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CASE STUDY IN ENTERPRISE RISK MANAGEMENT: HAPPY TAILS, INC.

By
Clay Daniel Chance

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

Oxford, MS
April 2021

Approved By

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DEDICATION

This thesis is dedicated to everyone who has helped me reach this point in my academic career. To my family, friends, and professors, thank you for supporting me and helping me become the best version of myself.

ACKNOWLEDGEMENTS

I would like to thank Dr. Andre Liebenberg for his help in advising this thesis. His course FIN 542 Enterprise Risk Management is the capstone course in the Risk Management & Insurance program, and in this class, I learned the techniques needed to appropriately identify, assess, prioritize, and manage various risks. I would also like to thank Dr. Stephen Fier for teaching me the details of commercial insurance contracts in FIN 441 and FIN 442.

ABSTRACT

CLAY DANIEL CHANCE: Case Study in Enterprise Risk Management: Happy Tails, Inc.
(Under the direction of Andre Liebenberg)

Enterprise risk management is a necessity for businesses in today's marketplace. Firms that are unaware of risks they are facing often find themselves in unexpected trouble. The field of enterprise risk management has been growing since the 1990s as an effort to minimize the costs that risk imposes on firms. In this case study, I identified risks for Happy Tails, Inc. and recommended various techniques to manage the risks. I found that not only does Happy Tails face many of the same major risks faced by most firms in the marketplace today, but it also faces some unique risks due to its corporate structure and line of business. This thesis highlights several of the most significant risks for Happy Tails, Inc. and recommends various risk management techniques to minimize the cost of risk for the firm.

PREFACE

This thesis is adapted from my work in FIN 542 Enterprise Risk Management, in which I learned the processes and tools risk managers use to reduce the cost of risk for firms.

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LIST OF ABBREVIATIONS

BAP	Business Auto Policy
BI	Business Income/Business Interruption
BPP	Buildings and Personal Property form
BPS	Basis Points
CGL	Commercial General Liability form
CRMS	Computerized Retail Management System
EE	Employee
EML	Estimated Maximum Loss
EPL	Employment Practices Liability
ER	Employer
ERM	Enterprise Risk Management
HT	Happy Tails
NFIP	National Flood Insurance Program
OSHA	Occupational Safety and Health Administration
TIE	Times Interest Earned
WC	Workers' Compensation

INTRODUCTION

Enterprise risk management is a relatively new field that emerged from the practice of buying insurance to transfer risks. Since the 1960s, risk managers have moved away from the traditional focus on insurance buying. Today, risk managers have a wide variety of responsibilities within firms. Risk managers still buy insurance, but now there is increased emphasis on finding more cost-effective methods for reducing the cost of risk for firms. Risk managers identify risks, design and implement loss control programs, review contracts, train employees, assure compliance with certain laws, arrange risk financing mechanisms other than insurance, manage claims, design employee benefit programs, and perform other duties related to handling risk for the firm (Liebenberg, 2021).

The traditionalist view of risk management holds that the role of risk management is to manage the pure risks of a firm. Pure risks are simply those risks that can be insured, such as buildings. The holistic view suggests that the role of risk management is manage all an organization's risks, which includes risks that cannot be insured. The organizational view states that risk management is "a general management function that seeks to assess and address the causes and effects of uncertainty and risk on an organization" (Liebenberg, 2021). The most advanced view of risk management used by firms in today's marketplace is enterprise risk management, which promotes increased risk awareness within the entire organization and facilitates better operational and strategic decision-making (Hoyt, 2015).

As described by Robert Hoyt and Andre Liebenberg in a 2015 report, "[Enterprise risk management] combines all risk management activities into one integrated framework that allows

decision-makers to see links among existing risks across divisions and activities that might go unnoticed in the traditional risk management model” (Hoyt, 2015). This description encapsulates the following major benefits of enterprise risk management: enhanced risk identification, improved decision-making abilities, and heightened awareness of the interrelationships present among different sources of risk. This report by Hoyt and Liebenberg summarizes the results of a 2011 study focused on publicly traded insurance companies that have adopted enterprise risk management programs to various extents. After controlling for certain variables that might skew the results (size, leverage, sales growth, profitability, diversification, dividends, insider stock ownership, whether a company was a life insurer or not, and firm risk as measured by beta), Hoyt and Liebenberg found that firms that had adopted enterprise risk management programs experienced a valuation premium that was both statistically and economically significant (Hoyt, 2015). This conclusion notes that more studies in recent years confirm the results of the 2011 study and extend understanding of the benefits of enterprise risk management.

