

Warsaw Stock Exchange Group

Investor Presentation

December 2022





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Key highlights of GPW





Operator of Central and Eastern Europe's the largest Equities, Derivatives, Commodities and Agricultural exchange.

GPW accounts for about 95% of equity trading in Polish equities.

Diversified business profile

- Core Exchange related and IT services
- Attractive dividend (7.6% DY 2023e)

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Diversified market participant base¹

- Local institutional investors (19%)
- International investors (63%)
- Retail investors (18%)

Strongly committed to ESG

- WIG ESG index
- ESG Guidelines for issuers (May 2021)
- sustainable development promotion (ESG Warsaw 2022 Conference, 2nd edition of the ESG Leaders competition)

Ample growth opportunities

- new products (ETF, structured products etc.)
- own trading platform
- new IT services

One of the EU's most dynamic IPO venues and CEE IPO hub

Leading growth sectors include eCommerce and Video Games.

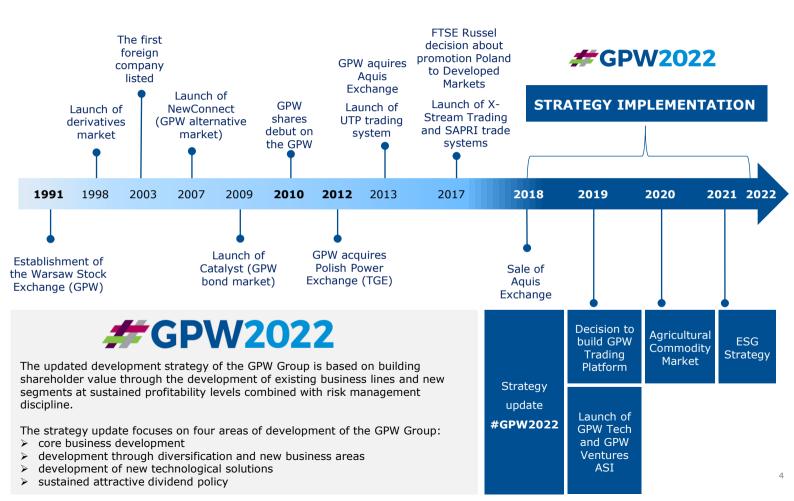
Recent main market IPOs include:

- Allegro: EUR 2.1 bn (PLN 9.2 bn)
- Huuuge Games: EUR 372 mn (PLN 1.67 bn)
- Pepco: EUR 825 mn (PLN 3.7 bn)



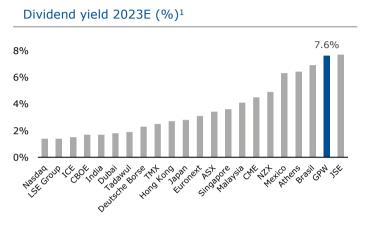
History of GPW and future progress



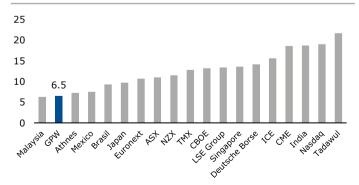


Attractive investment opportunity among peers



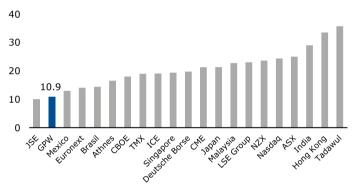


EV to EBITDA for 2023E



¹ estimated dividend yield in 2023 Source: Bloomberg, December 2022

Price to Earnings for 2023E



Market multiplies

		P/E 2022	P/E 2023	EV/EBITDA 2022	EV/EBITDA 2023	Dividend Yield 20231	Mkt Cap (USD mn)
(Median (21 peers)	21.5	20.6	13.4	12.8	3.0%	-
	GPW	10.3	10.9	5.9	6.5	7.6%	338
	Discount (%)	-52%	-47%	-56%	-49%	+4.6 pp	-

Experienced management board



GPW management board



Marek DIETL, CEO

CEO of GPW (Warsaw Stock Exchange) and the economic adviser to the President of Poland. He has spent almost 20 years in the consulting and venture capital industries. He collected experience as a non-executive board member of more than 25 organizations. Marek Dietl frequently undertakes community and academic activities. He used to serve as a mediator at the arbitration court of the Financial Supervision Commission and adviser to the President of Energy Regulation Office. Marek Dietl is also an assistant professor at the SGH-Warsaw School of Economics.



Monika GORGOŃ, Board Member, COO

Supervises areas of compliance, risk, business continuity, AML, and internal control at WSE and has also chaired the WSE Advisory Committee for Compliance. Vice-Chairperson of the Supervisory Board of GPW Benchmark S.A. Monika Gorgoń gained extensive experience in the regulated activity sector, while working, inter alia, for the Citi Group and Orange Polska, as well as the Vice-Chairperson of the Supervisory Board of GPW Benchmark S.A. Since August 2022, she has also been the Member of the Supervisory Board of the BondSpot S.A.

Adam MŁODKOWSKI, Board Member, CFO

For many years of his professional career was associated with the banking sector, among others with the Pekao S.A. Group and PKO Bank Polski S.A. Adam Młodkowski was also the founder and President of the Management Board of two independent consulting companies. He was an independent member of the supervisory board of KDPW_CCP. recommended by GPW. In September 2020, he took the position of Vice-President of the Management Board for Finance at Towarowa Giełda Energii. Since April 2021, he has also been the Chairman of the Supervisory Board of the Commodity Exchange Clearing House.



Izabela OLSZEWSKA, Board Member, CSO

Works on the capital market since 1992. Izabela has held a number of business and sales management functions at GPW, working with investors and companies, both local and international, and was responsible for the development of the product offering of the regulated and alternative markets. Izabela has been Chair of the Supervisory Board of Towarowa Giełda Energii (Polish Power Exchange) since July 2019 and was Member of the Supervisory Board of Bondspot from October 2015 to June 2019. Previously, she was Member of the Board of Directors of Aquis Exchange, London. She is Member of the Advisory Board of Krajowy Depozyt Papierów Wartościowych (Central Securities Depository of Poland).

Shares



- State Treasury preferred shares 35,01%
- other shareholders preferred shares 0,18%
- other shareholders bearer shares (free float) 64,80%

Votes



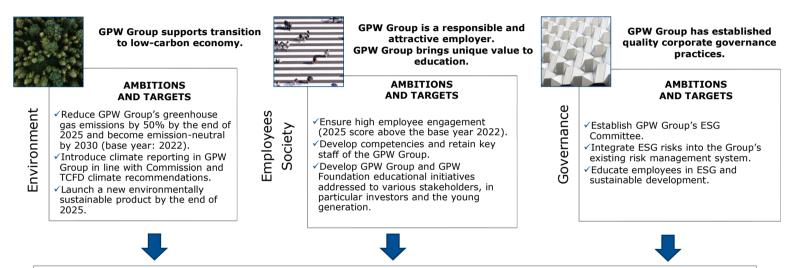
State Treasury – share of votes 51,80%

- other shareholders preferred shares, share in votes 0,27%
- other shareholders share in votes 47,93%

ESG: environmental, social, governance factors



GPW Group ESG Strategy 2025



- The ESG Strategy is implemented by GPW Group companies under Annual Operational Plans for the implementation of the ESG Strategy
- The ESG strategy is supplemented by relevant policies concerning, among others, climate, ethics and anti-corruption, diversity management and supply chain and customer relations (the regulations were implemented in all companies of the GPW Group in 2021)
- Progress in the implementation of the GPW Group ESG Strategy 2025 is regularly evaluated and reported: internally in the GPW Group's ESG management system, and externally in GPW Group annual integrated reports published on the GPW Group website <u>www.gpw.pl</u>
- ESG management structure was introduced in the GPW Group (dedicated ESG Management Board member, ESG Committee)

ESG: environmental, social, governance factors









Implementation of the GPW Group ESG Strategy 2025

- As part of the GPW Group's ESG governance structure, ESG factors are regularly discussed by the GPW Management Board, the ESG Committee and the Group Council
- We conduct workshops/lectures on ESG factors addressed to employees (we focused on ethics compliance, anti-fraud and anti-corruption policies in Q3)
- We take action to implement ESG risk management as part of GPW's risk management system

As a market organizer, we carry out activities supporting the development of initiatives related to sustainable development

- We carried out educational activities (Ring the Bell for Financial Literacy, Stock Exchange Summer School, GO4Poland)
- We are active in the promotion and development of the green bond market (conference with the UN GC on the "Green Finance 2022" report).
- We promote sustainable development and financing (the 2nd edition of the ESG Leaders competition is underway, the 5th study has been completed on the impact of ESG factors on investment decisions of capital market participants)

CONTRIBUTION TO ACHIEVING 17 SUSTAINABLE DEVELOPMENT GOALS 2030



INTEGRATED REPORT



REPORT IS AVAILABLE AT: https://www.gpw.pl/esg-gpw-en

PARTNERSHIP





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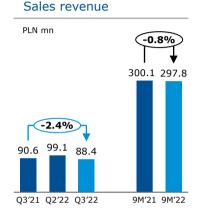




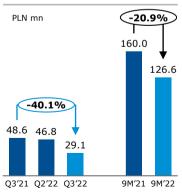
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Financial performance in Q3'22

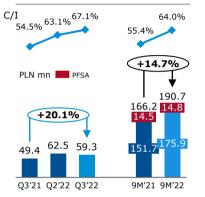




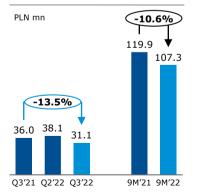
EBITDA



Operating expenses



Net profit



Sales revenue

 Decrease of revenue in Q3'22 by 2.4% YoY to PLN 88.4 mn. Driven by lower revenue on the commodity market (PLN 29.8 mn vs. PLN 35.8 mn) combined with higher revenue on the financial market (PLN 58.0 mn vs. PLN 54.4 mn).

