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North America

Bucephalus webpage

Obscuring the true cost of management

Compensation accounting hides cash extraction and distorts valuation

The accounting rules for equity compensation are deeply flawed. They obscure the true cost and imply there is no impact on cashflow. In reality, the true cost, and the cash impact, is often multiples of the accounting expense. Worse, it incentivises management to push short-term stock performance, irrespective of the risk to long term shareholders. We think "adjusted" EBITDA as a proxy for cash generation is grossly misleading, particularly if used with buybacks. As a valuation tool, by ignoring the real costs, it simply reinforces the cycle.

Over the last three years, at some companies, the true cost of equity compensation has been 4-7x the expensed cost and true EBITDA has been as little as 3% of cumulative "adjusted" EBITDA". Management at some blue chips have quietly been pocketing billions as profits fell. Elsewhere, management tells a growth story, but cashes out as fast as possible, leaving investors with the debt. Others are taxing pre-tax profits at 30% or more.

Our list of expensive, geared and greedy includes **Servicenow** (NOW US), **Autodesk** (ADSK US), **Netflix** (NFLX US), **Atlassian** (TEAM US), **Advance Micro** (AMD US), **Tesla** (TSLA US) and **Wayfair** (W US).

The true cost can far exceed the accounting expense

Shopify's true compensation cost over US$600mn, 7x the US$90m expensed

Company	Ticker	Market cap (US$mn)	(a) Equity comp. expense 3yr cum. (local mn)	(b) Buybacks to offset stock grants 3yr cum. (local mn)	(c) Accrued dividends 3yr cum. (local mn)	(d) Mark-to-market over 3 years (local mn)	(a + b + c + d) True compensation cost 3yr cum. (local mn)	True cost/ expensed (x)
Shopify Inc	**SHOP CN**	**16,500**	**90**	**0**	**0**	**540**	**630**	**7.1**
Amphenol	APH US	29,100	140	540	20	260	960	6.8
Arista Networks	ANET US	20,300	180	0	0	1,000	1,180	6.6
Chevron	CVX US	224,900	720	0	1,990	2,010	4,720	6.6
Match Group	MTCH US	16,400	170	0	0	920	1,090	6.4
Heico	HEI US	11,100	20	0	0	100	130	6.3
Teleflex	TFX US	12,400	50	0	10	220	280	5.5
Netflix	NFLX US	158,800	480	0	0	2,010	2,490	5.2
TransDigm	TDG US	19,500	130	90	260	160	630	5.0
Charter Comms	CHTR US	82,000	580	1,630	0	300	2,520	4.3

Figure 1: Equity compensation: Cost vs expense (three years cumulative)

Source: Bloomberg, company filings and Bucephalus Research Partnership

Quietly filling management's pockets

EBITDA fell, but Chevron staff quietly got an extra US$4bn, 5.7x more than expensed

Exposing Creative Accounting

Company	Ticker	Market cap (US$bn)	Recurring EBITDA 3yr cum. (local mn)	Recurring EBITDA growth over 3 years (%)	Equity compensation expense 3yr cum. (local mn)	True compensation already cashed in 3yr cum. (local mn)	Total true compensation cost 3yr cum. (local mn)	**Total hidden pay (true - expensed)** 3yr cum. **(US$m)**
Chevron Corp	**CVX US**	**224,900**	**57,750**	**(38)**	**720**	**0**	**4,720**	**4,000**
Cisco Systems	CSCO US	216,700	45,450	7	4,590	3,760	8,350	3,760
Oracle Corp	ORCL US	196,100	48,444	(0)	3,990	3,260	7,260	3,260
Intel Corp	INTC US	210,000	72,258	8	4,150	2,970	7,120	2,970
Pfizer Inc	PFE US	251,800	66,999	6	2,200	1,970	4,170	1,970
Qualcomm Inc	QCOM US	110,300	23,472	(29)	2,880	1,760	4,640	1,760
Walmart Inc	WMT US	277,000	99,383	(9)	1,670	1,600	3,270	1,600
Procter & Gamble	PG US	208,100	47,212	(5)	1,100	1,060	2,160	1,060
Caterpillar Inc	CAT US	86,100	22,924	(8)	710	200	1,680	970
Hp Inc	HPQ US	39,600	16,625	(57)	1,120	850	1,960	850

Figure 2: Hidden pay (three years cumulative)

