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Tesla: THE Solarcity acquisition[[1]](#footnote-1)

Tomiwa Ademidun wrote this case under the supervision of Professor Zhichuan (Frank) Li solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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I think it’s really kind of a no-brainer, if we didn’t do this it would make Tesla’s execution harder and worse.

Elon Musk, Tesla’s chief executive officer, on the SolarCity Acquisition, June 2016[[2]](#footnote-2)

It was a sunny Friday in December 2016 in Southern California when Brad Buss, a member of Tesla’s board of directors, received a phone call from Elon Musk, Tesla’s chief executive officer (CEO). Musk was interested in acquiring a solar panel manufacturer, SolarCity. The board had agreed to seek a fairness opinion from an independent investment bank, Evercore Partners (Evercore), which then performed a valuation and offered an opinion on what it thought SolarCity was worth. Musk had announced the deal to the media; however, significant uproar emerged from Wall Street regarding the value of SolarCity to Tesla. Tesla shares dropped 10 per cent after the announcement while SolarCity shares popped more than 15 per cent. As a board member, Buss had the ability to give his opinion on whether SolarCity was a strategic fit for Tesla, and if it was, Buss could advise Musk on a fair final price that Tesla could pitch to the shareholders of both companies.

THE Solar Power Industry

The diminishing supply and soaring price of fossil fuels, combined with a rising global interest in clean, renewable energy sources, led to the U.S. solar industry’s significant growth in the last two decades (see Exhibit 1). In 2006, 30,000 U.S. homes had solar systems, which increased to 400,000 in 2013 and was expected to reach 3,800,000 homes by 2020.[[3]](#footnote-3) The U.S. solar industry included solar power plants and photovoltaic (PV) solar panels connected to local electrical grids. In 2015, the United States had 25 gigawatts of installed photovoltaic capacity and solar power generated 51.7 terawatt-hours, or 1.27 per cent of total U.S. electricity.[[4]](#footnote-4) The United States had been a pioneer in PVs and solar power research, with several of the world’s largest installations located in the California and Nevada deserts. The U.S. Department of Energy (DOE) had also invested heavily in clean energy, and many companies had recently entered this industry due to the DOE’s favourable loans and various subsidies.

While most companies in the solar power industry were large utilities that also held diversified investments in other fields, such as hydro and natural gas, many of the start-ups entering the solar industry, such as SolarCity, had assets only in the solar industry and were unprofitable. These start-ups were desperate for government subsidies and loans to finance their operations, hoping to reach profitability after becoming large and realizing economies of scale.

SolarCity

In 2006, brothers Peter and Lyndon Rive were discussing ideas to start a company when their cousin, Elon Musk, suggested a solar company concept. Since then the company the Rive brothers founded had grown rapidly, becoming the number-one solar panel installer in the United States with more than 100,000 installations in 2015.[[5]](#footnote-5) The company had an industry leading five-year compounded annual growth rate of 65.25 per cent in revenue. SolarCity also entered into long-term financing agreements with customers, which provided the company with recurring revenue. As SolarCity grew from a start-up to an actual utility, it became increasingly dependent on large amounts of debt to finance its large capital expenditures. Despite going public in 2012, the company had never experienced a profitable year. In fiscal year 2015, it reported losses of $769 million on $400 million sales (see Exhibits 2, 3, 4, and 5). The encouraging news was that, according to a consensus of analysts, SolarCity would finally turn profitable in 2017 for the first time in its history (see Exhibits 13).

Tesla

The U.S. automotive industry was a notoriously difficult industry to break into: the last U.S. auto manufacturer to go public was the Ford Motor Company in 1956.[[6]](#footnote-6) Five bold entrepreneurs planned to disrupt the auto industry in a major way. In 2003, Musk and four other entrepreneurs—Martin Eberhard, Marc Tarpenning, J. B. Straubel, and Ian Wright—founded Tesla Motors as an electric car manufacturer.[[7]](#footnote-7) Tesla initially made headlines after producing the first electric sports car, the Tesla Roadster. Led by the mercurial CEO Elon Musk, who was also the CEO of a space exploration company called SpaceX, the company went public in the first quarter of 2013, and had since experienced constant news coverage and a growing loyal fan base. SpaceX had its own monumental challenges to overcome, such as entering the U.S. defence space industry which had been a monopoly dominated by the United Launch Alliance for nearly a decade.[[8]](#footnote-8) Many industry analysts were worried that despite Musk’s reputation as a genius, running a company in the auto industry was too difficult and demanding for one person to do as a “part-time CEO.”

