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Dow Chemical Company (DOW-US)

Chemicals

- **We reiterate our neutral rating on DOW and believe little opportunity for outperformance exists from current levels.**
- **Business Performance remains flat as DOW continues to experience sluggish economic conditions especially in Europe.**
- **DOW continues to experience weakness in several key business lines.**

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Company Update

Dow Chemical Company (DOW-US)
 Chemicals

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Research Action:

Reiterate rating

Rating: Neutral

Prior Rating: Neutral

Price 02/08/2017: \$59.73

 52 Week High /
 Low: \$61.73
 \$44.40

Key Data: (TTM as of Dec-16)

Excess Cash per Share: \$6.92

Annual Dividend: \$1.84

Dividend Yield: 3.08%

Ave. Volume (30 Day): 5.9M

Shares Outstanding: 1,121.4M

Float: 1,117.8M

Equity MV: \$66,980.0M

Sales TTM: \$48,137.0M

Beta: 0.73

EBITDAR: \$11,758.9M

NOPAT: \$6,289.7M

Total Invested Capital: \$58,780.6M

Return on Capital: 11.20%

Cost of Capital: 4.98%

Economic Profit: \$3,492.8M

Market Value Added: \$35,824.0M

Current Operations Value: \$128,922.2M

Future Growth Value: -\$34,317.5M

- **We reiterate our neutral rating on DOW.** Business Performance remains flat due to low global economic growth, pricing headwinds and a general downtrend in commodity prices. The recent run-up in the share price fully reflects the anticipated shareholder value creation based on the merger with DuPont (DD-US, non-rated) and the subsequent spinoffs. We believe little opportunity for outperformance exists from current levels.
- **Business Performance remains flat.** Y/Y trends in revenue, economic cash flow, NOPAT and Economic Profit have had a slight negative trend for the past few years. We believe the benefit of the DuPont merger will be operating efficiency and significant cost savings estimated to be approximately \$3 billion within the first two years. While this should have a positive effect on economic profit and return on capital, we feel the current share price already reflects most of that contribution. DOW continues to experience sluggish economic conditions especially in Europe.
- **DOW continues to experience weakness in several key business lines.** DOW's agriculture business had a slight pickup in Q4 2016. However, prices of major crops such as corn and soy beans remain at multiyear lows and a highly competitive pricing environment is expected to continue going forward. Weakness in the energy market, due to lower oil prices is hurting oil and gas exploration project demand. DOW reported lower volumes in its energy business in the most recent quarter due to weak demand from refining and processing end markets. Depressed oil prices may also lead to constricted margins for methane-based plastics and affect volumes. Further, DOW 's experiencing greater competitive pricing pressure in its performance materials & chemicals business. DOW also faces feedstock cost pressure in its performance plastics business with a reported \$100 million increase in feedstock and energy costs in Q4. Raw material cost pressure will continue for the foreseeable future putting continual downward pressure on margins.

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Investment Thesis

The merger between Dow Chemical and Dupont will create the world's largest chemical company with over \$71 billion in annual revenue and \$135 billion in equity market value before subsequently breaking up into three separately traded companies through a tax-free spinoff. Business trends in both companies have been flat for several years. Global growth of chemical sales has remained flat due to low global economic growth, pricing headwinds and generally declining commodity prices. The belief is that the key drivers of business performance will be cost savings and operational improvements through the merger and the realignment of business lines. While in many cases spinoffs unlock shareholder value, the run-up in price since the deal was announced fully reflects any future value creation based on this event.

