



Capitalize for Kids

Bloomberg

Intelligent Investing Challenge

Grand Prize Winner
Long Gentex Corp. (GNTX)
By Cecilia Hung, *Hummingbird Partners*

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Gentex Corp (GNTX), \$29.55 - designs and manufactures automatic-dimming mirrors for the automotive industry. It is a \$4 billion dollar company with sales of \$1.2 billion in 2013. Automatic-dimming mirrors detect headlight glare from behind and automatically dims the mirror to protect driver's vision. Gentex uses the mirror as the platform, a piece of "real estate", to integrate a number of proprietary and innovative safety and convenience features.

I. Sustainable and Appropriable Competitive Advantage through Superior Technology and a Cultural Imperative of Constant Innovation

- a. Superior Technology: After a six-year patent infringement battle in the 1990's with Donnelly, the predecessor of its largest competitor, Gentex gained the exclusive use of its proprietary electrochromic gel technology in producing auto-dimming mirrors. Industry insiders attribute the technology's superiority to higher durability and higher yield rates. As a result, Gentex has consistently maintained a near monopoly in the space with 88% market share.
- b. Culture of Innovation: Gentex is essentially a technology company with a strong R&D focus that consistently develops proprietary and value-add features to integrate into its rear-view mirror. Not only does this reinforce its reputation as the technological leader, but importantly, has allowed Gentex to offset the annual 3-5% price reduction imposed by automakers on their suppliers. For the past ten years, Gentex has maintained an industry leading gross margin of ~40% and held steady an average selling price of over \$40.
- c. Gentex's Moat is evident by the difficulty of its largest competitor Magna, a \$24 billion auto parts manufacturer, to expand market share despite significantly higher financial and R&D resources. After Magna acquired Donnelly in 2002, Gentex's market actually share grew from 78% to 88% while Magna's fell from 19% to 10%.
- d. Barriers of Entry: An aspiring competitor would have to make an open-ended commitment of billions of dollars of upfront R&D investment to try to displace a firmly-entrenched leader with 88% market share in a segment that, at \$1.4 billion, is less than 0.1% of the global auto parts industry. Incentives to do so would be limited, particularly in an industry known for constant margin pressure thanks to annual price reductions imposed by automakers.

II. Gentex is a Highly Profitable Business, with Strong Organic Growth Funded *Entirely* by its Own Generated Cash Earnings

- a. Not Your Typical Auto Parts Supplier's Profitability: Unlike commodity producers, Gentex has margins that are consistently and significantly above the auto parts industry's average. FY2013 gross margin of 37% and EBIT margin of 26% are the highest in the industry, and compares with industry averages of 18% and 9%, respectively.
- b. Strong Top-line Growth that's Entirely Organic: Gentex has never made an acquisition before its recent HomeLink transaction. Revenues have grown 4.5x, or a CAGR of 10% from 1999 to 2013, a period when the U.S. auto parts industry has been largely stagnant.
- c. Self-Financed Business: Prior to 2013, Gentex has not raised *any* external capital, debt or equity, since its 1981 IPO. Historically, it funded its capital expenditures and investments *entirely* with generated cash. FY2013 FCF Margin of 21% is more than 4x that of industry average.

- d. Efficient R&D is Key to 5-Yearr Average ROIC of 35%: Gentex's secret sauce has been the highly commercial nature of its R&D. CEO Fred Bauer, an engineer by training holding >100 patents, is a savvy businessman who has the ability to encourage innovation while emphasizing commercial sensibility. Gentex's US patents grew from 196 to 421 in the past ten years, and profits have doubled with the introduction of proprietary products such as SmartBeam, Driver Assist etc.

III. **Gentex's Growth Runway Underappreciated**

- a. Auto-Dimming Mirrors Still Underpenetrated: Despite an 88% market share in the auto-dimming mirror market, Gentex has ample opportunities to grow as global penetration rates for internal auto-dimming mirrors was just 24% in 2013, and 6% for external mirrors.
- b. Ample and Pending Growth Outside North America: While North American penetration rate for internal mirrors is at ~50%, developed countries such as Europe and Japan are catching up, growing from 30% in 2012 to 35% in 2013. Furthermore, IHS forecasts that light vehicle sales in BRIC countries, which Gentex has only begun to penetrate, will supersede that of North America, Europe and Japan, Gentex's traditional market, by 2017.
- c. Gentex Products' Focus on Safety Has Potential to Trend Towards Ubiquity: Ample historical examples of safety features (air bags, seat belts, disc brakes etc.) which started out as options before becoming standard equipment, often spurred by mandates. Emerging markets lagged the U.S. in safety features but adoption growth rates are trending higher as they "catch up".
- d. Automakers are Incentivized by Low Costs and High Margins: Gentex's approach is to reduce prices on its mirror products for broader appeal. Automakers are incentivized to sell Gentex products given their compelling economics: low cost (miniscule percentage, ~0.5%, of a vehicle's cost) and high markup (~300%) to automakers. Evidence of trickle-down effect: Gentex mainly supplied luxury vehicles prior to 2001, but count ~300 nameplates today.
- e. Rearview Mirror is a Prime "Real Estate" as Platform for Growth: Gentex is well-positioned to capitalize on future trends as its auto-dimming mirror is a convenient and low-cost location for new features to be added – the mirror is in the driver's natural line of sight and electronics in the mirror can be shared to avoid adding additional hardware. Today, popular features such as SmartBeam, Rearview Camera Display, Homelink etc. have been added to the mirror, driving mirror package prices upwards of \$100, when its base mirrors were priced at only ~\$30 15 years ago, despite annual price reductions.

IV. **Unique Ownership Mentality Across Employee Levels Align Incentives with Shareholders**

- a. Top Management Reasonably, but Far from Excessively Compensated: CEO Fred Bauer's base salary in 2013 was a modest \$480K, with a bonus of \$104K. The second highest paid employee earned just 26% less. Bauer owns 3% of the company.
- b. Aligned Incentives at All Levels: Gentex has no pension or OPEB liabilities, and the workforce is non-unionized. Instead, there is an ownership mentality, and profit is shared among all levels of employees, as over 90% of stock options granted in 2013 were to non-executive level officers/directors. Management options vest over five to seven years and executive officers must own three times their annual salaries in Gentex common stock.

Catalysts:

Short Term: Gentex historically hoarded as much as \$450 million cash on its balance sheet. In the recent year, it has started to deploy its dry powder for the immediately accretive acquisition of HomeLink and other shareholder-friendly uses, including raising dividends by 14% and authorizing 4 million of share repurchase. Furthermore, the Company is still looking for acquisition opportunities. The shift in strategy will accelerate growth as well as increase shareholder value in the short term.

Medium to Long Term: Increased penetration of exterior mirrors and high-value products such as SmartBeam and Driver Assist will drive growth. Gentex has also started to penetrate into fast growing emerging markets such as China. Penetration of dimmable aircraft windows could be a wildcard upside.

Valuation:

Gentex is trading at 15.8x P/E and 9.5x EV/EBITDA, which are at low ends of historical multiples. Such valuation fails to take into account its long growth runway. Furthermore, it is trading at only 13.4x P/E if we treat its exceptionally efficient and growth driving R&D expenses as investment expenditures.

