood at PLN 4.1 million in 2018, an increase of 4.4% year on year. The Exchange Commodity Market had 72 members as at 31 December 2018, two more than a year earlier.

Table 41 Data for trading on the commodity market

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Commodity market - trading revenue (PLN million)	**78.5**	**70.1**	**60.9**	**8.5**	**12.1%**
Volume of trading in electricity					
Spot transactions *(TWh)*	27.7	25.2	27.6	2.5	9.8%
Forward transactions *(TWh)*	198.3	86.4	99.0	111.9	129.5%
Volume of trading in gas					
Spot transactions *(TWh)*	23.7	24.0	24.6	-0.3	-1.3%
Forward transactions *(TWh)*	119.6	114.7	89.9	5.0	4.3%
Volume of trading in property rights (TGE) (TWh)	59.6	59.5	51.0	0.1	0.2%

Source: Company

REGISTER OF CERTIFICATES OF ORIGIN

Revenues from the operation of the **Register of Certificates of Origin** amounted to PLN 28.7 million in 2018 compared to PLN 30.6 million in 2017, representing a decrease of 6.3%. The decrease of revenues from the operation of the Register of Certificates of Origin was driven by a decrease of cancelled property rights (by 9.4%) and issued property rights (by 2.6%).

Table 42 Data for the Register of Certificates of Origin

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Commodity market - revenue from operation of the Register of Certificates of Origin of electricity (PLN million)	**28.7**	**30.6**	**24.9**	**-1.9**	**-6.3%**
Issued property rights *(TWh)*	47.7	49.0	47.7	-1.3	-2.6%
Cancelled property rights *(TWh)*	47.4	52.3	43.0	-4.9	-9.4%

Source: Company

CLEARING

The Group earns revenue from the **clearing activities** of IRGiT, which is a subsidiary of TGE. The revenue stood at PLN 45.9 million in 2018 compared to PLN 41.0 million in 2017. The increase in the revenue was driven by increased volumes of trade on the markets operated by TGE. The revenue from clearing was PLN 11.2 million on the electricity market, PLN 19.2 million in the gas market, and PLN 15.5 million on the property rights market.

OTHER REVENUES

The Group's other revenues amounted to PLN 1.4 million in 2018 compared to PLN 1.0 million in 2017. The Group's other revenues include revenues from educational and PR services, office space lease, and sponsorship.

OPERATING EXPENSES

Total operating expenses of the **GPW Group** amounted to PLN 173.8 million in 2018, representing an increase of 4.9% (PLN 8.0 million) year on year. The increase of operating expenses was driven by an increase of depreciation and amortisation charges by PLN 3.4 million, an increase of salaries and other employee costs by PLN 6.0 million, an increase of fees and charges by PLN 6.9 million, including fees paid to PFSA for market supervision by PLN 7 million, as well as a decrease of external service charges by PLN 8.7 million and a decrease of rent and other maintenance fees by PLN 0.4 million.

Separate operating expenses of **GPW S.A.** stood at PLN 113.0 million in 2018, representing an increase of PLN 3.1 million or 2.8% year on year. The increase of the operating expenses year on year in 2018 was driven by an increase of all cost categories except external service charges. The fees paid by the Exchange to PFSA for market supervision increased by PLN 3.8 million in 2018.

Operating expenses of **TGE** stood at PLN 42.6 million in 2018 compared to PLN 37.5 million in 2017. The year-on-year increase of the operating expenses in 2018 was mainly driven by an increase of depreciation and amortisation charges by 39.2% or PLN 2.4 million and an increase of fees and charges by PLN 1.8 million or 126.5%. The annual fees paid to PFSA were PLN 3.2 million in 2018 compared to PLN 1.4 million in 2017, an increase of 134.8%.

Operating expenses of **IRGiT** stood at PLN 15.4 million in 2018, representing an increase of PLN 1.3 million year on year. Like other GPW Group companies, IRGiT paid a higher fee to PFSA: PLN 2.4 million in 2018 compared to PLN 1.1 million in 2017.

Operating expenses of **BondSpot** stood at PLN 10.8 million in 2018 compared to PLN 9.9 million in 2017, representing an increase of 9.2% or PLN 0.9 million. The increase was mainly driven by an increase of external service charges by PLN 0.8 million.

Table 43 Consolidated operating expenses of GPW Group and structure of operating expenses in 2016 - 2018

	Year ended 31 December						Change (2018 vs 2017)	Change (%) (2018 vs 2017)
PLN'000, %	2018	%	2017	%	2016	%		
Depreciation and amortisation	31,772	18%	28,325	17%	25,793	17%	3,447	12.2%
Salaries	55,065	32%	50,764	31%	49,860	33%	4,301	8.5%
Other employee costs	13,765	8%	12,081	7%	11,300	8%	1,684	13.9%
Rent and other maintenance fees	9,122	5%	9,505	6%	9,444	6%	(383)	-4.0%
Fees and charges	13,428	8%	6,553	4%	10,009	7%	6,875	104.9%
including: PFSA fees	*12,538*	*7%*	*5,579*	*3%*	*9,121*	*6%*	*6,959*	*124.7%*
External service charges	44,520	26%	53,194	32%	38,587	26%	(8,674)	-16.3%
Other operating expenses	6,140	4%	5,341	3%	5,162	3%	799	15.0%
Total	**173,812**	**100%**	**165,763**	**100%**	**150,155**	**100%**	**8,050**	**4.9%**

Source: Consolidated Financial Statements, Company

The Group is not dependent on any single supplier or provider as no contractor has a share exceeding 10% of the total expenses of the Group.

Depreciation and amortisation

Depreciation and amortisation charges stood at PLN 31.8 million in 2018, representing an increase of 12.2% (PLN 3.4 million) compared to PLN 28.3 million in 2017. The increase in depreciation and amortisation charges year on year in 2018 was driven mainly by an increase of depreciation and amortisation charges in TGE by PLN 2.4 million and an increase of depreciation and amortisation charges in GPW by PLN 0.8 million. The increase of depreciation and amortisation charges of TGE was driven by the implementation of the new trading system in 2017: X-Stream (in May 2017) and Sapri (in November 2017). The increase of the depreciation and amortisation charges of GPW was driven by the depreciation of property, plant and equipment, including servers purchased in 2017, as well as the purchase of property, plant and equipment and intangible assets in 2018.

Salaries and other employee costs

Salaries and other employee costs of the Group amounted to PLN 68.8 million in 2018, representing an increase of 9.5% (PLN 6.0 million) compared to PLN 62.8 million in 2017.

The increase of salaries in the GPW Group year on year in 2018 was driven by an increase of costs by PLN 4.0 million in GPW, by PLN 0.8 million in TGE, by PLN 0.5 million in IRGiT, and by PLN 0.5 million in in GPW Benchmark.

The increase of salaries and other employee costs in GPW year on year in 2018 was mainly driven by an increase of basic salaries by PLN 1.9 million, an increase of supplementary remuneration by PLN 0.8 million, and an increase of other employee costs including social security charges by PLN 1.3 million. The increase of salaries was driven by an upgrade of remuneration in H2 2017 and a gradual increase in the headcount necessary to restore part of the Company's human resources reduced during the restructuring in 2016. The increase of supplementary remuneration was driven by short-term contracts in the development of the strategy.

The increase of salaries and other employee costs in TGE year on year in 2018 was driven by an increase of basic salaries by PLN 0.6 million, an increase of supplementary remuneration by PLN 0.1 million, and an increase of other employee costs including social security charges by PLN 0.1 million. The increase of salaries in TGE was driven by an increase of gross remuneration by PLN 0.2 million, mainly due to increased employment; an increase of retirement and reorganisation severance pay by PLN 0.2 million; an increase of 2018 bonus provisions by PLN 0.1 million due to increased employment; and an increase of unused holiday provisions by PLN 0.1 million.

The increase of salaries and other employee costs in IRGiT year on year in 2018 was driven by an increase of basic salaries by PLN 0.4 million and an increase of other employee costs including social security charges by PLN 0.1 million. The increase of salaries in IRGiT was driven mainly by an upgrade of remuneration in H2 2018.

The increase of salaries in GPW Benchmark year on year in 2018 was driven by an increase of basic salaries by PLN 0.2 million and an increase of supplementary remuneration by PLN 0.3 million. The increase of salaries was driven by an increase of basic remuneration by PLN 0.2 million as the company was in business throughout 2018. The company did not yet organise reference rate fixings in H1 2017. That business started on 30 June 2017 and the company hired expert staff. The increase of supplementary remuneration in 2018 was driven by the cost of an Oversight Committee established under Regulation (EU) 2016/1011 of 8 June 2016, as well as higher costs of the Supervisory Board.

The headcount of the Group was 350 FTEs as at 31 December 2018 compared to 328 FTEs as at 31 December 2017. The increase of the headcount of the Group year on year in 2018 resulted from workforce additions in GPW SA, TGE, BondSpot and InfoEngine. The increase of the headcount of GPW in 2018 was a result of the recovery of some human resources reduced in the workforce restructuring in 2016 as well as the implementation of the Group's strategy.

Table 44 Employment in GPW Group

	As at 31 December		
# FTEs	2018	2017	2016
GPW	204	189	185
Subsidiaries	146	139	146
Total	**350**	**328**	**331**

Source: Company

Rent and other maintenance fees

Rent and other maintenance fees of the GPW Group amounted to PLN 9.1 million in 2018 compared to PLN 9.5 million in 2017. The decrease of rent in 2018 was mainly driven by a higher rent in 2017 due to the temporary payment of rent at two locations by subsidiaries in the process of their relocation to a common location at Centrum Giełdowe in 2017.

Fees and charges

Fees and charges stood at PLN 13.4 million in 2018, an increase of 104.9% (PLN 6.9 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 as compared to PLN 5.6 million paid for supervision in 2017. It should be noted that the fee may vary year to year depending on a range of factors beyond the Group's control.

External service charges

External service charges amounted to PLN 44.5 million in 2018 compared to PLN 53.2 million in 2017.

Table 45 Consolidated external service charges of GPW Group and structure of external service charges in 2016 - 2018

PLN'000, %	Year ended 31 December 2018	%	2017	%	2016	%	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
IT cost:	22,940	52%	32,467	61%	22,161	57%	(9,527)	-29.3%
IT infrastructure maintenance	*15,998*	*36%*	*15,752*	*30%*	*12,395*	*32%*	*246*	*1.6%*
TBSP maintenance service	*1,466*	*3%*	*1,091*	*2%*	*1,453*	*4%*	*375*	*34.4%*
Data transmission lines	*5,102*	*11%*	*5,242*	*10%*	*5,924*	*15%*	*(140)*	*-2.7%*
Software modification	*374*	*1%*	*10,382*	*20%*	*2,389*	*6%*	*(10,008)*	*-96.4%*
Office and office equipment maintenance:	3,355	8%	3,325	6%	2,860	7%	30	0.9%
Repair and maintenance of installations	*1,026*	*2%*	*1,012*	*2%*	*1,038*	*3%*	*14*	*1.4%*
Security	*1,412*	*3%*	*1,396*	*3%*	*904*	*2%*	*16*	*1.1%*
Cleaning	*533*	*1%*	*528*	*1%*	*495*	*1%*	*5*	*0.9%*
Phone and mobile phone services	*384*	*1%*	*389*	*1%*	*423*	*1%*	*(5)*	*-1.2%*
International (energy) market services	*1,857*	*4%*	*2,003*	*4%*	*399*	*1%*	*(146)*	*-7.3%*
Leasing, rental and maintenance of vehicles	*711*	2%	659	1%	527	1%	52	7.9%
Transportation services	137	0%	139	0%	125	0%	(2)	-1.6%
Promotion, education, market development	5,424	12%	4,618	9%	5,392	14%	806	17.5%
Market liquidity support	908	2%	522	1%	583	2%	386	73.9%
Advisory (including: audit, legal services, business consulting)	6,697	15%	6,213	12%	3,716	10%	484	7.8%
Information services	261	1%	956	2%	892	2%	(695)	-72.7%
Training	973	2%	813	2%	700	2%	160	19.6%
Mail fees	75	0%	95	0%	78	0%	(20)	-21.0%
Bank fees	172	0%	123	0%	135	0%	49	39.8%
Translation	349	1%	364	1%	224	1%	(15)	-4.1%
Other	661	1%	897	2%	795	2%	(236)	-26.3%
Total	**44,520**	**100%**	**53,194**	**100%**	**38,587**	**100%**	**(8,674)**	**-16.3%**

Source: Consolidated Financial Statements, Company

The decrease of external service charges in the GPW Group year on year in 2018 was mainly driven by the following items:

- IT infrastructure maintenance – an increase of PLN 0.2 million due to the cost of IT hardware and software maintenance services. The increase of the Group's IT infrastructure maintenance costs was driven by an increase in TGE by PLN 0.9 million or 22.0% due to the commissioning of two new systems, X-Stream and Sapri, in 2017. The cost of system licences and support in 2017 was low because X-Stream was rolled out in May 2017 and Sapri in November 2017. The maintenance cost of both systems in 2018 was charged throughout the year.

