

# Tesla Company Analysis



# Drivers

## Drivers

Selected case	2
Company	Tesla
Currency	USD
Domestic country	United States
10-year treasury yield (Sep 27 2018)	3.07%
Market risk premium US	5%
Company beta (Sep 27 2018)	0.78
Tesla share price (Sep 27 2018)	307.8
Bond Yield (Sep 19 2018)	7.50%
Corporate tax rate	30%
Expected inflation	2%

1. Select provides a flexible model.
2. This is an Analysis about Tesla company.
3. The model currency is USD.
4. UST10 is our yield on September 27, 2018.
5. The market risk premium is 5%.
6. The beta on September 27, 2018 is 0.78
7. Tesla's price on September 27, 2018 is 307.8
8. Bond yield on September 19, 2018 is 7.5%.
9. The corporate tax rate is 30%, estimated.
10. Expected inflation of 2%.

# P&L Input

KPIs are calculated on year-to-year validation.

## P&L Input

(in thousands)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act
Automotive revenues	3,007,012	3,740,973	6,350,766	9,641,300	6,092,998
Energy generation and storage	4,208	14,477	181,394	1,116,266	784,430
Services and other	187,136	290,575	467,972	1,001,185	533,554
<b>Total revenues</b>	<b>3,198,356</b>	<b>4,046,025</b>	<b>7,000,132</b>	<b>11,758,751</b>	<b>7,410,982</b>
Automotive cost of revenues	(2,145,749)	(2,823,302)	(4,750,081)	(7,432,704)	(4,862,547)
Energy generation and storage cost of revenues	(4,005)	(12,287)	(178,332)	(874,538)	(705,636)
Services and other cost of revenues	(166,931)	(286,933)	(472,462)	(1,229,022)	(767,343)
<b>Gross profit</b>	<b>881,671</b>	<b>923,503</b>	<b>1,599,257</b>	<b>2,222,487</b>	<b>1,075,456</b>
Research and development	(464,700)	(717,900)	(834,408)	(1,378,073)	(753,225)
Selling, general and administrative	(603,660)	(922,232)	(1,432,189)	(2,476,500)	(1,437,163)
Restructuring and other					(103,434)
<b>EBIT</b>	<b>(186,689)</b>	<b>(716,629)</b>	<b>(667,340)</b>	<b>(1,632,086)</b>	<b>(1,218,366)</b>
Interest income	1,126	1,508	8,530	19,686	10,278
Interest expense	(100,886)	(118,851)	(198,810)	(471,259)	(313,128)
Other income (expense), net	1,813	(41,652)	111,272	(125,373)	13,195
<b>EBT</b>	<b>(284,636)</b>	<b>(875,624)</b>	<b>(746,348)</b>	<b>(2,209,032)</b>	<b>(1,508,021)</b>
Provision for income taxes	(9,404)	(13,039)	(26,698)	(31,546)	(19,312)
<b>Net loss incl. minority interests</b>	<b>(294,040)</b>	<b>(888,663)</b>	<b>(773,046)</b>	<b>(2,240,578)</b>	<b>(1,527,333)</b>
Minority interests	-	-	98,132	279,178	100,243
<b>Net loss</b>	<b>(294,040)</b>	<b>(888,663)</b>	<b>(674,914)</b>	<b>(1,961,400)</b>	<b>(1,427,090)</b>

## KPIs

Revenue % automotive y-o-y		24%	70%	52%	
Revenue % generation y-o-y		244%	1153%	515%	
Revenue % services y-o-y		55%	61%	114%	
GP% automotive	29%	25%	25%	23%	20%
GP% energy generation and automotive	5%	15%	2%	22%	10%
GP% services and other	11%	1%	-1%	-23%	-44%
Overall GP%	28%	23%	23%	19%	15%
EBIT %	-6%	-18%	-10%	-14%	-16%
Net loss %	-9%	-22%	-10%	-17%	-19%
ROA	-5%	-11%	-3%	-7%	-5%
ROE	-32%	-82%	-14%	-46%	-32%

# Balance Sheet Input

Here we have measures on liquidity and solvency ratios.

Liquidity ratios above 1 and, Solvency ratios to prove a company's long-term financial health.

## Balance Sheet Input

(in thousands)	31 Dec 2014	31 Dec 2015	31 Dec 2016	31 Dec 2017	30 Jun 2018
Cash and cash equivalents	1,905,713	1,196,908	3,393,216	3,367,914	2,236,424
Restricted cash and marketable securities	17,947	22,628	105,519	155,323	146,822
Accounts receivable, net	226,604	168,965	499,142	515,381	569,874
Inventory	953,675	1,277,838	2,067,454	2,263,537	3,324,643
Prepaid expenses and other current assets	76,134	115,667	194,465	268,365	422,034
<b>Total current assets</b>	<b>3,180,073</b>	<b>2,782,006</b>	<b>6,259,796</b>	<b>6,570,520</b>	<b>6,699,797</b>
Operating lease vehicles, net	766,744	1,791,403	3,134,080	4,116,604	2,282,047
Solar energy systems, leased and to be leased, net	-	-	5,919,880	6,347,490	6,340,031
Property, plant and equipment, net	1,829,267	3,403,334	5,982,957	10,027,522	10,969,348
Intangible assets, net	-	12,816	376,145	361,502	364,690
portion	-	-	506,302	516,889	434,841
Restricted cash, net of current portion	11,374	31,522	268,165	441,722	399,992
Other assets	43,209	46,858	216,751	273,123	419,254
<b>Total assets</b>	<b>5,830,667</b>	<b>8,067,939</b>	<b>22,664,076</b>	<b>28,655,372</b>	<b>27,910,000</b>
Accounts payable	777,946	916,148	1,860,341	2,390,250	3,030,493
Accrued liabilities	268,883	422,798	1,210,028	1,731,366	1,814,979
Deferred revenue	191,651	423,961	763,126	1,015,253	576,321
Resale value guarantees	-	136,831	179,504	787,333	674,255
Customer deposits	257,587	283,370	663,859	853,919	942,129
Current portion of long-term debt and capital leases	611,099	627,927	984,211	796,549	2,103,185
Current portion of solar bonds issued to related parties	-	-	165,936	100,000	-
<b>Total current liabilities</b>	<b>2,107,166</b>	<b>2,811,035</b>	<b>5,827,005</b>	<b>7,674,670</b>	<b>9,141,362</b>
Long-term debt and capital leases, net of current portion	1,818,785	2,021,093	5,860,049	9,415,700	9,513,390
Other liabilities	993,006	2,152,107	5,438,936	6,330,414	3,988,135
<b>Total liabilities</b>	<b>4,918,957</b>	<b>6,984,235</b>	<b>17,125,990</b>	<b>23,420,784</b>	<b>22,642,887</b>
<b>Total stockholders' equity</b>	<b>911,710</b>	<b>1,083,704</b>	<b>4,752,911</b>	<b>4,237,242</b>	<b>4,445,957</b>
Noncontrolling interests in subsidiaries	-	-	785,175	997,346	821,156
<b>Total liabilities and equity</b>	<b>5,830,667</b>	<b>8,067,939</b>	<b>22,664,076</b>	<b>28,655,372</b>	<b>27,910,000</b>

### KPIs

#### Liquidity ratios

Quick ratio	0.91	0.43	0.60	0.46	0.26
Current ratio	1.51	0.99	1.07	0.86	0.73
DSO	25.51	15.03	25.67	15.78	13.84
DIO	148.20	147.32	137.81	85.45	94.46
DPO	120.89	105.62	124.00	90.23	86.10
Net Trading Cycle	52.81	56.73	39.47	11.00	22.20

#### Solvency ratios

Debt ratio	1.19	1.16	1.32	1.22	1.23
Interest coverage	<0	<0	<0	<0	<0

# Income Statements Items

# Automotive 1<sup>st</sup> business line

More than 80% of Tesla revenues in 2017.



# Deliveries

## Deliveries

Vehicle	Tesla Deliveries																
	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Tesla Model 3	-	-	-	1,764	26,620	104,000	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375	588,922	600,700
Tesla Model S and X	33,600	50,580	76,230	101,312	44,100	55,900	100,000	102,000	104,040	106,121	108,243	110,408	112,616	114,869	117,166	119,509	121,899
Tesla Model Y	-	-	-	-	-	-	-	1,764	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375
Tesla Roadster 2	-	-	-	-	-	-	-	-	500	1,000	1,500	1,650	1,815	1,906	2,001	2,041	2,082
Tesla Pickup	-	-	-	-	-	-	-	250	18,512	36,848	58,957	64,853	71,338	74,905	78,650	80,223	81,827
Tesla Semi	-	-	-	-	-	-	-	250	18,512	36,848	58,957	64,853	71,338	74,905	78,650	80,223	81,827
<b>Total</b>	<b>33,600</b>	<b>50,580</b>	<b>76,230</b>	<b>103,076</b>	<b>70,720</b>	<b>159,900</b>	<b>230,620</b>	<b>364,264</b>	<b>688,184</b>	<b>898,417</b>	<b>1,147,017</b>	<b>1,227,891</b>	<b>1,315,421</b>	<b>1,361,165</b>	<b>1,408,796</b>	<b>1,436,972</b>	<b>1,465,711</b>
<b>y-o-y growth %</b>																	
Tesla Model 3	n.a.	n.a.	n.a.	n.a.			7305%	99%	60%	10%	10%	5%	5%	2%	2%	2%	2%
Tesla Model S and X	n.a.	51%	51%	33%			-1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Tesla Model Y	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Roadster 2	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	n.a.	100%	50%	10%	10%	5%	5%	2%	2%
Tesla Pickup	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Semi	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%

Assumed growth after introduction:

2 years 10%  
 2 years 5%  
 onwards 2%

Revenue = Number of vehicles delivered X Average price

The Model Y, Roadster 2, Pickup, and Semi models are new models and should start to be delivered after 2018, we need to forecast those deliveries and we do it based on similar industry numbers, and Tesla actual numbers up to this date.

