

CD Projekt (CDR PW)

The First Domino Has Fallen

SHORT

THE ANALYST

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Investment Thesis

- **Cyberpunk 2077, released on 10 December 2020, is highly unoptimised on last generation consoles, which we estimate make up 40% of the currently installed player base.**
- **Our estimates for units sold are 10%, 15%, and 30% below consensus for FY'20e, FY'21e, and in the medium term, respectively.**
- **CD Projekt's share price had increased more than 10x since 2016 without a major game release but with very high expectations for Cyberpunk 2077.**
- **Longer term risks are not priced in as management may struggle to please its main stakeholders, including players (timely patches to fix bugs), employees (who may be burnt out), and investors (unit sales and Cyberpunk Online expectations).**
- **We believe the stock presents a liquid, immediately actionable, and asymmetric shorting opportunity with low upside risk and ~47% downside potential.**

Current Price: **PLN 300**

2Y Price Target: **PLN 160**

Forecast Return: **~47%**


3m ADV: **\$40m**

Market Cap: **€7bn**

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We initiate a short recommendation on CD Projekt, with a target price of PLN 160, and recommend building positions immediately as catalysts are already playing out. Cyberpunk 2077 was released on 10 December 2020 and is tracking significantly below our quality expectations. This note is shorter than our typical initiation due to the urgency and simplicity of the idea. The company plans to **release sales figures before the holiday break**.

We believe now is an opportune time to short the stock despite a 30% fall from its highs as consensus estimates are likely too high and CD Projekt's reputation could be impaired in the long term. We have seen how rapidly **Ubisoft's** share price collapsed in October 2019 when Ghost Recon Breakpoint underperformed. We believe CD Projekt's fall could be greater as its portfolio is much more concentrated.

Cyberpunk 2077 Is Disappointing on Xbox One and PlayStation 4

CD Projekt's share price was almost completely reliant on the success of Cyberpunk 2077, as we believe it is the predominant revenue driver over the next five years. **Numerous press outlets, reviewers, and players find the game inadequate on basic last-gen consoles, which we estimate make up ~40% of the intended audience.** The experience for the remaining 60% is not amazing either (i.e., does not reach a 95+ critic score) – in our view the game has been overhyped and we believe it could sell materially below consensus expectations.

- **The initial 91 score on OpenCritic was based on reviewers' experience of the PC version of the game** and did not reflect the extent of the unpolished, buggy gameplay that much of the console player base is experiencing. The critic rating is 85 as of 15 December 2020. **Xbox One** and **PS4** versions have 4/10 and 3/10 user scores on Metacritic respectively.
- **We estimate that 40% of Cyberpunk's potential market in FY'20 is the Xbox One S and PlayStation 4.** We arrive at this figure by assuming a 65/35 console/PC split, roughly the same as The Witcher 3 (source: company presentation sent to us on 18 July 2019) and **global games market**. We assume that the console installed base by the end of December 2020 will be split roughly 60/35/5 between the 2013/2017/2020 generations of consoles (using industry commentary for 2017 consoles and **VGChartz data for 2020 consoles**).

- Last-gen consoles struggle to sustain 30 FPS at 720p, which we consider as a low bar for a AAA video game. Furthermore, there are reports on social media of the game freezing and crashing on last-gen consoles. **The game is 'simply not in an acceptable state'** on these platforms according to IGN, a major video gaming news outlet.
- CD Projekt has **offered refunds to those who purchased the game on console**. Although we initially believed this to be CD Projekt going above and beyond, only refunds in line with retailer policies are honoured, **as clarified on an investor call on 14 December 2020**.

Exhibit 1: Xbox One and PlayStation 4 Versions of the Game



Source: *IGN YouTube, Digital Foundry YouTube* (Accessed December 2020)

- We believe the studio is at risk of creating bad will with players and gaming community. We think **the company did not reveal last-gen gameplay or allow reviews on last-gen consoles before the release date** to potentially avoid reducing pre-orders and day one sales. Piotr Nielubowicz, CD Projekt’s CFO, stated on the Q3’20 earnings call (25 November 2020, transcript accessed via Senticio) that the game runs ‘surprisingly good... very good’ on these last-gen platforms.
- Even on PC, where the game has averaged an **89 score on Metacritic**, Cyberpunk struggles to match The Witcher 3: Wild Hunt in user score (**7.0** for Cyberpunk 2077 versus **9.4** for The Witcher 3), and this is also the case on Steam (**78%** versus **97%** respectively). The PC version has fewer – but still noticeable – glitches.
- CD Projekt has committed to patch and update the last-gen versions of the game by February 2021, which delays the timeline for future DLCs and Cyberpunk Online.

