



Executive Summary

- COVID-19 Fallout— With operations in some areas suspended for more than a month, manufacturers are facing an unprecedented challenge. Major manufacturers, such as Automotive OEMs, have cut all US production capacity—plans on when to restart production have been delayed several times through public announcements.
- Near Term Criticality
 — Companies should review their supply base for critical components from plants that have or might shutdown, have low safety stock levels, and are under financial stress.
- Supply Risk— Companies should review their supply base for critical suppliers that will lose large amounts of revenue and have low cash levels. Suppliers' approaches to COVID-19 risk mitigation should also be reviewed. In addition to financial risk, companies with low cash levels may have additional difficulties rapidly reopening.
- Production Restart
 — Geographic clusters of restart dates will require suppliers to prioritize production timed to each OEM and production lines.
- Supplier Financial Risk— Companies will undergo varying degrees of stress if operations remain suspended over the next few weeks and months. Public and Private suppliers' financials should be reviewed to determine exposure to the industry, cash reserves, and available means of mitigation.

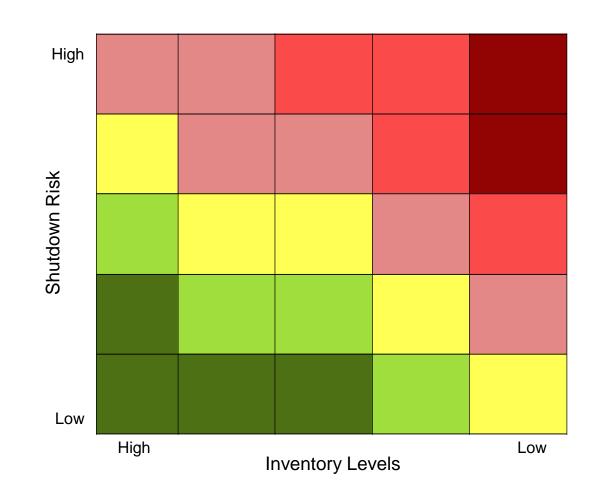
1. Background & Supplier Impact

- 2. Cost & Capital Supplier Risk Approach
- 3. Reference Cases

Supply Risk Assessment

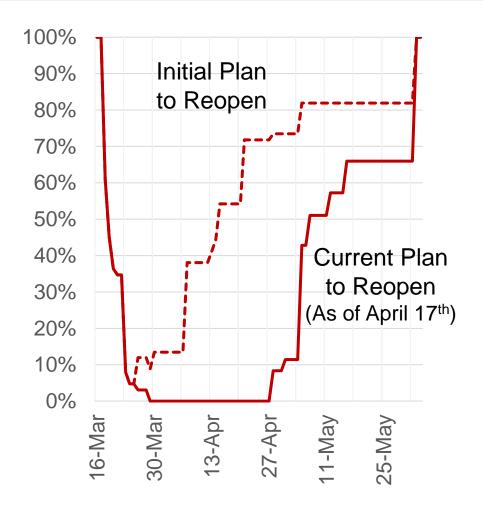
Companies should review their supply base for critical components from plants that have or might shutdown, have low safety stock levels, and are under financial stress.

- Resources should be focused on major suppliers as well as suppliers that provide supplycritical components
- Financial stress will increase as shutdowns become prolonged
- Working with manufacturing and engineering highlights critical components
- Working with supply chain highlights limited sources for critical components
- Efforts should be narrowed to the most critical suppliers



Automotive Capacity Cuts and Planned Restarts

Automotive OEMs have cut all US production capacity—plans on when to restart production have been delayed several times through public announcements.

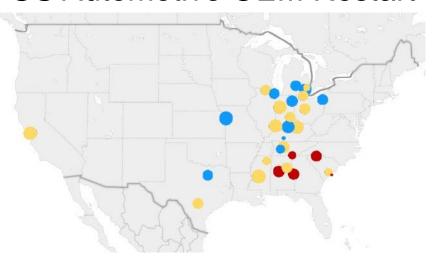


- GM and Ford have not publicly committed to restart dates
- Several OEMs located in the Southeast will likely delay planned restart dates as infection rates have been increasing in those areas
- OEMs are looking to balance securing production capacity with suppliers with the need to wait until plants can be safely opened
- Automotive shutdowns reflect similar actions being taken in other manufacturing-related industries

Automotive Capacity Cuts and Planned Restarts

Planned restart dates tend to be more aggressive in the Southeast.

