November 2018



Reality overwhelms creative accounting Bombardier, Celltrion and thyssenkrupp investors nurse losses

Bombardier has recently fallen 38%, thyssenkrupp 18% and Celltrion 30%. In each case, the market was surprised when management admitted that they could not deliver on targets. This need not have been the case. For months, we have been warning that they have been using creative accounting to hide their business reality.

It seems that many observers simply accepted management's word, rather than closely examining the accounts. This failure to understand the methods used to disguise weak performance, a lack of cashflow and real leverage exposed their clients to unnecessary accounting, fiduciary and reputational risk. The worst in not over. All three still have problems and are likely to need further capital, yet the traditional sell side remains positive.

These are just some of the stocks using creative accounting. Common factors include diverse operations, complex balance sheets, aggressive M&A, working capital manipulation and the use of "adjusted" EBITDA to justify negative cashflow. Our revised Governance, Accounting and Performance scores include several new anticreative accounting measures and have been re-run for the largest listed companies, generating several new names to be investigated.

To understand the risk of creative accounting in your stocks of interest, email research@buceph.com

Multiple issues still to be addressed: BBD/B CN & TKA GR

High GAP scores, skewed incentives and questionable assumptions

Bucephalus Research Partnership

Bombardier: Bucephalus GAP* score 226

- Governance risk (100th percentile)
 - Controlling family, overseas directors, limited accounting experience, pension deficit, disclosure, exec pay
- Accounting risk (99th percentile)
 - Cost capitalisation, consolidated accounting, contract accounting, depreciation, minorities
- Performance risk (79th percentile)
 - Working capital management, margins, leverage, auditing, cost allocation

thyssenkrupp: Bucephalus GAP* score 137

- Governance risk (60th percentile)
 - Controlling family, oversized board, pension deficit, executive incentives, auditing, disclosure
- Accounting risk (36th percentile)
 - Consolidated accounting, contract accounting, depreciation, goodwill/intangibles,
- Performance risk (41st percentile)
 - Working capital management, margins, leverage, cost allocation, capex management

*Bucephalus Governance Accounting Performance score, quantifying the risk of creative accounting. Higher is worse

Source: Bloomberg, company filings and Bucephalus Research Partnership

Multiple issues still to be addressed: 068270 KS

High GAP scores, skewed incentives and questionable assumptions

Celltrion Healthcare: Bucephalus GAP* score 174

- Governance risk (100th percentile)
 - Group structure, controlling shareholder, related company transactions, poor disclosure, auditing costs
- Accounting risk (99th percentile)
 - Cost capitalisation, related company lack of payments, inventory values, revenue inflation, working capital
- Performance risk (79th percentile)
 - Margins, intangibles, leverage, tax rates, executive pay

*Bucephalus Governance Accounting Performance score, quantifying the risk of creative accounting. Higher is worse



Share prices dropping but the sellside remains bullish Each stock has been falling for a while, yet views and targets are still positive

Bombardier (BBD/B CN) stock drops

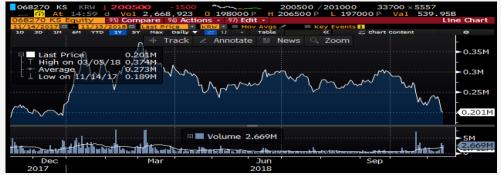
Coverage remains optimistic



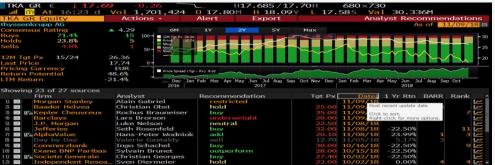
thyssenkrupp (TKA GR) stock drops



Celltrion (068270 KS) stock drops



Coverage remains optimistic



Coverage remains optimistic



Source: Bloomberg, company filings and Bucephalus Research Partnership

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309.924

22.01%

Bucephalus on Bombardier

Initial report published in December 2017

Bombardier (BBD/B CN): Flying on fumes Sell, best case price \$0.62, down 80% December 2017

