North America United States
Consumer Autos & Auto Parts

Deutsche Bank

9 August 2010

Tesla Motors

Reuters: **TSLA.OQ** Bloomberg: **TSLA UN** Exchange: **NMS** Ticker: **TSLA**

Initiating coverage with a Hold recommendation

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We believe that Tesla can compete successfully over the long-term
We believe that Tesla's deep technical talent, head-start in EV technology, low development costs, unique product offering, low cost financing, and already-ubiquitous brand name position the co. to succeed in bringing competitive veh's to market. We expect strong demand / profitability in the med-term (20k Model S sales would enable $250MM-$300MM of EBITDA in 2013). And we expect a promising future beyond this, based on product expansion. The shares appear fully valued at this point, however, and we initiate coverage with a Hold rating.

Innovative battery approach leads to key cost / driving range advantages
Tesla's success in using groundbreaking packaging and electronics technology to enhance the durability and safety of low-cost, high-energy consumer electronics-style lithium-ion cells has resulted in a current battery pack cost that we estimate at ~$470 / kWh, compared to ~$650 / kWh for the rest of the industry (assuming similarly low volumes). And we believe that future packs (expected in 2012) could approach $300 / kWh, which would be dramatically lower than mainstream automakers. Lower cost and higher energy should enable Tesla to produce vehicles with unparalleled performance (range of 160-300 miles compared to 100 for most other planned EV's). Tesla's approach has been validated by Daimler and Toyota, each of which are current shareholders and are using Tesla packs in prototype EV's.

Low-cost business model / strong execution to-date give us confidence
Earnings appear quite strong on only 20k Model S units, which appears to be very achievable in the context of the premium midsize segment, and we believe that the company can break-even at roughly 50% of that volume. Capital needs have been mitigated by a low-cost DOE loan, and an ability to purchase PP&E at distressed prices. Access to the Toyota parts bin (and Toyota's material cost) is particularly advantageous with respect to material cost. Current management initiated a cost-reduction program that took the company from -10% gross margin in 1Q09 to +21% in 1H10, despite lower YOY unit volumes, which gives us confidence in our 22% gross margin projection for the Model S.

We have arrived at a $17 price target for the company's shares…
…based on a DCF analysis (see page 32 for detail). Key risks include execution on the scale up from niche to volume manufacturing, risks associated with demand and avg transaction price assumptions, risks associated with costs projections, and unknowns associated with the future competitive landscape (we believe that Tesla's competitors are now aggressively pursuing electric vehicles). In addition, we anticipate limited near term revenue/earnings to support the stock (i.e. until launch of the Model S in 2012). Consequently, we anticipate that Tesla's shares can exhibit high levels of near term volatility.

Forecasts and ratios

Year End Dec 31	2009A	**2010E**	2011E
FY EPS (USD)	-	**-3.08**	-2.15
Revenue (USDm)	111.9	**110.5**	146.9

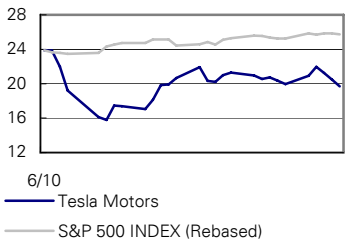
Source: Deutsche Bank estimates, company data

Coverage Change

Hold

Price at 6 Aug 2010 (USD)	**19.67**
Price target	**17.00**

Price/price relative



Performance (%)	1m	3m	12m
Absolute	*22.1*	–	–
S&P 500 INDEX	*9.1*	*-0.6*	*12.5*

Deutsche Bank Securities Inc.

Model updated:06 August 2010

Running the numbers

North America

United States

Autos & Auto Parts

Tesla Motors

Reuters: TSLA.OQ Bloomberg: TSLA UN

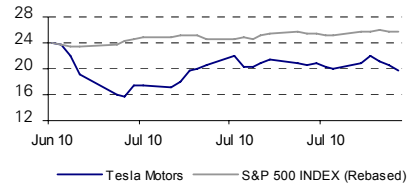
Hold

Price (6 Aug 10)	USD 19.67
Target price	USD 17.00
52-week Range	USD 15.80 - 23.89
Market Cap (m)	USDm 990 EURm 745

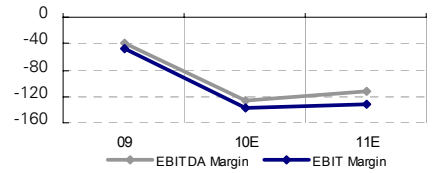
Company Profile

Tesla Motors designs, manufactures, and sells electric vehicles and EV powertrain components. Founded in 2003, the company introduced the first widely available highway-capable electrick vehicle in 2008. They plan to produce a higher-volume product (Model S) in 2012.

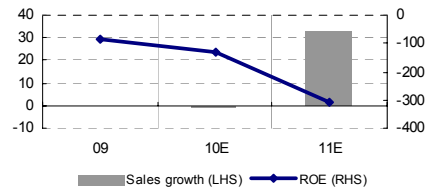
Price Performance



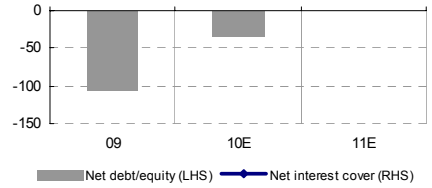
Margin Trends



Growth & Profitability



Solvency



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Fiscal year end 31-Dec	2009	2010E	2011E
Financial Summary			
DB EPS (USD)	na	-3.08	-2.15
Reported EPS (USD)	-1.03	-2.87	-1.99
DPS (USD)	0.00	0.00	0.00
BVPS (USD)	1.30	3.31	-0.37
Valuation Metrics			
Price/Sales (x)	nm	9.0	12.6
P/E (DB) (x)	na	nm	nm
P/E (Reported) (x)	nm	nm	nm
P/BV (x)	0.0	5.9	nm
FCF yield (%)	na	nm	nm
Dividend yield (%)	na	0.0	0.0
EV/Sales	nm	8.4	14.3
EV/EBITDA	nm	nm	nm
EV/EBIT	nm	nm	nm
Income Statement (USDm)			
Sales	112	111	147
EBITDA	-45	-140	-165
EBIT	-52	-151	-192
Pre-tax profit	-56	-155	-202
Net income	**-56**	**-155**	**-202**
Cash Flow (USDm)			
Cash flow from operations	**-81**	**-119**	**-182**
Net Capex	-12	-129	-129
Free cash flow	**-93**	**-248**	**-311**
Equity raised/(bought back)	158	246	0
Dividends paid	0	0	0
Net inc/(dec) in borrowings	0	0	0
Other investing/financing cash flows	-5	149	188
Net cash flow	**60**	**147**	**-123**
Change in working capital	*-38*	*28*	*-8*
Balance Sheet (USDm)			
Cash and cash equivalents	70	217	93
Property, plant & equipment	24	147	252
Goodwill	0	0	0
Other assets	37	61	64
Total assets	**130**	**424**	**409**
Debt	0	159	351
Other liabilities	65	99	94
Total liabilities	**65**	**258**	**445**
Total shareholders' equity	**66**	**167**	**-35**
Net debt	*-70*	*-58*	*258*
Key Company Metrics			
Sales growth (%)	nm	-1.2	32.9
DB EPS growth (%)	na	na	30.2
Payout ratio (%)	nm	nm	nm
EBITDA Margin (%)	-40.2	-126.4	-112.2
EBIT Margin (%)	-46.4	-136.3	-131.0
ROE (%)	-84.8	-133.3	-306.7
Net debt/equity (%)	-106.0	-34.5	nm
Net interest cover (x)	nm	nm	nm
DuPont Analysis			
EBIT margin (%)	-46.4	-136.3	-131.0
x Asset turnover (x)	0.9	0.4	0.4
x Financial cost ratio (x)	1.0	1.0	1.0
x Tax and other effects (x)	1.0	1.0	1.0
= ROA (post tax) (%)	**-42.7**	**-55.8**	**-48.4**
x Financial leverage (x)	2.0	2.4	6.3
= ROE (%)	**-84.8**	**-133.3**	**-306.7**
annual growth (%)	*na*	*-57.1*	*-130.1*
x NTA/share (avg) (x)	1.2	2.2	0.7
= Reported EPS	**-1.03**	**-2.87**	**-1.99**
annual growth (%)	*na*	*-177.8*	*30.5*

Source: Company data, Deutsche Bank estimates

Investment Thesis

Outlook

We believe that Tesla's deep technical talent, its head-start in EV technology, its low product development costs, unique product offering, low cost DOE financing, and an already-ubiquitous brand name, position the company to succeed in bringing competitive vehicles to market. We expect strong demand and profitability in the intermediate term (20k Model S sales would enable Tesla to generate $250MM-$300MM of EBITDA in 2013). And the company has a promising future beyond this starting point, based on a growing product portfolio. Tesla's success in using groundbreaking packaging and electronics technology to enhance the durability and safety of low-cost, high-energy consumer electronics-style lithium-ion cells has resulted in cost and driving range advantages versus the EV offerings of Tesla's competitors. And the company's technological approach has been validated by Daimler and Toyota, each of which are current shareholders. The shares appear fully valued at this point, however, and thus our Hold recommendation.

Valuation

Our price target of $17 is based on a DCF analysis. Valuing Tesla presents a unique set of challenges, given the fact that company revenue won't accelerate until 2012 and beyond. We believe that DCF is the most appropriate valuation method in this case. We assume 7% terminal growth beginning in 2020 (given our projection that Tesla will still be building out its vehicle portfolio and that only 9.5% of global sales will be vehicles able to be fueled from the grid in 2020, we believe that an 7% growth rate is reasonable). We assume a terminal EBIT margin of 11.7% and a weighted average cost of capital of 13.5% (we calculate WACC by using 15% cost of equity and 3.3% cost of DOE debt and weight this over the expected capital structure from 2010 – 2014).

Risks

Key downside risks include execution on the scale up from niche to volume manufacturing, risks associated with demand and average transaction price assumptions, risks associated with costs projections (note that manufacturing is largely U.S. based, and in formerly unionized facilities), and unknowns associated with the future competitive landscape (we believe that Tesla's competitors are now aggressively pursuing electric vehicles). In addition, we anticipate limited near term revenue/earnings to support the stock (i.e. until launch of the Model S in 2012, or further ramping of Tesla's powertrain business). Consequently, we anticipate that Tesla's shares may exhibit high levels of near term volatility.

Upside could be derived from higher-than-expected Model S volumes or Powertrain sales contract wins. Given volumes of competitor vehicles in the 50k - 200k range, there is the potential for Tesla Model S volume to be significantly higher-than-expected. Additional customers / contracts for Powertrain sales could add significantly to our revenue / profitability targets (i.e. if current Toyota / Daimler development contracts turn into commercial production contracts).

Key points:

- Innovative battery approach gives Tesla driving range and cost advantage, and puts them years ahead of competitors. The Tesla Roadster achieves 4.6 miles of range per kWh of battery storage (244 miles of range / 53kWh battery), compared to 4.2 for the Nissan Leaf (100 miles / 24kWh), 3.4 for the Mini E (120 miles / 35kWh), and 2.5 for the Chevy Volt (40 miles of electric driving range / 16kWh).
- One platform, one powertrain strategy could facilitate unparalleled flexibility and operational/financial efficiency within the Auto Industry (it typically costs automakers $500 MM - $1 bn to develop a vehicle. Tesla is at $100-$400 MM). We'd note that development costs (R&D and Capex) for Tesla's current vehicle, the Roadster, were $125MM.
- Execution risk has been mitigated by ability to poach world-class automotive / engineering talent (Head of manufacturing is from Toyota. Head of Engineering is from Lotus. Head designer is from VW and Mazda. Head Aerodynamicist is from Ferrari. Head of purchasing is from SAP. CFO is from Ford. Head of HR / Recruiting is from Google).
- Purchase of NUMMI, a high volume auto manufacturing plant formerly owned by Toyota and General Motors, further mitigates execution risk.
- Company has shown an ability to execute – As evidenced by the gross margin increase for the Roadster, rapid launch of the Roadster Sport/right hand drive models, and rapid prototyping of Toyota and Daimler powertrains/vehicles.
- Price point / segment positioning / performance of Model S avoids most EV competition, enables the high-cost of the powertrain to fit within a high price point vehicle, and positions the company for maximum total cost of ownership benefit. Our Gross Margin expectations in the low 20% range appears realistic compared to other luxury automakers; particularly as Tesla owns its own distribution.
- Low cost business model - Earnings appear quite strong on only 20k units, which appears to be very achievable in the context of the premium midsize segment.
- If volume doesn't hit the target, the company can break-even at roughly 50% of our projected volume.
- Tesla's technology has been validated through partnerships with Daimler / Toyota. Access to the Toyota parts bin (and Toyota's material cost) is particularly advantageous re: cost and engineering / design resources.
- Tesla has access to low cost capital / facilities / equipment. Capital needs have been mitigated by a low cost DOE loan, and the ability to purchase PP&E at distressed prices.
- The powertrain business has the potential to surprise to the upside and provide a revenue bridge to 2012.
- Key risks include execution on the scale up from niche to volume manufacturing, risks associated with demand and average transaction price assumptions, risks associated with cost projections (note that manufacturing is largely U.S. based, and in formerly unionized facilities), and unknowns associated with the future competitive landscape (we believe that Tesla's competitors are now aggressively pursuing electric vehicles). In addition, we anticipate limited near term revenue/earnings to support the stock (i.e. until the launch of the Model S in 2012, or further ramping of Tesla's powertrain business). Consequently, we anticipate that Tesla's shares may exhibit high levels of near term volatility.
- We have arrived at a $17 target for Tesla's shares. We have used a DCF methodology to value Tesla's shares. The DCF incorporates 7% terminal revenue growth beginning in

2020 (given our projection that Tesla will still be building out its vehicle portfolio and that only 9.5% of global sales will be vehicles able to be fueled from the grid in 2020, we believe that a 7% growth rate is reasonable). We assume a terminal EBIT margin of 11.7% and a weighted average cost of capital of 13.5% (15% cost of equity and 3.3% cost of U.S. Department of Energy-funded debt).