US Automotive OEM Restart



- Geographic clusters of restart dates will require suppliers to prioritize production timed to each OEM and production line
- Freight capacity between suppliers and OEMs will need to be managed to secure capacity timed to each restart

- Plan to Open in April
- Plan to Open in May
- No Stated Restart Date

Production Cut Analysis

Companies started the year with large cash cushions and could easily cover interest payments. However, this will change if significant shutdowns continue.

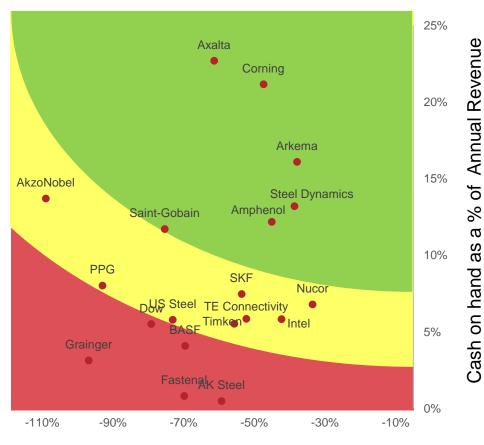
								If 33% d	lrop in Annual R	evenue
				EBITDA /			(Cash +		EBITDA /	
	LT Debt /	LT Debt /	LT Debt Due	Interest	EBITDA	Current	Credit) /	EBITDA	Interest	
	Equity	EBITDA	in One Year	Expense	Margin	Ratio	Revenue	Margin	Expense	Risk
AK Steel	412%	4.7	2%	2.9	7%	191%	8%	4%	1.2	High
AkzoNobel	31%	1.7	8%	15.8	13%	158%	33%	-2%	(1.4)	High
Amphenol	85%	0.6	10%	15.8	23%	199%	14%	19%	8.7	Low
Arkema	45%	1.6	22%	12.6	17%	198%	26%	15%	7.8	Low
Axalta	269%	4.5	1%	5.2	19%	240%	32%	11%	2.0	Moderate
BASF	35%	1.9	18%	16.6	13%	187%	14%	6%	5.0	Low
Corning	59%	2.8	0%_	12.7	24%	212%	21%	19%	6.7	Low
Dow	113%	6.1	3%	2.8	6%	157%	23%	2%	0.6	High
Fastenal	13%	0.3	1%	85.5	22%	451%	16%	10%	25.8	Low
Grainger	93%	1.3	11%	19.0	13%	212%	10%	1%	0.6	High
Intel	33%	0.8	13%	67.2	46%	140%	20%	39%	38.8	Low
Micron	14%	0.4	4%	67.4	65%	274%	50%	83%	57.7	Low
Nucor	40%	1.6	1%	21.7	12%	334%	13%	12%	14.5	Low
NVIDIA	16%	0.6	4%	62.1	30%	767%	105%	14%	19.1	Low
PPG	84%	2.0	10%	17.5	15%	141%	23%	2%	1.2	High
Saint-Gobain	52%	2.2	15%	17.4	11%	135%	21%	4%	4.3	Moderate
SKF	35%	1.0	5%	17.2	15%	207%	7%	10%	8.0	Low
Steel Dynamics	67%	2.0	3%	10.3	12%	422%	25%	11%	6.3	Low
TE Connectivity	32%	1.3	14%	54.2	21%	164%	18%	15%	25.8	Low
Timken	84%	2.4	4%	9.4	18%	254%	19%	12%	4.2	Low
US Steel	89%	9.4	0%	2.7	3%	145%	21%	1%	0.7	High

Additionally, many companies have large long-term debt loads which could cause additional financial stress if waves of virus last 18-24 months.