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Company Report – Research Update

Financial Data

Report Basis Reported Period Ending	LTM 12/31/2011	LTM 12/31/2012	LTM 12/31/2013	LTM 12/31/2014	LTM 12/31/2015	LTM 12/31/2016	LTM 12/31/2017	NTM 12/31/2017	5 Yr Average	3 Yr Average	Current Trend
Net Sales Revenue	\$59,985.0	\$56,786.0	\$57,038.0	\$58,120.0	\$48,758.0	\$48,137.0	\$51,044.1	\$53,767.8	\$51,671.7	\$49,590.5	
Sales Growth	11.76%	-5.33%	0.44%	1.90%	-16.11%	-1.27%	6.04%	-4.07%	-5.16%	2.38%	
Sales Growth Trend	14.85%	1.50%	-1.87%	1.32%	-8.91%	-7.21%	3.11%	-3.03%	-4.93%	-2.05%	
Cash Operating Expenses	\$50,484.6	\$47,341.2	\$47,022.3	\$46,931.2	\$37,480.3	\$37,005.0	\$39,898.3	\$43,156.0	\$40,472.2	\$38,451.6	
% of Sales	84.16%	83.37%	82.44%	80.75%	76.87%	76.87%	78.16%	80.06%	78.16%	77.52%	
Operating Cash Flow (EBITDAR)	\$9,500.4	\$9,444.8	\$10,015.7	\$11,188.8	\$11,277.7	\$11,132.0	\$11,145.8	\$10,611.8	\$11,199.5	\$11,138.9	
EBITDAR Margin	15.84%	16.63%	17.56%	19.25%	23.13%	23.13%	21.84%	19.94%	21.84%	22.48%	
EBITDAR Growth	8.80%	-0.58%	6.04%	11.71%	0.79%	-1.29%	0.12%	3.33%	3.74%	-0.58%	
Economic Operating Expenses	\$4,966.0	\$4,882.0	\$4,918.0	\$4,933.0	\$4,719.0	\$4,398.0	\$4,645.4	\$4,770.0	\$4,683.3	\$4,521.7	
% of Sales	8.28%	8.60%	8.62%	8.49%	9.68%	9.14%	9.10%	8.90%	9.10%	9.12%	
Net Operating Profit Before Tax (NOPBT)	\$4,534.4	\$4,562.8	\$5,097.7	\$6,255.8	\$6,558.7	\$6,734.0	\$6,500.4	\$5,841.8	\$6,516.2	\$6,617.2	
NOPBT Margin	7.56%	8.04%	8.94%	10.76%	13.45%	13.99%	12.73%	11.04%	12.73%	13.36%	
NOPBT Growth	22.35%	0.63%	11.72%	22.72%	4.84%	2.67%	-3.47%	8.52%	10.08%	-0.40%	
Cash Operating Income Tax	\$1,028.8	\$1,505.7	\$1,489.5	\$1,694.4	\$1,418.1	\$13.7	\$1,059.8	\$1,224.3	\$1,042.1	\$536.8	
Economic Tax Effective Rate	22.69%	33.00%	29.22%	27.08%	21.62%	0.20%	16.30%	22.23%	16.30%	8.25%	
Net Operating Profit After Tax (NOPAT)	\$3,505.6	\$3,057.1	\$3,608.3	\$4,561.5	\$5,140.6	\$6,720.3	\$5,440.6	\$4,617.5	\$5,474.1	\$6,080.4	
NOPAT Margin	5.84%	5.38%	6.33%	7.85%	10.54%	13.96%	10.66%	8.81%	10.78%	12.31%	
NOPAT Growth	14.19%	-12.79%	18.03%	26.42%	12.70%		-19.04%	15.02%	23.28%	5.84%	
Cash & Equivalents	\$7,954.0	\$6,883.0	\$8,481.0	\$8,093.0	\$11,500.0	\$9,576.0	\$9,874.2	\$8,906.6	\$9,723.0	\$9,725.1	
Total Assets	\$69,224.0	\$69,605.0	\$69,501.0	\$68,796.0	\$68,026.0	\$79,511.0	\$81,987.0	\$71,087.8	\$72,111.0	\$80,749.0	
Non - Interest Bearing Liabilities (NIBLs)	\$23,335.0	\$25,898.0	\$22,026.0	\$24,039.0	\$22,921.0	\$30,411.0	\$31,358.0	\$25,059.0	\$25,790.3	\$30,884.5	
