



CATERPILLAR DEERE

M&A Evaluation

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The Problem

- Should Caterpillar acquire Deere & Company?
 - Caterpillar CEO requested the advice of the Strategic Investments Department
 - Evaluate feasibility and effectiveness of the potential deal



The Solution



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A Good Merger Opportunity

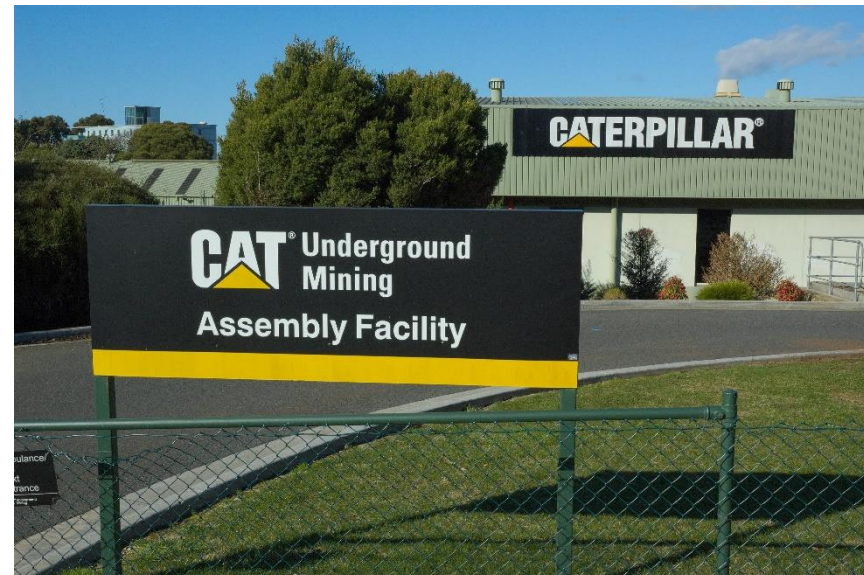
- Target acquisition price = \$38.6 billion
- Reasons for the acquisition
 - Positive industry outlook
 - Significant cost and revenue synergies
 - Compatible corporate cultures
 - Strong financial performance by Deere





Background - Caterpillar

- Four Operating Segments
 - Energy & Transportation
 - Construction Industries
 - Resource Industries
 - Financial Products
- Strong Distribution Network
 - 48 dealers in US
 - 130 dealers internationally



Background - Deere

- Three Operating Segments
 - Agriculture and Turf
 - Construction and Forestry
 - Financial Services
- Geographical Concentration
 - North America (62% of total revenues)





Industry Analysis

Industry Analysis

- Construction Machine Manufacturing
 - Caterpillar's current industry
- Tractors and Agricultural Manufacturing
 - Caterpillar's new potential industry





Construction Machine Manufacturing

| Porter's Five Forces | Level |
|-------------------------------|----------|
| Intensity of Existing Rivalry | High |
| Threat of New Entrants | Low |
| Bargaining Power of Suppliers | Moderate |
| Bargaining Power of Buyers | Moderate |
| Threat of Substitutes | Low |

Key point: Caterpillar and Deere are well-positioned within the industry

Construction Machine Manufacturing

- Key performance drivers
 - Global expansion
 - Caterpillar has a history of growth through acquisition
 - Technology innovation
 - Deere is recognized as an industry leader in R&D

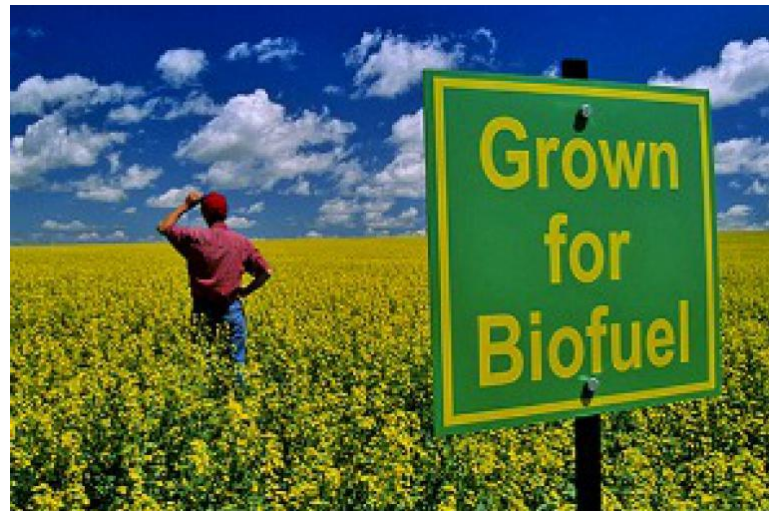


Key point: Acquisition = beneficial strategic move



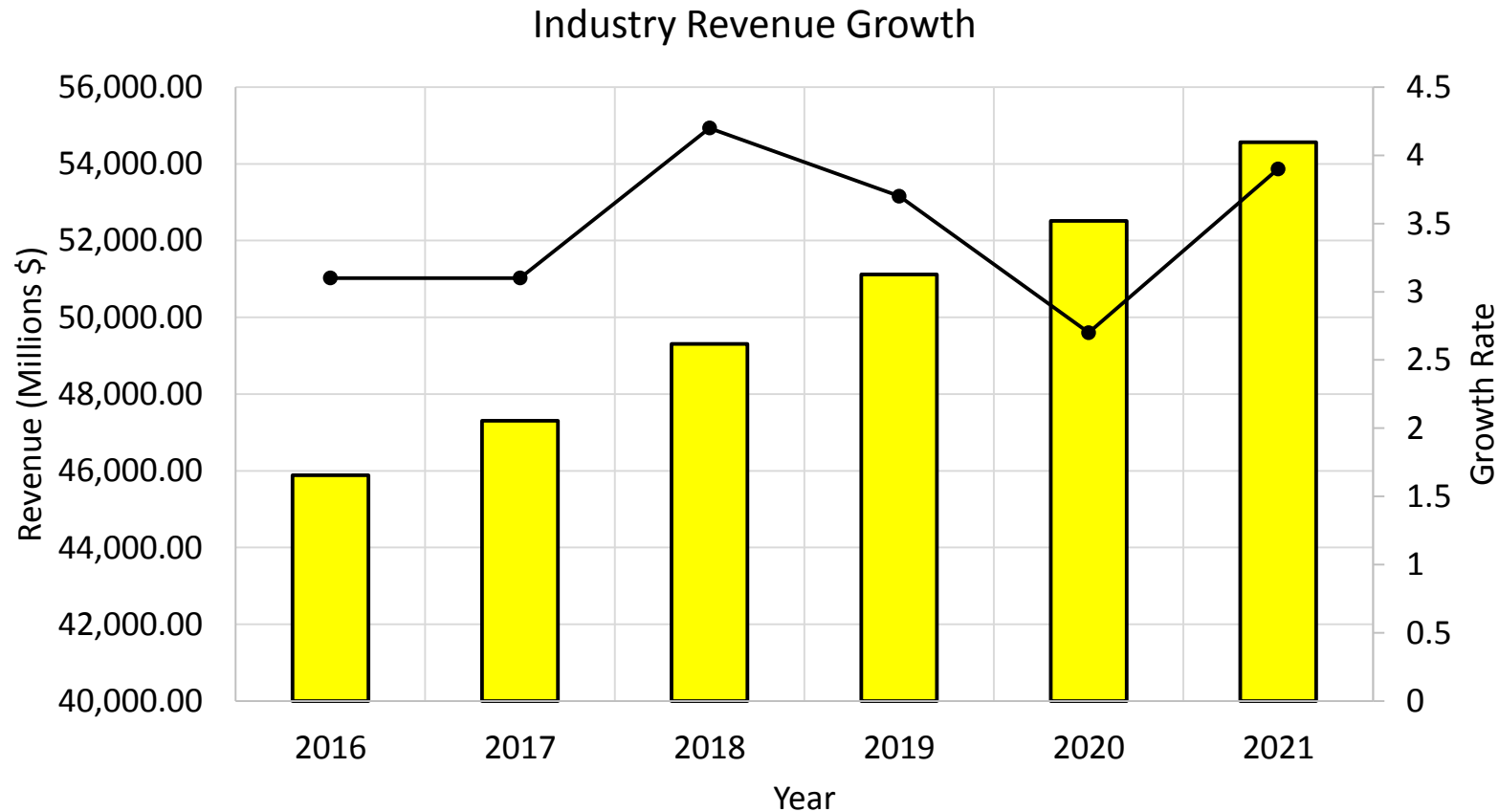
Tractors and Agricultural Manufacturing

- Positives
 - Deere has the largest market share (26.8%)
 - Industry revenue growth will be 3.8%
 - Strong global demand for food and biofuels
- Negatives
 - Industry is mature
 - Increasing interest rates





Tractors and Agricultural Manufacturing



Key point: Acquisition = profitable opportunity



Financial Performance



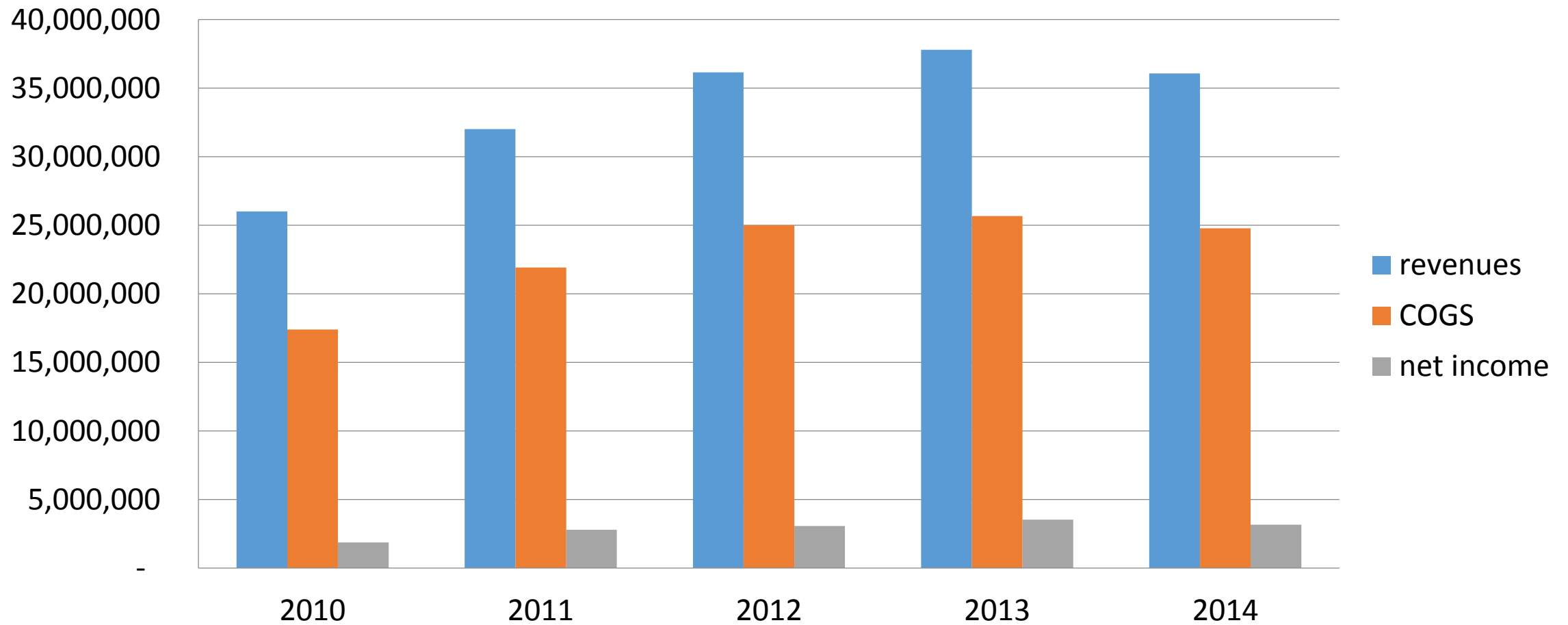
Financial Performance

- Acquisition will add value
 - Added revenue streams
 - Long-term benefits from the effective use of cash flows for investing activities
 - Improved profitability ratios
 - Better stock performance



