

# Sunk Costs: What Costs Do You Sea ?

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## BACKGROUND

Festival Cruise Lines (FCL), a publicly traded company on both the New York Stock Exchange (NYSE) and London Stock Exchange, is the largest cruise company in the world. FCL serves as the parent company for four primary subsidiaries—a broad spectrum of cruise line brands that cater to a variety of cruise vacationers. At the low end, the first FCL subsidiary, Festival, offers an affordable cruise experience to a wide variety of cost-conscious customers. Other FCL subsidiaries, like Goddess Cruise Lines, American Swiss Cruise Lines, and Dranuc Cruise Lines, offer progressively higher-quality cruise experiences for correspondingly higher price premiums. FCL is domiciled internationally and has two headquarters located in Doral, Fla., an industrial area of Miami, and Southampton, England.

FCL's Festival subsidiary began entertaining passengers on its Happy Boats in 1972. Today, it employs upwards of 90,000 crew members who serve more than 3.5 million cruise passengers annually on a fleet of 24 ships. Cruises generally range from three to 18 days in duration, and the one-week cruise is the most common. Ships venture to a wide variety of world-wide destinations, including New Zealand, Tahiti, New England, Alaska, the Mexican Riviera, Caribbean, Mediterranean, and many more.

Festival finds itself in an industry that has evolved over the last century. The cruise ship industry was born in 1844. Focus shifted from carrying cargo to pleasing customers, and superliners were being developed by the early 20th Century. These ships provided an abundance of fine dining

and leisure activities to affluent passengers and generally were not designed to cater to the general population. In the 1960s, cruise ship companies began shifting operations to attract a broader spectrum of middle-income clientele. While premium ships were still available, the days of the affluent Titanic-style voyages were becoming a thing of the past. Price competition began to slowly enter the market and dramatically increased in recent years. Call it the “Walmartization” of the cruise ship industry. The recent downturn in the economy put real pressure on potential passengers’ discretionary income and, as a result, cruise ship prices. Containing and controlling costs in this environment is critical to a cruise ship company’s success.

The cruise industry is also a high-fixed-cost industry. A typical cruise ship can cost \$500 million, and larger and larger ships are being built. Given the enormous fixed costs, one of the greatest challenges facing the cruise ship industry today is utilizing capacity—filling ships with passengers and generating revenue. Festival’s bottom line is extremely dependent on cruise ship passengers and ship occupancy levels. Projecting a healthy reputation to attract customers and maintain occupancy levels is important.

Festival generally has an impeccable history of safety. But increased competition and economic pressures in the industry recently created an additional bottom-line focus on cost control. Many safety repairs and investments had been tabled and delayed to increase ship turnaround, time at sea, revenue utilization, and ultimately profits. In 1998, Festival ran into its first instance of trouble with a passenger-filled ship. Since that time, more than five ships have encountered

disconcerting incidences—four incidences attributable to fires in engine rooms, laundry rooms, and a generator room.

## INTRODUCTION

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The office was quiet. The sunny spring weather in Miami, Fla., had lured many Festival Cruise Line (FCL) personnel to take an enjoyable Friday afternoon off. But Linda Wright, a senior accountant at FCL, and some of her accounting staff were still busy at work. It was late Friday afternoon; Linda took a brief pause to reflect on her career at FCL.

Linda Wright's name suited her perfectly. She did not like being wrong—carried herself with integrity and seldom made bad decisions. She had been attracted to Festival's culture and mission—to the happiness, joy, laughter, and entertainment FCL generated and brought to passengers on its Happy Boats. Miami also provided Linda and her family a picturesque destination to call home. FCL had been a great career choice for Linda. When she joined Festival, she was the sole female in the accounting department. Over the years, she had become a skilled accountant and excelled within the company.

Linda and her staff were busy putting together capital budgeting analyses for investment proposals and projects that had been submitted to the corporate office. Among the submitted proposals, Linda and a few of her colleagues—Matt Dennison and Evan Truett—were analyzing a capital investment proposal to improve the safety of the cruise ship fleet for FCL's Festival subsidiary. This capital investment analysis posed a real challenge to delicately balance bottom-line income considerations of controlling costs with adequate safety investment considerations for protecting cruise ship personnel and passengers and minimizing safety risks.