Source: Bloomberg, company filings and Bucephalus Research Partnership

Talking growth, taking cash and leaving investors with debt

CDK's "adjusted" EBITDA, or profit before costs, up 72%, but management sold out

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Company	Ticker	Market cap (US$bn)	"adjusted" EBITDA growth – last 3 years (%)	"adjusted" EBITDA 3yr cum. (local mn)	Total buybacks/ "adjusted" EBITDA 3yr cum. (%)	True compensation cost 3yr cum. (local mn)	Total buybacks/ True compensation (x)	Free float (%)	Total debt/ total assets (%)
Domino's Pizza	DPZ US	11,700	44	1,550	139	130	17.1	100	377
CDK Global	**CDK US**	**8,100**	**72**	**2,080**	**104**	**270**	**8.1**	**100**	**87**
Verisign	VRSN US	20,000	19	2,310	83	310	6.2	88	82
Sirius XM	SIRI US	32,000	44	5,650	90	650	7.8	26	81
Aspen Tech	AZPN US	8,400	22	720	105	120	6.3	99	64
MSCI	MSCI US	16,200	59	1,810	90	210	7.7	97	63
Motorola Sol.	MSI US	20,600	41	4,640	97	420	10.6	100	54
Fair Isaac	FICO US	7,000	19	770	80	310	2.0	97	48
IQVIA	IQV US	25,600	172	4,350	97	470	9.0	81	45
Integ. Device	IDTI US	6,100	61	700	100	230	3.0	99	38

Figure 3: Buybacks exceed true compensation (three years cumulative)

Source: Bloomberg, company filings and Bucephalus Research Partnership

Management keeps the stock, but taxes returns

No buybacks, but Dexcom management takes over 100% of profit

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Company	Ticker	Market cap (US$bn)	"adjusted" EBITDA growth – last 3 years (%)	"adjusted" EBITDA 3yr cum. (local mn)	Pre-tax profit 3yr cum. (local mn)	Stock compensation 3yr cum. (local mn)	Stock compensation/ (PBT+ comp.) (%)	Stock compensation (LFY) (local mn)	Forecast PBT (local mn)	Stock compensation/ Forecast PBT (x)
Dexcom	**DXCM US**	**12,600**	**144**	**178**	**(170)**	**300**	**233**	**110**	**(10)**	**112**
Zillow Group	ZG US	9,400	386	363	(290)	340	740	110	50	70
Splunk	SPLK US	18,400	1,210	258	(890)	1,040	671	370	270	58
Workday	WDAY US	32,800	1,863	679	(960)	1,110	750	480	400	54
Servicenow	NOW US	36,100	1,377	1,076	(520)	1,240	172	660	720	48
Yelp	YELP US	3,900	121	346	0	250	100	100	140	43
Guidewire	GWRE US	8,600	47	328	50	230	81	90	130	40
Sprint	S US	25,800	99	31,113	80	350	82	180	300	37
Atlassian	TEAM US	22,200	219	415	(130)	380	154	160	270	37
Mimecast	MIME US	2,500	85	54	(10)	30	174	10	30	30

Figure 4: Real EBITDA vs 'adjusted' EBITDA- positive (three years cumulative)

Source: Bloomberg, company filings and Bucephalus Research Partnership

Expensive, greedy and geared

Servicenow is set to take over 170% of this year's PBT pre compensation in stock

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Company	Ticker	Market cap (US$bn)	"Adjusted" EBITDA growth (3 year %)	EV/ forecast "adjusted" EBITDA (x)	Total debt/ total assets (x)	True compensation/ expense (x)	Equity compensation/ Forecast PBT + comp (%)	EV/ forecast EBITDA less expected true compensation cost (x)
Servicenow	NOW US	36,100	1,377	47	35	2.0	172	1,000
Autodesk	ADSK US	33,100	Positive to Neg.	(784)	39	1.7	(297)	176
Netflix	NFLX US	158,800	98	141	34	5.2	34	125
Atlassian	TEAM US	22,200	219	98	34	1.7	154	100
Advance Micro	AMD US	31,900	(0)	61	39	4.2	Loss-making	54
Tesla	TSLA US	50,400	214	87	36	1.6	Loss-making	42
Wayfair	W US	13,400	(23)	(150)	34	2.9	Loss-making	Negative EBITDA
Neurocrine	NBIX US	10,700	(62)	(113)	45	3.7	Loss-making	Negative EBITDA
Hubspot	HUBS US	6,200	- to +	207	42	2.5	Loss-making	Negative EBITDA
Insulet	PODD US	6,300	30	147	69	2.9	Loss-making	Negative EBITDA