Operating expenses

Increase of operating expenses in Q3'22 by 20.1% YoY to PLN 59.3 mn. Driven by an increase in external service charges (PLN 18.5 mn vs. PLN 13.5 mn) and total employee costs (PLN 28.6 mn vs. PLN 24.0 mn).

EBITDA

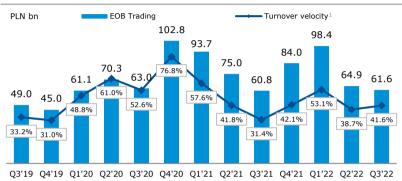
- Decrease of EBITDA in Q3'22 by 40.1% YoY to PLN 29.1 mn - driven by lower revenue on the commodity market (-16.8% YoY) combined with a higher revenue on the financial market (+6.6% YoY) and an increase in operating expenses (+20.1% YoY).
- In addition, a goodwill impairment allowance (BondSpot) at PLN 6.7 mn was recognised in Q3'22. The allowance was recognised in other expenses.

Net profit

 Decrease of net profit in Q3'22 by 13.5% YoY to PLN 31.1 mn.

Investor activity



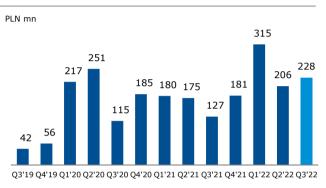


Main Market EOB equity turnover value

Main Market EOB equity turnover in Q3'22: PLN 61.6 bn (+1.2% YoY, -5.1% QoQ)

- Average daily Main Market EOB turnover: PLN 974.5 mn in Q3'22 vs. PLN 1,072.7 mn in Q2'22 and vs. PLN 946.2 mn in Q3'21
- Average fee on the stock market: 2.13 bps in Q3'22 (2.22 bps in Q3'21 vs. 2.11 bps in Q2'22)
- New Connect EOB turnover in Q3'22: 458.8 mn (-50.7% YoY, -19.8% QoQ).
- Structured products turnover in Q3'22: PLN 738.2 mn (-5.4% YoY, -3.5% QoQ).
- ETF turnover in Q3'22: PLN 228.0 mn (+80.2% YoY, +10.9% QoQ)
- Share of HVP/HVF participants in equity turnover: 16.4% in Q3'22 vs. 14.1% in Q3'21. Nominal increase: PLN 10.2 bn vs. PLN 8.5 bn
- Four new listings on the Main Market (transfers from NewConnect), one new listing on NewConnect in Q3'22

ETF turnover value



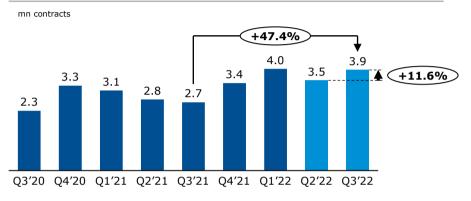
Q3′21	Q4′21	Q1′22	Q2′22	Q3′22		
Number of new listings – Main Market						
3	5	2	0	4		
	Number	of new listir	ngs - NewCo	nnect		
8	10	5	4	1		
Value of IPOs – Main Market and Newconnect (PLN mn)						
1 020	2 406	20	14	77		
Value	of SPOs - M	1ain Market	and Newcor	nect (PLN mn)		
392	686	210	6 918	280		

 $^{\rm 1}$ Quarterly turnover calculated as average of monthly turnover figures for the quarter (source: FESE)

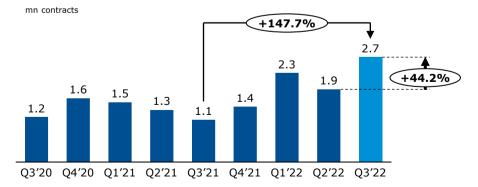
Growing turnover in derivatives



Derivatives turnover volume



WIG20 futures turnover volume highest since 2011



- Total derivatives turnover volume in Q3'22: 3.9 mn contracts (+47.4% YoY, +11.6% QoQ)
- WIG20 futures turnover volume in Q3'22: 2.7 mn contracts (+147.7 YoY, +44.2% QoQ). The highest quarterly turnover sine Q4 2011.
- Share of proprietary futures traders participating in HVP/HVF Programmes: 7.4% in Q3'22 vs. 7.3% in Q3'21.
- Volatility in Q3'22:
 - WIG volatility: 24.9% (vs. 20.5% in Q2'22 and 13.2% in Q3'21)
 - ✓ WIG20 volatility: 29.3% (vs. 24.4% in Q2'22 and 14.7% in Q3'21)

Commodity market turnover in Q3'22

Natural Gas (TWh)

43.2

42.4

03'21 04'21 01'22 02'22 03'22

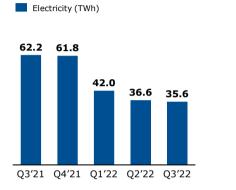
30.9

25.0

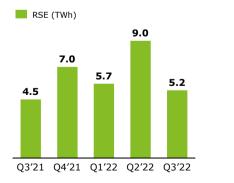
64.2

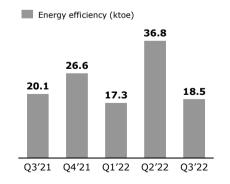


Electricity and gas spot and forward turnover volume



Property rights turnover volume





Electricity market

 Total electricity turnover volume in Q3'22 was 35.6 TWh (-42.8% YoY, -2.6% QoQ). The spot turnover volume was 7.3 TWh (-23.3% YoY, -11.6% QoQ). The forward turnover volume was 28.3 TWh (-46.3% YoY, without changes QoQ)

Gas market

 Total gas turnover volume in Q3'22 was 25.0 TWh (-61.1% YoY, -19.1% QoQ). The spot turnover volume was 3.2 TWh (-21.1% YoY, -27.2% QoQ). The forward turnover volume was 21.8 TWh (-63.8% YoY, -17.8% QoQ)

Property rights market

- RSE property rights turnover volume in Q3'22 was 5.2 TWh (+14.1% YoY, -42.5% QoQ)
- Energy efficiency property rights turnover volume in Q3'22 was 18.5 ktoe (-8.1% YoY, -49.7% QoQ)



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Our market highlights and opportunities



- 1 Diversified revenue structure, solid financial performance and attractive dividend, Strategy#GPW2022
- 2 The largest stock exchange in CEE region Promotion to Developed Market status (FTSE Russell and STOXX)
- 3 The largest CEE economy and growth leader in EU
- 4 Large and still growing client base
- **5** Potential for further growth of free float and liquidity in financial segment
- 6 Employee Capital Plans (ECP)
- **7** Dynamic commodity segment

Strategy update #GPW2022 (strategic initiatives)







⁴ Does not include other revenues, which constitute 0.9% of GPW Group revenues

⁵ Last twelve months ending on 30 September 2022

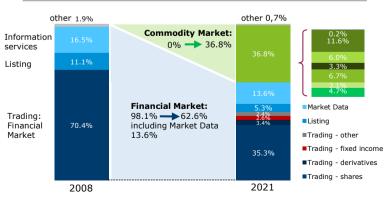
⁶ Does not include the KDPW revenues (associate company; equity method is applied)