Linda recognized a few challenges with the safety investment proposal, and two were prominent. First, the developing analysis was based on many—often slippery—estimates. Although accounting can be perceived as black-and-white and relatively straightforward, Linda found herself in murky waters, collecting data and performing analyses that were largely based on educated estimates. What was the cost of an accident? What value should be placed on human injury? The team's estimates could influence analysis of the safety investment's viability and eventually influence FCL passenger and crew safety.

Second, Linda wondered how receptive executive management would be to a significant capital outlay designed to generate safety improvements but potentially offer little bottom-line benefit. Would the proposal be passed over for projects promising larger potential boosts to profits?

Bottom-line considerations were becoming a primary focus in executive decisions because of increasing price competition in the cruise industry and the increasingly tight economy.

Linda pondered her concerns: "How can I handle the uncertain estimates included in my analysis? What are my responsibilities to passenger and crew safety? How do I balance these responsibilities with controlling costs and profitability?" Linda Wright could not get this one wrong.

## THE TURBULENCE

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"What are you having for lunch today?" David asked with a jovial smile.

"Dave! Do you even have to ask? A spinach salad with smoked salmon and veggies," Linda replied.

"A creature of habit! You're a typical accountant," David nodded. "You need to live a little; try something different—even delicious. They're serving filet mignon today and look at these desserts!" David exclaimed as he took a bite of tiramisu.

Linda was having lunch in Festival's corporate cafeteria with David Santana, the head of Corporate Risk Management at Festival. David was a colleague and friend who Linda had known and respected for years—even if their dietary preferences were strikingly different. David was a bright, hard-working Peruvian immigrant who had worked his way up through the Festival ranks over the years. The capital investments in safety improvements were his brain child, and now he was audaciously championing the latest proposal.

In fact, the capital proposal for safety improvements had been a main topic of conversation during several lunches Linda and David shared over the last couple of months. David's concern for these safety improvements went beyond the professional; it was also personal. A few years earlier, an engine fire on the Festival ship Victory had created serious safety concerns. Mario Venasquez, one of David's Peruvian childhood friends, was a Festival employee on the ship. In fact, David was able to get Mario the job on the Victory so that he could help his family in Peru. Mario valiantly took action to fight the fire, and his responsive and courageous actions contained it, resulting in limited damage and minimal interruptions. The engine fire incident went virtually unnoticed to passengers. But Mario sacrificed his life to contain the engine fire—a tragic blow for David. This incident became the "canary in the coal mine" for David—a signal that Festival needed to change course and take corrective action to improve ship safety.

So conversation quickly returned to the safety investment topic as Linda and David started lunch. "Did you get our actuarial estimates on the probabilities and magnitudes of cruise ship safety accidents?" David queried.

“Yes, we did. Thank you. Matt and Evan added them into our capital investment analyses. In fact, we also finished extensive conversations with Festival’s legal counsel,” Linda replied.

“Oh? Great! Let me know if you have any questions or need any more data. What did legal have to say?” asked David.

“Well, according to the lawyers, Festival is currently meeting all international maritime safety standards. The safety improvements would go well beyond current international legal standards and requirements but would protect Festival in the future if laws change and safety requirements become more rigorous,” Linda said.

“Well, that isn’t all that surprising. The cruise ship industry has consistently lobbied lawmakers for years to keep safety regulation to a minimum,” David revealed, “but Festival needs to be different.” David’s face reflected the passion resulting from the loss of his friend and his recent experiences.

“You’re right. This is important for Festival,” Linda affirmed.

“Our crew members, valued passengers, and shareholders need to be protected and reassured that we care about the safety of our people. I’m concerned that the Board of Directors is favoring cost control and financial considerations a little too much. Their minds are wrapped up in the current year’s bottom line. I have championed safety investments for several years now and have been repeatedly turned down due to limited financial resources. Corporate needs to extend its vision beyond a myopic focus on the bottom line. This is about more than just profits; it’s about people,” David concluded.

Linda nodded empathetically. David was right. Festival executives selected capital investments primarily on the basis of a project’s contribution to economic return and bottom-line impact. The lunch conversation continued and slowly meandered into casual chit-chat. Linda appreciated David as a Festival employee.

## THE NUMBERS

“I just got an e-mail from John. Corporate is now breathing down our necks for the capital investment analysis information. We really need to wrap this up soon,” Linda relayed as she rallied Matt and Evan during a brief powwow in her office. John Cary was Festival’s current hard-charging CEO. Projects including the safety investment proposal had made it through the initial screening phase. Now executives wanted analysis information to rank proposals for possible selection and funding during the preference phase of analysis.