Company profile	
	rcraft
	anada
	nst and Young
	Family 53% vote
Market cap.	US\$5.5bn
Daily turnover	US\$58.9m
Dividend	03338.911
Interest cost	6.4%
Ava. debt churn	15%
Cash tax paid/expens Pension deficit	ed Negative CAD2.5bn
Bucephalus GAP score	
Governance percentile	
Board size	14
	14
Tenure – longest	
Poison pill	Dual vote
Audit cost (bps)	7.6
Ave. exec. director pa	
Accounting percentile	
Excessive capex	Yes
Excessive cont. liabs.	Yes
Excessive intangibles	Yes
Working capital issue	
Excessive inventory	Yes
Performance percenti	
Margins	Tiny
Director compensatio	
Depreciation rate	Low
Cashflow	Negative
Interest cost	High
Intangibles/Equity	Over 100%
Altman Z score	Distress
Recommendation	Sell
Current price (CAD)	3.09
Target price (CAD)	0.62
Difference (%)	(80)

Paying Airbus to take an option on the C series programme may secure the future of Bombardier's Gommercial jets, but it underlines the precariousness of Bombardier's financial position. Creative accounting and careful presentation has enabled them to inflate profits, understate US\$28bn of liabilities, and disguise negative cashflow. Having sold stakes in the train and plane businesses, Bombardier's future cashflow is ring-fenced, leaving its capital providers at risk. A peer comparison suggests the turnaround may be a mirage and, with their history of overstated profits and assets, we are sceptical. Sadly, even if management's estimates are achievable, there is plenty of risk and little value for shareholders. Perhaps this is to be expected at a state-supported, family-controlled business whose finance and audit committees live overseas. Management is paid well for keeping the company on life support, we think it is most unlikely that minorities will reap similar rewards. Sell, best case- C\$0.62, realistic- C\$ zero.

Reality postponed: Bombardier paid Airbus to take a 50% stake in the C series jets. If the deal does take place, this gives the project credibility, but Bombardier will lose control of both the business and its cashflow. It is most likely that Airbus will use their rather more conservative accounting standards which will reduce asset values and operating profits. Airbus may cut some costs and sell a few more planes but with margins likely to be close 6%, Bombardier's share is worth less than US\$2bn.

High risk of default: BBD has US\$28bn of liabilities. Add in the C series funding guarantees and they rise by another US\$1bn. With the cashflow from transportation and the C series largely ring-fenced, the parent's 2017F EBIT, US\$278m, cannot cover the US\$790m of finance costs. Debt will continue to rise even with dividends from transportation. Bombardier doesn't reveal its covenants, only noting that Transportation is segregated and that they use a different set of accounts. With liabilities over 80% of assets and more negative cashflow, there is no room for error.

Living in Wonderland: There is talk of a turnaround, yet much of the improvement is due to reduced amortisation rates which are far below their peers. The arrival of IFRS 15 mean USS\$900m in write-offs due to aggressive accounting in the past. Perhaps this, and their offshore finance/audit committees explain their high audit fees. The lessons from Livent have yet to be learnt. Treat the accounts with scepticism. SELL

Figure 1: Aircraft valuations

Company	Ticker	Market cap. (US\$bn)	Net Debt/(cash) (US\$bn)	Enterprise Value (US\$bn)	EV/ Sales (x)	EBITDA margin Last FY (%)	EV/ EBITDA (x)	GAP score	Audit cost/ revenue (bps)
Bombardier	BBD/b CN	6	7.0	15	0.9	2.6	36.2	226	7.6
Boeing	BA US	162	0.7	162	1.8	12.6	22.7	184	2.8
Airbus	AIR FP	79	(0.6)	78	1.0	6.1	26.8	160	1.8
Embraer	ERJ US	4	0.7	4	0.7	9.3	9.4	130	3.9
Textron	TXT US	15	3.2	17	1.2	11.3	16.6	102	6.9
Dassault Aviation	AM FP	13	(3.4)	8	1.7	9.1	28.3	128	2.5
General Dynamics	GD US	61	2.2	63	2.0	15.2	20.3	133	6.7

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February 2018

Bombardier (BBD/B CN): Accounting wizardry

Best case: \$0.45 - down 88%, Sell

At their recent results, Bombardier seems to have persuaded the markets that the company is on the mend. The reality is that behind their creative accounting little has changed. Reported losses understate the final hits to retained equity and without, what appears to be a cynical manipulation of working capital cashflow usage would have risen not fallen. We urge investors to ignore the headlines and check the detail in the annual report. With assets barely exceeding liabilities, there is little value for shareholders.

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June 2018 Bucephalus client portal

Bombardier (BBD/B CN)

Do the maths - 2020 Fair value C\$1.79 down 64%, Sell

The stock is up on hopes of a turnaround, sales of the G7000 business jet and the C series deal. Some believe the stock should double by 2020 as cashflow recovers and Bombardier de-gears. It is time for a reality check.