1 Sound financial performance





Increasing diversification

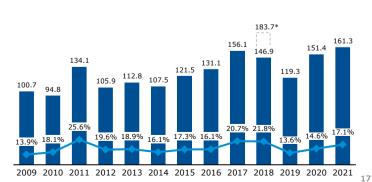


High EBITDA margin



Solid profitability

Net profit, PLN mn 🛛 🔶 ROE, %



* PLN 36.8 mn - gain on disposal of Aquis Exchange

1 Ambitious financial targets



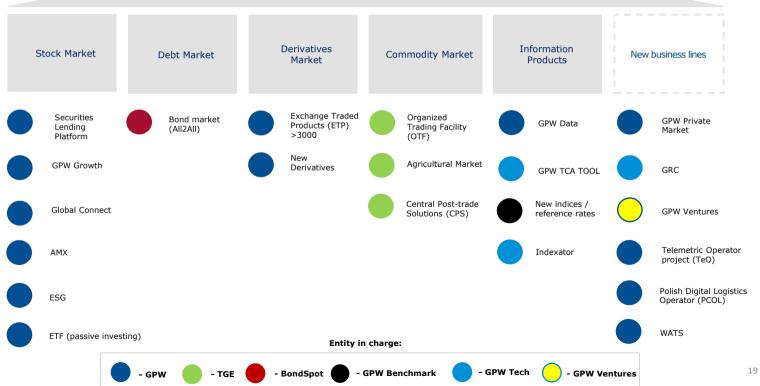
GPW Group financial targets for 2022

Revenue	➢ PLN 470 mn in 2022
EBITDA	≻ PLN 250 mn in 2022
ROE	ROE: 19% in 2022 (it may temporarily fall below 19% due to strategy implementation expenditures)
Cost/Income	C/I under 50% after 2022 (it may temporarily range from 63% to 55% due to strategy implementation expenditures)
Dividend	 > dividend payout rate not lower than 60% of consolidated net profit > dividend not lower than PLN 2.5 per share from 2020 profit (dividend policy) > annual increase in the dividend from the 2020-2022 profits by at least PLN 0.1 per share

Strategy update #GPW2022 (strategic initiatives)

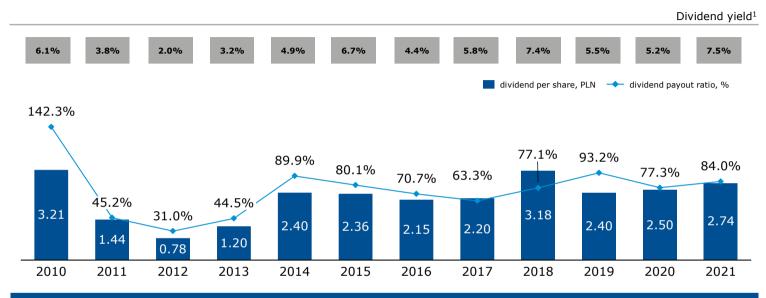






1 Attractive dividend policy





GPW has paid dividends totaling PLN 1.11 billion since IPO

DIVIDEND POLICY:

- ✓ Dividend payout rate not lower than 60% of consolidated net profit of GPW Group for the financial year attributable to GPW shareholders, adjusted for the share of profit of associates
- ✓ Annual increase in the dividend from the 2020-2022 profits by at least PLN 0.1 per share

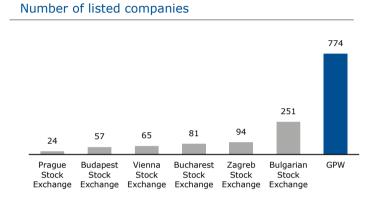
¹ Based on the share price as at the dividend record date

² By financial year for which dividend was paid

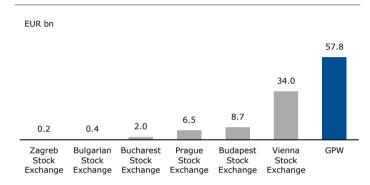
³ Based on the consolidated profit attributable to the shareholders of the parent entity and adjusted for the share of profit of associates

2 The largest stock exchange in CEE region

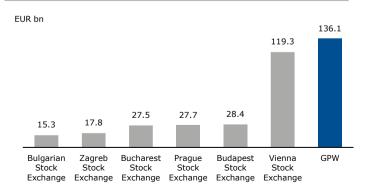




Value of equity trading EOB, YTD

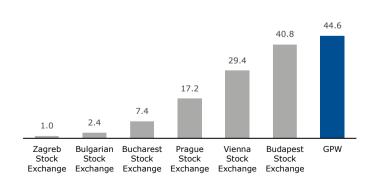


Market capitalisation



 $^{\rm 1}$ average turnover velocity YTD ; value of turnover (EOB) divided by market capitalisation Source: FESE, November 2022

Velocity¹



Poland's Promotion to Developed Markets: Success of Poland's Economy and Capital Market



Highly appreciated Polish capital market...

- Well-developed and stable market infrastructure
- Broad selection of listed stocks and high liquidity
- Wide and unlimited access to professional market intermediaries
- Independent supervision over the market and high standards of corporate governance
- Efficient and secure trading and post-trading services
- Little limitations on investing by foreign investors
- Extensive, legally regulated added value services including short selling and omnibus securities accounts

... aids classification of Poland amongst the 25 Developed Markets



Ceremony at London Stock Exchange



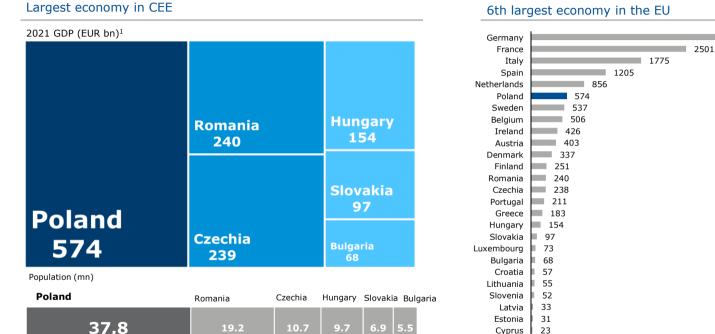
FTSE Developed Markets ranking in numbers¹

September 2018	Poland's reclassification by FTSE Russel
0.17%	Poland's share in FTSE Developed excluding US Index - as of September 2022
0.77%	Poland's share in MSCI Emerging Markets – as of December 2021

3 Largest economy in the CEE region



3602



6th largest economy in the EU

Fitch **STANDARD** A2 **A**-**A**-Moody's Poland's credit ratings perspektywa Ratings perspektywa perspektywa &POOR'S stabilna stabilna stabilna

Malta 15

3 Leader of economic growth

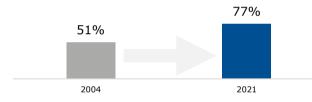


Solid GDP growth



accumulated Poland's GDP growth (PPS) since 2004 (EU acession)

Poland's GDP per capital is moving towards EU's average

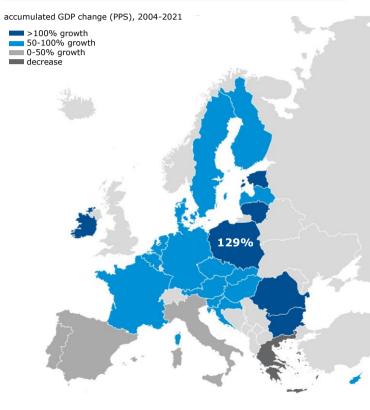


Market consensus¹

	2021	2022E	2023E	2024E
GDP YoY, %	+5.9	+4.6	+0.7	+3.1
inflation CPI ² , %	+5.1	+14.4	+13.4	
unemployment rate, %	5.4	5.3	5.7	

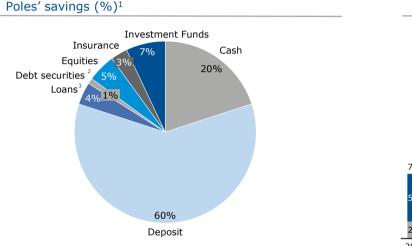
¹ PAP Biznes survey (Polish Press Agency Business Unit, December 2022) ² annual average Source: Eurostat, Polish Press Agency

One of EU's growth leaders



Potential for retail investment growth





Household assets (PLN bn)¹



- Most of Poles' savings are located in bank deposits
- Stocks represent only 5% of Poles' savings; however, individual investors are very active on the GPW (turnover share at 22% in 2021)
- GPW initiatives: education, joint initiatives with market participants, promotion of direct and indirect investment on the Exchange, including pension savings
- New flows injected into the Polish capital market by Employee Capital Plans (PPK)

² Short and long-term debt securities, short and long-term loans

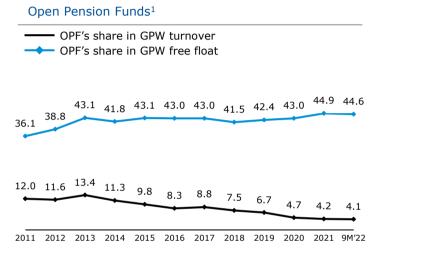
³ Listed shares, insurance, investment funds, short and long-term debt securities, short and long-term loans

Source: National Bank of Poland (NBP); data as of the end of Q2 2022, (latest data available)

¹Net of pension entitlements (pension funds and Social Insurance Institution sub-accounts), non-listed shares, other equity interest

4 Strong domestic institutional investor base

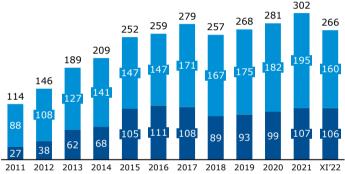




Investment funds in Poland²

Capital Market funds, assets PLN bn





- Largest institutional investor pool in the CEE region
- Open Pension Fund (OFE) net assets value amounts to PLN 155.4 bn as of November 2022
- Investment funds enjoy strong confidence of retail investors who increasingly seek more sophisticated savings and investment products

² According to the classification of funds created by IZFIA (The Chamber of Fund and Asset Management), the non-public funds sector includes those whose assets are not invested in capital markets. Non-public funds include: securitization, real estate and non-public assets.