Figure 5: Expensive, greedy and geared

Source: Bloomberg, company filings and Bucephalus Research Partnership

Three EV/EBITDA valuations

“adjusted” EBITDA ignores the cost of management and lowers the multiple

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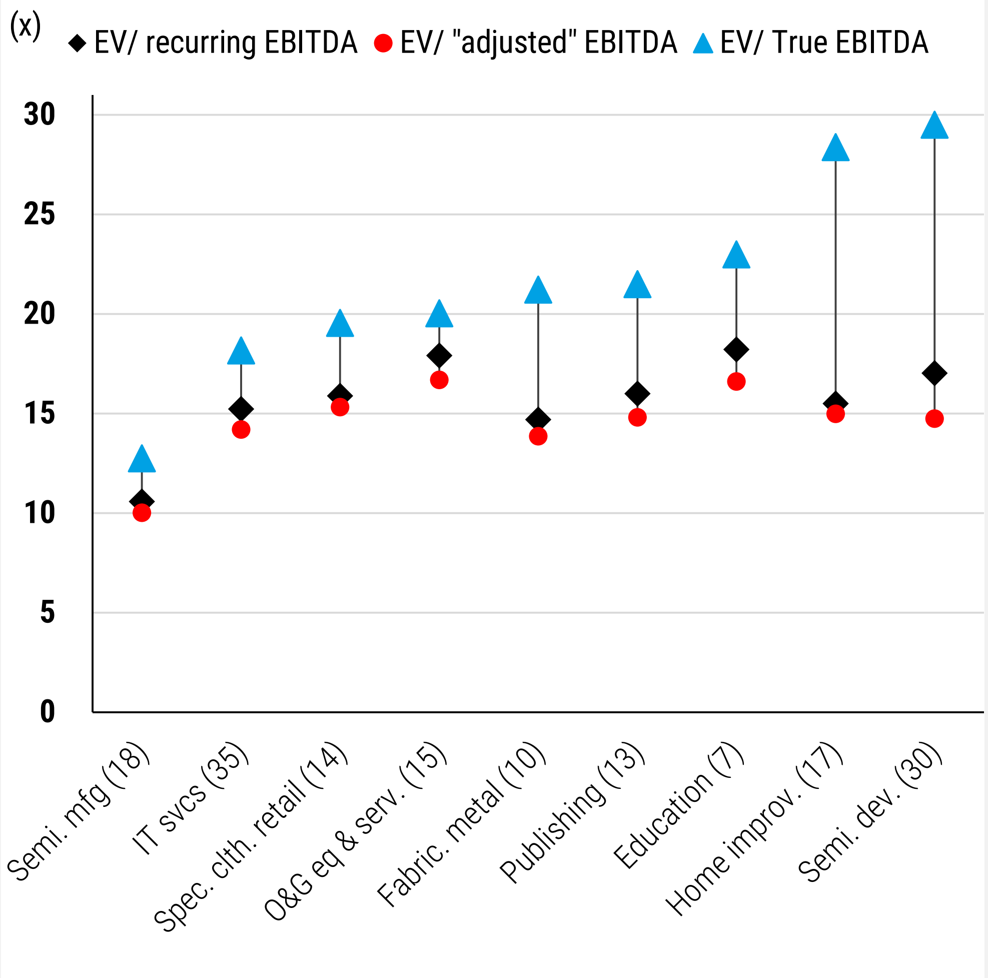