Company Overview

Tesla was founded in 2003 to develop an electric sports car, the Tesla Roadster, which was launched in 2008, and is still the only highway capable electric vehicle on the market in the U.S. But since Tesla's formation, vehicle electrification has gained much greater significance. We believe that a number of factors, including concerns about dependence on oil, increased societal concern about climate change, regulatory change (driving improved fuel economy/CO2 regulations), and significant advancements in battery technology/cost have the potential to drive profound changes for the global auto industry over the next five to ten years, including a significant rise in penetration rates for Electric Vehicles. At the same time, Tesla has gained worldwide recognition for its electric drivetrain engineering and innovation. Based on products on the market, and those (that we know of) under development, we believe that Tesla is currently at the leading edge of performance and cost for EV technology, while achieving impressive benchmarks for battery pack safety and life expectancy. Tesla has 72 patents issued and applied for - 30 for the battery pack. Innovations in digital motor controllers, charge controller, traction control, pack controls, vehicle management, battery management, power electronics design are significant differentiating advantages.

Tesla's first vehicle, the Tesla Roadster, demonstrated the company's electric powertrain capabilities. And they are currently in production of their second generation of powertrain technology, having reduced the cost of their powertrain by 31% from Gen 1.0 to Gen 2.0 (October '08 – October '09). Version 3.0 will coincide with the launch of the next model in 2012, and is expected to achieve an additional 36% reduction in cost, while achieving further improvement in performance.

Tesla's competitors have taken notice, and have taken steps which validate the company's leadership position …

Daimler recognized the company's advanced development, and the company took a 10% equity stake in Tesla in May 2009 for $50MM (Aabar took 40% of this stake in July 2009). Daimler and Tesla have since begun collaboration on several projects, with Daimler increasingly relying on Tesla for the supply of battery packs and chargers, accelerating Daimler's initiatives in this market.

Toyota and Tesla announced in July 2010 that they would collaborate on production of a fleet of prototype Toyota RAV4 EV's with Tesla powertrains, and Toyota also took an equity stake ($50 MM) in the company. Toyota has also announced a goal to bring a production version of the vehicle to market in the U.S. in 2012.

Several other automakers have also initiated discussions with Tesla for the use of Tesla's powertrain technology, reinforcing our view that Tesla remains at the forefront of EV Powertrain technology.

And we believe that Tesla is positioned well for its next phase of growth…

Tesla is now transitioning from being a niche manufacturer of high priced ($100K+) sports cars, to becoming a full fledged manufacturer and marketer of luxury automobiles with a long term objective of competing against product offerings from BMW, Mercedes, Audi, Infiniti, and Lexus.

We have confidence that Tesla has the potential to meet its operational objectives, including the launch of its first high volume vehicle, the Model S, on time and on budget. Our confidence is in part derived from the depth of experience of individuals that the company has brought on board from the world's leading automakers and suppliers. Over the past 15 months, Tesla has engaged in an aggressive effort to target and recruit some of the best talent in the world in key automotive functional areas such as automotive design, engineering, and manufacturing. We have been very impressed with the level of engineering talent brought on board in areas such as electric powertrain technology, stamping, casting, vehicle assembly, safety, aerodynamics, steering and suspension, paint, manufacturing, purchasing, and other key areas. Tesla has been able to attract world renowned talent from companies including Toyota, Honda, Mercedes, Audi, Ford, Ferrari Racing, Williams Racing, Laepple, and others. Consequently, we believe that Tesla's internal design, engineering, and manufacturing capabilities rival those of the world's leading global automakers.

Led by a very demanding CEO, the company's culture is based on vision and speed, and it prides itself in being able to apply a Silicon Valley Operating System in order to accelerate the pace of innovation in the Auto Industry.

One of the best examples of the company's adherence to its vision is the decision to move ahead with the development of a battery pack consisting of laptop-size batteries, despite near-unanimous skepticism from the battery industry and traditional automakers. The decision and ultimate success of using low cost, energetic laptop cells has paid off so far, as the cost of the current Roadster pack is well below the most competitively priced "advanced automotive" packs available in the world (we estimate ~$470 per kWh at ~1,000 units per year ($25k cost of the 53kWh pack), compared to our estimate of the industry average of ~$650 per kWh at 10k-20k units per year). In terms of performance, we estimate that Tesla's packs can facilitate a driving range of 4.6 miles per kWh compared to 3.5-4.2 miles for most other batteries (based on EPA 2-cycle test).

We also believe that Tesla has the capacity to move faster than its automotive peers. In part due to its organizational structure, and in part because of the caliber of talent brought in from the auto and other industries. The company's focus on one vehicle platform and one powertrain (EV powertrains are uniquely capabable of this level of flexibility) is also key in this regard. The company employs an interactive approach, with designers, engineers, and manufacturing personnel working adjacent to one another, able to collaborate on an ad hoc basis and solve problems quickly. This is in stark contrast to the silo'd/functional organizational structure of traditional automakers, where the slowest member of the team drives the pace of progress, and where problems need to be elevated to higher management who have to allocate their time between several platforms / powertrains.

One of the best examples of the company's speed is their approach to pitching their powertrain business to prospective automaker customers. Instead of preparing a Powerpoint presentation or displaying off-the-shelf examples of their work, Tesla has purchased one of the automaker's vehicles (from a dealer), and actually converted it to an EV. This has been accomplished in the past in as little as two weeks. We have no doubt that, for a traditional supplier / automaker, it would take at least a month just to receive approvals to purchase the vehicle and likely 6 months to complete a conversion.

We consider TSLA's management team to be very strong and well-equipped to compete long-term with traditional OEM's

Elon Musk
Chairman, Product Architect and CEO
Musk is known as a hard-driving CEO that inspires innovative, tireless work out of his employees. He has also shown a strong ability to secure investment / partnership deals (evidenced by the partnerships with Daimler and Toyota) and generate value for those investors (Daimler's $50MM investment is now worth $145MM). We'd also note that Musk took over the CEO role in October 2008, and spearheaded a successful cost-down program that enabled Tesla's margin to improve to +8% in 2Q09 from -10% in 1Q09. The company has been gross margin-positive ever since, despite low volumes.

Musk previously started Internet companies Zip2 and PayPal. In addition to his Tesla duties, he serves as CEO and CTO of SpaceX, and he's Chairman of SolarCity.

JB Straubel
Chief Technical Officer
As a co-founder of Tesla, Straubel has overseen the technical and engineering design of the vehicles, and is considered the product architect of Tesla's powertrain, work that is considered groundbreaking by industry insiders. Prior to Tesla, JB was the CTO and co-founder of the aerospace firm, Volacom, which designed a specialized high-altitude electric aircraft platform using a novel power plant. At Volacom, JB invented and patented a new long-endurance hybrid electric propulsion concept that was later licensed to Boeing. Before Volacom, JB worked at Rosen Motors as a propulsion engineer developing a new hybrid electric vehicle drivetrain based on a micro turbine and a high-speed flywheel. JB was also part of the early team at Pentadyne, where he designed and built a first-generation 150kW power inverter, motor-generator controls, and magnetic bearing systems.

Deepak Ahuja
Chief Financial Officer
Deepak Ahuja brings a wealth of finance experience within the automotive industry to his role at Tesla, including a long career at Ford. We believe that certain of his roles at Ford are particularly well-suited to his role at Tesla, particularly CFO for Ford of Southern Africa ($3 bn subsidiary) and CFO for Auto Alliance International (Ford / Mazda JV with over $4 billion in revenue), both essentially enterprise management positions. His career at Ford included assignments in all aspects of the business, including Manufacturing, Marketing and Sales, Treasury, Acquisition and Divestitures. Ahuja also has a technical background, having worked as an engineer for Kennametal, Inc. for almost 6 years.

Franz von Holzhausen
Chief Designer
Prior to joining Tesla, Franz was Director of Design at the Mazda North American Design Center. While at Mazda, Franz pioneered the Nagare surface language design philosophy, led design of the Mazda RX-8, Tribute, and Mazda5 production vehicle facelifts, and was instrumental in the design development of the 2009 Mazda6 and Mazda3. He previously designed the Pontiac Solstice at GM (a highly respected vehicle in terms of design), and held design positions at Volkswagen prior to that.

Gilbert Passin
Vice President, Manufacturing
Given Passin's prior experience in spearheading the launch of 200k unit vehicle platforms, we have confidence in his ability to guide the launch of the 20k unit Model S. Passin has had a 23 year international automotive career, including leading high-profile divisions at Toyota, Volvo, Mack and Renault across North America and Europe. Most recently, Passin served as

general manager of production engineering for Toyota in North America, and was previously vice president of manufacturing at Toyota's plant in Cambridge, Ontario. Passin was instrumental in the manufacturing planning and launch of the best-selling Lexus RX luxury SUV at the award-winning plant which produces over 200,000 automobiles per year and is the only Toyota site to produce a Lexus vehicle outside of Japan. He also launched manufacturing of the award-winning tenth generation Corolla.

Peter Rawlinson
Vice President & Chief Engineer
Prior to Tesla, Peter led vehicle engineering at Corus Automotive, an engineering consultancy specializing in advanced engineering solutions for the global motor industry, where he worked on many product development programs for Ford / Jaguar / LandRover, the BMW 5-Series, and others.

Peter is an expert in crash safety and aluminum stamping engineering, two areas that will be critical to an on-time launch of the Model S. He led development of the Think electric vehicle platform, which was done with only 5 engineers in 6 months. That vehicle was recognized as having the best crash safety performance in the subcompact vehicle class globally. Before Corus, Peter served as Chief Engineer of Advanced Engineering at Lotus, where he pioneered the use of advanced aluminum body structures, bonding cast elements with stampings and extrusions, an approach subsequently widely adopted within the industry. Vehicles using this approach include Aston Martins, the new Jaguar XJ, the current Audi A8 and the Audi TT.

Diarmuid O'Connell
Vice President of Business Development
Diarmuid joined Tesla in 2006, and currently serves as the Vice President of Business Development, in which capacity he manages commercial relationships and all aspects of government affairs. Before joining Tesla, Diarmuid served as Chief of Staff for Political Military Affairs at the US State Department, where he was involved in policy and operational support to the U.S military in various theaters of operation. Before his tenure in Washington, Diarmuid worked in corporate strategy as a management consultant for Accenture, as a founder of educational software developer, Real Time Learning, and as a senior executive with both McCann Erickson Worldwide and Young and Rubicam.

John Walker
Vice President Sales North America
John was appointed Vice President Sales for North America in August 2009 and is responsible for all sales in the United States and Canada, including the coast-to-coast retail expansion and opening of new stores in the world's largest car market. He was most recently general manager sales operations for Audi of America and previously director of sales for Audi Canada and general Manager of sales for Audi Australia.

Cristiano Carlutti
Vice President of European Sales and Operations
Before joining Tesla in January 2010 Cristiano Carlutti led critical divisions at Fiat, most recently overseeing the strategy and operations of the rent-a-car and used car department for European markets. Carlutti was also in charge of the Flagship development project, a €150 million program which established a network of company-owned dealerships throughout Europe. Before that he was CEO of Autocontact Italia, where he was in charge of reselling and servicing more than 90,000 vehicles per year.

Arnnon Geshuri
Vice President, Human Resources
Arnnon Geshuri joined Tesla in November 2009 as the vice president of human resources and is responsible for HR operations and the global recruitment efforts. Previously, Arnnon was director of staffing operations for Google, where he designed the company's recruitment organization and talent acquisition strategy, and oversaw the growth in Google's global employement to 20,000 employees, from 2,500 in 2004. Before Google, Arnnon was director of global staffing and VP – HR for E*TRADE Financial.