Net Assets	\$44,732.0	\$42,570.0	\$46,293.0	\$43,624.0	\$44,296.0	\$47,858.0	\$49,348.3	\$44,928.2	\$45,259.3	\$48,603.2	
Economic Asset Adjustments	\$3,906.0	\$5,054.2	\$3,974.9	\$4,561.9	\$4,298.9	\$8,881.0	\$9,157.6	\$5,354.2	\$5,913.9	\$9,019.3	
Net Operating Assets	\$48,638.0	\$47,624.2	\$50,267.9	\$48,185.9	\$48,594.9	\$56,739.0	\$58,505.9	\$50,282.4	\$51,173.3	\$57,622.4	
Debt & Debt Equivalents	\$23,470.0	\$22,939.2	\$20,218.9	\$22,453.9	\$19,633.9	\$21,363.0	\$22,028.3	\$21,321.8	\$21,150.3	\$21,695.6	
Equity & Equivalents	\$22,281.0	\$20,877.0	\$26,898.0	\$22,423.0	\$25,374.0	\$25,987.0	\$26,796.2	\$24,311.8	\$24,594.7	\$26,391.6	
Total Capital - Financing Sources	\$45,751.0	\$43,816.2	\$47,116.9	\$44,876.9	\$45,007.9	\$47,350.0	\$48,824.5	\$45,633.6	\$45,744.9	\$48,087.2	
Capital Adjustments	\$2,036.0	\$3,102.0	\$1,716.0	\$1,891.0	\$1,875.0	\$8,881.0	\$9,157.6	\$3,493.0	\$4,215.7	\$9,019.3	
Net Capital Financing Sources	\$47,787.0	\$46,918.2	\$48,832.9	\$46,767.9	\$46,882.9	\$56,231.0	\$57,982.1	\$49,126.6	\$49,960.6	\$57,106.5	
Net Working Capital	\$12,708.3	\$13,712.3	\$13,745.9	\$13,504.0	\$11,026.9	\$9,484.9	\$9,780.2	\$12,294.8	\$11,338.6	\$9,632.5	
Cost of Net Working Capital	\$461.1	\$500.9	\$603.7	\$502.4	\$482.9	\$464.9	\$479.4	\$511.0	\$483.4	\$472.2	
% of Revenue	0.77%	0.88%	1.06%	0.86%	0.99%	0.97%	0.94%	0.95%	0.94%	0.95%	
Operational Capital	\$28,480.3	\$30,442.5	\$30,447.8	\$29,819.9	\$26,949.8	\$32,970.9	\$33,997.6	\$30,126.2	\$29,913.5	\$33,484.2	
Cost of Operational Capital	\$1,082.4	\$1,117.1	\$1,338.6	\$1,111.2	\$1,117.5	\$1,358.2	\$1,400.5	\$1,208.6	\$1,195.7	\$1,379.4	
% of Revenue	1.80%	1.97%	2.35%	1.91%	2.29%	2.82%	2.74%	2.27%	2.34%	2.78%	
Productive Capital	\$46,471.3	\$47,892.5	\$47,559.8	\$46,219.9	\$42,720.8	\$54,268.9	\$55,958.8	\$47,732.4	\$47,736.5	\$55,113.8	
Cost of Productive Capital	\$1,790.4	\$1,789.1	\$2,098.5	\$1,729.1	\$1,750.8	\$2,198.5	\$2,266.9	\$1,913.2	\$1,892.8	\$2,232.7	
% of Revenue	2.98%	3.15%	3.68%	2.98%	3.59%	4.57%	4.44%	3.59%	3.71%	4.50%	
Total Operating Capital	\$43,683.3	\$43,580.5	\$44,638.8	\$42,998.9	\$39,532.8	\$49,569.9	\$51,113.5	\$44,064.2	\$44,033.9	\$50,341.7	
Cost of Total Operating Capital	\$1,684.5	\$1,654.5	\$1,939.5	\$1,615.9	\$1,624.6	\$2,019.7	\$2,082.6	\$1,770.8	\$1,753.4	\$2,051.2	
% of Revenue	2.81%	2.91%	3.40%	2.78%	3.33%	4.20%	4.08%	3.32%	3.44%	4.14%	
Non - Operating Capital	\$4,954.8	\$4,043.7	\$5,629.1	\$5,187.0	\$9,062.1	\$7,169.2	\$7,392.4	\$6,218.2	\$7,139.4	\$7,280.8	