# Deliveries

## Deliveries

Vehicle	Tesla Deliveries																
	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Tesla Model 3	-	-	-	1,764	26,620	104,000	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375	588,922	600,700
Tesla Model S and X	33,600	50,580	76,230	101,312	44,100	55,900	100,000	102,000	104,040	106,121	108,243	110,408	112,616	114,869	117,166	119,509	121,899
Tesla Model Y	-	-	-	-	-	-	-	1,764	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375
Tesla Roadster 2	-	-	-	-	-	-	-	-	500	1,000	1,500	1,650	1,815	1,906	2,001	2,041	2,082
Tesla Pickup	-	-	-	-	-	-	-	250	18,512	36,848	58,957	64,853	71,338	74,905	78,650	80,223	81,827
Tesla Semi	-	-	-	-	-	-	-	250	18,512	36,848	58,957	64,853	71,338	74,905	78,650	80,223	81,827
<b>Total</b>	<b>33,600</b>	<b>50,580</b>	<b>76,230</b>	<b>103,076</b>	<b>70,720</b>	<b>159,900</b>	<b>230,620</b>	<b>364,264</b>	<b>688,184</b>	<b>898,417</b>	<b>1,147,017</b>	<b>1,227,891</b>	<b>1,315,421</b>	<b>1,361,165</b>	<b>1,408,796</b>	<b>1,436,972</b>	<b>1,465,711</b>
<b>y-o-y growth %</b>																	
Tesla Model 3	n.a.	n.a.	n.a.	n.a.			7305%	99%	60%	10%	10%	5%	5%	2%	2%	2%	2%
Tesla Model S and X	n.a.	51%	51%	33%			-1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Tesla Model Y	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Roadster 2	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	n.a.	100%	50%	10%	10%	5%	5%	2%	2%
Tesla Pickup	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Semi	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%

Assumed growth after introduction:

2 years 10%  
 2 years 5%  
 onwards 2%

The forecast for Model 3, 2018 H2 is based on 26 weeks 4000 deliveries per week, in 2019 the estimate was based on 5000 deliveries per week, in 2020 forecast is based on 52 weeks and 8000 deliveries per week, then 2 years of 10% growth, 2 years of 5% and onwards 2% (which corresponds to long-term inflation). It is reasonable estimate if consider the growth that the company has in deliveries up to this date.



# Deliveries

## Deliveries

	Tesla Deliveries																
Vehicle	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Tesla Model 3	-	-	-	1,764	26,620	104,000	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375	588,922	600,700
Tesla Model S and Tesla Model Y	33,600	50,580	76,230	101,312	44,100	55,900	100,000	102,000	104,040	106,121	108,243	110,408	112,616	114,869	117,166	119,509	121,899
Tesla Roadster 2	-	-	-	-	-	-	-	1,764	130,620	260,000	416,000	457,600	503,360	528,528	554,954	566,053	577,375
Tesla Pickup	-	-	-	-	-	-	-	500	1,000	1,000	1,500	1,650	1,815	1,906	2,001	2,041	2,082
Tesla Semi	-	-	-	-	-	-	-	250	18,512	36,848	58,957	64,853	71,338	74,905	78,650	80,223	81,827
Total	33,600	50,580	76,230	103,076	70,720	159,900	230,620	364,264	688,184	898,417	1,147,017	1,227,891	1,315,421	1,361,165	1,408,796	1,436,972	1,465,711
y-o-y growth %																	
Tesla Model 3	n.a.	n.a.	n.a.	n.a.			7305%	99%	60%	10%	10%	5%	5%	2%	2%	2%	2%
Tesla Model S and X	n.a.	51%	51%	33%			-1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Tesla Model Y	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Roadster 2	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	n.a.	100%	50%	10%	10%	5%	5%	2%	2%
Tesla Pickup	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%
Tesla Semi	n.a.	n.a.	n.a.	n.a.			n.a.	n.a.	7305%	99%	60%	10%	10%	5%	5%	2%	2%

Assumed growth after introduction:

2 years 10%  
 2 years 5%  
 onwards 2%

The Model S and X are being analyzed together; the Model Y is estimated replicating the Model 3. The Roadster 2 is a fancier car, so it starts with 500 deliveries, increases by 100%, then 50%, afterwards it grows as model 3. Pickup and Semi reflect the same type of growth in our model.

**NOTE: Deliveries reflect revenue, which is the basis of a financial model.**

Deliveries development

# Deliveries comparable

## Deliveries comparable

### Comparable

Vehicle	Average	Adj. Average
GM	9,600,340	9,600,340
Ford	6,607,000	6,607,000
Fiat Chrysler	4,740,000	4,740,000
BMW	2,460,000	2,460,000
Volkswagen	10,700,000	10,700,000
Jaguar	n.a.	n.a.
Porsche	n.a.	n.a.
Ferrari	n.a.	n.a.
Scania	n.a.	n.a.
MAN	n.a.	n.a.
Paccar	n.a.	n.a.
Average	n.a.	6,821,468

It is important to cross-check our estimate with actual market data, “sanity check”.

In these comparable deliveries, we find an average delivery for companies like GM, Ford, Fiat, BMW and Volkswagen.

We do not take other listed companies into consideration just because we want to make sure that we are comparing the general companies' deliveries with the Tesla company deliveries, not model by model.

# Revenue Automotive

## Revenue Automotive

	Tesla Revenue Automotive (in mln \$)																	
Vehicle	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst	Average Price (\$)
Tesla Model 3				n.a.	n.a.	4,368	5,486	10,920	17,472	19,219	21,141	22,198	23,308	23,774	24,250	24,735	25,229	42,000
Tesla Model S and X	3,007	3,741	6,351	n.a.	n.a.	4,891	8,750	8,925	9,104	9,286	9,471	9,661	9,854	10,051	10,252	10,457	10,666	87,500
Tesla Model Y	-	-	-	-	-	-	-	88	6,531	13,000	20,800	22,880	25,168	26,426	27,748	28,303	28,869	50,000
Tesla Roadster 2	-	-	-	-	-	-	-	-	115	230	345	380	417	438	460	469	479	230,000
Tesla Pickup	-	-	-	-	-	-	-	16	1,166	2,321	3,714	4,086	4,494	4,719	4,955	5,054	5,155	63,000
Tesla Semi	-	-	-	-	-	-	-	50	3,702	7,370	11,791	12,971	14,268	14,981	15,730	16,045	16,365	200,000
Total	3,007	3,741	6,351	9,641	6,093	9,259	14,236	19,999	38,090	51,426	67,263	72,175	77,509	80,390	83,395	85,063	86,764	
Selected case																		
Tesla Model 3								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Model S and X								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Model Y								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Roadster 2								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Pickup								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Semi								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Best case																		
Tesla Model 3								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Tesla Model S and X								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Tesla Model Y								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Tesla Roadster 2								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Tesla Pickup								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Tesla Semi								102%	102%	102%	102%	102%	102%	102%	102%	102%	102%	102%
Base case																		
Tesla Model 3								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Model S and X								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Model Y								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Roadster 2								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Pickup								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tesla Semi								100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Worst case																		
Tesla Model 3								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Tesla Model S and X								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Tesla Model Y								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Tesla Roadster 2								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Tesla Pickup								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%
Tesla Semi								98%	98%	98%	98%	98%	98%	98%	98%	98%	98%	98%

Average prices based on: <https://cleantechnica.com/2017/12/25/tesla-vehicle-revenue-2022-73-7-billion/>

# Gross Profit (%)

## GP %

### Comparable

Vehicle	Comparable companies	GP % Comp. 1	GP % Comp. 2	GP % Comp. 3	Average
Tesla Model 3	GM, Ford, Fiat Chrysler	13.9%	7.9%	15.3%	12.4%
Tesla Model S and X	BMW, Mercedes Cars, Volkswagen	18.4%	20.8%	18.4%	19.2%
Tesla Model Y	BMW, Mercedes Cars, Volkswagen	18.4%	20.8%	18.4%	19.2%
Tesla Roadster 2	Jaguar, Porsche, Ferrari	38.1%	28.2%	51.7%	39.3%
Tesla Pickup	GM, Ford, Fiat Chrysler	13.9%	7.9%	15.3%	12.4%
Tesla Semi	Scania, MAN, Paccar	24.6%	18.6%	14.3%	19.2%

### Historical

Vehicle	Average
Tesla Model 3	n.a.
Tesla Model S and X	25%
Tesla Model Y	n.a.
Tesla Roadster 2	n.a.
Tesla Pickup	n.a.
Tesla Semi	n.a.

Gross Profit % divided by Model.

Estimating is based on available public information, taking similar models and averaging is a great way to make a forecast.

