



# GPW Group's Financial Results Q4 2016

28 February 2017

# Record-high Financial Results in 2016

Net profit highest since 2011  
*(second highest in GPW Group's history)*

**PLN 131.1 mn**

Record-high EBITDA

**PLN 183.7 mn**

Record-low C/I ratio

**48.3%**

Record-high dividend yield<sup>1</sup>

**6.7%**

<sup>1</sup> Dividend yield based on GPW share closing price as at the dividend record date

# Our Successes in 2016

## DEVELOPMENT

- ◆ Development of liquidity support programmes
- ◆ Take-over of the function of WIBID and WIBOR fixing organiser
- ◆ Introduction of a maker-taker price list
- ◆ Colocation service
- ◆ Sale of non-display data
- ◆ Six new single-stock futures and GBP/PLN futures
- ◆ Launch of ABN Amro Clearing

## TRANSPARENCY

- ◆ New segmentation of NewConnect
- ◆ New calendar and methodology of the main exchange indices
- ◆ Three new sector indices

## DIALOGUE

- ◆ Ambassador programme for the top 20 banks in Poland
- ◆ Intensified educational initiatives
- ◆ Polish-Belarussian IPO Centre
- ◆ Tenth edition of the Respect Index

## TECHNOLOGY

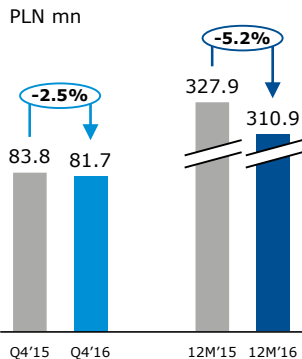
- ◆ New systems: X-Stream Clearing NASDAQ in IRGiT and NASDAQ Trading in POLPX
- ◆ PFSA's approval for POLPX as operator of CO<sub>2</sub> auction platform
- ◆ OTC trade reporting service: POLPX RRM

## **Summary of the GPW Group's Activity in Q4 2016**

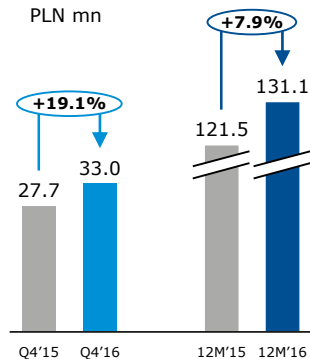
Financial Results of the GPW Group in Q4 2016

# Growth Momentum Maintained in Q4'16

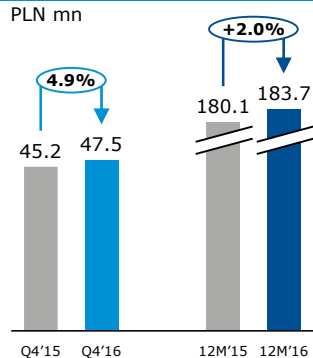
## Sales revenue



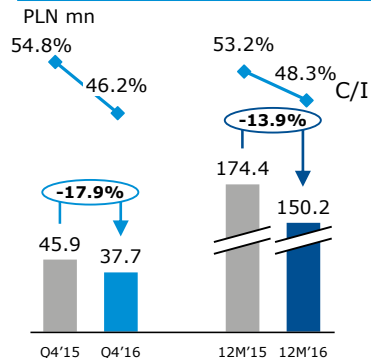
## Net profit



## EBITDA



## Operating expenses

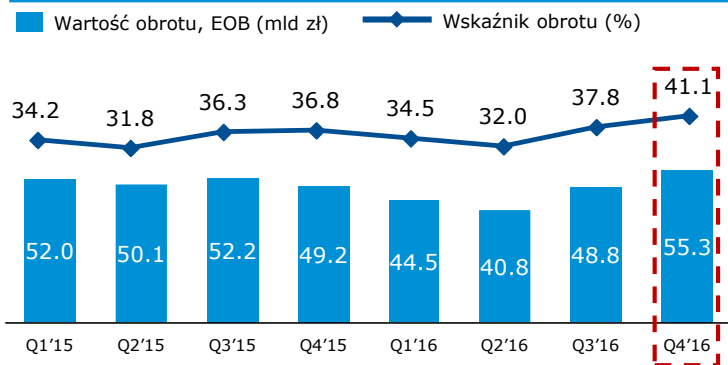


- ◆ Net profit in Q4'16: PLN 33.0 mn (up by 19.1% yoy)
- ◆ Strict cost discipline
  - ✓ C/I at 46.2% in Q4'16 and 48.3% in all of 2016
- ◆ Atypical events
  - ✓ POLPX's VAT correction and resulting interest cost
  - ✓ Donation to the Polish National Foundation

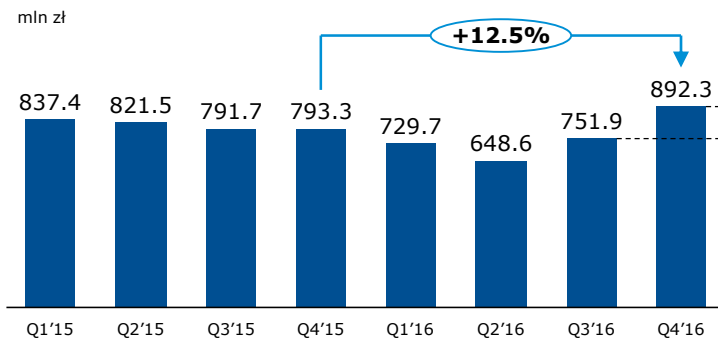
	Q4'16	2016
Net profit margin	40.3%	<b>42.3%</b>
EBITDA margin	58.1%	<b>59.1%</b>

# Investors Came Back to the Stock Market in Q4'16

## Highest velocity since Q2'13: 41.1%

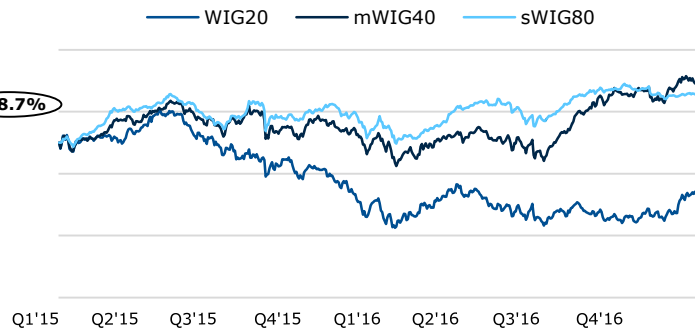


## Average daily value of EOB trade



- ◆ The best quarter since Q2'13 in terms of turnover in stocks: increase to PLN 55.3 bn in Q4'16 (+13.3% qoq and +12.3% yoy):
  - ✓ Average daily value of trade up by 18.7% qoq and 12.5% yoy
  - ✓ WIG20 gained 12.89% in Q4'16 – rising energy and banking stocks
- ◆ Share of new proprietary traders<sup>2</sup> in turnover in stocks at 8.9% in Q4'16 and 10.2% in all of 2016

## Growth of the main indices<sup>1</sup>

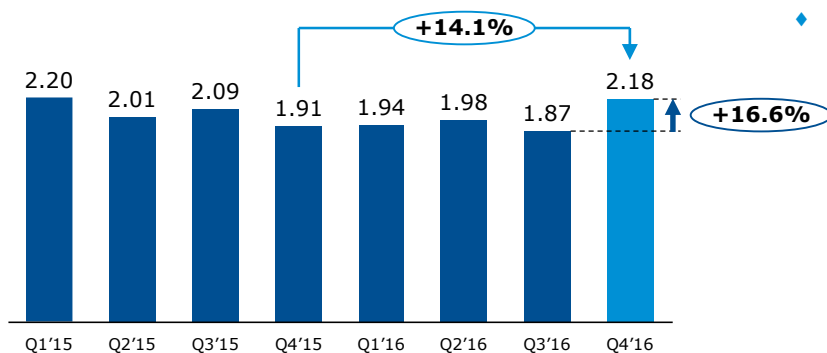


<sup>1</sup> Change in the value of turnover in stocks participating in WIG20, mWIG40 and sWIG80; Q1'15 = 100%

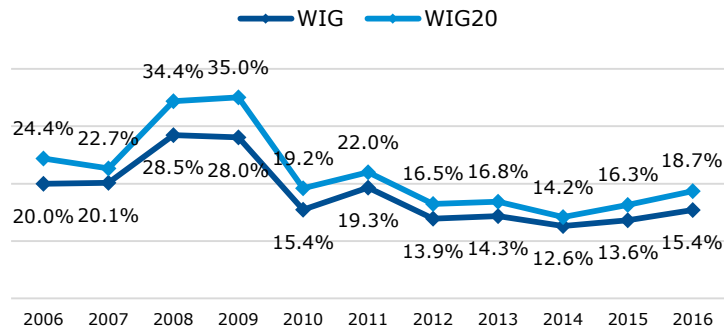
<sup>2</sup> Participants of liquidity support programmes (HVP and HVF) and a new market maker

