Corporate Renaissance Group

WELCOME!

CFO BOOTCAMP

Creating a Footprint for High Performance - Part #1: Managing for Value

Corporate Renaissance Group

May 26 1.30 - 2.30 PM ET

SESSION #1:

High Performance Enterprise - Managing for Value

June 3 1.30 - 2.30 PM ET

SESSION #2:

High Performance Enterprise - Incentivizing for Value

If you aren't registered for the next, please do so at crgroup.com/cfo-bootcamp

HOUSEKEEPING

Select slides & reference material can be downloaded:
crgroup.com/CFO-Bootcamp

Get your questions in!

Webinar is being recorded and will be posted and sent this week.

This session qualifies for 1.0 continuing professional development hour.
Certificates will be available for download after the event.

Corporate Renaissance Group

ABOUT US:

- CRGroup was established in 1989 – HQ Ottawa
- Microsoft Gold Partner and leading provider of Microsoft Solutions
- Team of highly tenured staff certified on leading Microsoft Solutions
- Focus on end-to-end business transformation

Corporate Renaissance Group

Transform Your Business

End-to-End Support for Microsoft Technologies

- Dynamics
- Dynamics 365
- Office 365 Power BI
- Power Apps
- SharePoint
- Teams

Leading Systems for Budgeting & Planning

- Board
- Adaptive Insights
- Rapidstart
- idu-Concept

Top Human Capital Management Solutions

- Dynamics 365 HR
- CRG emPerform
- Managed Engagement & 360° Surveys

www.crgroup.com

CRGROUP HIGHLIGHTS:

COMPANY

Founded:	1989
Offices:	Canada, US, Caribbean, South Africa, India, Hong Kong
Now Part Of:	Quisitive - Microsoft US Partner of the Year 2019, all things AZURE

CUSTOMERS

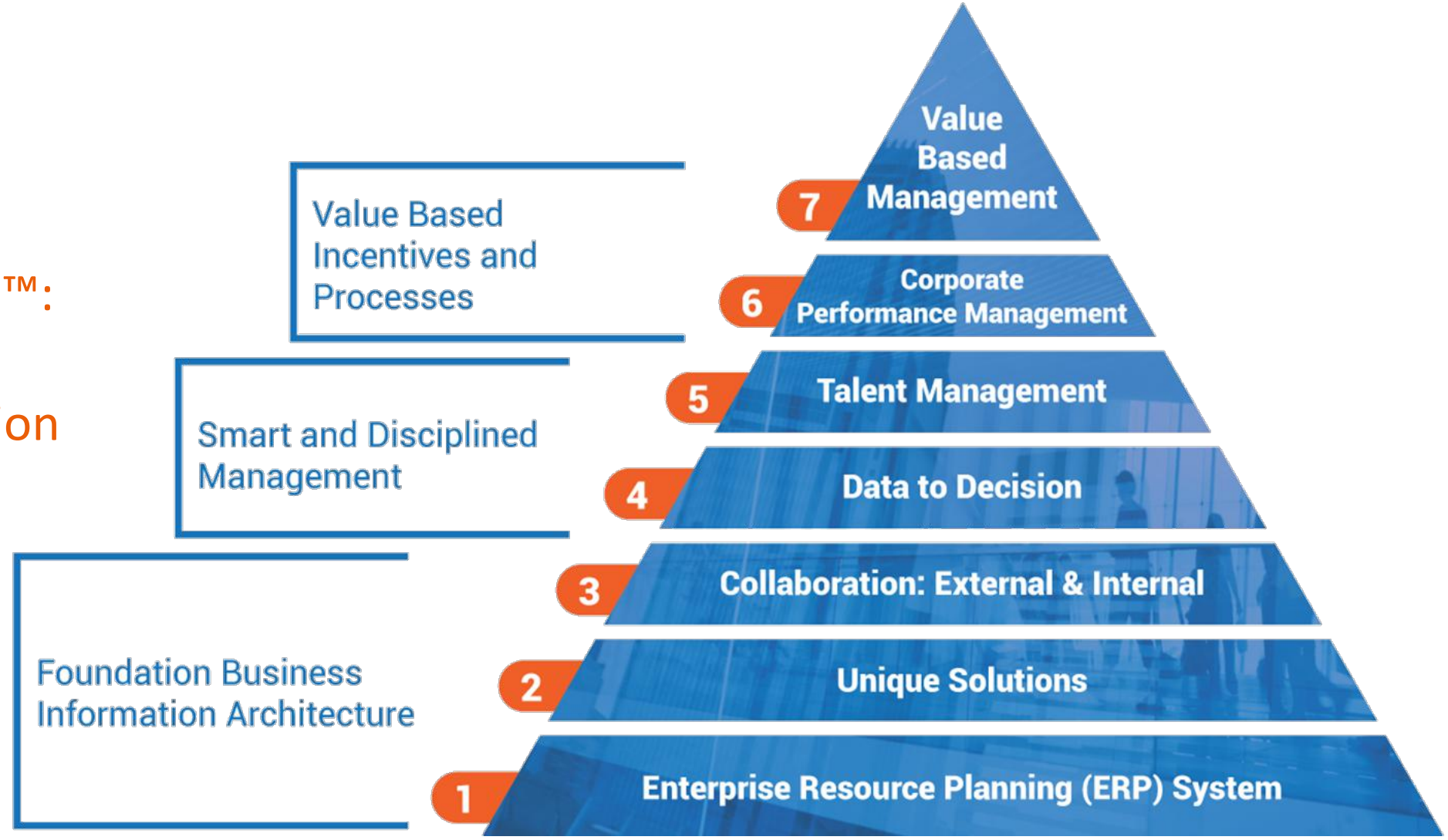
Number	4,000+
Revenue:	$5M to $ billion

TEAM

Strength	70+ team members along with many associates
Education:	Business & Technology
Active Partners:	300+

Level 7 Enterprise™:

Our Implementation Framework



Corporate Renaissance Group

Level 7™ Enterprise Solutions

In the Cloud or On-Premise

ERP

Dynamics AX
Dynamics GP
Dynamics NAV
Dynamics 365

Unique Solutions

Cost Allocator
FlexABM
Add-Ons for Dynamics GP
Kemp Load Balancers

Collaboration & Productivity

Dynamics 365
Dynamics CRM
SharePoint
Office 365
Atlassian
Microsoft Teams
Microsoft PowerApps
Microsoft Flow
Microsoft Common Data Service

BI/Analytics

Board
Microsoft BI/SQL Server
Power BI
Tableau
Microsoft Azure
Data Warehouse

Talent Management

CRG emPerform
Dynamics 365 for Talent
Confidential Insights

CPM/Budgeting

Board
Adaptive Insights
Rapidstart
IDU Concept

Value Based Management (VBM)

Strategy and Planning
Executive Compensation
Enterprise Dashboards
Activity Based Costing
Shared Services

Theme: Best fit and value for money

MEET YOUR PRESENTER: Dr. Vijay Jog

An interesting background:

- Chemical engineering degrees, Bachelors and masters (McGill)
- MBA (marketing and finance) and Ph.D. (finance) from McGill
- Worked as market research consultant for Bell Canada in late 70s early 80s
- After Ph.D., Worked for the Department of Finance on Mega projects and budgets (corporate tax policy) – 1982-1992 (full time and then part time)
- Started teaching at Sprott School - 1985 to 2017, retired as Chancellor Professor Emeritus and Distinguished Research Fellow
- Started CRGroup in 1989 www.crgroup.com
- Have consulted around the world for large and medium size enterprises and many government departments

Corporate Renaissance Group

We are <u>not</u> going to talk about COVID-19 today!

AGENDA:

- Defining Wealth and Value
  - An Example - John Deere
  - Empirical Evidence
- Managing for Value: Value drivers and VBM
- Q&A - Wrap Up

Corporate Renaissance Group

Defining Value

- Dilemma – Shareholders versus stakeholders
- And within the shareholder group –
  - For publicly listed firms: lead/institutional/analysts versus individual
  - For private firms: family/founder versus non-family SMT

Defining Value

For publicly listed firms:

Some criticism about shareholder value and is a potential conflict with values for other stakeholders

For all firms:

Conflict between CSR or stakeholder value versus Shareholder Value

*Please note **

That this is not a good debate – I see (at least in the medium to long term) any company that ignores CSR or treats customers or suppliers or employees in an irresponsible manner cannot ***MAXIMISE*** *or even* ***OPTIMISE*** *shareholder value*!

Differences Between Wealth & Value Metrics

- Stock market-based metrics are direct external measures of shareholder wealth creation - based on expectations
- Value measures are metrics of value creation - based on annual internal financial performance
- *If value creation performance is consistently positive, we would expect increased wealth creation even if we were a private firm*

Assuming that Shareholders are Important Stakeholders?

- How to measure value?
  - What is (are) the correct metric(s)
  - How do these metrics interrelate?
- Is there a difference between publicly listed versus private firms
- What are levers to create value – Value Based Management (VBM)

Measuring Shareholder Value ...

Measuring Wealth and Value Creation - Three Sets of Metrics

Stock Market Based Measures (wealth)

&/or

Internal Measures (value)

&/or

Hybrid measures

Terminology: Wealth vs. Value

Wealth is generally an external measure (stock price based)

Value is generally an internal measure (financial statement based)

Hybrid measures combine both

There is ample evidence that there is a high correlation between the RIGHT value metric and Shareholder wealth….