In this thesis, I analyze a case study written by Robert Hoyt and Lily Waldron in 2020 titled “Happy Tails, Inc.” This case study describes the operations, organizational structure, history, and financial data of Happy Tails, a pet boutique focusing on natural dog food options and products as well as specialized grooming services. I identify, assess, and recommend risk management solutions for the two most significant risks in each of the following categories: property, liability, and uninsurable. I also discuss Happy Tails’ workers’ compensation loss history, forecast future workers’ compensation losses, and recommend methods of reducing and insuring workers’ compensation losses in the future. Lastly, I use principles of financial ratio analysis to point out sources of risk present in financial statements.

1. BUSINESS INTERRUPTION

Happy Tails' top property risk is business interruption. As a firm that generates its revenues primarily through pet grooming services and retailing pet supplies, Happy Tails relies heavily on its ability to operate its stores normally. In the event of property damage causing a shutdown at one of Happy Tails' locations or under conditions that prevent smooth operations of Happy Tails' suppliers, Happy Tails would suffer devastating losses.

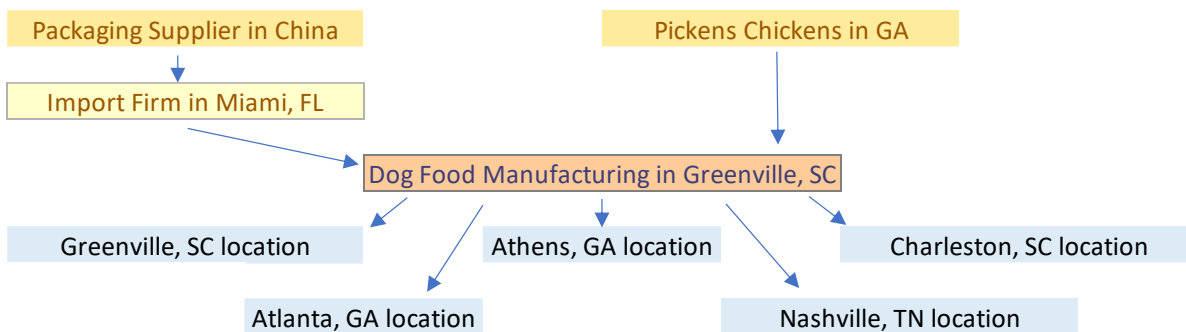


Figure 1.1

Figure 1.1 above depicts Happy Tails' supply chain for its brand of organic dog food. The packaging supplier in China and Pickens Chickens are both suppliers of key components for Happy Tails' dog food, and if either one of these suppliers experienced a loss that halted normal operations and rendered them unable to meet Happy Tails' demands for dog food components, Happy Tails would suffer business income losses. The packaging supplier in China is described as unreliable and difficult to work with. The packaging supplier also requires payment in local currency, Chinese yuan, thus exposing Happy Tails to foreign exchange rate risk.

Pickens Chickens is also a difficult supplier to work with. The incident revealing patterns of animal cruelty at Pickens Chickens forced Happy Tails to pull all chicken-based dog food from shelves, resulting in losses. The import firm in Miami is also critical to Happy Tails' supply chain because it handles the incoming shipments of dog food packaging from China and the transport of packaging shipments to the manufacturing center in Greenville. The dog food manufacturing facility is the core operation for Happy Tails in its line of organic dog food. At this facility, incorrect estimates of vitamin D have caused dogs to get sick, exposing Happy Tails to products liability. Additionally, this manufacturing facility has a history of workers' compensation claims due to poor safety practices. Any issues related to the supply chain could create losses for Happy Tails' line of dog food due to business interruption.

Brief descriptions have been provided for each of the critical units in Happy Tails' dog food supply chain to reach the following conclusion: strongly consider discontinuing Happy Tails' brand of organic dog food. Dog food manufacturing does not seem to be one of Happy Tails' core competencies and should be avoided if it is not significantly profitable. The profitability of Happy Tails' dog food is not described in detail, but an in-depth analysis of the profits gained from dog food sales and operations is necessary to determine if the benefits of offering an organic dog food line outweigh the costs and the risk associated with it. The risks include high degrees of foreign exchange risk, business interruption risk, reputation risk, products liability risk, and workers' compensation risk. If Happy Tails determines that it wants to continue its line of organic dog foods, it should consider modifying its supply chain to allow for smoother and more flexible operations.