Assuming a conservative 5% penetration growth in its major markets and entry into emerging markets, we use a 16x forward P/E multiple and estimate a 2-year base case share price of **\$51**, a **72%** upside. If we also assume that revenue per car will grow \$5 and use a 17x forward P/E multiple, we estimate 2-year upside case share price to be **\$58**, a **97%** upside.

Risks:

- 1) **Loss of CEO/Founder:** Fred Bauer is a central part of Gentex's culture and leadership. He is 71 years old but fit and healthy, with no plans of stepping down soon.
- 2) **Ability to introduce commercially viable products to counter margin pressure from price reductions:** Although Gentex has a successful history of innovation, CEO acknowledges that innovation is inherently risky, which is balanced by maintaining a healthy balance sheet.
- 3) **Patent expiration:** Large part of Gentex's manufacturing success lies with its processes, which are intentionally not patented to ensure its proprietary nature. Gentex continues to innovate, essentially pushing out patent expirations.
- 4) **Auto market cyclicity:** Gentex will be negatively impacted in margins and volumes.
- 5) **Failure to increase penetration** of auto-dimming mirrors in the US and globally in the near term.
- 6) **Competition:** Low competition in auto-dimming mirrors, but intense competition in advanced features such as SmartBeam or Driver Assist. In the near term, rearview mirror "real estate" is a competitive advantage as it remains a low cost location for automakers to add features.

Background

Gentex Corporation (NYSE: GNTX) designs and manufactures automatic-dimming rearview mirrors for the automotive industry, which comprises 98% of its revenues. It also manufactures auto-dimming aircraft windows and fire protection products. It had sales of \$1.2 billion in 2013, and a gross margin of 37%. It currently owns ~88% market share of the worldwide auto-dimming rearview mirrors market.

The Company currently supplies mirrors to automakers including: Audi, BMW, Chrysler, Citroen, Fiat, Ford, General Motors, Honda, Hyundai/Kia, Infiniti, Jaguar/Land Rover, Lexus, Mazda, Mercedes-Benz, Mitsubishi, Nissan, Opel, Peugeot, Renault, Rolls Royce, SAIC, Samsung, SEAT, Skoda, Toyota, Volkswagen and Volvo.

Products

Below is a brief overview of Gentex products for reference purposes, which may be helpful for understanding the investment thesis.

Auto-dimming mirror¹

Gentex's main "bread and butter" product is the auto-dimming rearview mirror. It increases nighttime driving safety by detecting headlight glare from vehicles traveling behind, and automatically dims the mirror to protect driver's vision. These can be both internal and exterior rearview mirrors.

Building on its mirror platform, Gentex has developed a number of safety and convenience technologies, a brief introduction of which follows:

SmartBeam²

SmartBeam enhances nighttime driving safety by enabling high beams to be used more frequently. A miniature camera at the back of a Gentex mirror is combined with algorithmic decision-making to detect presence of headlamps and taillamps ahead and adjusts the high beams as needed, to allow "constant on" high beams without blinding surrounding traffic.

Side Blind Zone Alerts and Driver Assist

Side Blind Zone Alerts light up on the side mirrors to notify the driver when vehicles are traveling on either side. The Driver Assist system offers features like lane departure warning, forward collision warning, traffic sign recognition, and pedestrian detection, which use a miniature camera integrated into a Gentex mirror.

HomeLink

Gentex acquired HomeLink 2013. HomeLink may be stand-alone or integrated into a mirror, and controls a variety of garage doors, home security systems, and in-home lighting and electronics.

Displays

Gentex is the leading supplier of mirror-based displays, including rear camera display (RCD), compass, and temperature, and much more. The mirror is an optimal location as it is constantly in the driver's line of sight and is a common location across all vehicles.

¹ A helpful illustration by the Company:

<https://www.youtube.com/watch?v=O7dnjTvhh74&list=PL99137D0D37CD2489>

² https://www.youtube.com/watch?v=frMf0uj_UpA

Detailed Thesis**1. Gentex has a sustainable and appropriable competitive advantage through superior technology and a cultural imperative of constant innovation**

Gentex has a near monopoly in its niche market of automatic-dimming rearview mirrors, with 88% of the global market³. Its largest competitor, Magna Mirrors, owns ~10% market share, with the remaining ~2% shared by small Japanese and Chinese suppliers. Gentex's market leading position is secure and has even grown over the years, from 78% in 2003 to 88% currently.

Gentex operates in an industry in which there are significant barriers of entry. The auto parts industry, which is estimated to be over \$200 billion⁴ in the U.S. and over \$2 trillion⁵ globally, is extremely competitive. In particular, U.S. automakers demand annual 3-5% price reductions⁶ from their suppliers in exchange for long term contracts. Coupled with rising raw material and labor costs and increasing competition from overseas manufacturers, the U.S. auto parts industry suffers from constant margin pressure. The financial crisis led to industry consolidation that has cut the number of U.S. automotive suppliers by roughly half since 2000, and over 80% since 1990.⁷ There are few incentives for new entrants in an industry particularly difficult for smaller players.

The auto-dimming mirror segment invites even less entrants - at ~\$1.4 billion, it is a miniscule fragment of the auto parts market. An aspiring competitor would have to make an open-ended commitment of billions of dollars of upfront R&D investment to try to displace a firmly-entrenched leader with 88% market share in a segment is less than 0.1% of the global auto parts industry. How, then, did Gentex become a near monopoly in this niche market?

Gentex's moat stems first and foremost from its superior, proprietary technology of manufacturing electrochromic auto-dimming mirrors. Over the years, the company significantly widened its moat by rolling out proprietary and high value-add technological features to its mirrors, further establishing the technical superiority and profitability of its products over its competitors'.

Superior, proprietary technology

Gentex produced the world's first auto-dimming mirrors in 1982 and has been a pioneer in the technology ever since. In the 1990's, Gentex and Donnelly, the predecessor of its largest competitor, sustained a protracted six-year patent infringement battle. The result was that Gentex and Donnelly would each employ different technologies in their auto-dimming mirror production. Gentex's technology, which uses a gel-based chemical solution, is viewed as superior by its major customers,

³ 2013 10-K

⁴ As of 2009, On the Road: U.S. Automotive Parts Industry Annual Assessment, Office of Transportation and Machinery U.S. Department of Commerce, 2011

⁵ IBIS <http://www.ibisworld.com/industry/global/global-auto-parts-accessories-manufacturing.html>

⁶ Gentex 10-Ks

⁷ The Current State of the U.S. Automotive Parts Market

http://trade.gov/mas/manufacturing/oaai/static/Auto%20Parts%20Paper%202012%20final_Latest_tg_oaai_003966.pdf

based on lower warranty costs and higher durability.⁸ Furthermore, the technology has a higher yield rate, one of the reasons for Gentex's industry leading margins.⁹

Conversations with industry experts and dealer forums support the view that Gentex mirrors are superior:

*"When the electrochromic mirrors were first made available Magna had the lion's share of the business - over time primarily **due to the overwhelming number of mirrors that failed Gentex has emerged as the leader** and now enjoys (I'm guessing) 80% of the auto dimming mirror business. **The mirrors they produce have not had the issues that the Magna mirrors do** - BMW jumped ship in 2007 and moved all of their business to Gentex."¹⁰*

*"Donnellys are notorious for breaking and leaking the liquid inside of them, often causing discoloration in the paint when the liquid eventually drips onto the center console. Why is not completely known. However, I mentioned the legal troubles between the 2 companies earlier, and that Donnelly had to change their methods of accomplishing the auto-dimming effect due to patent infringements. My theory is that whatever they did to change the process for auto-dimming, **it was an inferior process with poor reliability/durability**. On the other hand, I've **never really heard of a Gentex mirror failing in any capacity** (certainly not by leaking out the gel). It is for this reason that I usually suggest people switch to a Gentex when their Donnelly mirrors finally fail, which they inevitably will."¹¹*

As evidence of its superiority, in the years since the settlement, Gentex has consistently maintained its dominant market share, which stands at 88% today.