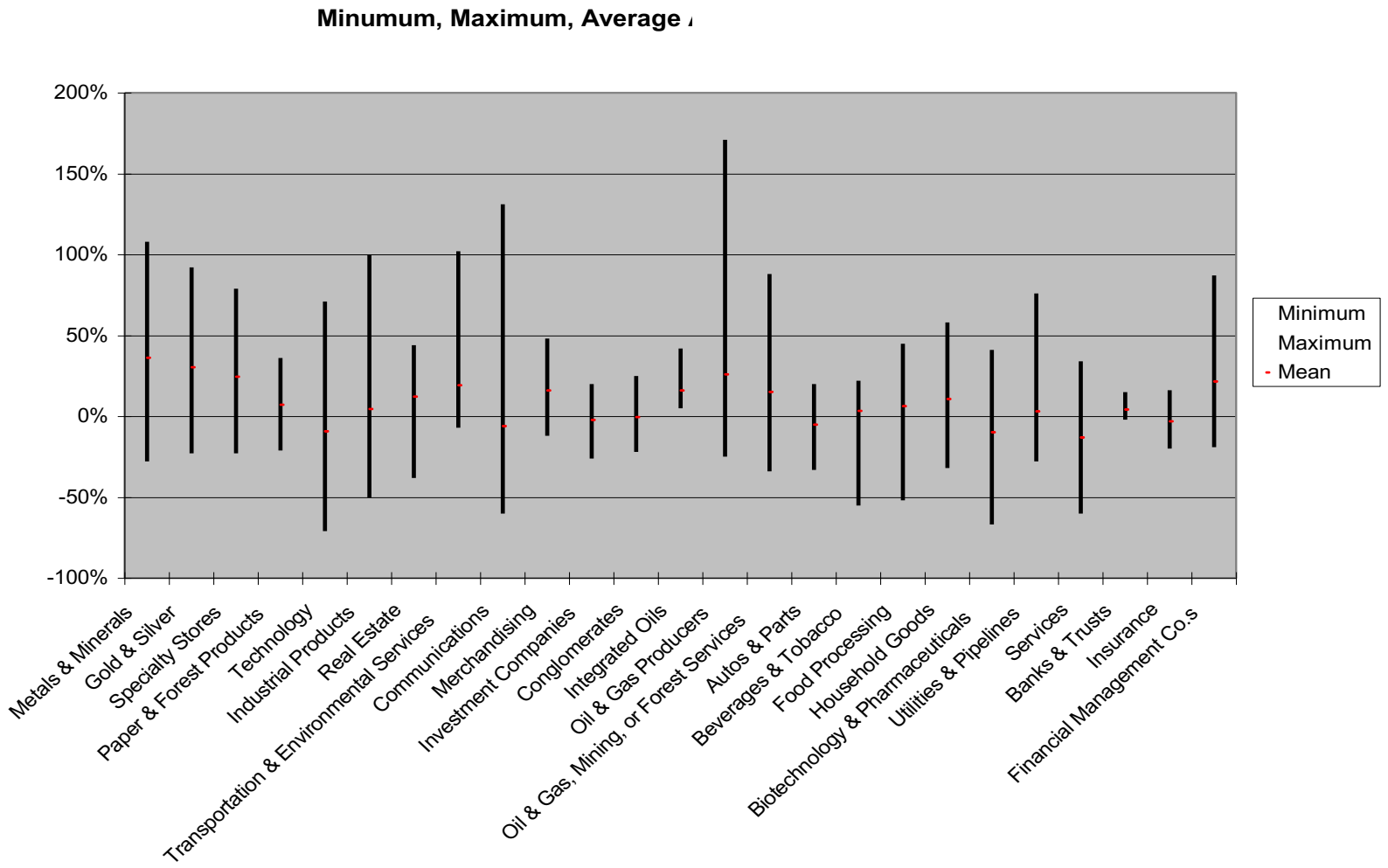
Measuring Wealth Creation: Stock Market Based – Rates of Return

An often used Measure:

- TSR = (Change in price + dividends)/ Original price

Very easy to calculate

Each industry displays significant difference in wealth creation ability of companies – management matters?



A Useful Insight About TSR (or changes in stock price)

Fundamental equations

- P1 = E1 times P1/E1

- P2 = E2 times P2/E2

And

- TSR = (P2-P1+ dividends)/ P1

So if no dividends then

TSR = (P2-P1)/ P1 or P2/P1 -1 = (E2 times P2/E2)/(E1 times P1/E1) - 1

So will depend on what is E2 relative to E1 as well as what is **P2/E2 relative to P/E1**

A little bit more technically

Approximate TSR = (1+gE) [1+Δ(P/E)] – 1

- where gE is the growth of earnings per share over the period
- Δ(P/E) is the change in the P/E multiple, over the period

So the return (or wealth creation) depend on

- earnings growth and
- **change in the P/E ratio – reflecting *expectations about future growth.***

Example: Google/Alphabet

	January/ 1/2006	Jun/30 /2010	Growth	Annualised 2006-2010	*July 1, 2019*	*Annualised growth rate (assume 9 years)*
EPS	$5.02	$23.03	358.8%	40.3%	*$39.9*	*16%*
P/E ratio	82.6	19.3	−76.6%	−27.6%	*27.6*	*5%*
Price	$414.9	$445.0	7.3%	1.6%	*$1100*	*8%*

Note: no dividends in the period

So: From a Wealth Creation Perspective…

TSR can be intuitively viewed as a **combination of underlying earnings growth and market's perception** of future growth reflected in the **P/E ratio**

This is also important when one thinks of making acquisitions that are earnings accretive

- Does the combined new EPS actually result in P/E ratio **staying the same** or it **declines** to a level in a way that price goes down?
    - Danaher, BRKA, Constellation SW, Enghouse, Alimentation Couche-Tard
    - Coupled with debt: Glencore, Valeant (now Bausch)

Challenges with Stock Market Based Wealth Measures *for* Evaluating Management Performance (and thus incentives)

- Only applicable for publicly listed firms
- Can be affected by **overall conditions** (interest rates, economic conditions, industry cycles, bullish and bearish sentiments, temporary deviations, *COVID*)
- Must have a correct benchmark - risk adjusted
- Not necessarily useful for measuring performance of (or providing incentives for) managers of individual subsidiaries and **business units** or linking impact of specific strategies
- So we may consider some alternatives if we want to **tie** Shareholder wealth creation and management performance.

Alternate Metrics - Two Kinds

- Traditional (Accounting) versus Contemporary (value) Metrics
- Traditional metrics usually refer to accounting-based measures, such as earnings per share or cash flow per share
- Contemporary metrics usually refer to economic- based metrics such as economic value added or economic value created

Traditional Accounting Metrics

- Using income statement, balance sheet and cash flow information

  Traditional Metrics ($)
  - Revenues (the top line)
  - Earnings Before Interest, tax, depreciation and Amortization (EBITDA)
  - Profit or earnings (the bottom line)
  - Cash and Free Cash flow
  - Earnings Per Share (EPS) and EPS Growth – fairly dominant

Evaluating Real Performance ...

	Company A		Company B	
	Last year	Current year	Last year	Current year
Sales	100	120	100	150
Profit after tax	10	18	10	30

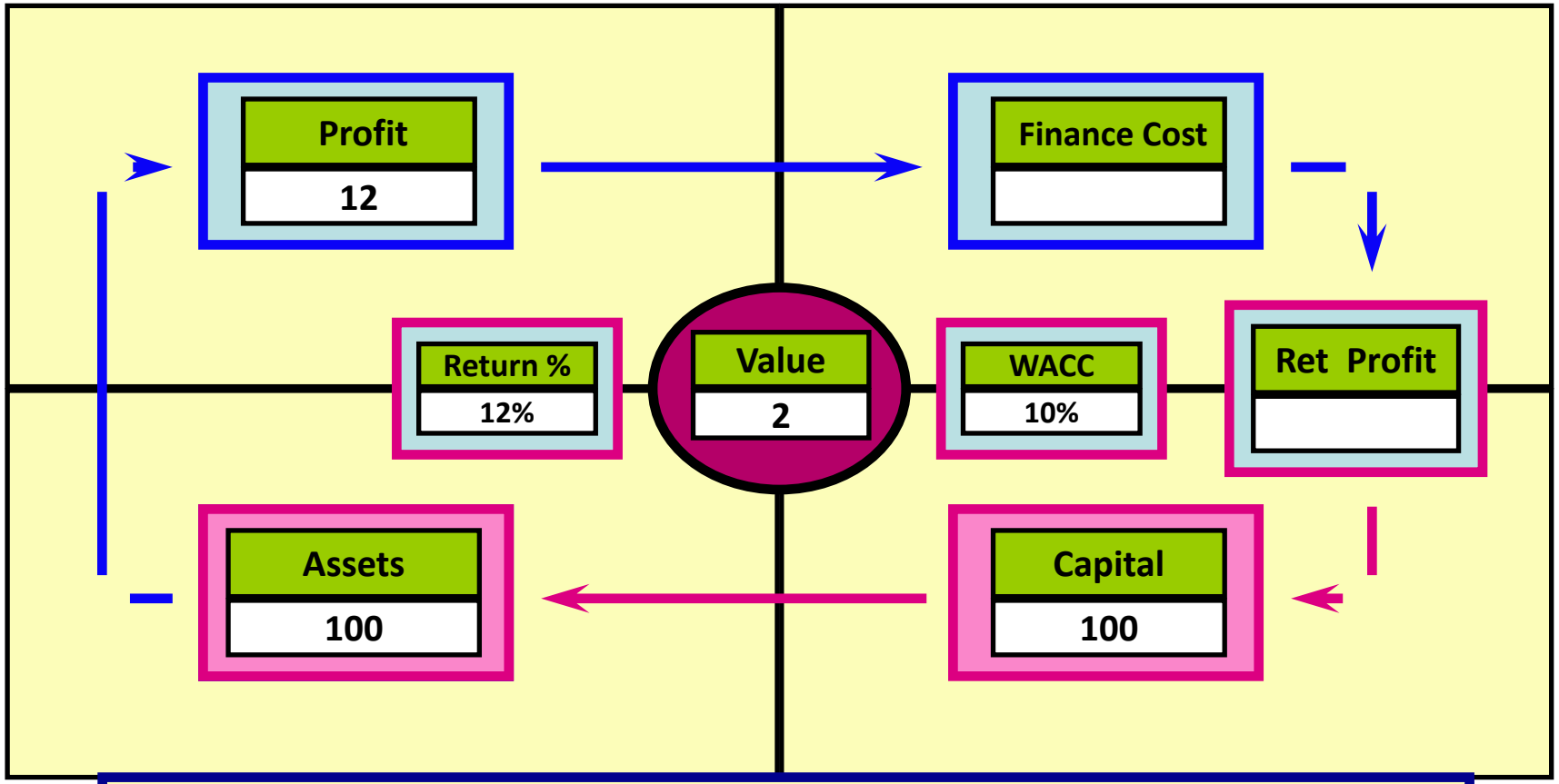
Q: Who created more value?

Evaluating Real performance ...

	Company A		Company B	
	Last year	Current year	Last Year	Current year
interest	0	0	5	13
Capital	50	55	50	200

Q: Now who created more value?

Economic Value Framework



Economic Value Calculation

EVC = Net Operating Profit after tax (NOPAT)

minus

Capital Charge

Where capital charge = Cost of capital times Net Assets

This is called **capital charge method**.

OR

EVC = (Return on Capital Employed (ROCE) - Cost of Capital) x Net Assets

This is called **the spread method**.