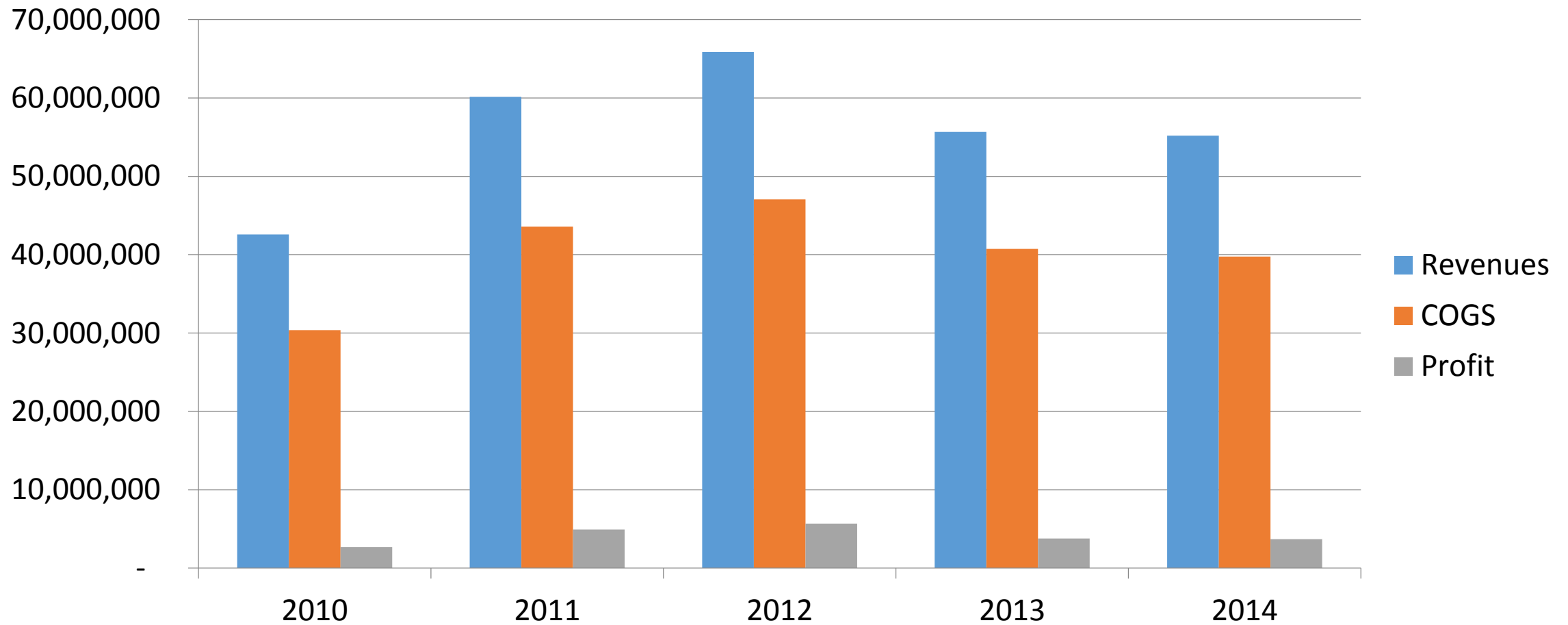


Deere 2010-14 (thousands)





Caterpillar 2010-14 (thousands)





Deere Cash Flow

- Net positive cash flow from operating activities
- \$3.52 billion for year-end 2014, an 8% increase over the last year
- 54% increase over the last five years
- OCF increase every year with the exception of 2012.





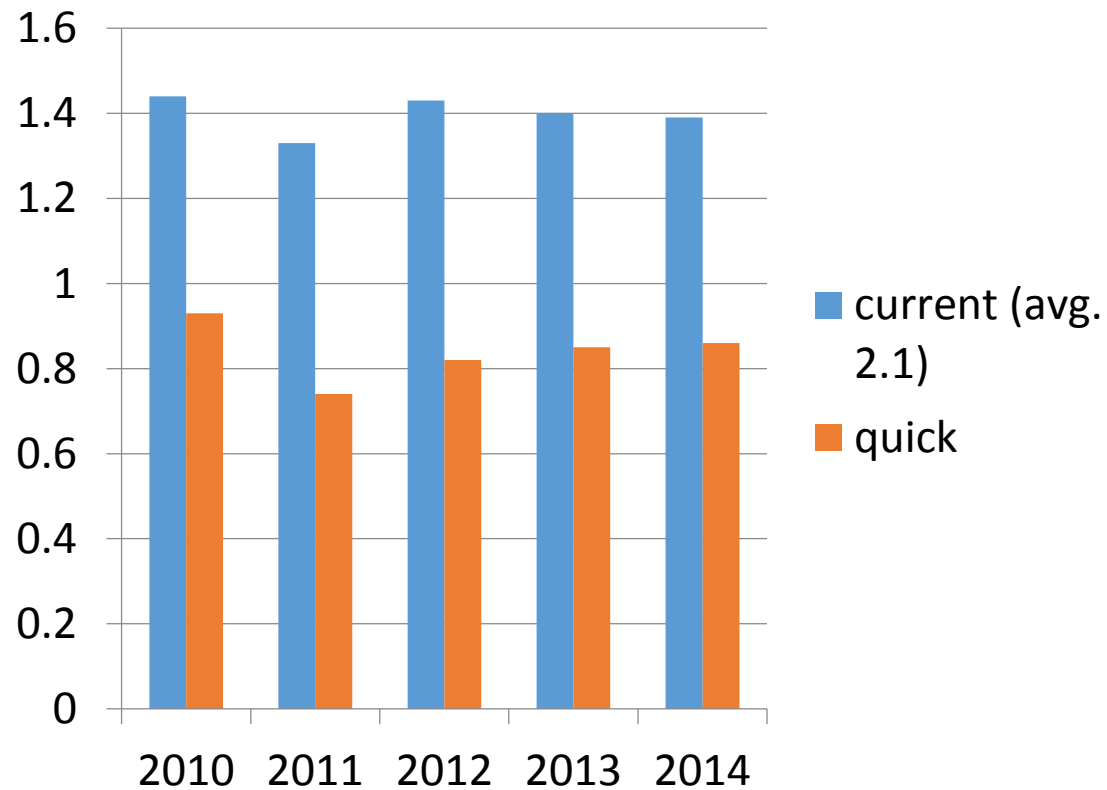
Deere Cash Flow

- Financing activities = negative amount of \$288 million in 2014.
- Repurchases of CS of \$2.731 billion
- Dividends paid of \$786 million
- Payment of dividends is encouraging news for current and prospective investors.
- CF investing activities = \$2.88 billion in 2014