Culture of Innovation

Gentex's culture of innovation has allowed it to widen its moat against competitors. Recognizing that the rearview mirror is a valuable "real estate" in the vehicle, the company focuses its R&D on ways to add value to the mirror. Gentex spends 7-8% of revenues on R&D, significantly higher than the industry average of 3-4%.

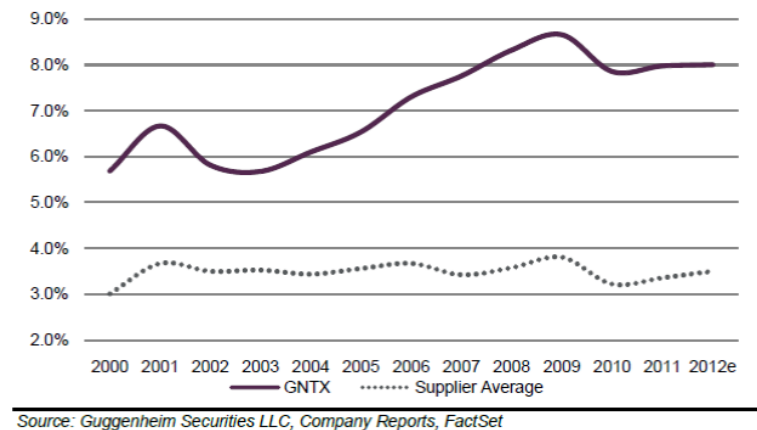
⁸ Credit Lyonnais Securities report, December 17 2003

⁹ Credit Lyonnais Securities report, December 17 2003

¹⁰ Dealer forum: <http://www.m3forum.net/m3forum/archive/index.php/t-390364.html>

¹¹ Dealer forum: <http://www.w-body.com/showthread.php/53701-Everything-you-ever-wanted-to-know-about-auto-dimming-rear-view-mirrors>

Gentex R&D vs. Supplier Average:



In the last ten years, Gentex spent over \$550 million on R&D. The result is a number of proprietary and high value-add features, such as SmartBeam and Rear Camera Display, which are integrated with the mirror hardware. As proof of its innovative culture, Gentex owns 421 patents and 21 trademarks in the U.S. and 335 patents and 61 trademarks outside the U.S. as of 2013, which expire between 2014 and 2032.¹²

Gentex is in essence a technology company with a strong emphasis on developing proprietary technology. This sets the company apart from most auto parts manufacturers, where they compete on pricing as commodity producers. With each new innovation, Gentex reinforces its reputation as the clear technological leader in the product arena, and widens its moat against competition. Most importantly, this has allowed Gentex to continuously grow its revenues and margins organically; offsetting the constant margin pressures experienced by the auto parts industry due to annual 3-5% price reductions demanded by the automakers.

CEO Fred Bauer explicates on the significance of innovation below:

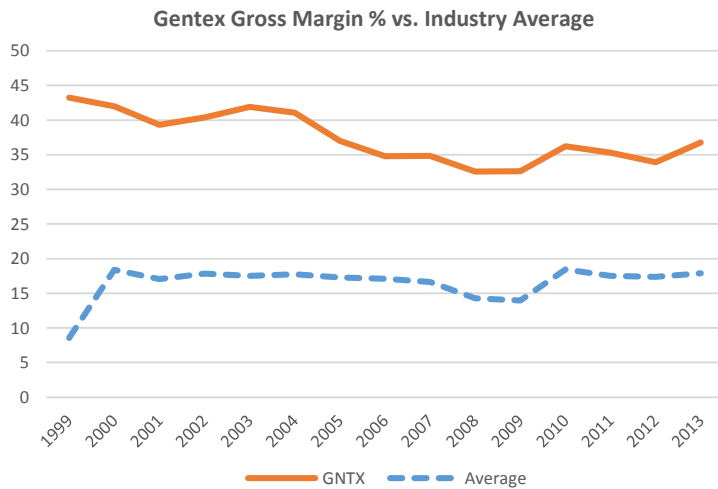
*"We believe that our culture is the primary reason that Gentex is able to continue to excel, despite the competitive automotive environment in which we do business. **Gentex continues to grant price reductions** to automakers that equate to as much or more than other suppliers on a percentage basis. **The key difference is that we aren't willing to settle for the lower margins that plague many other automotive suppliers, and we continually encourage all Gentex associates to develop ideas for ways that we can work smarter to offset these ongoing price reductions.***

***Over the past 12 years, we have reduced the price of our base electrochromic mirror by over 40 percent. However, our overall average price per unit today is still at approximately \$41, due to the incorporation of advanced electronic features in the interior mirrors and the addition of exterior mirrors, especially those using curved or thin glass.**"*¹³

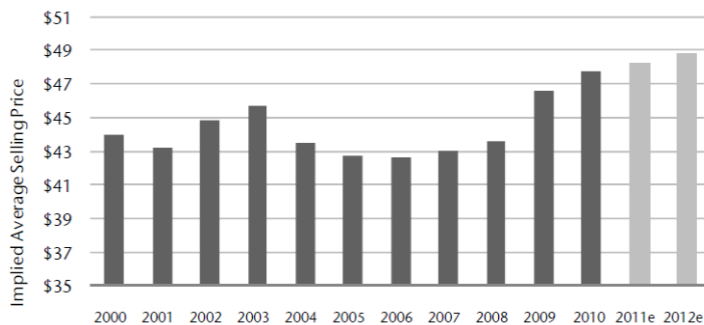
¹² 2013 Annual Report

¹³ 1998 Annual Report

The result of Gentex's culture of innovation is seen in its steady gross margins and average selling price over the years, despite annual price reductions.



Implied Average Selling Price:



Source: Jefferies estimates, company data

Gentex's moat is evident in the difficulty experienced by competitors to expand market share. Magna International (NYSE: MGA), one of the largest automobile parts manufacturers with a \$24 billion market cap, acquired Donnelly Corporation, which was Gentex' largest competitor, for \$415 million in 2002. Analysts were concerned at the time with Gentex's long-term competitive position given Magna's R&D capabilities and financial wherewithal.¹⁴ Yet since 2002, Gentex's market share grew from 78%¹⁵ to 88% in 2014, as Magna's fell from 19% to 10%.

Due to the auto industry's practice to dual-source, Gentex is unlikely to ever become a full monopoly. It is, however, evident that the effort and resources needed to capture Gentex's \$1.2 billion market share is beyond even Magna's capabilities – a warning sign for any aspiring new entrant.

