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The date and the time stated on the front page is the date of the preparation of this document. The price used throughout the recommendation to calculate adequate ratios is the "last" price stated on the front page of this document.

The definitions of terms used in the document include:

NII – Net interest income – interest income minus interest expense.

Net F&C – Net fee and commission income – fee and commission income minus fee and commission expense.

## Polish video game developers

LLP – loan loss provisions – an expense set aside as an allowance for bad loans.  
 NPL – non-performing loan – loans that are in default or close to be in default.  
 Cost/Income – operating expenses divided by total banking revenue.  
 ROE – return on equity – net income (or adjusted net income) divided by the average shareholders' equity.  
 ROA – return on assets – net income (or adjusted net income) divided by the average assets.  
 EBIT – earnings before interests and tax.  
 EBITDA – earnings before interests, tax, depreciation and amortization.  
 EPS – earnings per share – the net income (or adjusted net income) divided by the number of shares outstanding.  
 P/E – price to earnings ratio – price divided by earnings per share.  
 PEG – P/E ratio divided by the annual EPS growth, usually over a certain period of time.  
 CAGR – compound annual growth rate.  
 BVPS – book value per share, the book value of the Company's equity divided by the number of shares outstanding.  
 P/BV – price to book value - price divided by the BVPS.  
 DPS – dividend per share – dividend of a given year divided by the number of shares outstanding.  
 DY – dividend yield – dividend of a given year divided by the current price.  
 DDM – dividend discount model – a fundamental method of valuation based on the assumption that the value of stock equals the sum of all discounted future dividends.  
 FV – Fair Value, calculated based on valuation methods outlined in the document.

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Rating	Difference between FV and price at recommendation
Buy	Above 10%
Hold	In between (and including) -10% and 10%
Sell	Below -10%

### IPOPEMA Research - Distribution by rating category (July 1 – September 30, 2019)

	Number	%
Buy	18	58%
Hold	10	32%
Sell	3	10%
Total	31	100%

### Rating History – 11 bit studios

Date	Recommendation	Fair Value	Price at recommendation	Author
02/12/2019	BUY	PLN 400.00	PLN 348.50	Michał Wojciechowski Marcin Nowak

### Rating History – CD Projekt

Date	Recommendation	Fair Value	Price at recommendation	Author
14/02/2018	BUY	PLN 129.90	PLN 109.10	Zaneta Marzec
24/06/2019	SELL	PLN 172.00	PLN 202.60	Michał Wojciechowski Marcin Nowak
02/12/2019	SELL	PLN 212.00	PLN 262.50	Michał Wojciechowski Marcin Nowak

### Rating History – PlayWay

Date	Recommendation	Fair Value	Price at recommendation	Author
02/12/2019	BUY	PLN 240.00	PLN 178.20	Michał Wojciechowski Marcin Nowak

### Rating History – Ten Square Games

Date	Recommendation	Fair Value	Price at recommendation	Author
02/12/2019	BUY	PLN 220.00	PLN 167.00	Michał Wojciechowski Marcin Nowak