The points mentioned in the last round still hold good. Major observations:

- If your products are not selling well – your company will be in trouble. **Please keeps an eye on the customer buying criteria for each segment.** Please give the customers what they want. Please spend on awareness and accessibility. Sell more and sell with better margins – everything will fall in place.
- New products? Why aren't you launching them? They will help you capture more market share
- Forecasting - huge unsold inventories! Or large stock outs. Forecasting is paramount.
- Financial management needs more attention. Teams are spending huge amounts of plant addition/automation and funding large parts of it with current debt! Do you go and buy a house with a credit card? Also, they're taking on long term debt and retiring some of the same in the same year! Issuing bonds and retiring them early costs money. Remember the capital structure of the firm is a policy decision. It should not keep changing with the weather.
- Greater scope to improve awareness and accessibility.

Some Points Common to all Industries

- Many teams have still got an emergency loan. But that was highly avoidable. Please pay attention to your cash account. Please cover with enough funds to cater to your worst-case scenarios. Remember, emergency loans are the most expensive source of funds in the simulation. You could comfortably have raised those funds through short-term borrowing and long-term bonds and/or stock issue (and paid much lesser interest expense). Emergency loans depress your stock price significantly, as stock holders question the poor management of the company. Please borrow enough to repay back this emergency loan in the current year. In the finance spreadsheet please ensure that your ending cash balance is between 10-15% of your annual sales. You would want to increase this figure if you forecasts are ambitious. You may want to reduce it if you feel your forecasts are on the dot and you know precisely what your competitors will be doing.
- Please keep an eye on the margins. Some teams have let the margins slip. Make sure you have sufficient margins to cover your costs. You may continue to sell more with these slim margins, but may not turn a profit. Please examine and remedy. Please read the note on margins below.
- Please be long term oriented. It may not be wise to sacrifice long term potential profits for short terms gains. Remember; as the market grows there may be more money to be made in the latter half of the simulation rounds than the former. Therefore.......act accordingly.
- If you want to capture more market share, please launch your arsenal of products faster. If the products are finally going to make money, it makes sense to launch them sooner rather than later. Good to see most teams are doing that. Some are not...
- In Round 3, TQM initiatives have started. Please read the flags on each cell and make investments accordingly - TQM investments can cut material cost,

reduce R&D cycle time, improve worker productivity and increase demand. Please ensure you manage your cash account as you make these investments. While inputting your decisions in the TQM sheet on Capstone, observe the worst case and best case benefits that accrue to you.

Industry and Team Specific Points

C130943

Erie and Ferris missed this round.

General: Decent round. Low sales for Erie. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for Andrews, Digby and Ferris. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Andrews and Ferris had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. Chester had the highest profits for this round. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Chester, Digby and Erie had a rise in stock price of $26/share, $0.3/share and $14/share respectively. **Andrews, Baldwin and Ferris's** stock price remained constant at $1/share due to their losses and emergency loans. Would you like to invest in a company that cannot pay its bills on time? An emergency loan is a similar situation. **Digby** distributed dividends higher than their EPS. Stockholders do not respond to dividends beyond the EPS, they consider them unsustainable. For example, if an EPS is $1.50 per share, and the dividend is $2.00 per share, stockholders would ignore anything above $1.50 per share as a driver of stock price. **Chester** is the most valuable company with a market capitalization of **$78M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Andrews, Baldwin and Digby had a rise in market share of 4.1%, 2.9% and 1.2% respectively. **Chester, Erie and Ferris had a fall** in market share of 0.1%, 5.2% and 2.9% respectively. Losing customers in the early years is a bad idea. The attempt should be to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, “Will competitors realize we have expanded our credit terms? All of them?”

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company’s Marketing worksheet. As they vary the A/R policy, they should watch the computer’s demand forecast.

Profits: Andrews, Baldwin and Ferris had bottom lines in red. The reasons are simple:

- Low Contribution Margins for Andrews and Ferris
- High Interest Expense for Andrews and Ferris
- High Unsold Inventory Levels for Andrews and Ferris (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Andrews and Chester: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Andrews, Digby and Ferris need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Andrews and Ferris have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Andrews - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $15.2M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You have large unsold inventories of over $196M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $23.5M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long-term debt of $229M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Retire Adam, Aft and Agape by selling their entire plant capacity. This will free up some of your cash.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Ferris - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $220M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $26.4M as inventory carrying costs) and depressed profits

- Previous years' emergency loan and long term debt of $164.6M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Retire Fist, Foam and Fume by selling their entire plant capacity. This will free up some of your cash.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Andrews, Baldwin, Chester and Erie have not even used the complete first shift capacity of their plants. **Erie,** for example could have produced the same quantity of products using 14% of their current first shift capacity. This would have reduced their depreciation by 86%.