- TBSP market maintenance – an increase of PLN 0.4 million due to a change of maintenance fees of the trading system TradeImpact in 2018.

- software modifications – a decrease of the cost of software modifications by PLN 10.0 million following modifications to GPW systems in 2017 required in the implementation of MiFID 2.

- promotion, education, market support – an increase by PLN 0.8 million due to an increase of the cost of promotion in GPW by PLN 0.2 million and a lower base of consolidated promotion costs in 2017 due to higher shared services in the Group subject to consolidation adjustments;

- market liquidity support – an increase of PLN 0.4 million in market making. As of the beginning of 2018, GPW aligned all market maker agreements with the MiFID 2 requirements, discontinued bilateral agreements with market makers and launched programmes open to all market makers. In addition, the Super Market Maker TOP7 programme was extended to include all WIG20 companies; under the programme, market makers ranking in the top 3 by value of turnover in a given month are eligible to use specific fee reductions.

- advisory – an increase of PLN 0.5 million due to an increase of advisory costs in GPW by PLN 1.9 million, mainly driven by the cost of update of the strategy and advisory in the sale of the associate Aquis and the cost of support in the strategy update, and a decrease of advisory costs in TGE by PLN 0.6 million and in IRGiT by PLN 0.7 million.

- information services – a decrease of PLN 0.7 million due to higher costs of intra-Group information services sold via GPW channels, subject to consolidation adjustments;

- other expenses – a decrease of PLN 0.2 million due to higher costs of intra-Group office services provided by GPW to subsidiaries, subject to consolidation adjustments.

According to § 18 (2) (1) of the GPW Articles of Association and Article 17 (6) of the Act on Management of State Property, below is the **report of representation expenses and expenses for legal services, marketing services, public relations services, social communications services and management advisory services**.

The cost of representation, legal services, marketing, public relations, social communications and advisory, including GPW Group management consulting, stood at PLN 12.1 million in 2018 compared to PLN 10.8 million in 2017.

Table 46 Promotion and advisory cost in 2017-2018

	Year ended 31 December		Change (2018 vs 2017)	Change (%) (2018 vs 2017)
PLN'000, %	2018	2017		
Promotion, education, market development	5,424	4,618	806	17.5%
Advisory (including: audit, legal services, business consulting)	6,697	6,213	484	7.8%
Total	**12,121**	**10,831**	**1,290**	**11.9%**

Source: Company

The cost of promotion, education and market development was PLN 5.4 million in 2018 compared to PLN 4.6 million in 2017. The cost of promotion, education and market development in 2018 is presented in the table below.

Table 47 Promotion, education and market development cost in 2018 - 2017

	Year ended 31 December		Change (2018 vs 2017)	Change (%) (2018 vs 2017)
PLN'000, %	2018	2017		
Financial and material sponsorship	933	299	634	211.8%
Promotion and business development	1,436	1,026	410	39.9%
Partnership in conferences	1,156	1,201	(45)	-3.7%
Catering services	476	469	7	1.5%
Media monitoring	70	46	24	52.7%
Public relations services	245	521	(276)	-52.9%
Advertising on radio, TV and press	406	554	(148)	-26.7%
Organization of conferences and trainings	703	503	200	39.7%
Total	**5,424**	**4,618**	**806**	**17.4%**

Source: Company

The Group's cost of representation includes mainly the cost of catering (shown in external service charges), which stood at PLN 476 thousand in 2018 compared to PLN 469 thousand in 2017, as well as the cost of promotional merchandise (shown in other operating expenses) at PLN 459 thousand in 2018 compared to PLN 348 thousand in 2017.

Advisory cost stood at PLN 6.7 million in 2018 compared to PLN 6.2 million in 2017, an increase of 7.8%. Advisory cost of the GPW Group in 2018 is presented in the table below.

Table 48 Advisory cost in 2017-2018

PLN'000, %	Year ended 31 December		Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017		
Legal services	1,660	1,376	285	20.7%
Tax advisory	558	1,308	(750)	-57.3%
Other advisory, including business and management	3,835	2,887	948	32.8%
Tax and accounting audits	643	643	(0)	-0.1%
Total	**6,697**	**6,214**	**483**	**7.8%**

Source: Company

Other advisory at PLN 3.8 million in 2018 included mainly business and management consulting, including advisory in GPW in the sale of Aquis, support in the Group's strategy development and update, and the representative office in London.

Other operating expenses

Other operating expenses amounted to PLN 6.1 million in 2018 compared to PLN 5.3 million in 2017, representing an increase of PLN 0.8 million or 15.0%. Other operating expenses in 2018 included mainly the cost of material and energy consumption at PLN 3.3 million, industry organisation membership fees at PLN 0.6 million, insurance at PLN 0.3 million, business travel at PLN 1.3 million, conference participation at PLN 0.2 million, and other costs at PLN 0.2 million. The cost of business travel reported the highest increase year on year in 2018 by 58.1% or PLN 0.5 million. The increase in the cost of business travel follows from a focus on the development of relations with counterparties and investors and from GPW's efforts to identify new opportunities of development.

OTHER INCOME AND EXPENSES

Other income of the Group stood at PLN 2.7 million in 2018 compared to PLN 3.9 million in 2017. Other income includes damages received, gains on the sale of property, plant and equipment (PLN 0.4 million), medical services reinvoiced to employees (PLN 0.4 million), an annual correction of input VAT at PLN 0.4 million, TGE's income from PSE in the Price Coupling of Regions (PCR) project at PLN 0.6 million, as well as other income at PLN 1.0 million. The biggest item in 2017 was the reversal of impairment losses on receivables in TGE at PLN 2.9 million, presented in other income in 2017.

Other expenses of the Group amounted to PLN 2.3 million in 2018 compared to PLN 2.9 million in 2017, representing a decrease of PLN 0.6 million. Other expenses include donations paid, losses on the sale of property, plant and equipment, impairment losses on receivables, and provisions against damages. Donations stood at PLN 488 thousand in 2018 compared to PLN 581 thousand 2017.

Donations paid in 2018 included GPW's donation of PLN 461 thousand to the GPW Foundation, PLN 10.3 thousand to the Foundation of the University of Warsaw, PLN 1 thousand to Caritas, and PLN 5.5 thousand to Europejska Fundacja na rzecz osób Potrzebujących. TGE offered donations to the Home for Single Mothers at PLN 4 thousand, the Dziecięca Fantazja Foundation at PLN 5 thousand, and the Avalon Foundation at PLN 1 thousand.

GPW paid a donation of PLN 1.5 million in 2018 and PLN 3.0 million in 2017 to the Polish National Foundation (PFN). These amounts are not fully shown in the profit and loss account due to changes of the accounting treatment of the donations.

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.

As a result, GPW decided to retrospectively change the accounting treatment of payments to PFN by discounting the future payments committed by GPW as at 31 December 2016 and by their one-off recognition in other expenses in Group's statement of comprehensive income for the year ended 31 December 2016 and in other liabilities in statement of financial position for the year ended 31 December 2016 (PLN 12.0 million non-current, PLN 2.6 million current).

The liability was PLN 12.0 million as at 31 December 2017 (PLN 10.8 million non-current, PLN 1.2 million current). The Company adjusted the cost of the payments to PFN recognised in the Group's statements of comprehensive income for 2016 and 2017 accordingly with the discounted payments for each period (PLN 2.6 million as at 31 December 2016). As a result of the adjustment, The Group's equity decreased by PLN 14.7 million as at 31 December 2016 and by PLN 12.0 million as at 31 December 2017 (as presented in the statement of changes in equity).

The net profit for the year ended 31 December 2016 decreased by PLN 14.7 million and the net profit for the year ended 31 December 2017 increased by PLN 2.6 million. Although the donation paid to PFN in 2017 was PLN 3.0 million, the adjustment only concerns the discounted amount of PLN 2.6 million. The difference (discount) between the amount paid in the period and the discounted amount for the period remains in other costs of the year. The discount of the 2017 donation was PLN 0.4 million in 2017. The 2018 net profit increased by PLN 1.2 million compared to the previous accounting treatment. The discount shown in other costs at 31 December 2018 was PLN 0.3 million. The donation paid to PFN in 2018 on a cash basis is PLN 1.5 million.

Impairment losses on receivables

As of 1 January 2018, following alignment with IFRS 9, the Group recognises a separate profit and loss account line: impairment losses on receivables. Impairment losses on receivables are measured on the basis of expected credit loss in the lifetime of debt. The detailed description of the valuation of expected credit loss is presented in the separate financial statements for 2018. The expected credit loss charged to the Group's results was PLN 3.2 million in 2018.

FINANCIAL INCOME AND EXPENSES

Financial income of the Group amounted to PLN 54.4 million in 2018, representing an increase of PLN 48.9 million compared to PLN 5.6 million in 2017. The financial income 2018 was driven by GPW's sale of interest in the associate Aquis.

On 8 June 2018, in connection with an IPO, shares of the associate Aquis Exchange Limited were allocated. GPW held 20.31% of votes and economic rights. As a result, GPW sold Aquis shares at GBP 2.69 per share on 14 June 2018. The value of the sale of GPW's interest in Aquis was GBP 12,396,327 gross. The sale of the interest is shown in GPW's accounts at the FX rate of GBP/PLN 4.8582. The financial income on the transaction recognised in the consolidated accounts was PLN 45.4 million.

Financial income includes mainly interest on bank deposits as well as positive FX differences. Income from interest on bank deposits and current accounts was PLN 5.9 million in 2018 compared to PLN 5.3 million in 2017. The Group earned income on corporate bonds and certificates of deposit at PLN 1.6 million.

Financial expenses of the Group stood at PLN 9.2 million in 2018 compared to PLN 11.1 million in 2017, down by PLN 2.0 million.

The lower level of financial expenses in 2018 year on year was due to the recognition of interest expenses in 2017 (PLN 1.3 million) on a bank loan granted to TGE by DNB Polska for the payment of overdue VAT, as well as negative FX differences in 2017 (PLN 1.3 million), which were not reported in 2018.

Interest cost of GPW's series C, D and E bonds (including the cost of the issue recognised over time) was the biggest item of financial expenses and stood at PLN 7.7 million in 2018 compared to PLN 7.6 million in 2017.