# Gross Profit

## Gross Profit

Vehicle	Tesla Gross Profit (in mln \$)																
	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Tesla Model 3	n.a.	n.a.	n.a.	n.a.	n.a.	541	n.a.	1,352	2,163	2,379	2,617	2,748	2,885	2,943	3,002	3,062	3,123
Tesla Model S and X	n.a.	n.a.	n.a.	n.a.	n.a.	940	n.a.	1,715	1,749	1,784	1,820	1,856	1,894	1,931	1,970	2,009	2,050
Tesla Model Y	-	-	-	-	-	-	-	17	1,255	2,498	3,997	4,397	4,836	5,078	5,332	5,439	5,548
Tesla Roadster 2	-	-	-	-	-	-	-	-	45	90	136	149	164	172	181	185	188
Tesla Pickup	-	-	-	-	-	-	-	2	144	287	460	506	556	584	613	626	638
Tesla Semi	-	-	-	-	-	-	-	10	710	1,413	2,260	2,486	2,735	2,872	3,015	3,076	3,137
<b>Total</b>	<b>861</b>	<b>918</b>	<b>1,601</b>	<b>2,209</b>	<b>1,230</b>	<b>1,481</b>	<b>2,711</b>	<b>3,095</b>	<b>6,066</b>	<b>8,452</b>	<b>11,289</b>	<b>12,142</b>	<b>13,070</b>	<b>13,580</b>	<b>14,113</b>	<b>14,395</b>	<b>14,683</b>
<b>Selected case</b>																	
Tesla Model 3						12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Tesla Model S and X						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
Tesla Model Y						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
Tesla Roadster 2						39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
Tesla Pickup						12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Tesla Semi						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
<b>Best case</b>																	
Tesla Model 3						14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Tesla Model S and X						21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Tesla Model Y						21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Tesla Roadster 2						41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%	41%
Tesla Pickup						14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Tesla Semi						21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
<b>Base case</b>																	
Tesla Model 3						12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Tesla Model S and X						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
Tesla Model Y						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
Tesla Roadster 2						39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
Tesla Pickup						12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Tesla Semi						19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
<b>Worst case</b>																	
Tesla Model 3						11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Tesla Model S and X						18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
Tesla Model Y						18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
Tesla Roadster 2						38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%
Tesla Pickup						11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Tesla Semi						18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%

The best and worst cases are done by adding or subtracting 1.5% of the base case.



# Cost of sales automotive

## Cost of sales automotive

Vehicle	Tesla Cost of sales (in mln \$)																
	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Tesla Model 3	n.a.	n.a.	n.a.	n.a.	n.a.	(3,827)	n.a.	(9,568)	(15,309)	(16,840)	(18,524)	(19,451)	(20,423)	(20,832)	(21,248)	(21,673)	(22,107)
Tesla Model S and	n.a.	n.a.	n.a.	n.a.	n.a.	(3,951)	n.a.	(7,210)	(7,354)	(7,501)	(7,651)	(7,804)	(7,960)	(8,120)	(8,282)	(8,448)	(8,617)
Tesla Model Y	-	-	-	-	-	-	-	(71)	(5,276)	(10,502)	(16,803)	(18,483)	(20,332)	(21,348)	(22,416)	(22,864)	(23,321)
Tesla Roadster 2	-	-	-	-	-	-	-	-	(70)	(140)	(209)	(230)	(253)	(266)	(279)	(285)	(291)
Tesla Pickup	-	-	-	-	-	-	-	(14)	(1,022)	(2,034)	(3,255)	(3,580)	(3,938)	(4,135)	(4,342)	(4,428)	(4,517)
Tesla Semi	-	-	-	-	-	-	-	(40)	(2,993)	(5,957)	(9,531)	(10,484)	(11,533)	(12,109)	(12,715)	(12,969)	(13,228)
<b>Total</b>	<b>(2,146)</b>	<b>(2,823)</b>	<b>(4,750)</b>	<b>(7,433)</b>	<b>(4,863)</b>	<b>(7,779)</b>	<b>(11,525)</b>	<b>(16,904)</b>	<b>(32,024)</b>	<b>(42,974)</b>	<b>(55,974)</b>	<b>(60,033)</b>	<b>(64,439)</b>	<b>(66,810)</b>	<b>(69,281)</b>	<b>(70,667)</b>	<b>(72,080)</b>

Gross Profit = Revenues – Cost of sales, easy to calculate with the data we have.

NOTE: Until now we had estimates of delivery, average price of each model, gross profit of each model and now we reach the cost of sales using the formula above.

# Revenue and GP automotive

## Revenue and Gross Profit automotive

Vehicle	2014 Act	2015 Act	2016 Act	2017 Act	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Revenue automotiv	3,007	3,741	6,351	9,641	14,236	19,999	38,090	51,426	67,263	72,175	77,509	80,390	83,395	85,063	86,764
Gross Profit autom	861	918	1,601	2,209	2,711	3,095	6,066	8,452	11,289	12,142	13,070	13,580	14,113	14,395	14,683
GP%	29%	25%	25%	23%	19%	15%	16%	16%	17%	17%	17%	17%	17%	17%	17%

We can see that the GP% decreases as the company starts selling more cars with a smaller margin, for example, the Model 3.

Energy & Other  
2<sup>nd</sup> business line

# Revenue Energy & Other

## Revenue Energy & Other

	Tesla Revenue Energy & Other (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Energy generation and storage	4	14	181	1,116	784	784	1,569	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Services and other	187	291	468	1,001	534	534	1,067	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total Energy and Other</b>	<b>191</b>	<b>305</b>	<b>649</b>	<b>2,117</b>	<b>1,318</b>	<b>1,318</b>	<b>2,636</b>	<b>3,058</b>	<b>3,425</b>	<b>3,699</b>	<b>3,921</b>	<b>4,156</b>	<b>4,405</b>	<b>4,669</b>	<b>4,950</b>	<b>5,247</b>	<b>5,561</b>
SolarCity	255	400	730	-	-	-	-	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total Energy and Other + SolarCity</b>	<b>446</b>	<b>705</b>	<b>1,380</b>	<b>2,117</b>	<b>1,318</b>	<b>1,318</b>	<b>2,636</b>	<b>3,058</b>	<b>3,425</b>	<b>3,699</b>	<b>3,921</b>	<b>4,156</b>	<b>4,405</b>	<b>4,669</b>	<b>4,950</b>	<b>5,247</b>	<b>5,561</b>
<b>Selected case</b>																	
Total Energy and Other								16%	12%	8%	6%	6%	6%	6%	6%	6%	6%
<b>Y-o-Y %</b>																	
<b>Best case</b>																	
Total Energy and Other								18%	14%	10%	8%	8%	8%	8%	8%	8%	8%
<b>Base case</b>																	
Total Energy and Other		58%	96%	53%				16%	12%	8%	6%	6%	6%	6%	6%	6%	6%
<b>Worst case</b>																	
Total Energy and Other								14%	10%	6%	4%	4%	4%	4%	4%	4%	4%

The data for 2018 H2 is estimated to be equal 2018 H1. SolarCity is integrated to Tesla.

The estimated growth in our base case is conservative and goes as follows: 16%, 12%, 8%, and 6% onwards. The best and worst case we add or subtract 2%.

# Gross Profit Energy & Other

## Gross Profit Energy & Other

	Tesla GP% Energy and Other (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Energy generation and storage	0	2	3	242	79	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Services and other	20	4	(4)	(228)	(234)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total Energy and Other</b>	<b>20</b>	<b>6</b>	<b>(1)</b>	<b>14</b>	<b>(155)</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
SolarCity	79	119	251	-	-	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total Energy and Other + SolarCity</b>	<b>99</b>	<b>125</b>	<b>250</b>	<b>14</b>	<b>(155)</b>	<b>n.a.</b>	<b>386</b>	<b>448</b>	<b>502</b>	<b>542</b>	<b>575</b>	<b>609</b>	<b>646</b>	<b>685</b>	<b>726</b>	<b>769</b>	<b>815</b>
<b>Selected case</b>																	
Total Energy and Other	22%	18%	18%	1%	-12%		15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
<b>GP%</b>																	
<b>Best case</b>							17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
Total Energy and Other																	
<b>Base case</b>							15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Total Energy and Other																	
<b>Worst case</b>																	
Total Energy and Other							13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%

The gross profit was calculated based on the average of 2014, 2015, 2016, and 2017. The best and worst case we add or subtract 2%.

# Cost of sales Energy & Other

## Cost of sales Energy & Other

	Tesla Cost of sales Energy & Other (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Energy generation and storage	(4)	(12)	(178)	(875)	(706)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Services and other	(167)	(287)	(472)	(1,229)	(767)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total Energy and Other	(171)	(299)	(651)	(2,104)	(1,473)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SolarCity	-176	(281)	(479)	-	-	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total Energy and Other + SolarCity	(347)	(580)	(1,130)	(2,104)	(1,473)	(777)	(2,249)	(2,609)	(2,923)	(3,156)	(3,346)	(3,546)	(3,759)	(3,985)	(4,224)	(4,477)	(4,746)

Gross Profit = Revenues – Cost of sales, easy to calculate with the data we have.