Asset Turnover: Andrews and Ferris need to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Andrews and Ferris are high. Large stock outs are also seen in all segments for **Baldwin, Chester and Erie**. This is equally damaging. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Fast leads the industry. Eat has low market share in this segment. Able has inappropriate age (too high) for the segment (age has an importance of 47% in this segment). Eat is overpriced (outside the price range thereby diminishing demand). Remember, price has an importance of 23% in this segment). All products need improvement in their position (performance and size) in the segment. Fast, Daze, Cake and Eat need improvement in accessibility.

- **Low End Segment:** Feat leads the industry. Baker and Fast have low market share in this segment. Ebb, Baker and Fast are overpriced (outside the price range, Price has an importance of 53% in this segment). Dell, Baker and Fast have inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Dell, Ebb and Cedar need improvement in accessibility.
- **High End Segment:** Bid leads the industry. Fist has low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Duck, Echo and Fist have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Bid, Duck, Echo and Fist are overpriced (outside the price range). Cid and Fist need increased levels of awareness. All products need improvement in accessibility.
- **Performance Segment:** Bold leads the industry. Edge has low market share in this segment. Dot, Aft and Foam have low MTBF (MTBF has an importance of 43% in the segment). All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Edge is overpriced (outside the price range). Aft, Foam and Edge have inappropriate age (too high) for the segment. Dot, Coat and Foam need increased levels of awareness. All products need improvement in accessibility.
- **Size Segment:** Cure leads the industry. Agape and Egg have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Fume, Agape and Egg has inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Egg is overpriced (outside the price range). Cure, Dune and Fume need increased levels of awareness. All products need improvement in accessibility.

Financial Management: Chester is not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: **Andrews, Digby, Erie and Ferris** do not seem keen to improve the productivity of their employees? As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130944

Ferris missed this round.

General: Low sales for Erie and Ferris. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for all teams except Digby. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Erie and Ferris had bottom lines in red. Baldwin, Chester, Digby and Erie had emergency loans. Digby had the highest profits for this round. Andrews leads the industry in terms of cumulative profits. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Andrews and Digby had a rise in stock price of $0.5/share and $0.03/share respectively. **Ferris's** stock price remained constant at $1/share. **Baldwin, Chester and Erie** had a fall in stock price of $8/share, $16/share and $23/share respectively due to their losses and emergency loans. Would you like to invest in a company that cannot pay its bills on time? An emergency loan is a similar situation. **Andrews** is the most valuable company with a market capitalization of **$117M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Andrews, Baldwin, Chester and Digby had a rise in market share of 2.3%, 0.6%, 0.6% and 5.5% respectively. **Erie and Ferris had a fall** in market share of 4% and 5% respectively. Losing customers in the early years is a bad idea. The attempt should be to

take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, "Will competitors realize we have expanded our credit terms? All of them?"

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company's Marketing worksheet. As they vary the A/R policy, they should watch the computer's demand forecast.

Profits: Erie and Ferris had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- High Interest Expense for Ferris
- High Unsold Inventory Levels (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Erie: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Andrews, Baldwin, Chester, Erie and Ferris need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Baldwin, Chester, Digby and Erie have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Baldwin - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $33.6M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You have large unsold inventories of over $38M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $4.6M as inventory carrying costs) and depressed profits
- Previous years' current debt of $3M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Chester – For a cash outflow of $28.2M (plant improvements + retirement of current debt), you did not raise any funds through debt or equity. Remember assets = liabilities plus equity. You increased assets (larger plant) but did not fund it adequately with debt and equity. Where will the cash come from? In the next round, remember to raise funds from stock issues, long term and current debt to repay this emergency loan. See note in red below:

Digby – For a cash outflow of $26.5M (plant improvements + retirement of current debt), you did not raise any funds through debt or equity. Remember assets = liabilities plus equity. You increased assets (larger plant) but did not fund it adequately with debt and equity. Where will the cash come from? In the next round, remember to raise funds from long term and current debt to repay this emergency loan. See note in red below:

Erie - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $6M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You have large unsold inventories of over $48M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $5.8M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long-term debt of $13.9M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Erie has not even used the complete first shift capacity of their plants.

Asset Turnover: Erie and Ferris need to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Baldwin, Erie and Ferris are high. Large stock outs are also seen in some segments for **Andrews and Digby**. This is equally damaging. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Able leads the industry. Fast, Eat, Drum and Dude have low market share in this segment. Dude is overpriced (outside the price range thereby diminishing demand). Remember, price has an importance of 23% in this segment). Fast, Eat and Drum need improvement in their position (performance and size) in the

segment. Drum needs increased levels of awareness. (It has awareness of only 46% and hence 54% of the market does not know about your product). Fast and Eat need improvement in accessibility.