Production Cut Analysis

Companies will undergo varying degrees of stress if annual revenue declines 25%.



 Compared to the group, AK Steel, Fastenal, and Grainger have less of a cash cushion on hand

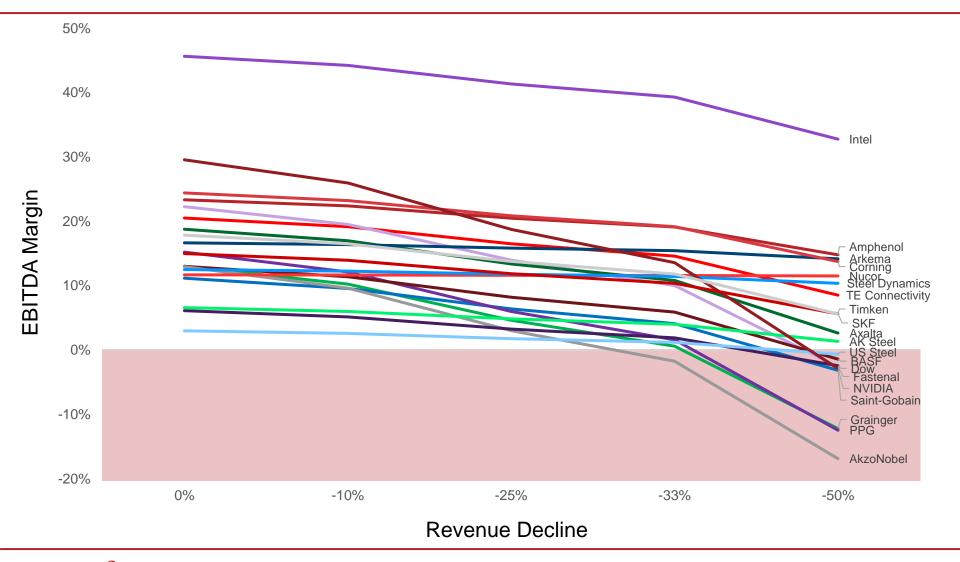
- Low cash cushions might make it more difficult for companies to rapidly reopen and ramp up operations
- Companies that need to raise additional capital may risk violating credit covenants

Projected EBITDA Impact



Risk Exposure

Companies will undergo varying degrees of stress depending upon how much their revenue declines.





Interest Coverage

Before the crisis, benchmarked companies could cover interest expenses¹, however several may not be able to meet obligations if sales decline by more than 30%.

	Annual Revenue Decline							
	0%	-5%	-10%	-20%	-30%	-40%	-50%	-60%
AK Steel	2.9	2.6	2.3	1.8	1.3	0.8	0.3	(0.2)
AkzoNobel	15.8	13.2	10.6	5.4	0.1	(5.1)	(10.3)	(15.5)
Amphenol	15.8	14.8	13.7	11.5	9.4	7.2	5.0	2.9
Arkema	12.6	11.8	11.1	9.7	8.2	6.8	5.3	3.9
Axalta	5.2	4.7	4.2	3.2	2.3	1.3	0.4	(0.6)
BASF	16.6	14.8	13.1	9.6	6.1	2.6	(0.9)	(4.4)
Corning	12.7	11.8	10.9	9.1	7.2	5.4	3.6	1.8
Dow	2.8	2.5	2.1	1.5	0.8	0.1	(0.6)	(1.2)
Fastenal	85.5	76.4	67.4	49.3	31.2	13.1	(5.0)	(23.1)
Grainger	19.0	16.2	13.4	7.8	2.3	(3.3)	(8.9)	(14.4)
Intel	67.2	62.9	58.6	50.0	41.3	32.7	24.1	15.5
Micron	67.4	65.9	64.5	61.5	58.6	55.6	52.7	49.7
Nucor	21.7	20.6	19.5	17.3	15.1	12.9	10.7	8.5
NVIDIA	62.1	55.6	49.0	36.0	23.0	10.0	(3.0)	(16.0)
PPG	17.5	15.0	12.5	7.6	2.7	(2.2)	(7.1)	(12.1)
Saint-Gobain	17.4	15.4	13.4	9.5	5.5	1.5	(2.5)	(6.4)
SKF	17.2	15.8	14.4	11.6	8.8	6.0	3.2	0.4
Steel Dynamics	10.3	9.7	9.1	7.9	6.7	5.5	4.3	3.1
TE Connectivity	54.2	49.9	45.6	37.0	28.4	19.8	11.3	2.7
Timken	9.4	8.6	7.8	6.2	4.6	3.1	1.5	(0.1)
US Steel	2.7	2.4	2.1	1.5	0.9	0.3	(0.3)	(0.9)