Cost of Non - Operating Capital	\$230.0	\$170.6	\$212.7	\$199.4	\$280.5	\$367.9	\$379.4	\$246.2	\$282.6	\$373.6	
% of Revenue	0.38%	0.30%	0.37%	0.34%	0.58%	0.76%	0.74%	0.47%	0.56%	0.75%	
Total Capital	\$48,638.0	\$47,624.2	\$50,267.9	\$48,185.9	\$48,594.9	\$56,739.0	\$58,505.9	\$50,282.4	\$51,173.3	\$57,622.4	
Cost of Total Capital	\$1,914.5	\$1,825.1	\$2,152.1	\$1,815.3	\$1,905.1	\$2,387.6	\$2,462.0	\$2,017.0	\$2,036.0	\$2,424.8	
% of Revenue	3.19%	3.21%	3.77%	3.12%	3.91%	4.96%	4.82%	3.80%	4.00%	4.89%	
Cost of Capital (WACC)	3.88%	3.79%	4.40%	3.69%	3.94%	4.53%	4.53%	4.07%	4.05%	4.53%	
Weighted After Tax Debt Cost of Capital	1.17%	0.94%	0.85%	0.77%	0.72%	1.12%	1.12%	0.88%	0.87%	1.12%	
Weighted Preferred Equity Cost of Capital	0.55%	0.52%	0.44%	0.42%	0.41%	0.00%	0.00%	0.36%	0.28%	0.00%	
Weighted Equity Cost of Capital	2.16%	2.33%	3.12%	2.49%	2.81%	3.41%	3.41%	2.83%	2.91%	3.41%	
Capital Structure											
Debt & Debt Equivalents	\$23,470.0	\$22,939.2	\$20,218.9	\$22,453.9	\$19,633.9	\$21,363.0	\$22,028.3	\$21,321.8	\$21,150.3	\$21,695.6	
Debt & Debt Equivalents % of Market Value	38.19%	34.91%	25.90%	27.99%	23.58%	24.98%	24.98%	27.14%	25.48%	24.98%	
Preferred Equity	\$4,000.0	\$4,000.0	\$4,000.0	\$4,000.0	\$4,000.0	\$0.0	\$0.0	\$3,200.0	\$2,666.7	\$0.0	
Preferred Equity % of Market Value	6.51%	6.09%	5.12%	4.99%	4.80%	0.00%	0.00%	4.07%	3.21%	0.00%	
Market Value of Common Equity	\$33,988.9	\$38,770.5	\$53,851.3	\$53,754.2	\$59,645.5	\$64,165.4	\$66,163.6	\$54,037.4	\$59,188.4	\$65,164.5	
Common Equity % of Market Value	55.30%	59.00%	68.98%	67.02%	71.62%	75.02%	75.02%	68.79%	71.31%	75.02%	
Total Economic Market Value (MV)	\$61,458.9	\$65,709.6	\$78,071.1	\$80,208.1	\$83,279.4	\$85,528.4	\$88,191.8	\$78,559.1	\$83,005.3	\$86,860.1	
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Excess Cash	\$4,954.8	\$4,043.7	\$5,629.1	\$5,187.0	\$9,062.1	\$7,169.2	\$7,392.4	\$6,218.2	\$7,139.4	\$7,280.8	
Economic Enterprise Value	\$56,504.2	\$61,665.9	\$72,441.0	\$75,021.1	\$74,217.3	\$78,359.3	\$80,799.4	\$72,340.9	\$75,865.9	\$79,579.3	
Ending Capital	\$47,787.0	\$46,918.2	\$48,832.9	\$46,767.9	\$46,882.9	\$56,231.0	\$57,982.1	\$49,126.6	\$49,960.6	\$57,106.5	
- Beginning Capital	\$48,854.5	\$47,787.0	\$46,918.2	\$48,832.9	\$46,767.9	\$46,882.9	\$56,231.0	\$47,437.8	\$47,494.6	\$51,557.0	
Average Capital	\$48,320.8	\$47,352.6	\$47,875.5	\$47,800.4	\$46,825.4	\$51,557.0	\$57,106.5	\$48,282.2	\$48,727.6	\$54,331.7	
Capital Δ	(\$1,067.5)	(\$868.8)	\$1,914.7	(\$2,065.0)	\$115.0	\$9,348.1	\$1,751.1	\$1,688.8	\$2,466.0	\$5,549.6	