# Derivatives Trade Clearly Picked Up

## Volume of derivatives trade



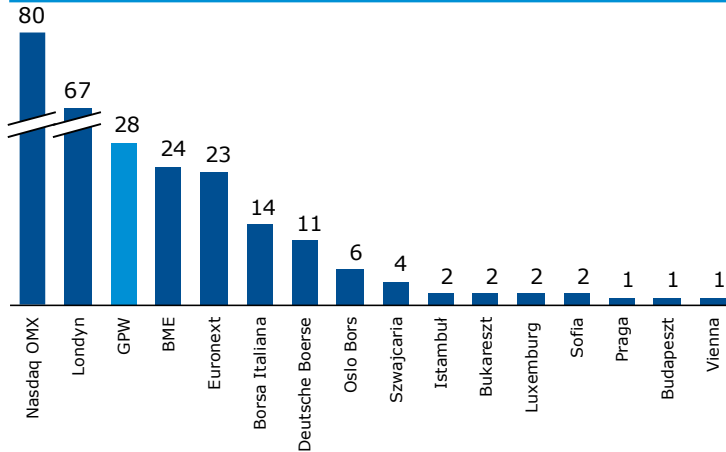
## Liquidity back to levels reported in 2011



- ◆ Volume of trade in derivatives increased in Q4 including all instruments:
  - ✓ Volume of trade in WIG20 futures: 1.2 mn contracts (+12.7% qoq and +3.9% yoy)
  - ✓ Record-high volume of trade in single-stock futures: 479 thou. contracts (+12.8 qoq and +63.9% yoy)
  - ✓ Volume of trade in interest rate futures: 4.8 thou. contracts (v. 12 thou. contracts in Q4'15 and 371 thou. contracts in Q3'15)
  - ✓ Volume of trade in FX futures: 365 thou. contracts (+39.9% qoq, +18.0% yoy)
- ◆ New GBP/PLN futures introduced in Q4
- ◆ Share of new investors in futures trade at 9.2% in Q4'16 and 7.0% in all of 2016

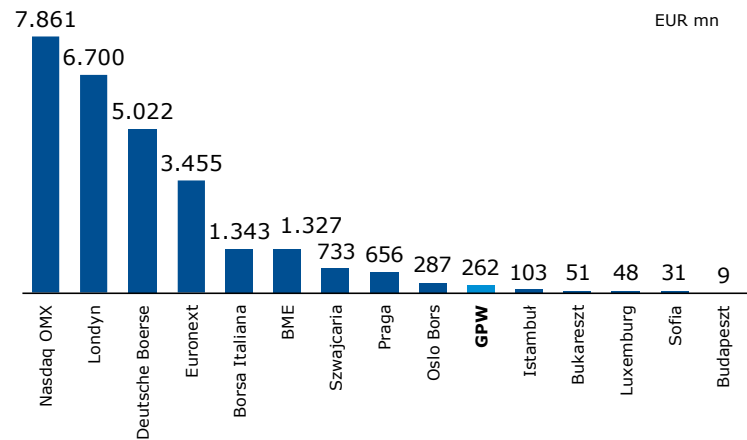
# GPW: An Important Source of Capital in Europe

GPW in European TOP3 by number of IPOs in 2016<sup>1</sup>



- ◆ GPW was the third European market by the number of IPOs in 2016 (28 IPOs v. 33 in 2015) and tenth by the value of IPOs.
- ◆ 19 new non-Treasury issued on Catalyst worth PLN 4.3 bn in 2016.

GPW in European TOP10 by value of IPOs in 2016<sup>1</sup>



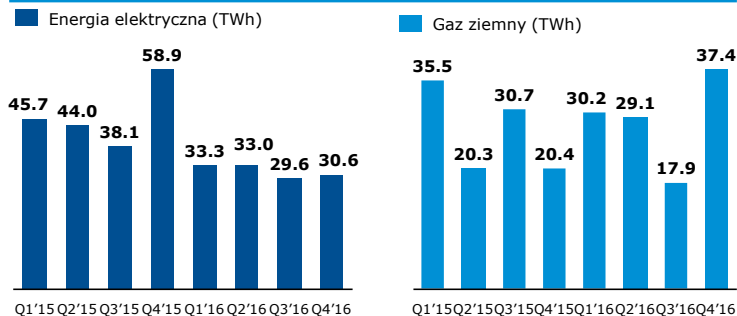
- ◆ Major IPOs in 2016:
  - ✓ Celon Pharma (PLN 245 mn)
  - ✓ X-trade Brokers DM S.A (PLN 189 mn)
  - ✓ Stelmet (PLN 182 mn)
- ◆ 7 transfers from NewConnect to the Main Market in 2016

<sup>1</sup> PwC IPO Watch 2016 r.

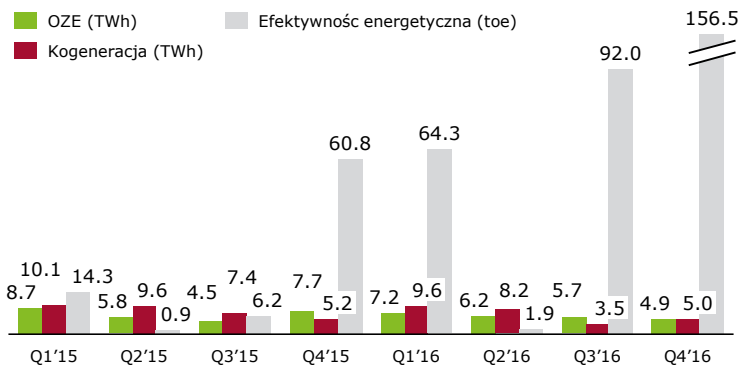


# Record-high Results on the Gas Market

## Volume of spot and forward transactions in electricity and gas



## Volume of trade in property rights



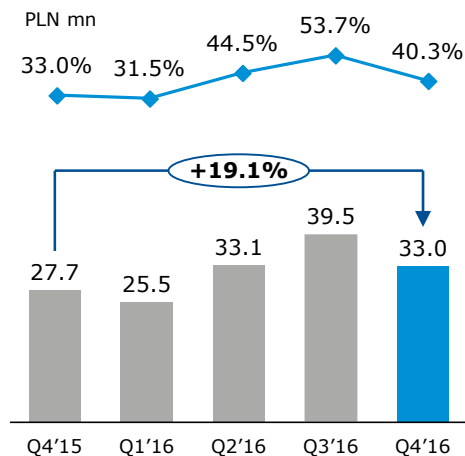
- ◆ Energy market: spot transactions up by 19.2% qoq in Q4'16, forward transactions down moderately (-0.7% qoq) as a result of phasing out of mandatory sales and shift of trade in electricity to the OTC market
  - ✓ annual volume of spot transactions in electricity was historically high at 27.6 TWh (up by 9.9 % yoy)
- ◆ Volume of trade in natural gas in 2016: 114.5 TWh – highest annual result in POLPX history.
  - ✓ record-high volume of spot transactions in Q4'16: 9.4 TWh (up by 65.3 yoy and 224.3% qoq)
- ◆ Register of Certificates of Origin/Property Rights Market:
  - ✓ as of 1 October 2016, new Energy Efficiency Act introduced white certificate solutions similar to other certificates of origin (no more tenders, phasing out of the substitution fee)
  - ✓ record-high volume of trade in property rights in energy efficiency (156.5 toe in Q4'16 and 314.8 toe in 2016)
  - ✓ 2970 new members of POLPX Register of Certificates of Origin (431 new members in 2016)
- ◆ CO<sub>2</sub> trading platform:
  - ✓ PFSA's approval for POLPX to operate a CO<sub>2</sub> allowances auction platform

Summary of the GPW Group's Activity in Q4 2016

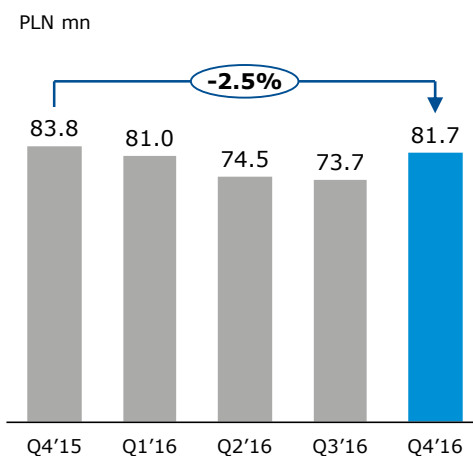
**Financial Results of the GPW Group in Q4 2016**