¹⁴ Citigroup Research, "Gentex Corporation - You get what you pay for", 2004

¹⁵ 2002 10-K

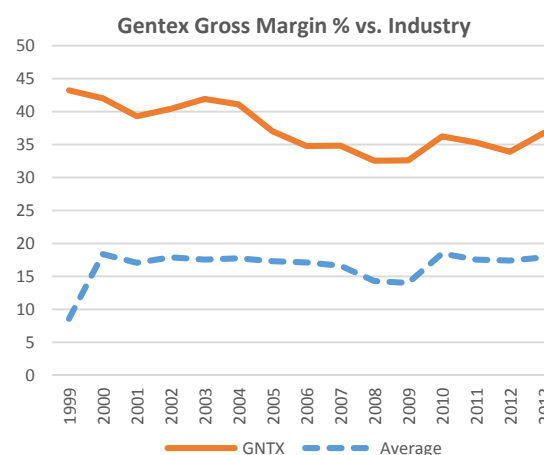
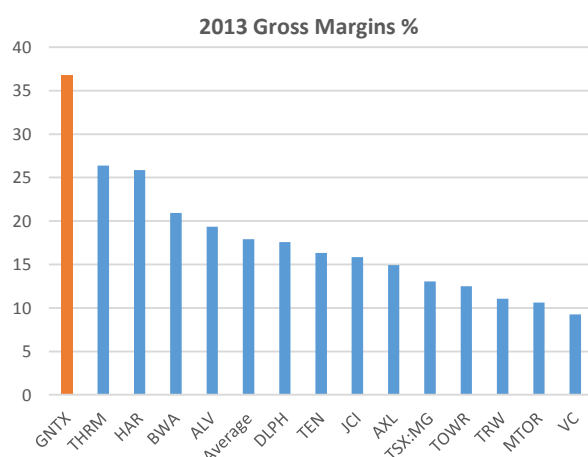
II. Highly profitable business, with strong organic growth funded entirely by its own generated cash

Gentex has a history of consistently achieving margins that are significantly above the auto parts industry's average. The key to Gentex's profitability is that it is essentially a technology company, not a commodity producer. As discussed in the earlier section, constant innovation has allowed Gentex to offset margin erosion that results from the annual 3-5% price concessions to automakers.

Gentex Financials:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Revenue	262	297	310	395	469	506	536	572	654	624	545	816	1,024	1,100	1,172
Gross Profit	113	125	122	160	197	208	199	199	228	203	178	296	362	373	431
EBITDA	95	102	97	134	167	172	160	155	179	145	133	230	274	290	370
EBIT	86	90	82	115	147	150	136	127	146	109	95	191	231	239	307
Net Income	65	71	65	86	107	113	110	109	122	62	65	138	165	169	223
Gross Margin	43%	42%	39%	40%	42%	41%	37%	35%	35%	33%	33%	36%	35%	34%	37%
EBITDA Margin	36%	34%	31%	34%	36%	34%	30%	27%	27%	23%	24%	28%	27%	26%	32%
EBIT Margin	33%	30%	26%	29%	31%	30%	25%	22%	22%	17%	17%	23%	23%	22%	26%
Net Income Margin	25%	24%	21%	22%	23%	22%	20%	19%	19%	10%	12%	17%	16%	15%	19%
Cash	95	138	206	216	394	495	507	328	398	323	353	435	419	450	310
Total Debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	266

Gentex's Historical Margins Consistently and Significantly above Industry Peers¹⁶

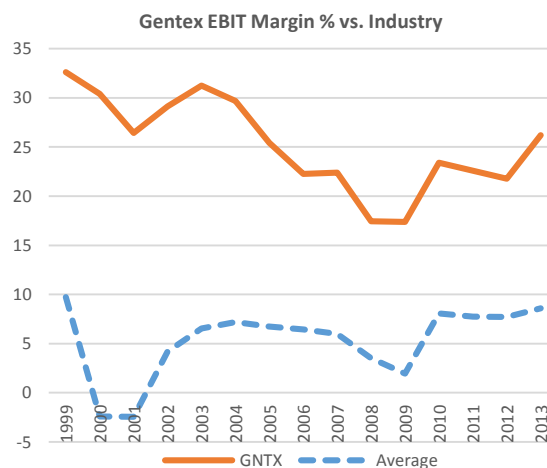
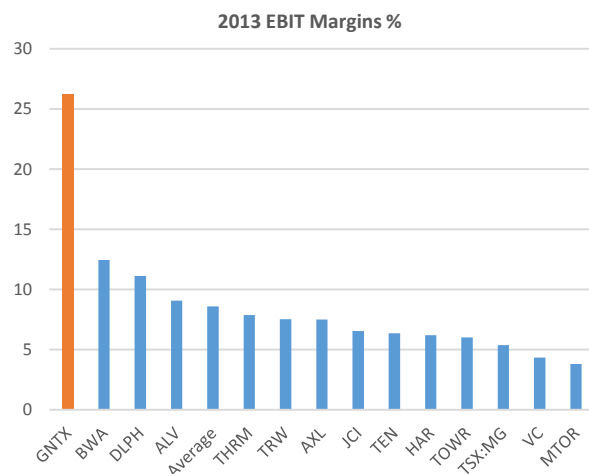


¹⁶ Industry peers are based on JP Morgan's August 2014 Auto Parts Value Tracker report

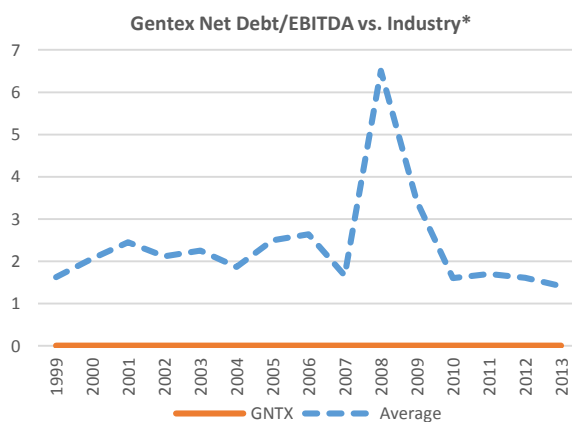
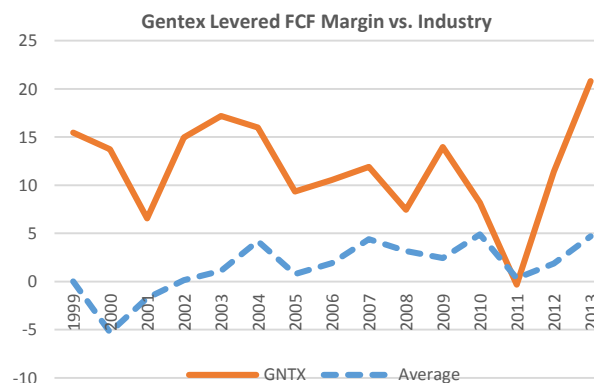
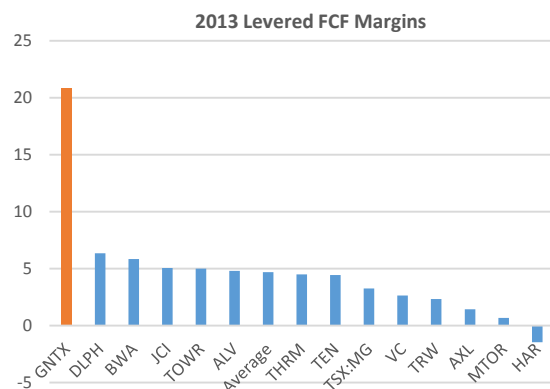
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Cecilia Hung