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 H2 2018 and 2.76% in H1 2018.

SHARE OF PROFIT OF ASSOCIATES

The Group's share of profit of associates stood at PLN 10.6 million in 2018 compared to PLN 10.1 million in 2017. The increase was mainly driven by a much lower profit net loss of Aquis Exchange Limited, recognised in 2018 only at PLN 0.9 million as at 31 March 2018, compared to a loss of PLN 3.2 million in 2017.

GPW's share in Aquis measured by the number of shares was 22.99% and GPW's share in economic and voting rights was 20.31% as at 31 December 2017. GPW sold the interest in Aquis in Q2 1018 and recognised the gains on the sale in financial income.

The Group's share of the **KDPW Group** profit was PLN 11.2 million in 2018 compared to PLN 12.6 million in 2017.

The share in the net profit of **Centrum Giełdowe** was PLN 0.4 million in 2018 compared to PLN 0.7 million in 2017. **Polska Agencja Ratingowa** (formerly IAiR) was recognised in the profit of associates as at 31 December 2018 as it became an associate following a change of shareholders in Q4 2018. The share of loss of PAR was PLN 0.2 million as at 31 December 2018.

Table 49 Profit / (Loss) of associates

PLN'000	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Grupa KDPW S.A.	33,651	37,693	23,829	(4,042)	-10.7%
Centrum Giełdowe S.A.	1,779	2,896	1,100	(1,117)	-38.6%
Polska Agencja Ratingowa S.A.	(543)	-	-	(543)	-
Aquis Exchange Limited *	(4,548)	(15,874)	(18,996)	11,326	-71.3%
Razem	**30,339**	**24,714**	**5,933**	**5,624**	**22.8%**

** the data as at 31 March 2018, in Q2 2018 GPW sold shares in Aquis*

Source: Consolidated Financial Statements, Company

Table 50 GPW's share of profit / (loss) of associates

PLN'000	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Grupa KDPW S.A.	11,217	12,565	7,698	(1,348)	-10.7%
Centrum Giełdowe S.A.	441	718	273	(277)	-38.6%
Polska Agencja Ratingowa S.A.	(181)	-	-	(181)	-
Aquis Exchange Limited *	(924)	(3,224)	(4,453)	2,300	-71.3%
Razem	**10,553**	**10,059**	**3,518**	**494**	**4.9%**

** the data as at 31 March 2018, in Q2 2018 GPW sold shares in Aquis*

Source: Consolidated Financial Statements, Company

INCOME TAX

Income tax of the Group was PLN 42.3 million in 2018 compared to PLN 32.3 million in 2017. The effective income tax rate was 18.7% in 2018 and 16.9% in 2017 as compared to the standard Polish corporate income tax rate of 19%. The income tax paid by the Group was PLN 41.7 million in 2018 compared to PLN 46.5 million in 2017.

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 tax years from 1 January 2017 to 31 December 2019.

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.

V. 3. Atypical factors and events

GPW as the organiser of WIBID and WIBOR reference rate fixings

The GPW Group acting through its subsidiary GPW Benchmark took over the preparation of WIBID and WIBOR reference rate fixings from the previous organiser, the Financial Markets Association ACI Polska as of 30 June 2017.

The decision of GPW to take over the functions of the organiser of reference rate fixings followed a proposal extended by the Association ACI Polska to GPW. In view of the Regulation, the Association ACI Polska decided that it would be unable to meet its requirements and approached GPW with a proposal to take over the functions of the organiser of WIBID and WIBOR reference rate fixings. Following an analysis, GPW decided to accept ACI Polska's proposal. The decision of the Exchange to take over as organiser of WIBID and WIBOR rate fixings is a milestone in its business. While the Group previously focused on trading in capital and commodity market instruments, it is now adding financial services.

The alignment of WIBID and WIBOR to the new requirements under 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 started in February 20018 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 under which the rates shall be used in financial instruments and contracts under the Regulation exclusively on the terms of the Agreement.

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, completed with the implementation of the model agreement as of 1 May 2018; review of the reference rate calculation methodology; and obtaining the authorisation to perform the functions of administrator. In the transition period under the Regulation until the end of 2019, GPW Benchmark S.A. is required to apply to the Polish Financial Supervision Authority to be authorised as WIBID and WIBOR administrator. GPW Benchmark is taking over the organisation of WIBID and WIBOR fixings in close collaboration with banks – fixing participants. This is very relevant in view of the role of banks in the process and the scope of use of reference rates in the banks' business.

GPW Benchmark continues the alignment of GPW Group reference rates subject to the transitional period, including WIG indices, with the Regulation. GPW Benchmark has developed the concept of a Warsaw Repo Rate. The initiative is implemented in partnership with BondSpot S.A.

Sale of an associate

On 19 February 2018, the Management Board of GPW decided to start negotiations of boundary conditions of a potential sale of shares of the associate Aquis Exchange ("Aquis"), taken up by GPW under an agreement of 19 August 2013, which authorised GPW to acquire a 30% stake in Aquis. The transaction price was GBP 5 million. In 2016, the associate completed several issues of shares without the participation of GPW. GPW held 20.31% of votes and economic rights as at 31 December 2017 and as at the date of the sale.

On 23 March 2018, the Management Board of GPW approved the boundary conditions of a potential sale expecting that the value of the stake in Aquis would be no less than GBP 11,475,000. However, the final value of the transaction depended on market conditions and an IPO of Aquis.

On 23 March 2018, the GPW Supervisory Board passed a resolution approving the sale of the stake in the associate Aquis Exchange. On 23 April 2018, the Extraordinary General Meeting of GPW approved the sale of 384,025 shares of associate Aquis.

On 8 June 2018, in connection with an IPO, shares of the associate Aquis Exchange Limited were allocated. In preparation for the IPO, Aquis allocated shares in order to reduce the par value per share as required to bring the IPO in line with the standards of trading in shares of public companies. As a result, the number of shares held by GPW increased from 384,025 shares to 4,608,300 shares. GPW sold Aquis shares at GBP 2.69 per share on 14 June 2018. The value of the sale of GPW's interest in Aquis was GBP 12,396,327. The gains on the sale of the shares of the associate Aquis at PLN 45,395 thousand are shown under financial income as at 31 December 2018.

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. As a result, the cost paid by the GPW Group was reduced significantly to PLN 9.1 million in 2016 compared to PLN 22.0 million in 2015. The cost of fees for market supervision was PLN 5.6 million in 2017, representing a decrease of 39.0%. However, the supervision fees increased by PLN 7.0 million to PLN 12.5 million for the Group in 2018. The high volatility of the cost of supervision in the last three years suggests that the fees may be subject to change, impacting the financial results of the GPW Group.

Establishment of the rating agency

According to an amendment of the entry in the National Court Register at 31 October 2018, the name of Instytut Analiz i Ratingu was changed to Polska Agencja Ratingowa S.A. ("PAR"). The capital of PAR was increased from PLN 2.1 million to PLN 6.5 million, resulting in a change of the shareholding structure. The shareholders of PAR are now, in equal parts, one-third each: GPW, Polski Fundusz Rozwoju S.A., and Biuro Informacji Kredytowej S.A. The mission of the joint rating agency is to build a rating culture in Poland by offering services to a broad group of entities, mainly small and mid-sized enterprises.

V. 4. Group's assets and liabilities structure

The total assets of the Group were PLN 1.2 billion as at 31 December 2018, an increase of 6.1% compared to PLN 1.1 billion as at 31 December 2017.

ASSETS

Total assets
PLN 1.2 bn

Non-current assets
PLN 580.4 m

Current assets
PLN 636.9 m

The Group's **non-current assets** stood at PLN 580.4 million representing 48% of total assets as at 31 December 2018 compared to PLN 596.4 million or 52% of total assets as at 31 December 2017. The decrease of non-current assets was mainly driven by a decrease of the value of property, plant and equipment in the last year as replacement capital expenditures were lower than the annual depreciation and amortisation charges. Furthermore, deferred assets decreased year on year in 2018.

Investment in associates on a consolidated basis remained stable year on year and stood at PLN 207.3 million as at 31 December 2018 despite the changes in 2018 including the sale of the associate Aquis and the recognition of Polska Agencja Ratingowa (formerly IAiR) as an associate at PLN 2.2 million following loss of control.

The Group's **current assets** stood at PLN 636.9 million representing 52% of total assets as at 31 December 2018 compared to PLN 550.7 million or 48% of total assets as at 31 December 2017.

The increase in current assets in the last year (by 15.7%) was driven mainly by an increase of financial assets measured at amortised cost and cash and cash equivalents by PLN 79.8 million (PLN 566.2 million as at 31 December 2018 compared to PLN 486.5 million as at 31 December 2017). Cash and cash equivalents understood as cash balances with maturities up to 3 months stood at PLN 188.7 million as at 31 December 2018 compared to PLN 235.9 million as at 31 December 2017. Assets measured at amortised cost understood as investments with maturities over 3 months (bank deposits, corporate bonds, certificates of deposit) stood at PLN 377.5 million as at 31 December 2018 compared to PLN 250.6 million as at 31 December 2017, shown in other financial assets.

As at 31 December 2018, the Company's management reviewed the treatment of deposits with maturities over 3 months in the light of IAS 7 *Statement of Cash Flows*. The analysis concluded that only deposits with maturities up to 3 months should be presented in cash and cash equivalents in the statement of financial position.

As a result, the Company decided to retrospectively change the accounting treatment of deposits and to present deposits with maturities over 3 months in financial assets measured at amortised cost. As a result of the reclassification, cash and cash equivalents decreased by PLN 250.6 million as at 31 December 2017 and by PLN 84.1 million as at 31 December 2016.

Furthermore, the difference in presentation of deposits above 3 months between 2018 and 2017, as they are shown in two different asset lines, is due to amendments to IFRS 9 *Financial Instruments* effective as of 1 January 2018, introducing financial assets measured at amortised cost in non-current assets. There was no such item in 2017, when cash balances with maturities over 3 months were presented in other financial assets.

In addition to the increase of cash, the Group's trade receivables increased by PLN 5.3 million.

Table 51 Consolidated statement of financial position of GPW Group at the year's end in 2016 - 2018 (assets)

	As at 31 December					
PLN'000	2018	%	2017	%	2016	%
Non-current assets	**580,375**	**48%**	**596,354**	**52%**	**597,287**	**52%**
Property, plant and equipment	108,158	9%	110,784	10%	119,130	10%
Intangible assets	254,564	21%	263,769	23%	269,593	23%
Investment in entities measured by equity method	207,267	17%	207,389	18%	197,231	17%
Deferred tax assets	540	0%	3,803	0%	1,809	0%
Available-for-sale financial assets	-	0%	271	0%	288	0%
Financial assets measured at fair value through other comprehensive income	101	0%	-	0%	-	0%
Prepayments	5,523	0%	6,116	1%	5,014	0%
Other non-current assets	4,222	0%	4,222	0%	4,222	0%
Current assets	**636,942**	**52%**	**550,699**	**48%**	**560,561**	**48%**
Inventory	64	0%	56	0%	57	0%
Receivables in respect of corporate income tax	-	0%	71	0%	428	0%
Trade and other receivables	69,437	6%	64,096	6%	113,262	10%
Contract assets	1,215	0%	-	0%	-	0%
Financial assets measured at amortised cost	377,502	31%	-	0%	-	0%
Other financial assets	-	0%	250,590	22%	84,147	7%
Cash and cash equivalents	188,724	16%	235,886	21%	362,667	31%
Total assets	**1,217,317**	**100%**	**1,147,053**	**100%**	**1,157,848**	**100%**

Source: Consolidated Financial Statements, Company

As at 31 December 2018, the management reviewed the treatment of the asset in respect of investments in the trading system in the light of IAS 38 *Intangible Assets*. The analysis concluded that the asset did not meet the definition of intangible assets. As a result, the accounting policy was changed retrospectively. The asset at PLN 4.2 million was reclassified from intangible assets to other non-current assets. The asset is presented in detail in GPW's separate financial statements for 2018, Note 13.