Note: Capital Employed equals Net assets

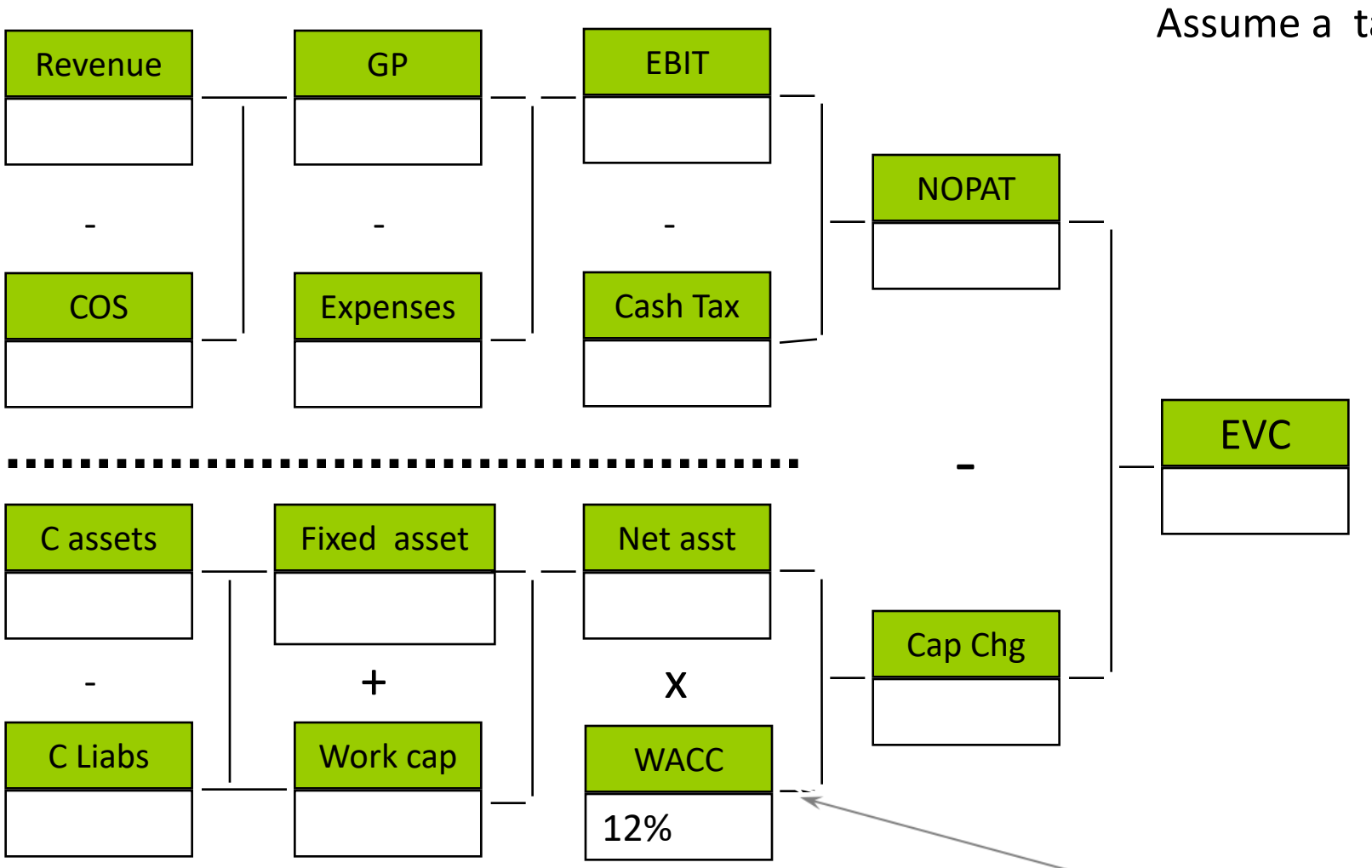
Traditional vs. Value-Based View

Traditional Income Statement	
	Revenues
less:	Cost of Goods Sold
equals:	Gross Profit
less:	Depr'n, S&A, Other
equals:	EBIT
less:	*Interest*
equals:	Profit before Tax
less:	*Taxes*
equals:	Net Profit

Value-Based Income Statement	
	Revenues
less:	Cost of Goods Sold
equals:	Gross Profit
less:	Depr'n, S&A, Other
equals:	EBIT
less:	*Adjusted Taxes*
equals:	NOPAT
less:	*Capital Charge*
equals:	Economic Value

where EBIT = Profit before Interest and Taxes
NOPAT = Net Operating Profit after Tax
S&A = Selling and Administration

Another View



Economic Value

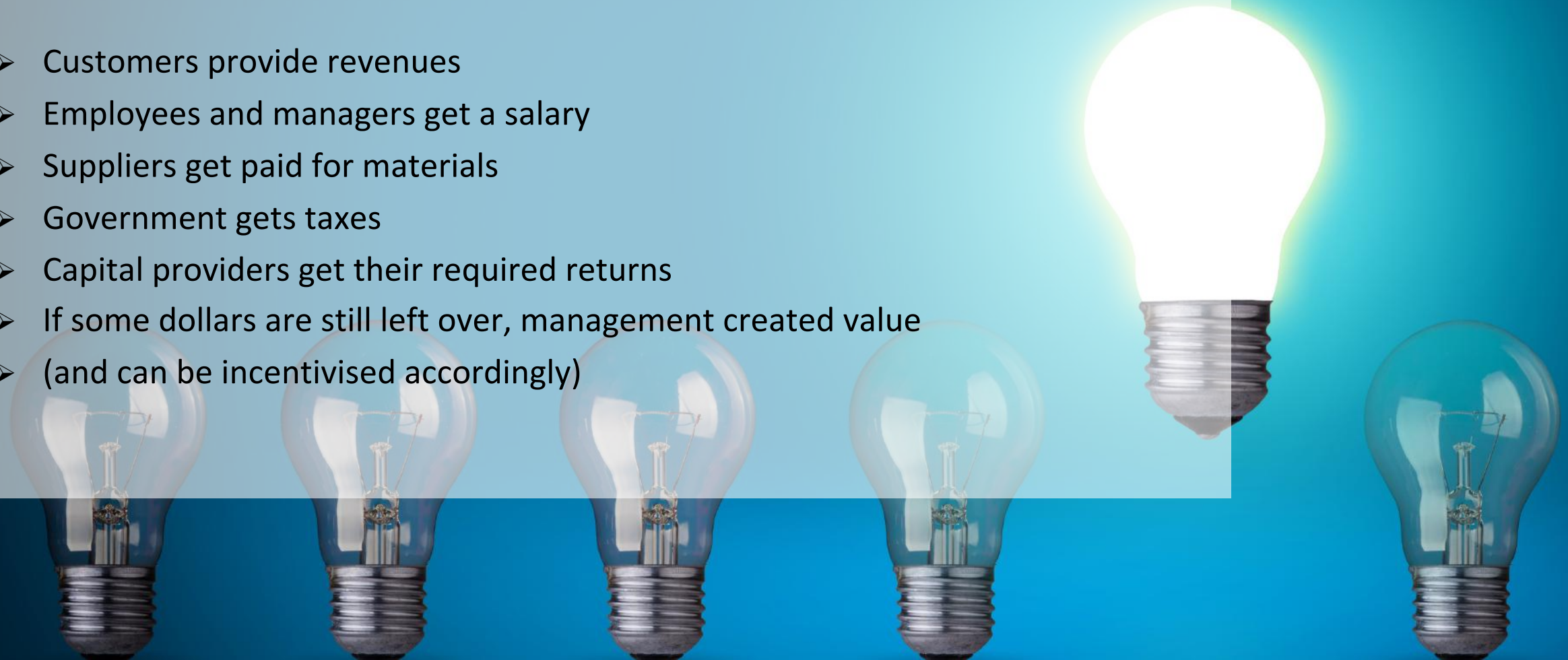
Economic Value creation is measured value produced by a business **ABOVE and BEYOND** what is required by investors.

The very concept of value creation is to provide **SUPERIOR RETURNS** to those who provide capital.

The Logic Behind Using EV Measures

Logic is simple:

- Customers provide revenues
- Employees and managers get a salary
- Suppliers get paid for materials
- Government gets taxes
- Capital providers get their required returns
- If some dollars are still left over, management created value
- (and can be incentivised accordingly)



EV Measures - A Wide Choice of Acronyms

Economic Value Added (EVA®) Shareholder Value (SV), Shareholder Value Added (SVA), Economic Value (EV), Economic Value Created (EVC), Economic Profits (EP), Cash Flow Return on Investment (CFROI), Total Business Return (TBR), and Discounted Economic Profits (DEP) are all different terms for similar performance measures. This competition has led to the “metric wars”.

All of these stem from the same concept **RESIDUAL INCOME**

The Concept of Residual Income

Was first noted by Hamilton in 1777, then by Ricardo in 1819 who called it supernormal profits. The idea was used by Alfred Marshall (1890) and called excess earnings by Canning (1929). It has also been labeled excess realizable profit (Edwards & Bell), super profit (Edey), excess income (Kay), and abnormal earnings (Peasnell). GM called it residual income in the 1930's. Similar concepts have been proposed by Drucker (1964), and PIMS (1970s).

Consequently, it is important to realize that while Economic Value measures are "contemporary" they are not new.

Characteristics of the EVC Measure– Some Key Points to Note

- Includes both income and capital employed
- Comes close to the “cash in - cash out” concept
- Can be used for all investment decisions – but NPV/DCF is better
- Can be used to incentivize management to take the right decisions

Implementation Issues …..

- Is data available and does data integrity exist?
- Can it be calculated regularly and unambiguously? - Does it suit the business?
- Does it require too many adjustments?
- Can it be manipulated?
- Would people understand it?
- Would it provide the right signals?
- Can it result in change for the better in managing the business?

An Example
and Empirical Evidence

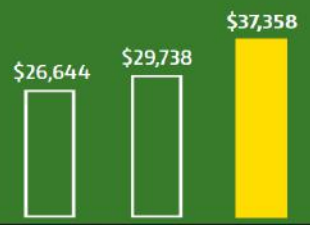
Corporate Renaissance Group

John Deere had another strong year in 2018. Net sales and revenues climbed to $37.36 billion — the second-highest level ever. Net income increased 10 percent, to $2.37 billion, or $7.24 per share. Results benefited from better market conditions and a favorable customer response to the company's lineup of advanced products.