- **Low End Segment:** Bead leads the industry. Feat has low market share in this segment. Acre has inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Feat needs improvement in its position (performance and size) in the segment. All teams need improvement in accessibility.
- **High End Segment:** Duck leads the industry. Cid, Ace and Dude have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Echo and Cid have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Ace has poor MTBF. Duck, Bid, Adam and Cid are overpriced (outside the price range). Ace needs increased levels of awareness. Bid, Echo and Cid need improvement in accessibility.
- **Performance Segment:** Dot leads the industry. Edge has low market share in this segment. Edge has low MTBF (MTBF has an importance of 43% in the segment). All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Coat and Edge have inappropriate age (too high) for the segment. All products need improvement in accessibility.
- **Size Segment:** Buddy leads the industry. Egg and Ace have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Egg has inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Buddy, Dune, Agape and Cure are overpriced (outside the price range). Ace needs increased levels of awareness. All products need improvement in accessibility.

Financial Management: **Andrews** is not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: **Ferris** does not seem keen to improve the productivity of their employees? As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130945

Andrews, Chester and Digby missed this round.

General: Low sales for Andrews and Digby. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for Andrews, Digby and Ferris. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Andrews and Digby had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. Chester had the highest profits for this round. They lead the industry in terms of cumulative profits. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Baldwin and Chester had a rise in stock price of $25/share and $15/share respectively. **Andrews, Digby, Erie and Ferris** had a fall in stock price of $32/share, $31/share, $8/share and $18/share respectively due to their losses and/or emergency loans. Would you like to invest in a company that cannot pay its bills on time? An emergency loan is a similar situation. **Chester** is the most valuable company with a market capitalization of **$193M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Baldwin and Ferris had a rise in market share of 2% and 8.2% respectively. **Andrews, Chester, Digby and Erie had a fall** in market share of 1.7%, 2.9%, 5.1% and 0.7% respectively. Losing customers in the early years is a bad idea. The attempt should be

to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, "Will competitors realize we have expanded our credit terms? All of them?"

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company's Marketing worksheet. As they vary the A/R policy, they should watch the computer's demand forecast.

Profits: Andrews, Digby and Ferris had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- High Interest expense for Digby
- High SG&A compared to sales for Digby
- High Unsold Inventory Levels for Andrews and Digby (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Andrews and Digby: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Andrews, Digby and Ferris need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Andrews, Digby and Erie have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Andrews - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $63M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $7.5M as inventory carrying costs) and depressed profits
- Previous years' long term debt of $7M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Digby - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $69M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $8.3M as inventory carrying costs) and depressed profits
- Previous years' long term debt of $7M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity

- Raise funds from long term and current debt to repay this emergency loan.

Erie – For a cash outflow of $19.8M (plant improvements + retirement of current debt), you raised $6M through equity. Remember assets = liabilities plus equity. You increased assets (larger plant) but did not fund it adequately with debt and equity. Where will the cash come from? In the next round, remember to raise funds from long term and current debt to repay this emergency loan. See note in red below:

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Andrews, Digby and Erie have not even used the complete first shift capacity of their plants. **Digby,** for example could have produced the same quantity of products using 37% of their current first shift capacity. This would have reduced their depreciation by 63%.

Asset Turnover: Andrews and Digby need to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Andrews and Digby are high. Large stock outs are also seen in all segments for **Chester**. This is equally damaging. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Baker leads the industry. Foam, Able, Daze and Feat have low market share in this segment. Baker, Able, Daze and Feat have inappropriate age (too high) for the segment (age has an importance of 47% in this segment). Cake is overpriced (outside the price range thereby diminishing demand). Remember, price has an importance of 23% in this segment). Except Fast and Cake, all products need improvement in their position (performance and size) in the segment. Able and Daze need improvement in accessibility.
- **Low End Segment:** Cedar leads the industry. Crème and Dell have low market share in this segment. Creme has inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Dell needs improvement in its position (performance and size) in the segment. Feat, Acre and Dell need improvement in accessibility.
- **High End Segment:** Bid leads the industry. Adam, Duck and Foam have low market share in this segment. All products need improvement in their position (performance

and size) in the segment (Ideal position has an importance of 43% in the segment). Cid, Echo, Adam and Duck have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Fist has poor MTBF. Cid and Echo are overpriced (outside the price range). Adam and Duck need increased levels of awareness. Cid, Adam and Duck need improvement in accessibility.