# Another Quarter of Solid Financial Results

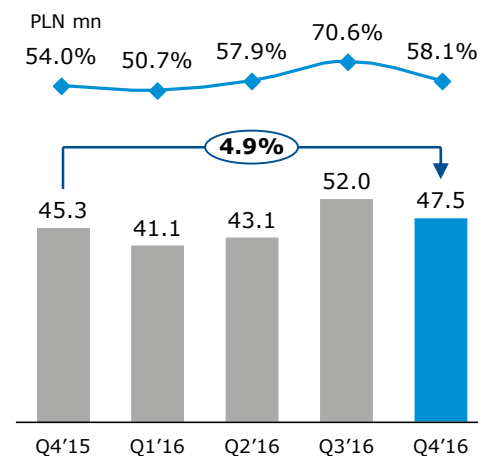
## Net profit and net profit margin



## Sales revenue



## EBITDA and EBITDA margin



- ◆ Strong uptrend in revenue, especially on the financial market
- ◆ Further cost optimisation and impact of one-off events :
  - ✓ Increase of financial costs due to adjustment of VAT in POLPX (3,6 mn PLN)
  - ✓ Donation of PLN 3 mn to the Polish National Foundation
- ◆ Solid net profit of PLN 33.0 mn and high EBITDA of PLN 47.5 mn

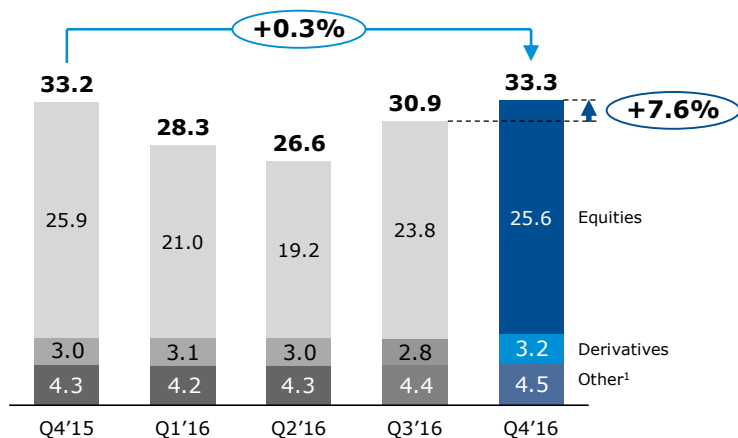
# Strong Increase of Trading Revenue

Q4'16: 40.7%



## Trading revenue – financial market

PLN mn



- ◆ Average turnover in shares per session in Q4'16 at PLN 892.3 mn vs. PLN 751.9 mn in Q3'16 and PLN 793.3 mn in Q4'15
- ◆ New fee reductions for Exchange Members:
  - ✓ Fixed fee on an order on the stock market reduced from PLN 0.20 to PLN 0.15 as of 1 November 2016
- ◆ Share of low-margin clients in turnover: 10.2% in 2016 and 8.9% in Q4'16
- ◆ Average transaction fee on the stock market in Q4'16: 2.10 bps.

## Investor activity on GPW markets

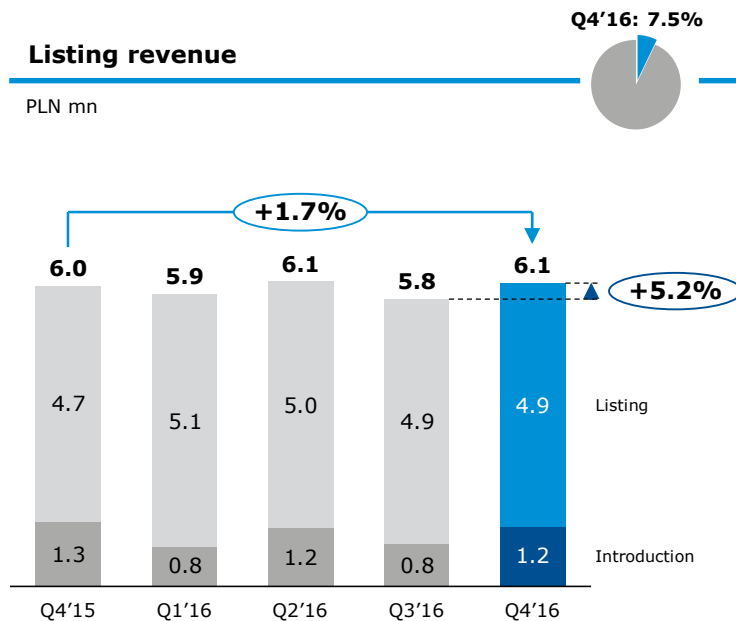
	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
Shares – value of trade (EOB, PLN bn)	49.2	44.5	40.8	48.8	55.3	203.5	189.5
					+12.3% yoy		-6.9% yoy
					+13.3% qoq		
Futures and options – volume of trade (mn contracts)	1.9	1.9	2.0	1.9	2.2	8.2	8.0
					+14.5% yoy		-2.8% yoy
					+16.9% qoq		
Treasury bonds – TBSP, cash transactions (PLN bn)	58.5	63.4	58.5	63.4	69.2	260.7	254.5
					+18.3% yoy		-2.4% yoy

<sup>1</sup> Debt instruments, other cash market instruments, other fees paid by market participants

# Stable Listing Revenue

## Listing revenue

PLN mn



- ◆ Total value of IPOs and SPOs in Q4'16 at PLN 1.1 bn
- ◆ Two out of the three biggest IPOs in 2016 took place in Q4: Celon Pharma (PLN 245 mn) and Stelmet (PLN 182 mn)
- ◆ Capitalisation of domestic companies at PLN 557.1 bn in Q4'16 vs. 516.7 bn in Q3'16

## Issuer activity

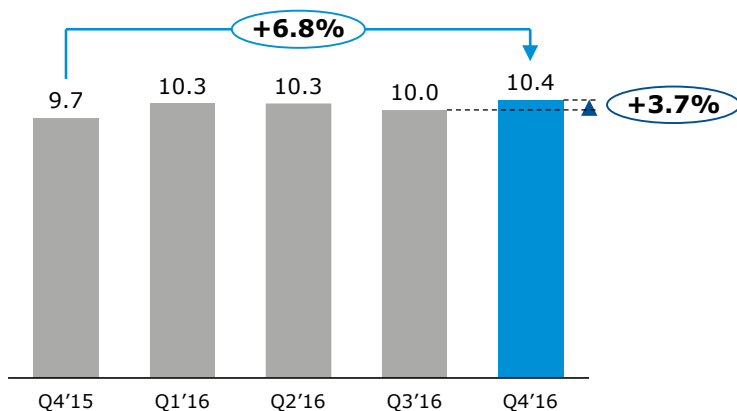
Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
<b>Number of IPOs on the Main Market</b>						
15	2	7	4	6	30	19
				-60.0% yoy		-36.7% yoy
				+50.0% qoq		
<b>Capitalisation of domestic companies (PLN bn)</b>						
516.8	543.7	496.1	515.7	557.1	516.8	557.1
				+7.8% yoy		+7.8% yoy
				+8.0% qoq		
<b>Value of IPOs (PLN mn)</b>						
578	73	394	0	629	1989	1096
				+8.8% yoy		-44.9% yoy

# Record-high Revenue from Information Services

## Revenue from information services

PLN mn

Q4'16: 12.7%



- ◆ New policy of selling non-display data as the main driver of growth in revenue in 2016; 43 clients as at the end of Q4'16 vs. 37 clients in Q3'16
- ◆ Record-high revenue from sales of processed data and indicators
- ◆ Increase in the number of subscribers for data from GPW, POLPX and Bondspot to 22.4 thou. in Q4'16 (highest since Q2'15)
- ◆ Monthly fee for top bid/ask for individual investors reduced by 25% in November 2016.

## Data vendors, subscribers and non-display clients

Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
Number of subscribers (tys.)						
221.1	224.2	222.3	222.0	224.6	221.1	224.6
				+1.2% qoq		+1.6% yoy

## Number of data vendors

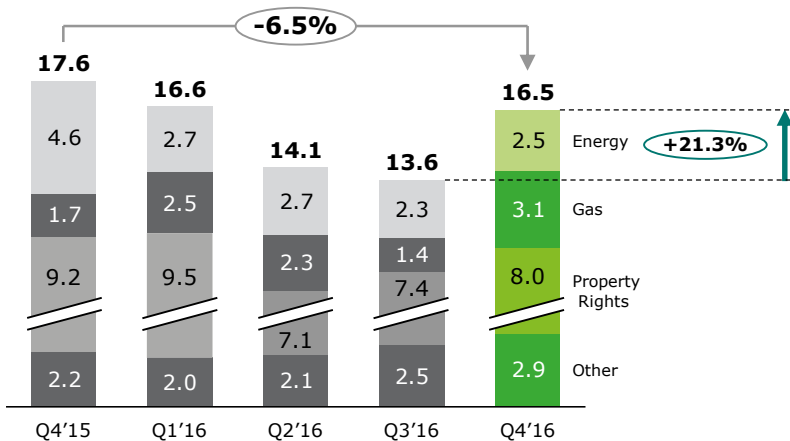
54	52	51	52	51	54	51
Non-display	29	35	37	43	-	43