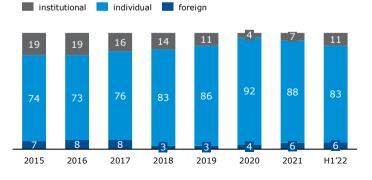
Advantageous mix of investors on GPW



Share of investors in trade in shares on the Main Market, %



Share of investors in trade in shares on the NewConnect, %



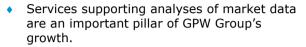
Share of investors in trade on the futures market, %



- Foreign investors account for over half of the Main Market equities turnover
- The individual investor share is considerably higher than in other developed markets
- Share of domestic institutional investors has still potential to grow along with PPK development

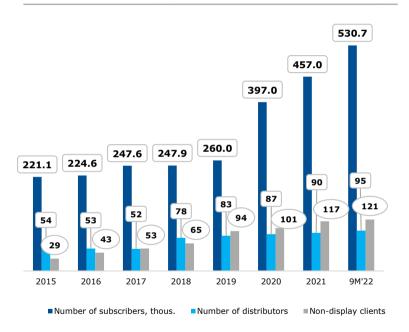
4 New services: commodity market and non-display data





- Developing GPW Data project:
 - ✓ The GPW Data project relies on machine learning and AI
 - ✓ The project introduces electronic reporting standards in Inline eXtensible Business Reporting Language (iXBRL)
 - Commercialization of GPW Data to launch at the turn of 2022/2023

Broad reach thanks to growing numbers of clients



Information services allow GPW to increase its revenue by tapping the potential of the key role of the infrastructure on the capital market.

5 Diversified issuers portfolio

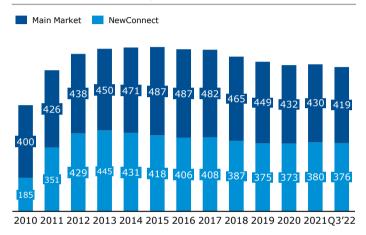


Issuer activity on GPW markets¹

Equity market

& GPW	Main Market 374 domestic companies 45 foreign issuers	Market cap: PLN 466 bn PLN 498 bn
Equity market for SME		
NEW/ CONNECT	NewConnect 372 domestic companies 4 foreign issuers	Market cap: PLN 14.7 bn
Debt market		
CATALYST	Catalyst 131 issuers (incl. State) 500 listed non-Treasury Issues	Value of non- Treasury issues: PLN 94.0 bn

Number of listed companies



Acquisition of issuers

- On the radar: family companies, PE funds, CEE companies, state-owned companies and their subsidiaries
- Intensive activities aimed at promoting the stock market as a place to raise capital for development
- Individual meetings with companies previously inactive on the GPW markets

GPW Growth

- 4th edition of a comprehensive educational program
 GPW Growth oriented to support the development of small and medium enterprises
- Supporting non-public companies in building their value through expansion using external sources of financing, in particular with a strong accent of development through the capital market

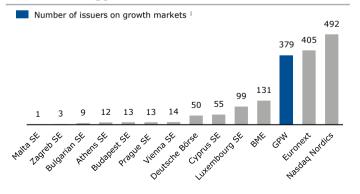
5 Alternative markets



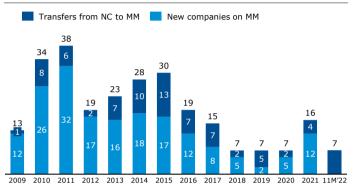
NEW CONNECT NewConnect

- Alternative trading system financing the growth of small and medium-sized companies with high growth potential
- Launched in 2007
- Companies transferring from NewConnect accounted for more than 40 percent of IPOs on the GPW Main Market in the last 10 years
- Nearly 20 percent of companies listed on GPW's Main Market are transfers from NewConnect
- Five companies in the current mWIG40 index originate from NewConnect

One of the biggest alternative markets in EU



Companies on Main Market transfered from NewConnect



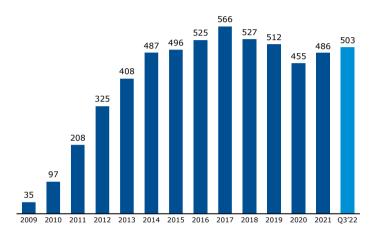
GlobalConnect

- A market listing foreign stocks, primarily European and in the future also US stocks
- Trading open during the trading hours on the Warsaw Stock
 Exchange
- Listing in the Polish zloty
- Access to market data
- Launched on 4 November



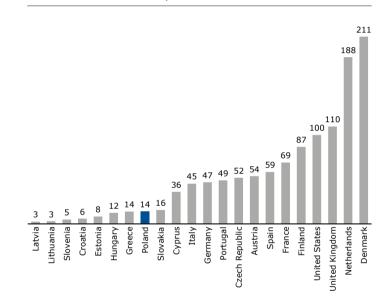
5 Opportunities for further debt market development





Number of non-Treasury issues on Catalyst

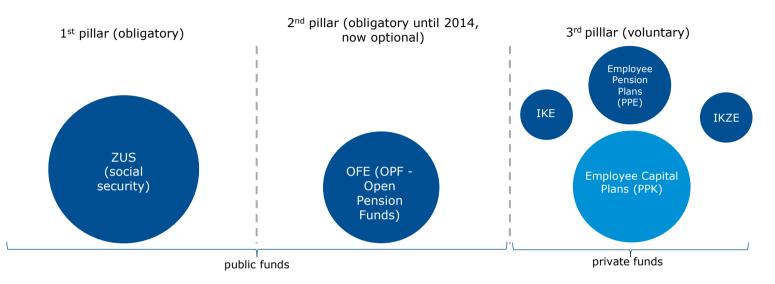
Total debt securities by residence of issuer as % of GDP¹



- Segmentation of the corporate debt market architecture
- Active role of the Exchange in attracting new issuers
- Single banking licence: an opportunity to grow bank activity as debt market participants



6 Employee Capital Plans (PPK)



- Employee Capital Plans/Pracownicze Plany Kapitałowe (PPK) are a new system of private long-term pension savings, mandatory for employers but optional for employees, based on contributions of employees, employers and the public budget.
- PPK scheme are very similar to UK Workplace Pension System
- **PPK's** impact on GPW:
 - Increase of market turnover and increase of the velocity rate
 - ✓ Attracting new issuers: growing number of IPOs
 - ✓ A stronger market in equities, corporate bonds, treasury bonds, real estate investment funds
 - Improved trust in and promotion of the capital market
- PPK employee participation at 33%, highest among companies with 250+ employees 49.1%

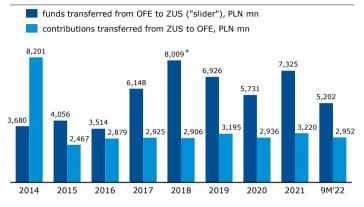




Operation of OFEs

- Part of pension contributions was compulsorily transferred to openended pension funds (OFEs) between 1999 and 2014. In February 2014, as a result of the pension system reform, 51.5% of the assets accumulated in OFEs (PLN 153.2 billion) were transferred to ZUS in the form of bonds issued or guaranteed by the State Treasury. A ban was imposed on OFEs investing in Treasury instruments and most of the funds' assets have since been equities.
- OFE members had to decide in 2014 whether they wanted to continue transferring their contributions to OFEs or to a subaccount in ZUS. Currently, those who remain in OFEs transfer 2.92% of their salary (part of their pension contribution) to OFEs.
- Ten years before retirement age, funds from OFEs begin to be gradually transferred to ZUS for later payment as a pension.

Transfers between OFE and ZUS



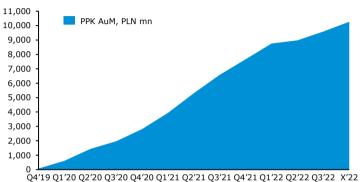
Structure of OFE assets as at 31 November 2022



* In Q4 2017, a high balance of funds transferred to ZUS - the effect of adjustments related to the lowering of the retirement age.