- **Performance Segment:** Bold leads the industry. Aft has low market share in this segment. Foam, Edge and Aft have low MTBF (MTBF has an importance of 43% in the segment). All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Coat is overpriced (outside the price range). Coat, Edge and Aft have inappropriate age (too high) for the segment. Aft needs increased levels of awareness. Coat, Foam and Aft need improvement in accessibility.
- **Size Segment:** Fume leads the industry. Egg and Agape have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Except Fume, all products have inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Fume and Cure are overpriced (outside the price range). Agape needs increased levels of awareness. Fume, Cure and Agape need improvement in accessibility.

Financial Management: **Baldwin and Chester** are not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- ***Can we find investments that generate a higher return than the cost of the funding***
- ***What is the risk that our investments will not produce the expected return?***

HR Module: **Baldwin, Digby, Erie and Ferris** do not seem keen to improve the productivity of their employees? As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130946

General: Low sales for Erie and Ferris. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for all teams. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Andrews, Chester, Erie and Ferris had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Digby had a rise in stock price of $20/share. **Andrews, Erie and Ferris's** stock price remained constant at $1/share. **Baldwin and Chester** had a fall in stock price of $16/share and $8/share respectively due to their losses and/or emergency loans. Would you like to invest in a company that cannot pay its bills on time? An emergency loan is a similar situation. **Chester** is the most valuable company with a market capitalization of **$68M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Andrews, Baldwin, Digby and Ferris had a rise in market share of 1.2%, 2.5%, 4.1% and 2.6% respectively. **Chester and Ferris had a fall** in market share of 4.2% and 6.2% respectively. Losing customers in the early years is a bad idea. The attempt should be to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, "Will competitors realize we have expanded our credit terms? All of them?"

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company's Marketing worksheet. As they vary the A/R policy, they should watch the computer's demand forecast.

Profits: Andrews, Chester, Erie and Ferris had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- High Interest expense for Andrews and Erie
- High Unsold Inventory Levels for Andrews, Erie and Ferris (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Andrews and Ferris: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: All teams need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Andrews, Baldwin, Chester, Erie and Ferris have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Andrews - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $111M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $13.3M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long term debt of $137M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Baldwin - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $28.5M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You have large unsold inventories of over $36M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $4.3M as inventory carrying costs) and depressed profits
- Previous years' current debt of $3M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)

- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Chester – For a cash outflow of $33.7M (plant improvements + retirement of long term and current debt), you did not raise any funds through debt or equity. Remember assets = liabilities plus equity. You increased assets (larger plant) but did not fund it adequately with debt and equity. Where will the cash come from? In the next round, remember to raise funds from long term and current debt to repay this emergency loan. See note in red below:

Erie - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $173M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $20.7M as inventory carrying costs) and depressed profits
- Previous years' emergency loan, long term and current debt of $87.7M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Ferris - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $99M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $12M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long term debt of $157M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock

issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Andrews and Ferris have not even used the complete first shift capacity of their plants. Ferris, for example could have produced the same quantity of products using 9% of their current first shift capacity. This would have reduced their depreciation by 91%.

Asset Turnover: Andrews, Erie and Ferris need to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Andrews, Baldwin, Erie and Ferris are high. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own.** Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Cake leads the industry. Eat and Ebb have low market share in this segment. Eat and Ebb have inappropriate age (too high) for the segment (age has an importance of 47% in this segment). Able, Fast, Eat and Ebb need improvement in their position (performance and size) in the segment. Fast and Ebb have poor MTBF. Baker, Fast, Ebb and Eat need improvement in accessibility.
- **Low End Segment:** Dell leads the industry. Ebb has low market share in this segment. Dell, Cedar and Ebb have inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Bead, Feat and Ebb need improvement in accessibility.
- **High End Segment:** Cid leads the industry. Echo and Fist have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Except Cid, all products have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Fist has poor MTBF. Cid and Bid are overpriced (outside the price range). Except Cid, all products need improvement in accessibility.
- **Performance Segment:** Coat leads the industry. Edge and Foam have low market share in this segment. Aft, Edge and Foam have low MTBF (MTBF has an importance of 43% in the segment). Dot, Bold, Foam and Aft need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Edge is overpriced (outside the price range). Dot, Aft, Edge and Foam have inappropriate age (too high) for the segment. Edge and Foam need increased levels of awareness. Except Coat, all products need improvement in accessibility.
- **Size Segment:** Agape leads the industry. Egg and Fume have low market share in this segment. Except Cure, all products need improvement in their position

(performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Dune, Egg and Fume have inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Fume has poor MTBF. Cure and Dune are overpriced (outside the price range). Buddy, Dune, Egg and Fume need improvement in accessibility.