Happy Tails should develop relationships with alternative suppliers for dog food packaging and ingredients. Having access to at least one other supplier of packaging, preferably in the United States, would be a great benefit to Happy Tails. A packaging supplier in the United States would reduce Happy

Tails' exposure to foreign exchange rate risk and diversify the supply chain such that if one supplier cannot meet Happy Tails' demand, the other one can provide a substitute. Similarly, Happy Tails should work with other poultry farms to diversify away the risk of Happy Tails' only chicken supplier suffering a loss and being unable to fulfill Happy Tails' orders.

The risks related to Happy Tails' supply chain are considered contingent business interruption exposures. Happy Tails is relying on these businesses to complete their duties and responsibilities as agreed upon, and when losses that interrupt operations occur at contingent firms, Happy Tails also suffers. Contingent business income insurance is an option, but it only covers business income losses due to the damage or destruction of contingent businesses. For example, the animal abuse incident at Pickens Chickens that caused Happy Tails to remove all products containing chicken from the sales floor would not be covered by contingent business income insurance. Similarly, incidents related to shipping delays or communication issues with the Chinese packaging supplier would not be covered by this insurance. For this reason, I do not recommend purchasing contingent business income insurance. Instead, I recommend diversifying the supply chain as described previously.

Relative to Happy Tails' core operations, I recommend that Happy Tails purchase business income insurance. Business interruption would result in severe losses for Happy Tails, and Appendix E shows calculations for potential costs related to business interruption. To calculate the amount of insurance needed and the cost of that insurance, I started by forecasting total sales and total cost of goods sold for 2020 using the 2019 data and the assumed growth rate of 3.4%. After deducting the forecasted cost of goods sold from the forecasted sales, I deducted ordinary payroll, which includes all payroll except for officers, executives, department managers, and employees under contract. Deducting ordinary payroll (180 days) yields a coinsurance basis of \$8,808,814. This number is used in the

following steps to determine how much business income insurance Happy Tails should buy and how much that insurance will cost.

With a coinsurance basis of \$8,808,814 and an assumed maximum shutdown duration of seven months, the estimated maximum business income loss for Happy Tails is \$5,138,475. Dividing the EML of \$5,138,475 by the coinsurance basis of \$8,808,814 yields a quotient of .583. This quotient is rounded up to the next decile for the coinsurance percentage of 60%. 60% of \$8,808,814 is \$5,285,288, and this is the limit of business income insurance Happy Tails should purchase. Using the given rate adjustment factor of 73% and the 80% coinsurance building rate (with sprinklers) for the special form of \$1.07/\$100, the business income insurance rate for Happy Tails is \$0.00781 per \$1 of coverage. Multiplying \$0.00781 by the recommended limit of \$5,285,288 gives a total cost of business income insurance equal to \$41,283. Table 1.2 below displays the calculations for the limit of business income insurance Happy Tails should purchase and the premium cost. Note that the building rate for buildings with sprinklers is discussed in the next section about Happy Tails’ risk related to building exposures.

Coinsurance Basis	Maximum shutdown (months)	EML	Quotient	Coins %	Limit
\$ 8,808,814	7	\$5,138,475	0.5833	60%	\$ 5,285,288
Rate adjustment factor	80% coins special form rate for buildings with sprinklers	BI rate for Happy Tails	BI premium for Happy Tails		
73%	0.0107	0.007811	\$ 41,283		

Table 1.2

2. OWNED BUILDING EXPOSURES

The second most important property risk for Happy Tails is damage to its owned buildings. Happy Tails owns four properties worth a total of \$6,232,254 in replacement cost or \$5,874,989 in actual cash value. Damage or complete destruction to any of these locations would represent severe losses not only in property damages, but also in business income losses if damages force operations to cease. I recommend that Happy Tails purchase special coverage form building insurance on a blanket basis for its four owned properties at replacement cost with a 90% coinsurance requirement to best transfer this property risk and finance any losses. The special coverage form covers all losses not specifically excluded in the policy, which gives Happy Tails the broadest available coverage for losses to its properties, and a 90% coinsurance requirement transfers a vast majority of property risks via insurance.