Musk had always set wildly ambitious goals for the company, and often had investors and customers wonder whether he would be able to meet these goals. The company seemed to oscillate between amazing successes and embarrassing failures. In 2015, the Model S sold more than 150,000 units and was the bestselling plug-in vehicle of the year.[[9]](#footnote-9) Yet, despite revenues of $4.05 billion, the company reported a loss of $889 million (see Exhibits 6, 7, 8, and 9). However, shareholders showed tremendous faith in Musk and Tesla’s altruistic mission to “accelerate the world’s transition to sustainable energy.”[[10]](#footnote-10) It seemed the more faith the shareholders had in him, the more ambitious and seemingly bizarre some of his decisions appeared to the public. For example, in November 2013 Tesla announced plans for the joint SolarCity-Tesla Gigafactory, a lithium-ion battery factory. The Gigafactory would have a projected capacity in 2020 of producing more lithium-ion batteries in a year than were produced in the entire world in 2013, the equivalent to supplying 500,000 Tesla cars per year. The factory would cost over $5 billion to build.[[11]](#footnote-11)

Problems at SolarCity

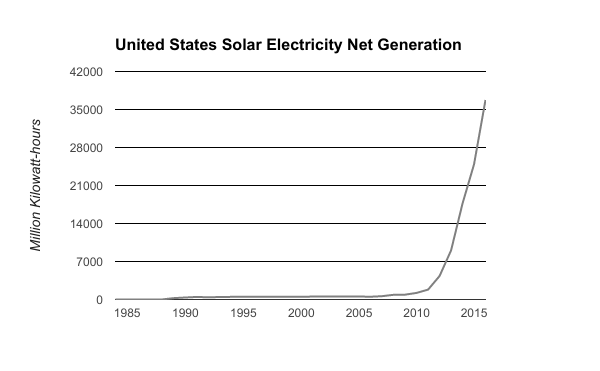
As the CEO of a start-up in the solar power industry, the first couple of years were expected to be difficult for Lyndon Rive. However, the business proved to be exceptionally challenging. Some critics claimed that SolarCity, unlike larger competitor utilities, did not have an asset base large enough to secure favourable credit terms. The company had a market debt-to-equity ratio of 1.45, which was drastically higher than the utilities industry average of 1.1. To reduce bankruptcy risk, the company hoped to move towards industry norm, achieving a more balanced capital structure of half debt and half equity (both in market value) while maintaining the current 97.59 million shares. Thus, SolarCity would be able to maintain its interest expense at a safe and sustainable level of $100 million from 2017 onwards. In 2015, it was struggling with $1.2 billion[[12]](#footnote-12) in current liabilities, yet only $902 million in current assets. In early 2016, the company was still starving for cash. Many investors wondered whether the company would declare bankruptcy and liquidate its assets to a larger utility company, following the fate of so many other solar energy companies. Some analysts, on the other hand, believed they had seen the light at the end of the tunnel: the SolarCity-Tesla Gigafactory would begin mass production of cells in 2017; Tesla model 3 pre-sales would top half a million by August 2016, many of which would be powered by SolarCity installed roofs and Powerwall. Both projects were expected to significantly increase profits for SolarCity.

The Acquisition Offer

As the chairman of the SolarCity board, Musk was frequently consulted whenever SolarCity had problems. Tesla had collaborated with SolarCity in the past on various energy initiatives. After hearing about the issues that the Rive brothers were facing and the possibility of the business closing down, Musk may have believed that an acquisition would be the best course of action for both companies. Tesla encouraged customers to charge their cars using the Tesla Powerwall and Tesla’s global network of Superchargers, both of which were to be powered by solar panels. An acquisition of SolarCity would allow both Tesla and SolarCity to experience significant cost synergies and provide access to more and cheaper financing. However, considering Tesla’s cash and profitability problems, investors could be reluctant to approve the purchase of an even more financially unstable company.[[13]](#footnote-13) Musk would first need a third-party investment bank to provide an opinion on a fair price for SolarCity, and then he would need to convince the shareholders that this purchase would be a wise decision.