NET SALES & REVENUES

$37.36 BILLION

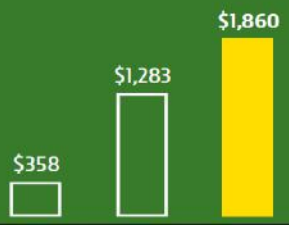
UP 26%



SHAREHOLDER VALUE ADDED*

$1.86 BILLION

UP 45%



NET INCOME
(attributable to Deere & Company)

$2.37 BILLION

UP 10%

John Deere extended its record of strong performance in 2018. Among our achievements, we launched new products with the latest technology and advanced features, expanded our market presence throughout the world, and updated the ambitious strategic plan that will guide our efforts in coming years. We also made progress integrating newly acquired companies expected to play an important role in our future. On the financial front, sales and net income were among the highest in company history.

In 2018, Deere reported net income of $2.37 billion, a 10 percent increase and the fifth-highest total in our history. Net sales and revenues rose 26 percent, to $37.36 billion. One-time charges associated with recent changes in the U.S. tax code reduced earnings by about $700 million. Operating profit was up 25 percent.

The company generated healthy cash flow as well as $1.86 billion in economic profit, or Shareholder Value Added* (SVA). SVA equals operating profit minus an implied cost of capital. It is our primary measure for managing the company and making investment decisions.

accounting for the acquisition of the Wirtgen Group, Deere's equipment operations ended the year with a healthy cash balance and relatively modest debt. Our financial-services organization remained conservatively capitalized as well.

Deere's financial performance allowed the company to make significant investments in advanced products, technologies, and growth-oriented projects. For the year, Deere devoted $2.6 billion to research and development and capital expenditures. We also returned nearly $1.8 billion to investors in the form of dividends and share repurchases. The quarterly dividend rate was increased during the year by 15 percent. (It was raised again, by approximately 10 percent, in December 2018.)

Wirtgen Group, the world leader in road-construction equipment, has more than met our expectations in product performance, customer service, and financial impact. It has added global size and scale to our construction equipment business.

Similarly, our Blue River Technology operation, acquired in 2017, made good progress testing its breakthrough see-and-spray technology in cotton and other crops.

SVA: FOCUSING ON GROWTH AND SUSTAINABLE PERFORMANCE

Shareholder Value Added (SVA) — essentially, the difference between operating profit and the pretax cost of capital — is a metric used by John Deere to evaluate business results and measure sustainable performance. To arrive at SVA, each equipment segment is assessed a pretax cost of assets — generally 12% of average identifiable operating assets with inventory at standard cost (believed to more closely approximate the current cost of inventory and the company's related investment). The financial services segment is assessed a cost of average equity — approximately 15% pretax. The amount of SVA is determined by deducting the asset or equity charge from operating profit.

Additional information on these metrics and their relationship to amounts presented in accordance with U.S. GAAP can be found at our website, www.JohnDeere.com/Investors. **Note:** Some totals may vary due to rounding.

To create and grow SVA, Deere equipment operations are targeting an operating return on average operating assets (OROA) of 20% at mid-cycle sales volumes and equally ambitious returns at other points in the cycle. (For purposes of this calculation, operating assets are average identifiable assets during the year with inventories valued at standard cost.)

DEERE EQUIPMENT OPERATIONS*

$MM unless indicated otherwise	2016	2017	2018
Net sales			33,351
Net sales – excluding Wirtgen	23,387	25,885	30,324
Operating profit**			3,684
Operating profit – excluding Wirtgen**	1,908	2,859	3,568
Average Assets			
With inventories at standard cost			20,959
With inventories at standard cost – excluding Wirtgen	13,092	13,421	14,825
With inventories at LIFO			19,701
With inventories at LIFO – excluding Wirtgen	11,816	12,150	13,566
Operating Return on Assets (OROA)			
OROA % @ LIFO	16.1%	23.5%	26.3%
Asset turns (std cost – excluding Wirtgen)	1.79	1.93	2.05
Operating margin % – excluding Wirtgen	8.16%	11.05%	11.77%
OROA % @ standard cost – excluding Wirtgen	14.6%	21.3%	24.1%
Average assets @ std cost – excluding Wirtgen	13,092	13,421	14,825
Operating profit – excluding Wirtgen**	1,908	2,859	3,568
Cost of assets	-1,571	-1,611	-1,778
SVA	337	1,248	1,790

CONSTRUCTION & FORESTRY*

$MM unless indicated otherwise	2016	2017	2018
Net sales			10,160
Net sales – excluding Wirtgen	4,900	5,718	7,133
Operating profit**			868
Operating profit – excluding Wirtgen**	189	346	752
Average Assets			
With inventories at standard cost			9,726
With inventories at standard cost – excluding Wirtgen	3,374	3,390	3,592
With inventories at LIFO			9,482
With inventories at LIFO – excluding Wirtgen	3,147	3,154	3,347
Operating Return on Assets (OROA)			
OROA % @ LIFO	6.0%	11.0%	22.5%
Asset turns (std cost – excluding Wirtgen)	1.45	1.69	1.99
Operating margin % – excluding Wirtgen	3.86%	6.05%	10.54%
OROA % @ standard cost - excluding Wirtgen	5.6%	10.2%	20.9%
Average assets @ std cost – excluding Wirtgen	3,374	3,390	3,592
Operating profit – excluding Wirtgen**	189	346	752
Cost of assets	-405	-407	-431
SVA	-216	-61	321

AG & TURF

$MM unless indicated otherwise	2016	2017	2018
Net sales	18,487	20,167	23,191
Operating profit**	1,719	2,513	2,816
Average Assets			
With inventories at standard cost	9,718	10,031	11,233
With inventories at LIFO	8,669	8,996	10,219
Operating Return on Assets (OROA)			
OROA % @ LIFO	19.8%	27.9%	27.6%
Asset turns (std cost)	1.90	2.01	2.06
Operating margin %	9.30%	12.46%	12.14%
OROA % @ standard cost	17.7%	25.1%	25.1%
Average assets @ std cost	9,718	10,031	11,233
Operating profit**	1,719	2,513	2,816
Cost of assets	-1,166	-1,204	-1,347
SVA	553	1,309	1,469

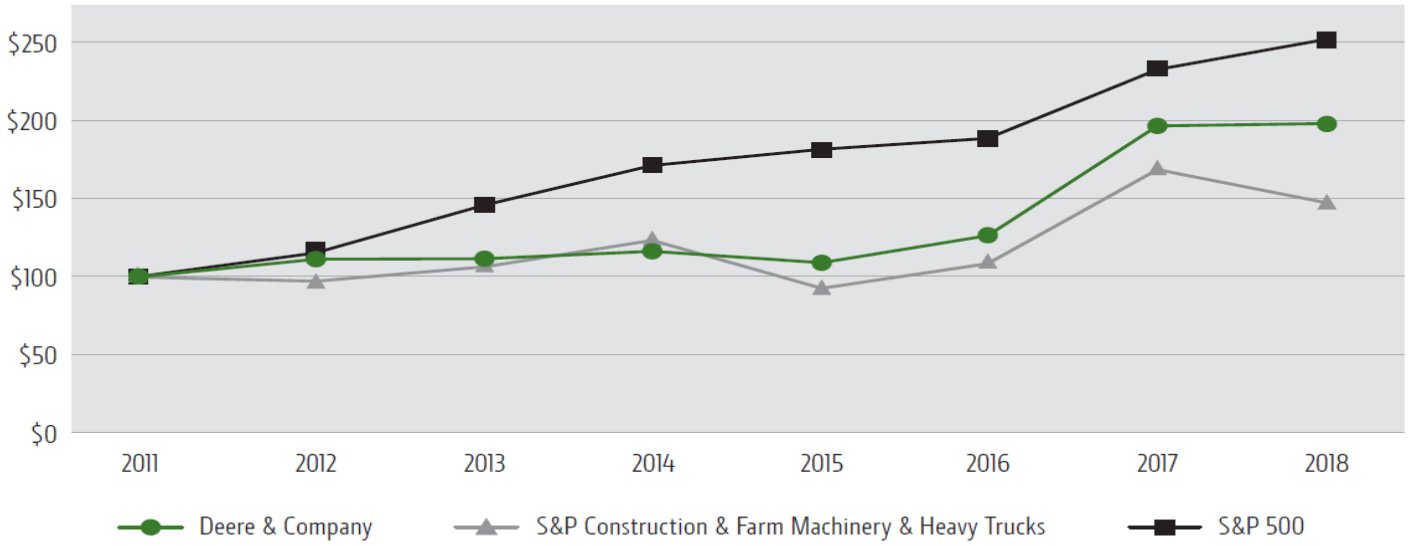
FINANCIAL SERVICES***

$MM unless indicated otherwise	2016	2017	2018
Net income attributable to Deere & Company	468	477	942
Net income attributable to Deere & Company – tax adjusted			530
Average equity	4,488	4,497	4,832
Average equity – tax adjusted			4,793
Return on equity %	10.4%	10.6%	
Return on equity % – tax adjusted			11.1%
Operating profit**	701	715	792
Average equity	4,488	4,497	4,793
Cost of equity	-680	-680	-722
SVA	21	35	70

Financial Services SVA is calculated on a pretax basis.

7-YEAR CUMULATIVE TOTAL RETURN

Deere compared to S&P 500 Index and S&P Construction & Farm Machinery & Heavy Trucks Index



The graph compares the cumulative total returns of Deere & Company, the S&P 500 Stock Index, and the S&P Construction & Farm Machinery & Heavy Trucks Index over a seven-year period. It assumes $100 was invested on October 28, 2011, and that dividends were reinvested. Deere & Company stock price at October 26, 2018, was $133.00. The Standard & Poor's 500 Construction & Farm Machinery & Heavy Trucks Index comprises Deere (DE), Caterpillar (CAT), Cummins (CMI), and Paccar (PCAR). The stock performance shown in the graph is not intended to forecast and does not necessarily indicate future price performance.