Figure 6a: EV vs “adjusted”, recurring and true EBITDA

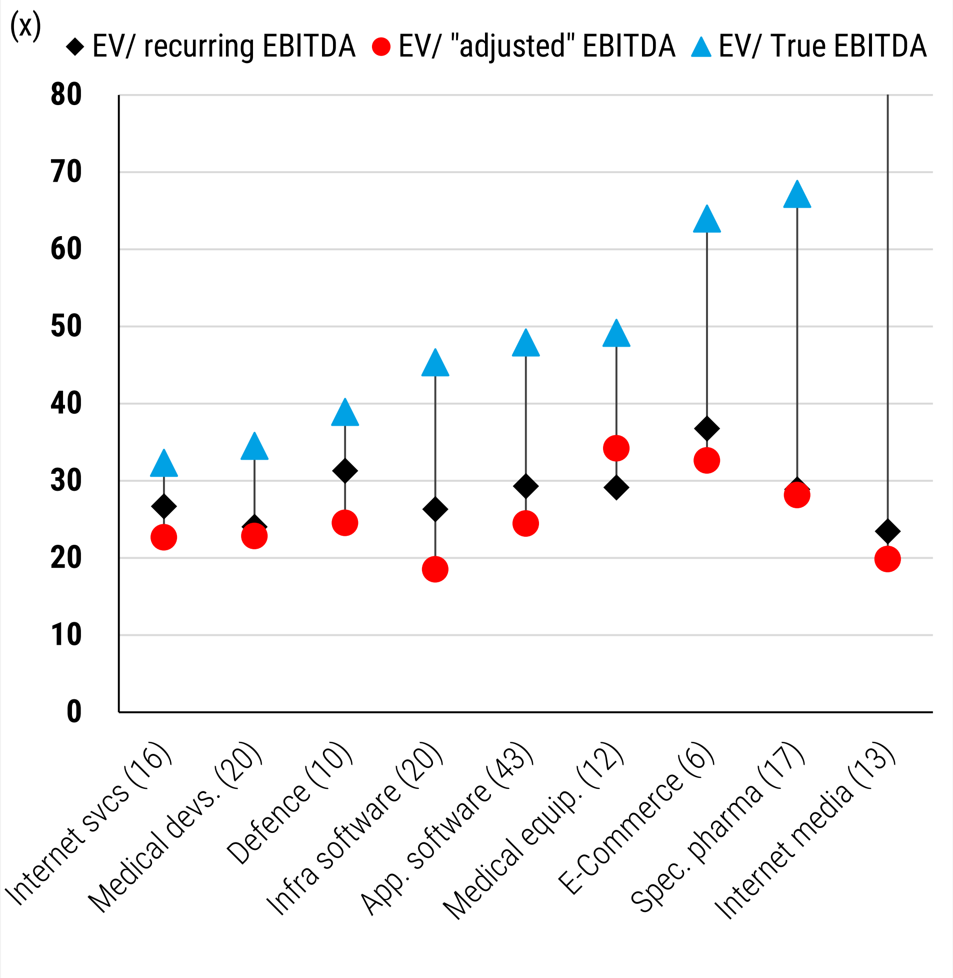

Figure 6b: EV vs “adjusted”, recurring and true EBITDA

Source: Bloomberg, company filings and Bucephalus Research Partnership

Stock compensation, an opportunity to get creative

Accounting: Salary is straightforward, stock is simple, options are far more flexible

	Cash	Stock with buyback	Options with buyback
Expensed	When paid	During the vesting period	During the vesting period
Valuation	Actual value	Stock price	Assumption based
Real cash cost	As stated	Repurchase cost less expense	Repurchase cost less expense
Who pays the tax?	Recipient	Recipient	Company/shareholders
Impact on:			
Profit/loss	Reduced	Modest increase	Inflated
Bal. Sheet - equity	None	Modest decrease	Large impact
Operating cashflow	Reduced	Increased	Increased
Financing cashflow	None	Decrease as Buyback> expense	Decrease as Buyback> expense
Non-GAAP EBITDA	None	Inflated	Misleading/fraudulent*

*Fraud: Intentional perversion of the truth in order to induce another to part with something of value, Merriam Webster

Figure 7: The impact of the compensation alternatives

Source: Bloomberg, company filings and Bucephalus Research Partnership

The mathematics of compensation accounting

The cash cost for options is 3x the P&L expense, if a stock rises 20%pa

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		Year 1	Year 2	Year 3	Final cost
Cash	Expense	100			100
	Cost	100			100
	Cash cost to shareholders				**100**
Equity	Expense	33	33	33	100
1 share @100	Dividends @ 2.3%	2.3	2.3	2.3	7
	Cost to buyback			173	173
	Cash cost to shareholders				**180**
Options	Expense	33	33	33	100
4 @100, 25% premium	Dividends/capital reduction	-	9	-	9
	Net cost to buyback			291	291
	Cash cost to shareholders				**300**