# Stable Trading Revenue on Commodity Market

## Trading revenue – commodity market

PLN mn

Q4'16: 20.2%



- ◆ Increase in revenue from trade in gas and electricity driven by volumes:
  - ✓ Volume of trade in gas: +109.1 qoq and +83.3% yoy
  - ✓ Volume of trade in electricity: +3.4 qoq and -48.0% yoy
- ◆ Increase of revenue from trade in property rights driven by rising turnover in rights to energy efficiency certificates (+282% yoy and 100% qoq)
- ◆ Increase of revenue from other fees due to continued development of the RRM trade reporting service and an increase in the number of members of the market in gas and the Register of Certificates of Origin

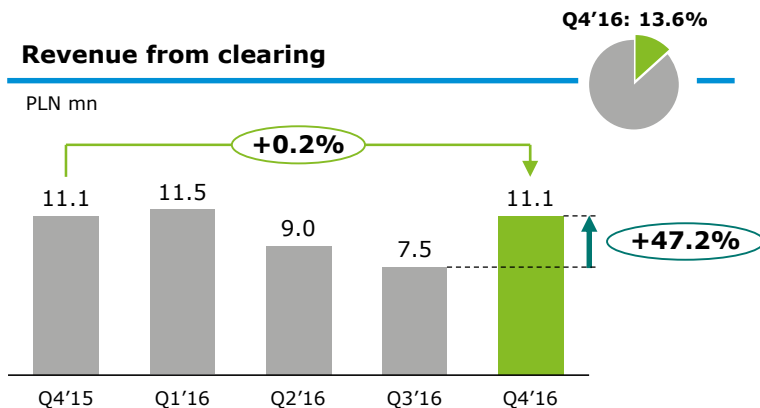
## Investor activity on the commodity market

	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
Electricity – volume of trade (TWh)							
	58.9	33.3	33.0	29.6	30.6	186.7	126.7
					-48.0% yoy		-3.2% yoy
					+3.4% qoq		
Natural gas – volume of trade (TWh)							
	20.4	30.2	29.1	17.9	37.4	106.9	114.5
					+83.3% yoy		+7.1% yoy
					109.0% qoq		
Property rights – volume of trade (TWh)							
	12.8	16.7	14.4	9.2	9.9	58.9	50.2
					-22.7% yoy		-14.8% yoy
					+7.6% qoq		

# Increase of Revenue from Clearing on the Commodity Market

## Revenue from clearing

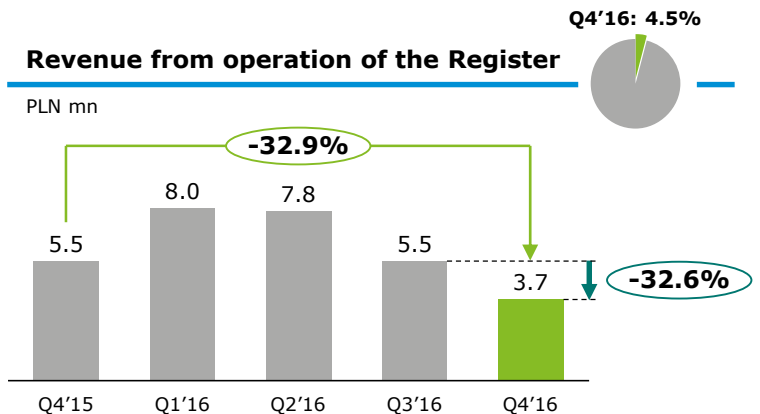
PLN mn



- ◆ Increase of revenue from clearing mainly driven by a dynamic increase of turnover on the gas market and an increase of turnover in property rights in energy efficiency certificates
- ◆ No cancellation of certificates of origin and lower volumes of certificates issued in Q4'16 (8.7 TWh in Q4'16)

## Revenue from operation of the Register

PLN mn



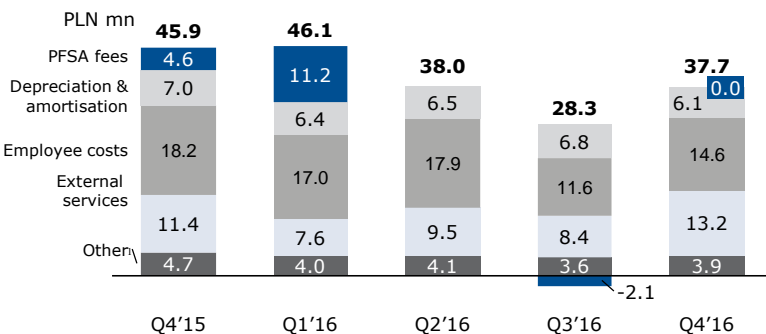
## Activity of participants of the Register of Certificates of Origin

Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
Volume of issued certificates of origin (TWh)						
9.4	16.7	9.6	12.4	8.7	50.7	47.2
				-7.4% yoy		
				-29.8% qoq		
Volume of cancelled certificates of origin (TWh)						
0.0	9.7	32.6	0.6	0.0	22.3	42.9
				-100% yoy		
				-100% qoq		
					+92.3% yoy	



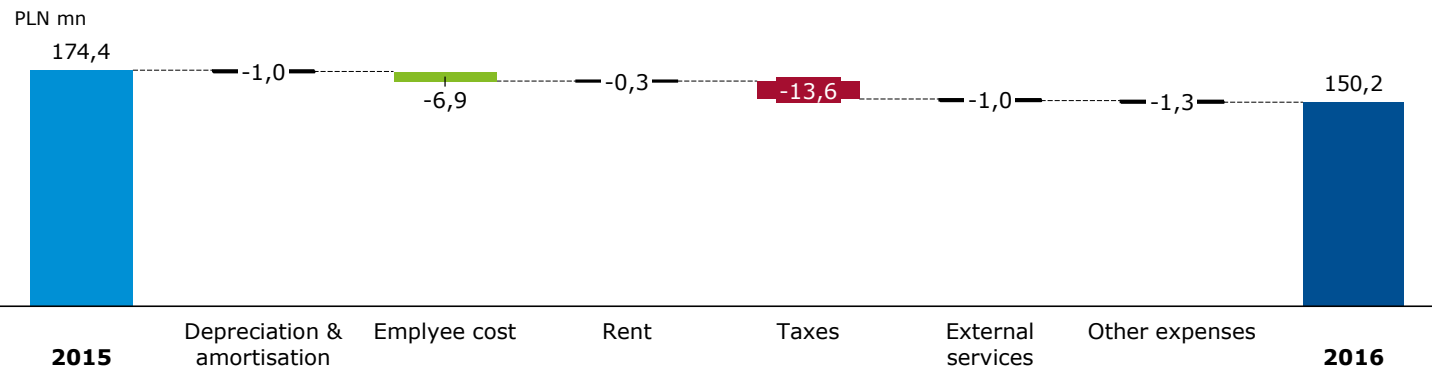
# Consistent Optimisation of Operating Expenses

## Operating expenses: +33.5% qoq and -17.9% yoy



- ◆ Increase of financial costs due to VAT adjustment and resulting interest in POLPX
- ◆ Donation to the Polish National Foundation: PLN 3 mn
- ◆ No fee paid by the GPW Group for capital market supervision (PFSA) due to modified accounting policies (all fees recognised in Q1)
- ◆ Increase of external service charges due to alignment of the trading system with MiFID II and increase of the cost of promotion and education
- ◆ C/I<sup>2</sup> in Q4'16: 46.2%, in 12m 2016: 48.3% vs 53.2% in 12m 2015

## Change in operating expenses

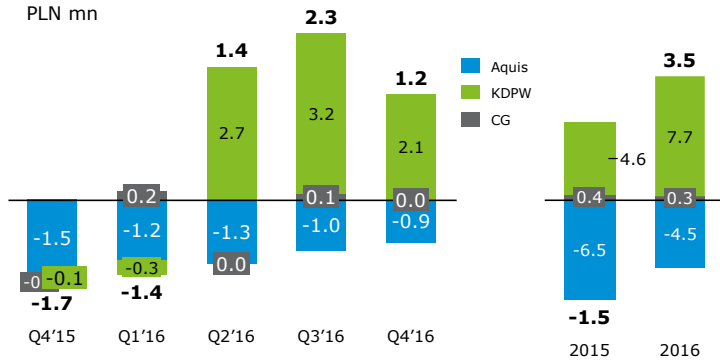


<sup>1</sup> Other includes rent, fees and charges (net of the PFSA fees), and other operating expenses

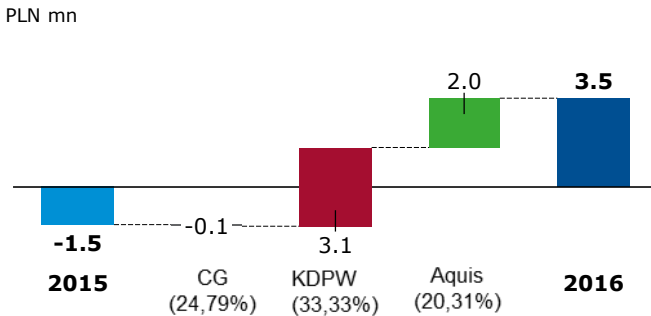
<sup>2</sup> C/I based on reported data, before netting