EQUITY AND LIABILITIES

The **equity** of the Group stood at PLN 890.5 million representing 73% of the Group's total equity and liabilities as at 31 December 2018 compared to PLN 799.5 million or 70% of total equity and liabilities as at 31 December 2017.

Non-controlling interests stood at PLN 0.6 million as at 31 December 2018 and as at 31 December 2017.

Non-current liabilities of the Group stood at PLN 269.3 million representing 22% of the Group's total equity and liabilities as at 31 December 2018 compared to PLN 270.8 million or 24% of total equity and liabilities as at 31 December 2017. The main item of the Group's non-current liabilities as at 31 December 2018 and as at 31 December 2017 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. The non-current liabilities under the bond issue as at 31 December 2016 included liabilities in respect of the series C bonds.

The non-current liabilities as at 31 December 2018 and as at 31 December 2017 included accruals and deferred income of PLN 5.0 million and PLN 5.6 million, respectively, mainly in relation to deferred income under a refund from PSE in the PCR project. The refund is recognised over time under other income (see *Other income* for details). Details of the recognition of the cost refund paid by PSE to TGE are presented in Notes 5 and 21 of the Consolidated Financial Statements of the Giełda Papierów Wartościowych w Warszawie S.A. Group for 2018.

In addition, non-current liabilities include deferred tax liabilities of PLN 7.4 million, employee benefits payable of PLN 1.1 million including retirement benefit provisions of PLN 0.6 million and annual bonus provisions for 2016 – 2017 for the Management Boards under the annual bonus system of the Management Boards of Group companies (i.e., bonus bank and phantom shares: PLN 0.1 million in GPW, PLN 0.2 million in BondSpot, PLN 0.2 million in IRGiT).

Other non-current liabilities include mainly the liability of the parent entity to the Polish National Foundation at PLN 9.6 million as at 31 December 2018 and PLN 10.8 million as at 31 December 2017.

Current liabilities of the Group stood at PLN 57.4 million representing 5% of the Group's total equity and liabilities as at 31 December 2018 compared to PLN 76.8 million or 7% of total equity and liabilities as at 31 December 2017.

The decrease of current liabilities of the Group was mainly driven by a decrease of:

- ✓ trade receivables by PLN 12.7 million,
- ✓ income tax payable by PLN 2.9 million,
- ✓ accruals and deferred income by PLN 6.8 million,
- ✓ other current liabilities by PLN 1.7 million.

As at 31 December 2018 (due to the implementation of IFRS 15 as of 1 January 2018), current liabilities included contract liabilities at PLN 3.6 million (deferred income). Current liabilities in respect of services provided on the financial and commodity markets include annual and quarterly fees paid by market participants. Those were presented in accruals and deferred income as at 31 December 2017. For details of the application of IFRS, see Note 34 to the consolidated financial statements for 2018.

Other current liabilities were the biggest item of current liabilities and stood at PLN 25.3 million as at 31 December 2018 compared to PLN 27.0 million as at 31 December 2017. Other current liabilities at PLN 25.3 million included mainly:

- ♦ liabilities in GPW - VAT payable at PLN 2.2 million, other taxes payable at PLN 1.1 million, contracted investments at PLN 1.8 million, liability to PFN at PLN 1.2 million,
- ♦ liabilities in TGE – VAT payable at PLN 12.5 million, contracted investments at PLN 2.0 million, CIT payments in the Tax Group at PLN 2.9 million.

Table 52 Consolidated statement of financial position of GPW Group at the year's end in 2016 - 2018 (equity and liabilities)

	As at 31 December					
PLN'000	2018	%	2017	%	2016	%
Equity	**890,538**	**73%**	**799,467**	**70%**	**730,592**	**63%**
Share capital	63,865	5%	63,865	6%	63,865	6%
Other reserves	1,267	0%	1,347	0%	1,184	0%
Retained earnings	824,816	68%	733,682	64%	665,018	57%
Non-controlling interests	590	0%	573	0%	525	0%
Non-current liabilities	**269,333**	**22%**	**270,781**	**24%**	**155,436**	**13%**
Liabilities under bond issue	243,961	20%	243,573	21%	123,459	11%
Employee benefits payable	1,147	0%	1,454	0%	1,832	0%
Accruals and deferred income	5,033	0%	5,592	0%	6,200	1%
Deferred income tax liability	7,357	1%	7,108	1%	9,675	1%
Other liabilities	11,835	1%	13,054	1%	14,238	1%
Current liabilities	**57,446**	**5%**	**76,805**	**7%**	**271,820**	**23%**
Liabilities under bond issue	1,938	0%	1,938	0%	122,882	11%
Trade payables *	8,575	1%	21,303	2%	6,387	1%
Employee benefits payable	14,278	1%	12,958	1%	8,114	1%
Finance lease liabilities	-	0%	31	0%	62	0%
Corporate income tax payable	3,158	0%	6,012	1%	16,154	1%
Contract liabilities	3,581	0%	-	0%	-	0%
Accruals and deferred income *	559	0%	7,386	1%	7,144	1%
Provisions for other liabilities and charges	68	0%	210	0%	333	0%
Other current liabilities	25,289	2%	26,967	2%	110,744	10%
Total equity and liabilities	**1,217,317**	**100%**	**1,147,053**	**100%**	**1,157,848**	**100%**

As of January 2018 deffered income is presented separately as contract liabilities

Source: Consolidated Financial Statements, Company

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 2018, 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 11.1 as at 31 December 2018 and 7.2 as at 31 December 2017.

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 around 106 days in 2018 and ca. 68 days in 2017.

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.

The risks inherent in financial instruments held are described in Note 3 to the Consolidated Financial Statements of the Giełda Papierów Wartościowych w Warszawie S.A. Group for the year ended 31 December 2018.

CASH FLOWS

The Group generated positive cash flows from **operating activities** at PLN 136.5 million in 2018 compared to positive cash flows of PLN 159.4 million in 2017.

The cash flows from **investing activities** were negative at PLN 84.2 million in 2018 compared to negative cash flows of PLN 186.6 million in 2017. The decrease of the negative value year on year in 2018 was driven by GPW's proceeds from the sale of interest in Aquis. In 2018, due to changes in the presentation of deposits over 3 months, cash flows include assets purchased during the year, including bank deposits over 3 months, and assets sold, including ended bank deposits over 3 months. Consequently, cash and cash equivalents presented in the cash flows include only cash and cash equivalents with maturities under 3 months.

The cash flows from **financing activities** were negative in 2018 at PLN 99.7 million, mainly due to the dividend paid by GPW at PLN 92.3 million (PLN 90.3 million in 2017) and interest paid on bonds issued by GPW at PLN 7.3 million.

Table 53 Consolidated cash flows of the Group

	Cash flows for the 12-month period ended 31 December	
PLN'000	**2018**	**2017**
Cash flows from operating activities	136,482	159,264
Cash flows from investing activities	(84,170)	(186,629)
Cash flows from financing activities	(99,669)	(99,784)
Net increase / (decrease) in cash	**(47,357)**	**(127,022)**
Impact of change of fx rates on cash balances in foreign currencies	*195*	*241*
Cash and cash equivalents - opening balance	**235,886**	**362,667**
Cash and cash equivalents - closing balance	**188,724**	**235,886**

Source: Consolidated Financial Statements, Company

CAPITAL EXPENDITURE

The Group's total capital expenditure in 2018 amounted to PLN 21.2 million including expenditure for property, plant and equipment at PLN 13.0 million and expenditure for intangible assets at PLN 8.3 million.

The capital expenditure for property, plant and equipment and intangible assets in 2018 included the Group's capital expenditure for IT equipment including servers, server casings, office equipment, as well as GPW's expenditure 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. TGE paid the costs of participation in the development of the European cross-border energy market XBiD.

The Group's total capital expenditure in 2017 amounted to PLN 22.7 million including expenditure for property, plant and equipment at PLN 10.3 million and expenditure for intangible assets at PLN 12.4 million.

The capital expenditure for property, plant and equipment and intangible assets in 2017 included GPW's capital expenditure for maintenance of IT infrastructure: IT equipment including servers, switches, fixed assets preparing GPW to comply with MiFID 2. The capital expenditure for intangible assets included investments in software in GPW: modifications of the AX accounting system, AX budgeting module, WIBIX application, as well as TGE's capital expenditure for intangible assets related to the implementation of the trading system.

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.

Contracted investments in property, plant and equipment were PLN 1,226 thousand as at 31 December 2017, including purchase of CISCO switches in TGE.

Contracted investments in intangible assets were PLN 1,979 thousand as at 31 December 2017 including mainly the trade surveillance system and the purchase of Microsoft licences for the GPW Group

V. 5. Ratio analysis

DEBT AND FINANCING RATIOS OF THE GROUP

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 2017, due to negative net debt (cash exceeds interest-bearing liabilities).

The debt to equity ratio decreased year on year in 2018 due to an increase in equity.

LIQUIDITY RATIOS

The current liquidity ratio was 11.1 as at 31 December 2018 compared to 7.2 as at 31 December 2017. The increase of the ratio was due to a decrease in current liabilities and an increase in current assets. 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 2018 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.

PROFITABILITY RATIOS

The operating profit ratio decreased modestly year on year in 2018 due to a lower operating profit. However, the net profit ratio improved year on year in 2018 due to a much higher net profit of the Group.

Table 54 Key financial indicators of GPW Group

		As at / For the 12-month period ended		
		31 December 2018	31 December 2017	31 December 2016
Debt and financing ratios				
Net debt / EBITDA (for a period of 12 months)	1), 2)	(1.2)	(1.1)	(0.7)
Debt to equity	3)	27.6%	30.7%	33.7%
Liquidity ratios				
Current liquidity	4)	11.1	7.2	2.1
Coverage of interest on bonds	5)	27.7	29.7	22.3
Return ratios				
EBITDA margin	6)	58.2%	61.1%	54.4%
Operating profit margin	7)	49.1%	53.0%	46.1%
Net profit margin	8)	53.0%	45.1%	37.5%
Cost / income	9)	50.1%	47.1%	48.3%
ROE	10)	21.7%	20.7%	16.1%
ROA	11)	15.5%	13.8%	10.4%

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

V. 6. Other information

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 2018. Consequently, no explanations are provided for the differences between the financial results disclosed in the Annual Report and any previously published forecasts.

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 I.1 of this Report.

In 2018, GPW did not make or divest any equity investments in any entities other than related parties.

Equity links of GPW to the companies from outside the Group as at 31 December 2018 include the investment in InfoStrefa S.A. (formerly Instytut Rynku Kapitałowego WSE Research S.A.) at 19.98% and the foreign investments in Bucharest Stock Exchange (BVB) – 0.06% replacing the investment in S.C. Sibex - Sibiu Stock Exchange S.A. as well as INNEX PJSC at 10%.

As at 31 December 2017, GPW held an interest in S.C. SIBEX – Sibiu Stock Exchange S.A. ("SIBEX") with its registered office in Romania since 2010. The company was listed on S.C. SIBEX – Sibiu Stock Exchange S.A. SIBEX merged with the Bucharest Stock Exchange (BVB) at 1 January 2018. Following the merger, GPW holds 5,232 BVB shares at a par value of RON 10 per share. BVB is listed on the Bucharest Stock Exchange. The interest held by GPW was PLN 101 thousand as at 31 December 2018.