Evelyn Chiang
Vice President of Supply Chain and IT
Evelyn, who joined Tesla in August 2007, oversees Supply Chain and Information Technology. Previously, she served as Senior Vice President of Operations of the Product and Technology Group of SAP AG, where she managed global operations, including strategic business planning, portfolio management and post-merger integration. She also managed new product introductions and served as Director of Professional Services at SAP.

George Blankenship
Vice President, Design and Store Development
George Blankenship recently joined Tesla and will be the architect of Tesla's retail strategy and dealer network. Blankenship was most recently at Microsoft but is best known as the creator of Apple's retail growth strategy (Apple has repeatedly been recognized by Fortune Magazine as America's Best Retailer). In a previous role as VP for Real Estate Strategy for Gap Inc., Blankenship managed growth of over 250 stores per year globally.

Competitive Advantage – Battery Pack / Management Technology

Lithium-ion cells used for consumer electronics applications are cheaper and store more energy than "advanced automotive" lithium-ion – Only Tesla is taking advantage of this

The primary constraint on electrifying vehicles has always been electricity storage. Lead acid, nickel cadmium, and nickel metal hydride batteries have achieved progressively higher energy density (the amount of energy that can be stored per unit of weight / volume), but are never expected to achieve the levels necessary to enable a reasonable amount of driving range (given the constraints on size / mass inherent in automobiles) for a plug-in hybrid or pure electric automobile. Lithium-ion battery technology has long held promise to alleviate this energy storage problem. And the desirable properties of this technology, relative to other battery types, can be seen in the near-exclusive use of rechargeable lithium-ion batteries in the consumer electronics industry.

Consumer electronics-type lithium-ion batteries have improved significantly over the last 15 years, based on economies of scale and technology refinements, with cost declining to ~$250 / kWh from ~$2,000 / kWh in 1995 and energy density improving to ~230 wh/kg from 90 wh/kg over the same time-frame. But the consensus view of the battery and automotive engineering community had been that consumer electronics type lithium-ion batteries (i.e. cobalt oxide cells) were not viable for automotive applications, due to life expectancy and safety (chemical stability) issues. The industry opted instead to develop "Advanced Automotive" Lithium-ion batteries, which, in relation to consumer electronics batteries, use different chemical compositions and larger form-factors to achieve longer life and improved safety. Although these advanced batteries now appear ready for commercial-scale automotive applications, they will require significant scale and technological improvement to match the cost and energy density of consumer-electronic type batteries. We believe that, at the cell level (costs do not compare to "pack" level costs we discuss elsewhere in the report), advanced automotive batteries achieve energy density of 150-160 wh/kg compared to 220-230 for consumer-electronic batteries. And automotive type cells cost $350-$400 per kWh, compared to $250 / kWh for consumer-electronics type cells. The combination of lower energy storage properties and higher cost between these battery types is not expected to be fully closed for 5-10 years.

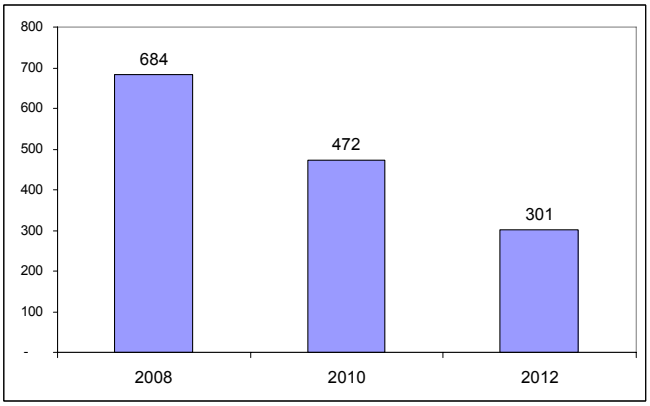
Desire for range and first-mover status led Tesla to use consumer electronics batteries

In the interest of getting a car on the road as soon as possible, and utilizing the cost and energy storage advantages of consumer-electronic cells, Tesla is using innovative battery pack technology and electronics to extend the life and enhance the safety of mass-produced "consumer electronics type" cells (which have been tweaked somewhat to optimize them for automotive). This has resulted in significant advantages in cost and driving range (detailed below). It has also enabled Tesla to produce and sell a highway-ready EV several years ahead of its competition. Given the company's "start-up" status, the lessons learned from actually functioning as an automaker since 2008 (i.e. optimizing the EV powertrain, manufacturing thousands of battery packs, and developing all the processes that go along with marketing / selling / servicing vehicles) represent valuable experience and, in our opinion, vastly reduces the risk of significant issues when the company's higher-volume Model S is introduced.

- 1) We estimate that the cost of the 53kWh Roadster pack is $25k (~1,000 units per year). This is ~$470 / kWh (Pack level cost), which compares to current cost of advanced automotive batteries (assuming approximately 10k-20k batteries per year) of at least $650 / kWh. Based on technological improvements and higher scale, Tesla believes that the Model S battery pack will be 64% of the cost of the Roadster pack (on a per kWh basis), which implies ~$300 / kWh cost. Advanced automotive battery packs are not expected to reach that cost level until the end of the decade.

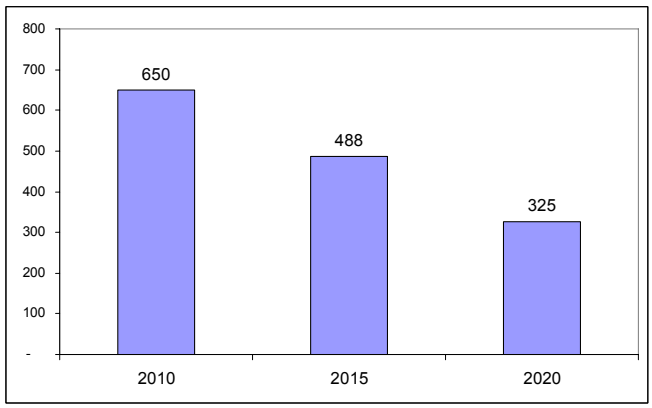
We'd also note that Tesla owns the intellectual property on the automotive-optimized battery cells that they are purchasing from a high-volume Japanese supplier. And the company has purchasing leverage, given the meaningful volume of cells that are necessary to support the Model S. Assuming 20k units, the Model S program will use 8MM-10MM cells per month, which is 4.5% of the current Consumer Electronics lithium-ion market (estimated to be 200MM cells per month in 2010).

Figure 1: Tesla Battery Costs (2008-2012). Based on our est that current Roadster battery pack cost is $25k (53 kWh), and Tesla assertion that current Roadster pack / Model S pack are 69% / 44% of 2008 pack cost.



Source: Deutsche Bank, Tesla

Figure 2: DB estimates of cost progression from 2010 – 2020 of advanced automotive battery packs.



Source: Deutsche Bank

- 2) Use of the more energy storage-efficient cells enables Tesla to put more kWh's into the car, per unit of mass, which leads to higher driving range. The Tesla Roadster achieves 244 miles of range (4.6 miles per kWh), compared to 100 miles for the Nissan Leaf (4.2 miles per kWh given the Leaf's 24kWh battery), compared to 40 miles for the Chevy Volt (2.5 miles per kWh given the Volt's 16kWh battery), and compared to 120 miles for the Mini E, the only other current vehicle to use consumer electronics batteries (3.4 miles per kWh given the Mini E's 35kWh battery).

Figure 3: Comparison of driving range (miles) per kWh. **Comparison to Volt is somewhat apples vs oranges, given that Volt is a plug-in hybrid (battery charge range has to be limited in order to enhance number of charge cycles over its life)

Vehicle	kWh Battery	Miles per kWh	Range (miles)
Tesla Roadster	53	4.6	244
Nissan Leaf	24	4.2	100
Mini E	35	3.4	120
Chevy Volt**	16	2.5	40

Source: Deutsche Bank

Tesla's strategy has been validated by the Roadster, as well as Daimler and Toyota investments

With 1,000+ Roadsters on the road to-date, test vehicles that have performed well over 80k+ miles to-date, and 2 major crashes which resulted in no structural / thermal issues with the battery, many of the concerns of the battery community over Tesla's strategy have been allayed. And in many circles, Tesla's engineering work is considered groundbreaking, which is validated by the investments in Tesla by Daimler and Toyota, each of which are planning to use Tesla powertrains in at least early versions of the company's EV's (Daimler's Smart ForTwo EV already uses Tesla powertrains).

However, there remains some disadvantage in life expectancy. Compared to advanced automotive batteries, which are expected to sustain 80% of original performance (driving range) after 10 years / 150k miles, Tesla states that the Roadster battery will sustain 65% of its original performance after 7-10 years / 100k-150k miles and that the Model S will sustain 65% after 10+ years and 150k miles. This "disadvantage" becomes less stark when considering that 65% of the 160 – 300 miles of Model S range (depending on battery size chosen by the customer) is still significantly higher than 80% of the ~100 mile range of most other EV's.

Automakers appear to favor purchasing cells, and manufacturing packs and motors in-house; this is exactly the strategy Tesla has pursued for years

We also find it interesting (and very advantageous) that Tesla has chosen the exact same make vs. buy strategy that many automakers now appear to be pursuing – to purchase battery cells from outside suppliers and to engineer / produce everything else in-house (battery pack, battery management electronics / software, electric motors). We believe that traditional automakers will ultimately be successful, but Tesla clearly has a head-start of several years.

Tesla is battery cell-agnostic and we expect will eventually use advanced automotive cells, once the hard work of the world's battery-makers results in enough improvement in cost and energy density to justify a change. We expect that the pack / battery management expertise Tesla has developed and used in enhancing consumer cells will continue to yield an advantage in optimizing advanced cells.

The Roadster has been a success

The Tesla Roadster, in production since 2008, is essentially a validation platform for the company's powertrain, as well as a dry-run for many of the sales / servicing / logistical processes that the company will employ in the future. The body / chassis is produced by Lotus off of the Lotus Elise platform (although a significant portion of the Roadster body components were designed and sourced by Tesla). 1,204 Roadsters have been sold to-date, and the company has a contract to purchase 1,196 more gliders from Lotus, prior to Lotus changing platforms. At the current run rate, this vehicle should continue to generate ~$18MM-$22MM of quarterly revenue, through to the Model S launch in mid-2012, based on 125 – 155 unit sales per quarter.

Considering the many compromises that fitting Tesla's powertrain into another company's existing platform entailed (issues with driver ingress / egress, relatively spartan interior, et al), we consider the vehicle a significant success. It proved-out the powertrain technology, drove significant brand awareness, and gave us a favorable indication of the company's ability to execute.

Execution ability: We believe that the Roadster experience is a significant positive indicator of Tesla's viability and ability to successfully launch the Model S. The most impressive example of the company's "blocking and tackling" ability is its ability to plan and implement cost-saving and revenue-enhancement initiatives that led to a ~18% gross margin on the Roadster in 1H10, a significant turnaround from –10% gross margin in 1Q09.

We'd also note that the non-powertrain portion of the Roadster is far from an off-the-shelf Lotus Elise. Although Lotus did produce the vehicle body / chassis (referred to as a glider), many of the components were specifically designed and sourced by Tesla (of the 50% of the vehicle content that was non-powertrain, 33% was designed and sourced by Tesla), which gave the company significant design / engineering / purchasing experience.

Technology validation: As stated above, the powertrain has performed well. Driving range (which fluctuates according to driving style) has been as advertised. There have been no safety issues, despite two major crashes. And the company's long-distance test vehicles continue to perform well at 80k+ miles.

Brand awareness: Although it's difficult to measure, it is clear that Tesla is the most well-known of the several start-up electric vehicle makers that plan vehicles. The company was named one of "America's Hottest Brands" by Advertising Age in November 2009, despite no traditional advertising to-date and no advertising agency of record.

Model S – From a vehicle with many compromises to an uncompromising vehicle

Tesla intends to compete with Audi, BMW, and Daimler in the luxury performance sedan segment… initially against conventional vehicles, and eventually against EV entries. The company's deep technical talent (validated by strong Roadster execution to-date), already-ubiquitous brand name, unique product offering (likely no EV's in the Model S price / vehicle-type segment through 2014) and low cost DOE financing, leads us to believe that they will succeed in bringing a competitive vehicle to market and encounter sufficient demand to sell 20k vehicles per year (and likely generate $250MM-$300MM of EBITDA). Tesla's strong head-start in EV technology and low product development costs leads us to believe that the company can grow off the Model S base and compete successfully in the long-term, even against EV entries of the traditional OEM's.

Volume (20k units), revenue per unit ($86,400), and gross margin (21.8%) for the Model S are the key drivers underpinning our expectation of $278MM of EBITDA in 2013. Based on the analysis below, we believe that each of these projections is achievable.