Tesla hired the investment bank Evercore Partners, while SolarCity hired Lazard et Freres, to value the deal and provide a fairness opinion (see Exhibits 10, 11, and 12).[[14]](#footnote-14) If the deal was successful, SolarCity expected to realize cost synergies of 20 percent of its capital expenditures although some investors believe 10 percent synergies would be more realistic. Because the deal was to be structured as a stock swap,[[15]](#footnote-15) the challenge was to calculate a fair exchange ratio. Tesla instructed Evercore to create a discounted cash flow analysis based on publicly available consensus estimates of The Goldman Sachs Group, Inc. and the Institutional Brokers’ Estimate System (see Exhibit 13). These forecasts assumed that SolarCity had successfully reduced its market debt-to-equity ratio to 1:1 from 2017 onwards. At that time, the 30 year U.S. Treasury rate was 2.5 per cent. A market risk premium of 5 per cent and a terminal growth rate of 4 per cent were commonly used for the solar power industry.[[16]](#footnote-16) For SolarCity, its beta was estimated between 1.95–2.40 from different sources. The cost of debt 6.8 per cent, much higher than the industry average of 5.8 per cent due to high default risk, could drop to 6.5 per cent in 2017 with a lower debt level. The expected tax rate would be 20 per cent when SolarCity had stable taxable income. After the merger, SolarCity would be able to maintain more stable capital expenditure, depreciation and amortization, and net working capital, as 23 per cent, 3.5 percent, and 10 per cent of revenue respectively. Both banks felt that an offer of 0.082 Tesla shares for each SolarCity share would be a good deal for the shareholders of both companies. This ratio was based on the analysts’ valuation of both Tesla and SolarCity stocks. Tesla was valued at $358.60 per share, and all parties felt comfortable with this valuation. However, whether SolarCity’s share price of $29.35, with a 35 per cent premium, was a reasonable estimate was open to some debate. With the backing of a credible third-party bank and the support of loyal Tesla shareholders, Musk felt confident that the deal would go through.

Exhibit 1: U.S. solar electricity production since 1985



Source: “Monthly Energy Review May 2017,” U.S. Energy Information Administration, Table 7.2a, accessed May 27, 2017, www.eia.gov/totalenergy/data/monthly/pdf/sec7\_5.pdf, 109.

Exhibit 2: SolarCity Income Statements, 2014-2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| Revenue: |  |  |  |
| Operating leases and solar energy systems incentives | 174 | 294 | 422 |
| Solar energy systems and components sales | 81 | 106 | 308 |
| **Total revenue** | 255 | 400 | 730 |
| Cost of revenue: |  |  |  |
| Solar energy systems sales and operating leases | 79 | 114 | 170 |
| Depreciation and amortization | 98 | 167 | 309 |
| Total cost of revenue | 176 | 281 | 479 |
| **Gross profit** | 79 | 119 | 251 |
| Operating expenses: |  |  |  |
| Sales and marketing | 239 | 457 | 443 |
| General and administrative | 156 | 245 | 229 |
| Restructuring, Pre-production and other | 0 | 0 | 175 |
| Research and development | 19 | 65 | 55 |
| Total operating expenses | 414 | 767 | 902 |
| **Loss from operations** | −336 | −648 | −650 |
| Interest expenses | 66 | 118 | 170 |
| Loss before income taxes | −402 | −765 | −821 |
| Income tax benefit (provision) | 27 | -3 | 0 |
| **Net loss** | −375 | −769 | −820 |

Note: EPS = earnings per share

Source: SolarCity SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, http://ir.tesla.com/secfiling.cfm?filingID=1564590-17-3084&CIK=1408356.