In addition to the stake in the above-mentioned companies, as well as in the Group subsidiaries and associates, GPW's major domestic investments as at 31 December 2018 include bank deposits, certificates of deposit, and corporate bonds.

Except for the investment in the Bucharest Stock Exchange (BVB) and INNEX PJSC, GPW has no other foreign investments. All the above investments were financed with own funds of GPW.

Details of the parent entity's investments were disclosed in the Separate Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the years ended 31 December 2018 and 31 December 2017.

Transactions of the Group with related parties are described in the Consolidated Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the years ended 31 December 2018 and 31 December 2017 and in Note 29 to the Separate Financial Statements of Giełda Papierów Wartościowych w Warszawie S.A. for the years ended 31 December 2018 and 31 December 2017.

CREDIT AND LOAN AGREEMENTS SIGNED AND TERMINATED DURING THE FINANCIAL YEAR

The Group signed and terminated no credit and loan agreements.

LOANS GRANTED IN THE FINANCIAL YEAR

Details of loans granted are presented above.

The Group granted no other loans in 2018.

GUARANTIES AND SURETIES GRANTED AND ACCEPTED DURING THE FINANCIAL YEAR

The subsidiary TGE held a bank guarantee at EUR 7.8 million, issued by a bank in favour of NordPool in respect of payments between TGE SA and Nord Pool in Market Coupling, valid from 1 July 2017 to 30 June 2018. In June 2018, a new agreement was signed, granting TGE a bank guarantee in favour of NordPool at PLN 3.6 million valid from 1 July 2018 to 30 June 2019 and another guarantee at EUR 3.6 million valid from 1 December 2018 to 30 April 2019.

InfoEngine holds a surety issued by TGE in favour of PSE to secure the settlement of a transmission contract between InfoEngine and PSE. The surety was issued on 5 July 2017 and annexed for extension in February 2018.

The Company granted and accepted no other guarantees and sureties in 2018.

MATERIAL TRANSACTIONS OF THE ISSUER AND SUBSIDIARIES WITH RELATED PARTIES ON TERMS OTHER THAN AT ARM'S LENGTH IN THE FINANCIAL YEAR

In 2018, 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 29 to the Consolidated Financial Statements.

CONTINGENT LIABILITIES AND ASSETS

The Group had no contingent liabilities or contingent assets as at 31 December 2018.

EVENTS AFTER THE BALANCE-SHEET DATE WHICH COULD SIGNIFICANTLY IMPACT THE FUTURE FINANCIAL RESULTS OF THE ISSUER

PSE's surety for InfoEngine

On 25 January 2018, the surety issued by TGE for InfoEngine in favour of PSE was annexed to extend its term and increase the amount from PLN 1 million to PLN 2 million.

Start of work on the Food Platform project

On 29 January 2018, a consortium comprised of Giełda Papierów Wartościowych, Towarowa Giełda Energii and Izba Rozliczeniowa Giełd Towarowych signed an agreement concerning the Food Platform project with Krajowy Ośrodek Wsparcia Rolnictwa (National Centre for Agricultural Support, KOWR). The Food Platform is a project covered by the government's Strategy for Responsible Development. The objective of the project is to launch an electronic trading platform for agricultural commodities.

Establishment of the subsidiary GPW Ventures ASI S.A.

The company GPW Ventures ASI S.A. was established on 13 February 2019. GPW S.A. is its sole founder and holds 100% of shares, i.e., 3,000,000 shares with a par value and issue value of PLN 1 per share. According to the articles of the company, the core business of GPW Ventures ASI S.A. is to collect assets from multiple investors and invest them in their interest according to the investment policy and to manage an alternative investment vehicle, including the introduction of the alternative investment vehicle to trading.

There were no other events after the balance-sheet date which could significantly impact the future financial results of the issuer.

VI FINANCIAL POSITION AND ASSETS OF GPW

VI. 1. Summary of results

GPW S.A. generated revenues of PLN 190.9 million in 2018, a decrease of 6.2% or PLN 12.6 million compared to 2017. Operating expenses stood at PLN 113.0 million in 2018, representing an increase of 2.8% or PLN 3.1 million compared to 2017. GPW S.A.'s EBITDA[27] was PLN 95.3 million in 2018, a decrease of 14.7% or PLN 16.4 million compared to PLN 111.8 million in 2017.

The Company generated a separate operating profit of PLN 75.1 million in 2018 compared to PLN 92.3 million in 2017, a decrease of 18.7% or PLN 17.2 million year on year.

The decrease of the operating profit year on year in 2018 was mainly a result of lower revenue (by PLN 12.6 million) combined with higher operating expenses (by PLN 3.1 million). The Company's revenue decreased mainly due to lower revenue from trading in equities and equity-related instruments (by PLN 15.5 million). Operating expenses increased mainly due to higher fees and charges, including an increase of the fees paid to PFSA for supervision in 2018 (by PLN 3.8 million). Salaries and other employee costs increased by PLN 4.0 million.

GPW S.A.'s net profit was PLN 151.9 million in 2018 compared to PLN 71.1 million in 2017, an increase of 112% or PLN 80.2 million. The increase of the net profit year on year in 2018 was due a higher balance of financial income and expenses. In 2018, GPW received PLN 69.3 million in dividends from the subsidiary TGE and reported gains on the sale of the associate Aquis at PLN 32.2 million. In 2017, Towarowa Giełda Energii paid no dividend as it was required to repay a bank loan taken to pay outstanding VAT liabilities following changes of the tax policy on certain services provided by the Company and the required adjustment of VAT for the years 2011-2016. Hence, the net financial income was much lower.

Detailed information on changes in revenues and expenses is presented in the sections below.

[27] GPW S.A.'s operating profit before depreciation and amortisation

Table 55 Separate profit and loss account of GPW S.A. by quarter in 2017 and 2018 and by year in 2016 – 2018

	2018				2017				2018	2017	2016
PLN'000	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1			
Sales revenue	**47,915**	**47,519**	**46,570**	**48,876**	**51,301**	**47,690**	**50,900**	**53,552**	**190,880**	**203,443**	**175,454**
Financial market	**45,234**	**44,725**	**44,537**	**46,654**	**48,893**	**45,655**	**49,359**	**52,322**	**181,150**	**196,229**	**172,899**
Trading	27,859	28,359	27,806	30,253	31,910	29,037	33,059	35,743	114,277	129,749	109,328
Listing	5,496	5,212	5,632	5,660	5,998	6,022	5,865	6,142	22,000	24,027	23,167
Information services	11,879	11,154	11,099	10,741	10,985	10,596	10,435	10,437	44,873	42,453	40,404
Commodity market	**115**	**103**	**105**	**100**	**90**	**87**	**86**	**85**	**423**	**348**	**327**
Information services	115	103	105	100	90	87	86	85	423	348	327
Other revenue	**2,566**	**2,691**	**1,928**	**2,122**	**2,318**	**1,948**	**1,455**	**1,145**	**9,307**	**6,866**	**2,228**
Operating expenses	**28,126**	**28,479**	**26,454**	**29,948**	**34,014**	**21,871**	**24,557**	**29,474**	**113,007**	**109,916**	**100,070**
Depreciation and amortisation	5,067	5,027	5,165	4,998	4,876	4,884	4,998	4,714	20,257	19,472	19,340
Salaries	8,702	7,571	7,721	8,038	8,151	7,228	6,665	7,347	32,032	29,391	29,089
Other employee costs	2,240	2,275	2,273	2,514	2,123	1,859	1,942	2,044	9,302	7,968	7,281
Rent and maintenance fees	2,292	2,240	1,938	1,829	1,879	1,874	1,934	1,785	8,299	7,472	6,347
Fees and charges	30	2,289	181	4,987	176	(2,933)	175	6,447	7,487	3,865	6,212
incl.: PFSA fees	*1*	*2,056*	*1*	*4,805*	*(1)*	*(3,160)*	*-*	*6,260*	*6,863*	*3,099*	*5,460*
External service charges	8,543	8,056	8,088	6,470	15,697	8,092	7,805	6,190	31,157	37,783	28,055
Other operating expenses	1,252	1,021	1,088	1,112	1,113	867	1,038	947	4,473	3,965	3,746
Other income	284	128	94	609	122	317	303	198	1,115	940	680
Impairment losses *	1,160	(292)	391	1,036	497	-	-	-	2,295	497	-
Other expenses	790	362	91	390	(139)	469	894	462	1,633	1,686	18,990
Operating profit	**18,123**	**19,098**	**19,728**	**18,111**	**17,051**	**25,668**	**25,752**	**23,814**	**75,060**	**92,284**	**57,074**
Financial income	1,337	1,079	103,762	1,136	847	893	2,353	949	107,314	5,042	66,354
Financial expenses	2,288	1,947	3,834	2,043	2,246	1,933	1,921	2,771	10,112	8,871	8,073
Profit before income tax	**17,172**	**18,230**	**119,656**	**17,204**	**15,652**	**24,628**	**26,184**	**21,992**	**172,262**	**88,455**	**115,355**
Income tax expense	3,453	3,581	9,940	3,359	3,059	4,751	4,718	4,248	20,333	16,776	13,930
Profit for the period	**13,719**	**14,649**	**109,716**	**13,845**	**12,593**	**19,877**	**21,466**	**17,744**	**151,929**	**71,679**	**101,425**

** As of 1 January 2018, on the application of IFRS 9, the Group reports a line of impairment losses of receivables while comparative data have not been restated (exception under 7.2.15 of IFRS 9).*

Source: Consolidated Financial Statements, Company

Table 56 Separate statement of financial position of GPW S.A. by quarter in 2016 - 2018