We believe CD Projekt will struggle to hit consensus estimates for units sold in FY’20e (we estimate 18m versus 20.5m from company compiled consensus provided to us in an email on 16 December 2020) due to the relatively weak reviews, especially on last-gen consoles, which make up around 40% of its market. We expect unit sales to be 18m or below; we take a 30% discount to a typical 3x ratio of pre-order sales to ~1 month sales figures (Grand Theft Auto V/The Witcher 3) due to the issues described above.

Whilst the stock has already fallen and is beginning to price in estimate reductions, we think sell-side numbers may come down much more. We believe 28m units will be sold in the 12 months following the release (versus 32m consensus), and 45m during the five years following the release, compared to the 66m expected by consensus.

From our experience, sales of video games are heavily weighted towards the release date and the weeks following. The negative sentiment and word-of-mouth feedback do not bode well for the series in the long term. Even the company, on our call on 18 July 2019, flagged that a game can lose half of its potential sales if released with lots of bugs.

The Game Is Not Perfect on PC/Next-Gen Either

Several parts of the game including the story, graphical detail (when played on a high-end PC), and voice acting are amazing. The main story line is 60+ hours of high-intensity entertainment. However, top reviews (whether on Reddit or OpenCritic) mention overly simplistic gameplay and poor implementation of artificial intelligence, which we think are both important parts of an open world RPG.

The bull thesis that CD Projekt can replicate Grand Theft Auto V's (GTA V) success (135m units sold up until and including 30 September 2020, according to Take-Two's latest 10Q) and that of GTA Online appears unachievable to us. **GTA V scored 96% on OpenCritic** and **Online arrived two weeks after launch**. Cyberpunk 2077 has a score of 85 and Online has no release date, although it is slated to be **a standalone large project released after 2021**. More information is due to be shared in Q1'21 when the company intends to update on its strategy.

Potential Impacts on Internal Culture

A second key question is whether the culture at CD Projekt has been impacted. We believe there is now risk of employee dissatisfaction. **Management pledged in May 2019 to avoid mandatory crunch** (significant overtime) in a conversation with Kotaku. The journalist, Jason Schreier, had previously investigated the 'rocky development' of Anthem and had four former CD Projekt employees reach out to tell him that they had seen similar problems in Warsaw. Schreier later moved to Bloomberg, where he reported on **management ordering six-day weeks ahead of launch**.

Although the crunch was expected to end on release date, we believe the issues need to be fixed as soon as possible for the game to be the success that the share price ascribes to it and, therefore, we expect the crunch to continue for the foreseeable future. **Glassdoor reviews** and news reports have painted a picture of declining morale in the firm. In a creative business, the next few months will be critical to the long term success of the company.

Two high-profile members of the firm already departed during the development: **Benjamin Lee** (Development Director) and **Sebastian Stepien** (Creative Director). Further churn is possible and would likely be detrimental for the firm. Management insiders have already cashed in PLN 150m worth of shares between July and September 2020 (according to Bloomberg), although they do remain large shareholders.

Valuation

Valuing a company that releases one AAA game every four to five years is difficult, especially when internal and external longer-term effects are unclear. We believe there is limited upside; market cap per employee is €5.9m versus €2.7m for Zenimax, €3.2m for Take-Two, and €3.4m for Electronic Arts. The ratio is more comparable to Activision Blizzard (€5.9m), but we think that the risk embedded in CD Projekt's earnings potential is significantly higher.