20k units is very achievable in the context of competitor volumes

The Tesla Model S is a 4-door, 5-passenger (excluding a 3rd row of seats that can accommodate 2 children) performance sedan that is intended to benchmark (and exceed, according to Tesla) the BMW 5-Series in every way. The base Model S is priced in the U.S. at $49,900 (after the $7,500 federal EV credit), which is directly on top of the BMW 535i (base price of $49,600). We would note, though, that the expected average price of the Model S to a customer in the U.S. (after rebates and carbon credits) is $74k. On a pricing basis, this puts the Model S at the midpoint of the midsize luxury sedan segment (BMW 5-Series, Mercedes E-Class) average transaction price of ~$60k and the large luxury sedan segment (BMW 7-Series, Mercedes S-Class) average transaction price of ~$90k.

We believe that entering the luxury sedan segment has significant advantages, including: 1) the Model S is likely to be the only luxury PHEV / EV available at least through 2013; 2) consumers in this segment are less price-sensitive (although the base Model S is equivalent to the 535i, the average transaction price is projected to be significantly higher); and 3) the fuel savings are significantly more compelling when competing against a 20mpg BMW, rather than the 30+ MPG vehicles to which the more mainstream segment EV's will be competing.

The performance sedan segment is approximately 800k units per year globally, so Tesla is looking to be 2.5% of that market (we'd note that, in the US, the Toyota Prius, at 140k units in 2009, was 8.1% of the 1.7MM unit lower midsize market). Given the price point of the Model S, however, it may be more appropriate to consider the large premium sedan segment plus the high-end models of the midsize premium sedan segment (assume ~15% of total midsize premium segment). Under this scenario, Model S would need to achieve 6% of a 325k unit global market. Overall, we believe that Tesla's volume expectations are achievable, particularly as:

- This will be a unique offering in that we don't expect any EV's in the luxury segment until at least 2014. We're confident that a unique, outwardly notable product like the Model S will garner significant consideration from the affluent consumers in this market, given the scarcity of choices. The only vehicle on the radar screen at this point is the BMW Megacity EV, but, based on limited information from BMW, this looks to be a much smaller vehicle, with significantly less driving range. We don't consider the Fisker Karma to be a competitor due to its $80k+ starting price.

- The Model S's driving range of 160-300 miles (depending on consumer choice of battery size) greatly reduces the range anxiety issue, which we believe significantly increases the vehicle's addressable consumer base. We continue to highlight that we know of no other electric vehicle planned with a driving range of more than ~100 miles.
- The Model S's competitive set is significantly less fuel efficient than the mainstream compact / midsize cars that most prospective EV's will be competing with. As illustrated in Figure 4 below, the annual fuel savings versus a BMW 740i (17mpg) / BMW 535i (21mpg) is ~$1,500 / ~$1,100, while versus a Honda Civic (30mpg), the annual fuel savings is only $660.

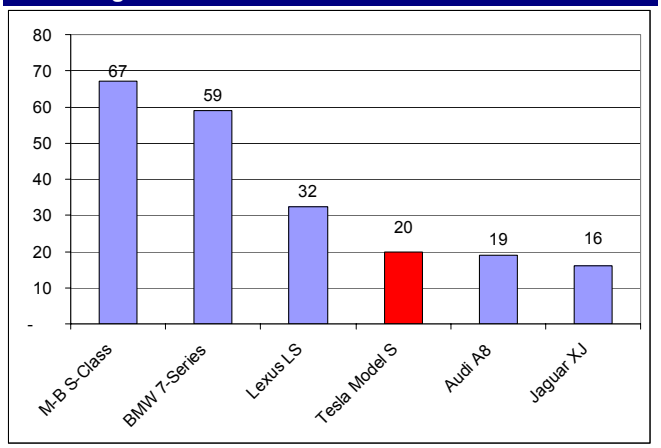
Figure 4: Comparison of Model S fueling cost to competitor vehicles

U.S.	Model S	740i	535i	Civic
Annual Mileage	12,000	12,000	12,000	12,000
Price ($) per gallon / kWh	0.11	2.73	2.73	2.73
Miles per gallon / kWh	3.03	20.0	22.0	30.0
Annual Fueling Cost	436	1,638	1,489	1,094
Model S Fuel Savings ($)		1,202	1,053	658

Europe	Model S	740i	535i	Civic
Annual Mileage	12,000	12,000	12,000	12,000
Price ($) per gallon / kWh	0.18	7.00	7.00	7.00
Miles per gallon / kWh	3.03	20.00	22.0	30.0
Annual Fueling Cost	713	4,200	3,818	2,805
Model S Fuel Savings ($)		3,487	3,105	2,092

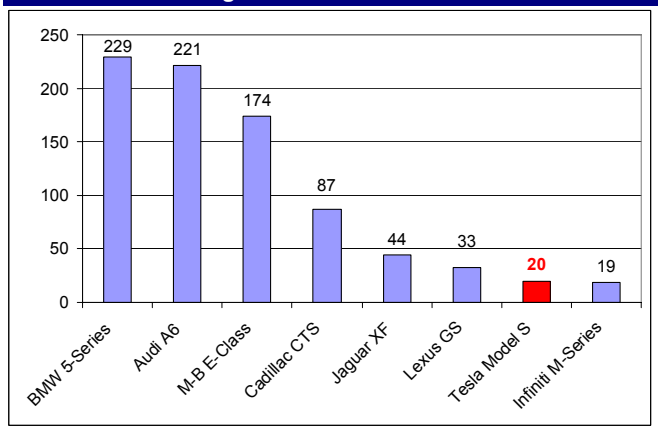
Source: Deutsche Bank, fueleconomy.gov

Figure 5: Competitor Product Volumes – Large Premium Sedan segment (2010E Global Volumes)



Source: JD Power

Figure 6: Competitor Product Volumes – Midsize Premium Sedan segment (2010E Global Volumes)



Source: JD Power

Average transaction price is likely the biggest swing factor

As stated above, the average price to the customer that we project for the Model S is $74k in the U.S. ($76.5k globally), which compares to ~$60k for its midsize luxury sedan competition and ~$90k for its large luxury sedan competition. The revenue to Tesla, however, will be substantially higher when you consider the $5,000 - $9,000 of government subsidies available in many high-volume markets (countries representing at least 58% of the 2009 global industry have subsidies in this range), not to mention many local areas with incremental benefits. And carbon reduction credits, which we expect to be $2,500 per unit globally. Given those factors, as well as somewhat higher pricing in Europe and ROW than the U.S., we arrive at an average revenue per unit of $86,400 for the Model S globally.

We'd note that our estimate of $86,400 includes the following assumptions:

- The Model S will offer 3 battery options, with respective ranges of 160 / 230 / 300 miles. The base model will come with the 160 mile battery, with each additional 70 mile increment being priced at ~$9k. We assume 20% / 60% / 20% split of volume.
- We are projecting that non-battery option content will add $13k. This represents a 20.5% uplift on the global average base price, based on the Roadster, which is currently achieving that same uplift.
- Regarding carbon reduction credits, Tesla currently receives ZEV (zero-emission vehicle) credits for any Roadster sold in California or the 13 states that match California's emission laws. It is currently selling those credits to OEM's that are not in compliance with California's ZEV requirements. The company generated $8.15MM of ZEV Credit revenue in 2009 on total Roadster volume of 830 units ($9,800 per vehicle). It's clear that in 2012 there will be a higher volume of ZEV's being sold and the price paid for the credits may go down based on a higher supply. However, we'd note that the U.S. federal fuel economy program (CAFÉ) will include a credit trading mechanism whereby those OEM's that are below the standard can sell credits to those OEM's that are in non-compliance. And Europe is also expected to have some form of trading system (the penalties for non-compliance with the European emissions program increase substantially beginning in 2012). Given these factors, we believe that just over $3k per U.S. and European vehicle is achievable for the Model S.

Figure 7: Model S Revenue – Breakdown by Component

	Revenue					
	U.S.	Europe	ROW	Global Avg	COGS	% Margin
Base Price - 160 mile range	57	64	66	61.1	54.9	10.2%
Destination & Delivery Charge	1	1	1	1.1	0.5	50.0%
Add'l Range (~$10k per 70 miles)	9	9	9	9.1	5.3	42.2%
Options	13	13	13	12.6	6.8	46.0%
Carbon reduction credits	3	3	-	2.5	-	100.0%
Total Revenue to Tesla	**85**	**90**	**89**	**86.4**	**67.5**	**21.8%**
Less:						
EV Credit Subsidies	(7.5)	(6.5)	(8.0)	(7.4)		
Carbon reduction credits	(3)	(3)	-	(2.5)		
Total Price to Customer	**74**	**80**	**81**	**76.5**		

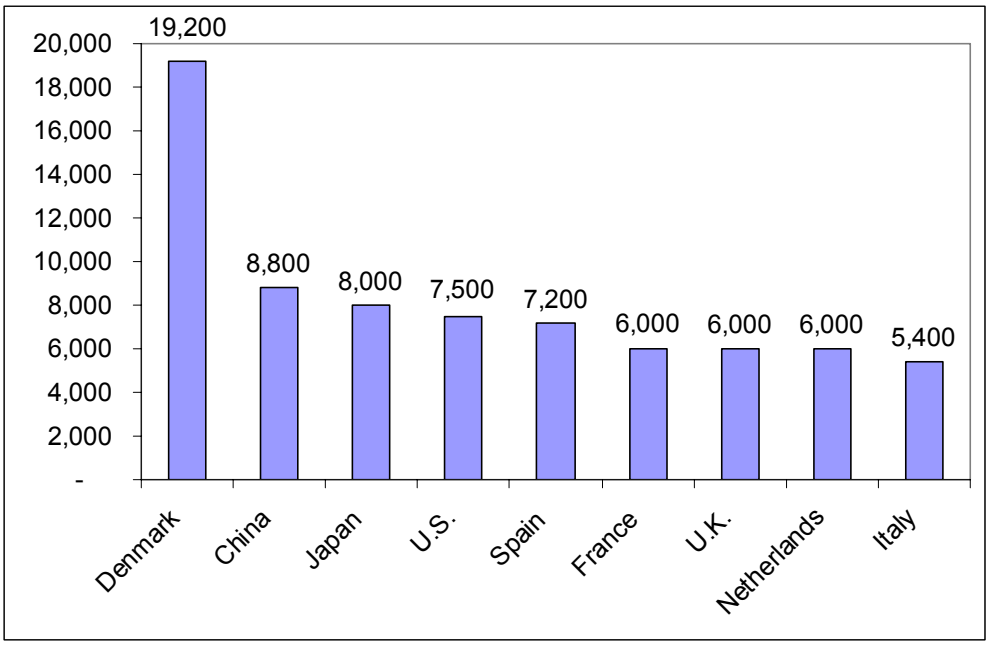
Source: Deutsche Bank

Figure 8: U.S. pricing of competitive vehicles ($000's)

		Base Price	Max Options	Price to Customer
Midsize Premium				
BMW	5-Series	45 - 60	33	45 - 90
Mercedes	E-Class	49 - 57	22	49 - 78
Audi	A6	45 - 59	6	45 - 63
Tesla	Model S - 160 mile range	50	20	50 - 70
Tesla	Model S - 230 mile range	60	20	60 - 80
Tesla	Model S - 300 mile range	70	20	70 - 90
Large Premium				
BMW	7-Series	70 - 83	30	70 - 115
Mercedes	S-Class	88 - 92	30	88 - 122
Audi	A8	75	18	75 - 93
Lexus	LS	65	13	65 - 78

Source: Edmonds

Figure 9: Significant EV purchase subsidies by country



Source: ACEA, US DOE, hybridcars.com

Figure 10: Total industry sales volumes for countries with significant incentives

Country	2009 Unit Sales (000's)
Denmark	128
China	12,960
Japan	4,551
U.S.	10,410
Spain	1,060
France	2,643
U.K.	2,192
Netherlands	441
Italy	2,339
Total	36,724
Total Industry	63,871
% of Total Industry	57.5%

Source: JD Power

Additional local-level incentives are available in many areas, including:

- London: EV's exempt from congestion charge (up to £ 2,000 per year savings)
- Quebec, Canada: C$8,000 (Ontario has signaled a C$10k incentive to be offered post-July '10)
- California: $5,000 per unit purchase rebate
- Colorado: personal tax credit up to 40% of vehicle purchase price (most veh's capped at $6k)
- NJ / CT / WA: EV's exempt from sales tax ($3,600 - $4,200 on $60k purchase)
- SC / MD / LA / IL / GA : $1,500 / $2,000 / $3,000 / $4,000 / $5,000 per unit tax credit
- HOV lane access / reduced or free parking available in many areas

Model S Gross margins look to be in the low 20% range

Tesla is projecting long-term gross margins of 25% for the company. Our model incorporates 22% margins in the first full year of Model S production (assuming 20k units). Given the expectations for a relatively rich mix of option and battery-size content, driving an average revenue per unit in the mid-$80k range, we believe these margins are reasonable.