6 Employee Capital Plans (PPK)





PPK AuM have crossed PLN 10 bn

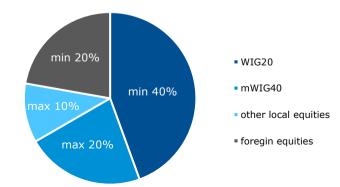
ECP assumes three (I, II, III) sources of contribution

		Basic contribution		/oluntary ontribution	Max contribution
I	Employee contribution	2% of gross wage	up to 2	2,0% gross wage	4% gross wage
II	Employer contribution	1,5% of gross wage	up to 2	2,5% gross wage	4% gross wage
	Maximum total contribution			n	8% gross wage
ш	Contriub	ition paid by public		welcome payment – PLN 25	
	budget:			annual payment – PLN 240	

Equities/debt share in total assets

Time left to the defined date (reaching 60 years old)	Equities	Debt
>20 years	60-80%	20-40%
11-20 years	40-70%	30-60%
6-10 years	25-50%	50-75%
1-5 years	10-30%	70-90%
After reaching the defined date (60 years)	<15%	>85%

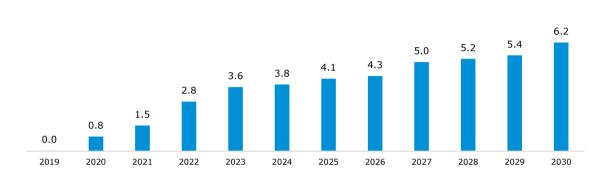
Equity portfolio structure



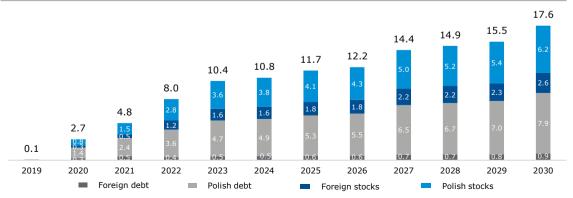
6 Estimated yearly inflows into PPK



Estimated inflows into Polish equity market (PLN bn)



Estimated inflows into capital market



Assumptions:

1. Participation rate, gradual increase: 2022 (22%) - 2030 (35%)* 2. Average contribution rate: 3.5% 3. Average monthly gross salary in 2022 - PLN 6242 and 2023 -PLN 6839 (According tostate budget for 2023 assumptions) 4. Average wage increase (annualy, from 2024) - 4% 5. Annual subsidy from the Labor Fund (contriubution paid by public budget) - 240,00 PLN 6. Portfolio structure: Equities PL - 35%, ✓ Foreign equities - 15%, ✓ Debt PL - 45%, \checkmark Foreign debt - 5% ✓

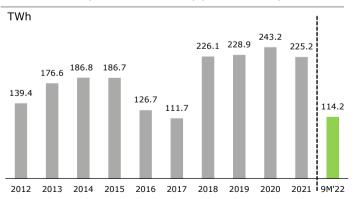
*Participation rate calculated in relation to persons entitled to the PPK (not in relation to employees of companies with an active PPK program)





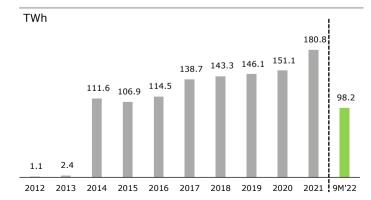
Commodity market growth drivers

- Launch of Agricultural Market wheat, corn and rye grains trading
- Organised Trading Facility (OTF) transformation of TGE's forward commodity market into an organised trading facility (OTF) under MiFID II
- On 19 November 2019, Towarowa Giełda Energii (TGE) opened the cross-border SIDC market based on the XBID model, which connects domestic electricity Intraday Markets within the European Union and enables continuous cross-border trading among entities in most European countries
- TGE granted NEMO status for the next 4 years 2 December 2019. The status of Nominated Electricity Market Operator has been granted to operate the single mechanism coupling European day-ahead and intraday energy markets for the Polish price area;



TGE electricity trade volumes (spot+forward)

Natural gas trading (spot+forward)







Market structure

- The operation of the Agricultural Market relies on TGE, Commodity Clearing House (IRGiT), and Authorised Warehouses
- TGE operates transparent trade in agricultural commodities; IRGiT provides safe clearing; and Authorised Warehouses ensure high quality of stored commodities

Summary

- The Agricultural Market includes around 50 authorised warehouses (28 in authorisation proces) and 3 authorised brokers (Noble DM, DM BOŚ, PGE DM)
- GPW Group offers trade in standarised wheat, rye, corn and rapeseed.





wheat







rapeseed

New products on the horizon

The range of agricultural products will later be extended to include maize, sugar, skimmed milk powder, pork semi-carcasses, concentrated apple juice

More information: www.tge.pl/en-home

4750 tons

Total turnover in 2021

2350 tons

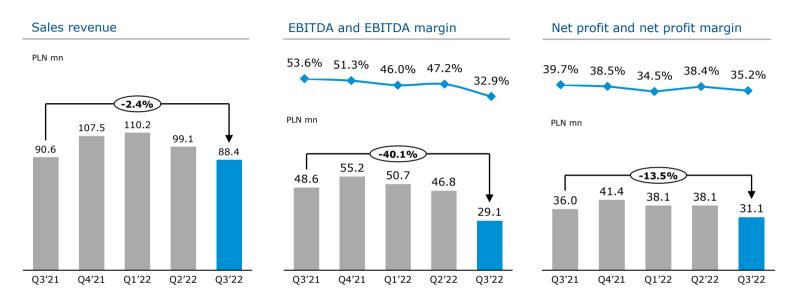
Total turnover in 2020



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Financial results by quarter

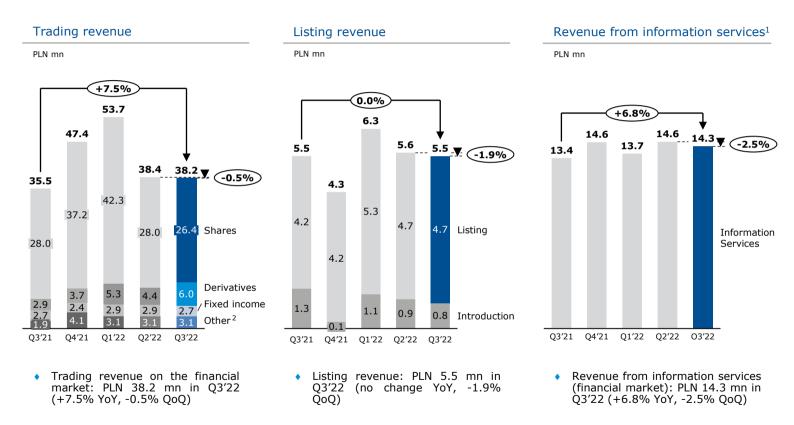




- Decrease of sales revenue by 2.4% YoY to PLN 88.4 mn in Q3'22, driven by a lower revenue on the commodity market (-PLN 6.0 mn i.e. -16.8% YoY) combined with a higher revenue on the financial market (+PLN 3.61 mn, +6.6% YoY).
- EBITDA margin: 32.9% in Q3'22 vs. 53.6% in Q3'21.
- Net profit margin: 35.2% in Q3'22 vs. 39.7% in Q3'21: the YoY decrease in net margin is due to, among others, a goodwill impairment allowance (BondSpot) of PLN 6.7 mn. The allowance was recognised in other expenses in Q3'22.
- Dividend: PLN 2.74 per share. Dividend payment date August 5, 2022. Dividend higher by PLN 0.14 per share than the minimum amount resulting from the dividend policy.

Revenue on the financial market



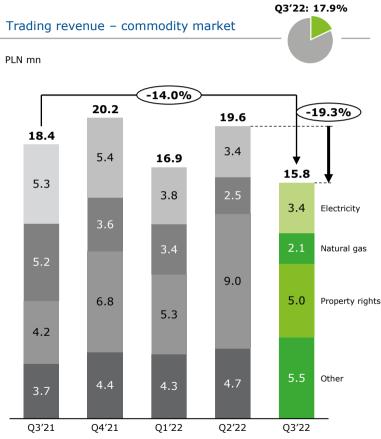


¹ Includes only revenue from information services on financial market

² Other cash market instruments, other fees paid by market participants

Revenue from the electricity, gas, and property rights markets



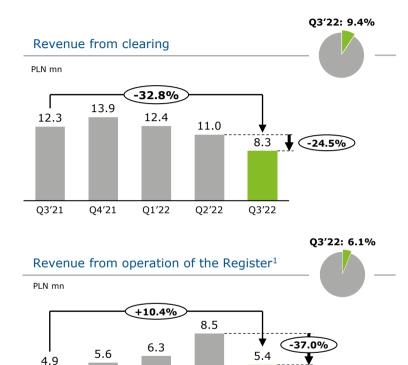


- Decrease in revenue from trading in electricity to PLN 3.4 mn in Q3'22 (-36.5% YoY; -1.7% QoQ) due to lower trading volumes, mainly in the forward market.
- Decrease in revenue from trading in gas to PLN 2.1 mn in Q3'22 (-60.6% YoY; -17.3% QoQ), due to lower trading volumes, mainly in the forward market.
- Increase in revenue from trading in property rights to PLN 5.0 mn (+18.1% YoY; -44.9% QoQ) driven by a YoY increase in trading volumes in green certificates. The QoQ decrease is due to the seasonality of trading related to the deadline of the obligation to cancel property rights.
- Increase in other fees by 47.6% YoY is mainly due to higher revenues for the management of clearing guarantee funds at IRGiT - significantly higher deposit interest rates and historically high electricity and gas prices resulted in an increase in the amounts contributed by Members to the clearing guarantee system.