Financial Management: **Chester and Digby** are not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: **Andrews, Baldwin, Chester and Digby** do not seem keen to improve the productivity of their employees? As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130947

Erie missed this round.

General: Low sales for Erie. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for Andrews, Chester, Digby and Erie. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Andrews, Chester and Erie had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. Ferris had the highest profits for this round. They lead the industry in terms of cumulative profits. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Baldwin, Digby, Erie and Ferris had a rise in stock price of $0.9/share, $9/share, $0.7/share and $16/share respectively. Andrews's stock price remained constant at $1/share. **Chester** had a fall in stock price of $12/share. **Ferris** is the most valuable company with a market capitalization of **$162M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Andrews, Chester and Ferris had a rise in market share of 0.2%, 10.2% and 1.4% respectively. **Baldwin, Digby and Erie had a fall** in market share of 2.5%, 4% and 5.3% respectively. Losing customers in the early years is a bad idea. The attempt should be to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, “Will competitors realize we have expanded our credit terms? All of them?”

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company’s Marketing worksheet. As they vary the A/R policy, they should watch the computer’s demand forecast.

Profits: Andrews, Chester, Digby and Erie had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- High Unsold Inventory Levels for Andrews, Digby and Erie (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Andrews and Erie: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Andrews, Chester, Digby and Erie need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Andrews, Chester and Erie have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Andrews – For a cash outflow of $97.8M (retirement of current debt), you raised $37.5M through debt, equity and sale of plant. Where will the cash come from? You also have high unsold inventory worth $50M which is blocking cash. In the next year, please make realistic forecasts and do not overproduce inventory. In the next round, remember to raise funds from stock issues, long term and current debt to repay this emergency loan. See note in red below:

Chester - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $9M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You bought back (retired) long term debt of $5M
- Negative cash flow from operations worth $22M
- Previous years' long-term debt of $7M which was repaid in the current year.

All this caused a huge outflow of cash that you did not have:
Therefore, in the next round:

- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Erie - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $43M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $5.1M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long-term debt of $37.7M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Andrews, Baldwin and Erie have not even used the complete first shift capacity of their plants. **Erie,** for example could have produced the same quantity of products using 30% of their current first shift capacity. This would have reduced their depreciation by 70%.

Asset Turnover: Erie and Ferris need to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Andrews, Digby and Erie are high. Large stock outs are also seen in some segments for **Andrews and Baldwin**. This is equally damaging. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Cake leads the industry. Eat and Cedar have low market share in this segment. Eat and Cedar have inappropriate age (too high) for the segment (age has an importance of 47% in this segment). Daze, Eat and Cedar need improvement in their position (performance and size) in the segment. Able needs increased levels of awareness. Fast, Daze, Able and Eat need improvement in accessibility.
- **Low End Segment:** Feat leads the industry. Acre, Eat and Daze have low market share in this segment. Daze is overpriced (outside the price range, Price has an importance of 53% in this segment). Bead and Daze have inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Dell needs improvement in its position (performance and size) in the segment. Ebb and Acre need increased levels of awareness. Feat and Acre need improvement in accessibility.

- **High End Segment:** Cid leads the industry. Echo and Aft have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Fist, Duck, Adam and Echo have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Adam and Echo are overpriced (outside the price range). Adam, Echo and Aft need increased levels of awareness. Fist, Duck, Adam, Echo and Aft need improvement in accessibility.
- **Performance Segment:** Dot leads the industry. Edge and Aft have low market share in this segment. Edge has low MTBF (MTBF has an importance of 43% in the segment). Except Aft, all products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Aft is overpriced (outside the price range). Dot, Coat and Edge have inappropriate age (too high) for the segment. Dot, Foam, Edge and Aft need increased levels of awareness. Except Bold, all products need improvement in accessibility.
- **Size Segment:** Cure leads the industry. Buddy and Egg have low market share in this segment. All products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Egg has inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Agape is overpriced (outside the price range). Agape and Egg need increased levels of awareness. Except Cure, all products need improvement in accessibility.

Financial Management: **Baldwin** is not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: **Andrews, Baldwin, Chester and Erie** do not seem keen to improve the productivity of their employees? As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130948

General: Well played round. Low sales for Chester. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for Baldwin, Chester and Erie. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Baldwin and Chester had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. Ferris had the highest profits for this round. They lead the industry in terms of cumulative profits. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Andrews and Erie had a rise in stock price of $10/share and $4/share respectively. **Baldwin's** stock price remained constant at $1/share. **Chester and Digby** had a fall in stock price of $2/share and $3/share respectively. **Ferris** is the most valuable company with a market capitalization of **$118M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Andrews, Erie and Ferris had a rise in market share of 2.6%, 3.6% and 4.1% respectively. **Baldwin, Chester and Digby had a fall** in market share of 2.8%, 4.8% and 2.6% respectively. Losing customers in the early years is a bad idea. The attempt should be to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, “Will competitors realize we have expanded our credit terms? All of them?”