# Profit of Associates

## Share of profit of associates



## Change in share of profits of associates



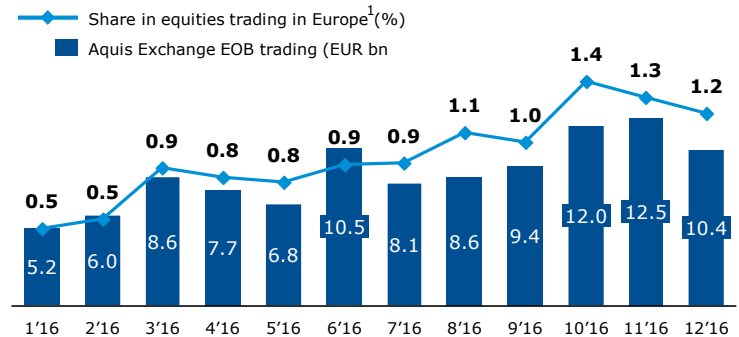
### Profit of the KDPW Group:

- ✓ profit of KDPW Group decreased in Q4'16 due to an increase of operating expenses by 21.1% qoq

### Aquis Exchange:

- ✓ share in the European equity trade market stable at more than 1.0% in Q4'16
- ✓ additional capital raised in Q4'16 (GPW's interest measured by the number of shares down to 22.99% and share in voting rights down to 20.31%)

## Turnover on Aquis Exchange



<sup>1</sup> Source: FESE

# GPW Group's Consolidated Balance Sheet

PLN mn	31.12.2015	31.03.2016	30.06.2016	30.09.2016	31.12.2016
<b>Non-current assets</b> , including among others	<b>580.6</b>	<b>577.0</b>	<b>579.6</b>	<b>584.7</b>	<b>597.3</b>
Property, plant and equipment	125.2	122.3	121.5	119.6	119.1
Intangible assets	261.7	259.9	258.1	262.4	273.8
Share of profit of associates	188.6	187.2	191.4	196.0	197.2
<b>Current assets</b> , including among others	<b>492.5</b>	<b>583.7</b>	<b>602.0</b>	<b>524.9</b>	<b>560.6</b>
Trade and other receivables	131.6	99.2	100.0	100.6	113.3
Available-for-sale financial assets	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalents	360.4	483.9	501.8	423.9	446.8
<b>Total assets</b>	<b>1,073.1</b>	<b>1,160.7</b>	<b>1,181.6</b>	<b>1,109.6</b>	<b>1,157.8</b>

- ◆ Increase of trade receivables and other receivables due to recognition of receivables from POLPX counterparties following modifications of the VAT accounting policy: PLN 66.3 mn
- ◆ Increase of other current liabilities due to POLPX's VAT liabilities of PLN 77.6 mn

**As of:**

PLN mn	31.12.2015	31.03.2016	30.06.2016	30.09.2016	31.12.2016
Equity	713.2	738.7	672.8	712.3	745.3
<b>Non-current liabilities</b>	<b>258.9</b>	<b>134.6</b>	<b>137.6</b>	<b>137.5</b>	<b>143.4</b>
Liability under the bond issue	243.8	123.6	123.7	123.7	123.5
<b>Current liabilities</b> , including among others	<b>101.0</b>	<b>287.4</b>	<b>371.2</b>	<b>259.7</b>	<b>269.2</b>
Trade payables	8.6	6.2	6.3	2.8	6.4
Income tax payable	9.5	7.2	10.4	8.9	8.1
Dividend and other liabilities	2.8	9.1	10.9	11.9	16.2
Employee benefits payable	7.3	39.0	31.0	11.6	7.1
Provisions	14.6	14.6	14.6	14.6	14.6
<b>Total equity and liabilities</b>	<b>1,073.1</b>	<b>1,160.7</b>	<b>1,181.6</b>	<b>1,109.6</b>	<b>1,157.8</b>

## **Annex: Back-up Slides**

# GPW Group's Consolidated Profit & Loss Account

PLN mn	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	2015	2016
<b>Revenue</b>	<b>83.8</b>	<b>81.0</b>	<b>74.5</b>	<b>73.7</b>	<b>81.7</b>	<b>327.9</b>	<b>310.9</b>
Financial market	49.0	44.5	43.0	46.8	49.8	200.0	184.0
Trading	33.2	28.3	26.6	30.9	33.2	136.9	119.1
Listing	6.0	5.9	6.1	5.8	6.1	24.5	23.9
Information services	9.7	10.3	10.3	10.0	10.4	38.5	41.0
Commodity market	34.2	36.1	30.9	26.6	31.2	125.2	124.9
Trading	17.6	16.6	14.1	13.6	16.5	62.6	60.9
Register of Certificates of Origin	5.5	8.0	7.8	5.5	3.7	24.2	24.9
Clearing	11.1	11.5	9.0	7.5	11.1	38.5	39.2
Other operating income	0.6	0.4	0.6	0.3	0.7	2.7	1.9
<b>Operating expenses</b>	<b>45.9</b>	<b>46.1</b>	<b>38.0</b>	<b>28.3</b>	<b>37.7</b>	<b>174.4</b>	<b>150.2</b>
Other income	11.4	7.6	9.5	8.4	13.2	39.6	38.6
Other expenses	0.0	0.6	0.0	0.4	3.6	2.2	4.6
<b>Operating profit</b>	<b>38.2</b>	<b>34.7</b>	<b>36.6</b>	<b>45.2</b>	<b>41.4</b>	<b>153.3</b>	<b>157.9</b>
Financial income	1.9	2.0	5.2	3.4	2.3	9.9	13.0
Financial expenses	3.5	3.0	2.9	3.0	3.2	12.1	12.1
Share of profit of associates	-1.7	-1.4	1.4	2.3	1.2	-1.5	3.5
<b>Profit before income tax</b>	<b>34.9</b>	<b>32.3</b>	<b>40.3</b>	<b>48.0</b>	<b>41.7</b>	<b>149.6</b>	<b>162.3</b>
Income tax	7.2	6.8	7.1	8.5	8.8	28.1	31.1
<b>Net profit</b>	<b>27.7</b>	<b>25.5</b>	<b>33.1</b>	<b>39.5</b>	<b>33.0</b>	<b>121.5</b>	<b>131.1</b>
<b>EBITDA</b>	<b>45.2</b>	<b>41.1</b>	<b>43.1</b>	<b>52.0</b>	<b>47.5</b>	<b>180.1</b>	<b>183.7</b>

- ◆ Increase of other operating expenses by PLN 3.0 mn due to a donation to the Polish National Foundation
- ◆ Increase of financial expenses by PLN 3.6 mn in 2016 due to interest accrued on POLPX's VAT overdue liability
- ◆ Increase of external service charges by PLN 1.6 mn due to alignment of the IT systems with MiFID II and by PLN 1.5 mn of the cost of promotions
- ◆ Financial income down in Q4'16 due to positive revaluation of Aquis in Q2'16 and Q3'16

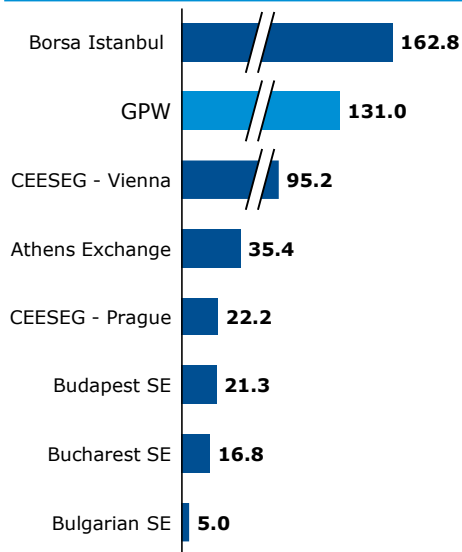
# GPW Group's Consolidated Cash Flows

PLN mn	2015	2016
<b>Cash flows from operating activities, including among others:</b>	<b>93.1</b>	<b>205.8</b>
Cash flows from operating activities	110.1	226.9
Net profit of the period	123.7	123.7
Adjustments:	121.5	131.1
Income tax	-11.5	95.8
Depreciation of property, plant and equipment	28.1	31.1
Financial income on restatement of share of profit of associates	26.8	25.8
Interest income on deposits	-2.8	-5.8
Interest and premium on bond issue	-6.2	-6.4
Share of profit of associates	6.6	7.6
Change in current assets and liabilities	1.5	-3.5
Decrease of trade and other receivables	-65.0	42.3
Increase / decrease of other liabilities	-55.3	18.3
Income tax expense	-17.0	-21.1
<b>Cash flows from investing activities, including among others:</b>	<b>-14.6</b>	<b>-14.5</b>
Purchase of property, plant and equipment	-23.9	-13.7
Purchase of intangible assets	-6.9	-9.9
Sale of available-for-sale financial assets	10.0	0.0
Purchase of associates	0.0	0.0
Interest received	6.8	6.4
<b>Cash flows from financing activities, including among others:</b>	<b>-107.2</b>	<b>-104.9</b>
Dividend paid and company social fund	-100.7	-99.1
Interest paid	-6.7	-5.8
Proceeds from bond issue	125.0	0.0
Buy-back of bonds issued	124.5	0.0
<b>Increase/decrease of net cash and cash equivalents</b>	<b>-28.7</b>	<b>86.4</b>
Cash and cash equivalents - opening balance	389.0	360.4
Cash and cash equivalents - closing balance	<b>360.4</b>	<b>446.8</b>