Revenue from clearing





- Decrease in revenue from clearing to PLN 8.3 mn in Q3'22 (-32.8% YoY; -24.5% QoQ) mainly due to lower gas and electricity trading volumes.
- The YoY increase in revenue from the operation of the Register of Certificates of Origin to PLN 5.4 million in Q3'22 (+10.4% YoY; -37.0% QoQ) is mainly due to a higher volume of RES property rights issued and an increase in the volume of operations in the Register of Guarantees of Origin.

Activity of participants of the Register of Certificates of Origin

9					
Q3′21	Q4′21	Q1′21	Q2'22		Q3'22
	Volume	of issued pr	operty rights	s (TWh)	
3.4	4.0	5.2	8.1		4.0
					+20.0% YoY
					-50.5% qoq
	Volume of c	ancelled cer	tificates of o	rigin (TWh)	
7.4	6.4	6.2	6.7		6.1
					-18.2% YoY
					-8.9% QoQ
	Guarantees	of Origin –	turnover vol	ume (TWh)	
5.5	8.9	10.0	11.1		9.4
					+72.1% YoY
					-15.1% QoQ

Q2′22

Q3′22

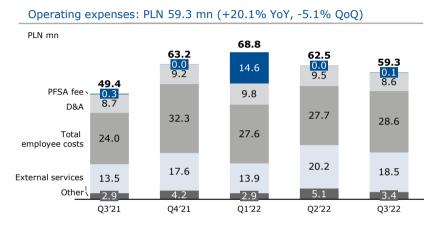
Q1′22

Q3′21

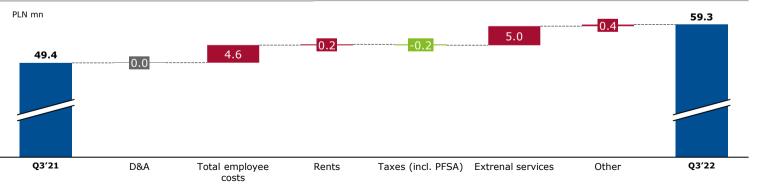
04'21

Operating expenses in Q3'22





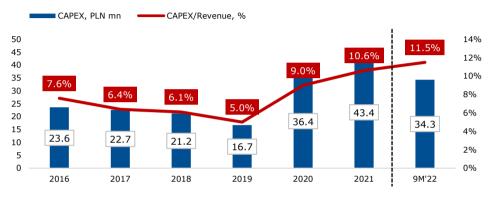
- Cost/income ratio (C/I): 64.0% in 9M'22 vs. 55.4% in 9M'21.
- Depreciation and amortisation: PLN 8.6 mn in Q3'22 (-0.4% YoY, -8.6% QoQ).
- Total employee costs: PLN 28.6 mn in Q3'22 (+19.1% YoY, +3.4% QoQ). YoY increase driven mainly by additional headcount in the implementation of strategic initiatives.
- External services: PLN 18.5 mn in Q3'22 (+36.8% YoY, -8.6% QoQ). YoY increase driven by rising cost of IT infrastructure maintenance, promotion, education and market development, advisory, information services and other costs.



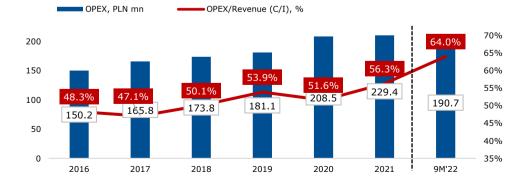
Operating expenses in Q3'22 vs. Q3'21

CAPEX and OPEX

CAPEX



OPEX



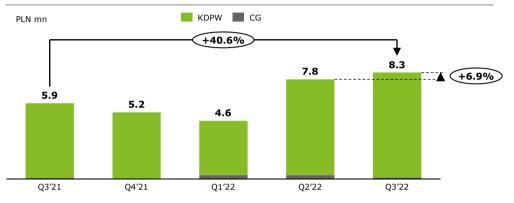


- In 2021 the Group's total capital expenditure (CAPEX) amounted to PLN 43.4 mn, including expenditure for property, plant and equipment at PLN 12.1 mn and expenditure for intangible assets at PLN 31.3 mn.
- In 9M'22 The Group's total CAPEX amounted to PLN 34.3 mn.
- CAPEX for the 2022 will be higher YoY due to the strategy implementation.
- In 2021 the Group's OPEX was PLN 229.4 mn.
- In 9M'22 the Group's OPEX was PLN 190.7 mn.
- 2022 OPEX guidance: slightly higher than in 2021.

Share of profit of entities measured by the equity method in Q3'22

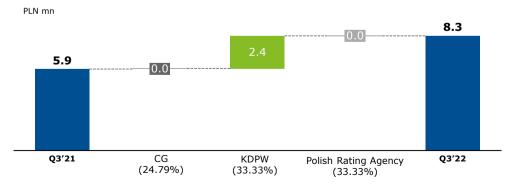


Share of profit of entities measured by the equity method



Group's share of profit of entities measured by the equity method in Q3'22 at PLN 8.3 mn (+40.6% YoY, +6.9% QoQ)

Q3'22 vs. Q3'21 change



- The Group's share of net profit of KDPW in Q3'22 was PLN 8.2 mn vs.
 5.8 mn in Q3'21
- GPW's share of profit of Centrum Giełdowe in Q3'22 was PLN 123 thou. vs. PLN 93 thou. in Q3'21

GPW Group's consolidated statement of financial position

PLN mn	30.09.2021	31.12.2021	31.03.2022	30.06.2022	30.09.2022
Non-current assets, including among others	597.6	603.6	618.2	608.2	614.6
Property, plant and equipment	90.5	91.9	92.2	90.2	96.5
Intangible assets	257.2	264.0	265.3	266.0	262.8
Share of profit of associates	231.6	230.8	231.4	226.0	233.2
Current assets, including among others	736.3	807.1	737.4	756.9	663.4
Trade and other receivables	149.9	177.1	94.2	93.3	92.9
Financial assets measured at amortised cost	256.1	277.3	306.0	212.3	138.5
Cash and cash equivalents	326.1	349.3	335.0	447.5	426.9
Total assets	1,333.9	1,410.7	1,355.7	1,365.1	1,278.0

Decrease of total assets as of 30 September 2022 mainly driven by a decrease of financial assets measured at amortised cost.

PLN mn	30.09.2021	31.12.2021	31.03.2022	30.06.2022	30.09.2022
Equity	932.3	967.9	1,001.8	921.9	953.0
Non-current liabilities	168.6	44.2	44.5	45.4	47.5
Liability under the bond issue	125.0	0.0	0.0	0.0	0.0
Current liabilities, including among others	233.0	398.6	309.4	397.8	277.5
Liability under the bond issue	121.8	246.3	126.8	125.9	126.9
Trade payables	12.9	13.7	12.7	18.7	14.8
Employee benefits payable	22.3	31.1	36.6	24.3	29.0
Contract liabilities	19.9	5.6	45.1	32.0	19.1
Provisions	28.5	28.8	28.4	33.1	31.7
Other current liabilities	14.6	58.0	38.3	150.2	47.5
Total equity and liabilities	1,333.9	1,410.7	1,355.7	1,365.1	1,278.0

 Decrease in current liabilities as of September 30, 2022, due to the payment of dividend in the amount of PLN 115.0 mn.