Assumptions

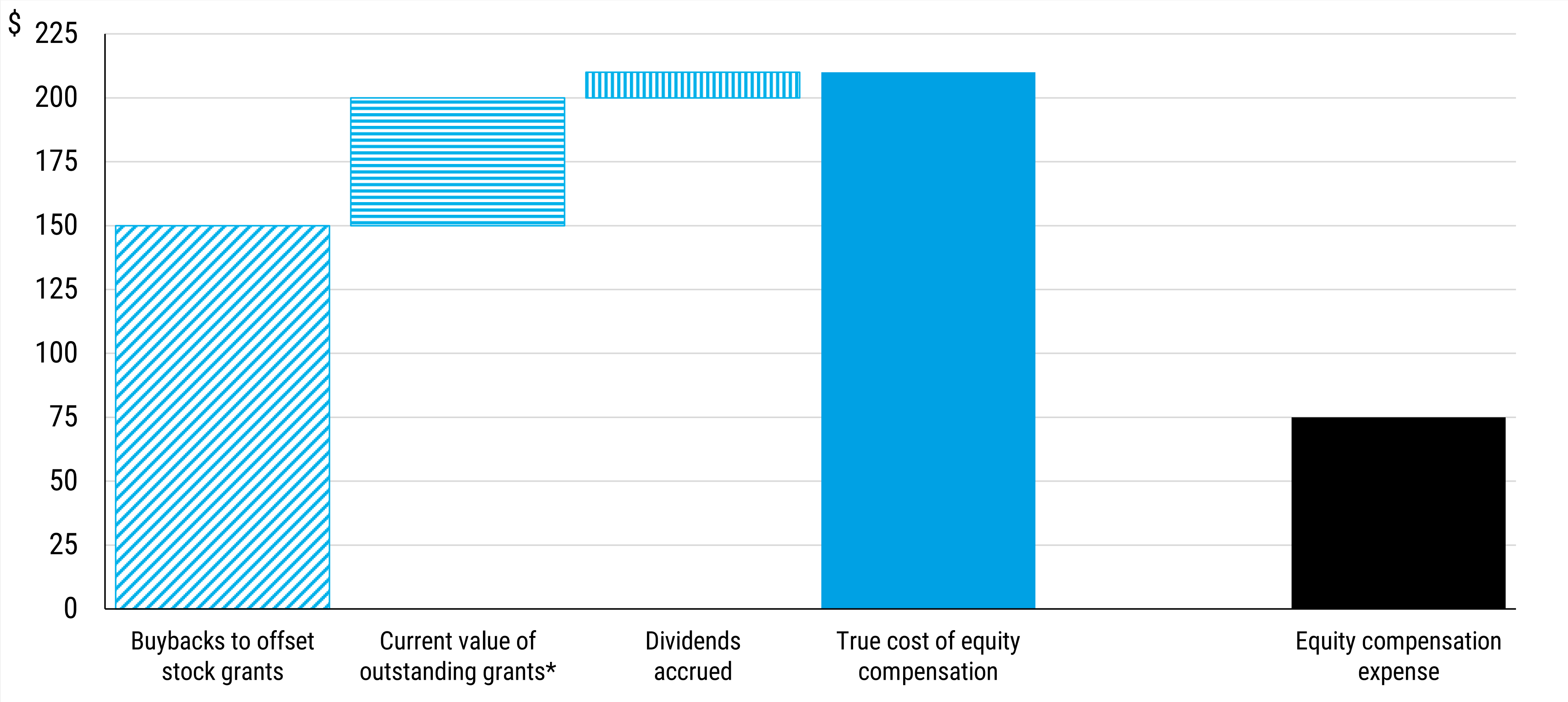
1) Stock rises 20% per annum
2) Shares are both entitled to dividends and bought back on full vesting
3) Options are issued at a 25% premium, entitled to dividends and are bought back on full vesting

Figure 8: Expense vs Cash cost

Source: Bloomberg, company filings and Bucephalus Research Partnership

Estimating the true cost of equity compensation

True cost = Buyback cost (+ current market value*) + dividends, if accrued



* The current market value of any stock/option grants that have yet to be repurchased

Figure 9: Calculating real cost of equity compensation

Source: Bloomberg, company filings and Bucephalus Research Partnership

Estimating grant and buyback quantities

Use year-end prices to derive price vs quantity

Component	Comment
Grant, price and quantity	Based on disclosure or estimated using year-end share price
Buyback, price and quantity	Buyback cost/Year-end share price
Mark-to-market value	Stock granted less buybacks * current price less grant price
Dividends accrued	Stock granted less buybacks * Dividends paid
Real cost of management	**Buybacks + current value of stock not bought back + dividends**

Embedded assumptions
- Grants vest over 3 years - Grants are assumed to be stock based. Options would cost more - Dividends accrue starting in the year of grant

Figure 10: Assumptions for estimating the true cost

Source: Bloomberg, company filings and Bucephalus Research Partnership

Calculating **True** EBITDA

"adjusted" EBITDA is misleading because it implies equity has no impact on cashflow

"adjusted" EBITDA, i.e. EBITDA with equity compensation added back, is not an indicator of either value creation or cashflow. By implying that equity compensation is cost-free and has no impact on cash generated by the business, it obscures the costs borne by shareholders and buries the true cost of compensation, i.e. stock issuance at less than the cost of re-purchase cost, in the balance sheet.

True EBITDA, i.e. adjusted for the full-cost of compensation is usually materially different to "adjusted" EBITDA.