- ◆ Increase of cash flows from operating activities due to a higher net profit and a change of assets due to a reduction of the POLPX Group's current VAT payments and an increase of liabilities following reclassification of GPW bonds to current liabilities in view of approaching redemption
- ◆ Capital expenditures for investments in GPW's trading system relating to MiFID II and the POLPX Group's trading and clearing systems

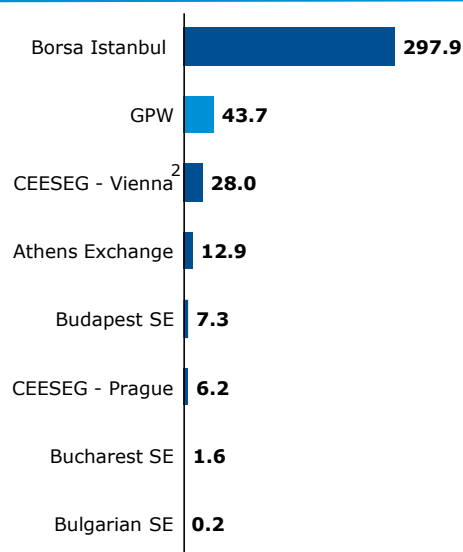
# GPW v. Other European Exchanges

## Capitalisation



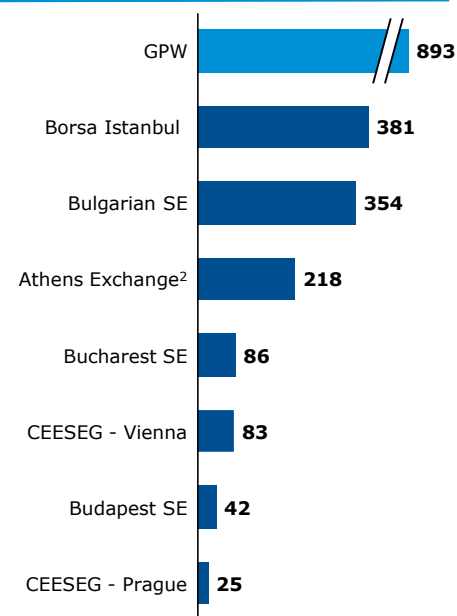
EUR bn

## Value of equity trade, EOB<sup>1</sup>



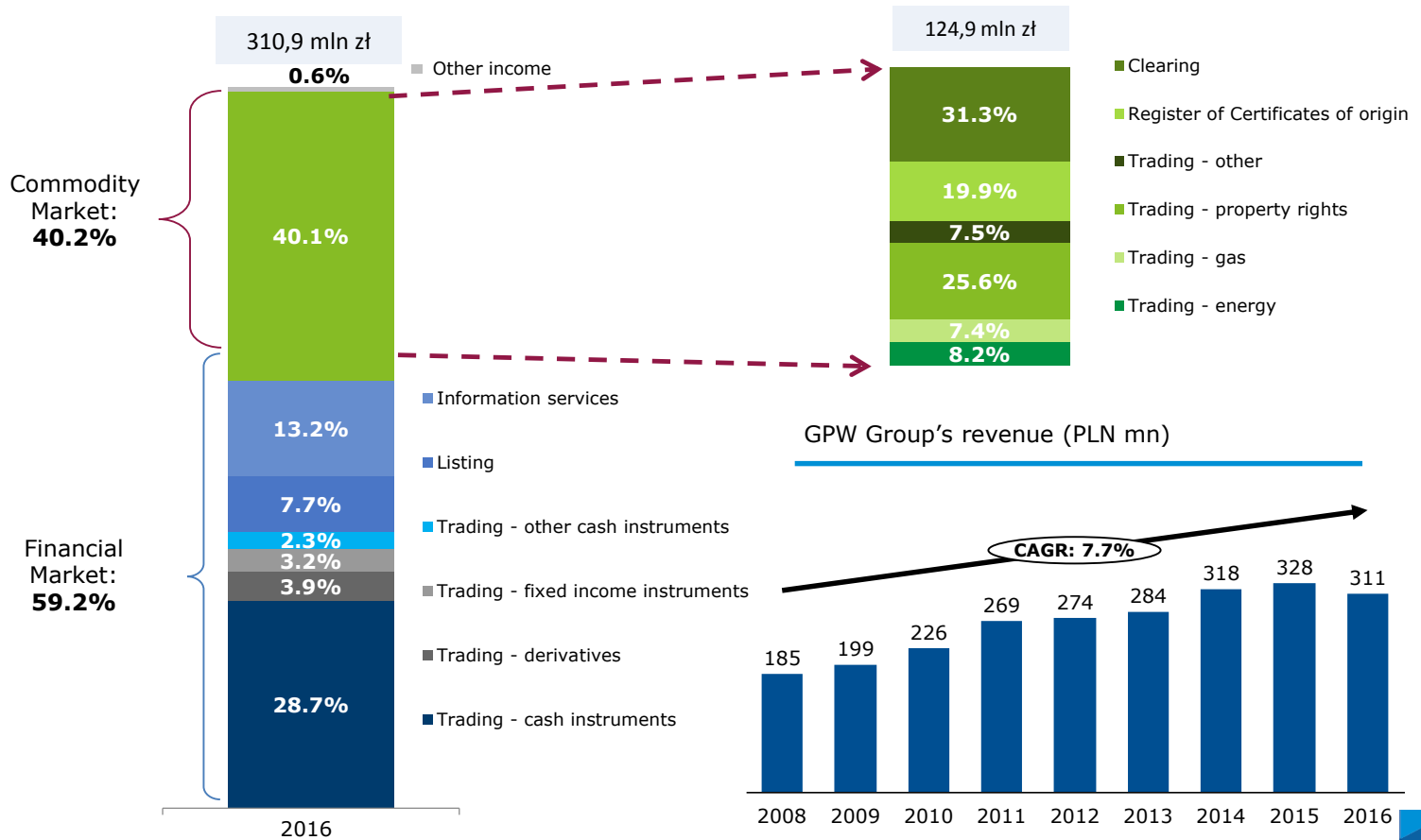
EUR bn

## Number of listed companies



<sup>1</sup> EOB – Electronic Order Book, as at the end of September 2016  
Source: FESE, December 2016

# GPW Group's Revenue Structure





# Financial Market: Trade in Equities

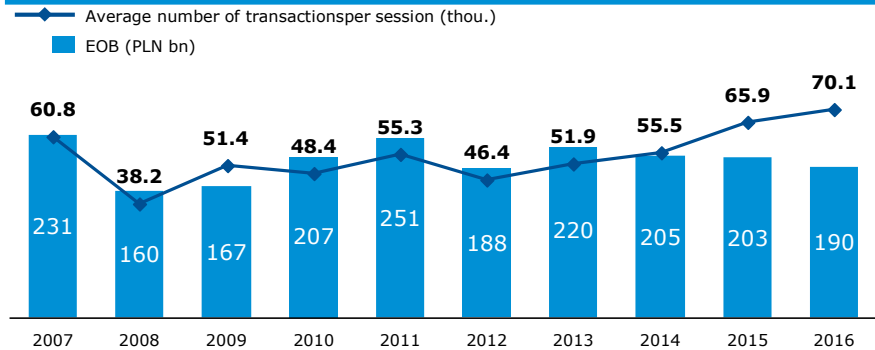


**28.8%<sup>1</sup>**

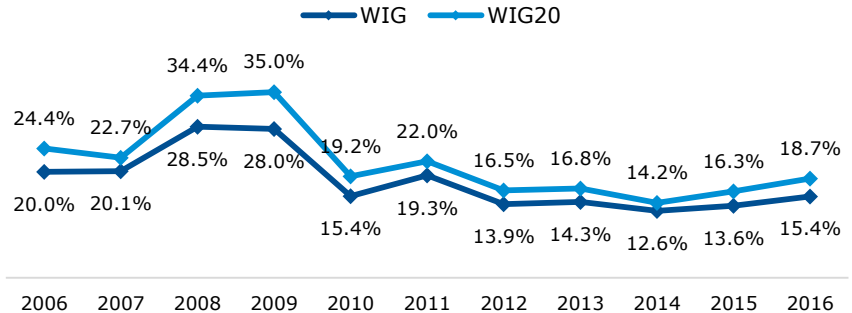
◆ Revenue drivers:

- ✓ Value of trade in equities
- ✓ Structure of orders (small, large, mid-sized)

Value of trade in equities and number of transactions



Velocity ratio and volatility - equity market



<sup>1</sup> Share in GPW Group's revenue in 2016

# Financial Market: Trade in Derivatives

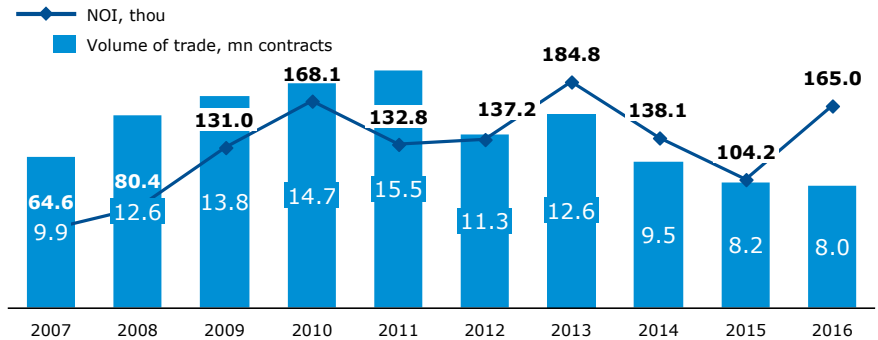


**3.9%<sup>2</sup>**

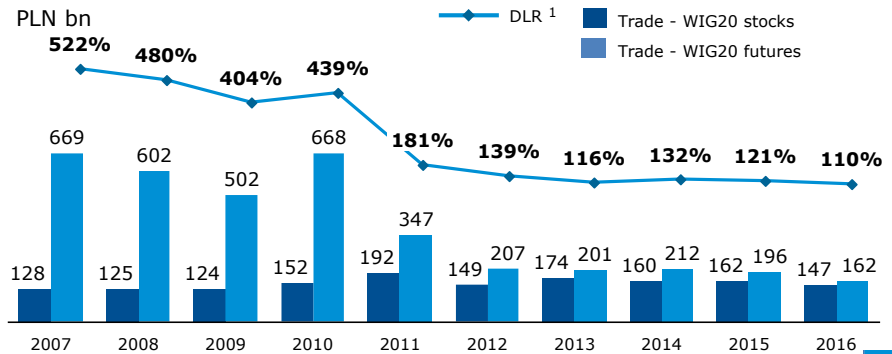
◆ Revenue drivers:

- ✓ Volume of trade in futures
- ✓ Number of open interest
- ✓ Volatility

Volume of trade in derivatives



Volume of trade in futures v. volatility



<sup>1</sup> Velocity ratio (value of trade in WIG20 futures to value of trade in WIG20 stocks)

<sup>2</sup> Share in GPW Group's revenue in 2016

# Financial Market: Other Instruments and Fees Paid by Participants



**3.3%<sup>1</sup>**

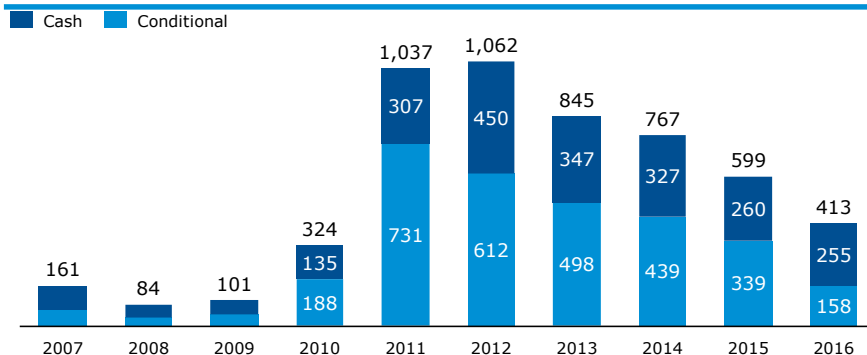


**2.2%<sup>2</sup>**

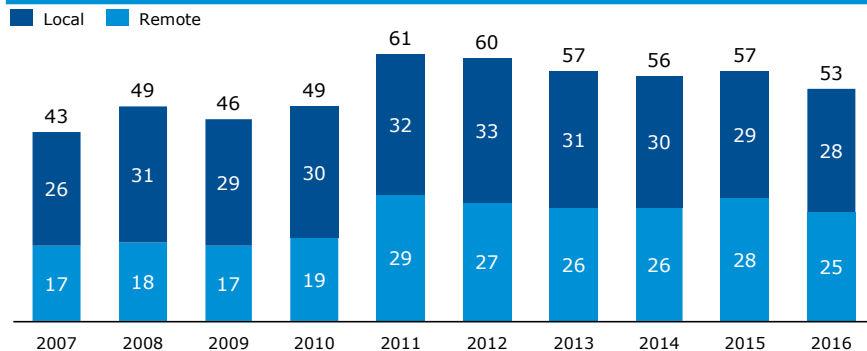
◆ Revenue drivers:

- ✓ Value of trade in Treasury bonds
- ✓ Number of exchange members

Value of trade on Treasury BondSpot Poland, PLN bn



Number of exchange members



<sup>1</sup> Share in GPW Group's revenue in 2016, trade in debt instruments

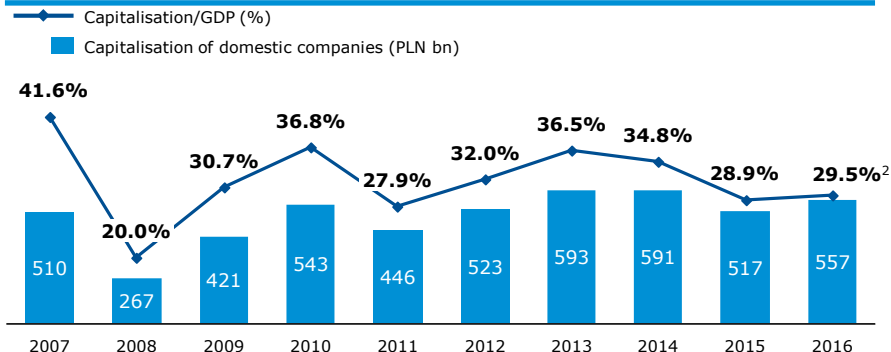
<sup>2</sup> Share in GPW Group's revenue in 2016, fees paid by market participants

 **7.7%<sup>1</sup>**

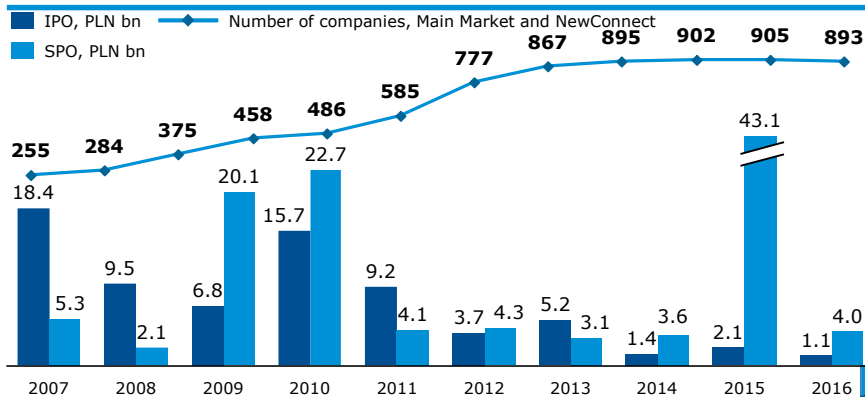
◆ Revenue drivers:

- ✓ Capitalisation at YE
- ✓ Value of new issue shares and bonds
- ✓ Number of issuers

## Capitalisation of domestic companies



## IPO/SPO value and number of companies



<sup>1</sup> Share in GPW Group's revenue in 2016

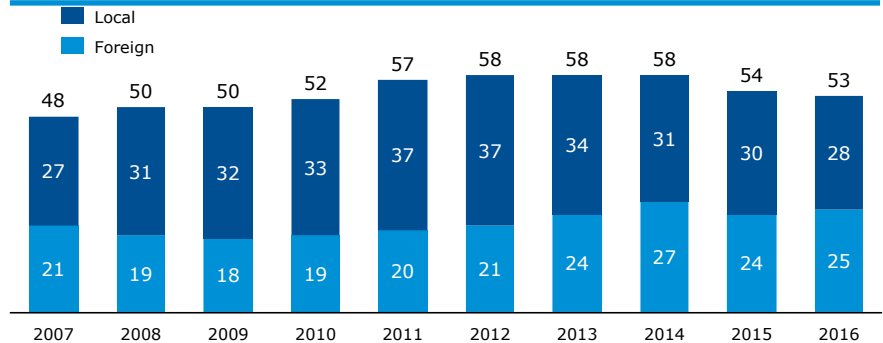
<sup>2</sup> Source: Estimates -NBP



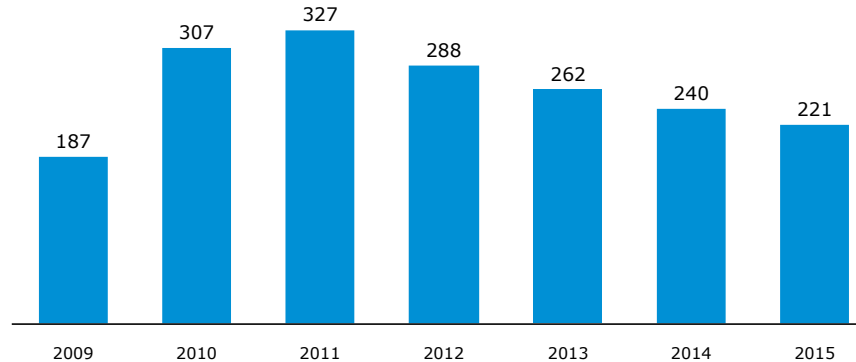
**13.2%<sup>1</sup>**

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

Number of data vendors



Number of subscribers (thou.)