	2018				2017				2016
PLN'000	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Non-current assets	**426,635**	**426,560**	**429,365**	**432,853**	**462,760**	**464,296**	**466,977**	**470,706**	**472,942**
Property, plant and equipment	96,362	94,868	95,510	94,359	96,269	96,672	97,470	99,650	101,034
Intangible assets	56,439	57,474	59,795	62,271	64,741	65,585	67,222	69,757	71,696
Investment in joint arrangements and associates	13,825	11,652	11,652	11,652	36,959	36,959	36,959	36,959	36,959
Investment in subsidiaries	250,885	253,058	253,058	254,985	254,985	254,985	254,985	254,985	254,985
Available-for-sale financial assets	-	-	-	-	271	280	278	278	288
Financial assets measured at fair value through other comprehensive income	101	200	204	197	-	-	-	-	-
Prepayments	4,801	5,086	4,924	5,167	5,313	5,593	5,841	4,855	3,758
Other non-current assets	4,222	4,222	4,222	4,222	4,222	4,222	4,222	4,222	4,222
Current assets	**358,619**	**348,867**	**443,934**	**332,097**	**275,535**	**259,360**	**337,304**	**326,360**	**291,788**
Inventories	64	64	60	54	56	54	53	59	58
Receivables in respect of corporate income tax	-	-	-	-	-	-	-	3,355	-
Trade and other receivables	25,483	28,585	99,723	39,223	26,272	33,964	38,198	36,475	23,941
Contract assets	1,015	1,946	1,818	-	-	-	-	-	-
Financial assets held for sale	-	-	-	25,307	-	-	-	-	-
Financial assets measured at amortised cost	310,090	296,530	303,331	149,731	-	-	-	-	-
Other financial assets	-	-	-	-	196,461	160,239	72,484	142,506	72,108
Cash and cash equivalents	21,967	21,742	39,002	117,782	52,746	65,103	226,569	143,965	195,681
Total assets	**785,254**	**775,427**	**873,299**	**764,950**	**738,295**	**723,656**	**804,281**	**797,066**	**764,730**
Equity	**498,237**	**484,535**	**469,887**	**452,508**	**438,873**	**426,290**	**406,413**	**475,186**	**457,442**
Share capital	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865	63,865
Other reserves	(142)	(125)	(125)	(125)	(125)	(114)	(114)	(114)	(114)
Retained earnings	434,514	420,795	406,147	388,768	375,133	362,539	342,662	411,435	393,691
Non-current liabilities	**263,237**	**262,430**	**260,006**	**258,842**	**264,574**	**264,553**	**262,846**	**262,487**	**148,808**
Liabilities on bonds issue	243,961	243,864	243,767	243,670	243,573	243,475	243,378	243,281	123,459
Employee benefits payable	595	560	669	884	883	837	1,296	1,799	1,435
Deferred income tax liability	6,846	6,241	3,875	2,662	7,064	7,266	5,276	4,588	9,676
Other liabilities	11,835	11,765	11,695	11,626	13,054	12,975	12,896	12,819	14,238
Current liabilities	**23,780**	**28,462**	**143,406**	**53,600**	**34,848**	**32,813**	**135,022**	**59,393**	**158,480**
Liabilities on bonds issue	1,938	2,099	1,899	2,070	1,938	2,100	1,895	2,069	122,882
Trade payables	4,498	4,689	9,766	11,137	11,954	4,040	2,727	3,752	4,297
Employee benefits payable	9,095	6,934	6,722	5,281	8,481	6,779	4,895	3,560	6,490
Corporate income tax payable	1,373	422	7,779	1,047	5,685	4,226	6,822	12,282	14,445
Contract liabilities	11	8,650	17,209	25,771	-	-	-	-	-
Accruals and deferred income *	-	-	-	-	21	9,972	23,903	31,687	1,712
Provisions for other liabilities and charges	68	68	68	68	211	190	317	317	317
Other current liabilities	6,797	5,600	99,963	8,226	6,558	5,506	94,463	5,726	8,337
Total equity and liabilities	**785,254**	**775,427**	**873,299**	**764,950**	**738,295**	**723,656**	**804,281**	**797,066**	**764,730**

** As of 2018, deferred income is presented under contract liabilities*

Source: Consolidated Financial Statements, Company

VI. 2. Presentation of the financials

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 office space lease and sponsorship, as well as services provided to GPW Group companies.

The Company's sales revenues amounted to PLN 190.9 million in 2018, a decrease of 6.2% (PLN 12.6 million) year on year. 95% of the revenue was generated by the financial market (96% in 2017), a small fraction by information services on the commodity market, and close to 5% by other revenue (3% in 2017).

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 57 Separate revenues of GPW S.A. and revenue structure in 2016 - 2018

PLN'000	Year ended 31 December 2018	%	2017	%	2016	%	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
Financial market	**181,150**	**95%**	**196,229**	**96%**	**172,899**	**99%**	**(15,079)**	**-7.7%**
Trading	114,277	60%	129,749	64%	109,328	62%	(15,472)	-11.9%
Equities and equity-related instruments	94,082	49%	109,564	54%	89,520	51%	(15,482)	-14.1%
Derivative instruments	12,068	6%	11,888	6%	12,202	7%	180	1.5%
Other fees paid by market participants	7,398	4%	7,498	4%	6,835	4%	(100)	-1.3%
Debt instruments	349	0%	371	0%	361	0%	(22)	-5.9%
Other cash instruments	380	0%	428	0%	410	0%	(48)	-11.2%
Listing	22,000	12%	24,027	12%	23,167	13%	(2,027)	-8.4%
Listing fees	19,305	10%	19,570	10%	19,508	11%	(265)	-1.4%
Introduction fees, other fees	2,695	1%	4,457	2%	3,659	2%	(1,762)	-39.5%
Information service	44,873	24%	42,453	21%	40,404	23%	2,420	5.7%
Real-time information	41,224	22%	39,412	19%	37,743	22%	1,812	4.6%
Historical and statistical information and indices	3,649	2%	3,041	1%	2,661	2%	608	20.0%
Commodity market	**423**	**0%**	**348**	**0%**	**327**	**0%**	**75**	**21.6%**
Information services	423	0%	348	0%	327	0%	75	21.6%
Other revenue	**9,307**	**5%**	**6,866**	**3%**	**2,228**	**1%**	**2,441**	**35.6%**
Total	**190,880**	**100%**	**203,443**	**100%**	**175,454**	**100%**	**(12,563)**	**-6.2%**

Source: Consolidated Financial Statements, Company

The Company earns revenue both from domestic and foreign clients. The table below presents revenue by geographic segment.

Table 58 Separate revenues of GPW S.A. by geographical segment in 2016 – 2018

PLN'000	Year ended 31 December 2018	%	2017	%	2016	%	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
Revenue from foreign customers	84,816	44%	75,610	37%	63,887	36%	9,206	12.2%
Revenue from local customers	106,064	56%	127,833	63%	111,567	64%	(21,769)	-17.0%
Total	**190,880**	**100%**	**203,443**	**100%**	**175,454**	**100%**	**(12,563)**	**-6.2%**

Source: Consolidated Financial Statements, Company

The average EUR/PLN exchange rate was 4.26 EUR/PLN in 2018, 4.26 EUR/PLN in 2017, and 4.36 EUR/PLN in 2016.

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 114.3 million in the year ended 31 December 2018 compared to PLN 129.7 million in 2017, a decrease of 11.9% or PLN 15.5 million.

The share of trading revenue in the total revenue on the financial market was 60% in 2018 compared to 64% in 2017. The biggest share in trading revenue (92.3%) is that of the revenue on the Main Market, which stood at PLN 105.5 million in 2018. 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 V.2.

Debt instruments

Revenues of the Company from transactions in **debt instruments** stood at PLN 0.35 million in 2018, a decrease of 5.9% year on year (PLN 0.37 million in 2017).

The revenue of the Company from transactions in debt instruments is generated by the Catalyst market.

Table 59 Data for the debt instruments market

	Year ended 31 December			Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017	2016		
Financial market, trading revenue: debt instruments *(PLN million)*	**0.35**	**0.37**	**0.36**	**(0.02)**	**-5.9%**
Catalyst:					
Value of trading *(PLN billion)*	2.25	2.33	2.37	(0.08)	-3.3%
incl.: Value of trading in non-Treasury instruments (PLN billion)	1.67	1.45	1.39	0.22	15.3%

Source: Company

Other cash market instruments

Revenue from:

- ✓ trading in other cash market instruments,

is presented in section V.2.

LISTING

Listing revenues of the Company on the financial market amounted to PLN 22.0 million in 2018 compared to PLN 24.0 million in 2017.

Revenues from **listing fees** amounted to PLN 19.3 million in 2018 compared to PLN 19.6 million in 2017. 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.

Revenues from **fees for introduction and other fees** amounted to PLN 2.7 million in 2018 compared to PLN 4.5 million in 2017. The revenues are driven mainly by the number and value of new listings of shares and bonds on the GPW markets. The value of IPOs and SPOs decreased year on year in 2018.

Listing revenues on the GPW Main Market and NewConnect is presented in section V.2.

Listing revenues from Catalyst decreased by 10.9% year on year in 2018. The decrease resulted from a decrease in the number of listed instruments: 556 at the end of 2018 compared to 573 at the end of

2017, as well as a decrease in the value of issued instruments, in particular non-Treasury instruments by 7.9%. The table below presents the key financial and operating figures.

Table 60 Data for Catalyst

	Year ended 31 December 2018	2017	2016	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
Catalyst					
Listing revenue *(PLN million)*	**1.5**	**1.7**	**1.3**	**-0.2**	**-10.9%**
Number of issuers	142	148	152	(6)	-4.1%
Number of issued instruments	556	573	505	-17	-3.0%
including: non-Treasury instruments	508	531	464	-23	-4.3%
Value of issued instruments *(PLN billion)*	770.8	743.0	690.0	27.8	3.7%
including: non-Treasury instruments	80.2	87.1	64.4	(6.8)	-7.9%

Source: Company

INFORMATION SERVICES

Revenues from information services on the financial market and the commodity market amounted to PLN 45.3 million in 2018 compared to PLN 42.8 million in 2017.

Table 61 Data for information services

PLN'000	Year ended 31 December 2018	2017	2016	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
Revenues from information services and WIBID and WIBOR reference rate services * (PLN million)	**45.3**	**42.8**	**40.7**	**2.5**	**5.8%**
Number of data vendors	78	52	51	26	50.0%
Number of subscribers *('000 subscribers)*	248.1	244.8	224.6	3.3	1.3%

Source: Company

Revenue from:

- ✓ information services,

is presented in section V.2.

OTHER REVENUES

The Company's other revenues amounted to PLN 9.3 million in 2018 compared to PLN 6.9 million in 2017. The Company's other revenues include revenues from educational and PR services, office space lease, services provided to GPW Group companies, colocation services, and sponsorship. The biggest revenue item in 2018 was the revenue from office space lease and colocation (PLN 4.9 million vs. PLN 2.9 million in 2017). The second largest revenue item was the revenue from services provided to GPW subsidiaries (PLN 3.7 million compared to PLN 3.2 million in 2017). These include financial, accounting, HR, office, marketing and administrative services. The other revenue was earned from sponsorship (PLN 0.4 million).

OPERATING EXPENSES

Total operating expenses stood at PLN 113.0 million in 2018, representing an increase of 2.8% (PLN 3.1 million) year on year. The cost/income ratio increased to 59.2% in 2018 from 54.0% in 2017. The increase of operating expenses in 2018 was mainly driven by an increase of the fee paid to PFSA for supervision as well as an increase of salaries and other employee costs.

Table 62 Separate operating expenses of GPW S.A. and structure of operating expenses in 2016 - 2018

PLN'000, %	Year ended 31 December						Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	%	2017	%	2016	%		
Depreciation and amortisation	20,257	18%	19,472	18%	19,340	19%	785	4.0%
Salaries	32,032	28%	29,391	27%	29,089	29%	2,641	9.0%
Other employee costs	9,302	8%	7,968	7%	7,281	7%	1,334	16.7%
Rent and other maintenance fees	8,299	7%	7,472	7%	6,347	6%	827	11.1%
Fees and charges	7,487	7%	3,865	4%	6,212	6%	3,622	93.7%
including PFSA fees	*6,863*	*6%*	*3,099*	*3%*	*5,460*	*5%*	*3,764*	*121.5%*
External service charges	31,157	28%	37,783	34%	28,055	28%	(6,626)	-17.5%
Other operating expenses	4,473	4%	3,965	4%	3,746	4%	508	12.8%
Total	**113,007**	**100%**	**109,916**	**100%**	**100,070**	**100%**	**3,091**	**2.8%**

Source: Consolidated 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 20.3 million in 2018, representing an increase of 4.0% (PLN 0.8 million) compared to PLN 19.5 million in 2017. The increase of depreciation and amortisation charges year on year was due to the purchase of property, plant and equipment including servers in H2 2017, whose depreciation was charged throughout 2018, as well as investments in 2018.

Salaries and other employee costs

Salaries and other employee costs amounted to PLN 41.3 million in 2018, representing an increase of 10.6% (PLN 4.0 million) compared to PLN 37.4 million in 2017.

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 204 FTEs as at 31 December 2018 compared to 189 FTEs as at 31 December 2017. The increase of the headcount of the Company year on year in 2018 was a result of the recovery of some human resources reduced in the workforce restructuring in 2016 as well as the human resources required in the implementation of the strategy.