To justify the optimism, we think Bombardier will need to be:

a) selling an extra 70 business jets p.a. at US\$50m on a 10%+ margins, i.e. volumes, prices and margins up 35%.

b) Trade on 19x (market cap + net liabilities)/EBITDA, i.e. 50%+ more expensive than its peers today.

EBITDA will rise, but don't ignore the finance costs, capex and minority interests. Many seem to be using a simple EV, using only net debt. We caution that this ignores the 8% negative carry on the cash and US\$10bn of other net liabilities.

Perfect execution and a generous peer multiple gives a 2020 value of C\$2.95, or 40% downside. If the performance is more modest, a more realistic peer based, multiple drops 2020 fair value to C\$1.79, down 64%.

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Bucephalus on thyssenkrupp

Initial report published in August 2017

thyssenkrupp (TKA GR): heading for a recap Sell, target price EU4.94, down 80%

Sector Steel producers Country Germany Auditor PwC Free float 77% Market cap US\$16.1bn US\$67m Daily turnover Dividend 0.6% Interest cost 6.5% Avg. debt churn 40% Cash tax paid/expensed 45% Pension deficit EU8.5bn Governance percentile 60 Board size 20 18 Tenure - longest Poison pill Yes Audit cost (bps) 3.6 US\$4.2m Ave. exec. director pay Accounting percentile 36 Excessive M&A Yes Excessive cont. liabs. Yes Excessive intangibles Yes Working capital issues Yes Excessive debt churn Yes Performance percentile 41 Margins Very low Director compensation Hiah **Beceivables** Low Return on assets Low Interest cost High Over 100% Intangibles/Equity Altman Z score Distress Current price (EUR) 25.14 Target price (EUR) 4.94 Difference (%) (80)

Don't believe the hype. thyssenkrupp is in trouble. At the end of the third quarter, gearing, 271%, exceeded the banking covenant limit, 185%, disclosed in the FY16 annual report. Even this number is debateable because net cash is not cash but client advances, and day to day debt levels are masked by window dressing, opaque accounting and off-balance sheet finance. Adjust fixed assets and goodwill to realistic levels and book equity falls significantly. Quoting the EU1.5bn sale value for CSA is disingenuous because we think it required a EU2.8bn recap prior to sale. Diversifying from steel has cost too much, and, despite under-depreciation and capitalised costs, margins remain some of the lowest in the industry. Cashflow remains too weak to cover the pension deficit, EU5.4bn, ongoing capex requirements and cut debt. With no real turnaround in sight, the company is in danger of technical default. At best, thyssenkrupp must raise capital. At worst, shareholders could get wiped out.

EU3bn+ of hidden debt: thyssenkrupp's average credit cost is 3.6%, but actual interest paid is about 5%. This and their unusual working capital, 24-31 days are missing, would suggest that normal debt levels are at least EU3bn higher than the year end numbers. Massive 'other finance' costs indicate that there could be up to EU26bn in other undisclosed off-balance sheet liabilities. Don't be misled by the EU2.2bn of net cash because this does not even cover EU4.7bn of customer advances.

Equity needs to be cut by 50%: Management wants an investment grade rating. This could explain why goodwill and book values are kept so high that asset sales result in write-offs. If their history is a guide, either steel assets should be cut by 29% or, using an 8% WACC, goodwill by 21% and EBIT 13%. Either way equity nearly halves. Adjust the rating metrics for this, include the hidden debt, and a B/C rating looks appropriate.

Inflated profits: thyssenkrupp moved into elevators and components to avoid the vagaries of steel prices. This has reduced revenue volatility, but left the company struggling to fund itself. Margins, even when inflated by capitalised costs, underdepreciation and adjusted for pensions, are still far below its peers. Cash generation is so weak that even the bare minimum of capex requires asset sales. The company claims that the annual EU432m pension cost has peaked, but it will be many years before they are materially lower. The stock is an overpriced option on thyssenkrupp's