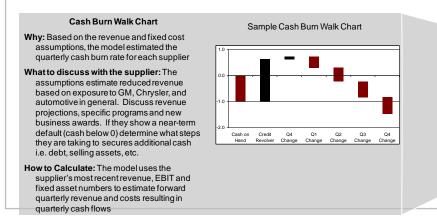
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Risk Identification

Risk Assessment

- Review financial statements and analyze key metrics determine level of supplier risk
- Rank suppliers in terms of potential short term and long term stress
- Identify actions to address with the supply base, depending on level of risk



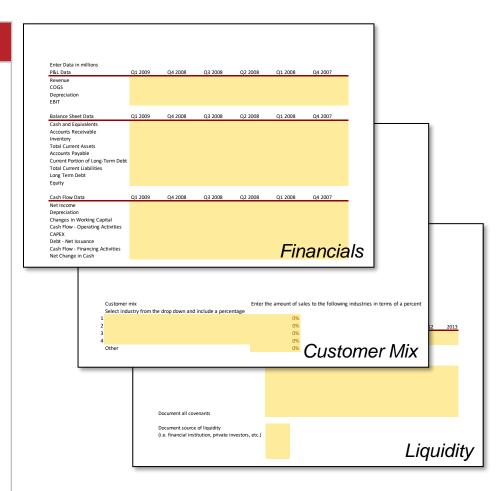




Supplier Engagement

Supplier Interviews

- Determine proper topics to address for both public and private suppliers to gauge financial risk
- Quantify supplier initiatives to reduce cash burn rates to maintain solvency
- Identify ownership structures and financing for private companies
- Calculate credit revolver covenants and understand supplier cash consequences for default
- Apply standard templates to collect financials from private suppliers

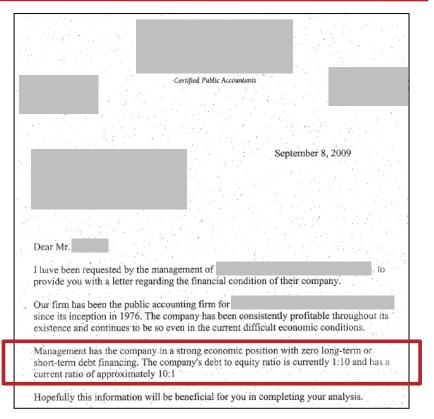


Private Supplier Assessment

Gut Check Data Received

- Suppliers may view this data request as unimportant and simply provide information to make the problem go away
- Thus, the materials provided will likely have unintentional missing information, incorrect information, or contradictory information

Examples





Supplier Engagement

	Liquidity	Viability	Volume
What to Ask	 Credit covenants Sources of short term cash Ownership of equity and their access to capital 	 Manufacturing footprint (e.g. components from sties deemed 'nonessential') Stability of contracts Sole sourced components 	Capacity reductionCash managementSafety stock levels
Key Data	Interest Coverage CAPEX limits	 Quantify initiatives and timing for cost reduction activities such as SG&A reduction, plant consolidation and business segment disposition 	 Cash Conversion Cycle Working capital initiatives



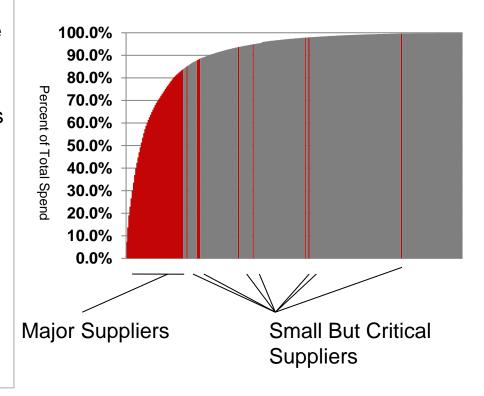
Supplier Prioritization

Risk assessment can be prioritized for large as well as small but critical suppliers.