Linda’s team had begun putting together the capital investment analyses for the safety investment proposal.

Linda decided to develop three estimates: one for what she viewed as the minimum investment required by adding emergency generators to each ship; one for installing the emergency generators and high-pressure water mist systems (an intermediate-level proposal); and one to fully fund all the recommended changes, including upgrading the engine rooms. Using these three alternatives, Evan and Matt began calculating the total number of annual cruise line passengers Festival can carry.

If Festival chooses not to invest in the expenditures, each ship has an available passenger capacity of 3,500. But under Festival’s current operations, the ships are only at 90% capacity. Additionally, Festival’s fleet of 24 ships cruise an average of 48 weeks out of the year. In order to make the minimal changes, the cruise schedule must remain the same to minimize the effect on capacity. The emergency generators will be installed during each of the ships’ four weeks of dock time (52 weeks in a year – 48 weeks), so total passenger capacity will remain unchanged for this alternative.

If the midrange alternative is selected, substantial effects will be seen. Average available passenger capacity will remain unchanged at 3,500, but the utilization rate will be 90% for year one, 91% for year two, and 92% for years beyond year two. In order to install the generators and sprinkler systems, the ships will need to be docked for the repairs. Therefore, only 36 cruises can be operated in year one, 40 in year two, and 49 in years beyond year two.

If all repairs and upgrades are performed, the utilization rate will be 90% for year one, 93% for year two, and 96% for years beyond year two. On average, 30 one-week-long cruises will operate in years one and two, and 50 one-week-long cruises will operate each year after year two. Evan and Matt’s findings and calculations are shown in Table 1.

Without any expenditures, Festival’s cruise ships can carry approximately 3.629 million passengers per year on its fleet of 24 ships. Each passenger will generate \$1,700 of revenue (sales price plus onboard spending). The variable costs are approximately \$300 per passenger, and the fixed costs are around \$3.6 billion per year. Linda’s team also collected the information on the actuarial estimates, probabilities, and costs of possible expected accidents from David Santana. This information can be used to calculate an estimated expected value of the cost of accidents. The operating costs, total passenger capacity, and potential accident costs depend on which parts of Linda’s recommendations are funded. In all three cases, Linda decided to leave the \$1,700 selling price and onboard spending and \$300 variable cost estimates in place. None of

**Table 1: Festival Cruise Lines, Inc.: Annual Passenger Factors**

	Current Operations	Minimum Funding	Midrange Funding			Complete Funding		
	(All Years)	(All Years)	Year 1	Year 2	After Year 2	Year 1	Year 2	After Year 2
1. Capacity Utilization Factor:								
Average available passenger capacity/cruise	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Capacity utilization rate (average actual capacity/available capacity)	90.00%	90.00%	90.00%	91.00%	92.00%	90.00%	93.00%	96.00%
Capacity utilization factor (Number of passengers/1 week cruise)	3,150	3,150	3,150	3,185	3,220	3,150	3,255	3,360
2. Turnover Factor (Number of 1 week cruises/year)	48	48	36	40	49	30	30	50
3. Fleet Factor (Number of Cruise Ships/year)	24	24	24	24	24	24	24	24
<b>Total Annual Festival Cruise Line Passengers</b>	<b>3,628,800</b>	<b>3,628,800</b>	<b>2,721,600</b>	<b>3,057,600</b>	<b>3,786,720</b>	<b>2,268,000</b>	<b>2,343,600</b>	<b>4,032,000</b>

the changes were likely to impact those two figures. Total passenger capacity, investment costs, and fixed operating costs, however, are another story.

Making the minimum required changes would cost \$100 million. Such minimal changes will have little impact on continuing capacity or efficiency, and during and after the repair process, total passenger capacity would remain unchanged. The investment would, however, somewhat reduce the probability of an accident. Linda and her team collected data on the likelihood and costs of accidents based on historical data in the industry. This information is included in Table 2.

Adding the emergency generators and installing high-pressure water mist systems on all ships will cost approximately \$250 million. Linda expects these changes to improve efficiency enough to increase post-project annual passenger capacity to 2.722 million in year one, 3.058 million in year two, and 3.787 million in years following year two. Once the upgrades are made, the net annual fixed costs will decrease slightly to approximately \$3.384 billion. The investments will also reduce the probability and projected costs of expected accidents.