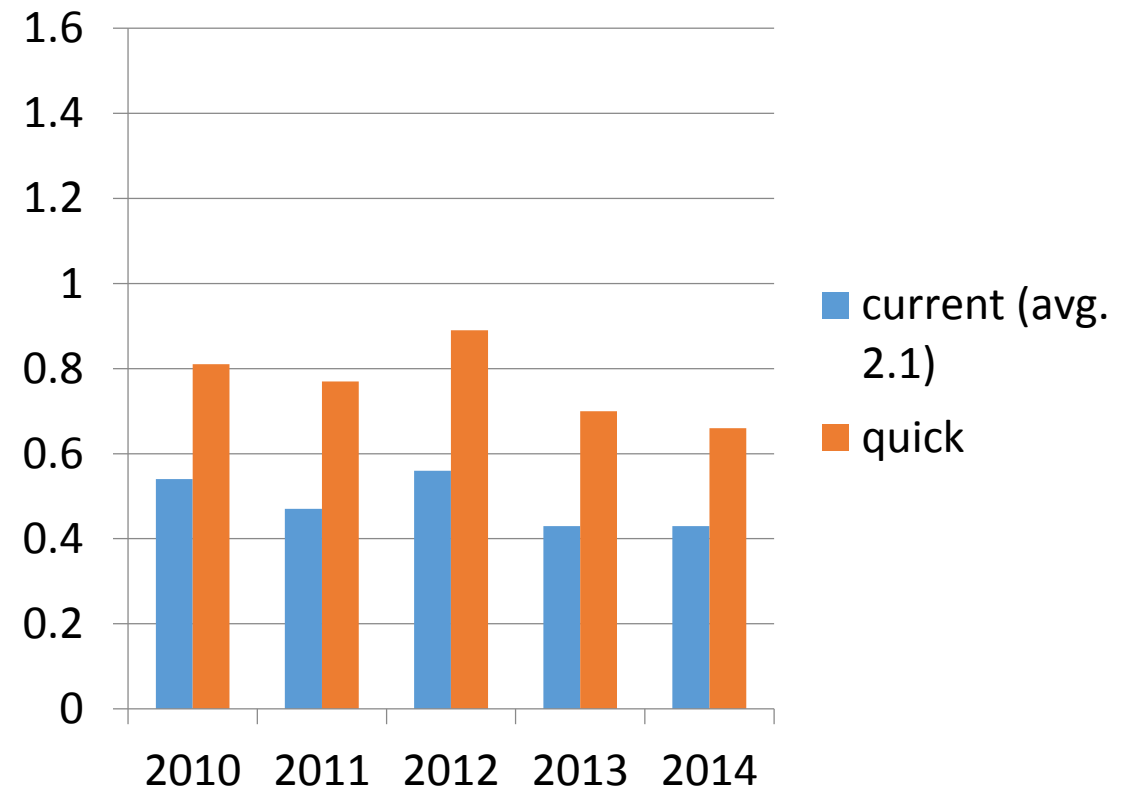


Liquidity Ratios

Caterpillar



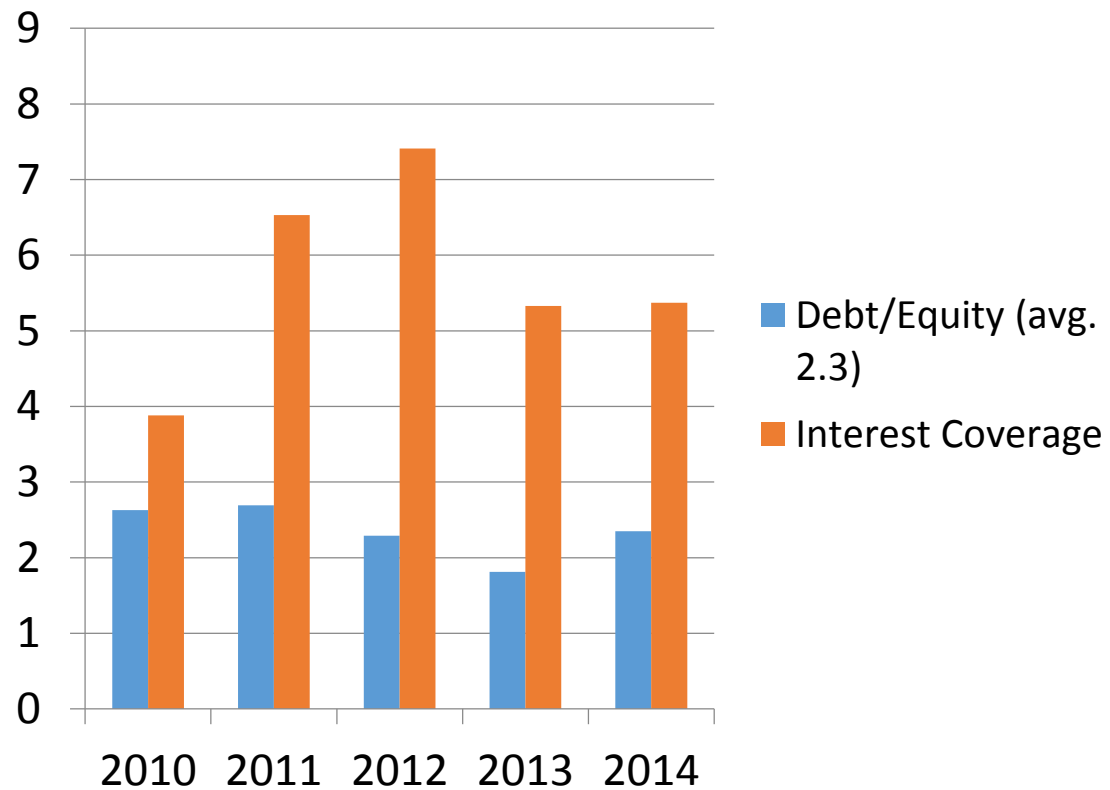
Deere



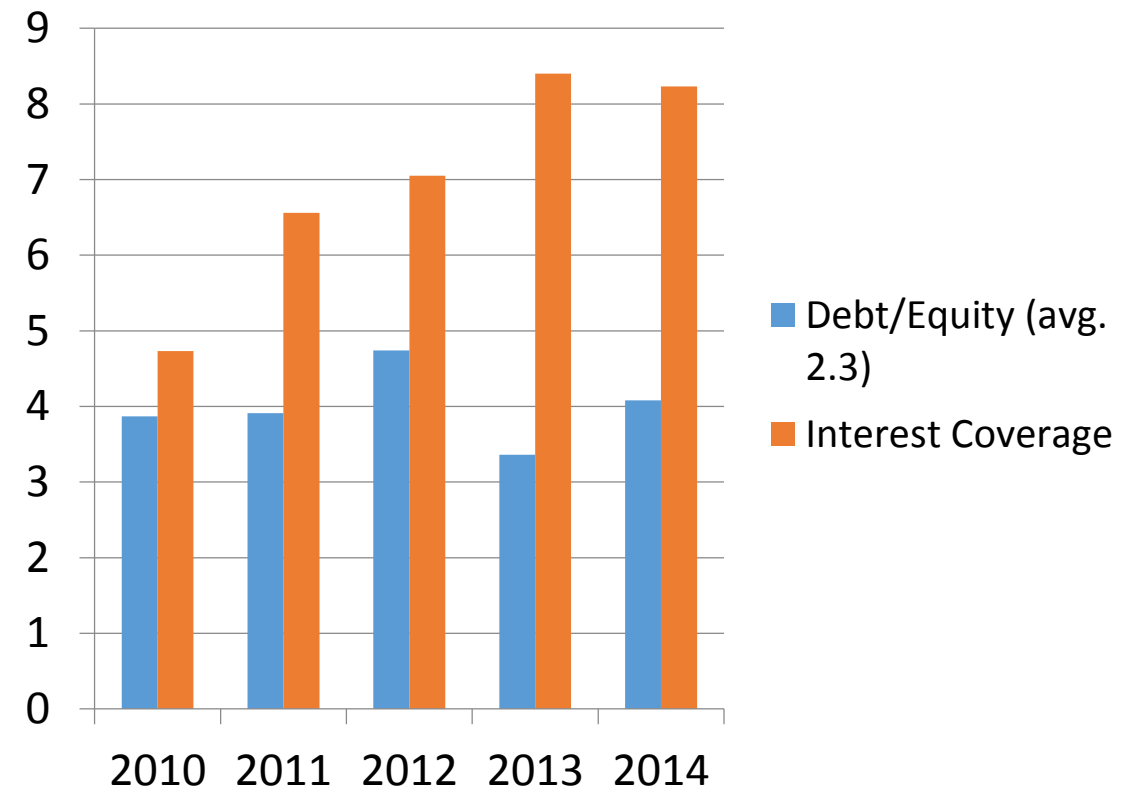


Solvency Ratios

Caterpillar



Deere





Profitability Ratios

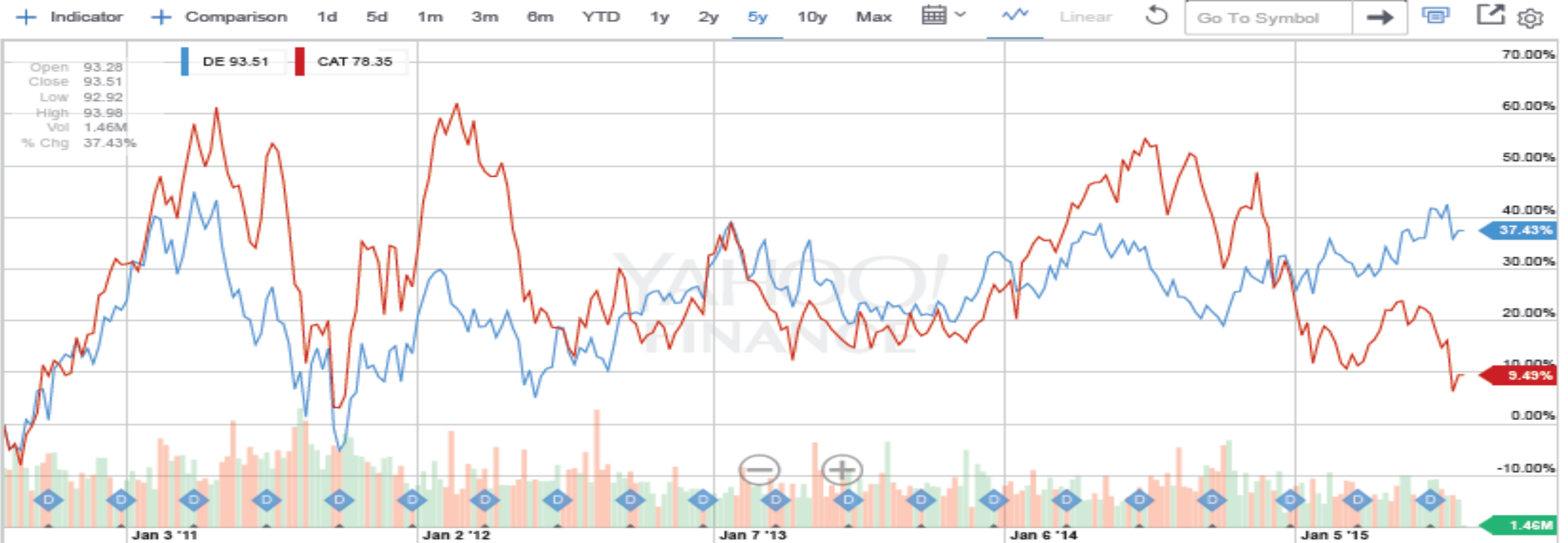
| Profitability Ratios | Deere YE 2014 | Cat YE 2014 |
|----------------------|---------------|-------------|
| ROA % (Net) | 5.23 | 4.36 |
| ROE % (Net) | 32.72 | 19.68 |
| ROI % (Operating) | 12.04 | 10.39 |
| EBITDA Margin % | 17.07 | 16.28 |

Stock Performance



Deere & Company (DE) ★ Watchlist

93.51 -0.12 (-0.13%) NYSE - As of 4:04PM EDT





Synergies: Are the combined parts greater than the whole?

An analysis to determine what Synergies exist if there were a merger based on an understanding of each companies' SWOTs



What would happen if the two were to be combined ?



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CATERPILLAR's SWOT



| Strengths | Weaknesses |
|--|---|
| <p>Strong portfolio of brands and diversified geographic presence help to mitigate business risks</p> <p>Expansive dealer and distributor network helps to expand its customer base and market share</p> <p>Customer driven product innovation capabilities strengthen competitiveness and drives growth</p> | <p>Weak financial performance could have an adverse impact on the long-term growth prospects</p> <p>Breach of restrictive covenants in debt agreements could negatively impact business</p> <p>Legal proceedings could have a material adverse effect on the consolidated results of operation, financial position or liquidity</p> |
| Opportunities | Threats |
| <p>Positive outlook for the global construction, farm machinery and heavy trucks market could provide growth opportunities</p> <p>Strategic acquisitions could support business growth and expansion</p> <p>Focus on local market demand could help to reduce cost and grow business</p> | <p>Stiff competition may negatively impact sales volume as well as margins</p> <p>Changes in government monetary and fiscal policies may negatively impact business results</p> <p>Price changes or shortage of commodities and components may adversely impact the ability to meet commitments to customers</p> |

DEERE's SWOT



| Strengths | Weaknesses |
|--|--|
| Robust dealer network Broad product portfolio Strong emphasis on research and development | Geographic concentration |
| Opportunities | Threats |
| Positive outlook for the global construction, farm machinery and heavy trucks market could provide growth opportunities Growing footprint in the emerging nations Focus on core business to enhance business prospects | Intense competition from global players Foreign currency risk Stringent engine and greenhouse gas emission standards |





Synergies when you combine Strengths

Strong portfolio of brands and diversified geographic presence help to mitigate business risks + Broad product portfolio

Expansive dealer and distributor network helps to expand its customer base and market share + Robust dealer network

Customer driven product innovation capabilities strengthen competitiveness and drives growth + Strong emphasis on research and development





Is CAT able to directly eliminate any weaknesses by DEERE having a complimentary strength?

Weaknesses

Weak financial performance could have an adverse impact on the long-term growth prospects

Breach of restrictive covenants in debt agreements could negatively impact business

Legal proceedings could have a material adverse effect on the consolidated results of operation, financial position or liquidity

Strengths

Robust dealer network

Broad product portfolio

Strong emphasis on research and development



JOHN DEERE



Is DEERE able to directly eliminate any weakness by CAT having a compatible strength?

Strengths

Strong portfolio of brands and diversified geographic presence help to mitigate business risks

Expansive dealer and distributor network helps to expand its customer base and market share

Customer driven product innovation capabilities strengthen competitiveness and drives growth

Weaknesses

Geographic concentration



Effectively DEERE's Weaknesses are now its Strengths!

Strengths

Strong portfolio of brands and diversified geographic presence help to mitigate business risks
Expansive dealer and distributor network helps to expand its customer base and market share
Customer driven product innovation capabilities strengthen competitiveness and drives growth

Weaknesses



Do any of Deere's Strengths Align With Opportunities for CAT?



Opportunities

Positive outlook for the global construction, farm machinery and heavy trucks market could provide growth opportunities
Strategic acquisitions could support business growth and expansion
Focus on local market demand could help to reduce cost and grow business

Strengths

Robust dealer network
Broad product portfolio
Strong emphasis on research and development



Do any of CAT's Strengths Align With Opportunities for DEERE?