Figure 11: Calculating real EBITDA

Source: Bloomberg, company filings and Bucephalus Research Partnership

True EBITDA vs “adjusted” EBITDA - 3 years cumulative

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Fully costed, Arista’s EBITDA would have been 3% of “adjusted” EBITDA

Company	Ticker	Market cap (US$bn)	Recurring EBITDA (local mn)	Equity compensation expense (local mn)	“adjusted” EBITDA (local mn)	True compensation cost (local mn)	True EBITDA* (local mn)	True EBITDA/ “adjusted” EBITDA (%)
Arista Networks	**ANET US**	**20,300**	**1,035**	**180**	**1,214**	**1,184**	**30**	**3**
Match Group	MTCH US	16,400	1,008	171	1,179	1,087	92	8
Salesforce.Com	CRM US	119,200	2,289	2,411	4,700	4,292	408	9
Epam Systems	EPAM US	7,500	486	147	633	554	80	13
Take-Two Inter.	TTWO US	15,300	887	268	1,155	860	295	26
Fortinet	FTNT US	15,300	340	355	695	489	206	30
Amazon.Com	AMZN US	960,900	36,400	9,309	45,709	26,723	18,986	42
ICU Medical	ICUI US	5,800	421	47	469	253	215	46
Cypress Semicon.	CY US	5,600	528	308	836	419	417	50

Figure 12: True vs. “adjusted” EBITDA – (3 years cumulative, local currency)

Source: Bloomberg, company filings and Bucephalus Research Partnership

Compensation can skew incentives: **Valeant (BHC)**

Management behaviour was rewarded with an extra US$743m but investors lost out

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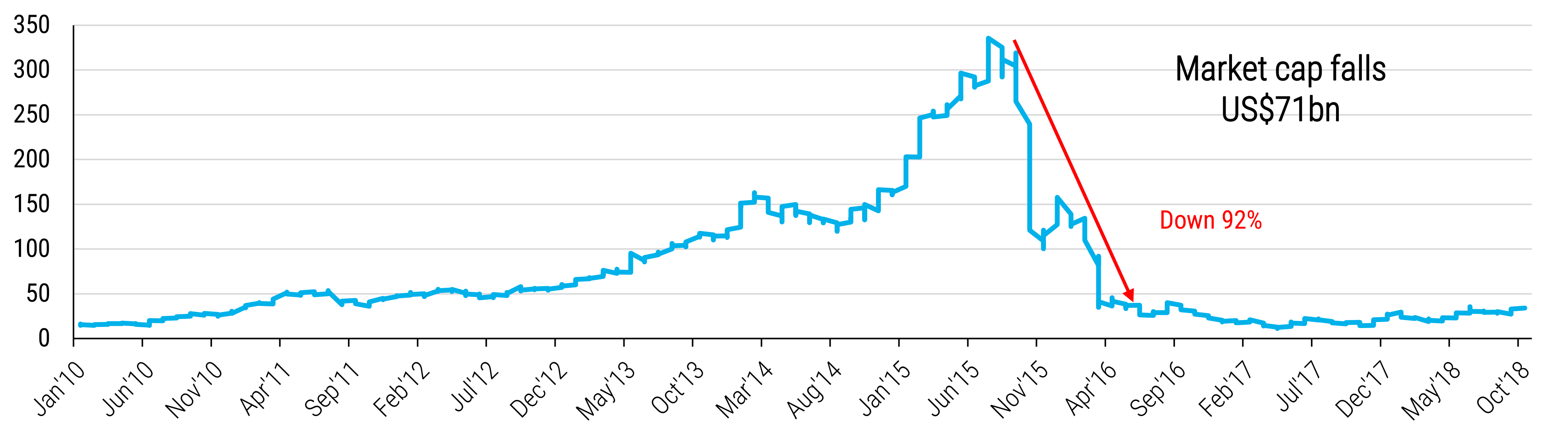

(US$m)	2010	2011	2012	2013	2014	2015	2016	2017	Total
Equity compensation expense	49	93	66	45	78	140	0	0	**472**
Excess compensation cost	32	192	81	122	65	251	0	0	**743**
Total compensation cost	81	285	147	167	143	391	0	0	**1,245**
Total compensation cost/Expensed (x)	1.7x	3.1x	2.2x	3.7x	1.8x	2.8x			**2.6x**
Recurring pre-tax profit	182	241	301	192	1,265	491	(575)	(1,228)	**869**
Excess compensation costs/Pre-tax profit (%)	18%	80%	27%	63%	5%	51%	-	-	**85%**