Exhibit 3: SolarCity Balance Sheets, 2014-2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| **Assets** |  |  |  |
| Current assets: |  |  |  |
| Cash and cash equivalents | 504.38 | 382.54 | 290.71 |
| Short-term investments | 138.31 | 11.31 | 0.00 |
| Restricted cash | 20.88 | 39.86 | 74.72 |
| Accounts and Rebates receivable -net | 52.73 | 45.55 | 77.29 |
| Inventories | 217.22 | 342.95 | 172.71 |
| Prepaid expenses and other current assets | 64.10 | 79.93 | 77.50 |
| Total current assets | 997.62 | 902.14 | 692.93 |
| Long Term Assets | 3,553.61 | 6,384.98 | 8,437.84 |
| Total assets | 4,551.22 | 7,287.12 | 9,130.76 |
| **Liabilities and equity** |  |  |  |
| Current liabilities: |  |  |  |
| Accounts payable | 237.81 | 364.97 | 619.55 |
| Current portion of financing obligation | 328.70 | 828.39 | 899.76 |
| Total current liabilities | 566.51 | 1,193.36 | 1,519.31 |
| Deferred revenue | 557.41 | 1,010.49 | 1,086.42 |
| Long-term debt and Solar bonds, net of current portion | 1,442.97 | 2,402.93 | 2,759.18 |
| Deferred U.S. Treasury grant income | 397.49 | 382.28 | 343.26 |
| Other liabilities and deferred credits | 244.47 | 563.51 | 1,147.54 |
| Total liabilities | 3,208.85 | 5,552.56 | 6,855.70 |
| Common stock: | 0.01 | 0.01 | 0.01 |
| Additional paid-in capital | 1,600.72 | 2,051.23 | 2,352.97 |
| Accumulated deficit | −258.36 | −316.69 | −77.92 |
| Total equity | 1,342.37 | 1,734.55 | 2,275.06 |
| Total liabilities and equity | 4,551.22 | 7,287,11 | 9,130.76 |

Source: SolarCity SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, http://ir.tesla.com/secfiling.cfm?filingID=1564590-17-3084&CIK=1408356.

Exhibit 4: SolarCity Cash Flow Statements, 2014–2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In Millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| **Operating activities:** |  |  |  |
| Net loss | −375.23 | −768.82 | −820.35 |
| Depreciation, amortization and write-offs | 11.07 | 14.05 | 14.85 |
| Accounts receivable | 0.95 | −11.05 | −32.95 |
| Inventories | −97.35 | −125.34 | 170.58 |
| Accounts payable | 112.48 | 125.47 | −149.69 |
| Other Operating Activities | 130.23 | −24.20 | 308.78 |
| Net cash used in operating activities | −217.85 | −789.88 | −508.78 |
| **Investing activities:** |  |  |  |
| Payments for the cost of solar energy systems, leased and to be leased | −1,162.96 | −1,665.64 | −1,611.01 |
| Purchase of property, plant and equipment | −22.89 | −176.54 | −62.90 |
| Purchases of short-term investments | −167.40 | −44.59 | 0.00 |
| Proceeds from sales and maturities of short-term investments | 28.76 | 170.74 | 11.24 |
| Acquisitions and Other investments | −20.33 | −10.70 | −26.67 |
| Net cash used in investing activities | −1,344.81 | −1,726.73 | −1,689.33 |
| **Financing activities:** |  |  |  |
| Borrowings under long-term debt | 369.80 | 1,093.26 | 1,376.18 |
| Repayments of long-term debt | −336.56 | −215.93 | −866.95 |
| Other Financing Cash Flow Items | 287.73 | 342.03 | 332.66 |
| Proceeds from investments by non-controlling interests and redeemable | 777.96 | 1,097.49 | 1,420.82 |
| Distributions paid to non-controlling interests and redeemable | −117.13 | −109.51 | −148.86 |
| Net cash provided by financing activities before equity and convertible | 982.15 | 2,207.33 | 2,113.85 |
| Proceeds from Convertibles and Options | 507.82 | 187.45 | −7.58 |
| Net cash provided by financing activities | 1,489.97 | 2,394.78 | 2,106.27 |
| Net increase in cash and cash equivalents | −72.70 | −121.84 | −91.83 |

Source: SolarCity SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, http://ir.tesla.com/secfiling.cfm?filingID=1564590-17-3084&CIK=1408356.

Exhibit 5: SolarCity Financial Ratios, 2014-2016

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** |
| **LIQUIDITY RATIOS** |  |  |  |
| Cash to Total Assets | 0.11 | 0.05 | 0.03 |
| Current Ratio | 1.76 | 0.76 | 0.46 |
|  |  |  |  |
| **EFFICIENCY** |  |  |  |
| Days of Inventory | 450.48 | 445.47 | 131.61 |
| Days Receivables | 75.48 | 41.56 | 38.65 |
| Days Payables | 493.19 | 474.07 | 158.22 |
|  |  |  |  |
| **FINANCIAL LEVERAGE** |  |  |  |
| LT Debt to Total Assets | 0.32 | 0.33 | 0.30 |
| Equity to Total Assets | 0.29 | 0.24 | 0.25 |
|  |  |  |  |
| **PROFITABILITY** |  |  |  |
| Net Profit Margin | −1.47 | −1.92 | −1.12 |
| Return on Equity | −0.28 | −0.44 | −0.36 |
| Return on Assets | −0.08 | −0.11 | −0.09 |
|  |  |  |  |
| **GROWTH** |  |  |  |
| Sales | 56.44% | 56.86% | 82.50% |
| Operating Income | −124.83% | −92.86% | −0.31% |
| Net Income | −146.71% | −105.07% | −6.63% |

Note: LT = long-term

Source: Author’s calculations.