Prioritized Approach

- Resources should be focused on major suppliers as well as suppliers that provide supply-critical components
- Working with manufacturing and engineering highlights critical components
- Working with supply chain highlights limited sources for critical components
- Efforts should be narrowed to the most critical suppliers

Supplier Focus by Spend





Supply Continuity

A daily call is critical as conditions are changing rapidly.

Supplier Name	Date of last interview					State		City		Zip Code		
	March (Sample Data)											
	16	17	18	19	20	23	24	25	26	27	30	31
Absentee Rate	3%	3%	2%	5%	5%	9%	8%	3%	12%	15%	13%	
On-Site Procedures												
PPE - Facemask		No	No									
PPE - Gloves	No	No	No	No	No	No	No	No	No	No	No	
Social Distancing	No	No	No	No	No	No	No	No	No	No	No	
Temperature Check	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	
Paid Sick Leave	No	No	No	No	No	No	No	No	No	No	No	
State / Local Restrictions												
Deemed Essential	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
No Restrictions	Yes	Yes										
Non-Essential Businesses		Yes										
Stay At Home Order									Yes	Yes	Yes	
Local Rate of Infection	0.03%	0.03%	0.04%	0.06%	0.07%	0.08%	0.10%	0.12%	0.13%	0.16%	0.20%	
Tier 2 Supplier Assessment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

A standardized and consistent approach to critical suppliers will identify trends and sounds alarms when conditions deteriorate.

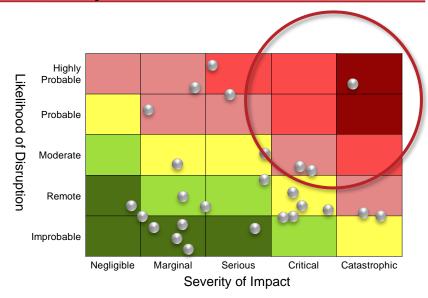
Risk Management Playbook

Developing counter measures for the riskiest suppliers

Focus Area

- Cost and Capital will work to develop risk mitigation playbooks for the identified high-risk, high-impact suppliers
- For each identified supplier, a specific contingency roadmap will be created with event triggers and defined countermeasures

Criticality Matrix



Private Supplier Process

Cost & Capital's private supplier evaluation

Send financial template to supplier

Review data

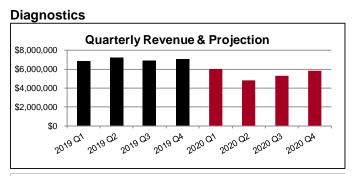
Interview CFO

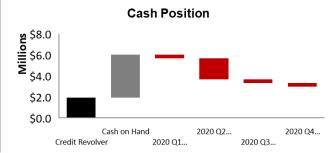
Quantify risk

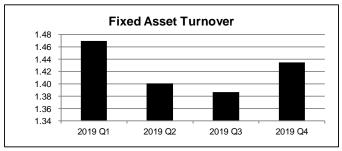
- Use the Cost & Capital template for P&L, Balance Sheet and Cash Flow
- Evaluate submission and calculate key ratios
- Assess liquidity position
- Gauge risk due to customer mix
- Interview CFO or controller to add detail behind the submitted template
- Generate risk profile for supplier