<sup>1</sup> Share in GPW Group's revenue in 2016

# Commodity Market: Trade in Electricity and Gas

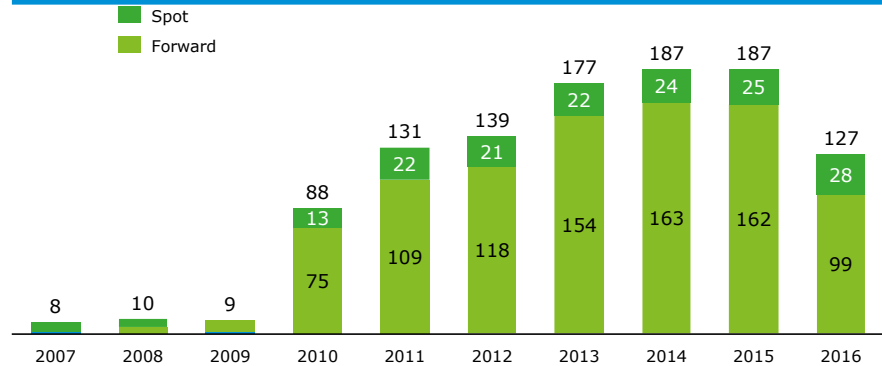


6.3%<sup>2</sup>

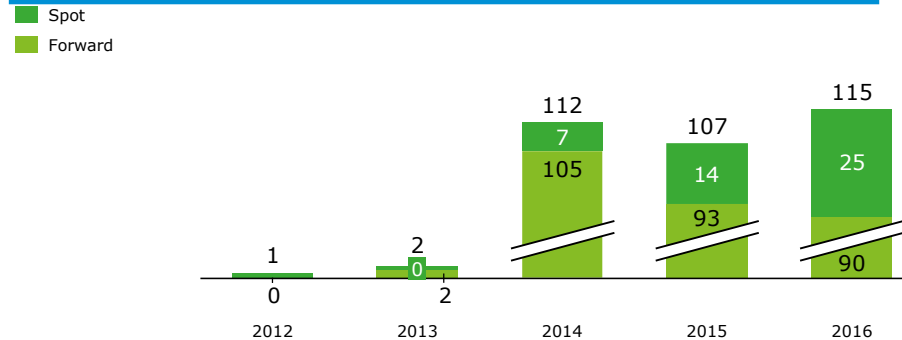
## ◆ Revenue drivers:

- ✓ Volume of trade in electricity
- ✓ Volume of trade in gas
- ✓ Share of spot and forward trade

Volume of trade in electricity (TWh)<sup>1</sup>



Volume of trade in gas (TWh)



<sup>1</sup> Data for 2006-2013 include trade on the GPW Energy Market poee

<sup>2</sup> Share in GPW Group's revenue in 2016

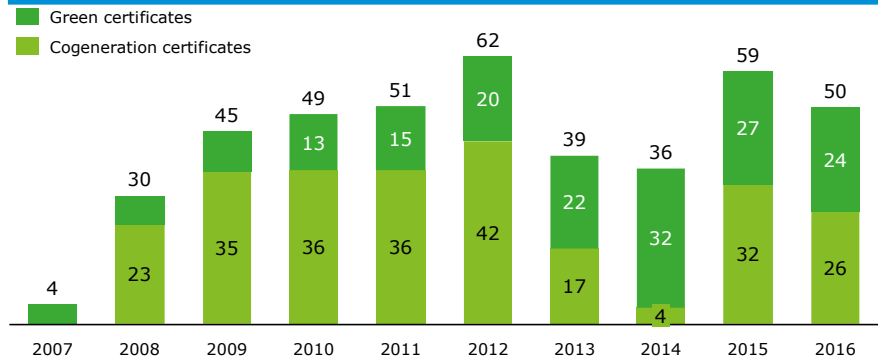


**10.3%<sup>1</sup>**

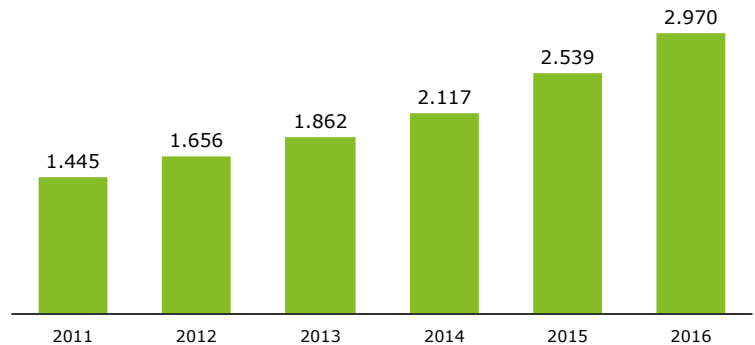
◆ Revenue drivers:

- ✓ Volume of trade in property rights
- ✓ Share of certificate categories in trade
- ✓ Number of register participants

Trade in property rights (TWh)



Number of participants of the Register of Certificates of Origin



<sup>1</sup> Share in GPW Group's revenue in 2016

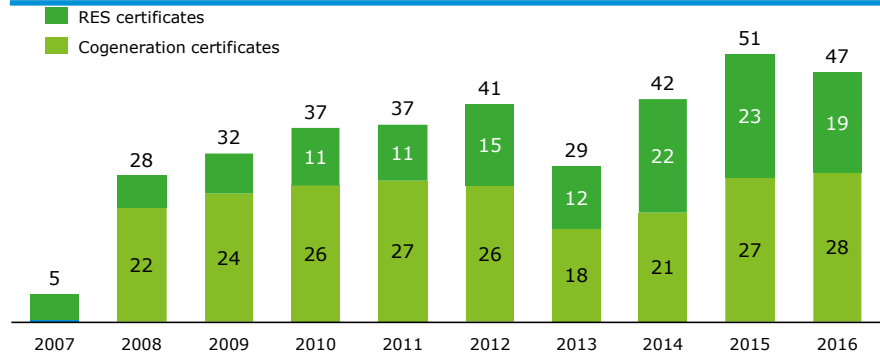


8.0%<sup>1</sup>

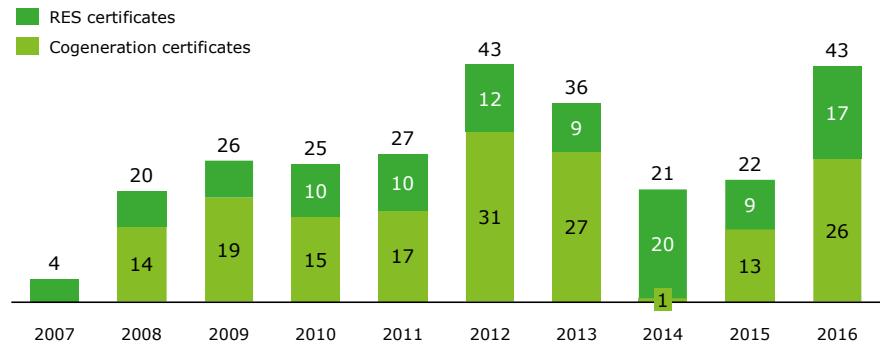
◆ Revenue drivers:

- ✓ Volume of issued property rights
- ✓ Volume of cancelled property rights

Volume of issued property rights (TWh)<sup>1</sup>



Volume of cancelled property rights (TWh)



<sup>1</sup> Share in GPW Group's revenue in 2016



## IR events

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- ◆ **27 April 2017**  
Publication of GPW Group's Consolidated Interim Report for Q1 2017
- ◆ **27 July 2017**  
Publication of GPW Group's Consolidated Interim Report for H1 2017
- ◆ **30 October 2017**  
Publication of GPW Group's Consolidated Interim Report for Q3 2017

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