In evaluation of the margins, we benchmark Tesla against other luxury manufacturers, as illustrated below:

Figure 11: Comparison of luxury automakers (note that

	Volume (000's)	Average Transaction Price ($000's)	Gross Margin
BMW	1,130	50	21%-24%
Jaguar / LandRover	230	57	29%-32%
Porsche	87	82	45%-55%
Tesla	20	86	21%-25%

Source: Company filings, JD Power, Deutsche Bank Estimates (ATP)

In the context of these comparisons, it appears that Tesla's margin projections are in-line with other OEM's. Clearly, the lower volume of Tesla is a negative in terms of scale; however, considering that manufacturing fixed costs are only a small part of the overall cost of the vehicle (even at 20k units), we believe the scale negatives can be offset by the following positives:

- In owning its own distribution, Tesla will capture the ~10% discount versus MSRP that traditional OEM's cede to their independent dealer-body. We expect that the cost of the dealerships, contained in SG&A, will represent approximately 4% of Model S revenue (based on 60 dealerships by the end of 2013, with $1.2MM op ex per dealer, over $1,725MM of Model S revenue in 2013). So we expect a 6% benefit vs. other OEM's.
- Despite low volume, Tesla's ability to use off-the-shelf Toyota / Lexus parts enables some of the vehicle's components to be purchased at a cost based on very high-scale.
- A significant portion of Tesla's COGS will be components produced in-house. Given the company's lean structure and the savings from not paying margin to a supplier, we believe there could be cost savings from these activities.
- Labor cost advantage – Tesla expects labor costs to be approximately $35 per hour, including benefits. We believe that this assumes a non-unionized workforce. We'd note that, even if the company's workforce did organize, the latest UAW agreement with GM, Ford, and Chrysler, set per-hour costs for new hires at ~$42 per hour for "production line" workers and ~$25 per hour for non-production line workers, so we believe that Tesla's projections would still be approximately the same.
- Tesla is building a plant and a production line at a time of capacity reductions in the auto industry, which means there is a significant amount of manufacturing equipment available at distressed prices (e.g. NUMMI plant itself, stamping presses, paint equipment, robotics, etc). This will aid in overhead absorption and mitigate the scale disadvantage versus some of the example OEM's above. Tesla is buying the NUMMI plant for $42MM, compared to the $200MM-$250MM that a typical production plant would cost to build from scratch (ex land cost). Another example is the nearly brand-new stamping press that Tesla purchased from a bankrupt supplier for $4MM (compared to $40MM-$50MM new).

Our estimates for the breakdown of Model S COGS are below. The key points we'd highlight are as follows:

- As with most vehicles, the gross margin on the base vehicle is relatively low while the incremental margin on optional content is quite high. This reinforces the importance of average transaction price.
- Fixed Cost – Direct Labor: We consider labor to be fixed, although it likely can flex somewhat. There is a clear break-point around 10k units, as the plan for the Model S is to produce 20k units on two shifts. Below, we estimate $2,000 per vehicle, which implies $40MM over 20k units (600 workers @ ~$33 per hour @ 2,000 hours per year). It is likely that the company could produce roughly 10%-20% additional vehicles without adding a shift. Conversely, if volume was below ~12k units, Tesla likely could reduce to 1 shift and $20MM of fixed cost.
- Fixed Cost – Overhead: We estimate that manufacturing overhead will be $80MM in the 2013/2014 time-frame, which is $4k per vehicle (assuming 20k units). The majority of the cost is D&A of ~$50MM with the remainder made up of indirect labor, energy costs, etc.

Figure 12: Breakdown of Model Cost of Goods Sold

	Total Cost	Variable	Fixed	% of Rev
Material Cost				
Non-Powertrain (incl $4k freight)	27	27	-	31.4%
Powertrain (incl $2k freight)	19	19	-	21.7%
Total Material cost	46	46	-	53.0%
Other Cost				
Labor	2.0	-	2	2.3%
D&A / Overhead	4.0	-	4	4.6%
Warranty	3.6	3.6	-	4.2%
Other	0.1	0.1	-	0.1%
Total - Base Model	**55.5**	**49.5**	**6**	**64.2%**
Cost of Sales - Add'l Range	5.3	5.3	-	6.1%
Cost of Sales - Options	6.8	6.8	-	7.8%
Total Cost of Sales - Avg Unit	**67.5**	**61.5**	**6**	**78.2%**
Revenue per Unit - Avg Model S	**86.4**			
Gross Margin - Total Model S	**21.8%**			

Source: Deutsche Bank

Higher level of vertical integration of Model S (relative to Roadster) is a cost opportunity, but introduces additional risk

On the vertical integration scale, Tesla is pursuing the traditional OEM model, intending to produce as high a level of content in-house as possible (i.e. powertrain, stamped body parts, and potentially plastic interior panels, will be internally produced), while the other electric vehicle OEM start-ups, such as Fisker and Coda, are on the other end of the spectrum, intending to utilize suppliers for nearly all of the vehicle content and then just assembling the parts. Although the vertical integration strategy adds risk, in terms of increasing the engineering / design load on Tesla's organization, it also enables the company to take advantage of its lean structure, enables them to take advantage of low cost production equipment being sold at distressed prices, and helps them avoid passing along margin to suppliers.

We'd also note that higher levels of vertical integration (and the resulting capture of component profits) is one of the factors that drives our belief that Tesla has a legitimate chance to compete with established OEM's over the long-term. Traditional automotive suppliers are not set-up for niche-level volumes, which leads to premium pricing for low volume programs. Tesla's organization / cost structure, on the other hand, is completely built around profitability at low volumes.

Below are the areas of differentiation, with respect to vertical integration, between the Model S and the Roadster:

Powertrain: Essentially no change in integration. Battery pack and motor will continue to be internally produced, although production of each will be moved to a new Palo Alto facility (battery pack until recently was produced at Tesla's facility in San Carlos, CA and motor produced at a Taiwan subsidiary). The Power Electronics Module (the unit that converts energy in the battery to current that powers the motor) will continue to be produced by a 3rd party in Taiwan.

Body: The Roadster's "Glider" (essentially everything but the powertrain) is currently 30% Lotus Elise-shared parts, 35% supplied components sourced by Lotus (designed by Tesla), and 35% supplied components sourced by Tesla (designed by Tesla). Therefore, Tesla's design responsibility will go from 70% to 100%, as the company transitions to the Model S. In-house production of stamped body parts will be new, as well as Body Shop and Paint Shop aspects of assembly (this is done by Lotus for the Roadster). All-in-all, we believe that up to 60% of material cost may be produced in-house.

With very little incremental investment, Tesla can produce differentiated vehicle models. Expecting 4 vehicles in the portfolio by 2016 (plus Model S Cabriolet)

Once the Model S is launched in 2012, Tesla expects to introduce a new model (off the same platform) every 1.5 years (these additional variants off the Model S platform are referred to as "Top Hats"). The next-generation Roadster is expected in 2013, followed by a crossover / SUV in 2015 (DB estimate), a light-commercial van in 2016 (DB estimate), and a Model S Cabriolet (within the 2014-2016 time-frame).

Ultimately, the company has plans for an additional platform, intended to support a family of smaller, less-expensive vehicles, similar to a BMW 3-Series.

Tesla believes that total investment for these new "top hats" is $100MM each (50% R&D Expense / 50% Capex). This compares to ~$250MM for a traditional OEM. The savings is due to the fact that essentially no work needs to be done to any of the parts below the "belt-line" (of the passengers), as well as the lean, fast structure of Tesla engineering described above.

In addition, we would highlight the fact that EV powertrains are considerably more flexible than traditional powertrains, which require a significant amount of engineering (or completely different designs) for different applications (i.e. small cars, large cars, crossovers, pickups, vans, SUV's). In contrast, a single EV powertrain has the flexibility to be deployed in nearly all light vehicle applications (in part due to the EV Powertrain's flat torque curve). The company's ability to build an entire portfolio of products around a single powertrain represents a significant competitive advantage, in our opinion.

We believe that with 4 different vehicles in the portfolio, Tesla can conservatively approach 35k units by 2017 (15% CAGR from 2013), $3.3bn in revenue (14% CAGR from 2013), and $529MM in EBITDA (17% CAGR from 2013).

The Powertrain business could provide upside surprises, and is essentially a free option as our DCF places very little value on the segment

Tesla intends to sell low-cost, low-risk EV powertrain assemblies / battery pack assemblies to other OEM's. We are projecting 2010 / 2011 / 2012 / 2013 revenue of $19MM / $53MM / $75MM / $109MM for this activity. Overall, we don't expect this to be a large business for Tesla in the long-run, as we believe that traditional OEM's intend to develop their own expertise in this area. However, in the near-term, Tesla's elegant powertrain solution could be a valuable way for an OEM to quickly get an EV to market. At a relatively high-volume price of ~$10k per unit (assuming $400 per kWh for a 25kWh pack), it would only take 15k units per year to more-than-double our 2013 powertrain sales forecast. We believe that this business is underappreciated, could provide upside surprises during the period preceding the Model S launch (as illustrated by the recent Toyota announcement), and is essentially a free option, as our DCF places essentially no value on the powertrain segment.

Tesla currently has 3 disclosed powertrain programs with Daimler:

- Contract to supply 1,000 battery packs and chargers for Daimler's Smart Fortwo electric vehicle (this will likely be increased to 1,500. Tesla began shipping packs / chargers in late 2009. We estimate $20k per unit, and for the total 1,500 units to be delivered by mid-2011. Although $20k seems high, we believe that, based on Tesla's Roadster powertrain costs, it is likely that the price could come down to the $7k-$8k range given higher volume (10k-15k units).
- Contract to assist with development and production of battery packs and chargers for a pilot fleet of Mercedes A-Class electric vehicles. Tesla has begun to recognize Development Services revenue and will likely begin shipping packs / chargers in 2011.
- Contract to develop modular battery packs for a Freightliner electric delivery van. Initial prototype batteries were shipped in 1Q10.

In July, Tesla and Toyota announced that Tesla would develop and sell prototype batteries for a Toyota RAV4 EV. The development will start immediately, with prototype packs likely being delivered in the near-term. Toyota has announced that they intend to market the vehicle commercially beginning in 2012. If Tesla were to get the supply contract for the commercial production, we estimate a conservative revenue opportunity of $150MM per year (15k units at $10k per battery (25kWh battery at $400 per kWh)).

Finally, the company is also looking into electrical grid energy storage opportunities. Tesla has an R&D agreement with Southern California Edison to adapt their battery pack for grid applications.

We'd note that Daimler has a limited exclusivity agreement with Tesla. Tesla can sell powertrain components to anyone (i.e. battery packs, chargers, motors, etc.), but Daimler has right of first refusal on Tesla selling an "integrated powertrain" to another OEM in a non-Tesla branded vehicle. The agreement lasts until July 2013, but does not appear to be a significant issue, as evidenced by the Toyota agreement.

FINANCIAL ANALYSIS SECTION

We expect Tesla's EBITDA and net income expected to turn positive once Model S production reaches 4,000+ per quarter (late 2012 / early 2013)

Based on our assumptions, detailed below, we see Tesla's earnings and cash flow turning significantly positive once Model S production ramps to a 20k unit per year run-rate in early 2013. And we'd note that our model includes significant spending on future vehicles during this time-frame. As we'll detail below, the company can break even (on a net income and cash flow basis) above 10k units per year, if spending on future vehicles is delayed.

Figure 13: Key earnings metrics ($MM, except EPS)

	2010E	2011E	2012E	2013E	2014E	2015E	2016E
Unit Volume - Total	536	560	6,867	20,750	22,250	26,200	32,000
Auto Revenue	73	74	618	1,842	1,990	2,332	2,838
Powertrain Revenue	19	53	75	109	180	203	237
Development Services	19	20	15	15	15	15	15
Total Revenue	111	147	708	1,966	2,185	2,550	3,090
Gross Profit	23	33	113	437	514	607	758
Gross Margin	*20.8%*	*22.8%*	*15.9%*	*22.2%*	*23.5%*	*23.8%*	*24.5%*
EBITDA	(140)	(165)	(51)	278	326	378	515
EBITDA Margin	*-126.4%*	*-112.2%*	*-7.3%*	*14.2%*	*14.9%*	*14.8%*	*16.7%*
EBIT	(151)	(192)	(94)	229	276	323	448
EBIT Margin	*-136.3%*	*-131.0%*	*-13.4%*	*11.6%*	*12.6%*	*12.7%*	*14.5%*
Pre-Tax Income	(155)	(202)	(109)	214	262	313	443
Net Income	(155)	(202)	(109)	214	258	224	337
EPS		(2.15)	(1.14)	2.04	2.44	2.10	3.13
Operating Cash Flow	(119)	(182)	(82)	261	387	269	386
Capex	(129)	(129)	(106)	(59)	(77)	(131)	(137)
Free Cash Flow	(248)	(311)	(188)	202	309	138	249
Cash Balance at YE	210	87	37	190	402	391	478
Net Debt	(50)	265	429	223	(88)	(228)	(477)
Net Debt / 1 Yr Fwd EBITDA			1.5	0.7	(0.2)	(0.4)	(0.9)

Source: Deutsche Bank

Our estimates are based on conservative margins relative to company projections

Tesla believes that it can achieve operating margin targets of 14%-16% (excluding 1% of revenue for stock-based comp) based on unit volumes in the 20k range. Our model assumes EBIT margins of 2-3 points below the midpoint, with the opportunity to raise those margins given operating leverage to additional volume once the vehicle portfolio expands around mid-decade.