	LT Debt / Equity	LT Debt / EBITDA	LT Debt Due in One Year	EBITDA / Interest Coverage	EBITDA Margin	Current Ratio	NTM Cash Required / (Cash + Credit)	(Cash + Credit) / Revenue	Z-Score	Risk
ABB	67.0%	12.0x	25%	3.5x	2.7%	131%	51%	21%	1.53	Moderate
Nidec	69.7%	12.5x	12%	5.7x	3.6%	145%	54%	15%	1.60	Moderate
Regal Beloit	48.4%	11.8x	0%	1.8x	3.0%	287%	0%	23%	1.85	Moderate
Yaskawa	79.9%	42.2x	25%	6.0x	1.0%	189%	7%	10%	2.07	Moderate
WEG	26.2%	3.2x	41%	9.1x	5.3%	217%	19%	25%	1.71	Remote
Emerson	71.3%	7.7x	33%	3.8x	4.2%	114%	41%	28%	3.01	Remote
Ametek	54.1%	7.7x	18%	4.1x	7.0%	142%	0%	27%	1.90	Remote









Cash Metrics	
LT Debt / Equity Ratio	0.67
Current Portion of LT Debt / Total Capital	0.10
Current Assets / Current Liabilities	1.31
LT Debt / Trailing EBITDA	11.98
Percent of Debt Due in One Year	25.2%
Projected Change in Cash / Revenue NTM	(13.9%)
Cash Requirement NTM / Cash on Hand	74.5%
Cash Requirement NTM / Available Credit	161.5%
Cash Requirement NTM / (Cash + Credit)	51.0%
Cash and Cash Equivalents / Revenue NTM	18.6%
Credit Revolver Available / Revenue NTM	8.6%

Volume Metrics

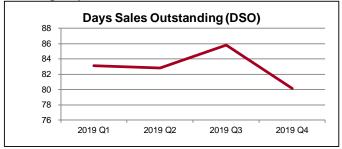
Projected FY 2020 Volume vs. FY 2019	78.8%
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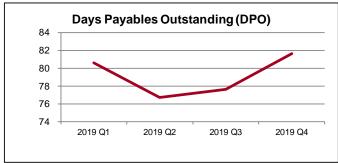
COGS / Sales

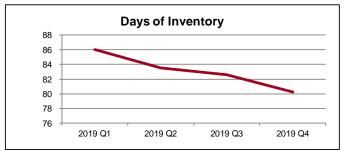
SG&A / Sales	19.3%
CAPEX / Sales	3.3%
Operating Profit Margin	7.2%
Days Sales Outstanding (DSO)	80.1
Days Payables Outstanding (DPO)	81.6
DSO / DPO	1.0
Days of Inventory	80.23
Cash Conversion Cycle	78.7
Working Capital Turnover	1.11
Fixed Asset Turnover	1.44

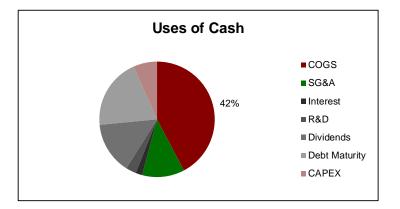


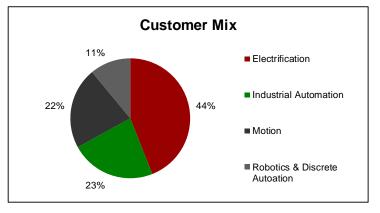
Working Capital Performance

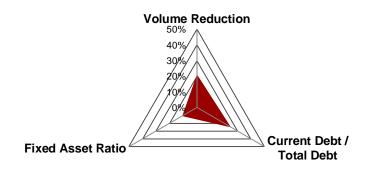












Z Score	1.53
Working Capital / Total Assets	0.13
Retained Earnings / Total Assets	0.43
EBIT / Total Assets	0.05
Market Value fo Equity / Total Liabilities	0.00
Revenue / Total Assets	0.61

NTM Projected C&CE Score	3.78
Cash Flow / Revenue	3.0%
Cash Flow / Capital Employed	13.5%
Cash Flow / Debt	7.4%
Cash Flow / Current Liabilities	3.3%
Cash Flow / Equity	4.9%
Cash / Capital Employed	82.8%
Cash / Debt	45.4%
Cash / Current Liabilities	20.3%
Cash / Equity	30.4%