Source: Bloomberg, company filings and Bucephalus Research Partnership

Compensation can skew incentives: **TransDigm (TDG)**

Dividends/buybacks boost the stock, but management gets 66% of pre-tax profit

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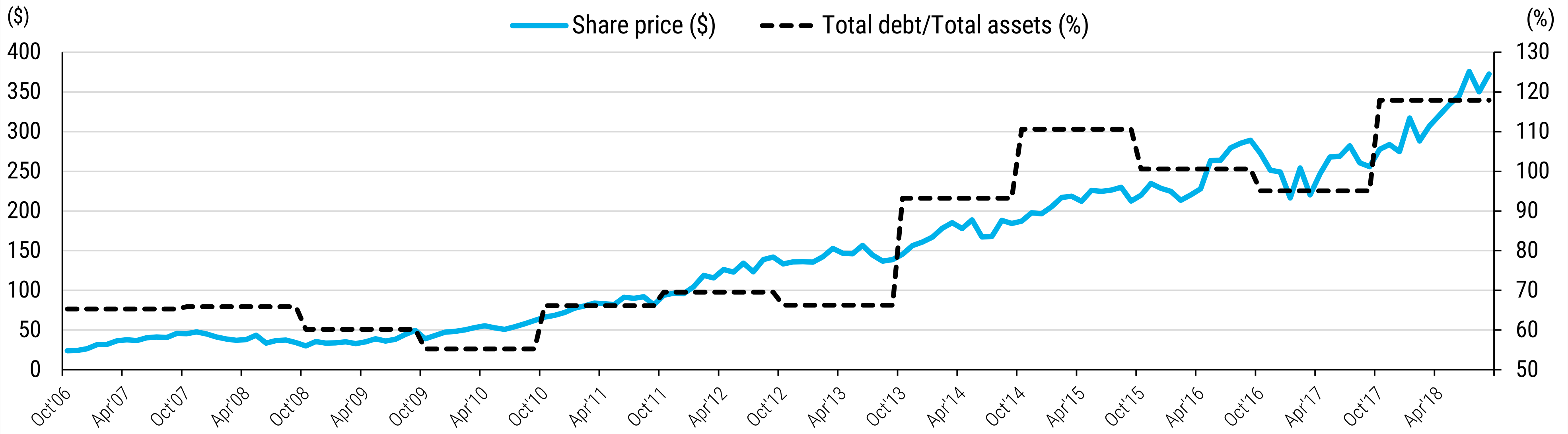

(US$m)	2010	2011	2012	2013	2014	2015	2016	2017	Mark-to-market	Total
Equity compensation expense	7	13	22	49	26	32	48	46		242
Excess equity compensation cost	51	67	145	202	192	177	35	13	2,300	3,211
Total cost vs expensed (x)	**8.6x**	**6.3x**	**7.5x**	**5.1x**	**8.3x**	**6.6x**	**1.7x**	**1.3x**		**14x**
Recurring pre-tax profit	263	335	507	507	603	689	818	921		4,900
Excess costs/ pre-tax profit (%)	19%	20%	29%	40%	32%	26%	4%	1%		**66%**
Retained earnings	192	364	689	(1,004)	(2,150)	(1,717)	(1,147)	(3,187)		
Intangibles	1,972	3,424	4,159	4,533	4,742	6,226	7,444	7,463		