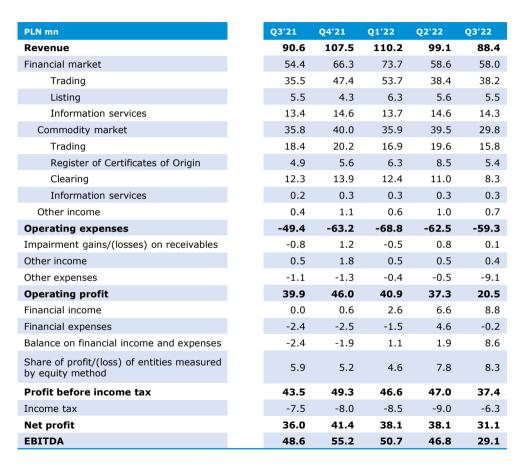
Liquid financial assets are presented in "Financial assets measured at amortised cost" and "Cash and cash equivalents". "Financial assets measured at amortised cost" includes among others cash in term deposits from 3 to 12 months. "Cash and cash equivalents" includes cash in bank accounts and term deposits up to 3 months.





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GPW Group consolidated statement of comprehensive income

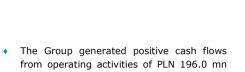




- Decrease of sales revenue in Q3'22 by 2.4% YoY to PLN 88.4 mn driven by lower revenue on the commodity market (PLN 29.8 mn zł vs. PLN 35.8 mn; -16.8% YoY) combined with higher revenue on the financial market (PLN 58.0 mn vs. PLN 54.4 mn zł; +6.6% YoY)
- Increase of operating expenses in Q3'22 by 20.1% YoY driven by an increase in external service charges (PLN 18.5 mn vs. PLN 13.5 mn) and total employee costs (PLN 28.6 mn vs. PLN 24.0 mn).
- Increase in other expenses in Q3'22 is due to a goodwill impairment allowance (BondSpot) of PLN 6.7 mn.
- Positive net financial income and expenses mainly due to an increase in financial income to PLN 8.8 mn in Q3'22 from PLN 0.01 mn in Q3'21. The increase in income was mainly driven by higher market interest rates.
- Increase of the Group's share of profit of entities measured by the equity method to PLN 8.3 mn in Q3'22 vs. PLN 5.9 mn in Q3'21 due to an increase in the net profit of the KDPW Group from PLN 5.8 mn in Q3'21 to PLN 8.2 mn in Q3'22.

GPW Group consolidated statement of cash flows

PLN mn 9 months period ended 30 September of	2022	2021
Total net cash flows from operating activities	196.0	-6.1
Net profit of the period	107.3	119.9
Adjustments:	124.0	-97.1
Income tax	23.8	24.5
Depreciation and amortisation	27.9	26.1
Share of (profit)/loss of entities measured by equity method	-20.7	-19.2
(Gains) on assets measured by amortized cost	-5.3	-0.3
Interest on bonds	3.2	4.1
Other adjustments	1.9	-0.8
Change of assets and liabilities :	93.4	-131.6
Trade receivables and other receivables	83.5	-94.7
Contract liabilities	12.4	-2.2
Other liabilities (excl. contracted investments and dividend payable)	-10.2	-49.7
Interest on tax payable (paid)/refunded	-35.3	-28.9
Total cash flows from investing activities:	115.5	32.6
In:	479.2	851,1
Sale of property, plant and equipment and intangible assets	0.01	4.5
Maturity of financial assets measured at amortised cost	464.9	839.1
Out:	363.7	-818.4
Purchase of property, plant and equipment	-12.5	-7.3
Purchase of intangible as sets and advances for intangible assets	-21.8	-20.7
Purchase of financial as sets measured at amortised cost	-324.4	-790.1
Total cash flows from financing activities:	-234.4	-111.2
In:	12.2	4.4
Grants received	9.8	4.4
Out:	-246.5	-115.7
Dividend paid	-115.0	-105.2
Interest paid on bonds	-120.0	-3.5
Net (decrease)/increase in cash and cash equivalents	77.2	-84.7
Effect of changes in exchange rates	0.4	-0.1
Cash and cash equivalents - opening balance	349.3	411.0
Cash and cash equivalents - closing balance	426.9	326.1



(+PLN 202.2 mn YoY) due to, among

- others, an increase in trade receivables and a lower balance of other current liabilities. Cash flows from investing activities were positive at PLN 115.5 mn (+PLN 82.8 mn, +253.8% YoY). The increase in the cash flows was mainly due to lower expenditure on the acquisition of assets measured at amortised cost (expenditure on the acquisition of assets measured at amortised cost down by PLN 465.7 mn, -58.9% YoY) combined with lower inflows from the maturity of assets measured at amortised cost (inflows down by PLN 374.1
- Cash flows from financing activities were negative at -PLN 234.4 mn vs. negative cash flows of -PLN 111.2 mn in 9M 2021, mainly due to the redemption of bonds issued (PLN 120 mn in 9M 2022 vs. no expenditure in 9M 2021).

mn, -44.6% YoY).

KDPW Group's financial results^{*}

	PLN mn	Q3'21	Q3'22	2020	2021
Revenue		49.2	56.1	174.8	205.3
Operating expenses		31.3	34.6	122.8	126.5
Operating profit		17.9	21.5	52.0	78.8
Net profit (PSR)		15.6	23.2	46.7	72.9
EBITDA		23.4	27.3	71.3	100.0
Net profit (IAS)		17.5	25.2	46.7	73.0

*The KDPW Group publishes its financial results according to the Polish Accounting Standards (PAS). The GPW Group publishes its financial results in accordance with the International Accounting Standards (IAS)

KDPW Group's business lines

- Operating a depository for cash market instruments (depository fees, opening and ٠ maintaining accounts)
- Settlement on the cash market (settlement of transactions, cash penalties, post-trade ٠ transfers, other transactions and services)
- Services for issuers (registration and maintenance of securites, payment of benefits, General Meetings)
- Clearing KDPW CCP (clearing transactions on the organised market and OTC trade, collateral management)
- Other operations (Trade Repository, Numbering Agency, Guarantee Fund, Compensation ٠ Scheme, ARM)



KDPW Group's revenue by guarter

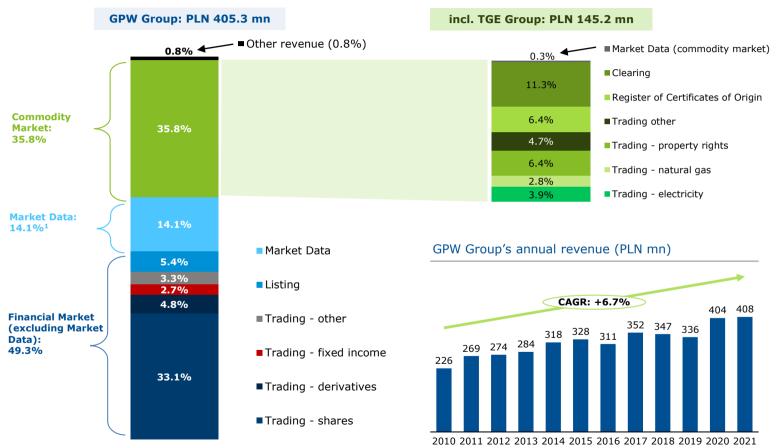
Increase in revenue of the KDPW Group from PLN 49.2 million in O3 2021 to PLN 56.1 million in O3 2022 as a result of:

- Increase in revenue from KDPW CCP clearing activities. This was driven by higher activity on both the cash and derivatives organised markets.
- Increase in revenue from guarantee fund ٠ management and administration due to the MPC's interest rate hikes.
- Increase in revenue from ancillary activities, . i.e., the EMIR Trade Repository due to a higher number of reported OTC contracts, the Guarantee Fund and the Compensation Scheme due to the MPC's interest rate hikes.
- Decrease in revenue from the operation of a . securities depository due to lower capitalisation of securities and decrease in revenue from cash market settlement fees in connection with the regulatory requirement to introduce a new way of calculating settlement discipline fees (cash penalty system).