Table 63 Employment in GPW S.A.

# FTEs	As at 31 December		
	2018	2017	2016
GPW	204	189	185
Total	**204**	**189**	**185**

Source: Company

Rent and other maintenance fees

Rent and other maintenance fees amounted to PLN 8.3 million in 2018 compared to PLN 7.5 million in 2017, representing an increase of 11.1% year in year. The increase of rent in 2018 was driven by additional space leased by GPW for its subsidiaries. The cost of additional space leased by GPW is reinvoiced to the subsidiaries as shown in *Other income*.

Fees and charges

Fees and charges stood at PLN 7.5 million in 2018, an increase of 93.7% (PLN 3.6 million) year on year. The main component of fees and charges of the Company are fees paid to the Polish Financial Supervision Authority, which 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 6.9 million in 2018 as compared to PLN 3.1 million paid in 2017. The cost of fees paid to PFSA in 2018 increased by 121.5% year on year. The amount of the supervision fee is beyond the Company's control.

External service charges

External service charges amounted to PLN 31.2 million in 2018 compared to PLN 37.8 million in 2017.

Table 64 Separate external service charges of GPW S.A. and structure of external service charges in 2016 - 2018

PLN'000, %	Year ended 31 December						Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	%	2017	%	2016	%		
IT cost:	13,794	44%	23,722	63%	15,668	56%	(9,928)	-41.9%
IT infrastructure maintenance	9,521	*31%*	10,018	*27%*	9,331	*33%*	*(497)*	*-5.0%*
Data transmission lines	4,178	*13%*	4,218	*11%*	4,508	*16%*	*(40)*	*-0.9%*
Software modification	95	*0%*	9,486	*25%*	1,829	*7%*	*(9,391)*	*-99.0%*
Office and office equipment maintenance:	3,025	10%	2,768	7%	2,244	8%	257	9.3%
Repair and maintenance of installations	951	*3%*	870	*2%*	863	*3%*	*81*	*9.3%*
Security	1,325	*4%*	1,181	*3%*	735	*3%*	*144*	*12.2%*
Cleaning	502	*2%*	449	*1%*	370	*1%*	*53*	*11.8%*
Phone and mobile phone services	247	*1%*	268	*1%*	276	*1%*	*(21)*	*-7.8%*
Leasing, rental and maintenance of vehicles	204	1%	159	0%	135	0%	45	28.0%
Transportation services	95	0%	91	0%	81	0%	4	4.4%
Promotion, education, market development	4,039	13%	3,804	10%	4,381	16%	235	6.2%
Market liquidity support	910	3%	521	1%	564	2%	389	74.8%
Advisory (including: audit, legal services, business consulting)	4,806	15%	2,918	8%	2,301	8%	1,888	64.7%
Information services	2,977	10%	2,212	6%	1,348	5%	765	34.6%
Training	516	2%	621	2%	540	2%	(105)	-16.9%
Mail fees	35	0%	40	0%	44	0%	(5)	-12.5%
Bank fees	60	0%	42	0%	48	0%	18	42.9%
Translation	289	1%	318	1%	177	1%	(29)	-9.1%
Other	407	1%	567	2%	524	2%	(160)	-28.2%
Total	**31,157**	**100%**	**37,783**	**100%**	**28,055**	**100%**	**(6,626)**	**-17.5%**

Source: Consolidated Financial Statements, Company

The decrease of external service charges by PLN 6.6 million year on year in 2018 was mainly driven by a decrease of the cost of software modifications by PLN 9.4 million to PLN 0.1 million in 2018 compared to PLN 9.5 million in 2017. In 2017, the cost was due to modifications of the trading system UTP in line with the MiFID 2 requirements. In addition, the following costs also decreased:

- IT infrastructure maintenance – down by PLN 0.5 million,
- training – down by PLN 0.1 million,
- other – down by PLN 0.2 million.

The following costs increased:

- promotion, education and market development – up by PLN 0.2 million,
- market liquidity support – up by PLN 0.4 million,
- advisory – up by PLN 1.9 million,
- information services – up by PLN 0.8 million.

According to § 18 (2) (1) of the GPW Articles of Association and Article 17 (6) of the Act on Management of State Property, below is the **report of representation expenses and expenses for legal services, marketing services, public relations services, social communications services and management advisory services**.
The cost of representation, legal services, marketing, public relations, social communications and advisory, including management consulting, stood at PLN 8.8 million in 2018 compared to PLN 6.7 million in 2017.

Table 65 Promotion and advisory cost

PLN'000, %	Year ended 31 December		Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017		
Promotion, education, market development	4,039	3,804	235	6.2%
Advisory (including: audit, legal services, business consulting)	4,806	2,918	1,888	64.7%
Total	**8,845**	**6,722**	**2,123**	**31.6%**

Source: Company

The cost of promotion, education and market development, including the cost of marketing services, public relations services and social communications, was PLN 4.0 million in 2018 compared to PLN 3.8 million in 2017. The cost of promotion, education and market development in 2018 is presented in the table below.

Table 66 Promotion, education and market development cost in 2018 - 2017

PLN'000, %	Year ended 31 December		Change (2018 vs 2017)	Change (%) (2018 vs 2017)
	2018	2017		
Financial and material sponsorship	885	284	600	211.3%
Promotion and business development	1,141	640	501	78.3%
Partnership in conferences	952	1,141	(189)	-16.6%
Catering services	289	355	(66)	-18.6%
Media monitoring	70	46	24	52.9%
Public relations services	245	644	(399)	-61.9%
Advertising on radio, TV and press	302	539	(237)	-43.9%
Organization of conferences and trainings	154	155	(1)	-0.6%
Total	**4,039**	**3,804**	**235**	**6.2%**

Source: Company

The Company's cost of representation includes mainly the cost of catering (shown in external service charges), which stood at PLN 289.0 thousand in 2018 compared to PLN 355.0 thousand in 2017, as well as the cost of promotional merchandise (shown in other operating expenses) at PLN 184.7 thousand in 2018 compared to PLN 153.3 thousand in 2017.

Advisory cost stood at PLN 4.8 million in 2018 compared to PLN 2.9 million in 2017, an increase of 64.7%. Advisory cost in 2018 is presented in the table below.

Table 67 Advisory cost

PLN'000, %	Year ended 31 December 2018	2017	Change (2018 vs 2017)	Change (%) (2018 vs 2017)
Legal services	1,036	554	482	87.0%
Tax advisory	374	383	(9)	-2.4%
Other advisory, including business and management	2,921	1,580	1,341	84.8%
Tax and accounting audits	475	400	75	18.7%
Total	**4,806**	**2,918**	**1,888**	**64.7%**

Other advisory at PLN 2.9 million included mainly business and management consulting, including advisory in the sale of Aquis, support in the Group's strategy development and update, and the representative office in London.

Other operating expenses

Other operating expenses increased by 12.8% or PLN 0.5 million year on year in 2018. Other operating expenses amounted to PLN 4.5 million, including the cost of material and energy consumption at PLN 2.4 million, industry organisation membership fees at PLN 0.4 million, non-life insurance at PLN 0.3 million, perpetual usufruct write-downs at PLN 0.1 million, business travel at PLN 0.9 million, conference participation at PLN 0.2 million, and other costs at PLN 0.2 million.

OTHER INCOME AND EXPENSES

Other income of GPW S.A. stood at PLN 1.1 million in 2018 compared to PLN 0.9 million in 2017. Other income in 2018 included mainly gains on the sale of property, plant and equipment at PLN 0.4 million, medical services reinvoiced to employees at PLN 0.3 million, the annual correction of input VAT at PLN 0.4 million, and other income at PLN 0.1 million, mainly including the surplus of income over expenses from 2017.

Other expenses of GPW S.A. decreased to PLN 1.6 million in 2018 compared to PLN 1.7 million in 2017 mainly due to lower donations paid and lower reinvoiced costs. In 2017, costs were invoiced by subsidiaries in respect of the upgrade and refurbishment of office space and advisory services in the WIBOR project.

Donations paid in 2018 were PLN 478 thousand, representing a decrease compared to PLN 579 thousand in 2017.

GPW paid donations in 2018 at PLN 461 thousand to the GPW Foundation, PLN 10.3 thousand to the Foundation of the University of Warsaw, PLN 1 thousand to Caritas, and PLN 5.5 thousand to Europejska Fundacja na rzecz osób Potrzebujących. In 2017, GPW paid donations at PLN 140 thousand to the Archdiocese of Warsaw, PLN 414 thousand to the GPW Foundation, and PLN 25 thousand to the Wolność i Demokracja Foundation.

GPW paid a donation of PLN 1.5 million in 2018 and PLN 3.0 million in 2017 to the Polish National Foundation (PFN). The accounting treatment of the donation to PFN was modified in 2018, as presented in the consolidated financial report under Other income and expenses.

As of 1 January 2018, following alignment with IFRS 9, the Group recognises a separate profit and loss account line: impairment losses on receivables. Impairment losses on receivables are measured on the basis of expected credit loss in the lifetime of debt; the detailed description of the valuation of expected credit loss is presented in the separate financial statements for 2018. The expected credit loss charged to the Company's results was PLN 2.3 million in 2018, compared to PLN 0.5 million in 2017.

FINANCIAL INCOME AND EXPENSES

Financial income of the Company stood at PLN 107.3 million in 2018 compared to PLN 5.0 million in 2017. Financial income includes mainly dividends paid by subsidiaries and associates, interest on bank deposits, positive FX differences, and gains on sale of interest.

Wysokość przychodów finansowych w 2018 roku wynika z otrzymania dywidend w wysokości 69,7 mln zł oraz ze sprzedaży przez GPW udziałów w spółce stowarzyszonej Aquis.

Dividends received by GPW stood at PLN 69.7 million in 2018, including PLN 69.3 million in dividends from the subsidiary TGE and PLN 0.4 million from Centrum Giełdowe. Dividends received in 2017 were PLN 1.3 million. The difference was due to the fact that the subsidiary TGE paid no dividend for 2016 in 2017. The subsidiary paid no dividend as it was required to repay the bank loan taken in Q1 2017 to pay outstanding VAT liabilities.

On 8 June 2018, in connection with an IPO, shares of the associate Aquis Exchange Limited were allocated. GPW held 20.31% of votes and economic rights. As a result, GPW sold Aquis shares at GBP 2.69 per share on 14 June 2018. The value of the sale of GPW's interest in Aquis was GBP 12,396,327 gross. The sale of the interest is shown in GPW's accounts at the FX rate of GBP/PLN 4.8582. The financial income on the transaction recognised in the separate accounts was PLN 32.2 million.

Income from interest on bank deposits and current accounts was PLN 3.0 million in 2018 compared to PLN 3.6 million in 2017. GPW earned financial income on certificates of deposit and corporate bonds at PLN 1.6 million in 2018.

Financial expenses of the Company stood at PLN 10.1 million in 2018 compared to PLN 8.9 million in 2017. The higher financial expenses in 2018 were mainly driven by a loss of PLN 2.1 million on reduction of the interest in Polska Agencja Ratingowa (formerly: IAiR) as well as interest on tax payable at PLN 0.3 million.

The largest item of the Company's financial expenses is the interest cost under outstanding bonds. Interest cost of bonds (including the cost of the issue recognised over time) stood at PLN 7.7 million in 2018, slightly more compared to PLN 7.6 million in 2017. The cost in 2018 was based on interest on series D and E bonds at 2.76% in H1 and 2.73% in H2 2018. In 2017, the interest cost was based on interest on series D and E bonds at 2.76%, fixed throughout the year, and interest on series C bonds at 3.19%. Interest on series D and E bonds in 2018 was modestly lower but the interest periods in 2018 were longer.