Source: Company Data, Financial statements and Tigress Research

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Company Report – Research Update

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	Average	Average	Trend	
Return on Market Value (NOPAT / MV)	5.70%	4.65%	4.62%	5.69%	6.17%	7.86%	8.10%	5.80%	6.57%	7.98%	
Return on Enterprise Value (NOPAT / EV)	6.20%	4.96%	4.98%	6.08%	6.93%	8.58%	8.84%	6.30%	7.19%	8.71%	
Return on Capital (NOPAT / Average Capital)	7.25%	6.46%	7.54%	9.54%	10.98%	13.03%	13.44%	9.51%	11.19%	13.24%	
Cost of Capital (WACC)	3.88%	3.79%	4.40%	3.69%	3.94%	4.53%	4.53%	4.07%	4.05%	4.53%	
Economic Return Spread	3.37%	2.66%	3.14%	5.86%	7.04%	8.50%	8.77%	5.44%	7.13%	8.63%	
Capital Charge	\$1,875.2	\$1,795.5	\$2,105.0	\$1,762.7	\$1,843.5	\$2,337.3	\$2,410.1	\$1,968.8	\$1,981.2	\$2,373.7	
Economic Profit (EP)	\$1,630.4	\$1,261.6	\$1,503.2	\$2,798.8	\$3,297.1	\$4,383.0	\$4,519.5	\$2,648.7	\$3,492.9	\$4,451.2	
Economic Profit Improvement (EPI)	\$1,081.8	(\$368.9)	\$241.6	\$1,295.6	\$498.3	\$1,085.9	\$136.5	\$550.5	\$959.9	\$611.2	
EP Growth	197.21%	-22.62%	19.15%	86.19%	17.81%	32.93%	3.11%	26.69%	45.64%	18.02%	
Economic Profit Margin on Sales	2.72%	2.22%	2.64%	4.82%	6.76%	9.11%	8.85%	5.11%	6.89%	8.98%	
Economic Profit Per Share	\$1.42	\$1.08	\$1.27	\$2.39	\$2.92	\$3.96	\$4.08	\$2.32	\$3.09	\$4.02	
GAAP Earnings Per Share	\$2.07	\$0.73	\$3.72	\$2.89	\$6.50	\$3.55	\$3.99	\$3.48	\$4.31	\$3.77	
Excess Cash Per Share	\$4.29	\$3.36	\$4.73	\$4.52	\$8.20	\$6.48	\$6.68	\$5.46	\$6.40	\$6.58	
Performance Drivers											
Sales Growth	11.76%	-5.33%	0.44%	1.90%	-16.11%	-1.27%	6.04%	-4.07%	-5.16%	2.38%	
Sales Growth Trend (ROC Sales Growth)	14.85%	1.50%	-1.87%	1.32%	-8.91%	-7.21%	3.11%	-3.03%	-4.93%	-2.05%	
EBITDAR Margin	15.84%	16.63%	17.56%	19.25%	23.13%	23.13%	21.84%	19.94%	21.84%	22.48%	
EBITDAR Growth	8.80%	-0.58%	6.04%	11.71%	0.79%	-1.29%	0.12%	3.33%	3.74%	-0.58%	
NOPBT Margin	7.56%	8.04%	8.94%	10.76%	13.45%	13.99%	12.73%	11.04%	12.73%	13.36%	
NOPBT Growth	22.35%	0.63%	11.72%	22.72%	4.84%	2.67%	-3.47%	8.52%	10.08%	-0.40%	
NOPAT Margin	5.84%	5.38%	6.33%	7.85%	10.54%	13.96%	10.66%	8.81%	10.78%	12.31%	
NOPAT Growth	14.19%	-12.79%	18.03%	26.42%	12.70%	30.73%	-19.04%	15.02%	23.28%	5.84%	
Economic Profit Margin on Sales (EP / Sales)	2.72%	2.22%	2.64%	4.82%	6.76%	9.11%	8.85%	5.11%	6.89%	8.98%	
Economic Profit Growth	197.21%	-22.62%	19.15%	86.19%	17.81%	32.93%	3.11%	26.69%	45.64%	18.02%	