Exhibit 6: Tesla Income Statements, 2014–2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| Total automotive revenue | 3,007 | 3,741 | 6,351 |
| Energy generation and storage | 4 | 14 | 181 |
| Services and other | 187 | 291 | 468 |
| **Total revenues** | 3,198 | 4,046 | 7,000 |
| Total automotive cost of revenues | 1,914 | 2,400 | 3,803 |
| Energy generation and storage | 4 | 12 | 178 |
| Services and other | 167 | 287 | 472 |
| Depreciation and Amortization | 232 | 423 | 947 |
| Total cost of revenues | 2,317 | 3,123 | 5,401 |
| **Gross profit** | 882 | 924 | 1,599 |
| Research and development | 465 | 718 | 834 |
| Selling, general and administrative | 604 | 922 | 1,432 |
| Total operating expenses | 1,068 | 1,640 | 2,267 |
| **Loss from operations** | −187 | −717 | −667 |
| Interest income | 1 | 2 | 9 |
| Interest expense | −101 | −119 | −199 |
| Other income (expense), net | 2 | −42 | 111 |
| **Loss before income taxes** | −285 | −876 | −746 |
| Provision for income taxes | 9 | 13 | 27 |
| **Net loss** | −294 | −889 | −773 |

Note: EPS = earnings per share

Source: Tesla SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, http://ir.tesla.com/secfiling.cfm?filingid=1564590-17-3118&cik=1318605.

Exhibit 7: Tesla Balance Sheets, 2014–2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| **Assets** |  |  |  |
| Cash and cash equivalents | 1,906 | 1,197 | 3,393 |
| Restricted cash | 18 | 23 | 106 |
| Accounts receivable, net | 227 | 169 | 499 |
| Inventory | 954 | 1,278 | 2,067 |
| Prepaid expenses and other current assets | 76 | 116 | 194 |
| Total current assets | 3,180 | 2,782 | 6,260 |
| Property, plant and equipment, net | 2,596 | 5,195 | 15,037 |
| Other assets | 55 | 78 | 1,367 |
| **Total assets** | 5,831 | 8,068 | 22,664 |
| **Liabilities and Equity** |  |  |  |
| Accounts payable | 778 | 916 | 1,860 |
| Accrued liabilities and other | 526 | 843 | 2,053 |
| Deferred revenue | 192 | 424 | 763 |
| Current portion of long-term debt and capital leases | 611 | 628 | 1,150 |
| Total current liabilities | 2,107 | 2,811 | 5,827 |
| Deferred revenue, net of current portion | 292 | 446 | 852 |
| Long-term debt and capital leases, net of current portion | 1,819 | 2,021 | 5,970 |
| Resale value guarantees, net of current portion | 488 | 1,294 | 2,210 |
| Other long-term liabilities | 155 | 365 | 1,891 |
| **Total liabilities** | 4,861 | 6,937 | 16,750 |
| Redeemable noncontrolling interests in subsidiaries | 0 | 0 | 367 |
| Convertible senior notes | 58 | 42 | 9 |
| **Stockholders’ equity:** |  |  |  |
| Common stock | 0.1 | 0.1 | 0.1 |
| Additional paid-in capital | 2,345 | 3,409 | 7,774 |
| Accumulated deficit | −1,434 | −2,322 | −2,997 |
| Other equity | 0 | −45 | −400 |
| **Total stockholders’ equity** | 970 | 1,084 | 4,753 |
| **Total liabilities and equity** | 5,831 | 8,068 | 22,664 |

Source: Tesla SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, <http://ir.tesla.com/secfiling.cfm?filingid=1564590-17-3118&cik=1318605>.