GPW Group's revenue structure: incremental for 12M ended 30 September 2022





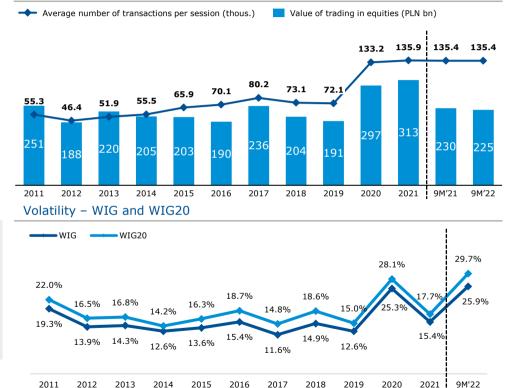
 1 revenue from Market Data only for the financial market; revenue from Market Data on the commodity market presented under "Commodity Market"

Financial market: Trade in equities





Equity turnover value and number of transactions



- Revenue drivers:
 - Equity turnover value
 - Structure of orders (small, large, mid-sized)

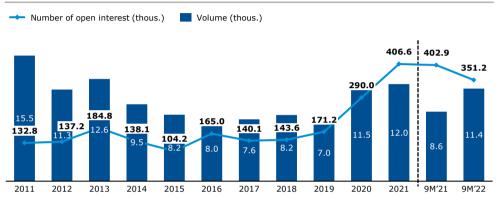
Financial market: Trade in derivatives



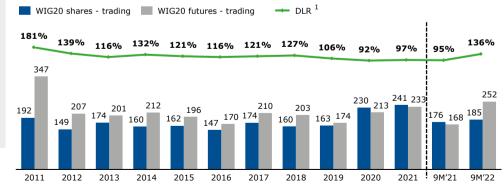


6.8%²

Derivatives turnover volume



Derivatives turnover volume vs. velocity

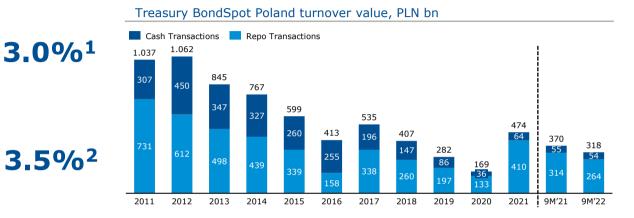


- Revenue drivers:
 - Derivatives turnover volume
 - Number of open interest
 - Volatility

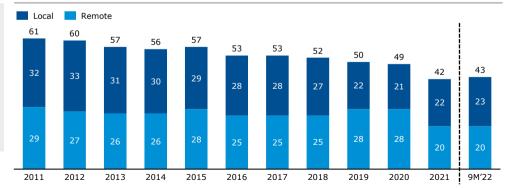
¹ Velocity ratio (value of trade in WIG20 futures to value of trade in WIG20 stocks) ² Share in GPW Group's revenue in Q3'22

Financial market: Other instruments and fees paid by participants





Number of exchange members



- Revenue drivers:
 - Treasury bonds turnover value
 - Number of exchange members

¹ Share in GPW Group's revenue in Q3'22, debt instrument turnover

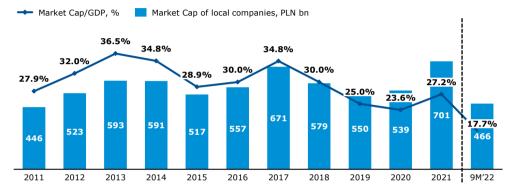
² Share in GPW Group's revenue in Q3'22, other trading fees paid by market participants and other cash instruments

Financial market: Listing





Capitalisation of domestic companies



IPO/SPO value and number of companies

IPO, PLN bn SPO, PLN bn 🔶 Number of listed companies (MM and NC) 905 895 902 893 890 867 852 824 805 810 795 90.79 43.13 8.10 9.63 9.36 7.73 7.41 1.15 3.95 3.66 4.35 5.24 3.12 1.36 3.62 2.07 5.36 1.94 0.11 0.35 0.08 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 9M'22

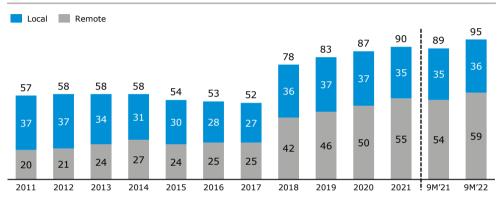
- Revenue drivers:
 - Capitalisation at YE
 - Value of new issue shares and bonds
 - Number of issuers

Financial and commodity market: Information services



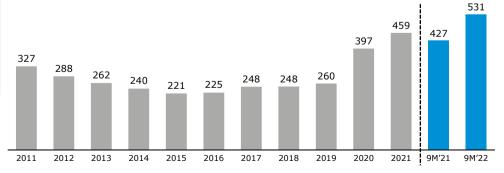


Number of data vendors



Number of subscribers (thou.)

- Revenue drivers:
 - Number of data vendors
 - Number of subscribers



 1 Total share of information services on the financial market and the commodity market in GPW Group's revenue in Q3'22

Commodity market: Trade in electricity and gas





Electricity turnover volume (TWh)¹



Gas turnover volume (TWh)

Spot Forward 180.8 Revenue drivers: 28.6 151.1 138.7 143.3 146.1 Electricity turnover volume \checkmark 137.6 25.8 22.6 106.8 114.5 23.7 24.0 20.6 111.6 Gas turnover volume \checkmark 98.2 6.5 13.9 24.6 14.3 \checkmark Share of spot and forward 152.2 123.5 125.3 119.6 117.0 114.7 trade 105.1 92.9 89.9 83.9 $1.1/0.0^{-2.4}/2.0$ 9M'21 9M'22 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 ÷

¹ Data for 2006-2013 include trade on the GPW Energy Market poee

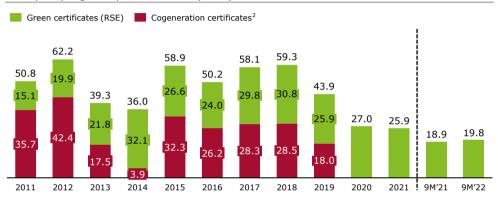
² Total share of trade in electricity and trade in gas in GPW Group's revenue in Q3'22

Commodity market: Trade in property rights



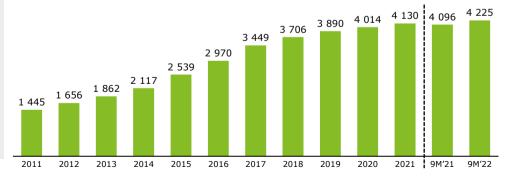


Property rights spot turnover (TWh)



Number of participants of the Register of Certificates of Origin

- Revenue drivers:
 - Property rights turnover volume
 - Share of certificate categories in trade
 - Number of register participants



¹ Share of revenue from trading in property rights to certificates of origin in GPW Group's revenue in Q3'22

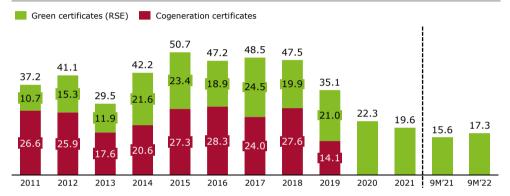
² Trade in cogeneration property rights ended at the end of June 2019

Commodity market: Register of Certificates of Origin





Volume of issued certificates of origin (TWh)



Volume of cancelled certificates of origin (TWh)

Green certificates (RSE) Cogeneration certificates 52.1 47.0 45.7 43.2 42.9 36.2 25.2 19.0 17.8 12.4 16.8 8.8 27.0 25.3 24.4 22.3 20.6 10.3 18.9 19.0 9.1 30.8 27.4 26.9 28.0 27.9 26.1 20.0 16.6 13.2 0.6 2020 2021 9M'21 2011 2012 2013 2014 2015 2016 2017 2018 2019 9M'22

- Revenue drivers:
 - Volume of issued property rights
 - Volume of cancelled property rights





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
COR	Certificates of Origin Register, register maintained by the Polish Power Exchange responsible for registration and record-keeeping of certificates of origin
ECM	Equity Capital Market, value of equity raised on the financial market
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. ETF can daily create and cancel ETF units. ETF units are exchange traded on the same terms as shares.
ЕТР	Exchange Traded Products, structured products – financial instruments whose price in 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
Green certificates	Certificate of origin is a document cerifing that the Energy was produced from the renewable Energy resources
HVF	High Volume Funds, a promotion programme addressed to investment funds actively trading in shares on \ensuremath{GPW}

Glossary (2)



НVР	High Volume Provider, a promotion programme addressed to legal entities whose core business is to invest on financial markets only on own account
ΙΡΟ	Initial Public Offering, in this presentation, PwC IPOwatch 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
мсо	Market Coupling operator
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.
NEMO	Nominated Electricity Market Operator is a market operator designated by the competent authority of the European Union Member State to participate in single day-ahead or single intraday coupling
отс	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
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

Glossary (3)



RGO	Register of Guarantees of Origin, register of instruments supporting renewable energy sources, which aim to provide disclosure for the end customer as to the amount of electricity generated in a renewable source and supplied to the power distribution or transmission network
SPO	Second Public Offering
Post-trade services	depository, clearing and settlement services
UTP	Universal Trading Platform, the trading system of the Warsaw Stock Exchange supplied by NYSE Technologies
White certificates	Certificates of origin of energy efficiency
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



IR events

• 2 March 2023

Introduction of the period of limited investor communications preceding the publication of FY 2022 financial results

16 March 2023

Publication of separate and consolidated annual report for 2022

4 May 2023

Introduction of the period of limited investor communications preceding the publication of Q1 2023 financial results

18 May 2023

Publication of consolidated quarterly report for Q1 2023

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Contact:

GPW Investor Relations Phone + 48 22 537 72 50

ir@gpw.pl

https://www.gpw.pl/investor-relations