current capital structure and with fair value closer to, or below, EU4.94. SELL

Figure 1: Steel valuations

		Mkt Cap	Net Debt	Ent. Val.	EV/Sales	Unl. sustainable cashflow margin	EV/ Unl sust. cashflow	G.A.P	Audit cost
Company	Ticker	(US\$bn)	(US\$bn)	(US\$bn)	(x)	3yr ave (%)	3yr ave (x)	Score	(bps)
thyssenkrupp	TKA GR	17.5	7.6	25.7	0.5	0.8	64.5	137	3.6
Ternium	TX US	5.9	1.2	7.9	1.0	9.2	10.8	85	4.1
Voestalpine	VOE AV	8.9	3.8	13.5	1.0	6.3	15.6	89	N/A
Steel Dynamics	STLD US	8.5	1.5	9.9	1.1	6.4	17.6	81	2.6
Tata Steel	TATA IN	9.5	11.2	20.9	1.2	4.9	23.8	114	N/A
Nucor Corp	NUE US	17.8	2.8	20.9	1.1	4.8	24.0	63	2.3
Arcelormittal	MT NA	26.8	11.9	40.9	0.7	2.5	26.0	123	3.7
Acerinox	ACX SM	3.5	0.9	4.5	0.9	3.0	28.6	80	2.0
Tenaris	TEN IM	16.1	(0.9)	15.4	3.6	5.4	66.4	113	8.5
Lift makers									
Kone	KNEBV FH	27.3	(0.4)	26.9	2.6	12.1	21.5	115	3.7



July 2018 Bucephalus client portal

Sell thyssenkrupp (TKA GR)

Restructuring exposes the lack of value - Fair value E12.20

An unwieldy board and wrong-way management incentives have led to creative accounting which hides poor productivity & efficiency. We show that the elevator business, talked-up by management and the mainstay of market value, struggles when properly costed and compared to peers.

The unintended consequence of restructuring and spin-offs will be to expose the creative accounting, illustrate the poor performance, and reveal the lack of value in the shares.

Bucephalus proprietary Governance, Accounting and Performance risk analysis:

- G: Director tenure. Depreciation. Pension
- A: Capex. Pension accounting. Murky finance
- P: Productivity. Employee costs. Low margins.

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4th October 2018 Bucephalus client portal

Sell thyssenkrupp (TKA GR)

Break up revealed, real change is delayed - Fair value EUR12.20

The thyssenkrupp break-up plan sets off talking optimistically about strategic clarity, higher transparency and meeting investor requirements. Once into the detail, we think it is clear that little has changed.

Governance: Instead of a clean spin off, Materials is to be given a stake in Industrials. This will protect management, dilute the activists' stake and make a third party bid more difficult.

Accounting: Rather than give some numeric detail on the allocation of sales and costs, summaries that ignore head office costs are used. The allocation also seems designed to maximise EBIT at Industrials, presumably because they are hoping for a higher multiple. There is talk of hidden reserves and tax, but no detail is given. Performance: No mention is made of how they will address their lack of efficiency or the costs that will be involved in laying off 38,000 staff.

We think the spin-off simply pushes real change further into the future, thyssenkrupp remains overpriced.

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Bucephalus on Celltrion

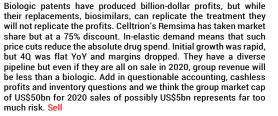
Initial report published in April 2018



Biosimilars: Bad for your wealth Celltrion group: BRP value KRW100.000. 65% downside

Company profile	
Sector	Generic Pharma
	South Korea
	EY & KPMG
Free float	63%
Market cap.	US\$35.5bn
Daily turnover	US\$693.8m
Dividend	N/A
Interest cost	3.4%
Audit cost	Falling
Pension deficit	None
Bucephalus GAP s	score 124
Governance (%)	N/A
Board size	7
Capitalised expen	
Related transaction	ons Multiple
Disclosure	Poor
Audit cost (bps/R	
Ave. exec. directo	rpay US\$0.7m
Accounting	51
Poor cashflow	Yes
Excessive intangil	oles Yes
Inventory days	279
Receivable days	319
Payable days	191
Peer performance	57
Margins	Very high
Leverage	High
Depreciation rate	11%
Cash tax paid	Low
Interest cost	3.4
Intangibles/Equity	
Altman Z score	2.55
Recommendation	SELL
Current price (KRV	
Target price (KRW	
Difference (%)	(65)

April 2018



Competition: Single brand biologics have generated billions in revenues and profits. biosimilars will not. The race for approvals is well underway and every biologic will face multiple competitors in nearly all regions. High gross biologic margins, AbbVie's are 75%, leave plenty of room for cuts as biosimilars fight for market share. We expect drug prices to fall below 80% of the pre-patent expire price within three years.