Operating expenses

# Opex

## Opex comparable:

Comparable - 2017

Company	Average	Adj. Average
GM	14%	14%
Ford	13%	13%
Fiat Chrysler	10%	10%
BMW	10%	10%
Volkswagen	12%	12%
Jaguar	31%	
Porsche	11%	11%
Ferrari	29%	
Scania	15%	15%
MAN	15%	15%
Paccar	4%	
Average	15%	12.5%

Tesla is not a young or mature company. The benefits of the scale do not yet apply to it in the year 2018. It is important to check that operating expenses will decrease as soon as the company is able to take advantage of the economy of scale.

The best approach to calculate Opex was to find information from competitors and average them, not considering companies with outlier's values as an Opex margin (%), instead the average of the market.

# Opex

## Opex

	Tesla Opex (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Revenues	3,453	4,446	7,730	11,759	7,411	10,577	17,988	23,057	41,515	55,124	71,184	76,330	81,914	85,059	88,344	90,309	92,325
Opex as a % of revenues	-30.9%	-36.9%	-29.3%	-32.8%	-31.0%	-26.5%		-12.5%	-12.5%	-12.5%	-12.5%	-12.5%	-12.5%	-12.5%	-12.5%	-12.5%	-12.5%
Opex	(1,068)	(1,640)	(2,267)	(3,855)	(2,294)	(2,801)	(5,095)	(2,880)	(5,186)	(6,886)	(8,892)	(9,535)	(10,233)	(10,625)	(11,036)	(11,281)	(11,533)
<b>Selected case</b>																	
Opex as a % of revenue						-26%		-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%
<b>Opex %</b>																	
<b>Best case</b>																	
Opex as a % of revenue						-23%		-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
<b>Base case</b>																	
Opex as a % of revenue						-26%		-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%
<b>Worst case</b>																	
Opex as a % of revenue						-29%		-14%	-14%	-14%	-14%	-14%	-14%	-14%	-14%	-14%	-14%

Opex as a % of revenues.

Opex to the 2018 H2 is based on average for the past years. The best and worst case we add or subtract 3%.

Opex to the others forecasted periods are based on average of competitors. The best and worst case we add or subtract 2%.

# Balance Sheet

# Property, Plant & Equipment

## Fixed asset roll forward

Selected case: as a % of PPE

1

	Tesla PP&E (in mln \$)															
(\$ in million)	31Dec2014	31Dec2015	31Dec2016	31Dec2017	30Jun2018	2018 H2	31Dec2018	31Dec2019	31Dec2020	31Dec2021	31Dec2022	31Dec2023	31Dec2024	31Dec2025	31Dec2026	31Dec2027
	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
Beginning PP&E	738	1,829	3,403	5,983	10,028	10,969	10,028	14,638	19,127	23,116	25,682	28,419	31,325	34,394	37,618	40,986
Capex	1,323	1,997	3,527	5,211	1,843	4,173	6,017	5,855	5,738	4,623	5,136	5,684	6,265	6,879	7,524	8,197
D&A	(232)	(423)	(947)	(1,166)	(901)	(505)	(1,406)	(1,366)	(1,749)	(2,057)	(2,399)	(2,778)	(3,196)	(3,655)	(4,156)	(4,703)
Ending PP&E	1,829	3,403	5,983	10,028	10,969	14,638	14,638	19,127	23,116	25,682	28,419	31,325	34,394	37,618	40,986	44,480

  

	Tesla D&A (in mln \$)															
(\$ in million)	2014	2015	2016	2017	2018 H1	2018 H2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
2018 H2Fcst						(505)										
2018Fcst							(1,406)									
2019Fcst								(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)
2020Fcst									(383)	(383)	(383)	(383)	(383)	(383)	(383)	(383)
2021Fcst										(308)	(308)	(308)	(308)	(308)	(308)	(308)
2022Fcst											(342)	(342)	(342)	(342)	(342)	(342)
2023Fcst												(379)	(379)	(379)	(379)	(379)
2024Fcst													(418)	(418)	(418)	(418)
2025Fcst														(459)	(459)	(459)
2026Fcst															(502)	(502)
2027Fcst																(546)
2028Fcst																(593)
Total D&A	(232)	(423)	(947)	(1,166)	(901)	(505)	(1,406)	(1,366)	(1,749)	(2,057)	(2,399)	(2,778)	(3,196)	(3,655)	(4,156)	(4,703)
D&A as a % of PP&E	-31.4%	-23.1%	-27.8%	-19.5%	-9.0%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%
D&A as a % of revenues	-7.3%	-10.4%	-13.5%	-9.9%	-12.2%	-4.8%	-7.8%	-5.9%	-4.2%	-3.7%	-3.4%	-3.6%	-3.9%	-4.3%	-4.7%	-5.2%
Capex as a % of PP&E	179.1%	109.2%	103.6%	87.1%	18.4%	99.5%	60.0%	40.0%	30.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Capex as a % of revenues	41.4%	49.3%	50.4%	44.3%	24.9%	42.1%	42.1%	42.1%	20.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Useful life Capex 15  
Useful life historical assets 15

Ending PP&E = Beginning PP&E + Capex – D&A

Capex can be modeled in two approaches:

1. Model as a % of Beginning PP&E (2018 H2 average applied, 2019 60%, 2020 40%, 2021 30%, 20% onwards).
2. Model as a % of revenues (2018 H2, 2019 average applied, 2020 20%, 2021 15%, 10% onwards).

# Property, Plant & Equipment

## Fixed asset roll forward

Selected case: as a % of PPE

1

	Tesla PP&E (in min \$)																
(\$ in million)	31Dec2014 Act	31Dec2015 Act	31Dec2016 Act	31Dec2017 Act	30Jun2018 Act	2018 H2 Fcst	31Dec2018 Fcst	31Dec2019 Fcst	31Dec2020 Fcst	31Dec2021 Fcst	31Dec2022 Fcst	31Dec2023 Fcst	31Dec2024 4	31Dec2025 5	31Dec2026 6	31Dec2027 7	31Dec2028 8
Beginning PP&E	738	1,829	3,403	5,983	10,028	10,969	10,028	14,638	19,127	23,116	25,682	28,419	31,325	34,394	37,618	40,986	44,480
Capex	1,323	1,997	3,527	5,211	1,843	4,173	6,017	5,855	5,738	4,623	5,136	5,684	6,265	6,879	7,524	8,197	8,896
D&A	(232)	(423)	(947)	(1,166)	(901)	(505)	(1,406)	(1,366)	(1,749)	(2,057)	(2,399)	(2,778)	(3,196)	(3,655)	(4,156)	(4,703)	(5,296)
Ending PP&E	1,829	3,403	5,983	10,028	10,969	14,638	14,638	19,127	23,116	25,682	28,419	31,325	34,394	37,618	40,986	44,480	48,081
	Tesla D&A (in min \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
2018 H2Fcst						(505)											
2018Fcst							(1,406)										
2019Fcst								(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)	(1,366)
2020Fcst									(383)	(383)	(383)	(383)	(383)	(383)	(383)	(383)	(383)
2021Fcst										(308)	(308)	(308)	(308)	(308)	(308)	(308)	(308)
2022Fcst											(342)	(342)	(342)	(342)	(342)	(342)	(342)
2023Fcst												(379)	(379)	(379)	(379)	(379)	(379)
2024Fcst													(418)	(418)	(418)	(418)	(418)
2025Fcst														(459)	(459)	(459)	(459)
2026Fcst															(502)	(502)	(502)
2027Fcst																(546)	(546)
2028Fcst																	(593)
Total D&A	(232)	(423)	(947)	(1,166)	(901)	(505)	(1,406)	(1,366)	(1,749)	(2,057)	(2,399)	(2,778)	(3,196)	(3,655)	(4,156)	(4,703)	(5,296)
D&A as a % of PP&E	-31.4%	-23.1%	-27.8%	-19.5%	-9.0%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%	-25.5%
D&A as a % of revenues	-7.3%	-10.4%	-13.5%	-9.9%	-12.2%	-4.8%	-7.8%	-5.9%	-4.2%	-3.7%	-3.4%	-3.6%	-3.9%	-4.3%	-4.7%	-5.2%	-5.7%
Capex as a % of PP&E	179.1%	109.2%	103.6%	87.1%	18.4%	99.5%	60.0%	40.0%	30.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Capex as a % of revenues	41.4%	49.3%	50.4%	44.3%	24.9%	42.1%	42.1%	42.1%	20.0%	15.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Useful life Capex 15  
Useful life historical assets 15

It is possible to do a sanity check of D&A as a % of revenues of other companies in the industry.  
We can't do it with Capex, because it is difficult to find Capex data.

NOTE: D&A H2 2018 -> D&A of historical assets + D&A of Capex H2 2018



# PP&E

## PP&E comparable

### Comparables - 2017

Company	D&A as a % of PP&E		D&A as a % of revenues	
	Average	Adj. Average	Average	Adj. Average
GM	-34%	-34%	-8%	-8%
Ford	-24%	-24%	-5%	-5%
Fiat Chrysler	-20%	-20%	-5%	-5%
BMW	-42%	-42%	-6%	-6%
Volkswagen	-40%	-40%	-10%	-10%
Jaguar	-28%	-28%	-7%	-7%
Porsche	-39%	-39%	-10%	-10%
Ferrari	-37%	-37%	-8%	-8%
Scania	-13%	-13%	-3%	-3%
MAN	-37%	-37%	-7%	-7%
Paccar				
<b>Average</b>	<b>-31%</b>	<b>-31%</b>	<b>-7%</b>	<b>-7%</b>

With D&A forecasted we can calculate:

1. D&A as a % of PP&E
2. D&A as a % of revenues.

We can do a sanity check since D&A is easier to find public information than capex.