Exhibit 8: Tesla Cash Flow Statements, 2014–2016

|  |  |  |  |
| --- | --- | --- | --- |
| **In millions of US$ (except for per share items)** | **2014** | **2015** | **2016** |
| **Cash Flows from Operating Activities** |  |  |  |
| Net loss | −294 | −889 | −773 |
| Depreciation and amortization | 232 | 423 | 947 |
| Non-cash interest and other operating activities | 262 | 435 | 485 |
| Gain on the acquisition of SolarCity | 0 | 0 | -89 |
| Other assets and Receivables | −1,299 | −1,582 | −2,675 |
| Accounts payable and accrued liabilities | 980 | 1,065 | 1,849 |
| Other long-term liabilities | 62 | 24 | 132 |
| Net cash used in operating activities | −57 | −524 | −124 |
| **Cash Flows from Investing Activities** |  |  |  |
| Purchases of property and equipment excluding capital leases, net of sales | −970 | −1,635 | −1,281 |
| Purchase of solar energy system, leased to be leased | 0 | 0 | −160 |
| Other Investing Activities | −21 | −26 | −189 |
| Cash acquired through (used in) business combinations | 0 | −12 | 214 |
| Net cash used in investing activities | −990 | −1,674 | −1,416 |
| **Cash Flows from Financing Activities** |  |  |  |
| Proceeds from issuance of common stock in public offering | 0 | 730 | 1,702 |
| Proceeds from issuance of convertible and other debt | 2,300 | 319 | 2,853 |
| Repayments of convertible and other debt | 0 | 0 | −1,858 |
| Other Financing Cash Flow Items | −157 | 475 | 1,047 |
| Net cash provided by financing activities | 2,143 | 1,524 | 3,744 |
| Effect of exchange rate changes on cash and cash equivalents | −36 | −34 | −7 |
| Net increase in cash and cash equivalents | 1,060 | −709 | 2,196 |

Source: Tesla SEC 10K Filings, Tesla Motors Inc., accessed June 14 2017, http://ir.tesla.com/secfiling.cfm?filingid=1564590-17-3118&cik=1318605.

Exhibit 9: Tesla Financial Ratios, 2014-2016

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2014 | 2015 | 2016 |
| **LIQUIDITY RATIOS** |  |  |  |
| Cash to Total Assets | 0.33 | 0.15 | 0.15 |
| Current Ratio | 1.51 | 0.99 | 1.07 |
|  |  |  |  |
| **EFFICIENCY** |  |  |  |
| Days of Inventory | 150.25 | 149.37 | 139.72 |
| Days Receivables | 25.86 | 15.24 | 26.03 |
| Days Payables | 122.57 | 107.09 | 125.72 |
|  |  |  |  |
| **FINANCIAL LEVERAGE** |  |  |  |
| LT Debt to Total Assets | 0.31 | 0.25 | 0.26 |
| Equity to Assets | 0.17 | 0.14 | 0.26 |
|  |  |  |  |
| **PROFITABILITY** |  |  |  |
| Net Profit Margin | −0.09 | −0.22 | −0.11 |
| Return on Equity | −0.30 | −0.79 | −0.13 |
| Return on Assets | −0.05 | −0.11 | −0.03 |
|  |  |  |  |
| **GROWTH** |  |  |  |
| Sales | 58.87% | 26.50% | 73.01% |
| Operating Income | −204.91% | −283.86% | 6.88% |
| Net Income | −297.30% | −202.23% | 13.01% |

Note: LT = long-term

Source: Author’s calculations.

Exhibit 10: financial indicators for firms Comparable to SolarCity, 2016

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Company Name** | **Price Jan 3** | **Shares**  **(M)** | **Market Cap** | **Debt** | **Debt**  **Equity Ratio** | **Beta** | **Sales ($M)** | **5-Year Sales**  **Growth (%)** | **PE**  **Ratio** | **EV/ EBITDA** | **EV/ Sales** |
| **First Solar** | 33.88 | 104 | 3,520 | 787 | 22% | 2.04 | 3,413 | 0.07 | 6.95 | 3.83 | 1.26 |
| **GCL-Poly Energy Holdings Ltd.** | 0.12 | 18,588 | 2,253 | 3,414 | 152% | 0.93 | 3,464 | 6.22 | 7.20 | 7.13 | 1.64 |
| **Canadian Solar Inc.** | 12.61 | 57 | 724 | 775 | 107% | 1.79 | 3,468 | 18.32 | 8.57 | 7.06 | 0.43 |
| **Trina Solar Ltd.-Spon Adr** | 9.46 | 92 | 875 | 762 | 87% | 1.12 | 3,036 | 10.32 | 11.28 | 6.38 | 0.54 |
| **Shanghai Aerospace Automobile Electromechanical** | 10.97 | 1,434 | 15,730 | 279 | 2% | 1.29 | 639 | 10.08 | 89.50 | 58.86 | 25.05 |
| Average |  |  |  |  | **74%** | **1.43** | **2,804** | **9.00** | **24.70** | **16.65** | **5.78** |