Strengths

Strong portfolio of brands and diversified geographic presence help to mitigate business risks

Expansive dealer and distributor network helps to expand its customer base and market share

Customer driven product innovation capabilities strengthen competitiveness and drives growth

Opportunities

Positive outlook for the global construction, farm machinery and heavy trucks market could provide growth opportunities

↔ Growing footprint in the emerging nations

↔ Focus on core business to enhance business prospects

Do any of CAT's Strengths Align With Opportunities for DEERE?

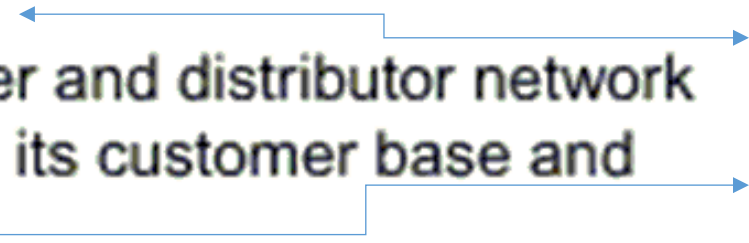


Strengths

geographic presence help to mitigate business risks
Expansive dealer and distributor network helps to expand its customer base and market share

Opportunities

Focus on core business to enhance business prospects





Are any Threats mitigated by combining?

Threats

Stiff competition may negatively impact sales volume as well as margins
Changes in government monetary and fiscal policies may negatively impact business results
Price changes or shortage of commodities and components may adversely impact the ability to meet commitments to customers

Threats

Intense competition from global players
Foreign currency risk
Stringent engine and greenhouse gas emission standards



CATERPILLAR ELIMINATES MOST OF DEERE'S THREATS

Strengths

Expansive dealer and distributor network helps to expand its customer base and market share



Threats

Intense competition from global players
Foreign currency risk



Summary of Synergies

Cost Synergies:

- Less overall spending in:
 - R&D
 - Legal fees
 - Financing and Banking
 - Acquisitions
 - Commodity Markets for raw materials





Summary of Synergies

Revenue Synergies:

- Superior product portfolio
- Enhanced global footprint and concentration
 - Emerging markets
 - China, Brazil, India
- Footprint in the agriculture and turf industries
- Less competition combined with more Cross selling





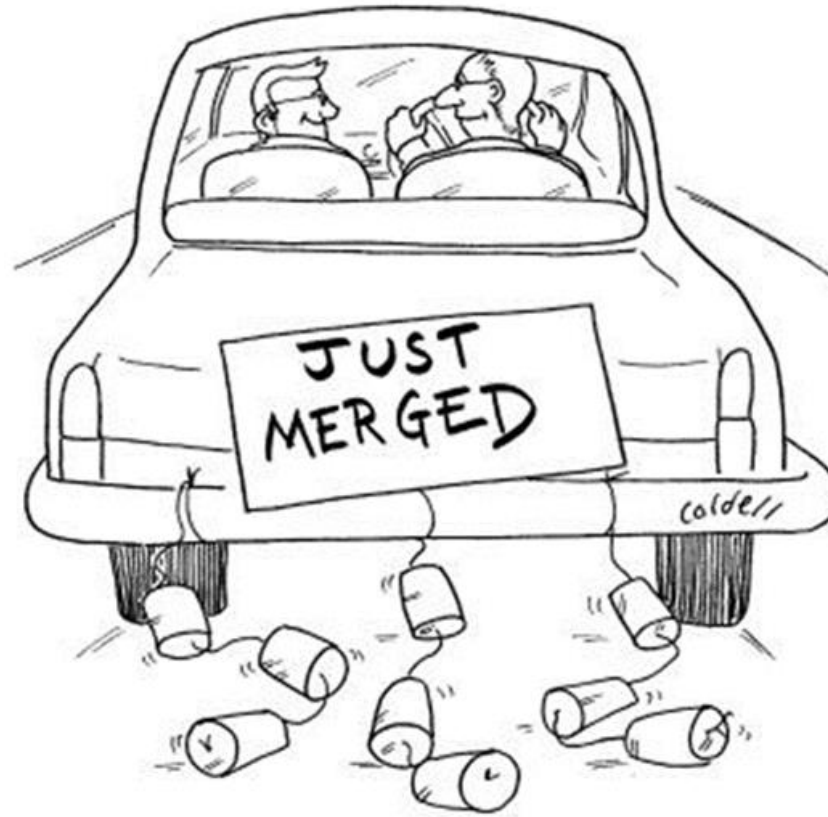
Summary of Synergies

Reciprocal Knowledge-Based Synergies:

- Less competition for acquisitions
 - More buyer power
- Greater possibilities combining R&D
- Upgrades in technology across the board and better products focusing on:
 - Price savings
 - Performance management



Leadership & Culture



Values

Deere

- Trust
- Commitment
- Innovation
- Integrity



Caterpillar

- Trust
- Commitment
- Innovation
- Integrity

Trust & Commitment



Innovation



Deere

- Eichberg Consulting 2012
Most Innovative Agricultural
Equipment Manufacturer



Caterpillar

- Doug Oberhelman, Chairman
and CEO of Caterpillar,
presented with the 2014
Leadership in American
Manufacturing Award





Facilitation

- **Caterpillar**
 - **“Adjust leadership style to meet the needs of those whom we serve.”**
 - **Flexible to accommodate a new culture**
 - **Willing to learn from Deere’s core values**



Facilitation

- **Deere**
 - Strongly rooted in the company's traditional values.
 - Culture with extreme pride in its origins.
 - Unique and strong customer base, an asset acquired through:
 - Quality
 - Innovation
 - Integrity
 - Commitment to People

The Result



CATERPILLAR[®]



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What Happens to Deere Management?

- “Some researchers have argued that the acquired executives are crucial resources: they are not easily replaceable and their departure causes significant social and decision-making issues resulting in the acquisition of less value.”

Tyutyunova, Ksenia. "CEO Turnover in Post-acquisition Integration Processes: Impact of Individual Characteristics and Cross-border Factor." *Master of Science Thesis Stockholm, Sweden 2013* (2013): 1-42. Web. 21 July 2015.

Golden Parachute

- Caterpillar could be responsible for up to \$60.9 million to Samuel Allen



Contingency Plan

Rajesh Kalathur

- **Senior Vice President**
- **Chief Financial Officer since 2012**
- **Deere employee since 1996**
- **Prime candidate to lead Deere post acquisition**





Business Risks



Risks Significant to Caterpillar

- Competition
 - competitive pricing, as it relates to fluctuations in commodity prices and currency
- Environmental laws and regulations
 - fines and penalties
 - R&D





Competition

KOMATSU

CNH
INDUSTRIAL

 **TEREX®**



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Competitive Pricing: Fluctuations in the Price of Steel



Figure 1: Price of Steel per Ton, 2008 – 2015
Source: Trading Economics: Steel





Competitive Pricing: Fluctuations in Currency

KOMATSU

- Yen advantage
 - recent 20 percent plunge in the yen against the dollar
 - pressuring Caterpillar's market share and margins
- Aggressive pricing strategies
 - increasing average product prices every year regardless of fluctuations in currency





Acquisition of Deere

- Eliminate competition between Caterpillar and Deere!
- Substantially reduce Caterpillar's exposure to competitive pricing



Environmental Laws and Regulations

- Subject to increasingly stringent environmental laws and regulations
- Failure to comply exposes Caterpillar to various fines and penalties
- Caterpillar has incurred and continues to incur significant R&D costs in an effort to comply with these standards





What can Deere offer?

- Access to R&D!
- Deere has consistently invested heavily in R&D for the past few years
- \$1.45 billion, \$1.47 billion and \$1.43 billion in FY2014, FY2013 and FY2012, respectively, in R&D





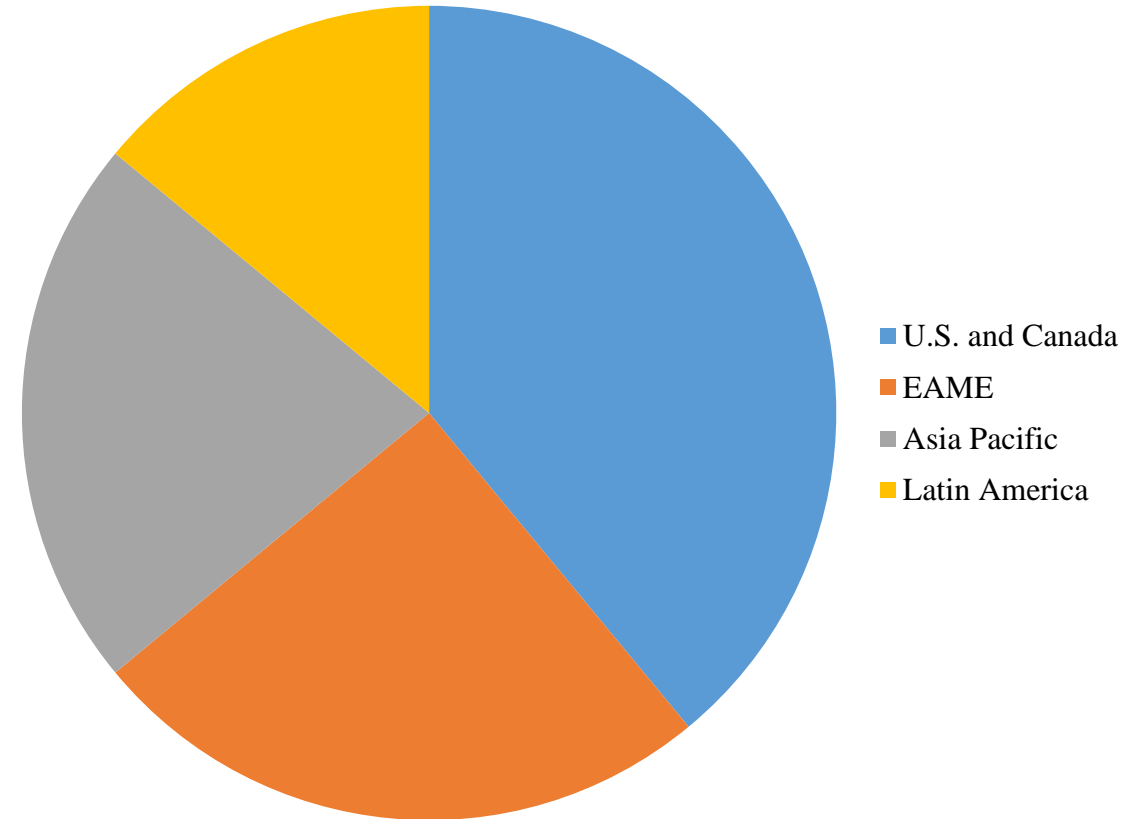
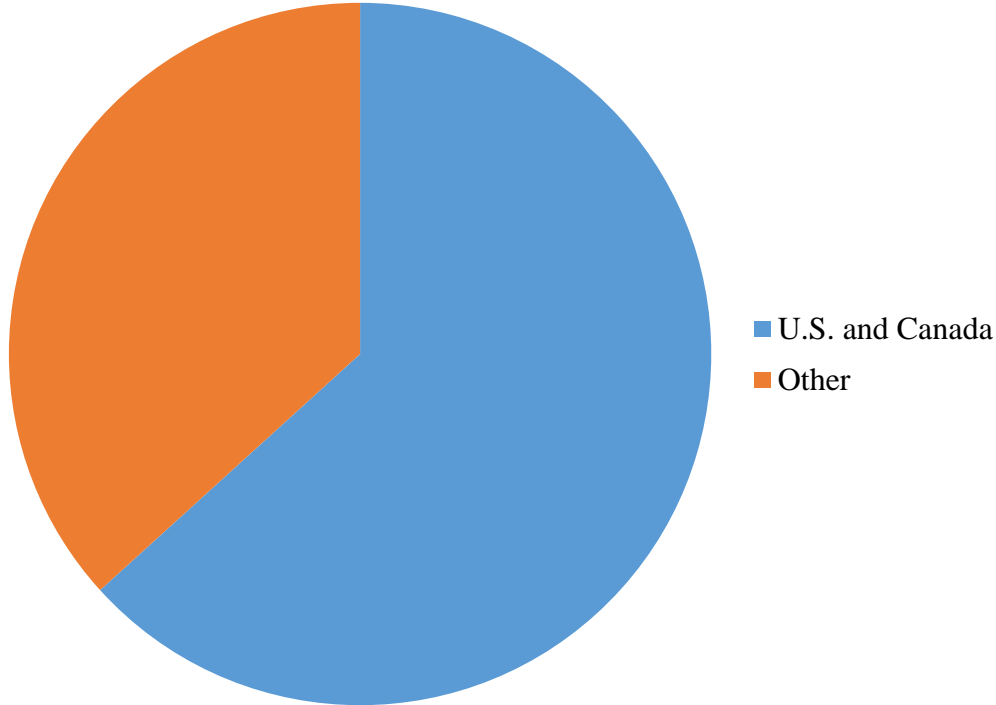
Risks Significant to Deere