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company’s Marketing worksheet. As they vary the A/R policy, they should watch the computer’s demand forecast.

Profits: Baldwin and Chester had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- High Interest Expense for Baldwin
- High Unsold Inventory Levels (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Baldwin, Chester and Erie need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: Baldwin and Chester have emergency loans. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Baldwin – For a cash outflow of $71.3M (retirement of current debt), you raised $26.5M through debt, equity and sale of plant. Remember assets = liabilities plus equity. You increased assets (larger plant) but did not fund it adequately with debt and equity. Where will the cash come from? You also have high unsold inventory worth $27.9M which is blocking cash. In the next year, please make realistic forecasts and do not overproduce inventory. In the next round, remember to raise funds from long term and current debt to repay this emergency loan. See note in red below:

Chester – You raised sufficient funds but have high unsold inventory worth $27.6M which is blocking cash. In the next year, please make realistic forecasts and do not overproduce inventory. In the next round, remember to raise funds from long term and current debt to repay this emergency loan. See note in red below:

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: Baldwin, Chester and Digby have not even used the complete first shift capacity of their plants. **Chester,** for example could have produced the same quantity of products using 36% of their current first shift capacity. This would have reduced their depreciation by 64%.

Asset Turnover: Chester needs to work their assets harder as they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: The inventory levels of Baldwin and Chester are high. Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Able leads the industry. Cake and Bead have low market share in this segment. Cake is overpriced (outside the price range thereby diminishing demand). Remember, price has an importance of 23% in this segment). Daze and Bead need improvement in their position (performance and size) in the segment. Bead has poor MTBF. Except Able, all products need improvement in accessibility.
- **Low End Segment:** Ebb leads the industry. Bead and Fast have low market share in this segment. Dell and Bead have inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Except Acre, all products need improvement in accessibility.
- **High End Segment:** Fox leads the industry. Adam, Cid and Edge have low market share in this segment. All human team products need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Bid, Adam and Cid have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Bid and Adam are overpriced (outside the price range). Exel needs increased levels of awareness. Duck, Bid and Cid need improvement in accessibility.
- **Performance Segment:** Foam leads the industry. Coat and Dot have low market share in this segment. Aft, Coat and Dot have low MTBF (MTBF has an importance of 43% in the segment). Dot, Edge and Aft need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Aft, Bold, Coat and Dot are overpriced (outside the price range). Aft and Coat have inappropriate age (too high) for the segment. Bold, Coat and Dot need increased levels of awareness. All products need improvement in accessibility.
- **Size Segment:** Fume leads the industry. Buddy and Cure have low market share in this segment. All human team products need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Cure has inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Buddy and Cure are overpriced (outside the price range). Dune, Buddy and Cure need increased levels of awareness. All products need improvement in accessibility.

Financial Management: **Digby** is not too keen on taking on leverage. Leverage as explained in the previous round can improve your ROE to a great extent. Please make growth investments: if you are, you will need both equity and fresh debt.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: Teams need to further improve the productivity of their employees. As an old saying goes “you pay peanuts, you get monkeys”. Would you rather have trained professionals or monkeys?

C130949

General: Low sales for Andrews and Baldwin. You took over the management of the company three years ago when it had a top-line of $100M. Sales have progressively diminished in the last few years. If you are to retain market share, your top line should grow at approximately the rate the market grows.

Low margins for all teams. Churning out a profit with such low contribution margins will be difficult indeed. This was your third year at the helm of affairs of you company. Andrews, Baldwin and Chester had bottom lines in red and emergency loans. Both are a perfect indicator of poor business management and bankruptcy. Digby had the highest profits for this round. They lead the industry in terms of cumulative profits. You've had three years to stabilize your companies. Aim for profits now. Wall Street investors are an impatient lot.

Stock Price and Market Cap: Baldwin and Chester's stock price remained constant at $1/share. **Andrews** had a fall in stock price of $1/share due to their losses and emergency loans. Would you like to invest in a company that cannot pay its bills on time? An emergency loan is a similar situation. **Digby** is the most valuable company with a market capitalization of **$168M**.

Please push up your EPS

EPS (profits/shares outstanding) answers the question, "What profits did each share earn?" EPS is a driver of stock price, and stock issues are an important source of growth capital.

The market is growing, and so should profits.

EPS is important for three reasons. First, profits bring new equity into the company. Second, EPS drives stock price, and the company can issue shares to bring in new equity. Third, any new equity can be leveraged with new debt.