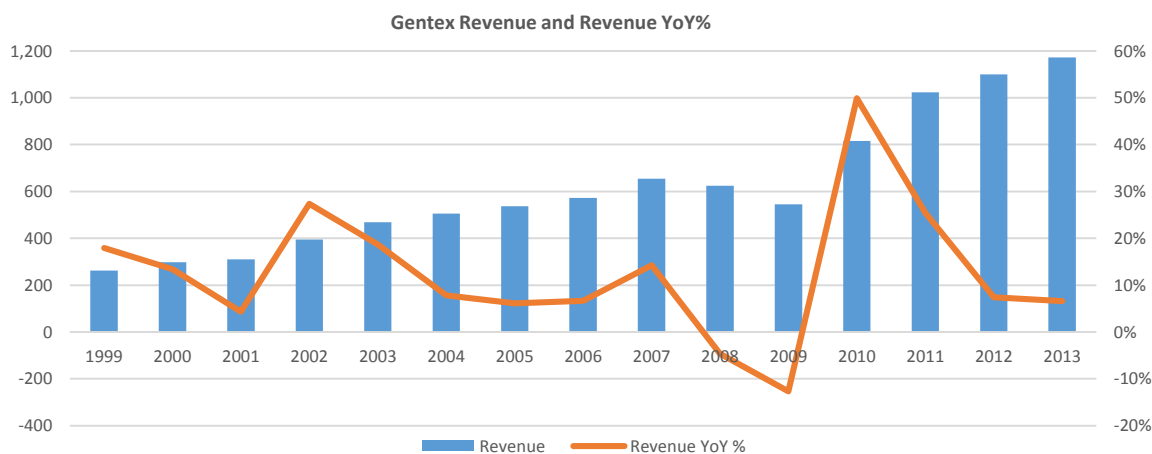
Importantly, Gentex has the highest free cash flow generation amongst its peers. This has allowed Gentex to fund its capital expenditures and investments entirely with its business generated cash *while* building up a significant cash balance. Prior to 2013, Gentex has not raised any external capital, debt or equity, since its IPO in 1981.



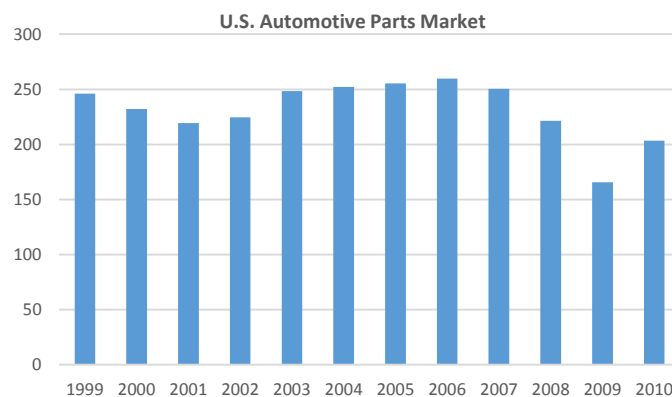
*Gentex has a negative net debt from 1999-2013, thus Net Debt/EBITDA is not meaningful.

Notably, Gentex's profitability and its strong balance sheet were the key behind Gentex's resilience through cycles. Gentex managed to generate a net profit in both 2008 and 2009, a period in which industry analysts reported that over 50 suppliers filed for Chapter 11 protection, up to 200 liquidated¹⁷, and many were running below breakeven point¹⁸. In 2011, the Japan tsunami and Thailand floods led to supply chain disruptions which caused significant lost sales at many auto suppliers.¹⁹ Gentex was relatively unaffected as its strong financials allowed it to quickly source alternative suppliers and ramp up inventory even at a higher cost.

In addition to being highly profitable, Gentex has experienced strong topline growth. Revenue has grown 4.5X or CAGR of 10% from 1999 to 2013. Most importantly, Gentex has never made an acquisition before its recent HomeLink transaction, which means that its growth has been entirely organic.



This growth was achieved in a period when the U.S. auto parts industry has been largely stagnant.²⁰



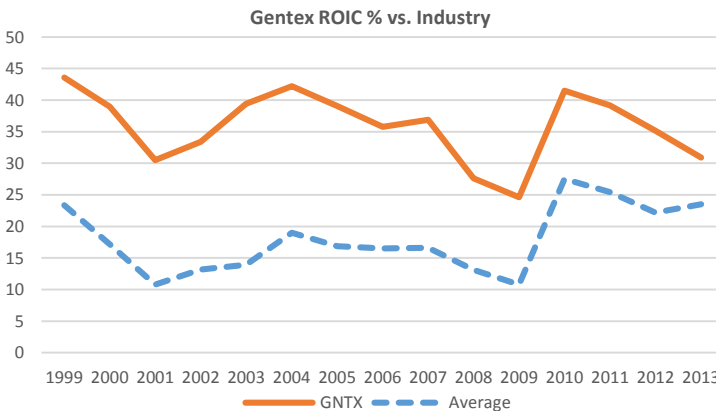
¹⁷ On the Road: U.S. Automotive Parts Industry Annual Assessment, Office of Transportation and Machinery U.S. Department of Commerce, 2011 <http://www.trade.gov/static/2011Parts.pdf>

¹⁸ The Current State of the U.S. Automotive Parts Market http://trade.gov/mas/manufacturing/oaai/static/Auto%20Parts%20Paper%202012%20final_Latest_tg_oaai_003966.pdf

¹⁹ Same as 18

²⁰ Same as 17

As Gentex accomplished a consistently high organic growth rate without the need for any external financing, it should come as no surprise that it has one of the highest returns on invested capital in the industry.



Gentex's high ROIC has resulted in a virtuous cycle of organic growth – due to its high profitability, Gentex generates a large amount of cash, which it has been able to reinvest in its own business to earn an even higher return.

Since Gentex does not look to acquisitions for growth, the key driver behind its high ROIC has been its exceptionally efficient R&D. Gentex has historically spent a significantly higher percentage of revenues on R&D than its peers - 7-8% which is double industry average of 3-4%. The continuous growth from 19 U.S. patents in 1996, to 196 in 2003, to 421 in 2013 is evidence of its productivity.