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Cost & Capital Partners Introduction

- Cost & Capital Partners focuses on the two most critical levers for shareholder value today - Cost Efficiency and Capital Efficiency
 - Cash should be treated as the valuable resource it is
 - Spend management preserves cash
 - Capital efficiency frees cash trapped in traditional operations
- We deliver results not just recommendations, each and every time
 - We stand behind our recommendations and prefer to be involved in implementation
 - We conduct negotiations on behalf of our clients
 - We are passionate about our work and the results
 - We work with our clients to implement the changes required to improve the business

Previous project work













































Risk Management

Packaging – Chemicals





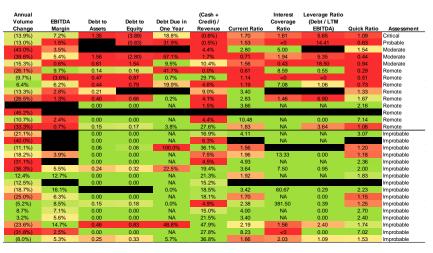
Engagement Overview

- Cost & Capital was asked to review risk factors for packaging suppliers for a maker of lawn and garden care products
- The team analyzed and audited packaging suppliers to determine the level of risk in the supply chain due to financial strain, capacity and cost reduction initiatives
- Suppliers were segmented into low, medium, high and critical risk suppliers
- Detailed agendas were created to engage the suppliers and develop risk mitigation plans

Risk Management

Supplier Risk Management – Industrial Equipment

Rating	Financial Ratio	Value	Comment
	Annual Volume Change	(13.0%)	
	EBITDA Margin	1.5%	Very low cash generation from operations
	Debt to Assets	NA	5.1MM debt (25% of sales)
	Debt to Equity	(0.83)	Negative equity levels suggest financial distress
	Debt Due in One Year	31.9%	Large debt principal payment due in next 12 months
	(Cash + Credit) / Revenue	(0.5%)	No cash on hand and company did not disclose available credit line
	Current Ratio	1.53	Working capital ratios show signs of financial distress
	Interest Coverage Ratio	< 0	
	Debt to EBITDA Ratio	14.41	
	Quick Ratio	0.63	



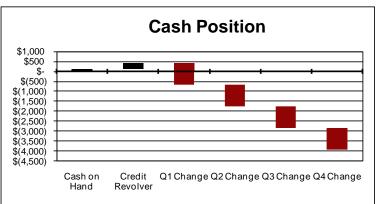
Engagement Overview

- A global industrial company needed to assess several dozen private suppliers for financial risk
- Templates were distributed to the suppliers and interviews were conducted to determine key operating and cash metrics
- Second round interviews were held to uncover any inconsistencies in data that was submitted
- Suppliers' financial risk was ranked and reported to management and risk mitigation plans were developed

Risk Management

Supplier Risk Management – Industrial Equipment





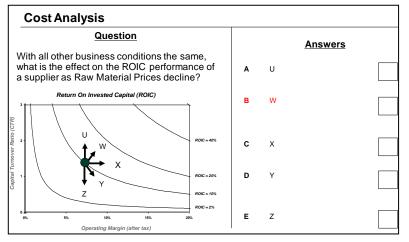
Engagement Overview

- Maintaining plant continuity during a credit crunch, a major automotive OEM tasked the team with identifying troubled suppliers beyond D&B ratings for private suppliers
- Suppliers were audited and key cash burn rate details were summarized to identify the more critical suppliers to monitor
- Each supplier was assessed for access to credit, cash as well as upcoming debt maturities
- The resulting analysis helped the client to consolidate the supply base and manage reduced volumes

Cost Reduction

Skills Development – Industrial Equipment





Engagement Overview

- A global industrial equipment supplier needed to gauge the level of supply chain competence within a new structured organization
- Leveraging the experience and materials from supporting sourcing projects across multiple industries, the team developed a set of assessment questions for each competency area:

BenchmarkingCost Analysis

Finance Market Knowledge

Negotiations Risk Management

Value Chain Analysis



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