Figure 14: Company long-term margin targets and DB estimates (note: excludes stock-based comp, which is expected to be 1% of revenue. We incorporate this into our model by increasing share count approximately 1% per year, based on company projections.)

	Tesla Long-term (~2013-2014) Operating Model Targets	DB Est - 2012	DB Est - 2013	DB Est - 2014	DB Est - 2015	DB Est - 2016
Gross Margin	25%	15.9%	22.2%	23.5%	23.8%	24.5%
R&D as % of Revenue	3%-5%	14.1%	4.0%	4.0%	4.7%	4.3%
SG&A as % of Revenue	5%-7%	15.1%	6.6%	6.9%	6.4%	5.7%
EBIT Margin	14%-16%	-13.4%	11.6%	12.6%	12.7%	14.5%

Source: Deutsche Bank, Tesla

In terms of sensitivities, we consider the key swing factors to be volume, overall pricing level, and average level of option content / battery range. The table below illustrates sensitivities. We estimate that Tesla's decremental margin on overall volume is ~29% (projected revenue per unit of $86.4k less variable costs of $61.5k). We estimate that the decremental margin on option / battery range content is ~44% (this content carries a higher margin per incremental dollar than the base vehicle). And of course, the decremental margin on pricing is 100% (could be driven by discounting to drive volume, or lower-than-expected carbon reduction credit revenue, which also carries a 100% margin).

Figure 15: Sensitivity to Volume, Option Content, Pricing assumptions

	Volume chges (units)	Options / Battery range ($ per unit)	Pricing ($ per unit)
Potential change to estimates	1,000	$ 1,000	$ 1,000
Change in revenue ($MM)	86.4	20.8	20.8
Incremental margin	28.8%	44.4%	100%
EBIT Impact	25	9	21
Base case EBIT margin (2014)	12.6%	12.6%	12.6%
Sensitivity-Adjusted EBIT margin	10.8%	11.8%	11.2%
Impact in Basis Points	(178)	(82)	(142)

Source: Deutsche Bank

Our long-term valuation is based on volume projections that would give Tesla similar global market share to Jaguar in the 2020 time-frame (and well-below Porsche)

We use Tesla's Roadster volume projections through 2012. We model that Model S production begins on time in 3Q12 (Tesla has a stretch target for early 2012), and ramps to a 20k unit run-rate by 1Q13. We then model the next-gen Roadster to begin production in mid-2013, the Model X (crossover vehicle) in early 2015, the Van (light-commercial vehicle) in 2H16 and the Gen3 Platform (3-Series size vehicle) in 2018.

Figure 16: Long-term volume projections

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Roadster	536	560	367	-	-	-	-	-	-	-	-
Roadster Next Gen	-	-	-	750	1,250	1,200	1,100	1,000	1,000	800	800
Model S	-	-	6,500	20,000	21,000	20,000	19,400	19,400	18,050	16,700	15,800
Model X	-	-	-	-	-	5,000	8,000	8,000	7,250	6,500	6,000
Van	-	-	-	-	-	-	3,500	6,500	6,500	6,500	6,500
Gen3 Vehicle	-	-	-	-	-	-	-	-	15,000	30,000	40,000
Tesla Total Volume	**536**	**560**	**6,867**	**20,750**	**22,250**	**26,200**	**32,000**	**34,900**	**47,800**	**60,500**	**69,100**
Global Share	0.00%	0.00%	0.01%	0.02%	0.03%	0.03%	0.03%	0.04%	0.05%	0.06%	0.07%

Source: Deutsche Bank

We'd note that our projected global share for Tesla of 0.07% in 2020 compares to the following luxury automakers:

Figure 17: 2009 global shares for selected automakers, compared to implied 2020 global share for Tesla

BMW	1.84%
Lexus	0.50%
Porsche	0.11%
Jaguar	0.08%
Tesla (2020 est)	0.07%
Ferrari	0.006%

Source: Deutsche Bank

Our volume projections incorporate a belief that, in certain cases, new Tesla vehicles will cannibalize existing vehicles. We assume that 20% of Model X sales are cannibalized from Model S and that 10% of Generation 3 vehicle sales are cannibalized from Model S and Model X. We assume that the Light Commercial Vehicle product is incremental volume, given the incremental commercial customer base.

Operating expenses to consist primarily of R&D to support Model S and future vehicles and the costs to operate Tesla dealerships

In this section, we will focus on operating expenses. For a detailed discussion of revenue and gross margins, see section above (pages 19-21).

Research & Development / Engineering

Tesla projects that R&D expenses will total 3%-5% of revenue in the 2013 / 2014 time-frame; however, it is unclear how much spending this includes on future models which, if Tesla is on the path to be a full-line luxury automaker, will clearly be meaningful.

We are projecting R&D expenses by vehicle program, essentially based on rough projections that Tesla has provided, with a bit of conservatism added (we project nearly $300MM for R&D on a new platform (compared to Tesla projections of $200MM) and $60MM on a Top Hat, compared to Tesla's projection of $50MM)):

Figure 18: Total investment for vehicle programs ($MM)

	Tesla Projections			DB Est		
	R&D	Capex	Total	R&D	Capex	Total
New Platform	200	200	400	290	250	540
New Top Hat	50	50	100	60	50	110
Powertrain project			10-50			10-50

Source: Deutsche Bank, Tesla

The two figures below illustrate the cadence of R&D spend that we project (broad guidelines; will not necessarily match exactly with our forecasts), as well as the overall forecasted spending through 2016 (note that R&D spending is likely to hit a near-term peak in 2011, as spending on prototype builds of the Model S reach a peak, taper down through 2013, the year after the Model S is launched and then increase based on future model spending):

Figure 19: Cadence of R&D spend (T-0 is the year of production launch, T-1 is year prior, etc.) ($MM)

CADENCE - R&D	T-4	T-3	T-2	T-1	T-0	T+1	Maint per year
New Platform	10	40	75	80	65	20	10
Top Hat			10	20	25	5	2
Major Refresh	4	16	30	32	26	8	

Source: Deutsche Bank

Figure 20: Forecasted R&D spending ($MM)

R&D ($MM)	Expected Start of Prod	2010	2011	2012	2013	2014	2015	2016	Based on Total expected spend (ex maintenance)
Roadster	In prod	15	-	-	-	-	-	-	-
Model S	2H12	79	95	55	13	10	10	10	290
Roadster - NG	2H13	-	10	20	25	5	2	2	60
Model X	1H15	-	-	5	15	23	15	4	61
Van	2H16	-	-	-	-	10	20	25	60
Gen 3 Vehicle	1H18				5	25	58	78	295
Powertrain		12	34	20	20	15	15	15	N/A
Total		106	139	100	78	88	120	133	
% of Revenue		96%	95%	14.1%	4.0%	4.0%	4.7%	4.3%	
Memo: Total (Excl New Model R&D)		106	139	95	58	30	27	27	

Source: Deutsche Bank

We model Capex in a similar fashion, although the cadence is different (capex spending is more focused near start of production). We'd also note an assumption that new dealerships require ~$600k of capital expenditure.

Figure 21: Breakdown of Capital Expenditures ($MM)

Capex	Expected Start of Prod	2010	2011	2012	2013	2014	2015	2016
Roadster	In prod	4	-	-	-	-	-	-
Model S	2H12	95	85	50	8	8	8	8
Roadster - NG	2H13	-		10	20	20	3	3
Model X	1H15				5	20	20	7
Van	2H16					10	30	10
Gen 3 Vehicle	1H18				-	10	48	88
Powertrain		26	26	25	15	15	15	15
Dealerships		4	8	11	11	11	7	7
Total		129	119	96	59	94	131	137
% of Sales		116%	81%	13.5%	3.0%	4.3%	5.1%	4.4%

Source: Deutsche Bank

Significant portion of SG&A expense will be dealership-related

We expect that Tesla will maintain a lean central SG&A structure, but will experience significant growth due to the expected ramp-up of dealerships. The company's long-term target is 5%-7% of sales (excluding stock-based comp). We project the high-6% range through 2014, but see potential to reduce this below 6% later in the decade, depending on prospective volumes.

Another unique aspect of Tesla's business model is to sell vehicles through company-owned stores, rather than through independently-owned dealerships, the traditional OEM distribution model. Tesla believes this will lead to the following advantages:

- Typical luxury OEM's sell vehicles to their dealers for a 10%-12% discount compared to MSRP. Tesla intends to capture this discount by selling its own vehicles. Compared to the 3.5%-4.0% of sales that we expect dealership operations to cost (plus a bit of depreciation, maybe $5MM-$10MM per year, well less than 0.5% of revenue), the 10% revenue increase appears to be compelling.
- Tesla can retain the profit on warranty repairs that OEM's typically pay to the dealership. Additionally, company-owned dealerships eliminate the temptation of dealers to "over-service" when a vehicle is under warranty.
- Direct feedback, direct contact with customers, compared to a typical OEM, which often will get customer feedback filtered through a dealer.

Given the uniqueness and initial scarcity value of Tesla's product and the company's belief that many vehicles will be ordered on-line (or through a central sales system), we believe that company-owned dealership model is likely an advantage to the company financially.

Figure 22: SG&A spending breakdown ($MM)

SG&A ($MM)	F2010	F2011	F2012	F2013	F2014	F2015	F2016
Stores	15	25	39	54	70	80	90
Operating Exp per store	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Total Dealership SG&A	18.0	30.3	46.5	64.8	84.0	96.0	108.0
Other SG&A	49.7	56.6	60.6	65.2	67.1	67.7	68.3
Total SG&A	67.7	86.9	107.1	130.0	151.1	163.7	176.3
Dealership SG&A (% of Sales)	16.3%	20.6%	6.6%	3.3%	3.8%	3.8%	3.5%
Other SG&A (% of Sales)	45.0%	38.5%	8.6%	3.3%	3.1%	2.7%	2.2%
Total SG&A (% of Sales)	61.2%	59.2%	15.1%	6.6%	6.9%	6.4%	5.7%
Volume per Store (units)	36	22	177	384	318	328	356

Source: Deutsche Bank

Interest and taxes not particularly meaningful through the forecast period

Tesla's only debt will be its DOE loan, which carries interest essentially at the same rate at which the Department of Energy borrows from the US Treasury. We are modeling 3.3%. At the point when the company's $465MM loan is fully drawn (in 2012), we expect interest to be $15MM per year (annualized run rate).

The company currently carries approximately $290MM of Net Operating Losses (as of 3/31/10) and has recorded a full valuation allowance against U.S. taxable earnings. We don't expect the company to record tax expense or pay cash taxes until these NOL's (and additional that will be accumulated through 2012) are exhausted. We expected this situation to last through 2014 and for the company's prospective tax rate to be in the mid-20% range, based on company comments.

Pretax Income breakeven point looks to be in the 10k unit range

Based on the analysis below, we believe that Tesla can break-even at much lower unit sales than the 20k per year of Model S that we project. The analysis assumes $80MM of fixed cost plus $20MM of direct labor (assuming only 1 shift with 300 workers, compared to 2 shifts to produce 20k units). It also assumes that if early indications for Model S sales were lower-than-expected that the company would not begin R&D spending on future models, would slow store growth, and would save on other variable SG&A, leading to Operating Expenses ~$45MM lower than the $208MM in our base model for 2013.

Figure 23: Tesla Breakeven Analysis (vehicle volumes in units, all else in $MM)

	Excl PWT	Incl PWT
DB-estimated Model S Volume	20,000	20,000
Model S Breakeven Volume	11,125	9,610
Cont Margin per unit	24.9	24.9
Aggr CM ($MM)	276.6	238.9
Fixed Cost	100.0	100.0
Gross Margin	176.6	138.9
SG&A / R&D	208.0	208.0
Less: R&D on new products	(20.0)	(20.0)
Less: 15 fewer dealerships	(18.0)	(18.0)
Less: 10% lower non-store SG&A	(6.5)	(6.5)
Interest Expense	13.0	13.0
Pretax - Vehicle sales only	0.1	(37.6)
PWT Revenue		125
Gross Margin		0.3
PWT Gross Profit		37.5
Pretax - Incl Powertrain		(0.1)

Source: Deutsche Bank

Cash usage through 2012 likely to be very close to current sources of cash

We expect that Tesla can generate free cash flow of approximately $200MM per year, once a 20k unit run rate is reached on the Model S in early 2013. Until then, however, the cash burn will be relatively intense. Key drivers of cash burn, as well as current sources of cash are summarized below. As illustrated, sources and uses over the next 3 years are nearly identical. We'd note that we are modeling this assuming there is no cash shortage. If Tesla were to foresee a cash shortage, we believe they could delay certain spending (dealership openings, R&D on new vehicles, etc.) in order to conserve cash. However, given margin for error in our modeling, we could certainly foresee scenarios in which Tesla would require additional equity funding (likely to be relatively minor) in the 2012 time-frame. In fact, we model a $25MM equity raise in mid-2012, due to forecasted low cash levels at mid-year, just prior to Model S launch.