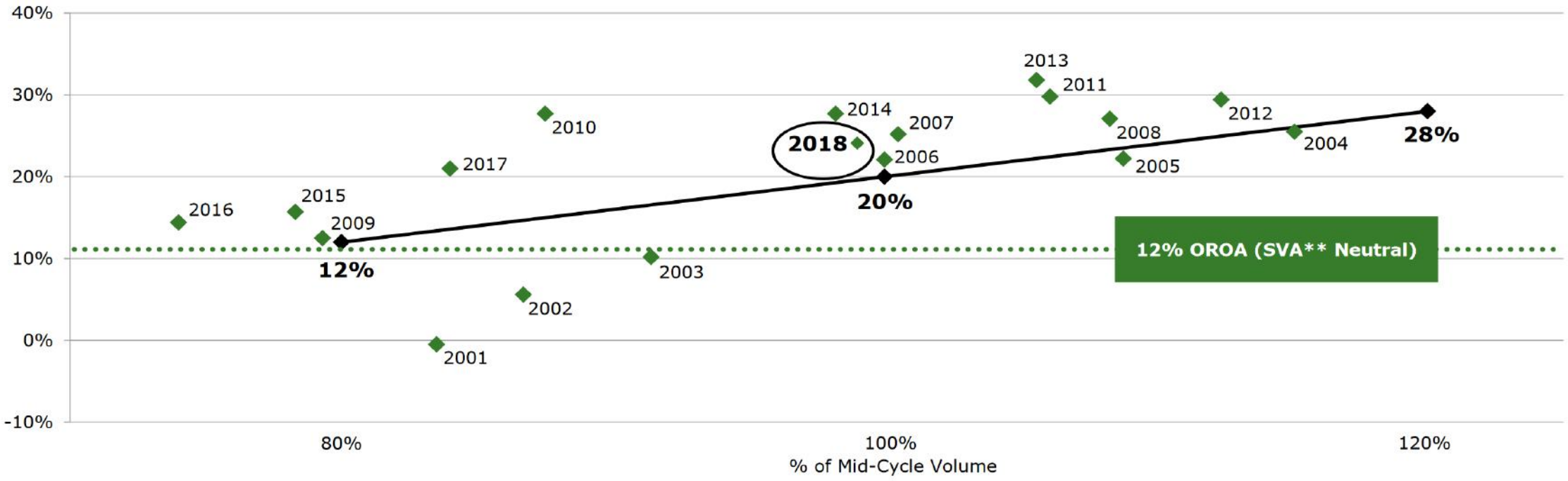
	2011	2012	2013	2014	2015	2016	2017	2018
Deere & Company	$100.00	$111.12	$111.20	$116.76	$109.47	$126.01	$196.71	$199.75
S&P Con & Farm Mach & Hvy Trks	$100.00	$97.49	$105.61	$124.62	$92.12	$109.44	$169.08	$147.32
S&P 500	$100.00	$115.21	$146.52	$171.82	$180.75	$188.90	$233.54	$250.70

Copyright © 2018 Standard & Poor's, a division of S&P Global. All rights reserved (www.researchdatagroup.com/S&P.htm).

Exceptional Operating Performance - OROA

Equipment Operations

24.1% OROA* in 2018

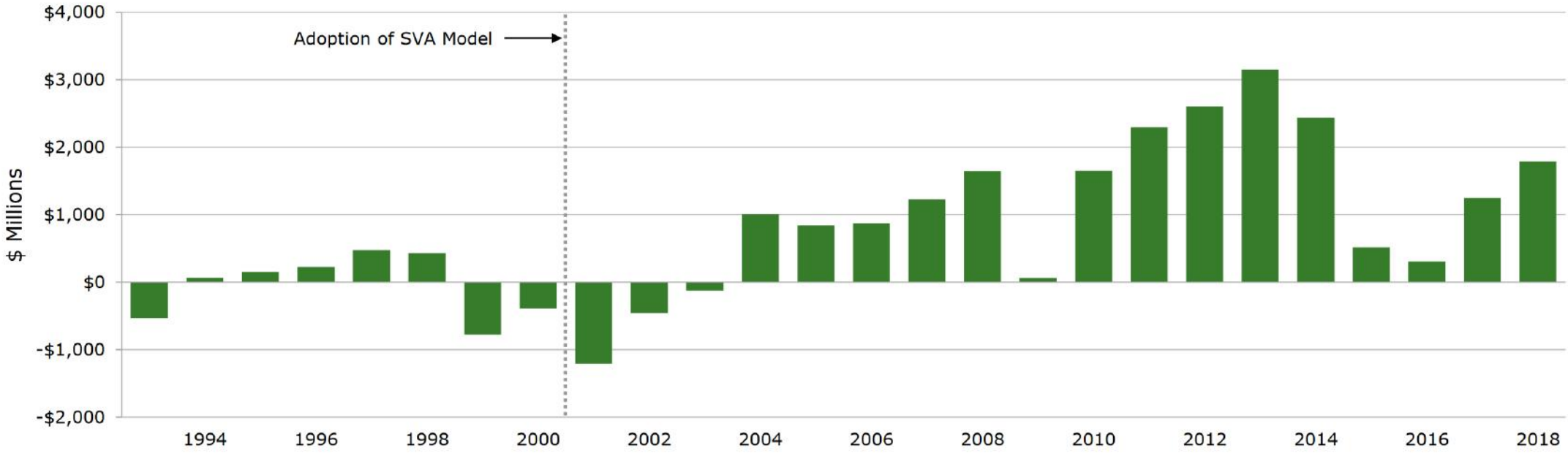


** Operating Return on Operating Assets*
*** Shareholder Value Added; for reconciliation to GAAP see "SVA* Reconciliation to GAAP" slide in Appendix*