Most importantly though, is the highly commercial nature of its R&D. CEO Fred Bauer is an engineer by training – he holds over 100 patents and is known to spend most of his time on the shop floor with the company's 720 engineers and scientists. From our conversations with the Company's engineers, what sets Bauer apart is his ability to encourage innovation while emphasizing commercial sensibility - *"Fred has earned everyone's respect because he is able to recognize when an idea, however interesting, is not commercial, and shoot it down without hurting anybody's feelings."*

As CEO, Mr. Bauer is first and foremost a businessman who eschews innovation simply for innovation's sake. In his words on a May 2013 call, *"And I love innovation. **It's got to be the right innovation to make money, but innovation is a great thing.**"*

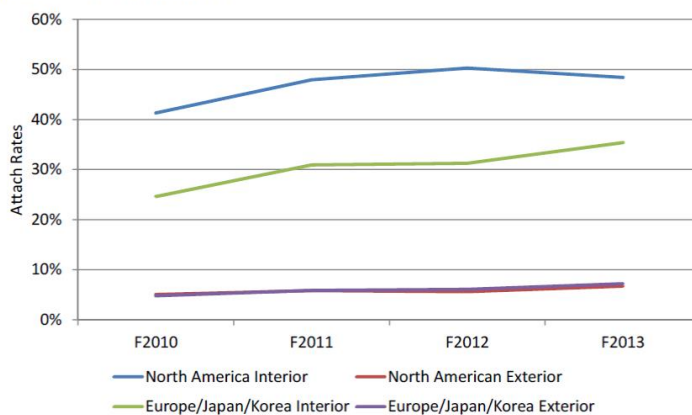
The pragmatic culture means that R&D investments have consistently translated to high profits – Gentex spent \$550 million on R&D in the past 10 years, a period in which profits doubled.

III. Gentex's growth runway underappreciated

Despite Gentex's impressive historical growth and an 88% market share of the auto-dimming mirror market, it still has significant organic growth opportunities. In 2013, global penetration rates for internal auto-dimming mirrors was 24%, and even lower for external mirrors at 6%.²¹ The Company is well positioned to profit not only from increased penetration as auto-dimming mirrors trend towards ubiquity, but also from upside opportunities as it continues to increase revenues on its mirror's "real estate".

Penetration rates for auto-dimming mirrors differ widely by region. In North America, the penetration rate for interior mirrors is ~50%. By contrast, Europe, Japan and Korea are at ~35% while emerging markets like BRIC countries are still at a significantly lower rate. There is clearly a long runway for penetration growth, particularly in international markets which are in their early innings and at a fraction of North America's.

Mirror Attach Rates by Region



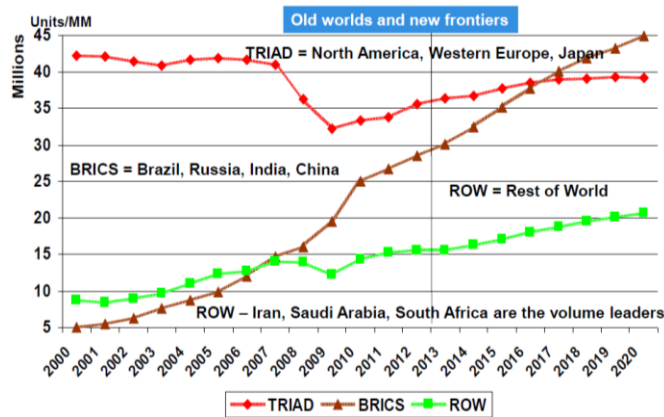
Source: Company reports

In particular, while auto market growth has slowed at the developed markets, growth is highest in the BRIC countries, where Gentex has not begun to penetrate. China and India are currently two of the largest and fastest growing light vehicle markets in the world, which could become the highest growth opportunities for Gentex.

²¹ Q1 2014 Earnings Call

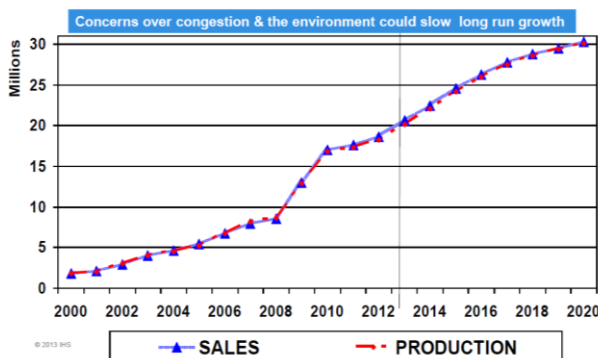
While light vehicle sales are projected to be stagnant in developed markets, BRIC countries are projected to overtake the developed markets in the next three years:

Global Light Vehicle Sales

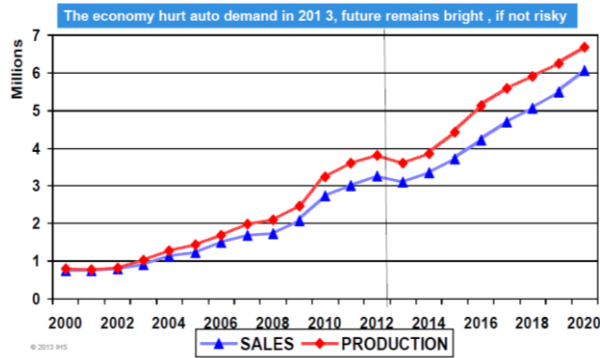


China and India, in particular, will experience the highest growth:

China - Light Vehicle Sales & Production



India - Light Vehicle Sales & Production



Gentex products have a strong safety focus, from reducing glare, increasing nighttime visibility, to eliminating side and back blind spots. Historically, effective safety features in vehicles trickle down from luxury vehicles to the mass market as Gentex points out in its 2013 10-K:

*Historically, new safety and comfort options have entered the original equipment automotive market at relatively low rates on “top of the line” or luxury model automobiles. **As the selection rates for the options on the luxury models increase, they generally become available on more models throughout the product line.** The ongoing trend of domestic and foreign automakers is to offer several options as a package. **The Company believes that its auto-dimming mirrors will be offered, in higher option rate packages, on and on more small/mid-size vehicle models as consumer awareness of the safety and comfort features continue to become more well-***

known, and as the Company continues its efforts to make automakers aware of Company technology available on competitive vehicle platforms.

The trend towards ubiquity for safety features has been demonstrated in history, sometimes spurred by mandates. Examples include disc brakes, head rests, air bags, 3-point seat belts, and anti-lock brakes, which started as options but became standard equipment in the U.S. over time. Airbags were first introduced by Ford and General Motors in the 1970s, but it was not until September 1, 1998 that the Intermodal Surface Transportation Efficiency Act of 1991 finally went into effect. The Act required all US cars and light trucks sold to be equipped with air bags on both sides of the front seat. More recently, in 2014, the U.S. mandated that rearview camera systems must be installed in light vehicles after 2018, significantly increasing the market for Gentex's Rear Camera Display.

Furthermore, safety standards in emerging markets such as Asia and South America tend to lag U.S. and Europe. In China for example, passenger airbag adoption rates were still below 70% in 2010²². Adoption rates in emerging markets are likely to continue to trend higher as they "catch up" to developed markets.

Automakers are incentivized by low price and high margins:

Pricing also plays a crucial role in adoption rates, and the Company is well aware of the importance of creating low-priced products that have potential for ubiquity, as it has laid out when explaining its strategy.

*"The Company's approach to the market has always been to work toward developing **low-cost products that automakers may sell to consumers in the millions**, as opposed to significantly higher-cost products that will likely only penetrate the top 5-10 percent of the market."*²³

*"Reducing the prices on our mirror products is very much to our long-term advantage, **since the rate at which our mirrors will be offered on lower priced vehicles is somewhat proportional to the price of the mirrors.**"*²⁴

A complete Gentex package wholesales for ~\$100, which is a miniscule percentage of a typical light vehicle's retail price of ~\$30,000. Similar to other options, however, the Company estimates that the retail mark-up on its mirror products is 250-300%. In 2012, a complete Gentex package including SmartBeam and Driver Assist were included as part of a \$6,000 option package on the Ford Explorer. Given the low cost and high markup, automakers are incentivized to include Gentex products in their popular option packages, particularly as customers associate these features with luxury vehicles.