Figure 24: Cash sources / uses ($MM)

Total Cash Needs (2010 - 2012)	
Operating Cash Burn	(384)
Capex	(363)
Total Cash Needs	(746)
Sources of Cash	
Cash as of 2009YE	70
DOE Loan	465
IPO Proceeds	189
Toyota Investment	50
Total Sources of Cash	773
Sources - Uses	27

Source: Deutsche Bank

Figure 25: Detailed Cash Flow projections

	2010	2011	2012	2013	2014
Beginning Cash	69.6	209.9	86.6	37.2	190.4
EBITDA	(139.8)	(164.7)	(51.4)	278.4	326.3
Interest Expense	(2.7)	(9.3)	(14.1)	(14.3)	(13.7)
Taxes	(0.1)	(0.0)	(0.8)	(0.8)	(4.0)
Working Capital	27.8	(8.3)	(15.8)	(1.8)	78.0
Other Operating	(4.3)	-	-	-	-
Total Operating Cash Flow	**(119.1)**	**(182.4)**	**(82.1)**	**261.5**	**386.6**
Capex	(128.6)	(128.7)	(105.5)	(59.2)	(77.2)
DOE Loan Draw	159.0	192.0	114.0	(52.8)	(100.0)
Free Cash Flow	**(88.7)**	**(119.1)**	**(73.6)**	**149.5**	**209.4**
Equity Raise	239.2	-	25.0	-	-
Other	(10.2)	(4.2)	(0.8)	3.8	1.7
Total Cash Flow	140.3	(123.3)	(49.4)	153.3	211.2
Ending Cash	209.9	86.6	37.2	190.4	401.6

Source: Deutsche Bank

Balance Sheet – DOE loan is a big advantage and we expect leverage to remain low (peak at 1.5x net debt / EBITDA in 2012)

Tesla closed on its $465MM DOE loan January 2010. This is the only debt we expect the company to carry for the foreseeable future. This loan is part of the $25 bn Advanced Technology Vehicle Manufacturing (ATVM) program, part of the 2007 Energy Independence and Security bill. To date, 5 companies have received loans under this program.

Figure 26: ATVM loans allocated to date

Company	Loan Amt ($MM)	Disclosed purpose
Ford	5,900	Funds to upgrade facilities to produce 13 fuel-efficient vehicles
Nissan	1,600	Retool Smyrna, TN plant to build adv tech veh's and build a battery mfg facility
Tesla	465	Manufacturing of electric vehicles and powertrains
Fisker	529	Complete development of Karma and fund R&D for new line of lower-cost PHEV's
Tenneco	24	Engrg / mfg of emission control products (aftertreatment and exhaust components)
Total	8,518	

Source: Department of Energy

The loan is specifically broken down as follows: 1) $364MM for Model S development and manufacturing facility; 2) $101MM for powertrain development and facility. Qualifying expenses are: engineering expense, tooling investment, and manufacturing equipment investment. Roadster production costs do not qualify, nor does corporate overhead.

This is a reimbursement program. Tesla will submit qualifying expenses for reimbursement and the DOE will disburse 80% of the funds for those costs (the loans require 20% equity). Given that Tesla had significant qualifying expenses prior to closing the loan, the prospective split of costs will be approximately 92% DOE / 8% Tesla.

Through 2Q10, Tesla has drawn $45.4MM of the loan proceeds. We expect that the loan will be fully-drawn by mid-to-late 2012, basically concurrent with launch of the Model S. Once the loan is fully-drawn, we expect Tesla to begin paying it down at a pace of at least $50MM per year, and we expect cash flow to be sufficient to fully pay-off the loan prior to the DOE warrants vesting in 2018 (the DOE will receive warrants to purchase 9.2MM shares of Tesla common (vesting beginning in 2018), if the agreed payment schedule is followed exactly. If Tesla can prepay the loan fully prior to 2018, no warrants will vest).

The other significant piece of government assistance that Tesla has received is approval for a California sales tax credit (9% savings) on "up to $320MM" of qualifying equipment, as long as it's purchased and used in California (CAETFA Sales Tax Exemption).

Valuation

Our price target of $17 is based on a DCF analysis. Valuing Tesla presents a unique set of challenges, given the fact that company revenue won't accelerate until 2012 and beyond. We believe that DCF is the most appropriate valuation method in this case. We assume 7% terminal growth beginning in 2020 (given our projection that Tesla will still be building out its vehicle portfolio and that only 9.5% of global sales will be vehicles able to be fueled from the grid in 2020, we believe that an 7% growth rate is reasonable). We assume a terminal EBIT margin of 11.7% and a weighted average cost of capital of 13.5% (we calculate WACC by using 15% cost of equity and 3.3% cost of DOE debt and weight this over the expected capital structure from 2010 – 2014).

In terms of a multiple, current EV (based on our DCF valuation and current debt level) implies a 5.4x multiple on 2013 EBITDA. However, this is not particularly meaningful as 2013 is 2.5 years away, and the company's net debt levels will increase prior to that time. We think the most reasonable way to look at the valuation is by projecting the multiple in mid-2012 (on 2013 results) on which the stock would need to trade to justify purchasing the stock now, assuming a reasonable amount of share growth between now and then. For example, the current equity value of Tesla is $1.98 bn ($19.59 on approximately 101MM shares). We estimate that an investor would require 15% equity growth per year to hold TSLA shares. Assuming 2 years of 15% growth, equity value in mid-2012 would be $2.6 bn. At that time, we expect net debt to be approximately $430MM, resulting in an EV of $3.05 bn, which is 11.0x our 2013 EBITDA estimate of $278MM (see figure below).

In the table below, we look at comparative multiples for the two U.S. lithium-ion battery-makers (A123 and Ener1), as well as BYD (a Chinese lithium-ion battery maker, conventional automaker, and prospective EV-maker) and GS Yuasa (a Japanese lead-acid battery-maker with a lithium-ion business expected to grow rapidly). On an EV / EBITDA basis, all these companies trade at a discount to BYD, but the relative valuations of AONE, HEV, and GS Yuasa appear more compelling than TSLA. Given the high current valuation, and significant amount of share supply that will come out of lock-up in early January (only about 13% of TSLA's current shares outstanding can currently be traded), we would recommend for prospective investors to wait for a better entry-point.

We'd also note that we estimate current valuations for Porsche and Ferrari of approximately 7x EV / EBITDA.

Figure 27: Comparative Valuations of other EV-exposed growth companies. (Notes: HEV current equity value includes expectation of future dilution in the share count. BYD consensus estimates are only available through 2012)

	TSLA - DCF Valuation	TSLA - Current Shares Val	AONE	HEV	BYD	GS Yuasa
Current equity value	1,744	1,982	1,106	539	15,280	2,674
2 years of growth at 15% (1 yr for BYD)	562	639	357	174	2,292	862
Prospective equity value at mid-2012	2,306	2,622	1,463	713	17,572	3,537
Net Debt (2012YE for TSLA / AONE / HEV)	428	428	(100)	72	575	543
Prospective EV	2,734	3,049	1,362	785	18,147	4,080
2013E EBITDA (2012E for BYD)	278	278	148	106	1,459	487
EV / EBITDA Multiple	9.8	11.0	9.2	7.4	12.4	8.4
2013E Revenue (2012E for BYD)	1,951	1,951	1,224	750	9,562	4,063
Required EV / Sales Multiple	1.4	1.6	1.1	1.0	1.9	1.0
2013E OCF	261	261	132	52	N/A	N/A
FCF Yield	11.3%	10.0%	9.0%	7.2%		

Source:Capital IQ, Deutsche Bank

Figure 28: Tesla Discounted Cash Flow Model ($MM)

	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Revenues	110.5	146.9	707.7	1,966.3	2,184.6	2,550.1	3,090.2	3,339.9	3,797.5	4,230.6	4,541.1
Revenue Growth		32.9%	381.9%	177.9%	11.1%	16.7%	21.2%	8.1%	13.7%	11.4%	7.3%
Operating Expenses	261.3	339.3	802.2	1,737.6	1,909.0	2,226.7	2,641.7	2,863.0	3,428.8	3,765.1	4,010.3
Operating Income	($151)	($192)	($94)	$229	$276	$323	$448	$477	$369	$465	$531
Operating Margin	-136.3%	-131.0%	-13.4%	11.6%	12.6%	12.7%	14.5%	14.3%	9.7%	11.0%	11.7%
Depreciation and Amortizati	$11	$28	$43	$50	$51	$55	$67	$72	$82	$92	$98
EBITDA	($140)	($165)	($51)	$278	$326	$378	$515	$549	$451	$557	$629
EBITDA Margin	-126.4%	-112.2%	-7.3%	14.2%	14.9%	14.8%	16.7%	16.4%	11.9%	13.2%	13.9%
Taxes	$0	$0	$1	$1	$4	$89	$106	($114)	($88)	($112)	($127)
Change \Working Capital		($8)	($16)	($2)	$78	($10)	($18)	($10)	($105)	($25)	($27)
Capex to Sales %	116.3%	87.6%	14.9%	3.0%	3.5%	5.1%	4.4%	4.0%	4.0%	3.9%	3.8%
CAPEX	($129)	($129)	($106)	($59)	($77)	($131)	($137)	($134)	($152)	($165)	($173)
Incremental Investment	($129)	($137)	($121)	($61)	$1	($141)	($155)	($144)	($257)	($190)	($200)
Free Cash Flow	($268)	($302)	($172)	$218	$331	$327	$467	$291	$106	$255	$302
Terminal Value											$4,645
Present Value	($236)	($234)	($118)	$131	$176	$153	$192	$106	$34	$72	$1,228
Sum of PVs	**$1,504**										

Enterprise value	**$1,504**
Cash (post-offering)	($286)
Total Debt	$46
Shareholder Value	$1,744
Shares Outstanding	101.2
Per Share Value	$17

Normalized Assumptions			
Sales Growth	7.0%	Terminal Value	
Operating Margin	11.7%	WACC - g	6.5%
Tax Rate	24.0%	WACC	13.5%
W/C % Revenue	2.0%		
CAPEX % Rev.	3.8%		

Source: Deutsche Bank

Risks

Key downside risks include execution on the scale up from niche to volume manufacturing, risks associated with demand and average transaction price assumptions, risks associated with costs projections (note that manufacturing is largely U.S. based, and in formerly unionized facilities), and unknowns associated with the future competitive landscape (we believe that Tesla's competitors are now aggressively pursuing electric vehicles). In addition, we anticipate limited near term revenue/earnings to support the stock (i.e. until launch of the Model S in 2012, or further ramping of Tesla's powertrain business). Consequently, we anticipate that Tesla's shares can exhibit high levels of near term volatility.

Additional Downside Risks

Currency Risk – Value of Euro is substantial risk factor, given 25%-35% of Model S volume expected to be in Europe. Current model based on 1.20 USD / Euro. We estimate that every 10 cent move in the Euro is an approximate $200MM impact to valuation (~$2.00 per share).

Warranty Cost Risk - Tesla is estimating that it will accrue $3,600 per Model S to cover warranty costs. Warranty costs significantly above this estimate (or a high-cost recall) could impact profitability and/or the company's balance sheet position.

The Model S pricing estimates assume governmental tax credits / rebates in certain countries which, although in existence today, are not guaranteed to be in existence in 2012. Reductions in support could impact the value proposition for Tesla's vehicles and consumer demand levels.

The segment in which the Model S competes generally includes significant leasing penetration. Inability to find a lease financing partner could impact demand levels.

Upside Risks

Key upside would center around potential volume upside. Given volumes of competitor vehicles in the 50k – 200k range, there is the potential for Tesla Model S volume to be significantly higher-than-expected.

Additional customers / contracts for Powertrain sales could add significantly to our revenue / profitability targets. For example, if Tesla were to receive a contract to produce battery packs for a future Toyota or Daimler EV (both of which are currently purchasing prototype batteries from Tesla), this could lead to substantially higher revenues than we've projected.