**NOTE:** It is better to use Capex as a percentage of revenue in growing business, as the business will need improvements as it grows. PP&E is important to verify the historical information of how much CAPEX represented for PP&E.

Working capital

# Working Capital

## Working capital

(\$ in million)	Tesla Working capital (in mln \$)															
	31Dec2014	31Dec2015	31Dec2016	31Dec2017	30Jun2018	31Dec2018	31Dec2019	31Dec2020	31Dec2021	31Dec2022	31Dec2023	31Dec2024	31Dec2025	31Dec2026	31Dec2027	31Dec2028
	4	5	6	7	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
Trade receivables	227	169	499	515	570	958	1,228	2,210	2,935	3,790	4,064	4,361	4,528	4,703	4,808	4,915
Inventory	954	1,278	2,067	2,264	3,325	5,073	6,648	11,906	15,716	20,209	21,661	23,234	24,119	25,042	25,601	26,174
Trade payables	778	916	1,860	2,390	3,030	4,358	5,711	10,229	13,502	17,362	18,609	19,961	20,721	21,515	21,994	22,487
<b>Net trade cycle</b>	<b>402</b>	<b>531</b>	<b>706</b>	<b>389</b>	<b>864</b>	<b>1,672</b>	<b>2,164</b>	<b>3,887</b>	<b>5,149</b>	<b>6,637</b>	<b>7,115</b>	<b>7,634</b>	<b>7,926</b>	<b>8,231</b>	<b>8,414</b>	<b>8,602</b>
<b>Selected case:</b>																
DSO	25.5	15.0	25.7	15.8	13.8	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
DIO	148.2	147.3	137.8	85.4	94.5	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6
DPO	120.9	105.6	124.0	90.2	86.1	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4	105.4
Net trade cycle	52.8	56.7	39.5	11.0	22.2	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4

Net trade cycle = DSO + DIO - DPO.

Using the average to forecast the future, from it we can calculate Trade receivables, Inventory and Trade payables.

Trade receivables = (DSO \* Revenue) / 360

Trade receivables = (DIO \* Cogs) / 360

Trade payables = (DPO \* Cogs) / 360

# Net trade cycle

## Working Capital comparable

Comparable - 2017

Vehicle	DSO		DIO		DPO		Net trade cycle	
	Average	Adj. Average	Average	Adj. Average	Average	Adj. Average	Average	Adj. Average
GM	22.0	22.0	28.8	28.8	75.0	75.0	(24.20)	(24.20)
Ford	28.2	28.2	21.2	21.2	60.6	60.6	(11.17)	(11.17)
Fiat Chrysler	25.6	25.6	41.9	41.9	84.0	84.0	(16.52)	(16.52)
BMW	9.7	9.7	46.4	46.4	44.5	44.5	11.60	11.60
Volkswagen	20.8	20.8	63.1	63.1	44.1	44.1	39.82	39.82
Jaguar	18.8		51.2		155.5		(85.39)	
Porsche	9.2	9.2	46.8	46.8	65.0	65.0	(9.11)	(9.11)
Ferrari	25.2	25.2	41.5	41.5	132.5	132.5	(65.77)	(65.77)
Scania	27.1	27.1	64.9	64.9	55.9	55.9	36.14	36.14
MAN	54.5		85.3		59.4		80.38	
Paccar	22.3	22.3	18.4	18.4	59.3	59.3	(18.62)	(18.62)
Average	24.0	21.1	46.3	41.4	76.0	69.0	(5.71)	(6.43)

It is closer to the Porsche production than anything else. Perhaps a revision of that number should be relevant to futures models.

Financing

# Financing

## Financing

Cover negative cash flows with:

Debt 50%

Equity 50%

Bond Yield as of Sep. 19 7.5%

	Tesla Financing (in mln \$)															
(\$ in million)	31Dec2014	31Dec2015	31Dec2016	31Dec2017	30Jun2018 Act	31Dec2018	31Dec2019	31Dec2020	31Dec2021	31Dec2022	31Dec2023	31Dec2024	31Dec2025	31Dec2026	31Dec2027	31Dec2028
Long-term debt and capital leases, net of curre	1,818.8	2,021.1	5,860.0	9,415.7	9,513.4	9,513.4	9,513.4	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3
Interest expense	(100.9)	(118.9)	(198.8)	(471.3)	(313.1)	(713.5)	(713.5)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)
Interest rate	-5.5%	-5.9%	-3.4%	-5.0%	-6.6%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%

	Tesla Cash Flow (in mln \$)																
	2014	2015	2016	2017	2018 H1	2018 H2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
Unlevered Free Cash Flow						1,841.7		(735.8)	9,022.8	7,799.4	9,833.9	2,706.2	3,015.5	1,377.2	1,439.8	506.2	491.3
Debt						-	-	367.9	-	-	-	-	-	-	-	-	-
Equity						-	-	367.9	-	-	-	-	-	-	-	-	-

Assumption #1:

UFCF<0, The company will raise financing on the first day of the following year.

Assumption #2:

The capital structure of the company if 50% debt and 50% equity

Assumption #3:

Cost of debt is constant (unreal assumption but easier to calculate),

7,5% Tesla bonds yield at the time.



# Financing

## Financing

Cover negative cash flows with:

Debt

50%

Equity

50%

Bond Yield as of Sep. 19

7.5%

	Tesla Financing (in mln \$)															
(\$ in million)	31Dec2014	31Dec2015	31Dec2016	31Dec2017	30Jun2018 Act	31Dec2018	31Dec2019	31Dec2020	31Dec2021	31Dec2022	31Dec2023	31Dec2024	31Dec2025	31Dec2026	31Dec2027	31Dec2028
Long-term debt and capital leases, net of curre	1,818.8	2,021.1	5,860.0	9,415.7	9,513.4	9,513.4	9,513.4	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3	9,881.3
Interest expense	(100.9)	(118.9)	(198.8)	(471.3)	(313.1)	(400.4)	(713.5)	(713.5)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)	(741.1)
Interest rate	-5.5%	-5.9%	-3.4%	-5.0%	-6.6%		7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%

	Tesla Cash Flow (in mln \$)																
	2014	2015	2016	2017	2018 H1	2018 H2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
Unlevered Free Cash Flow						1,841.7		(735.8)	9,022.8	7,799.4	9,833.9	2,706.2	3,015.5	1,377.2	1,439.8	506.2	491.3
Debt						-	-	367.9	-	-	-	-	-	-	-	-	-
Equity						-	-	367.9	-	-	-	-	-	-	-	-	-

Outstanding debt (end of 2018) = Outstanding debt (end of 2017) + newly raised debt (2018)

Interest expense = Outstanding debt \* Interest rate

# WACC

## WACC

Risk-free rate	3.07%
Market risk premium	5.00%
Beta (as of 27 Sep 2018)	0.78
Tax rate	30%
<b>Cost of equity</b>	<b>7.0%</b>
Current bond Yield as of 19th Sep	7.5%

(\$ in million)	Tesla WACC calculation (in mln \$)															
	31Dec201	31Dec201	31Dec201	31Dec201	30Jun2018	31Dec201	31Dec201	31Dec202	31Dec202	31Dec202	31Dec202	31Dec202	31Dec202	31Dec202	31Dec202	31Dec202
	4	5	6	7	Act	8	9	0	1	2	3	4	5	6	7	8
Debt	2430	2649	6844	10212	11617	11,617	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984
Equity	912	1084	5538	5235	5267	4,088	4,405	4,854	5,811	7,373	9,105	11,025	13,054	15,197	17,397	19,654
Debt / (Debt + Equity)	73%	71%	55%	66%	69%	74%	73%	71%	67%	62%	57%	52%	48%	44%	41%	38%
Equity / (Debt + Equity)	27%	29%	45%	34%	31%	26%	27%	29%	33%	38%	43%	48%	52%	56%	59%	62%
Cost of equity	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Cost of debt	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
<b>WACC</b>	<b>5.7%</b>	<b>5.7%</b>	<b>6.0%</b>	<b>5.8%</b>	<b>5.8%</b>	<b>5.7%</b>	<b>5.7%</b>	<b>5.7%</b>	<b>5.8%</b>	<b>5.9%</b>	<b>6.0%</b>	<b>6.1%</b>	<b>6.1%</b>	<b>6.2%</b>	<b>6.3%</b>	<b>6.3%</b>

CAPM Formula:

Cost of equity = Risk-Free Rate of Return + Beta \* (Market Rate of Return – Risk free Rate of Return)

Output

# P & L

## P&L

	Tesla P&L (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
Revenues	3,198	4,046	7,000	11,759	7,411	10,577	17,988	23,057	41,515	55,124	71,184	76,330	81,914	85,059	88,344	90,309	92,325
Cost of sales	(2,317)	(3,123)	(5,401)	(9,536)	(6,336)	(8,555)	(14,891)	(19,513)	(34,946)	(46,130)	(59,319)	(63,579)	(68,198)	(70,794)	(73,505)	(75,144)	(76,826)
Gross profit	882	924	1,599	2,222	1,075	2,022	3,097	3,543	6,568	8,994	11,864	12,751	13,716	14,265	14,839	15,165	15,499
Operating expenses	(1,068)	(1,640)	(2,267)	(3,855)	(2,294)	(2,801)	(5,095)	(2,880)	(5,186)	(6,886)	(8,892)	(9,535)	(10,233)	(10,625)	(11,036)	(11,281)	(11,533)
EBIT	(187)	(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Interest expenses/income	(98)	(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
EBT	(285)	(876)	(746)	(2,209)	(1,508)	(1,179)	(2,711)	(50)	641	1,367	2,231	2,475	2,742	2,898	3,062	3,142	3,225
Taxes	(9)	(13)	(27)	(32)	(19)	-	-	(192)	(410)	(669)	(743)	(823)	(870)	(919)	(943)	(967)	(967)
Minority interest	-	-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
Net Income	(294)	(889)	(675)	(1,961)	(1,427)	(1,179)	(2,711)	(50)	449	957	1,562	1,733	1,920	2,029	2,143	2,200	2,257
Check																	
Net income	-294	-889	-675	-1961	-1427												

Revenues = Automotive revenue + Energy & Other revenue.