Rational expectations: Even in the first year, if Remicade is a good example, investors should expect to see drugs discounted 50-60%. Extra consumption will not compensate for this, so drug spend will drop, possibly as soon as 2018. Pipelines with multiple drugs can create growth but competition will split each market. The most important market, the US, is yet to open, so expectations for growth seem far too high

Questionable accounting: Healthcare IPO'd with high margins and growth. Since then, sales have fallen in Asia and the US and margins have collapsed. It is not clear if this is due to channel stuffing, receivables remain extended, or overpriced inventory. Either way, the margins of the past may be over. Their revenue recognition and inventory valuation policies also seem generous and may be hiding losses of US\$500m, or 100% of Inc.'s 2017 profits. Even ignoring these issues, a group EV/sales of 60+ implies high expectations for growth. However, even if they maintain their current sales, their new drugs are successful, and they take a 20% share in the US, sales in 2020 will be US\$5bn and EBIT US\$1.5bn, or 34x EV/sales. This is more expensive than AbbVie today.

Figure 1: Biopharmaceutical valuations

Company	Ticker	Market cap. (US\$bn)	Enterprise Value (US\$bn)	Revenue (US\$bn)	EV/ Sales (x)	EBITDA margin Last FY (%)	EV/ EBITDA (x)	GAP score	Audit cost/ revenue (bps)
Celltrion group	N/A	49	48	1.1	60.3	70	61.7	124	4.3
Johnson & Johnson	JNJ US	349	366	76	4.8	32	15.0	83	7.9
AbbVie Inc.	ABBV US	149	176	28	6.2	39	15.9	144	5.2
Roche Hldg-Genus	ROG SW	195	205	54	3.7	32	11.7	99	4.5
Biogen Inc	BIIB US	56	55	12	4.5	52	8.6	79	4.8
Allergan Plc	AGN US	57	85	16	5.4	9	59.0	129	25.1
Samsung Biologic	207940 KS	35	35	0	81.6	29	278.9	-	
Teva Pharma	TEVA IT	20	53	22.4	2.3	(69)	(3.4)	96	6.4



Recent stock reports

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Company	Ticker	Recommendation	Title
<u>Baidu</u>	BIDU US	Sell/Avoid	A Fiduciary nightmare, adopting global worst practice
thyssenkrupp	TKA GR	Sell	Break-up revealed, real change is delayed
<u>Anta</u>	2020 HK	Buy	The Amer bid makes strategic sense
<u>Amer</u>	AMEAS FH	Buy	Take the Anta bid seriously
Dometic	DOM US	Buy	Risk/reward seems fair
<u>Pilgrim's Pride</u>	PPC US	Buy	JBS needs to access Pilgrim's value
<u>TransDigm</u>	TDG US	Sell	Daylight robbery. Management takes the profit
<u>Lenovo</u>	992 HK	Sell	Drowning in debt
Celltrion Inc.	068270 KS	Sell	The dual-company structure masks investment risk
<u>Bombardier</u>	BBD/B CN	Sell	Do the maths. De-gearing will be limited at best
<u>Prada</u>	1913 HK	Sell	Weak sales, inventory and dividend risk
<u>Hengan</u>	1044 HK	Sell	Relationships, churn and margin pressure
<u>Vinda</u>	3331 HK	Buy	New incentives, leverage and margins
Thor Industries	THO US	Buy	Cheap, shareholder-friendly, cash generator
BT Group	BT/A LN	Buy	Bullsh!t Tolerant

Bucephalus: Exposing Creative Accounting

Our proprietary **G**overnance, **A**ccounting and **P**erformance reviews combine statistical analysis of reported data with careful reading of company statements and management reports. This enables us to:

Generate investment ideas on the largest, most liquid companies

- When business realities diverge from management's reports & accounts.
- Where incentives, behaviours and outcomes are being hidden from investors.
- And the market's perception and valuations create opportunity

Help our clients manage risk and improve outcomes

Investors use our proprietary risk descriptors to asses the largest 8,000 companies in the Americas, Europe and Asia. This helps with:

Risk oversight: Our clients can review both whole portfolios and individual holdings to avoid reputational damage, accounting scandals and risk of permanent capital losses.

Ideas: We look for high returns when management presentations, market perceptions and business realities diverge.

Due diligence: We investigate Governance, Accounting and Performance issues even if companies are outside our core coverage.

Stewardship: Clients ask us to review corporate resolutions and provide recommendations to encourage best practice. We check to ensure that management incentives are truly aligned with all shareholders.

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