Note: M = millions; PE = price/earnings; EV/EBITDA = enterprise value ÷ earnings before interest, taxes, depreciation, and amortization; EV = enterprise value

Source: “Solar Energy Industry Companies,” S&P Capital IQ database (2016), accessed January 6, 2017, www.capitaliq.com.

Exhibit 11: Descriptions of firms comparable to Solarcity

|  |  |
| --- | --- |
| **First Solar** | First Solar, Inc. is a provider of photovoltaic (PV) solar energy solutions. The company designs, manufactures, and sells PV solar modules with thin-film semiconductor technology, and develops, designs, constructs, and sells PV solar power solutions. |
| **GCL-Poly Energy Holdings Ltd.** | GCL-Poly Energy Holdings Limited is an investment holding company principally engaged in solar material business. The company operates its business through three segments. The Solar Material Business segment is engaged in the manufacture and sales of polysilicon and wafer to companies operating in the solar industry. |
| **Canadian Solar Inc.** | Canadian Solar Inc. is a solar power company that provides solar power products, services, and system solutions with operations in North America, South America, Europe, Africa, the Middle East, Australia, and Asia. |
| **Trina Solar Ltd.-Spon Adr** | Trina Solar Limited is an integrated solar power products manufacturer and solar system developer based in China, with a global distribution network. The company has integrated the manufacturing of ingots, wafers, and solar cells for use in its PV module production. |
| **Shanghai Aerospace Automobile Electromechanical** | Shanghai Aerospace is a China-based company principally engaged in new energy development business. The company mainly provides new energy PV, including polycrystalline silicon, solar cell modules, and others: automobile components, including automobile air conditioning systems and others, as well as new materials. |
| **SolarCity** | SolarCity Corporation is a United States-based solar provider primarily engaged in the design, manufacture, installation, and sale or lease of solar energy systems to residential and commercial customers, or sale of electricity generated by solar energy systems to customers. |

Source: “Solar Energy Industry Companies,” S&P Capital IQ database (2016), December 1, 2016, accessed January 6, 2017, www.capitaliq.com.

Exhibit 12: Precedent Transactions

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date Effective** | **Target**  **Name** | **Acquirer**  **Name** | **Deal  Value  ($M)** | **Implied Enterprise Value** | **Equity Value** | **Target Net Sales LTM** | **Net Income LTM** | **EBITDA LTM** |
| 07/30/14 | Sun Team Group Ltd. | Procognia Israel Ltd. | 20.17 | 47.44 | 19.83 | 36.10 | 7.4 | 11.45 |
| 02/10/15 | Nexolon Co. | Creditors | 91.94 | 608.66 | 78.81 | 239.63 | –383.3 | –23.97 |
| 12/21/15 | Gestamp Asetym Solar | KKR & Co. LP | 1,000.00 | 853.85 | 814.91 | 64.98 | –6.6 | 8.81 |
| 12/22/15 | Renewable Energy Generation | BlackRock Inc. | 97.23 | 104.00 | 82.84 | 18.91 | –8.3 | 24.15 |
| 03/31/16 | Enel Green Power SpA | Enel SpA | 10,893.95 | 18,787.79 | 9,707.55 | 3,438.76 | 233.6 | 2,255.25 |
| 12/02/16 | Alerion Clean Power SpA | Eolo Energia Srl | 116.32 | 329.48 | 102.49 | 48.10 | –9.3 | 27.53 |

Note: M = millions; LTM = last twelve months; EBITDA = earnings before interest, taxes, depreciation, and amortization; Implied enterprise value is deal value plus interest-bearing debt; Equity value is market value of equity one month prior to acquisition announcement.

Source: “Solar Energy Industry Companies,” S&P Capital IQ database (2016), December 1, 2016, accessed January 6, 2017, www.capitaliq.com.