Exceptional Operating Performance – SVA

Equipment Operations

$1.8 billion SVA* in 2018

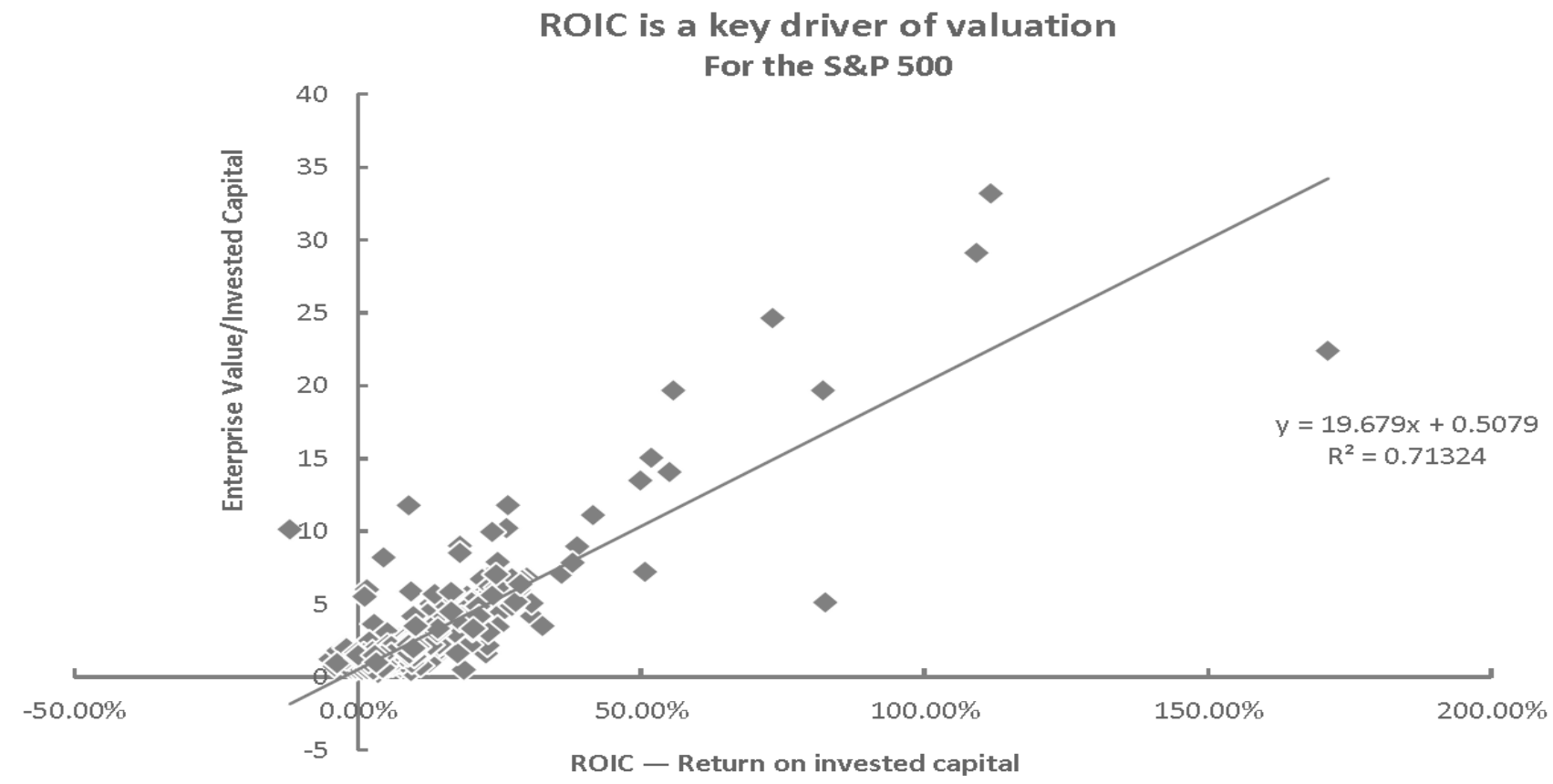


** Shareholder Value Added; for reconciliation to GAAP see "SVA* Reconciliation to GAAP" slide in Appendix*

Linking Value to Wealth - Evidence

ROIC Explains 71% of Valuation Differences – A Recent E&Y Study

Figure 1: ROIC vs. Valuation for stocks in the S&P 500

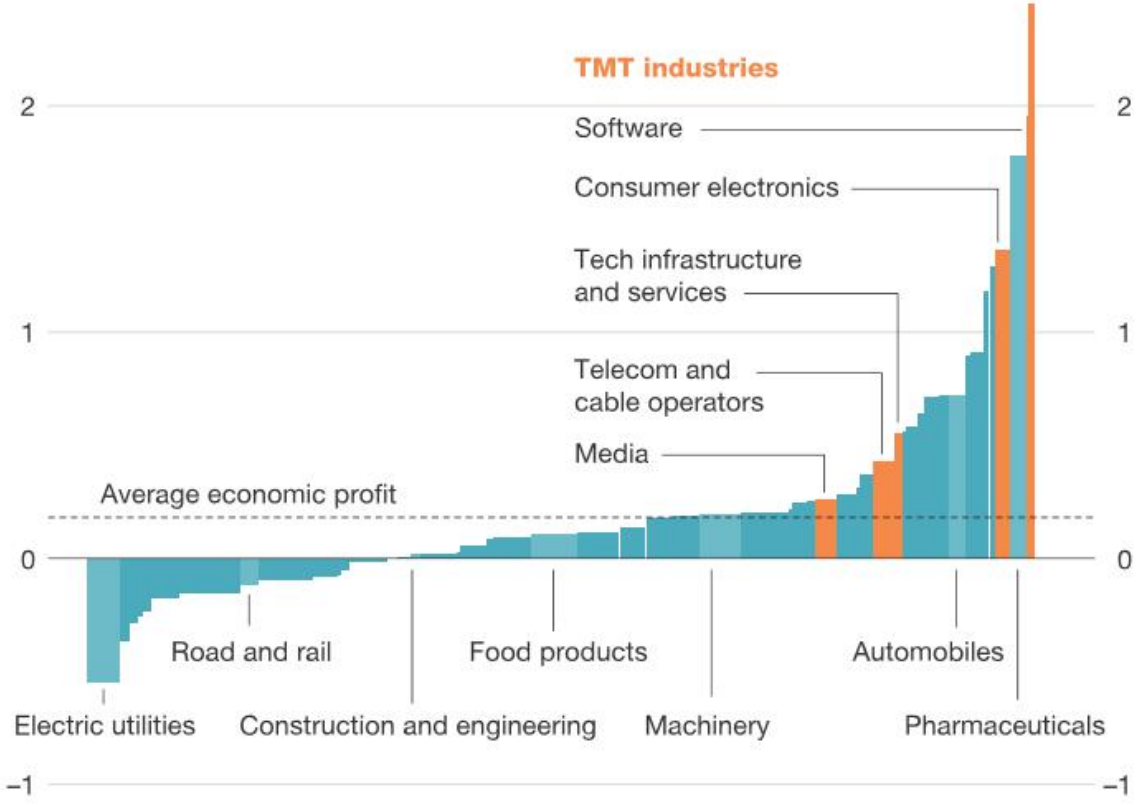


CEO

Article - McKinsey Quarterly

Tech, media, and telecom (TMT) are unique in their value creation.

Average economic profit by industry,
2010–14, $ billion



Source: McKinsey analysis of 2,414 public companies across 59 industries from 2010–14

McKinsey&Company

From Measuring Value to Creating Value

Corporate Renaissance Group

The Management Lessons of EV

EVC = (Return on Capital - Cost of Capital) x Capital

4 LESSONS FOR CREATING VALUE

1. Improve returns with no additional capital.

2. Only invest in projects where return on assets exceeds cost of capital.

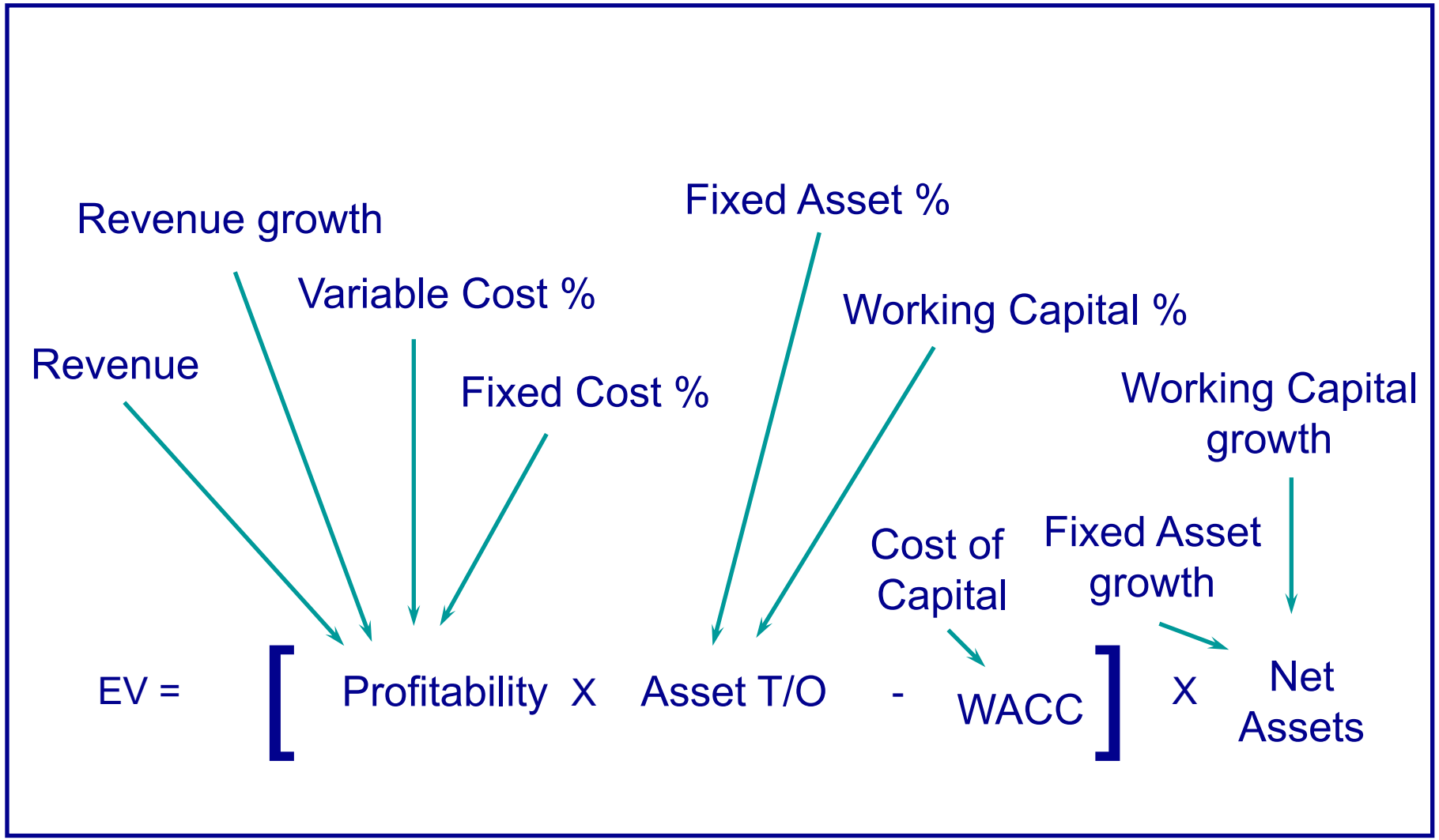
3. Divest from projects where return on assets is lower than cost of capital.

4. Reduce Cost of Capital

THE SEVEN VALUE DRIVERS

- Revenue
- Operating Margin
- Cash Taxes
- Working Capital
- Fixed Assets
- Cost of Capital
- Growth Duration

EVC Drill Down – Financial Drivers



Further Insight

Economic Value Created - A Simple Insight

EVC = (Return on Capital (after tax) − Cost of Capital) X Capital

Return on Capital after tax (RONA) = (NOPAT / Revenue) times (Revenue / Net Assets)

= Operating Margin times Asset Turnover

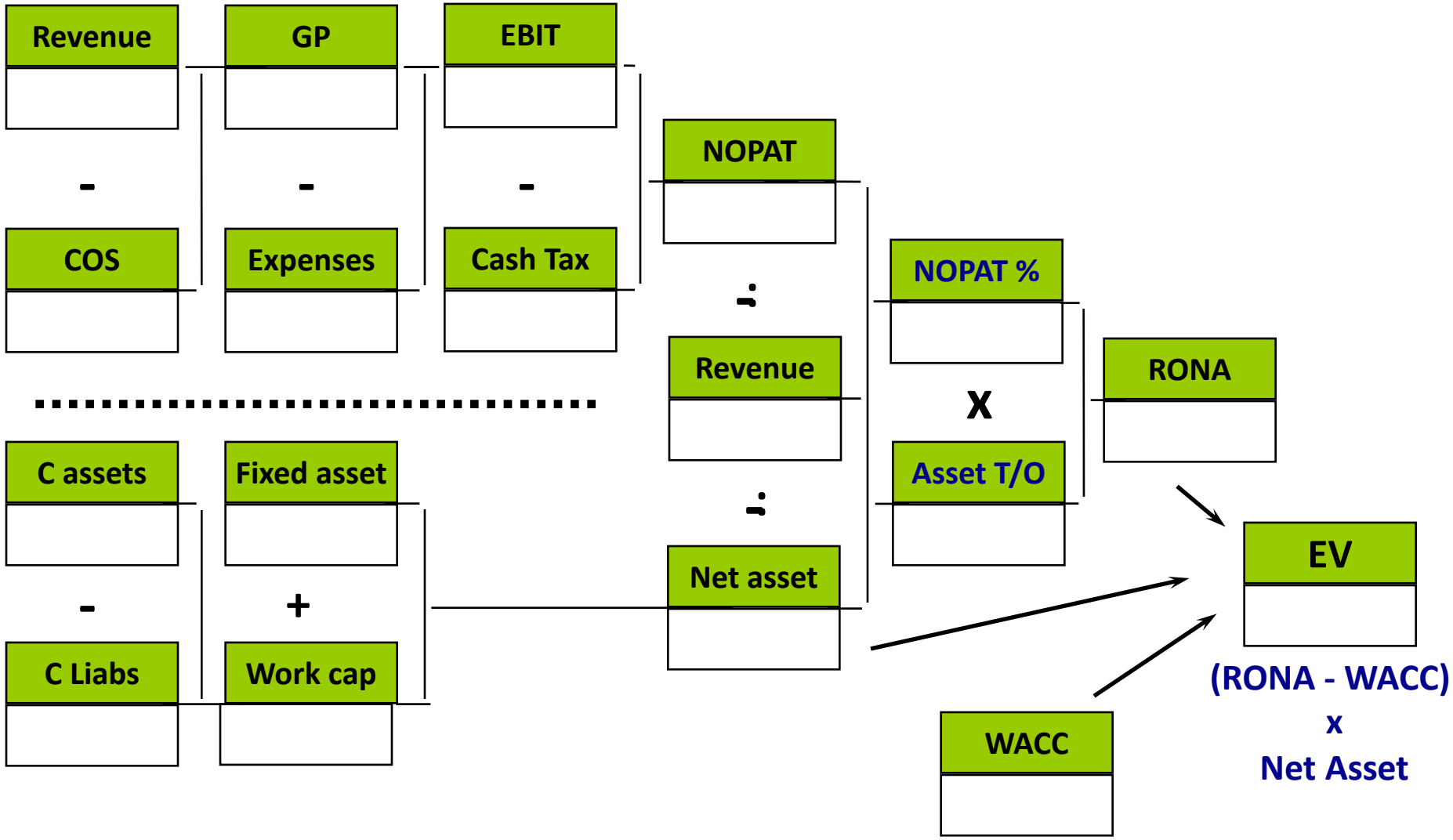
We can increase EVC by increasing profitability and/or increasing asset turnover

Make more for every dollar of sales

and/or

Sell more with per dollar of assets (capital)

EV - An Alternative Method



Re-Visiting John Deere

John Deere Cost of Capital

SVA: FOCUSING ON GROWTH AND SUSTAINABLE PERFORMANCE

Shareholder Value Added (SVA) — essentially, the difference between operating profit and the pretax cost of capital — is a metric used by John Deere to evaluate business results and measure sustainable performance. To arrive at SVA, each equipment segment is assessed a pretax cost of assets — generally 12% of average identifiable operating assets with inventory at standard cost (believed to more closely approximate the current cost of inventory and the company's related investment). The financial services segment is assessed a cost of average equity — approximately 15% pretax. The amount of SVA is determined by deducting the asset or equity charge from operating profit.