- Geographic concentration in U.S. and Canada
 - over-dependence on U.S. and Canadian markets
- Currency translation risk
 - assets denominated in the currencies of other countries
 - currency fluctuations





Geographic Concentration



Currency Translation Risk

- Reported items denominated in the currencies of foreign countries
- Fluctuations in the exchange rates between other currencies and the US dollar
- Hedging as a form of protection





Overall Risk Analysis

- Acquisition would:
 - significantly reduce competition
 - give access to Deere's R&D
 - give access to Caterpillar's global distribution network
- From a risk-standpoint, we recommend the acquisition of Deere & Co. by Caterpillar Inc.



Antitrust Laws

Legal Implications

- Impact of the 3 major US antitrust laws
 - Sherman Act
 - Federal Trade Commission Act
 - Clayton Act



**The government makes laws
that promote competition!**

**Sherman
Antitrust
Act**

1890

**The
Clayton
Act**

1914

Purpose of Antitrust Laws

- Promote fair competition
- Prohibit monopolistic combinations
- Prevent unfair market concentration





Market Concentration

- Caterpillar and Deere combined would capture 34.4% market share
 - Antitrust laws do not provide a numeric threshold for what constitutes a violation
 - Based on written law, there is no clear evidence that this merger would be prevented
 - However, in practice, the FTC may require certain remedies in order to allow a questionable merger



Structural and Conduct Remedies

- Structural remedies
 - Divestment of assets
- Conduct remedies
 - A written provision that governs the business conduct of an entity after a merger takes place
- Generally, the FTC will not allow stand-alone conduct remedies
 - In the case of Caterpillar and Deere, structural remedies will likely be required



Example: Exxon/Mobil

- Merger took place in 1998
 - Combined US market share would be 14%
 - The issue was the degree of concentration in specific US markets rather than the total market share
- FTC required divestment of assets
- Assets accounted for 15% of the company's overlapping retail outlets



How Does this Apply to CAT and Deere?

- CAT and Deere's only area of overlap is construction and forestry equipment manufacturing
- If the FTC required Deere to divest 15% of the overlapping assets
 - US construction and forestry sales would likely decrease by 15%
 - US construction and forestry sales were about 11.1% of total Deere revenues
 - Result would be a decrease of only 1.7% of revenues (i.e. $11.1\% \times 0.15$)
- Conclusion
 - The merger will likely be permitted from a legal standpoint with only minimal financial impact



Valuation



Valuation of Deere

- Objective: Determine the value of Deere and Company to Caterpillar
- Approaches:
 - Ratio Analysis
 - Discounted Cash Flow





Key Ratios

| Key Ratios | | | |
|----------------------|---------|-------------|------------------|
| | Deere | Caterpillar | Industry Average |
| | Current | Current | Current |
| Price/Earnings | 13.5 | 13.9 | 13.8 |
| Price/Cash Flow | 7.7 | 7.4 | 7.5 |
| Price/Free Cash Flow | 22.6 | 13.9 | 15.6 |
| Dividend Yield % | 2.55 | 3.55 | 2.6 |
| Price/Book | 3.94 | 3.09 | 2.8 |
| Price/Sales | 0.98 | 0.96 | 0.8 |



Market Value of Deere's Performance to Deere

| Deere & Co. Market Capitalization as a subsidiary of Caterpillar based on Price/Earnings | | | |
|--|-------------------|-------------------|--------------------------|
| | Deere | Caterpillar | DE(Projected) |
| Market Capitalization | \$ 32,200,000,000 | \$ 52,400,000,000 | \$ 33,277,475,700 |
| Share Price | \$ 96.55 | \$ 86.82 | \$ 99.66 |
| Earnings Per Share | \$ 7.17 | \$ 6.24 | |
| Shares Outstanding | 333,900,000 | 603,700,000 | 333,900,000 |
| Price/Earnings | 13.50 | 13.90 | 13.90 |



Discounted Cash Flow

- 3 Variables Required:
 - Current Cash Flow from Operations
 - Discount Rate (Caterpillar)
 - Growth Rate (Deere and Company)

$$Value = CF * \frac{(1+g)^1}{(1+DR)^1} + \dots CF * \frac{(1+g)^t}{(1+DR)^t}$$



Cash Flows From Operations

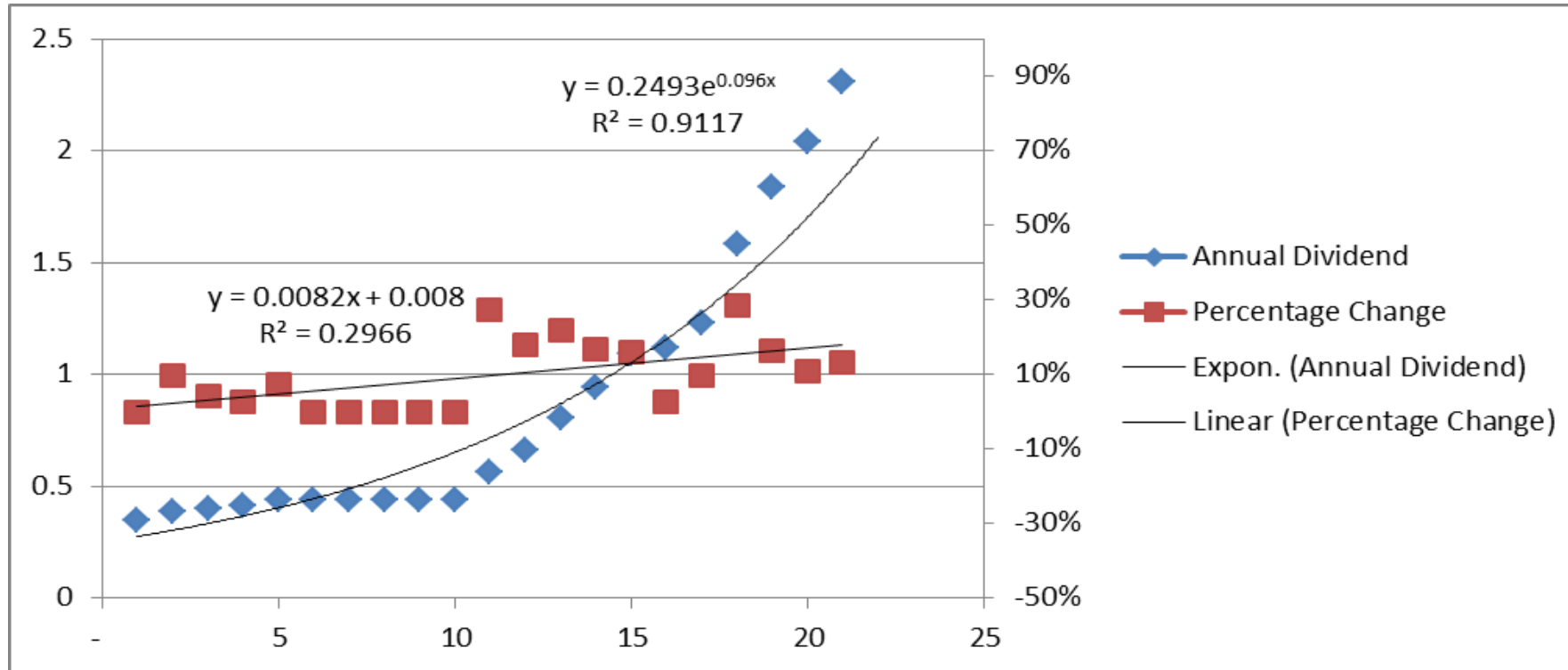
- Cash Flow from Operations:
 - \$3.5 billion (10-K; 12/29/2014)
 - Effective Tax Rate 28% (provided in tax note to 10-K; 12/29/2014)
 - After Tax Cash Flow generated from operations:
 - **\$2,640,176,000**



Growth Rate

- Top Estimate: 20%
- Low Estimate: 0%
- Median Estimate: 13.0145%

Calculation of Median Growth Rate



| g | Year |
|-------|--------|
| 10% | 2008 |
| 11% | 2009 |
| 12% | 2010 |
| 13% | 2011 |
| 15% | 2012 |
| 16% | 2013 |
| μ | 13.01% |

Derivative of regression = $7479 e^{(12x/125)}/312,500$
Average derivative from 2008 – 2014

g = 13.0145%

Discount Rate: WACC Caterpillar

$$WACC = \frac{E}{D + E} (r_e) + \frac{D}{D + E} (r_d)(1 - t)$$

Where:

E = market value of equity

D = market value of debt

r_e = cost of equity

r_d = cost of debt

t = corporate tax rate



Analysis of WACC from Caterpillar 2014 10-k

| | Total Outstanding | Weighted Average Rate |
|------------------------------|-------------------|-----------------------|
| Short Term Debt | 44,424,000 | 0.944% |
| Long Term Debt | 27,784,000,000 | 5.243% |
| Equity | 16,826,000,000 | 9.878% |
| | 44,654,424,000 | |
| Effective Tax Rate | | 28.000% |
| 2014 Caterpillar WACC | | 6.071% |



Discount Rate: Buildup Method

| Buildup Method | |
|---|----------------|
| Yield on 20 year US Treasury (July 9, 2015) | 2.800% |
| Equity Risk Premium | 5.500% |
| Size Premium | 2.000% |
| Industry Premium | 6.000% |
| Company Specific Premium | 6.000% |
| | 22.300% |



Result of Discounted Cash Flows

| | | Growth Rate | | |
|-------------------|--|-------------------|-------------------|-------------------|
| Discount Rate | | 0% | 13.0145% | 20% |
| WACC (6.07%) | | \$ 22,006,561,217 | \$ 40,681,808,386 | \$ 58,009,482,778 |
| Build Up (22.30%) | | \$ 12,898,051,202 | \$ 20,184,529,727 | \$ 26,459,516,958 |