We value CD Projekt by valuing Cyberpunk 2077 and Cyberpunk Online using a DCF approach, GOG.com using an EV/Sales multiple, present value of future AAA games every four years using an equivalent annual annuity approach, and a real option approach for expansion in number of studios. Our estimate of the company value is PLN 15 bn, or PLN 160 per share. The assumptions and calculations are presented in Exhibit 2, 3, and 4 below. The tables are also available in the model.

Exhibit 2: CD Projekt's Sum-of-the-Parts

The Analyst SOTP	PLN m	Explanations
Cyberpunk 2077	2,895	See Cyberpunk tab
Cyberpunk Online	988	See Cyberpunk tab
One AAA every 4 years	7,991	Equivalent annual annuity approach
2nd studio option value	1,998	Expansion option
3rd studio option value	499	Expansion option
GOG.com	1,000	5x EV/Sales - platform potential
Total	15,371	
per share	160	
<i>Downside</i>	<i>-48%</i>	

Source: The Analyst Research Estimates (Completed December 2020)

In conclusion, we are short CD Projekt, with 47% downside potential to a PLN 160 target price. We believe the shares have yet to fully reflect the negative reception of Cyberpunk 2077 and the potential longer term ramifications. This is a timely idea with

short-term catalysts, where we are lower than consensus units sold estimates by 10% in the FY'20e, 15% in FY'21e, and 30% below in the medium term.

Exhibit 3: Cyberpunk 2077 DCF

PLN m	2020	2021	2022	2023	2024
Units (m)	18	10	8	5	4
Retail price \$ (incl VAT + DLCs)	60	50	45	40	30
Retail price PLN (incl VAT + DLCs)	220	183	165	146	110
Digital share of sales	50%	80%	90%	95%	95%
Digital royalty %	70%	72%	74%	76%	78%
Retail share of sales	50%	20%	10%	5%	5%
Retail royalty %	40%	40%	40%	40%	40%
Retail marketing budget	-100	-50	0	0	0
ASP to CDR (PLN)	121	120	116	109	84
Revenue (PLN)	2,074	1,150	930	543	334
Internal Marketing Costs (PLN)	-225	-150	-50	-20	-20
G&A	-40	-40	-40	-40	-40
Development CF	-80	-40	-30	-20	-20
FCFE (pre-tax & profit share)	1,729	920	810	463	254
10% profit share	-123	-92	-81	-46	-25
Tax	-221	-166	-146	-83	-46
FCFE	1,385	663	583	333	183
FCFE discounted at 7.5%	1,385	613	499	264	134

Source: The Analyst Research Estimates (Completed December 2020)

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Exhibit 4: DCF of a Generic AAA Game

PLN m	FY+1	FY+2	FY+3	FY+4	FY+5	FY+6	FY+7	FY+8	FY+9
	Development Phase				Sales Phase				
Units (m)					16	10	6	5	3
Retail price (USD, incl VAT + DLCs)					60	55	50	45	35
Retail Price (PLN, incl VAT + DLCs)					220	201	183	165	128
Digital share of sales					50%	75%	90%	95%	95%
Digital royalty %					70%	72%	74%	76%	78%
Retail share of sales					50%	20%	10%	5%	5%
Retail royalty %					40%	40%	40%	40%	40%
Retail marketing budget	-	-	-	-	-200	-38	-13	-	-
ASP to CDR (PLN)					121	125	129	122	97
Revenue					1,732	1,211	763	611	292
Internal marketing costs	-	-10	-10	-30	-120	-20	-10	-	-
G&A	-40	-40	-40	-40	-40	-40	-40	-40	-40
Development expenditure	-60	-80	-100	-160	-50	-30	-20	-	-
FCF (pre-profit sharing & tax)	-100	-130	-150	-230	1,522	1,121	693	571	252
10% profit share					-91	-112	-69	-57	-25
Tax					-164	-202	-125	-103	-45
FCFE	-100	-130	-150	-230	1,267	807	499	411	182
FCFE discounted at 7.5%	-93	-111	-119	-168	858	505	289	220	90

Assumptions (PLN m)	
R&D budget (main game)	400
R&D budget (DLCs)	100
Distributor marketing budget	250
Central marketing budget	150
Lifetime sales (units)	40
Tax rate	20%
Discount Rate	7.5%

Source: The Analyst Research Estimates (Completed December 2020)

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