**Exhibit 13: SolarCity Discounted Cash Flow analysis, 2015–2021**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ($ in millions) | **FY 2015** | **FY 2016** | **FY 2017E** | **FY 2018E** | **FY 2019E** | **FY 2020E** | **FY 2021E** |
| **Revenue** | 400 | 730 | 969 | 1,274 | 2,066 | 3,295 | 5,003 |
| **EBITDA** | −640.12 | −634.67 | 347.13 | 456.51 | 740.38 | 1,180.91 | 1,793.12 |

Note: FY = fiscal year; E = estimated; EBITDA = earnings before interest, taxes, depreciation, and amortization.

1. This case has been written based on published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of Tesla or SolarCity, or any of their employees. [↑](#footnote-ref-1)
2. “Tesla Motors Conference Call,” Tesla, June 22, 2016, accessed April 20, 2017, http://edge.media-server.com/m/p/makhvjt8. [↑](#footnote-ref-2)
3. Laura Wisland, “How Many Homes Have Rooftop Solar? The Number Is Growing...,” [Union of Concerned Scientists](https://en.wikipedia.org/wiki/Union_of_Concerned_Scientists) blog, September 4, 2014, accessed December 10, 2014, http://blog.ucsusa.org/laura-wisland/how-many-homes-have-rooftop-solar-644?. [↑](#footnote-ref-3)
4. U.S. Energy Information Administration, Electric Power Monthly with Data for March 2017, report, May 2017, accessed May 27, 2017, www.eia.gov/electricity/monthly/monthly/pdf/epm.pdf, 15–16. [↑](#footnote-ref-4)
5. United States Securities and Exchange Commission, SolarCity form 10K, December 31, 2015, accessed June 1, 2017, www.sec.gov/Archives/edgar/data/1408356/000156459016012549/scty-10k\_20151231.htm. [↑](#footnote-ref-5)
6. Matt Andrejczak, “Tesla Motors Revs up $244 Million, IPO,” MarketWatch, June 28, 2010, accessed May 12, 2017, www.marketwatch.com/story/tesla-motors-revs-up-244-million-ipo-2010-06-28. [↑](#footnote-ref-6)
7. Martin LaMonica, “Tesla Motors Founders: Now There Are Five,” cnet.com, September 21, 2009, accessed May 12, 2017, www.cnet.com/news/tesla-motors-founders-now-there-are-five/. [↑](#footnote-ref-7)
8. Petersen, Melody, “SpaceX may upset firm's monopoly in launching Air Force satellites,” *Los Angeles Times*, November 25, 2015, accessed June 16, 2017, www.latimes.com/business/la-fi-spacex-satellites-20141126-story.html#page=1. [↑](#footnote-ref-8)
9. Jeff Cobb, “Tesla Model S Is World’s Best-Selling Plug-in Car for Second Year in a Row,” HybridCars, January 26, 2017, accessed April, 20, 2017, www.hybridcars.com/tesla-model-s-is-worlds-best-selling-plug-in-car-for-second-year-in-a-row. [↑](#footnote-ref-9)
10. Tesla Motors, “About Tesla”, January 9, 2015, accessed June 14, 2017, www.tesla.com/about. [↑](#footnote-ref-10)
11. Tesla Motors, “Planned 2020 Gigafactory Production Exceeds 2013 Global Production,” February 26, 2014, accessed June 14, 2017, www.teslamotors.com/sites/default/files/blog\_attachments/gigafactory.pdf. [↑](#footnote-ref-11)
12. All currency amounts are in U.S. dollars unless otherwise specified. [↑](#footnote-ref-12)
13. “Tesla Motors Conference Call,” op. cit. [↑](#footnote-ref-13)
14. Aswath Damodaran, “Keystone Kop Valuations: Lazard, Evercore and the TSLA/SCTY Deal,” Musings on Markets, blog, September 6, 2016, accessed April 20, 2017, <http://aswathdamodaran.blogspot.ca/2016/09/keystone-kop-valuations-lazard-evercore.html>. [↑](#footnote-ref-14)
15. “Tesla Makes Offer to Acquire SolarCity,” Tesla, blog post, June 21, 2016, accessed April 20, 2017, www.tesla.com/blog/tesla-makes-offer-to-acquire-solarcity. [↑](#footnote-ref-15)
16. The Henry Fund Research, “First Solar Inc. (FSLR)”, November 26, 2016, accessed June 14, 2017, www.biz.uiowa.edu/henry/download/research/FSLR\_f16.pdf. [↑](#footnote-ref-16)