Economic Return Spread (ROC-WACC)	3.37%	2.66%	3.14%	5.86%	7.04%	8.50%	8.91%	5.44%	7.13%	8.70%	
Economic Return Ratio (ROC / WACC)	186.95%	170.26%	171.41%	258.78%	278.85%	287.52%	296.48%	233.36%	275.05%	292.00%	
Economic Profit Momentum (Δ EP/Capital)	2.26%	-0.79%	0.49%	2.77%	1.06%	1.93%	0.24%	1.09%	1.92%	1.08%	
Economic Profit Momentum Margin (Δ EP/Sales)	1.80%	-0.65%	0.42%	2.23%	1.02%	2.26%	0.27%	1.06%	1.84%	1.26%	
Capital Growth	-2.19%	-1.82%	4.08%	-4.23%	0.25%	19.94%	3.11%	3.64%	5.32%	11.53%	
Capital Turns	1.26X	1.21X	1.17X	1.24X	1.04X	0.86X	0.88X	1.10X	1.05X	0.87X	
EVC Acceleration Margin	2.02%	-0.61%	0.43%	2.27%	0.86%	2.23%	0.28%	1.08%	1.79%	1.18%	
EVC Acceleration Spread	2.27%	-0.76%	0.51%	2.71%	1.04%	2.32%	0.26%	0.96%	1.99%	1.25%	
Risk Factors											
Free Cash Flow (NOPAT - Δ Capital)	\$4,573.1	\$3,925.9	\$1,693.6	\$6,626.4	\$5,025.6	(\$2,627.8)	\$3,689.5	\$2,928.7	\$3,008.1	\$530.9	
Free Cash Flow Rate (FCF / Capital)	9.57%	8.37%	3.47%	14.17%	10.72%	-4.67%	6.36%	6.41%	6.74%	0.84%	
Free Cash Flow Yield (FCF / MV)	7.44%	5.97%	2.17%	8.26%	6.03%	-3.07%	4.18%	3.87%	3.74%	0.56%	
Total Debt / Total Capital	49.11%	48.89%	41.40%	48.01%	41.88%	37.99%	37.99%	43.64%	42.63%	37.99%	
Total Debt / EBITDAR	247.04%	242.88%	201.87%	200.68%	174.09%	191.91%	197.64%	202.29%	188.89%	194.77%	
Excess Cash	\$4,954.8	\$4,043.7	\$5,629.1	\$5,187.0	\$9,062.1	\$7,169.2	\$0.0	\$6,218.2	\$7,139.4	\$3,584.6	
Financial Leverage ((Total Debt - Excess Cash) / Pension Leverage (Net Pension Liability / MV))	30.13%	28.76%	18.69%	21.53%	12.69%	16.60%	24.98%	19.65%	16.94%	20.79%	
Equity Risk Index (S&P 500 = 1.00)	0.43	0.42	0.42	0.43	0.45	0.46	0.46	0.44	0.45	0.46	
Stock Price Volatility	5.42	4.87	3.41	3.31	3.55	3.14	3.14	3.66	3.33	3.14	
Sales Index (NL Sales)	11.00	10.95	10.95	10.97	10.79	10.78	10.84	10.89	10.85	10.81	
Market Value Index (NL Market Value)	11.03	11.09	11.27	11.29	11.33	11.36	11.39	11.27	11.33	11.37	
Size Index (NL Sales: MV)	11.01	11.02	11.11	11.13	11.06	11.07	11.11	11.08	11.09	11.09	
Beta	0.15	0.14	0.14	0.15	0.19	0.19	0.19	0.16	0.17	0.19	
TFP Adjusted Beta	0.43	0.42	0.42	0.43	0.45	0.46	0.46	0.44	0.45	0.46	
Stock Price Volatility	5.42	4.87	3.41	3.31	3.55	3.14	3.14	3.66	3.33	3.14	
Valuation Measures											
Total Economic Market Value (MV)	\$61,458.9	\$65,709.6	\$78,070.1	\$80,208.1	\$83,279.4	\$85,528.4	\$88,191.8	\$78,559.1	\$83,005.3	\$86,860.1	
Economic Enterprise Value	\$56,504.2	\$61,665.9	\$72,441.0	\$75,021.1	\$74,217.3	\$78,359.3	\$80,799.4	\$72,340.9	\$75,865.9	\$79,579.3	