# Balance Sheet

## Balance Sheet

Tesla BS (in mln \$)																	Assumption
	31Dec2014	31Dec2015	31Dec2016	31Dec2017	30Jun2018	31Dec2018	31Dec2019	31Dec2020	31Dec2021	31Dec2022	31Dec2023	31Dec2024	31Dec2025	31Dec2026	31Dec2027	31Dec2028	
(\$ in million)	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	
Cash	1,906	1,197	3,393	3,368	2,236	3,678	3,163	11,667	18,948	28,263	30,450	32,947	33,806	34,727	34,714	34,687	Cash flow sheet
Restricted cash and securiti	18	23	106	155	147	147	147	147	147	147	147	147	147	147	147	147	Stays flat
Trade receivables	227	169	499	515	570	958	1,228	2,210	2,935	3,790	4,064	4,361	4,528	4,703	4,808	4,915	Working capital sheet
Inventory	954	1,278	2,067	2,264	3,325	5,073	6,648	11,906	15,716	20,209	21,661	23,234	24,119	25,042	25,601	26,174	Working capital sheet
Prepaid expenses	76	116	194	268	422	575	738	1,328	1,763	2,277	2,442	2,620	2,721	2,826	2,889	2,953	Grows as a % of revenues
as a % of revenues	2.4%	2.9%	2.8%	2.3%	5.7%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	
Operating lease vehicles	767	1,791	3,134	4,117	2,282	2,282	2,282	2,282	2,282	2,282	2,282	2,282	2,282	2,282	2,282	2,282	Stays flat
Solar energy systems lease	-	-	5,920	6,347	6,340	6,340	6,340	6,340	6,340	6,340	6,340	6,340	6,340	6,340	6,340	6,340	Stays flat
PP&E	1,829	3,403	5,983	10,028	10,969	14,638	19,127	23,116	25,682	28,419	31,325	34,394	37,618	40,986	44,480	48,081	PP&E sheet
Intangible assets	-	13	376	362	365	365	365	365	365	365	365	365	365	365	365	365	Stays flat
Other assets	55	78	991	1,232	1,254	2,492	3,194	5,751	7,636	9,861	10,574	11,347	11,783	12,238	12,510	12,789	Grows as a % of revenues
as a % of revenues	1.7%	1.9%	14.2%	10.5%	16.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	
<b>Total assets</b>	<b>5,831</b>	<b>8,068</b>	<b>22,664</b>	<b>28,655</b>	<b>27,910</b>	<b>36,547</b>	<b>43,230</b>	<b>65,112</b>	<b>81,814</b>	<b>101,953</b>	<b>109,648</b>	<b>118,037</b>	<b>123,708</b>	<b>129,655</b>	<b>134,135</b>	<b>138,732</b>	
Accounts payable	778	916	1,860	2,390	3,030	4,358	5,711	10,229	13,502	17,362	18,609	19,961	20,721	21,515	21,994	22,487	Working capital sheet
Accrued liabilities	269	423	1,210	1,731	1,815	2,711	3,475	6,257	8,308	10,728	11,504	12,346	12,820	13,315	13,611	13,915	Grows as a % of revenues
as a % of revenues	8.4%	10.4%	17.3%	14.7%	24.5%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	15.1%	
Deferred revenue	192	424	763	1,015	576	1,575	2,019	3,635	4,827	6,233	6,684	7,173	7,448	7,736	7,908	8,085	Grows as a % of revenues
as a % of revenues	6.0%	10.5%	10.9%	8.6%	7.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	8.8%	
Resale value guarantees	-	137	180	787	674	782	1,003	1,805	2,397	3,095	3,319	3,562	3,698	3,841	3,927	4,014	Grows as a % of revenues
as a % of revenues	0.0%	3.4%	2.6%	6.7%	9.1%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	
Customer deposits	258	283	664	854	942	1,602	2,053	3,696	4,908	6,338	6,796	7,293	7,573	7,865	8,040	8,220	Grows as a % of revenues
as a % of revenues	8.1%	7.0%	9.5%	7.3%	12.7%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	
Long-term debt	2,430	2,649	6,844	10,212	11,617	11,617	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984	11,984	Financing sheet
Other liabilities	993	2,152	5,605	6,430	3,988	9,815	12,580	22,651	30,077	38,839	41,647	44,694	46,409	48,202	49,274	50,374	Grows as a % of revenues
as a % of revenues	31.0%	53.2%	80.1%	54.7%	53.8%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	54.6%	
<b>Total liabilities</b>	<b>4,919</b>	<b>6,984</b>	<b>17,126</b>	<b>23,421</b>	<b>22,643</b>	<b>32,459</b>	<b>38,825</b>	<b>60,257</b>	<b>76,003</b>	<b>94,580</b>	<b>100,543</b>	<b>107,012</b>	<b>110,654</b>	<b>114,458</b>	<b>116,738</b>	<b>119,078</b>	
Equity	912	1,084	5,538	5,235	5,267	4,088	4,405	4,854	5,811	7,373	9,105	11,025	13,054	15,197	17,397	19,654	
<b>Total liabilities &amp; equity</b>	<b>5,831</b>	<b>8,068</b>	<b>22,664</b>	<b>28,655</b>	<b>27,910</b>	<b>36,547</b>	<b>43,230</b>	<b>65,112</b>	<b>81,814</b>	<b>101,953</b>	<b>109,648</b>	<b>118,037</b>	<b>123,708</b>	<b>129,655</b>	<b>134,135</b>	<b>138,732</b>	
Check	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ending cash = Beginning cash + Net cash flow

NOTE: Assumption of growth of assets and liabilities are made on the right column.



# Cash Flow

## Cash Flow

	Tesla Cash Flow (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
EBIT		(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Operating taxes (30%)		(13)	(27)	(32)	(19)	-	(19)	(199)	(415)	(632)	(892)	(965)	(1,045)	(1,092)	(1,141)	(1,165)	(1,190)
NOPAT		(730)	(694)	(1,664)	(1,238)	(779)	(2,017)	464	968	1,476	2,080	2,251	2,438	2,548	2,662	2,718	2,776
Add-back D&A		423	947	1,166	901	505	1,406	1,366	1,749	2,057	2,399	2,778	3,196	3,655	4,156	4,703	5,296
Gross Cash Flow		(307)	253	(497)	(336)	(274)	(611)	1,830	2,716	3,533	4,480	5,030	5,634	6,202	6,818	7,421	8,072
Changes in Trade receivables		58	(330)	(16)	(54)	(388)	(442)	(270)	(983)	(725)	(855)	(274)	(297)	(167)	(175)	(105)	(107)
Changes in Inventory		(324)	(790)	(196)	(1,061)	(1,748)	(2,810)	(1,575)	(5,258)	(3,810)	(4,493)	(1,451)	(1,574)	(884)	(924)	(558)	(573)
Changes in Accounts payable		138	944	530	640	1,328	1,968	1,353	4,517	3,273	3,860	1,247	1,352	760	794	480	492
Investments in Working Capital		(128)	(176)	318	(475)	(808)	(1,284)	(492)	(1,723)	(1,261)	(1,488)	(478)	(519)	(292)	(305)	(183)	(188)
Capex		(1,997)	(3,527)	(5,211)	(1,843)	(4,173)	(6,017)	(5,855)	(5,738)	(4,623)	(5,136)	(5,684)	(6,265)	(6,879)	(7,524)	(8,197)	(8,896)
Other assets		(1,105)	(8,700)	(1,760)	1,671	(1,391)	280	(864)	(3,147)	(2,321)	(2,738)	(878)	(952)	(536)	(560)	(335)	(344)
Other liabilities		1,708	5,002	2,397	(2,822)	8,489	5,666	4,645	16,915	12,472	14,717	4,717	5,117	2,882	3,010	1,801	1,848
Unlevered Free Cash Flow		(1,830)	(7,147)	(4,753)	(3,806)	1,842	(1,964)	(736)	9,023	7,799	9,834	2,706	3,016	1,377	1,440	506	491
Interest expenses		(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
Delta Financial liabilities		219	4,195	3,368	1,404	-	1,404	368	-	-	-	-	-	-	-	-	-
Delta equity/Other equity movements		1,061	5,129	1,658	1,460	-	1,460	368	-	-	-	-	-	-	-	-	-
Tax adjustment		-	-	-	-	-	19	199	222	222	222	222	222	222	222	222	222
Minority interest		-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow		(709)	2,196	(25)	(1,131)	1,441	205	(515)	8,504	7,281	9,315	2,187	2,497	858	921	(13)	(27)
Opening cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,367.9	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7
Net Cash Flow		-	(708.8)	2,196.3	(25.3)	(1,131.5)	1,441.4	205.5	(514.5)	8,504.0	7,280.6	9,315.1	2,187.5	2,496.8	858.4	921.1	(27.5)
Closing cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,677.8	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,582.2
Check		-	-	-	-	-	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4

Unlevered free cash flow, which helps the company to figure out the need for financing in the future.