Valuation Conclusion

- Assume a 20% control premium to market value
- Target value \$38.6 -- \$40.7 Billion



Technology and Analytics

John Deere ForestSight™



JOHNSON™ MACHINE MONITORING
MACHINE-HEALTH PROGNOSTICS
REMOTE DIAGNOSTICS AND PROGRAMMING
DEALER CONSULTATION



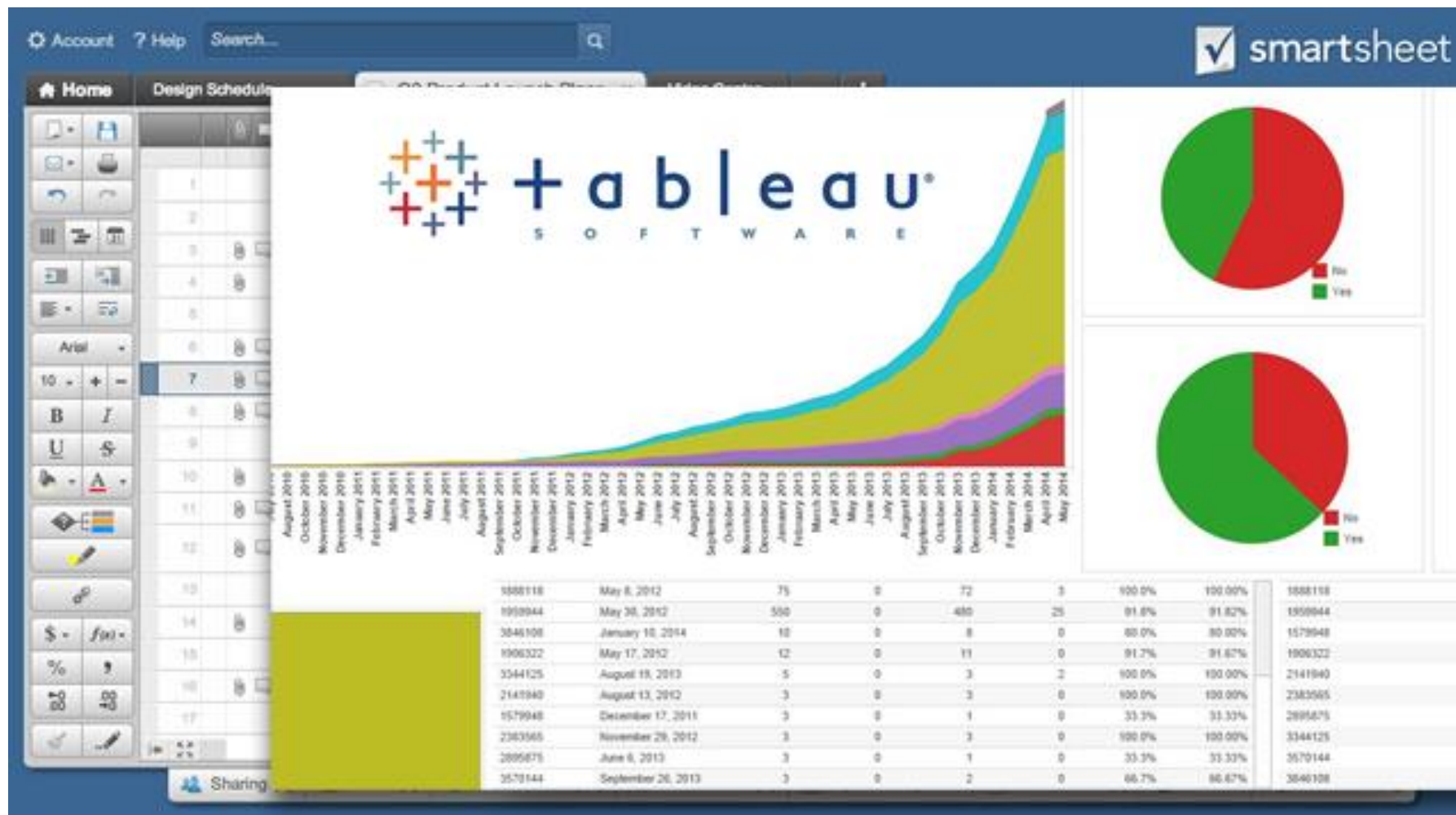


Opportunities to Automate at Caterpillar

| Category | Risk | Business Objective |
|-------------|---------------------------|-----------------------------------|
| Financial | Lost sales volume | Profitability |
| Strategic | Bad M&A decisions | Growth |
| Operational | Production inefficiencies | Minimize manufacturing cycle time |
| Compliance | Anti-competitive lawsuits | Maintain positive public image |



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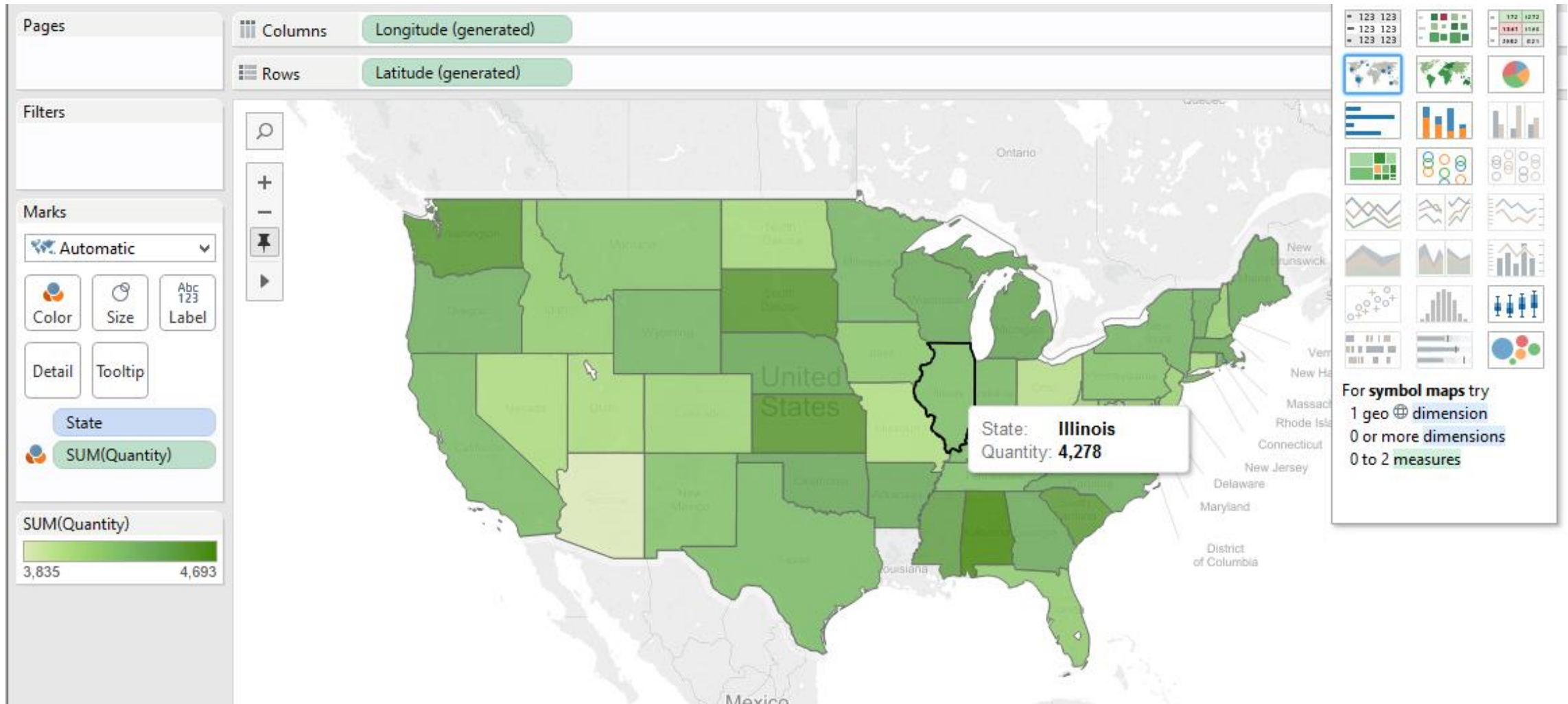