The trickle-down effect has been evident in Gentex's history. Before 2001, Gentex mainly supplied luxury vehicles, but has since penetrated into the mass market. In 2013, 27 automakers, with 299 nameplates²⁵ included Gentex products.

²² Takata Airbags 2010 Presentation

²³ 2007 Annual Report

²⁴ 1998 Annual Report

²⁵ Q1 2014 Earnings Call

The mirror as “real estate”, a platform for growth:

Aside from increasing penetration on its existing products, Gentex is well positioned to continue adding new features on its mirrors and capitalizing on future trends. This is because the rearview mirror is a prime “real estate” in the vehicle, as it is standard across all vehicles and is in the driver’s line of sight, making it attractive for displaying information. Also importantly, the electronics in an auto-dimming mirror can be shared with other advanced features. The rearview mirror thus becomes a low-cost and convenient location for an automaker to add features without the need for retooling the console or adding new hardware. As stated in the 2006 10-K:

*“We continue to use the mirror as a strategic electronic module that allows automakers to offer multiple features in a safe, ergonomic, high-performance and quick-to-market location. We believe that certain displays, sensors, cameras and microphones – they all naturally belong in the mirror, and **our vision is to help customers exploit this critical piece of interior real estate in the vehicle.**”*

For example, the company started with a base mirror in the \$30 range in early 2000’s, while currently a model including SmartBeam has an ASP of ~\$75 even after annual price reductions. With the auto-dimming mirror as a platform, Gentex has vast organic growth potential despite having a limited physical footprint in the vehicle. The opportunities for adding features and increasing the value of its mirrors are unlimited.

Recent HomeLink acquisition increases Gentex’s penetration and adds new “real estate”:

With the acquisition, Gentex gains a piece of real estate outside of the rearview mirror for the first time. HomeLink buttons are often located at a different location than the mirror, and more importantly, have a higher penetration rate than Gentex’s. HomeLink has penetrated 407 nameplates, of which 178 are outside the mirror²⁶. This immediately gives Gentex new “real estate” and in more vehicles. Given Gentex’s expertise at exploiting the limited “real estate” they own, it is just as likely to significantly add value to the new turf they have gained with HomeLink.

In addition, following the acquisition, Gentex announced that HomeLink has been expanded to non-automotive vehicles outside of Gentex’s traditional market, including motorcycles, mowers, golf carts, ATVs. This development substantially increases Gentex’s total addressable market.

An anecdotal but potentially significant insight from a senior industry executive suggests HomeLink may bring more to Gentex than numbers. He indicated that HomeLink has about 15 of the most talented and innovative engineers, which could be a unique fit for Gentex and accelerate their innovative streak.

²⁶ Gentex August 2014 Pacific Crest Securities Presentation

IV. Unique Ownership Mentality Across Employee Levels Align Incentives with Shareholders

Perhaps unsurprisingly, behind such outperformance is a fair and effective incentives system. Top management are reasonably, but far from excessively compensated. CEO Bauer's base salary in 2013 was a modest \$480K, with a bonus of \$104K. By comparison, the second-highest paid employee earned just 26% less.

The Company has no pension or OPEB liabilities, and the workforce is not unionized. This is a rarity in an industry where 14 out of 15 comparable peers had underfunded pensions. Instead, Bauer encourages ownership mentality and profit sharing among all levels of employees through a meritocratic stock compensation program: over 90% of options granted in 2013 were to non-executive level officers/directors.²⁷ The 10% that goes to management, however, cannot be easily cashed out: Options vest over five to seven years; and to ensure that managers' incentives are in line with shareholders, the company mandates that executive officers must own three times their annual salaries in Gentex common stock. Bauer owns 3% of the company and takes 60-70% of his total compensation in stock or options.

Gentex's management may be somewhat off-putting to investors: Fred Bauer does not talk to analysts, rarely speaks at earnings calls, and avoids the limelight. Anecdotal evidence from sources close to the company indicates that this may perhaps be by design: Bauer is "a man with a mission", his work hours typically end at 10 p.m., frequently working six days a week, and sometimes seven - he is simply too busy for things that add little value to what the business is trying to accomplish and does not appear to have ego needs that require public acclamation.

It is no surprise that Gentex is rarely on the radar of Wall Street - the company's investor presentations are almost absurdly curt (a 2013 Analyst Meeting presentation had exactly one slide) and focused on esoteric aspects of its newest products rather than touting past achievements or its stock performance. Furthermore, Gentex historically has not raised external capital, giving investment banks few incentives to court it. The company is traditionally covered by auto analysts who lump it with other cyclical, commodity-like manufacturers.

²⁷ 2014 Proxy

Catalysts:

Gentex has historically had an extremely conservative balance sheet, with ample cash and no debt. While it provided stability, the underutilization of capital also dragged on returns. At the end of 2012, Gentex hoarded \$450 million of cash and short term investments, and \$140 million of longer-term investments in stocks and bonds.

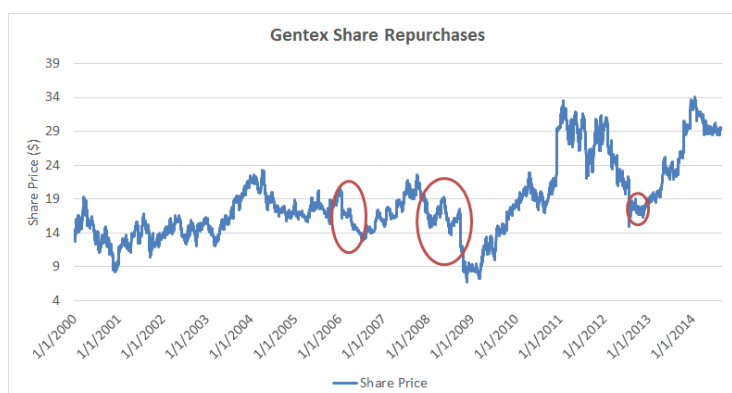
In the recent year, management has started to meaningfully deploy capital in shareholder-friendly ways, providing significant short term catalysts.

The first is the use of its dry powder to grow the business. The company acquired HomeLink in 2013, largely funded with its \$425 million cash on hand. The acquisition is immediately accretive and would increase revenues by \$125-\$150 million/year, and boost consolidated gross profit margins by 1-1.5% in the short term. Recent quarters' results have run on the high end.

The acquisition immediately increases returns on previously non-productive cash, and more importantly, Gentex has quickly rebuilt its cash balance to a comfortable \$392 million as of 2Q 2014. Historically debt averse, the Company took on \$275 million of new bank debt, at a rate of LIBOR+100bp, to preserve its ability to take on additional acquisitions or investments. On its recent 1Q 2014 call, management has stated that they are *"actively continuing to look at opportunities for acquisition and new technology outside the mirror and outside of automotive as well"*.

In addition to deploying capital to grow the business, management has also taken action to return excess cash to shareholders. It increased its dividends by 14% in 2Q 2014 – double the rate of its historical increases. Furthermore, the company authorized an addition 4 million authorized share repurchase plan in 2012, which remains unused. Historically Gentex has been a shrewd buyer of its shares, making large purchases after significant share price declines.