INCOME TAX

Income tax of the Company was PLN 20.3 million in 2018 and PLN 16.8 million in 2017. The **effective income tax rate** was 11.8% in 2018 and 19.0% in 2017 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 2018 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 dividends of PLN 69.7 million in 2018, including PLN 69.3 million from TGE and PLN 0.4 million from Centrum Giełdowe. GPW received no dividend from the subsidiary TGE in 2017 and so the effective tax rate in 2017 is close to the statutory corporate income tax rate in Poland.

Income tax paid by GPW was PLN 35.7 million in 2018 compared to PLN 39.6 million in 2017.

VI. 3. Atypical factors and events

Atypical factors and events are presented in section V.3

VI. 4. Company's assets and liabilities structure

The total assets of the Company were PLN 784.9 million as at 31 December 2018, an increase of 6.3% (PLN 46.6 million) compared to PLN 738.3 million as at 31 December 2017.

ASSETS

Total assets

PLN 785.3 m

Non-current assets

PLN 426.6 m

Current assets

PLN 358.6 m

The Company's **non-current assets** stood at PLN 426.6 million representing 54% of total assets as at 31 December 2018 compared to PLN 462.8 million or 63% of total assets as at 31 December 2017. The decrease of non-current assets was mainly driven by a decrease of the value of property, plant and equipment as a result of depreciation as well as a decrease of the share of profit of associates following the sale of Aquis.

The Company's **current assets** stood at PLN 358.6 million representing 46% of total assets as at 31 December 2018 compared to PLN 275.5 million or 37% of total assets as at 31 December 2017. The increase of current assets in 2018 was driven by an increase of cash flows from operating and investing activities. Cash flows include 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 2018.

Trade and other receivables stood at PLN 25.5 million as at 31 December 2018, a decrease compared to PLN 26.3 million as at 31 December 2017.

Table 68 Separate statement of financial position of GPW S.A. at the year's end in 2016 - 2018 (assets)

	As at 31 December					
PLN'000	2018	%	2017	%	2016	%
Non-current assets	**426,635**	**54%**	**462,760**	**63%**	**472,942**	**62%**
Property, plant and equipment	96,362	12%	96,269	13%	101,034	13%
Intangible assets	56,439	7%	64,741	9%	71,696	9%
Investment in joint arrangements and associates	13,825	2%	36,959	5%	36,959	5%
Investment in subsidiaries	250,885	32%	254,985	35%	254,985	33%
Available-for-sale financial assets	-	0%	271	0%	288	0%
Financial assets measured at fair value through other comprehensive income	101	0%	-	0%	-	0%
Prepayments	4,801	1%	5,313	1%	3,758	0%
Other non-current assets	4,222	1%	4,222	1%	4,222	1%
Current assets	**358,619**	**46%**	**275,535**	**37%**	**291,788**	**38%**
Inventories	64	0%	56	0%	58	0%
Trade and other receivables	25,483	3%	26,272	4%	23,941	3%
Contract assets	1,015	0%	-	0%	-	0%
Financial assets measured at amortised cost	310,090	39%	-	0%	-	0%
Other financial assets	-	0%	196,461	27%	72,108	9%
Cash and cash equivalents	21,967	3%	52,746	7%	195,681	26%
Total assets	**785,254**	**100%**	**738,295**	**100%**	**764,730**	**100%**

Source: Consolidated Financial Statements, Company

EQUITY AND LIABILITIES

Equity
PLN 498.2 m

Non-current liabilities
PLN 263.2 m

Current liabilities
PLN 23.8 m

The **equity** of the Company stood at PLN 498.2 million representing 63% of the total equity and liabilities as at 31 December 2018 compared to PLN 438.9 million or 59% of total equity and liabilities as at 31 December 2017.

Non-current liabilities of the Company stood at PLN 263.2 million representing 34% of the Group's total equity and liabilities as at 31 December 2018 compared to PLN 264.6 million or 36% of total equity and liabilities as at 31 December 2017. Non-current liabilities in respect of outstanding bonds remained stable year on year as at 31 December 2018. Non-current liabilities of GPW include outstanding series D and E bonds maturing in 2022 and series C bonds also maturing in 2022.

The biggest year-on-year decrease in non-current liabilities was reported in other non-current liabilities, which stood at PLN 11.8 million as at 31 December 2018 compared to PLN 13.1 million as at 31 December 2017.

The main item of other non-current liabilities (PLN 9.6 million) is the non-current liability to the Polish National Foundation (PFN) as per the new accounting treatment of the Company's liability to PFN. The change of the accounting treatment of the annual donation is presented in the consolidated section of the report under Other income and expenses.

Current liabilities of the Company stood at PLN 23.8 million representing 3% of the total equity and liabilities as at 31 December 2018 compared to PLN 34.8 million or 5% of total equity and liabilities as at 31 December 2017. The decrease of current liabilities was driven by a decrease of trade payables by PLN 7.5 million and a decrease of the corporate income tax payable by PLN 4.3 million.

Table 69 Separate statement of financial position of GPW S.A. at the year's end in 2016 - 2018 (equity and liabilities)

	As at 31 December					
PLN'000	2018	%	2017	%	2016	%
Equity	**498,237**	**63%**	**438,873**	**59%**	**457,442**	**60%**
Share capital	63,865	8%	63,865	9%	63,865	8%
Other reserves	(142)	0%	(125)	0%	(114)	0%
Retained earnings	434,514	55%	375,133	51%	393,691	51%
Non-current liabilities	**263,237**	**34%**	**264,574**	**36%**	**148,808**	**19%**
Liabilities on bonds issue	243,961	31%	243,573	33%	123,459	16%
Employee benefits payable	595	0%	883	0%	1,435	0%
Deferred income tax liability	6,846	1%	7,064	1%	9,676	1%
Other liabilities	11,835	2%	13,054	2%	14,238	-
Current liabilities	**23,780**	**3%**	**34,848**	**5%**	**158,480**	**21%**
Liabilities on bonds issue	1,938	0%	1,938	0%	122,882	16%
Trade payables	4,498	1%	11,954	2%	4,297	1%
Employee benefits payable	9,095	1%	8,481	1%	6,490	1%
Corporate income tax payable	1,373	0%	5,685	1%	14,445	2%
Contract liabilities	11	0%	-	0%	-	0%
Accruals and deferred income *	-	0%	21	0%	1,712	0%
Provisions for other liabilities and charges	68	0%	211	0%	317	0%
Other current liabilities	6,797	1%	6,558	1%	8,337	1%
Total equity and liabilities	**785,254**	**100%**	**738,295**	**100%**	**764,730**	**100%**

** As of 2018, deferred income is presented under performance obligations*

Source: Consolidated Financial Statements, Company

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 2018, the Company'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 increased to 15.1 from 7.9 as at 31 December 2017 as 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 2018 and the average duration of a financial asset portfolio was around 106 days in 2018 and ca. 68 days in 2017.

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 3 *Financial Risk Management* to the Separate Financial Statements.

CASH FLOWS

The Company generated positive cash flows from **operating activities** at PLN 62.7 million in 2018, a decrease compared to positive cash flows of PLN 86.0 million in 2017.

The cash flows from **investing activities** were positive at PLN 5.9 million in 2018 compared to negative cash flows of PLN 131.0 million in 2017. The positive cash flows from investing activities in 2018 were due to a surplus of proceeds over investments, mainly driven by receipts on the sale of interest in Aquis and the dividend received from TGE.

The cash flows from **financing activities** were negative at PLN 99.6 million in 2018, mainly due to the dividend paid to the shareholders at PLN 92.3 million. The cash flows from financing activities were negative at PLN 98.4 million in 2017 and the dividend paid to the shareholders was PLN 90.2 million.

Table 70 Separate cash flows of GPW S.A.

	Cash flows for the 12-month period ended 31 December	
PLN'000	2018	2017
Cash flows from operating activities	62,737	85,990
Cash flows from investing activities	5,883	(130,963)
Cash flows from financing activities	(99,588)	(98,387)
Net increase / (decrease) in cash and cash equivalents	**(30,968)**	**(143,360)**
Impact of change of fx rates on cash balances in foreign currencies	*189*	*423*
Cash and cash equivalents - opening balance	**52,746**	**195,681**
Cash and cash equivalents - closing balance	**21,967**	**52,746**

Source: Consolidated Financial Statements, Company

CAPITAL EXPENDITURE

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 Company's total capital expenditure in 2017 amounted to PLN 10.4 million including expenditure for property, plant and equipment at PLN 6.4 million and expenditure for intangible assets at PLN 4.0 million.

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.

The capital expenditure for property, plant and equipment and intangible assets in 2017 related to maintenance of IT infrastructure including acquisition of network devices and IT equipment such as servers, as well as the acquisition of licences. Part of the capital expenditure prepared GPW to comply with MiFID 2 requirements.

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 mainly the trade surveillance system.

Contracted investments in property, plant and equipment were PLN 77.0 thousand as at 31 December 2017, including mainly reconstruction of rooms in the GPW building.

Contracted investments in intangible assets were PLN 1,203 thousand as at 31 December 2017, including mainly Microsoft licences and the trade surveillance system.

IV. 6. Ratio analysis

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 decreased year on year in 2018 and remained negative ((-) 0.1) due to negative net debt (cash exceeds interest-bearing liabilities). The increase of free cash was driven by the sale of Aquis, the dividend from TGE, and positive net cash flows from operating activities. The debt to equity ratio decreased year on year in 2018 due to an increase in equity as at 31 December 2018. Interest-bearing debt was stable year on year in 2018 (PLN 245.9 million as at 31 December 2018 compared to PLN 245.5 million as at 31 December 2017).

LIQUIDITY RATIOS

The current liquidity ratio was 15.1 as at 31 December 2018, an increase compared to 7.9 as at 31 December 2017. The increase of the current liquidity ratio was due to an increase in current assets from PLN 275.5 million in 2017 to PLN 358.6 million as at 31 December 2018 combined with a decrease of current liabilities from PLN 34.8 million to PLN 23.8 million.

The coverage ratio of interest costs under the bond issue decreased to 13.1 as at 31 December 2018 compared to 15.4 as at 31 December 2017. However, the ratio remains 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.

PROFITABILITY RATIOS

The profitability ratios EBITDA and EBIT decreased year on year in 2018 driven by a decrease of revenue and an increase of expenses, causing a reduction in the operating profit. The Company's cost/income ratio increased as expenses rose and revenues dropped in 2018. Return on assets (ROA) and return on equity (ROE) increased due to a higher net profit in 2018 compared to the net profit of 2017. The net profit of the Company was higher owing to dividend payments from the subsidiary TGE and gains on the sale of interest in the associate Aquis.

Table 71 Key financial indicators of GPW S.A.

		As at / For the 12-month period ended 31 December		
		2018	2017	2016
Debt and financing ratios				
Net debt / EBITDA for 12 months	1), 2)	(0.1)	(0.0)	(0.3)
Debt to equity	3)	49.4%	55.9%	53.9%
Liquidity ratios				
Current liquidity	4)	15.1	7.9	1.8
Coverage of interest on bonds	5)	13.1	15.4	10.1
Return ratios				
EBITDA	6)	49.9%	54.9%	43.6%
Operating profit margin	7)	39.3%	45.4%	32.5%
Net profit margin	8)	79.6%	35.2%	57.8%
Cost / income	9)	59.2%	54.0%	57.0%
ROE	10)	32.4%	16.0%	22.2%
ROA	11)	19.9%	9.5%	13.5%

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

Source: Company

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, value of equity raised on the financial market 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-standard 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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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, 26 February 2019