Source: Bloomberg, company filings and Bucephalus Research Partnership

Shareholder alignment, more theory than fact at TransDigm

Very few buys, instead management tends to sell soon after vesting

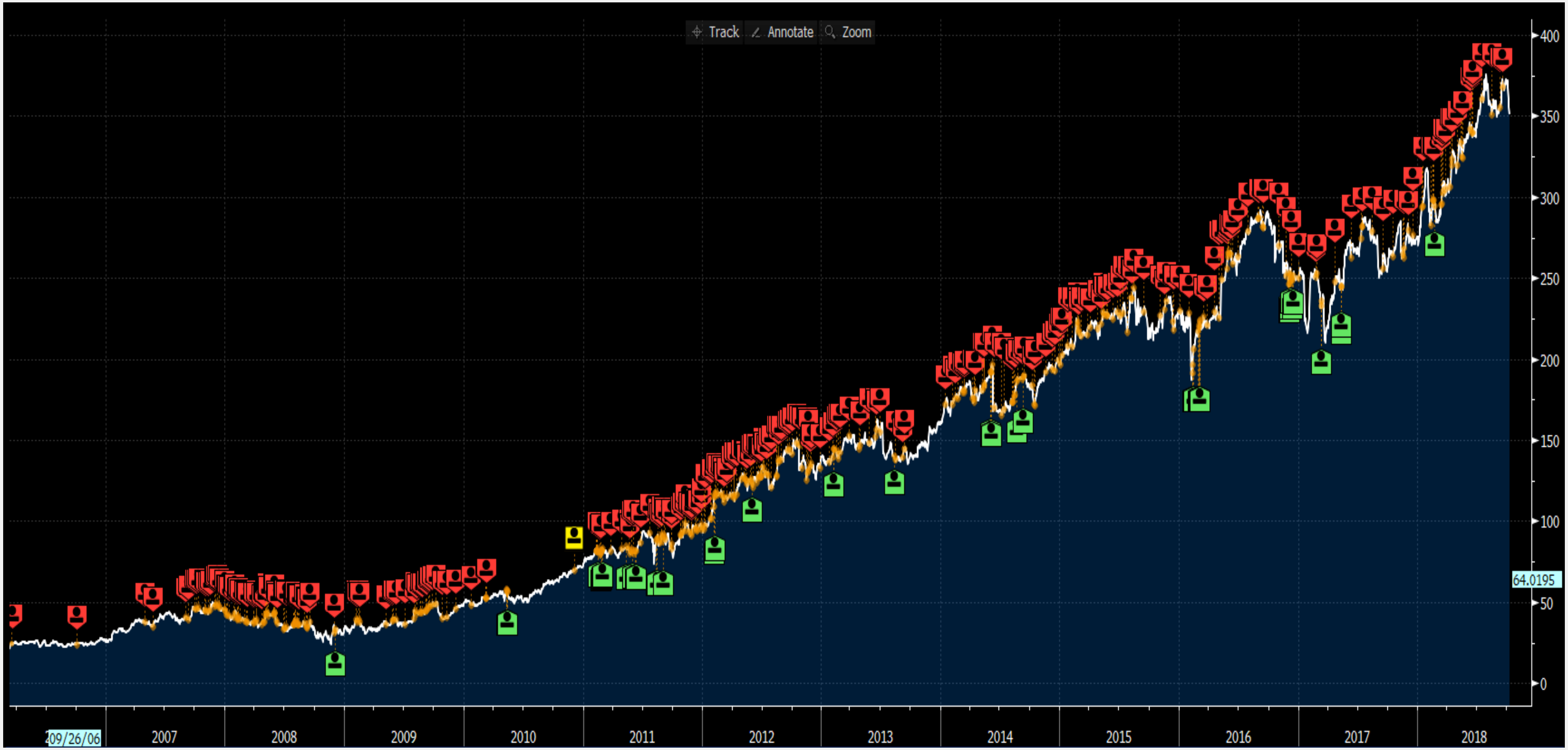

Figure 13: TransDigm management stock trading

Compensation decisions and accounting at TransDigm

A solution that seems designed to inflate profits and obscure the cash cost

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Management's choice	Business impact
Below-market cash salaries	Cash costs are reduced, boosting EBITDA
Option awards, not stock	Same dollar value of the award results in increased dilution and cash cost
Vesting period	The expense is split over the vesting period, delaying the expense and boosting margins
Dilution	Contingent stock (outstanding options and vesting awards) is ignored for dilution calculations
Buybacks	Transfer the cash cost of management from the P&L to the Balance sheet
Equivalence payments	Shifts the tax burden on management benefits from staff to shareholders
Focus on EBITDA	Ignores the cost of buybacks, dividends, and the cost of finance and re-financing
Targeting intrinsic value	Derives total equity value, ignores dilution and the cash cost of compensation and debt issuance

Appendix I: Compensation choices and their impact

Source: Bloomberg, company filings and Bucephalus Research Partnership

Useful links

All available for download from our website

Company	Link
Understanding accounting for equity compensation	SEC: Accounting for stock compensation under FASB ASC
	FASB: Stock compensation for non-employees (June 2018 update)
	FASB: Employee share-based payment accounting (March 2016)
Bucephalus PDFs	Asia
	Europe
	North America
Underlying spreadsheet	Asia
	Europe
	North America

Source: Bloomberg, company filings and Bucephalus Research Partnership

Appendix I: The different EBITDA variations

None of which are necessarily a good approximation for an ability to create cashflow

EBITDA	Description
Reported	As reported by the company
Recurring	Reported less one-off items
“adjusted”	Recurring + stock compensation expense
Real	“adjusted” less the full cost of stock compensation
Forecast	Bloomberg forecast EBITDA

Source: Bloomberg, company filings and Bucephalus Research Partnership

Recent reports

For clients, our research is available via Bloomberg, FactSet, OneAccess & Blue matrix

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

Source: Bloomberg, company filings and Bucephalus Research Partnership

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Generate investment ideas on the largest, most liquid companies

- When business realities diverge from management's reports & accounts.
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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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Source: Bloomberg, company filings and Bucephalus Research Partnership

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