Equity Market Value	\$33,988.9	\$38,770.5	\$53,851.3	\$53,754.2	\$59,645.5	\$64,165.4	\$66,163.6	\$54,037.4	\$59,188.4	\$65,164.5	
Total Capital	\$48,638.0	\$47,624.2	\$50,267.9	\$48,185.9	\$48,594.9	\$56,739.0	\$58,505.9	\$50,282.4	\$51,173.3	\$57,622.4	
Market Value Created MVC (MV - Capital)	\$12,820.9	\$18,085.5	\$27,802.3	\$32,022.2	\$34,684.5	\$28,789.4	\$29,685.9	\$28,276.8	\$31,832.0	\$29,237.7	
MVC Margin (MVC / Sales)	21.37%	31.85%	48.74%	55.10%	71.14%	59.81%	58.16%	52.59%	61.60%	58.96%	
MVC Spread (MVC / Capital)	26.36%	37.98%	55.31%	66.46%	71.37%	50.74%	50.74%	56.24%	62.20%	50.74%	
Current EVC Value (EP / WACC)	\$42,013.0	\$33,270.1	\$34,187.6	\$75,896.9	\$83,745.9	\$96,680.8	\$99,691.4	\$65,089.2	\$66,188.4	\$98,186.1	
Current Operations Value COV	\$90,333.7	\$80,623.7	\$82,063.2	\$123,697.3	\$130,571.3	\$148,237.7	\$156,798.0	\$113,371.3	\$134,915.9	\$152,517.9	
Current Operations Value Per Share	\$78.62	\$68.93	\$69.18	\$105.64	\$115.54	\$133.78	\$135.99	\$98.33	\$118.73	\$134.91	
Future Growth Value (MVC - EVA Value)	(\$28,874.8)	(\$14,913.1)	(\$3,993.1)	(\$43,489.2)	(\$47,291.9)	(\$62,709.3)	(\$68,606.2)	(\$34,812.2)	(\$51,910.6)	(\$65,657.7)	
Future Growth Value Reliance (FGV / MV)	-46.98%	-22.70%	-5.11%	-54.22%	-56.79%	-73.32%	-77.79%	-44.31%	-62.54%	-75.59%	
Share Price	\$28.76	\$32.33	\$44.40	\$45.61	\$51.48	\$57.22	\$57.22	\$46.21	\$51.44	\$57.22	
Dividend Yield	3.13%	3.74%	2.88%	3.35%	3.34%	3.22%					
Total Shareholder Return (TTM)	-12.63%	16.15%	40.22%	6.08%	16.21%	14.37%	0.00%	-19.25%	11.32%	11.24%	
MV to IC Ratio	1.26X	1.38X	1.55X	1.66X	1.71X	1.51X	1.51X	1.56X	1.62X	1.51X	
EV / EBITDAR Multiple	5.95X	6.53X	7.23X	6.71X	6.58X	7.04X	7.25X	6.82X	6.77X	7.14X	
EV / NOPBIT Multiple	12.46X	13.51X	14.21X	11.99X	11.32X	11.64X	12.43X	12.38X	11.64X	12.03X	
EV / NOPAT Multiple	16.12X	20.17X	20.08X	16.45X	14.44X	11.66X	14.85X	16.67X	13.86X	13.09X	
EV / EP Multiple	34.66X	48.88X	48.19X	26.81X	22.51X	17.88X	17.88X	27.31X	21.72X	17.88X	
Future Growth Value (% of MV)	-46.98%	-22.70%	-5.11%	-54.22%	-56.79%	-73.32%	-77.79%	-44.31%	-62.54%	-75.59%	
Current Operations Value (% of MV)	146.98%	122.70%	105.11%	154.22%	156.79%	173.32%	177.79%	144.31%	162.54%	175.59%	
Market Value (COV + FGV %)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Basic Shares Outstanding	1,149.0	1,169.7	1,186.2	1,170.9	1,130.1	1,108.1	1,153.0	1,153.0	1,136.4	1,130.6	