An example may help. Suppose the company wants to invest $15 million in new plant and equipment each year for the next three years. If its profits are zero and it issues no stock, the purchases would need to be funded entirely with bonds. But this would drive up interest expense, and worse, eventually the company would reach a ceiling where bond holders would give it no additional debt. The company would stop growing.

In the end, a company's growth is built upon equity. If it has equity, it can get debt, too.

How can companies improve EPS? Improve sales volume while maintaining margins. EPS is closely linked with the Asset Utilization and Competitive Advantage categories.

Sales: Digby, Erie and Ferris had a rise in market share of 2.5%, 3% and 4% respectively. **Andrews, Baldwin and Chester had a fall** in market share of 1.2%, 4.2% and 4.1% respectively. Losing customers in the early years is a bad idea. The attempt should be to take away customers from your competitors. With a falling customer base, all other metrics for company are likely to erode.

Please consider how you AR policy impacts sales and the ramifications:

The accounts receivable policy affects both demand and the balance sheet. Companies express the policy in days. A 30 day policy means that accounts receivable will be 30/365 * Sales.

On the balance sheet, if a company expands A/R policy from 30 days to 60 days, it doubles A/R. In effect it gives a loan to customers, and in the process it incurs the additional expense of carrying that loan. For example, if accounts receivable expanded from $10 million to $20 million, and the company funded the expansion with short term debt at 10%, it would incur an additional $1.0 million in interest expense.

On the other hand, demand would increase by about 5% from $120 million to $126 million, while fixed costs would remain the same. Profits would increase by about $0.8 million after paying the additional $1 million in interest expense. And, of course, the additional $6 million in sales came out of competitors.

But there is a risk. It is trivial for competitors to copy A/R policies, and if that happens, the increase in demand is neutralized while everyone absorbs the additional $1.0 million in interest expense. The question then is, “Will competitors realize we have expanded our credit terms? All of them?”

Beyond 60 days, the incremental cost in interest exceeds the incremental gain in demand.

As companies shorten A/R policy, they effectively reduce the loan they have made to customers. Cash goes up, interest expense falls. However, customers want credit terms. If the company demands cash payment, demand falls to 65% of its potential.

These relationships are easily explored with the company’s Marketing worksheet. As they vary the A/R policy, they should watch the computer’s demand forecast.

Profits: Andrews, Baldwin and Chester had bottom lines in red. The reasons are simple:

- Low Contribution Margins
- Low sales for Andrews and Baldwin
- High Unsold Inventory Levels (you pay 12.5% inventory carrying cost!)
- Unnecessarily high depreciation due to low plant utilization for Andrews and Chester: why keep such a large idle plant.

Profits are listed on page 1 of the Capstone Courier. Losses are usually the result of insufficient margin caused by a high cost structure and too low prices. Profit can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt, and losses on liquidation (scrapping) of inventory when retiring a product line.

Contribution Margin: Andrews, Baldwin and Chester need to pay attention to their margins.

Contribution margin is what is left over after variable costs. Variable costs include the cost of goods (material and labor) and inventory carrying expense.

The biggest expense is the cost of goods. If the contribution margin is 30%, then out of every sales dollar, $0.70 paid for inventory and $0.30 is available for everything else, including profits.

Fixed costs are those expenses that will be paid regardless of sales. They include promotion, sales budget, R&D, admin, and interest expenses.

As the contribution margin falls below 30%, it becomes increasingly difficult to cover fixed costs.

How can a company improve its contribution margin? Guard price and attack material and labor expenses.

Emergency Loans: **Andrews, Baldwin and Chester have emergency loans**. Please stay away from emergency loans. The reasons for your cash flow crisis are easy to see:

Andrews - The reasons for your emergency loan were large cash outflows arising from:

- You spent (wrote out cheques) for $27.6M for plant. Assets increased but you did not fund it adequately with debt and equity. Where will the cash come from?
- You have large unsold inventories of over $54M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $6.4M as inventory carrying costs) and depressed profits
- You repurchased your common stock worth $0.2M
- Previous years' emergency loan, long term and current debt of $31.1M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Baldwin - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $281M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $33.7M as inventory carrying costs) and depressed profits
- You bought back (retired) long term debt of $10K
- Previous years' emergency loan, long term and current debt of $140.5M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory

- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

Chester - The reasons for your emergency loan were large cash outflows arising from:

- You have large unsold inventories of over $117M. That is causing a cash flow crisis by blocking cash. This also imposed 12% (almost $14M as inventory carrying costs) and depressed profits
- Previous years' emergency loan and long-term debt of $131M which was repaid in the current year.