If the Board of Directors will allow upgrades to the engine room as well, Linda estimates the upfront cost will be \$300 million. Post-implementation annual passenger capacity will be approximately 2.268 million in year one, 2.344 million in year two, and 4.032 million in all years following year two. In addition, annual fixed costs will drop to around \$3.240 billion, and the projected probabilities and costs of expected accidents will decrease as well.

Matt and Evan estimate that all of the capital investments will have a useful life of 15 years with no salvage value. Additionally, they conservatively assume that all capital investment outlays occur and begin to depreciate at the same time (i.e., time 0) even though complete

installation of some considered alternatives will occur after the start of capital investment outlays (i.e., time 0).

Linda, with the help of Matt and Evan, input the information into a spreadsheet (see Table 2) in order to calculate the net present value (NPV) and payback period of the different funding options. For tax purposes, it is Festival's policy to depreciate capital investments using the straight-line method, and Festival's marginal tax rate (combined federal, state, and local) is about 40%. The hurdle (discount) rate is 10% after tax for all capital expenditures.

Festival's policy states that the company will only consider investing in capital projects with a positive NPV within five years to satisfy certain profitability thresholds. Also, it will only invest in capital projects with an unadjusted payback period of five years or less. Linda and her team used these standards to evaluate the different alternatives.

## LINDA'S SITUATION

The analysis was coming together, but Linda began to replay executives' potential responses over and over in her head. Because of Festival's large size in the market, the public's eye is always on its stock price. CEO John Cary was well aware of this and never let anyone forget the importance of the bottom line. Even though Festival seeks to please its passengers, John and the rest of the top executives put pleasing shareholders as their first priority.

These thoughts left Linda somewhat anxious. Her analysis affected a significant number of people. What were her responsibilities to the executives and the Board of Directors, shareholders, Festival employees, Festival cruise ship personnel and passengers, and David? How could she balance and meet all of these responsibilities?

**Table 2: Festival Cruise Lines, Inc.: Cruise Ship Safety Repairs and Upgrades Data**

(All numbers shown in thousands except Variable Costs per Ticket and Sales Price per Ticket + Onboard Spending)

<b>Initial Investment</b>								
	Complete funding		\$ 300,000					
	Midrange funding		\$ 250,000					
	Minimum funding		\$ 100,000					
Depreciable life of investment				15				
<b>Operations Information:</b>								
<b>Original Operations</b>					<b>With Capital Expenditures</b>			
<b>Costs:</b>					<b>Costs:</b>			
Sales price per ticket + onboard spending			\$ 1,700		Sales price per ticket + onboard spending			\$ 1,700
Variable costs per ticket			\$ 300		Variable costs per ticket			\$ 300
Fixed costs			\$3,600,000		Fixed costs			
						Complete funding		\$3,240,000
						Midrange funding		\$3,384,000
						Minimum funding		\$3,600,000
<b>Total Passengers</b> (from table 1, rounded in the thousands)			3,629		<b>Total Passengers</b> (from table 1, rounded in the thousands)			
					Year 1, Midrange funding			2,722
					Year 1, Complete funding			2,268
					Year 2, Midrange funding			3,058
					Year 2, Complete funding			2,344
					Thereafter			
						Complete funding		4,032
						Midrange funding		3,787
						Minimum funding		3,629
<b>Expected Accident Costs</b>		<b>Probability</b>	<b>Cost</b>		<b>Expected Accident Cost</b>		<b>Probability</b>	<b>Cost</b>
						<b>Complete funding</b>		
	Significant Accident/Event	3%	\$ 160,000			Significant Accident/Event	1%	\$ 100,000
	Moderate Accident/Event	4%	\$ 120,000			Moderate Accident/Event	1%	\$ 80,000
	Minor Accident/Event	5%	\$ 80,000			Minor Accident/Event	1%	\$ 60,000
	No Accident	88%	0			No Accident	97%	0
						<b>Midrange funding</b>		
						Significant Accident/Event	1%	\$ 120,000
						Moderate Accident/Event	2%	\$ 100,000
						Minor Accident/Event	1%	\$ 70,000
						No Accident	96%	0
						<b>Minimum funding</b>		
						Significant Accident/Event	1%	\$ 160,000
						Moderate Accident/Event	2%	\$ 120,000
						Minor Accident/Event	1%	\$ 80,000
						No Accident	96%	0
<b>Other Information</b>								
Income Tax Rate:			40%		Hurdle (Discount) Rate:			10%

## FESTIVAL CRUISE LINES CASE QUESTIONS

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Would you do the right thing if you were Linda Wright? Answer the following case questions by preparing an analysis to guide Festival Cruise Line's decisions. Help Festival decide whether it should fully fund all of the recommended upgrades.