Quarter Ended	Total Number of Shares Purchased (Post-Split)	Cost of Shares Purchased
March 31, 2003	830,000	\$10,246,810
September 30, 2005	1,496,059	25,214,573
March 31, 2006	2,803,548	47,145,310
June 30, 2006	7,201,081	104,604,414
September 30, 2006	3,968,171	55,614,102
December 31, 2006	1,232,884	19,487,427
March 31, 2007	447,710	7,328,015
March 31, 2008	2,200,752	34,619,490
June 30, 2008	1,203,560	19,043,775
September 30, 2008	2,519,153	39,689,410
December 31, 2008	2,125,253	17,907,128
September 30, 2012	1,971,829	33,716,725
Total	28,000,000	\$414,617,179



All these developments suggest that in the near term, management will opportunistically engage in more ways to employ excess cash for shareholders' benefit. This is in contrast to past history where excess cash earned immaterial returns on its balance sheet.

In the medium and longer term, there are ample opportunities as global light vehicle sales continues to grow, particularly in emerging markets where Gentex is only beginning to penetrate, and as Gentex continues to drive penetration, especially in exterior mirrors. As discussed in earlier sections, we believe that Gentex has a long runway for growth.

We believe that Gentex may bring even more upside surprises from recent developments such as dimmable aircraft windows, or other innovations that are still in the works.

Valuation:

Gentex is currently trading at 15.8x P/LTM EPS, and 9.5x EV/LTM EBITDA. These are significantly lower than Gentex's historical multiples at 20-24x P/LTM EPS. Current multiples fail to take into account that Gentex is an actively growing business with a long runway ahead.

Furthermore, we believe that for Gentex, R&D expenses should be treated as investment expenditure. As discussed in earlier sections, R&D has always been a key driver of growth in Gentex's history, and as such is comparable to growth capital expenditure. Adding back LTM after-tax R&D would mean Gentex is only trading at 13.4x P/LTM EPS.

When estimating Gentex's long term value, we put ourselves in the owners' shoes, and consider the most meaningful metrics which drive Gentex's growth to be 1) the total value of Gentex products per vehicle and 2) the number of vehicles that employ Gentex products.

We base our valuation on simple assumptions below:

- **Light Vehicle Production in 2017 by region:** from IHS²⁸ estimates
- **Penetration Rates:** Current penetration rates are estimated to be 50% in North America and 40% in Europe, Japan and Korea²⁹. We assume that penetration rates will continue to grow to 55% and 45% respectively. We also assume that entry into emerging markets, in particular Asia, will result in penetration of 5% in 2017.
- **Revenue per Vehicle:** We assume that future ASP growth will be offset by price concessions and skewed product mix to exterior mirrors, which have higher margins but lower ASP. Therefore we assume revenue per vehicle to be unchanged from previous 5-year average of \$60. We assume lower revenue for emerging markets at \$40, which is the price of a basic mirror package.
- **Adjusted Earnings Margin:** We assume net income margin of 19%, based on 2013 margin which was at the low end of long-term average. Excluding 7% of R&D expenditure would boost margins after-tax of ~4.5%, resulting in adjusted earnings margin of 23.5%.
- **Share Outstanding:** Assume 4 million of shares repurchased, i.e. 142 million shares outstanding
- **1-Year Forward P/E:** Assume 16x, which is below historical average of ~18-22x

²⁸ IHS Global Light Vehicle Outlook: <http://www.tecma.com/wp-content/uploads/2014/01/George-MaglianoPuebla.pdf>

²⁹ Based on 2Q 2014 mirror shipments and 2Q 2014 IHS light vehicle production estimates.

Base Case Valuation

<i>2017 estimates, in \$ millions except /unit data</i>	<u>N.America</u>	<u>Europe</u>	<u>Japan/Korea</u>	<u>Rest of World</u>	<u>Total</u>
Light Vehicle Units	34.5	14.5	12.0	34.0	95.0
Penetration	55%	45%	45%	5%	
Revenue per Car	60	60	60	40	
Total Revenue	1,139	392	324	68	1,922
Adjusted Earnings Margin					23.5%
Adjusted Earnings					452
1-year Forward P/E					16
Shares Outstanding					142
Share Price					\$ 51
Current Price					\$ 29.55
Upside					72%

Under the above conservative assumptions, Gentex could trade at **\$51** in 2 years, an upside of **72%**.

Furthermore, we believe that it is likely Gentex may benefit from other upside developments. Due to the addition of HomeLink, a higher adoption of exterior mirrors, and increased penetration of higher value product offerings, average revenue per car could increase to \$65 in developed markets. In fact, run-rate revenue per car at 2Q 2014 was at \$61. We also apply a higher forward multiple at 17x P/E due to higher growth expectations.

Upside Case Valuation

<i>2017 estimates, in \$ millions except /unit data</i>	<u>N.America</u>	<u>Europe</u>	<u>Japan/Korea</u>	<u>Rest of World</u>	<u>Total</u>
Light Vehicle Units	34.5	14.5	12.0	34.0	95.0
Penetration	55%	45%	45%	5%	
Revenue per Car	65	65	65	40	
Total Revenue	1,233	424	351	68	2,077
Adjusted Earnings Margin					23.5%
Adjusted Earnings					488
1-year Forward P/E					17
Shares Outstanding					142
Share Price					\$ 58
Current Price					\$ 29.55
Upside					97%

Under the upside case, Gentex could trade at **\$58** in 2 years, an upside of **97%**.

Risks

- 1) **Loss of CEO/Founder:** While CEO/Founder Fred Bauer is fit and healthy, he is 71 years old. Bauer is the key to Gentex's past and continued success. Sources indicate that he is grooming senior vice president Mark Newton, a ten year Gentex veteran, as successor; but Bauer said "there's nothing I'd rather be doing" and is in his early years of his "30-year plan" for the company.
- 2) **Ability to continue innovation of commercially viable products to counter margin pressure from price reductions:** While the company's past record speaks volumes to its culture of innovation, even Bauer acknowledges that innovation is a risky business and Gentex takes on

that risk every day as it continues to work on product ideas and enhancements. He balances that risk with maintaining a healthy balance sheet

- 3) **Patent expiration:** A relatively minor risk - large part of Gentex's manufacturing success lies with its processes, which is intentionally not patented in order to ensure its proprietary nature. Gentex has patents out to the year 2032, and most importantly the Company continues to improve its products and typically receive new patents, essentially pushing out patent expirations.
- 4) **Auto market cyclicity:** Gentex copes with the inherent cyclicity of auto production – a sustained downturn in automotive industry, production schedule changes, labor stoppages at major customers etc. will negatively impact margins and volumes
- 5) **Failure to increase penetration** of auto-dimming mirrors in the US and globally in the near term will hinder growth
- 6) **Competition:** While competition is unlikely in the auto-dimming mirror market, there are numerous competing technologies to Gentex's advanced features such as SmartBeam or Driver Assist, including its close partner Mobileye (NYSE: MBLY). In the near term, however, Gentex's dominance in the mirror "real estate" is a competitive advantage as it remains a low cost and convenient location for automakers to add features.