To create and grow SVA, Deere equipment operations are targeting an operating return on average operating assets (OROA) of 20% at mid-cycle sales volumes and equally ambitious returns at other points in the cycle. (For purposes of this calculation, operating assets are average identifiable assets during the year with inventories valued at standard cost.)

Additional information on these metrics and their relationship to amounts presented in accordance with U.S. GAAP can be found at our website, www.JohnDeere.com/Investors. **Note:** Some totals may vary due to rounding.

DEERE EQUIPMENT OPERATIONS*

$MM unless indicated otherwise	2016	2017	2018
Net sales			33,351
Net sales – excluding Wirtgen	23,387	25,885	30,324
Operating profit**			3,684
Operating profit – excluding Wirtgen**	1,908	2,859	3,568
Average Assets			
With inventories at standard cost			20,959
With inventories at standard cost – excluding Wirtgen	13,092	13,421	14,825
With inventories at LIFO			19,701
With inventories at LIFO – excluding Wirtgen	11,816	12,150	13,566
Operating Return on Assets (OROA)			
OROA % @ LIFO	16.1%	23.5%	26.3%
Asset turns (std cost – excluding Wirtgen)	1.79	1.93	2.05
Operating margin % – excluding Wirtgen	8.16%	11.05%	11.77%
OROA % @ standard cost – excluding Wirtgen	14.6%	21.3%	24.1%
Average assets @ std cost – excluding Wirtgen	13,092	13,421	14,825
Operating profit – excluding Wirtgen**	1,908	2,859	3,568
Cost of assets	-1,571	-1,611	-1,778
SVA	337	1,248	1,790

CONSTRUCTION & FORESTRY*

$MM unless indicated otherwise	2016	2017	2018
Net sales			10,160
Net sales – excluding Wirtgen	4,900	5,718	7,133
Operating profit**			868
Operating profit – excluding Wirtgen**	189	346	752
Average Assets			
With inventories at standard cost			9,726
With inventories at standard cost – excluding Wirtgen	3,374	3,390	3,592
With inventories at LIFO			9,482
With inventories at LIFO – excluding Wirtgen	3,147	3,154	3,347
Operating Return on Assets (OROA)			
OROA % @ LIFO	6.0%	11.0%	22.5%
Asset turns (std cost – excluding Wirtgen)	1.45	1.69	1.99
Operating margin % – excluding Wirtgen	3.86%	6.05%	10.54%
OROA % @ standard cost - excluding Wirtgen	5.6%	10.2%	20.9%
Average assets @ std cost – excluding Wirtgen	3,374	3,390	3,592
Operating profit – excluding Wirtgen**	189	346	752
Cost of assets	-405	-407	-431
SVA	-216	-61	321

AG & TURF

$MM unless indicated otherwise	2016	2017	2018
Net sales	18,487	20,167	23,191
Operating profit**	1,719	2,513	2,816
Average Assets			
With inventories at standard cost	9,718	10,031	11,233
With inventories at LIFO	8,669	8,996	10,219
Operating Return on Assets (OROA)			
OROA % @ LIFO	19.8%	27.9%	27.6%
Asset turns (std cost)	1.90	2.01	2.06
Operating margin %	9.30%	12.46%	12.14%
OROA % @ standard cost	17.7%	25.1%	25.1%
Average assets @ std cost	9,718	10,031	11,233
Operating profit**	1,719	2,513	2,816
Cost of assets	-1,166	-1,204	-1,347
SVA	553	1,309	1,469

FINANCIAL SERVICES***

$MM unless indicated otherwise	2016	2017	2018
Net income attributable to Deere & Company	468	477	942
Net income attributable to Deere & Company – tax adjusted			530
Average equity	4,488	4,497	4,832
Average equity – tax adjusted			4,793
Return on equity %	10.4%	10.6%	
Return on equity % – tax adjusted			11.1%
Operating profit**	701	715	792
Average equity	4,488	4,497	4,793
Cost of equity	-680	-680	-722
SVA	21	35	70

Financial Services SVA is calculated on a pretax basis.

OROA and Asset Returns

To create and grow SVA, Deere equipment operations are targeting an operating return on average operating assets (OROA) of 20% at mid-cycle sales volumes and equally ambitious returns at other points in the cycle. (For purposes of this calculation, operating assets are average identifiable assets during the year with inventories valued at standard cost.)

SVA: FOCUSING ON GROWTH AND SUSTAINABLE PERFORMANCE

Shareholder Value Added (SVA) — essentially, the difference between operating profit and the pretax cost of capital — is a metric used by John Deere to evaluate business results and measure sustainable performance.

To arrive at SVA, each equipment segment is assessed a pretax cost of assets — generally 12% of average identifiable operating assets with inventory at standard cost (believed to more closely approximate the current cost of inventory and the company's related investment). The financial services segment is assessed a cost of average equity — approximately 15% pretax.

The amount of SVA is determined by deducting the asset or equity charge from operating profit.

Additional information on these metrics and their relationship to amounts presented in accordance with U.S. GAAP can be found at our website, www.JohnDeere.com/Investors. ***Note:*** *Some totals may vary due to rounding.*

DEERE EQUIPMENT OPERATIONS

$MM unless indicated otherwise	2015	2016	2017
Net Sales	25,755	23,387	25,855
Operating profit	2,177	1,880	2,821
Average assets			
With inventories @ std cost	13,840	13,092	13,421
With inventories @ LIFO	12,491	11,816	12,150
OROA % @ LIFO	17.4	15.9	23.2
Asset turns (std cost)	1.86	1.79	1.93
Operating margin %	x 8.45	x 8.04	x 10.91
OROA % @ standard cost	15.7	14.4	21.0
$MM	2015	2016	2017
Average assets @ std cost	13,840	13,092	13,421
Operating profit	2,177	1,880	2,821
Cost of assets	-1,661	-1,570	-1,611
SVA	516	310	1,210

CONSTRUCTION & FORESTRY

$MM unless indicated otherwise	2015	2016	2017
Net sales	5,963	4,900	5,718
Operating profit	528	180	337
Average assets			
With inventories @ std cost	3,667	3,374	3,390
With inventories @ LIFO	3,435	3,147	3,154
OROA % @ LIFO	15.4	5.7	10.7
Asset turns (std cost)	1.63	1.45	1.69
Operating margin %	x 8.85	x 3.67	x 5.89
OROA % @ standard cost	14.4	5.3	9.9
$MM	2015	2016	2017
Average assets @ std cost	3,667	3,374	3,390
Operating profit	528	180	337
Cost of assets	-440	-405	-407
SVA	88	-225	-70

AGRICULTURE & TURF

$MM unless indicated otherwise	2015	2016	2017
Net sales	19,812	18,487	20,167
Operating profit	1,649	1,700	2,484
Average assets			
With inventories @ std cost	10,173	9,718	10,031
With inventories @ LIFO	9,056	8,669	8,996
OROA % @ LIFO	18.2	19.6	27.6
Asset turns (std cost)	1.95	1.90	2.01
Operating margin %	x 8.32	x 9.20	x 12.31
OROA % @ standard cost	16.2	17.5	24.8
$MM	2015	2016	2017
Average assets @ std cost	10,173	9,718	10,031
Operating profit	1,649	1,700	2,484
Cost of assets	-1,221	-1,165	-1,204
SVA	428	535	1,280

FINANCIAL SERVICES

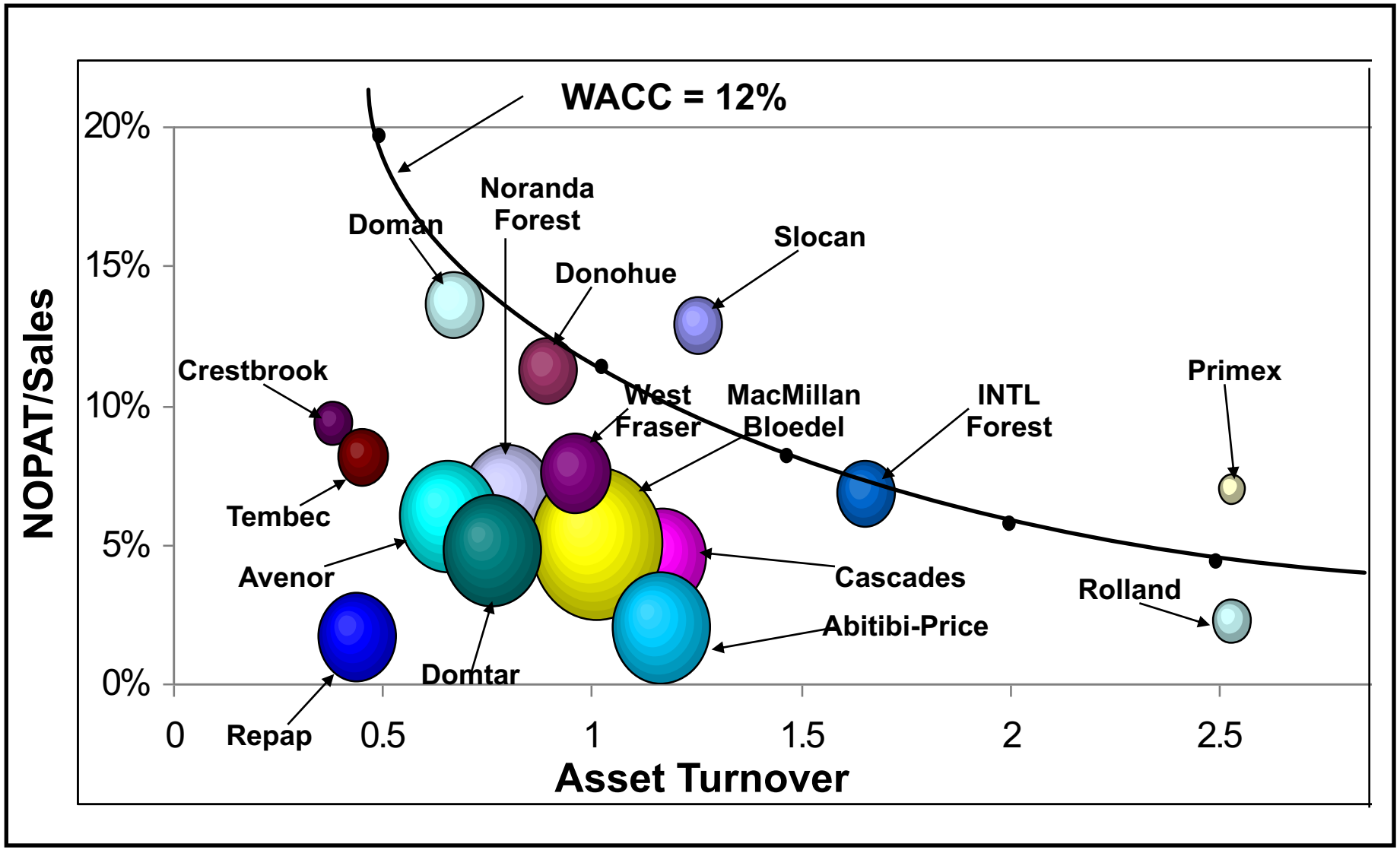
$MM unless indicated otherwise	2015	2016	2017
Net income attributable to Deere & Company	633	468	477
Average equity	4,655	4,488	4,497
Return on equity %	13.6	10.4	10.6
$MM	2015	2016	2017
Operating profit	963	709	722
Average equity	4,655	4,488	4,497
Operating profit	963	709	722
Cost of equity	-705	-680	-680
SVA	258	29	42