NOTE: Other assets = Restricted Cash and Securities, Prepaid expenses, Operating Lease vehicles, Solar Energy system leased, Intangible assets, and Other assets.

# Cash Flow

## Cash Flow

	Tesla Cash Flow (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
EBIT		(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Operating taxes (30%)		(13)	(27)	(32)	(19)	-	(19)	(199)	(415)	(632)	(892)	(965)	(1,045)	(1,092)	(1,141)	(1,165)	(1,190)
NOPAT		(730)	(694)	(1,664)	(1,238)	(779)	(2,017)	464	968	1,476	2,080	2,251	2,438	2,548	2,662	2,718	2,776
Add-back D&A		423	947	1,166	901	505	1,406	1,366	1,749	2,057	2,399	2,778	3,196	3,655	4,156	4,703	5,296
Gross Cash Flow		(307)	253	(497)	(336)	(274)	(611)	1,830	2,716	3,533	4,480	5,030	5,634	6,202	6,818	7,421	8,072
Changes in Trade receivables		58	(330)	(16)	(54)	(388)	(442)	(270)	(983)	(725)	(855)	(274)	(297)	(167)	(175)	(105)	(107)
Changes in Inventory		(324)	(790)	(196)	(1,061)	(1,748)	(2,810)	(1,575)	(5,258)	(3,810)	(4,493)	(1,451)	(1,574)	(884)	(924)	(558)	(573)
Changes in Accounts payable		138	944	530	640	1,328	1,968	1,353	4,517	3,273	3,860	1,247	1,352	760	794	480	492
Investments in Working Capital		(128)	(176)	318	(475)	(808)	(1,284)	(492)	(1,723)	(1,261)	(1,488)	(478)	(519)	(292)	(305)	(183)	(188)
Capex		(1,997)	(3,527)	(5,211)	(1,843)	(4,173)	(6,017)	(5,855)	(5,738)	(4,623)	(5,136)	(5,684)	(6,265)	(6,879)	(7,524)	(8,197)	(8,896)
Other assets		(1,105)	(8,700)	(1,760)	1,671	(1,391)	280	(864)	(3,147)	(2,321)	(2,738)	(878)	(952)	(536)	(560)	(335)	(344)
Other liabilities		1,708	5,002	2,397	(2,822)	8,489	5,666	4,645	16,915	12,472	14,717	4,717	5,117	2,882	3,010	1,801	1,848
Unlevered Free Cash Flow		(1,830)	(7,147)	(4,753)	(3,806)	1,842	(1,964)	(736)	9,023	7,799	9,834	2,706	3,016	1,377	1,440	506	491
Interest expenses		(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
Delta Financial liabilities		219	4,195	3,368	1,404	-	1,404	368	-	-	-	-	-	-	-	-	-
Delta equity/Other equity movements		1,061	5,129	1,658	1,460	-	1,460	368	-	-	-	-	-	-	-	-	-
Tax adjustment		-	-	-	-	-	19	199	222	222	222	222	222	222	222	222	222
Minority interest		-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow		(709)	2,196	(25)	(1,131)	1,441	205	(515)	8,504	7,281	9,315	2,187	2,497	858	921	(13)	(27)
Opening cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,367.9	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7
Net Cash Flow		-	(708.8)	2,196.3	(25.3)	(1,131.5)	205.5	(514.5)	8,504.0	7,280.6	9,315.1	2,187.5	2,496.8	858.4	921.1	(12.6)	(27.5)
Closing cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,677.8	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7	34,582.2
Check		-	-	-	-	-	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4

NOTE: Operating taxes are different from cash taxes. D&A is a non-monetary expenses.

To calculate WC: when assets increase cash outflow (-), when assets decrease cash inflow (+). For liabilities, when liabilities increase cash inflow (+), when liabilities decrease cash outflow (-). Capex is money that the company spends (-).



# Cash Flow

## Cash Flow

	Tesla Cash Flow (in mln \$)																
(\$ in million)	2014 Act	2015 Act	2016 Act	2017 Act	2018 H1 Act	2018 H2 Fcst	2018 Fcst	2019 Fcst	2020 Fcst	2021 Fcst	2022 Fcst	2023 Fcst	2024 Fcst	2025 Fcst	2026 Fcst	2027 Fcst	2028 Fcst
EBIT		(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Operating taxes (30%)		(13)	(27)	(32)	(19)	-	(19)	(199)	(415)	(632)	(892)	(965)	(1,045)	(1,092)	(1,141)	(1,165)	(1,190)
<b>NOPAT</b>		<b>(730)</b>	<b>(694)</b>	<b>(1,664)</b>	<b>(1,238)</b>	<b>(779)</b>	<b>(2,017)</b>	<b>464</b>	<b>968</b>	<b>1,476</b>	<b>2,080</b>	<b>2,251</b>	<b>2,438</b>	<b>2,548</b>	<b>2,662</b>	<b>2,718</b>	<b>2,776</b>
Add-back D&A		423	947	1,166	901	505	1,406	1,366	1,749	2,057	2,399	2,778	3,196	3,655	4,156	4,703	5,296
<b>Gross Cash Flow</b>		<b>(307)</b>	<b>253</b>	<b>(497)</b>	<b>(336)</b>	<b>(274)</b>	<b>(611)</b>	<b>1,830</b>	<b>2,716</b>	<b>3,533</b>	<b>4,480</b>	<b>5,030</b>	<b>5,634</b>	<b>6,202</b>	<b>6,818</b>	<b>7,421</b>	<b>8,072</b>
Changes in Trade receivables		58	(330)	(16)	(54)	(388)	(442)	(270)	(983)	(725)	(855)	(274)	(297)	(167)	(175)	(105)	(107)
Changes in Inventory		(324)	(790)	(196)	(1,061)	(1,748)	(2,810)	(1,575)	(5,258)	(3,810)	(4,493)	(1,451)	(1,574)	(884)	(924)	(558)	(573)
Changes in Accounts payable		138	944	530	640	1,328	1,968	1,353	4,517	3,273	3,860	1,247	1,352	760	794	480	492
<b>Investments in Working Capital</b>		<b>(128)</b>	<b>(176)</b>	<b>318</b>	<b>(475)</b>	<b>(808)</b>	<b>(1,284)</b>	<b>(492)</b>	<b>(1,723)</b>	<b>(1,261)</b>	<b>(1,488)</b>	<b>(478)</b>	<b>(519)</b>	<b>(292)</b>	<b>(305)</b>	<b>(183)</b>	<b>(188)</b>
Capex		(1,997)	(3,527)	(5,211)	(1,843)	(4,173)	(6,017)	(5,855)	(5,738)	(4,623)	(5,136)	(5,684)	(6,265)	(6,879)	(7,524)	(8,197)	(8,896)
Other assets		(1,105)	(8,700)	(1,760)	1,671	(1,391)	280	(864)	(3,147)	(2,321)	(2,738)	(878)	(952)	(536)	(560)	(335)	(344)
Other liabilities		1,708	5,002	2,397	(2,822)	8,489	5,666	4,645	16,915	12,472	14,717	4,717	5,117	2,882	3,010	1,801	1,848
<b>Unlevered Free Cash Flow</b>		<b>(1,830)</b>	<b>(7,147)</b>	<b>(4,753)</b>	<b>(3,806)</b>	<b>1,842</b>	<b>(1,964)</b>	<b>(736)</b>	<b>9,023</b>	<b>7,799</b>	<b>9,834</b>	<b>2,706</b>	<b>3,016</b>	<b>1,377</b>	<b>1,440</b>	<b>506</b>	<b>491</b>
Interest expenses		(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
Delta Financial liabilities		219	4,195	3,368	1,404	-	1,404	368	-	-	-	-	-	-	-	-	-
Delta equity/Other equity movements		1,061	5,129	1,658	1,460	-	1,460	368	-	-	-	-	-	-	-	-	-
Tax adjustment		-	-	-	-	-	19	199	222	222	222	222	222	222	222	222	222
Minority interest		-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
<b>Net Cash Flow</b>		<b>(709)</b>	<b>2,196</b>	<b>(25)</b>	<b>(1,131)</b>	<b>1,441</b>	<b>205</b>	<b>(515)</b>	<b>8,504</b>	<b>7,281</b>	<b>9,315</b>	<b>2,187</b>	<b>2,497</b>	<b>858</b>	<b>921</b>	<b>(13)</b>	<b>(27)</b>
Opening cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,367.9	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7
Net Cash Flow		-	(708.8)	2,196.3	(25.3)	(1,131.5)	205.5	(514.5)	8,504.0	7,280.6	9,315.1	2,187.5	2,496.8	858.4	921.1	(12.6)	(27.5)
Closing cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,677.8	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,582.2
Check		-	-	-	-	-	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4

1. Other assets = Restricted Cash and Securities, Prepaid expenses, Operating Lease vehicles, Solar Energy system leased, Intangible assets, and Other assets.
2. Other Liabilities = Accrued Liabilities, Deferred revenue, Resale value guarantees, Customer deposits, and other liabilities.