Big Data

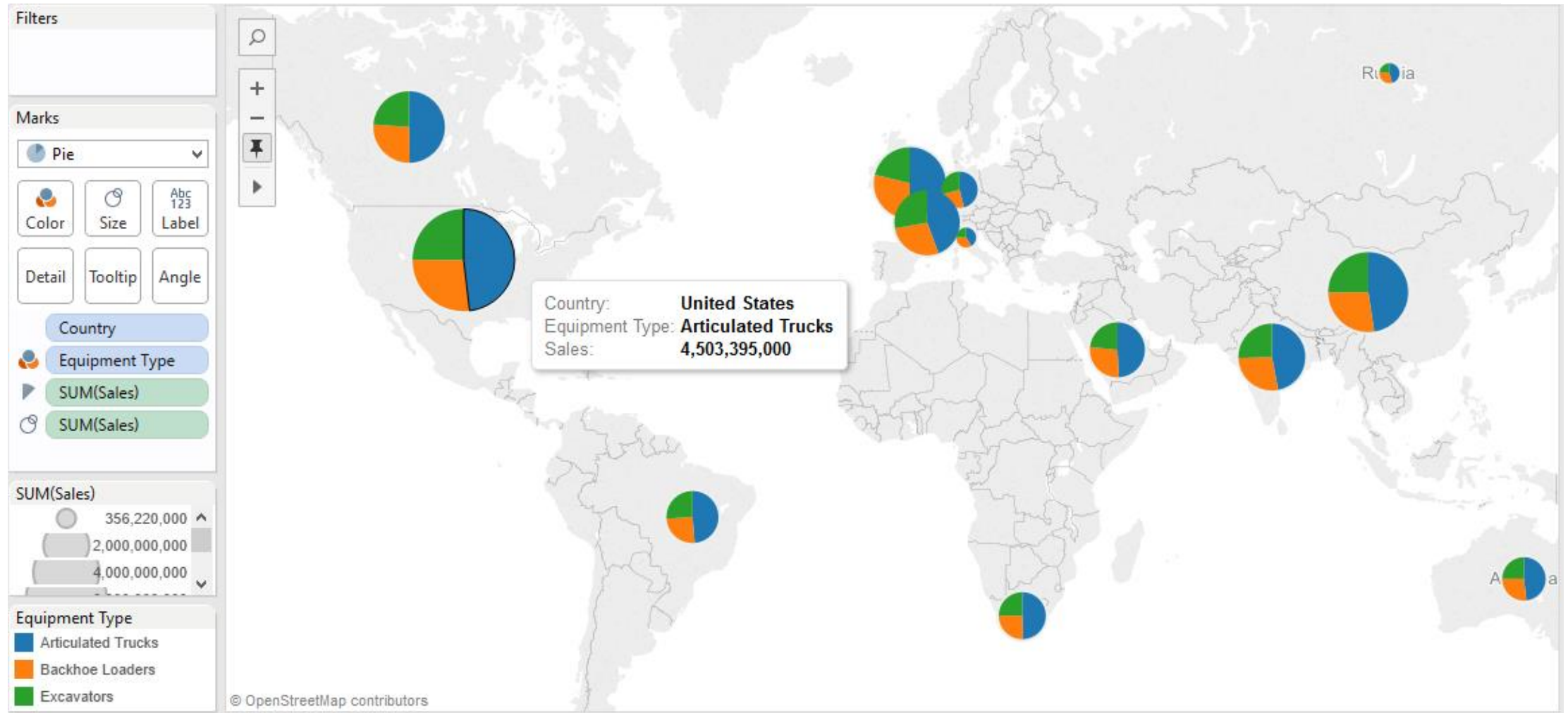
| B | C | D | E | F | G | H | I |
|------------|----------|--------------|-------------|------------|---------------|--------------|--------------------|
| Date | Quantity | Sales | Profit | Unit Price | Country | State | Equipment Type |
| 3/8/2012 | 19 | \$1,871,500 | \$224,580 | 98,500 | United States | New Jersey | Backhoe Loaders |
| 11/11/2012 | 17 | \$6,715,000 | \$604,350 | 395,000 | United States | New York | Articulated Trucks |
| 11/11/2012 | 24 | \$9,480,000 | \$853,200 | 395,000 | United States | Alabama | Articulated Trucks |
| 6/29/2009 | 34 | \$8,160,000 | \$489,600 | 240,000 | United States | Illinois | Excavators |
| 2/16/2009 | 37 | \$3,644,500 | \$437,340 | 98,500 | United States | New Jersey | Backhoe Loaders |
| 2/16/2009 | 15 | \$5,925,000 | \$533,250 | 395,000 | United States | Mississippi | Articulated Trucks |
| 12/27/2010 | 34 | \$3,349,000 | \$401,880 | 98,500 | United States | Maine | Backhoe Loaders |
| 11/25/2010 | 37 | \$14,615,000 | \$1,315,350 | 395,000 | United States | Oregon | Articulated Trucks |
| 11/25/2010 | 16 | \$6,320,000 | \$568,800 | 395,000 | United States | Washington | Articulated Trucks |
| 11/25/2009 | 7 | \$689,500 | \$82,740 | 98,500 | United States | Washington | Backhoe Loaders |
| 8/19/2012 | 46 | \$11,040,000 | \$662,400 | 240,000 | United States | Ohio | Excavators |
| 3/24/2009 | 42 | \$4,137,000 | \$496,440 | 98,500 | United States | Pennsylvania | Backhoe Loaders |
| 3/29/2012 | 50 | \$19,750,000 | \$1,777,500 | 395,000 | United States | Rhode Island | Articulated Trucks |
| 12/16/2011 | 49 | \$4,826,500 | \$579,180 | 98,500 | United States | Texas | Backhoe Loaders |
| 12/16/2011 | 22 | \$2,167,000 | \$260,040 | 98,500 | United States | California | Backhoe Loaders |
| 8/27/2010 | 39 | \$15,405,000 | \$1,386,450 | 395,000 | United States | New York | Articulated Trucks |
| 12/10/2011 | 32 | \$7,680,000 | \$460,800 | 240,000 | United States | Illinois | Excavators |
| 10/19/2012 | 28 | \$2,758,000 | \$330,960 | 98,500 | United States | Tennessee | Backhoe Loaders |
| 10/28/2011 | 19 | \$1,871,500 | \$224,580 | 98,500 | United States | Kentucky | Backhoe Loaders |
| 10/28/2011 | 20 | \$1,970,000 | \$236,400 | 98,500 | United States | Arkansas | Backhoe Loaders |
| 10/28/2011 | 35 | \$3,447,500 | \$413,700 | 98,500 | United States | Oklahoma | Backhoe Loaders |
| 2/13/2012 | 15 | \$1,477,500 | \$177,300 | 98,500 | United States | Kansas | Backhoe Loaders |



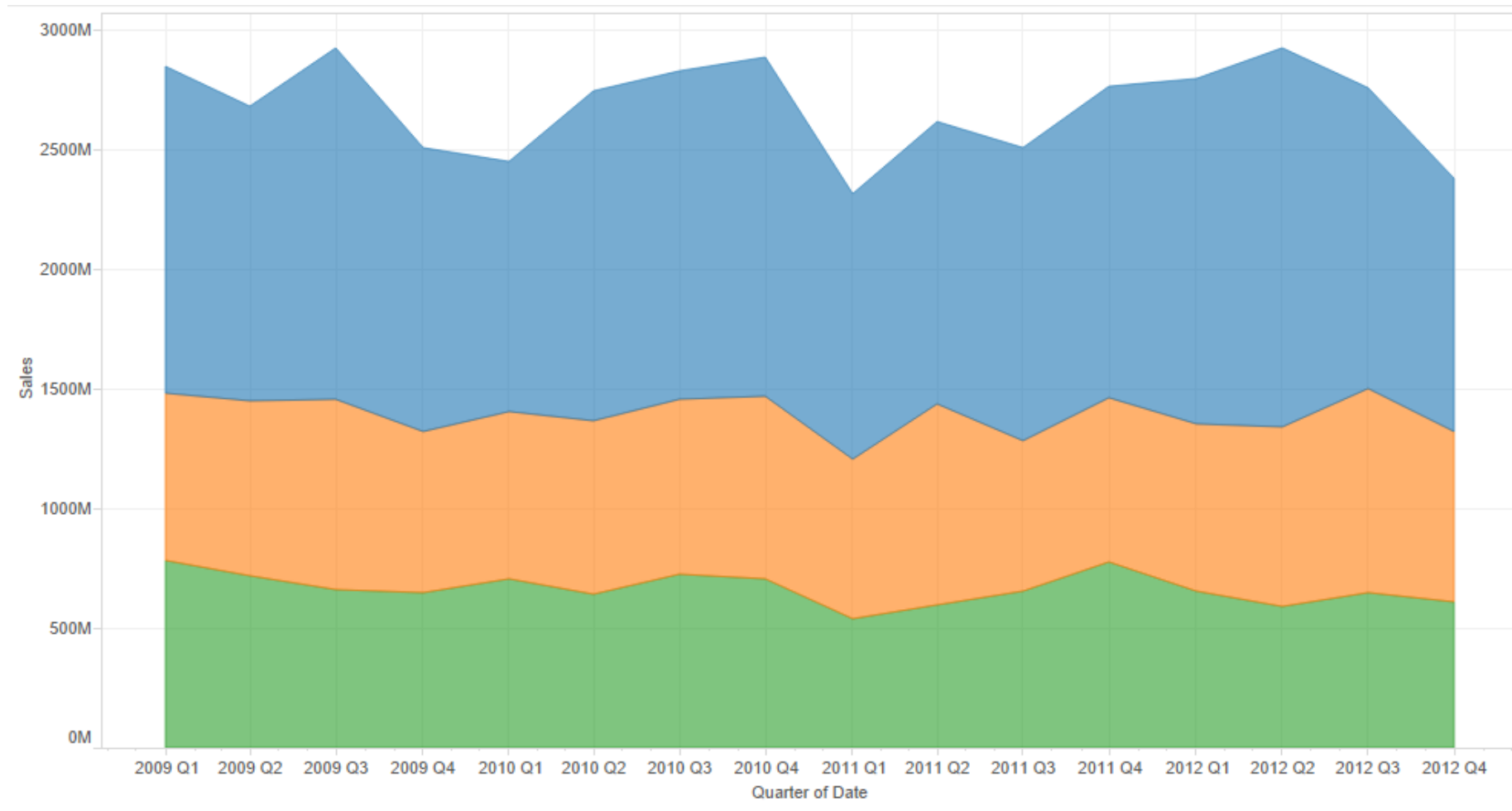
Data Visualization – Sales Quantity by State



Data Visualization – Global Sales by Equipment Type



Continuous Sales Monitoring





```
gsearch.py - C:\Users\Timothy\Documents\Rutgers\Summer 2015\Advanced Audi...  
File Edit Format Run Options Window Help  
import webbrowser  
  
new=2  
  
tabUrl="http://google.com/?#q=";  
  
term= input("Enter search query: ");  
  
webbrowser.open(tabUrl+term,new=new);|
```

Sublime Text

```
Python 3.4.3 Shell  
File Edit Shell Debug Options Window Help  
Python 3.4.3 (v3.4.3:9b73f1c3e601, Feb 24 2015, 22:43:06) [MSC v.1600 32 bit (Intel)] on win32  
Type "copyright", "credits" or "license()" for more information.  
>>> import webbrowser  
>>> new=2  
>>> tabUrl="http://google.com/?#q=";  
>>> term= input("Enter search query: ");  
Enter search query: Caterpillar  
>>> webbrowser.open(tabUrl+term,new=new);  
True  
>>> |
```

Python Terminal

Text Mining



Python Output Result



caterpillar - Google Search

https://www.google.com/search?q=caterpillar&oq=caterpillar&aqs=chrome..69i57j69i59l3j69i60l2.3113j1j4&sourceid=chrome&es_sm=93&ie=UTF-8

Google caterpillar

Web Images News Maps Videos More Search tools

About 69,200,000 results (0.37 seconds)

Caterpillar: Cat | global-selector
www.cat.com/ ▾ Caterpillar Inc. ▾
Manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and a wide offering of related services.
[Products & Services – North America](#) - [Cat | Products & Services](#) - [Products & Services](#)

Cat | Products & Services – North America | Caterpillar
www.cat.com/en_US.html ▾ Caterpillar Inc. ▾
Cat machines & engines set the standard for the industries we serve. Our extensive product line reflects our increased focus on our customers' success.

Caterpillar | Caterpillar
www.caterpillar.com/ ▾ Caterpillar Inc. ▾
Jessica Poliner is a district manager based in Panama and serves as Caterpillar Country Manager for Panama. She recently shared her thoughts about ...

[Images for caterpillar](#) [Report images](#)

Caterpillar Inc.
Construction machinery and equipment company

Caterpillar Inc., is an American corporation which designs, manufactures, markets and sells machinery, engines, financial products and insurance to customers via a worldwide dealer network. [Wikipedia](#)