Financial Services SVA is calculated on a pretax basis.

WACC: Pre tax 12% for all except financial 15%

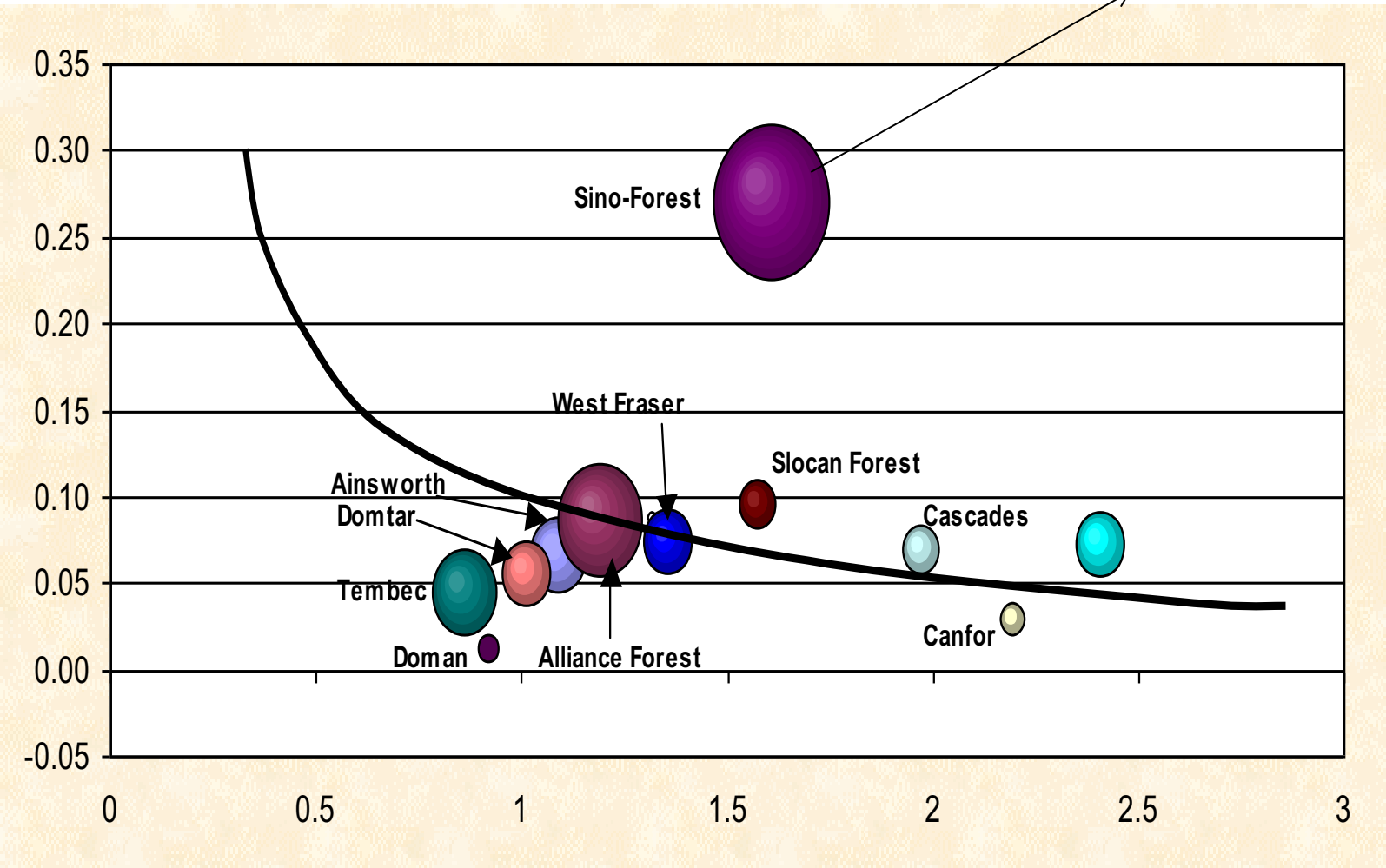
And Finally:
A Deeper Perspective

Forest Product Sector - 2000



Forest Product Sector - 2005

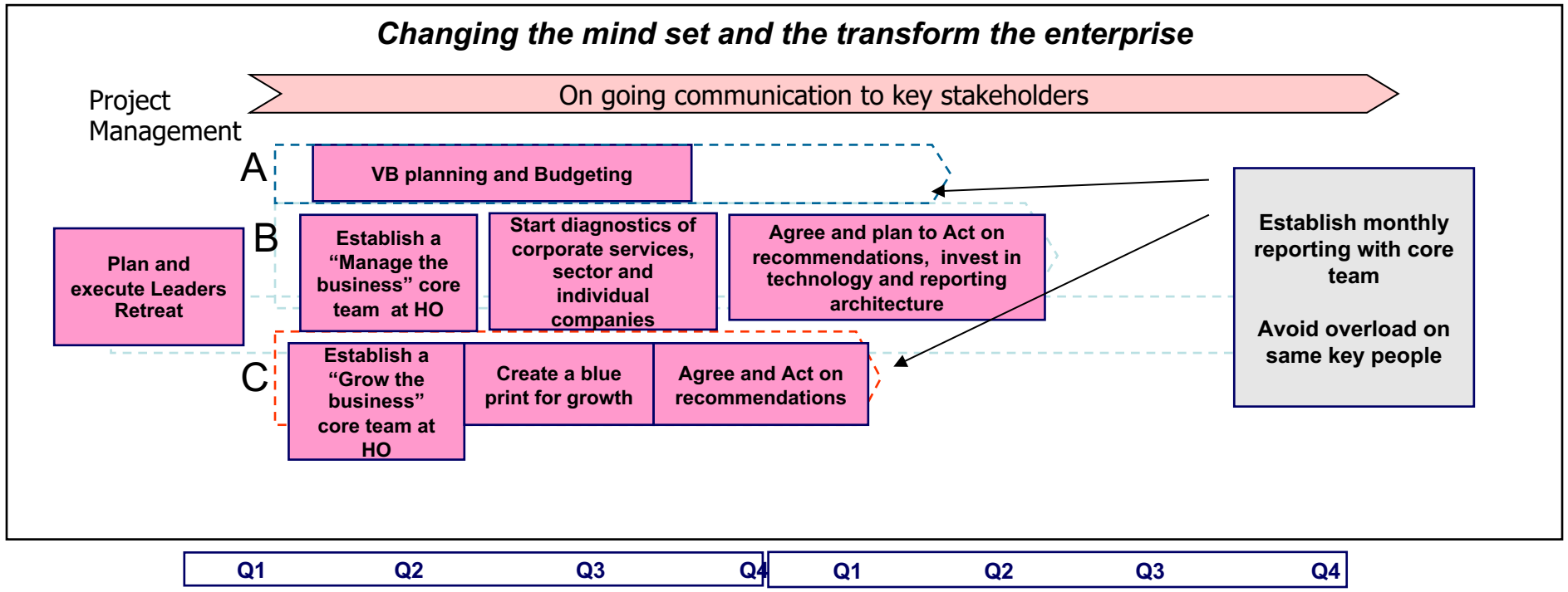
No one questioned



How does one become a VBM company?

A million (or two) dollar question…

A TYPICAL VBM PROJECT PLAN



A TYPICAL VBM PROJECT PLAN

KEY PRINCIPLES:

1. **Use Leaders Retreat as a catalyst for change**; Typically we assist in planning and facilitate to keep it on track.
2. **Sponsor** – Chairman, Champion – COO, an exec team of three senior people: Finance, HR, Technology *plus our strategic and tactical involvement – we provide the methodology, process and discipline*
3. The Core team establishes a team (one analyst each with domain experience in each of three (shared services, Technology, DSS) teams *plus one or two senior analysts from our team*, agrees on tasks, and start the diagnostics including "as is" costs of shared services across all companies. Report to the core team on a monthly basis. Plan a three day debrief session In parallel to closing of targets.
4. **Sponsor** – Chairman, Internal exec team – Chairman, COO, two thinkers from the exec committee *plus our analytical involvement*. The key role is to analyse existing portfolio, assess the competitive space, establish a plan for pro-active growth.
5. Start designing objectives/initiatives/metrics to link them to decision makers incentives

Next session

KEY PRINCIPLES

- Keep it simple (KISS)
- Use external analysts to provide a shareholder perspective
- Show visible support of senior management

Questions?

Join us for:
SESSION #2: Designing Incentive systems
Jun 3 1:30-2:30PM ET
Register at crgroup.com/cfo-bootcamp

Thank you for joining!

Please take a moment to complete the survey.

See you at Part 2 - Designing Incentive systems

Want more information or to book a Level 7 consultation? Contact us!

crg@crgroup.com

crgroup.com/CFO-Bootcamp

Corporate Renaissance Group