Source: Company Data, Financial statements and Tigress Research

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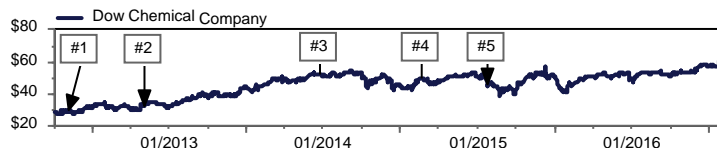
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Ratings History

Dow Chemical Company (DOW-US)				
Item #	Date	Research Action	Rating	Price
#5	07/24/2015	Reiterate Rating	Neutral	\$159.74
#4	02/19/2015	Reiterate Rating	Neutral	\$14.54
#3	06/23/2014	Reiterate Rating	Neutral	\$118.27
#2	05/02/2013	Reiterate Rating	Neutral	85.63
#1	11/05/2012	Initiation of Coverage	Neutral	\$79.41


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We employ proprietary quantitative valuation models combined with dynamic fundamental analysis based on the principles of Economic Profit to formulate timely and insightful investment ratings, analysis, strategies and recommendations.

We make key adjustments to reported financial data eliminating GAAP-based accounting distortions and measuring all companies on a cash operating basis.

Our proprietary research framework is a multi-factor model that scores and ranks companies based on their risk-adjusted ability to create Economic Profit relative to their current market value focusing on three key components:

Business Performance: Measuring economic profitability, growth and operating efficiency.

Risk: Measuring business sustainability, volatility, strength and consistency.

Valuation: Linking business performance to market value. Measuring value created relative to capital employed and enterprise multiples of economic profit and cash flow.

We score and rank 24 key measurements of performance, risk and value into relative market and industry investment recommendations.

For more information on our research methodology, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

Glossary of Key Terms and Measures

Excess Cash per Share: Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.

EBITDAR: Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.

NOPAT: Net Operating Profit after Tax. Represents a company's after-tax cash operating profit excluding financing costs.

Total Invested Capital: Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of company.

Return on Capital: Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.

Cost of Capital: Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.

Economic Profit: Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.

Current Operations Value: Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream assuming it remains constant forever.

Future Growth Value: Future Growth Value is the portion of market value based on un-earned Economic Profit

For more information on the key terms and measures, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

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		#	%	#	%
Strong Buy:	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	16	15%	0	0
Buy:	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	49	44%	4	80%
Neutral:	Expect little or no outperformance opportunity over the next 12 months.	38	36%	1	20%
Underperform:	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	6	5%	0	0
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%

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