# Cash Flow

## Cash Flow

	Tesla Cash Flow (in mln \$)																
	2014	2015	2016	2017	2018 H1	2018 H2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
(\$ in million)	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
EBIT		(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Operating taxes (30%)		(13)	(27)	(32)	(19)	-	(19)	(199)	(415)	(632)	(892)	(965)	(1,045)	(1,092)	(1,141)	(1,165)	(1,190)
<b>NOPAT</b>		<b>(730)</b>	<b>(694)</b>	<b>(1,664)</b>	<b>(1,238)</b>	<b>(779)</b>	<b>(2,017)</b>	<b>464</b>	<b>968</b>	<b>1,476</b>	<b>2,080</b>	<b>2,251</b>	<b>2,438</b>	<b>2,548</b>	<b>2,662</b>	<b>2,718</b>	<b>2,776</b>
Add-back D&A		423	947	1,166	901	505	1,406	1,366	1,749	2,057	2,399	2,778	3,196	3,655	4,156	4,703	5,296
<b>Gross Cash Flow</b>		<b>(307)</b>	<b>253</b>	<b>(497)</b>	<b>(336)</b>	<b>(274)</b>	<b>(611)</b>	<b>1,830</b>	<b>2,716</b>	<b>3,533</b>	<b>4,480</b>	<b>5,030</b>	<b>5,634</b>	<b>6,202</b>	<b>6,818</b>	<b>7,421</b>	<b>8,072</b>
Changes in Trade receivables		58	(330)	(16)	(54)	(388)	(442)	(270)	(983)	(725)	(855)	(274)	(297)	(167)	(175)	(105)	(107)
Changes in Inventory		(324)	(790)	(196)	(1,061)	(1,748)	(2,810)	(1,575)	(5,258)	(3,810)	(4,493)	(1,451)	(1,574)	(884)	(924)	(558)	(573)
Changes in Accounts payable		138	944	530	640	1,328	1,968	1,353	4,517	3,273	3,860	1,247	1,352	760	794	480	492
<b>Investments in Working Capital</b>		<b>(128)</b>	<b>(176)</b>	<b>318</b>	<b>(475)</b>	<b>(808)</b>	<b>(1,284)</b>	<b>(492)</b>	<b>(1,723)</b>	<b>(1,261)</b>	<b>(1,488)</b>	<b>(478)</b>	<b>(519)</b>	<b>(292)</b>	<b>(305)</b>	<b>(183)</b>	<b>(188)</b>
Capex		(1,997)	(3,527)	(5,211)	(1,843)	(4,173)	(6,017)	(5,855)	(5,738)	(4,623)	(5,136)	(5,684)	(6,265)	(6,879)	(7,524)	(8,197)	(8,896)
Other assets		(1,105)	(8,700)	(1,760)	1,671	(1,391)	280	(864)	(3,147)	(2,321)	(2,738)	(878)	(952)	(536)	(560)	(335)	(344)
Other liabilities		1,708	5,002	2,397	(2,822)	8,489	5,666	4,645	16,915	12,472	14,717	4,717	5,117	2,882	3,010	1,801	1,848
<b>Unlevered Free Cash Flow</b>		<b>(1,830)</b>	<b>(7,147)</b>	<b>(4,753)</b>	<b>(3,806)</b>	<b>1,842</b>	<b>(1,964)</b>	<b>(736)</b>	<b>9,023</b>	<b>7,799</b>	<b>9,834</b>	<b>2,706</b>	<b>3,016</b>	<b>1,377</b>	<b>1,440</b>	<b>506</b>	<b>491</b>
Interest expenses		(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
Delta Financial liabilities		219	4,195	3,368	1,404	-	1,404	368	-	-	-	-	-	-	-	-	-
Delta equity/Other equity movements		1,061	5,129	1,658	1,460	-	1,460	368	-	-	-	-	-	-	-	-	-
Tax adjustment		-	-	-	-	-	19	199	222	222	222	222	222	222	222	222	222
Minority interest		-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
<b>Net Cash Flow</b>		<b>(709)</b>	<b>2,196</b>	<b>(25)</b>	<b>(1,131)</b>	<b>1,441</b>	<b>205</b>	<b>(515)</b>	<b>8,504</b>	<b>7,281</b>	<b>9,315</b>	<b>2,187</b>	<b>2,497</b>	<b>858</b>	<b>921</b>	<b>(13)</b>	<b>(27)</b>
Opening cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,367.9	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7
Net Cash Flow		-	(708.8)	2,196.3	(25.3)	(1,131.5)	205.5	(514.5)	8,504.0	7,280.6	9,315.1	2,187.5	2,496.8	858.4	921.1	(12.6)	(27.5)
Closing cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,677.8	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,582.2
Check		-	-	-	-	-	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4

Unlevered Free Cash Flow = Gross Cash Flow + Investment in Working Capital + Capex + Other assets + Other liabilities

NOTE: Unlevered Free Cash Flow (debt free company)

# Cash Flow

## Cash Flow

	Tesla Cash Flow (in mln \$)																
	2014	2015	2016	2017	2018 H1	2018 H2	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
(\$ in million)	Act	Act	Act	Act	Act	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst	Fcst
EBIT		(717)	(667)	(1,632)	(1,218)	(779)	(1,997)	663	1,382	2,108	2,972	3,216	3,483	3,640	3,803	3,883	3,966
Operating taxes (30%)		(13)	(27)	(32)	(19)	-	(19)	(199)	(415)	(632)	(892)	(965)	(1,045)	(1,092)	(1,141)	(1,165)	(1,190)
NOPAT		(730)	(694)	(1,664)	(1,238)	(779)	(2,017)	464	968	1,476	2,080	2,251	2,438	2,548	2,662	2,718	2,776
Add-back D&A		423	947	1,166	901	505	1,406	1,366	1,749	2,057	2,399	2,778	3,196	3,655	4,156	4,703	5,296
Gross Cash Flow		(307)	253	(497)	(336)	(274)	(611)	1,830	2,716	3,533	4,480	5,030	5,634	6,202	6,818	7,421	8,072
Changes in Trade receivables		58	(330)	(16)	(54)	(388)	(442)	(270)	(983)	(725)	(855)	(274)	(297)	(167)	(175)	(105)	(107)
Changes in Inventory		(324)	(790)	(196)	(1,061)	(1,748)	(2,810)	(1,575)	(5,258)	(3,810)	(4,493)	(1,451)	(1,574)	(884)	(924)	(558)	(573)
Changes in Accounts payable		138	944	530	640	1,328	1,968	1,353	4,517	3,273	3,860	1,247	1,352	760	794	480	492
Investments in Working Capital		(128)	(176)	318	(475)	(808)	(1,284)	(492)	(1,723)	(1,261)	(1,488)	(478)	(519)	(292)	(305)	(183)	(188)
Capex		(1,997)	(3,527)	(5,211)	(1,843)	(4,173)	(6,017)	(5,855)	(5,738)	(4,623)	(5,136)	(5,684)	(6,265)	(6,879)	(7,524)	(8,197)	(8,896)
Other assets		(1,105)	(8,700)	(1,760)	1,671	(1,391)	280	(864)	(3,147)	(2,321)	(2,738)	(878)	(952)	(536)	(560)	(335)	(344)
Other liabilities		1,708	5,002	2,397	(2,822)	8,489	5,666	4,645	16,915	12,472	14,717	4,717	5,117	2,882	3,010	1,801	1,848
Unlevered Free Cash Flow		(1,830)	(7,147)	(4,753)	(3,806)	1,842	(1,964)	(736)	9,023	7,799	9,834	2,706	3,016	1,377	1,440	506	491
Interest expenses		(159)	(79)	(577)	(290)	(400)	(714)	(714)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)	(741)
Delta Financial liabilities		219	4,195	3,368	1,404	-	1,404	368	-	-	-	-	-	-	-	-	-
Delta equity/Other equity movements		1,061	5,129	1,658	1,460	-	1,460	368	-	-	-	-	-	-	-	-	-
Tax adjustment		-	-	-	-	-	19	199	222	222	222	222	222	222	222	222	222
Minority interest		-	98	279	100	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow		(709)	2,196	(25)	(1,131)	1,441	205	(515)	8,504	7,281	9,315	2,187	2,497	858	921	(13)	(27)
Opening cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,367.9	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,609.7
Net Cash Flow		-	(708.8)	2,196.3	(25.3)	(1,131.5)	205.5	(514.5)	8,504.0	7,280.6	9,315.1	2,187.5	2,496.8	858.4	921.1	(12.6)	(27.5)
Closing cash		1,905.7	1,196.9	3,393.2	3,367.9	2,236.4	3,677.8	3,573.4	3,058.9	11,562.9	18,843.4	28,158.5	30,346.0	32,842.8	33,701.2	34,622.3	34,582.2
Check		-	-	-	-	-	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4	104.4

Net Cash Flow = Interest Expense

+ Delta Financial Liabilities = (Debt current period – Debt previous period)

+ Delta equity = (Ending equity – Beginning equity +/- Net income/loss +/- Other equity movement (dividends or any increase of Capital))

+ Tax adjustment = Taxes (P&L) – Operating taxes (Cash Flow)

+ Minority interest (in the P&L)

Thank you