Figure 29: Tesla Earnings Model ($MM)

Income Statement	1Q10	2Q10	3Q10E	4Q10E	F2008	F2009	F2010E	F2011E	F2012E	F2013E
Auto & PWT Revenue	20.6	24.0	24.1	23.3	14.7	94.8	91.9	126.9	692.7	1,951.3
Development Services	0.2	4.4	5.0	9.0	-	17.2	18.7	20.0	15.0	15.0
Total Revenue	**20.8**	**28.4**	**29.1**	**32.3**	**14.7**	**111.9**	**110.5**	**146.9**	**707.7**	**1,966.3**
Auto COGS	16.8	20.2								
Development Service COGS	0.1	1.9								
COGS	16.9	22.1	23.1	25.4	15.9	102.4	87.6	113.4	595.1	1,529.6
Gross Profit	3.9	6.3	6.0	6.8	(1.1)	9.5	23.0	33.4	112.6	436.7
Gross Margin	*18.7%*	*22.2%*	*20.5%*	*21.2%*			*20.8%*	*22.8%*	*15.9%*	*22.2%*
R&D	13.0	14.9	34.0	44.2	53.7	19.3	106.0	139.0	100.0	78.0
SG&A	13.5	16.7	18.5	19.0	23.6	42.2	67.7	86.9	107.1	130.0
Operating Profit	**(22.6)**	**(25.2)**	**(46.5)**	**(56.3)**	**(78.5)**	**(51.9)**	**(150.7)**	**(192.4)**	**(94.5)**	**228.7**
Operating Margin	*-108.6%*	*-88.9%*	*-160.1%*	*-174.5%*			*-136.3%*	*-131.0%*	*-13.4%*	*11.6%*
		20.7%							*17.5%*	*25.7%*
Interest Inc / (Exp)	(0.2)	(0.4)	(0.8)	(1.3)	(3.2)	(2.4)	(2.7)	(9.3)	(14.1)	(14.3)
Other gain / (loss)	(0.9)	(0.4)			(1.0)	(1.4)	(1.3)	-	-	-
Pretax Income	**(23.7)**	**(26.0)**	**(47.3)**	**(57.6)**	**(82.7)**	**(55.7)**	**(154.7)**	**(201.7)**	**(108.6)**	**214.4**
Taxes	(0.1)	(0.0)	(0.0)	(0.0)	(0.1)	(0.0)	(0.1)	(0.0)	(0.8)	(0.8)
Tax Rate					0%	0%	0%	0%	0%	0%
Net Income	**(23.8)**	**(26.1)**	**(47.4)**	**(57.7)**	**(82.8)**	**(55.7)**	**(154.9)**	**(201.8)**	**(109.4)**	**213.6**
EPS	**(3.26)**	**(3.41)**	**(0.51)**	**(0.62)**			**(3.08)**	**(2.15)**	**(1.14)**	**2.04**
Basic Shares	7.3	7.6	93.1	93.4	50.4	50.4	50.4	94.0	95.6	97.3
Diluted Shares	7.3	7.6	100.3	100.6	54.0	54.0	54.0	101.2	102.8	104.5
EBITDA	**(20.5)**	**(22.8)**	**(43.5)**	**(53.0)**	**(74.3)**	**(45.0)**	**(139.8)**	**(164.7)**	**(51.4)**	**278.4**
EBITDA Margin								*-112%*	*-7%*	*14%*
R&D as % of Revenue	62.4%	52.3%	117.0%	136.8%	364%	17%	96%	95%	14.1%	4.0%
SG&A as % of Revenue	65.0%	58.7%	63.7%	58.9%	160%	38%	61%	59%	15.1%	6.6%
Net Operating Losses	290.0	316.0	363.4	421.0			421.0	622.8	731.3	516.9

Source: Deutsche Bank

Figure 30: Tesla Cash Flow Model ($MM)

Cash Flow Statement	1Q10	2Q10	3Q10	4Q10	F2008	F2009	F2010	F2011	F2012	F2013
Reported net income	(23.8)	(26.1)	(47.4)	(57.7)	(82.8)	(55.7)	(154.9)	(201.8)	(109.4)	213.6
Depreciation and amortization	2.1	2.5	3.0	3.3	4.2	6.9	10.9	27.7	43.0	49.7
Other operating	0.1	(3.2)			45.5	5.5	(3.0)			
Change in working capital	(5.8)	8.9	(5.5)	30.3	(19.3)	(37.5)	27.8	(8.3)	(15.8)	(1.8)
Operating cash flow	**(27.3)**	**(17.9)**	**(49.9)**	**(24.0)**	**(52.4)**	**(80.8)**	**(119.1)**	**(182.4)**	**(82.1)**	**261.5**
Capital expenditures	(5.5)	(9.2)	(42.4)	(71.6)	(9.6)	(11.9)	(128.6)	(128.7)	(105.5)	(59.2)
Free cash flow	**(32.8)**	**(27.1)**	**(92.3)**	**(95.6)**	**(62.0)**	**(92.7)**	**(247.7)**	**(311.1)**	**(187.6)**	**202.3**
Cash used in acquisitions							-	-	-	-
Other investing	(3.9)	(0.9)			(1.0)	(2.4)	(4.8)	-	-	-
Dividends							-	-	-	-
Discretionary cash flow	**(36.7)**	**(27.9)**	**(92.3)**	**(95.6)**	**(63.0)**	**(95.1)**	**(252.5)**	**(311.1)**	**(187.6)**	**202.3**
Increase (decrease) in borrowings							-	-	-	-
Increase (decrease) in cap leases	(0.1)					(0.3)	(0.1)	-	-	-
Increase (decrease) in gov't borrc	29.9	15.5	50.3	63.3			159.0	192.0	114.0	(52.8)
Change in vehicle lease investmei	-	(0.9)	(0.9)	(1.1)			(2.9)	(4.2)	(0.8)	3.8
Governmental Grants							-	-	-	-
Equity Issuances	0.4	-	238.8		55.1	157.8	239.2	-	25.0	-
Other	(1.6)	(0.9)				(2.0)	(2.5)			
Net Financing flow	**28.6**	**13.7**	**288.3**	**62.1**	**55.1**	**155.4**	**392.8**	**187.8**	**138.1**	**(49.0)**
Effect of foreign currency										
Net change in cash position	**(8.1)**	**(14.2)**	**196.1**	**(33.5)**	**(7.9)**	**60.4**	**140.3**	**(123.3)**	**(49.4)**	**153.3**

Source: Deutsche Bank

Figure 31: Tesla Balance Sheet ($MM)

Assets	1Q10	2Q10	3Q10	4Q10	F2008	F2009	F2010	F2011	F2012	F2013
Cash and cash equivalents	61.5	47.3	243.4	209.9	9.3	69.6	209.9	86.6	37.2	190.4
Restricted Cash		5.4					-	-	-	-
Receivables, net	5.9	6.5	8.3	9.2	3.3	3.5	9.2	14.6	40.0	55.4
Inventory	28.6	29.5	35.4	41.8	16.7	23.2	41.8	39.8	219.1	261.0
Lease Receivable		0.9	1.8	2.9			2.9	7.2	8.0	4.2
Prepaid Expenses and Other	4.5	5.8	6	5	2.2	4.2	5.0	5.0	5.0	5.0
Current assets	**100.6**	**95.4**	**294.9**	**268.8**	**31.4**	**100.6**	**268.8**	**153.1**	**309.2**	**516.0**
PP&E	26.9	33.2	88.4	143.6	18.8	23.5	143.6	244.6	307.0	316.5
Other Assets	10.4	19.4	5.1	5.1	0.3	2.8	5.1	5.1	5.1	5.1
Restricted Cash	7.5				1.2	3.6	-	-	-	-
Total assets	**145.3**	**148.0**	**388.3**	**417.5**	**51.7**	**130.4**	**417.5**	**402.8**	**621.4**	**837.6**
Liabilities										
Revolving credit lines	-	-	-	-			-	-	-	-
Curr portion of LT debt	-	-	-	-			-	-	-	-
Curr portion of Cap Leases	0.3	-	-	-	0.3	0.3	-	-	-	-
Accounts payable	18.2	16.5	17.7	53.0	14.2	15.1	53.0	39.8	205.4	233.4
Accrued liabilities (prim warranty	7.9	17.5	16.9	16.2	11.1	14.5	16.2	14.4	37.0	99.5
Deferred Income Taxes							-	-	-	-
Refundable Membership Fees	26.0	26.2	28.0	30.0	48.0	26.0	30.0	40.0	50.0	15.0
Deferred Revenue	6.7	10.2	10.2	10.2	14.2	1.4	10.2	10.2	1.0	1.0
Other Curr Liabilities (incl Def Rer	-	5.0	(1)	(14)	-	0.2	(13.8)	(13.8)	(13.8)	(13.8)
Total current liabilities	**59.1**	**75.5**	**72.0**	**95.6**	**87.9**	**57.5**	**95.6**	**90.6**	**279.5**	**335.0**
Long-term Debt - Other	-	-	-	-	54.5	-	-	-	-	-
Long-term Debt - Gov't	29.9	45.4	95.8	159.0	-	-	159.0	351.0	465.0	412.2
Capital Leases	0.7	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9
Deferred revenue	1.4	-			-	1.2	-	-	-	-
Other LT Liabilties	3.9	-	2	2	4.8	3.5	2.0	2.0	2.0	2.0
Preferred Stock Warrants	10.4	16.7			2.1	1.7	-	-	-	-
Total liabilities	**105.4**	**138.5**	**170.7**	**257.5**	**150.2**	**64.7**	**257.5**	**444.5**	**747.5**	**750.2**
Redeemable Preferred	319.2	319.2			101.2	319.2	-	-	-	-
Redeemable Common		-	575	575			574.8	574.8	599.8	599.8
Accum Deficit, Minority Interest,	(279.3)	(309.8)	(357)	(415)	(199.7)	(253.5)	(414.8)	(616.5)	(725.9)	(512.3)
Total liabilities and S.E.	**145.3**	**148.0**	**388.3**	**417.5**	**51.7**	**130.4**	**417.5**	**402.8**	**621.4**	**837.6**

Source: Deutsche Bank

Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist			
Company	**Ticker**	**Recent price***	**Disclosure**
Tesla Motors	TSLA.OQ	19.67 (USD) 6 Aug 10	1,2,6,7,8

*Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank and subject companies.

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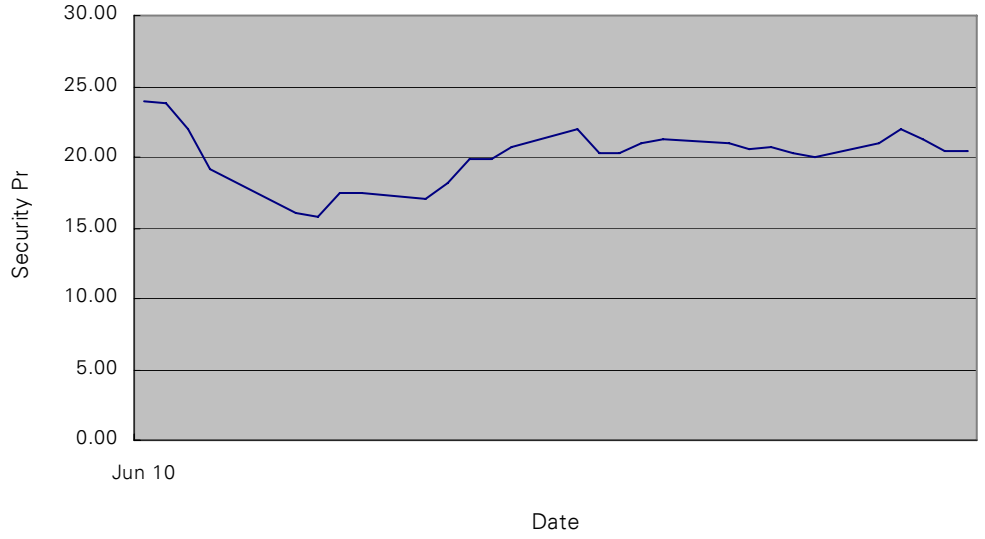
Historical recommendations and target price: Tesla Motors (TSLA.OQ)

(as of 8/6/2010)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9, 2002

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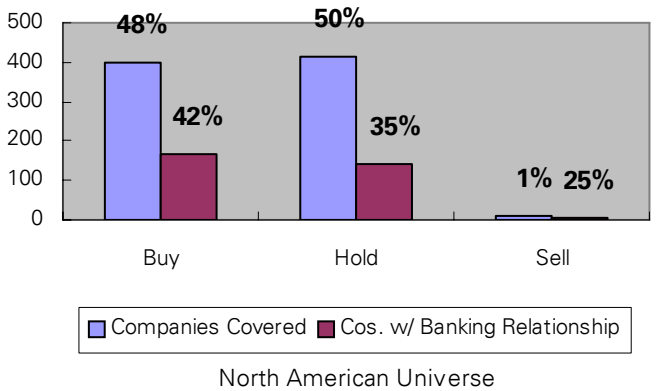

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