1. What are Linda's responsibilities in this situation?

NOTE: You can apply the general standards in the *IMA Statement of Ethical Professional Practice* (available in Appendix A to help you identify specific responsibilities for Linda in this situation).

2. Complete the net present value (NPV) analysis and payback-period analysis required for Linda's report and prepare a discussion of your findings. Remember to use Festival's required five-year time horizon for your analyses. (The NPV and payback period analyses can be organized neatly in an appendix to your case analysis. A reader of your conclusions should be able to follow your work and computations. You can use an Excel spreadsheet. The results of your appendix analyses can be referenced in the body of your case to support your decision.) Based solely on the economics, what course of action should Linda recommend?
3. As Linda, what is your final decision and why? Assess the impacts of your final decision:
  - a. What benefits/harms result and to whom?
  - b. What rights are being exercised (denied) and by (to) whom?
  - c. Do these impacts modify or change your decision? How?

## APPENDIX A: IMA® STATEMENT OF ETHICAL PROFESSIONAL PRACTICE

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### STATEMENT OF ETHICAL PROFESSIONAL PRACTICE

Members of IMA shall behave ethically. A commitment to ethical professional practice includes: overarching principles that express our values, and standards that guide our conduct.

### PRINCIPLES

IMA's overarching ethical principles include: Honesty, Fairness, Objectivity, and Responsibility. Members shall act in accordance with these principles and shall encourage others within their organizations to adhere to them.

## STANDARDS

A member's failure to comply with the following standards may result in disciplinary action.

### I. COMPETENCE

Each member has a responsibility to:

1. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
2. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
3. Provide decision support information and recommendations that are accurate, clear, concise, and timely.
4. Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.

### II. CONFIDENTIALITY

Each member has a responsibility to:

1. Keep information confidential except when disclosure is authorized or legally required.
2. Inform all relevant parties regarding appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
3. Refrain from using confidential information for unethical or illegal advantage.

### III. INTEGRITY

Each member has a responsibility to:

1. Mitigate actual conflicts of interest, regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
3. Abstain from engaging in or supporting any activity that might discredit the profession.

### IV. CREDIBILITY

Each member has a responsibility to:

1. Communicate information fairly and objectively.
2. Disclose all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.



## RESOLUTION OF ETHICAL CONFLICT

In applying the Standards of Ethical Professional Practice, you may encounter problems identifying unethical behavior or resolving an ethical conflict. When faced with ethical issues, you should follow your organization's established policies on the resolution of such conflict. If these policies do not resolve the ethical conflict, you should consider the following courses of action:

1. Discuss the issue with your immediate supervisor except when it appears that the supervisor is involved. In that case, present the issue to the next level. If you cannot achieve a satisfactory resolution, submit the issue to the next management level. If your immediate superior is the chief executive officer or equivalent, the acceptable reviewing authority may be a group such as the audit committee, executive committee, board of directors, board of trustees, or owners. Contact with levels above the immediate superior should be initiated only with your superior's knowledge, assuming he or she is not involved. Communication of such problems to authorities or individuals not employed or engaged by the organization is not considered appropriate, unless you believe there is a clear violation of the law.
2. Clarify relevant ethical issues by initiating a confidential discussion with an IMA Ethics Counselor or other impartial advisor to obtain a better understanding of possible courses of action.
3. Consult your own attorney as to legal obligations and rights concerning the ethical conflict.

### ABOUT IMA® (Institute of Management Accountants)

IMA®, the association of accountants and financial professionals in business, is one of the largest and most respected associations focused exclusively on advancing the management accounting profession. Globally, IMA supports the profession through research, the CMA® (Certified Management Accountant) program, continuing education, networking and advocacy of the highest ethical business practices. IMA has a global network of more than 70,000 members in 120 countries and 300 professional and student chapters. Headquartered in Montvale, N.J., USA, IMA provides localized services through its four global regions: The Americas, Asia/Pacific, Europe, and Middle East/Africa. For more information about IMA, please visit [www.imanet.org](http://www.imanet.org)