Stock price: CAT (NYSE) \$78.65 +0.44 (+0.56%)
Jul 31, 5:29 PM EDT - Disclaimer


Headquarters: Peoria, IL

CEO: Douglas R Oberhelman

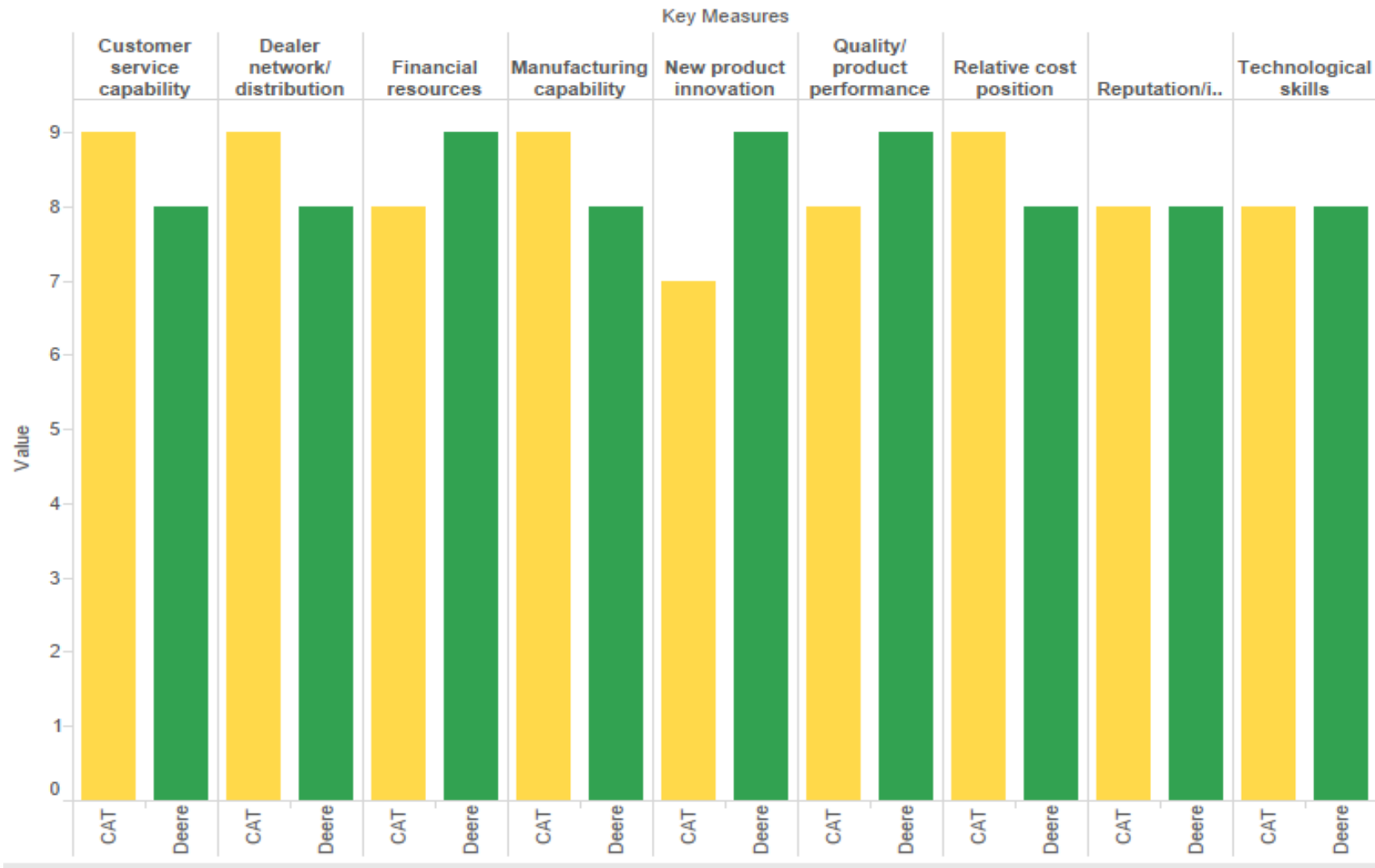
Founded: April 15, 1925, California

Founders: C. L. Best, Benjamin Holt

Subsidiaries: Perkins Engines, Solar Turbines, More

A photograph of a building with the Caterpillar logo on its facade, partially obscured by green foliage.

Text Mining to Assess Potential Merger





Opportunities to Automate for Customers

| Category | Risk | Business Objective |
|-------------|---------------------------------|----------------------------------|
| Financial | Cash flow crunch | Cost control |
| Strategic | Ineffective resource allocation | Accurate project scheduling |
| Operational | Delays due to part failures | Meet project deadlines |
| Compliance | OSHA safety violations | Safe jobsite and avoid penalties |

Equipment Sensor Data



| A | B | C | D | E | F | G | H | I |
|--------------|----------------|----------|------------|----------------|--------------------------|------------------------|-----------------|-------------------------|
| Equipment ID | Equipment Type | Quantity | City | State | Fuel Efficiency (Gal/Hr) | Operating Time (Hours) | Idle Time (Hrs) | Fuel Capacity (Gallons) |
| B113 | Backhoe Loader | 1 | Charlotte | North Carolina | 7.00 | 3 | 2 | 35 |
| B114 | Backhoe Loader | 1 | New Haven | Connecticut | 5.00 | 5 | 2 | 35 |
| B115 | Backhoe Loader | 1 | Lexington | Kentucky | 3.50 | 7 | 3 | 35 |
| B116 | Backhoe Loader | 1 | Lexington | Kentucky | 3.50 | 7 | 3 | 35 |
| B117 | Backhoe Loader | 1 | Lexington | Kentucky | 3.18 | 7 | 4 | 35 |
| B118 | Backhoe Loader | 1 | Lexington | Kentucky | 2.92 | 7 | 5 | 35 |
| B119 | Backhoe Loader | 1 | Lexington | Kentucky | 3.18 | 7 | 4 | 35 |
| B120 | Backhoe Loader | 1 | Lexington | Kentucky | 3.18 | 7 | 4 | 35 |
| E101 | Excavator | 1 | New York | New York | 6.82 | 8 | 3 | 75 |
| E102 | Excavator | 1 | New York | New York | 7.50 | 8 | 2 | 75 |
| E103 | Excavator | 1 | New York | New York | 8.33 | 8 | 1 | 75 |
| E104 | Excavator | 1 | Trenton | New Jersey | 12.50 | 4 | 2 | 75 |
| E105 | Excavator | 1 | Trenton | New Jersey | 10.71 | 4 | 3 | 75 |
| E106 | Excavator | 1 | Trenton | New Jersey | 10.71 | 4 | 3 | 75 |
| E107 | Excavator | 1 | Trenton | New Jersey | 12.50 | 4 | 2 | 75 |
| E108 | Excavator | 1 | Trenton | New Jersey | 12.50 | 4 | 2 | 75 |
| E109 | Excavator | 1 | Pittsburgh | Pennsylvania | 12.50 | 3 | 3 | 75 |
| E110 | Excavator | 1 | Pittsburgh | Pennsylvania | 10.71 | 3 | 4 | 75 |
| E111 | Excavator | 1 | Baltimore | Maryland | 10.71 | 4 | 3 | 75 |
| E112 | Excavator | 1 | Baltimore | Maryland | 10.71 | 4 | 3 | 75 |
| E113 | Excavator | 1 | Baltimore | Maryland | 9.38 | 4 | 4 | 75 |
| E114 | Excavator | 1 | Richmond | Virginia | 8.33 | 5 | 4 | 75 |

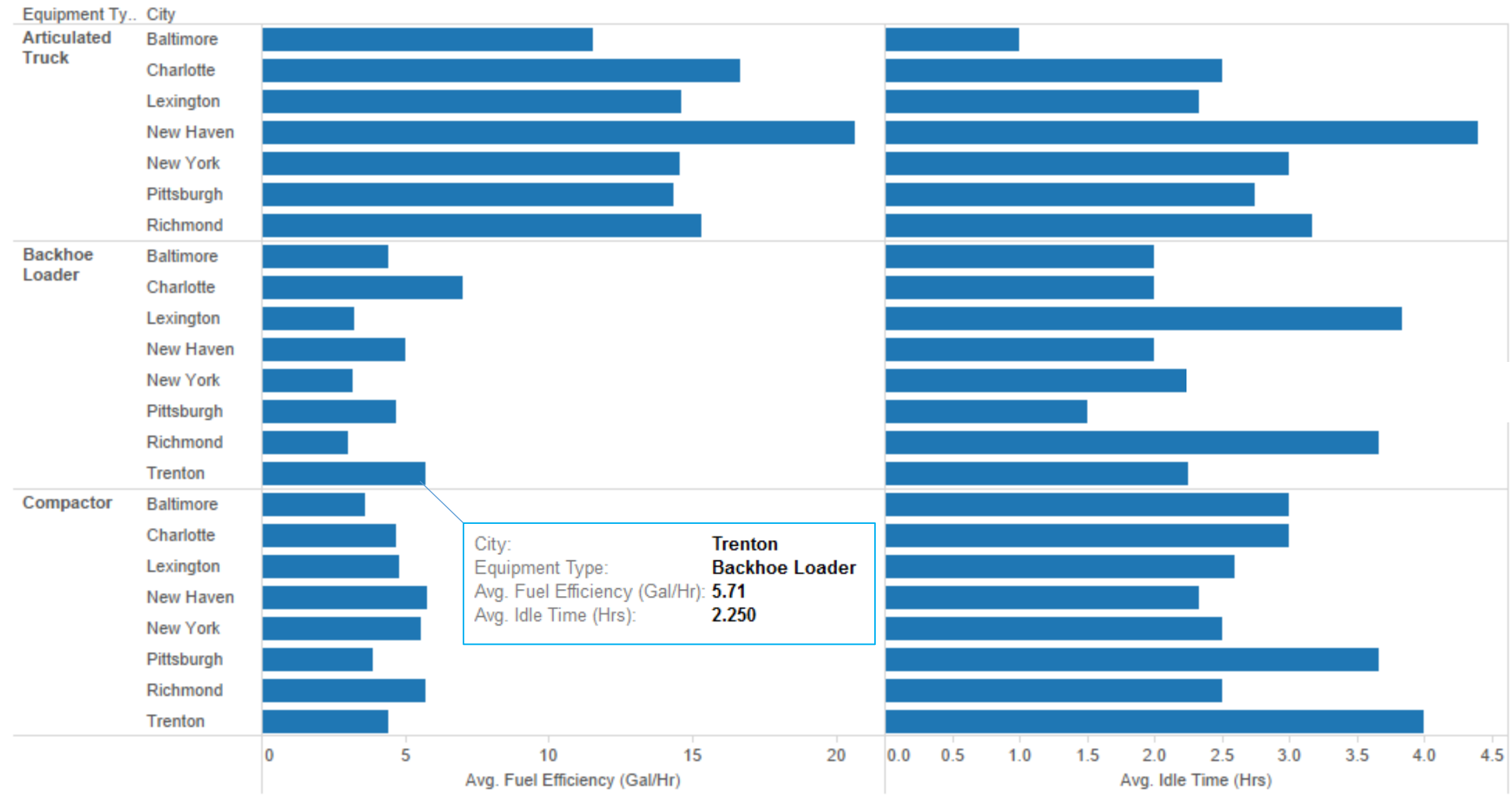


Fleet Monitoring

| Columns | | City | | | | | | | |
|-------------------|--|----------------|-----------|-----------|-----------|----------|------------|----------|---------|
| Rows | | Equipment Type | | | | | | | |
| | | City | | | | | | | |
| Equipment Type | | Baltimore | Charlotte | Lexington | New Haven | New York | Pittsburgh | Richmond | Trenton |
| Articulated Truck | | 1 | 2 | 3 | 5 | 2 | 4 | 3 | |
| Backhoe Loader | | 2 | 1 | 6 | 1 | 1 | 2 | 3 | 4 |
| Compactor | | 1 | 3 | 5 | 3 | 2 | 3 | 2 | 1 |
| Dozer | | 3 | 2 | 4 | 3 | 4 | 1 | 1 | 2 |
| Excavator | | 3 | 3 | 3 | | 3 | 2 | 1 | 5 |



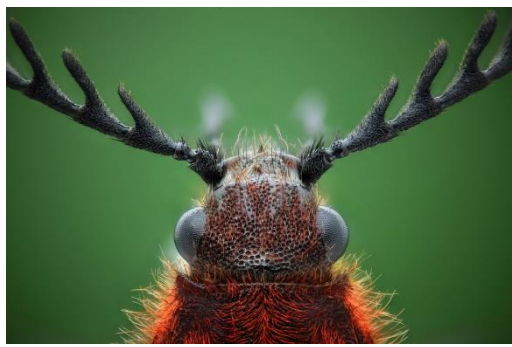
Fuel Efficiency and Idle Times Monitoring





Time to Merge

CATERPILLAR + **DEERE** =





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Questions?