All this caused a huge outflow (and blocking) of cash that you did not have:
Therefore, in the next round:

- Make realistic sales forecasts and do not overproduce inventory
- Reduce your production to cater to the large unsold inventory.
- Keep doing RnD on your products (remember the older inventory gets a free ride to the new specs)
- Sell surplus unused plant capacity
- Raise funds from long term and current debt to repay this emergency loan.

This emergency loan is current debt. It will automatically get plugged into "current debt due this year". Borrow maximum from long and short term debt and raise funds through stock issues and sale of surplus plant to **ensure your 31 Dec closing cash (bottom left row on Finance sheet of Capstone) balance is a healthy figure (attempt 1-2 months of sales).**

Please remember: emergency loan is current debt: you have to repay it in the next year. The amount of cash going out for the repayment of the emergency loan will auto-populate in the current debt column on the finance sheet of Capstone.

Plant Size and Utilization: **Andrews and Chester have not even used the complete first shift capacity of their plants**. **Andrews,** for example could have produced the same quantity of products using 24% of their current first shift capacity. This would have reduced their depreciation by 76%.

Asset Turnover: **Andrews, Baldwin and Chester need to work their assets harder as** they have the asset turnover ratio below one. Let us try and ensure that every dollar of asset on our balance sheet produces at least one dollar of sales.

Forecasting and Inventory: **The inventory levels of Andrews, Baldwin and Chester are high.** Teams should ensure judicious sales forecasts: produce such quantities that they are able to fulfill the demand for their products without having high unsold inventory. **IMP: – Please don't go by computer forecasts: make your own**. Please read the note on forecasting in the online Capstone Guide.

Segment Wise Product Analysis: How are your products faring?

- **Traditional Segment:** Daze leads the industry. Coat, Able and Cure have low market share in this segment. Cake, Cid, Coat and Able have inappropriate age (too high) for the segment (age has an importance of 47% in this segment). Cid, Coat and Cure are overpriced (outside the price range thereby diminishing demand). Remember, price has an importance of 23% in this segment). Cake, Cid, Coat and Able need improvement in their position (performance and size) in the segment. Able needs improvement in accessibility.
- **Low End Segment:** Ebb leads the industry. Bead, Fast, Able and Cake have low market share in this segment. Bead, Able and Cake are overpriced (outside the price range, Price has an importance of 53% in this segment). Cedar and Cake have inappropriate age (too low) for the segment (Age has an importance of 24% in this segment). Acre and Bead need increased levels of awareness. All products need improvement in accessibility.
- **High End Segment:** Duck leads the industry. Bid and Adam have low market share in this segment. Bid and Adam need improvement in their position (performance and size) in the segment (Ideal position has an importance of 43% in the segment). Bid and Adam have inappropriate age (too high) for the segment (Age has an importance of 29% in this segment). Bid is overpriced (outside the price range). Adam needs increased levels of awareness. Bid and Adam need improvement in accessibility.
- **Performance Segment:** Dot leads the industry. Bold and Aft have low market share in this segment. Bold and Aft have low MTBF (MTBF has an importance of 43% in the segment). Bold and Aft need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 29% in the segment). Bold and Aft are overpriced (outside the price range). Bold and Aft have inappropriate age (too high) for the segment. Bold and Aft need increased levels of awareness. Bold and Aft need improvement in accessibility.
- **Size Segment:** Dune leads the industry. Cid and Buddy have low market share in this segment. Cure, Cid and Buddy need improvement in their position (performance and size) in the segment (Ideal Position has an importance of 43% in the segment). Cid and Buddy have inappropriate age (too high) for the segment (Age has an importance of 29% in the segment). Buddy needs increased levels of awareness. All products need improvement in accessibility.

Financial Management: **Andrews, Baldwin and Chester** need to rework their D/E ratio. The ideal leverage in Capstone is between 1.8 and 2.8.

A thought on Debt: Some teams often strive to eliminate debt and bring leverage down. They pay off any current debt and retire all bonds.

In short, they manage the company as they manage their personal finances. This thinking is wrong, especially in the early rounds of simulation. Consider this example: Without debt, your company's assets will not be as large. Conceivably, a competitor with identical equity could have assets worth two to three times as much as yours.

In a business, debt buys income producing assets. If you can borrow money at 10% and make 20%, you should borrow all you can get.

The relevant questions are:

- **Can we find investments that generate a higher return than the cost of the funding**
- **What is the risk that our investments will not produce the expected return?**

HR Module: Andrews, Baldwin and Chester do not seem keen to improve the productivity of their employees? As an old saying goes "you pay peanuts, you get monkeys". Would you rather have trained professionals or monkeys?