First, I will address the Happy Tails location in Greenville, SC. The building in Greenville is 30 years old and does not have a sprinkler system, which is a direct violation of local building codes. I recommend that Happy Tails install a sprinkler system and reap the benefits of savings on insurance premiums. Figure 2.1 demonstrates the cost of a sprinkler system and the ensuing premium savings.

Sprinkler System Greenville, SC Location

<u>Installation Costs</u>			
Square Footage of Store Front		3,750	
Square Footage of Corporate Headquarters		1,500	
Square Footage of Dog Food Production Facility		10,450	
Total Square Feet - Greenville		<u>15,700</u>	
Cost per Square Foot		\$ 0.92	
Subtotal		\$ 14,444.00	
Local Tax 8%		<u>\$ 1,155.52</u>	
Total Installation Cost		<u>\$ 15,599.52</u>	
<u>Total Cost</u>			
Installation Cost		\$ 15,599.52	
Water Main Construction		\$ 6,400.00	
Water Tower		\$ 5,000.00	
Total Cost of Sprinkler System		<u>\$ 26,999.52</u>	
<u>Building</u>		<u>Without Sprinklers</u>	<u>With Sprinklers</u>
Insurable Value		\$ 3,470,000.00	\$3,496,999.52
90% coinsurance building rate (per \$100)		1.55	1.07
Building Premium (Special Coverage Form)		<u>\$ 53,785.00</u>	<u>\$ 37,417.89</u>
<u>Contents</u>			
Insurable Value		\$ 2,584,000.00	\$2,584,000.00
90% coinsurance BPP rate (per \$100)		1.60	0.98
Contents Premium (Special Coverage Form)		<u>\$ 41,344.00</u>	<u>\$ 25,323.20</u>
<u>Total Premium</u>		<u>\$ 95,129.00</u>	<u>\$ 62,741.09</u>
<u>Annual Premium Savings</u>		<u>\$ 32,387.91</u>	

Figure 2.1

As shown in Figure 2.1, the annual premium savings when using the special coverage form is \$32,388, and the cost of the sprinkler system is only \$27,000. Not only is Happy Tails required to have a sprinkler at this location due to local building codes, but Happy Tails also earns back more than its initial investment in less than a year due to premium savings. A sprinkler system installation at Happy Tails would be an excellent use of cash and would be an

effective loss control measure to put in place. While the sprinkler system itself would not fully prevent any fires, it would minimize the damages caused by a fire once it occurs.

After installing a sprinkler system at the Greenville, SC, location, each of Happy Tails' four owned locations would be fully sprinklered. This means that Happy Tails receives the benefit of premium reduction for its buildings. The special coverage form on a blanket basis with a 90% coinsurance requirement has a rate of \$1.55 per \$100 for buildings without sprinklers and a rate of \$1.07 per \$100 of coverage for buildings with sprinklers. Happy Tails would pay the lower rate because all its owned buildings would be sprinklered after installing a sprinkler system in Greenville, SC.

I recommend that Happy Tails purchase blanket building insurance for replacement cost value at 90% coinsurance because Happy Tails is not in a position to retain large amounts of property losses. Property insurance on a blanket basis allows Happy Tails to use the full limit of insurance at any one location, whereas specific basis insurance would only provide the limits respective to each individual location. Happy Tails would be better off transferring more risk to protect its funds that should be used to service debt obligations and invest in growth opportunities. With a 90% coinsurance requirement and a replacement cost value of \$6,232,254, Happy Tails' limit of building insurance would be \$5,609,029. \$5,609,029 multiplied by the rate of \$1.07 per \$100 of coverage yields a total cost of insurance for the four owned buildings of \$60,017 annually. To insure the contents of these four owned buildings plus the contents of the rented building, Happy Tails would purchase contents limits of \$4,280,603 (total equipment and inventory times 90%) at a rate of \$0.93 per \$100 of coverage for a total cost of \$39,810. This brings Happy Tails' total buildings and content coverage cost to \$99,827. This is more expensive than using the basic or broad cause of loss form, using lower coinsurance

requirements, or insuring the buildings on a specific basis, but it is a good use of funds because of the financial stability it provides when losses occur. With the special coverage form, Happy Tails is insured for all losses that are not specifically excluded by the insurance policy. This additional coverage is beneficial to Happy Tails because Happy Tails would not need to retain or find alternative financing for most property losses.

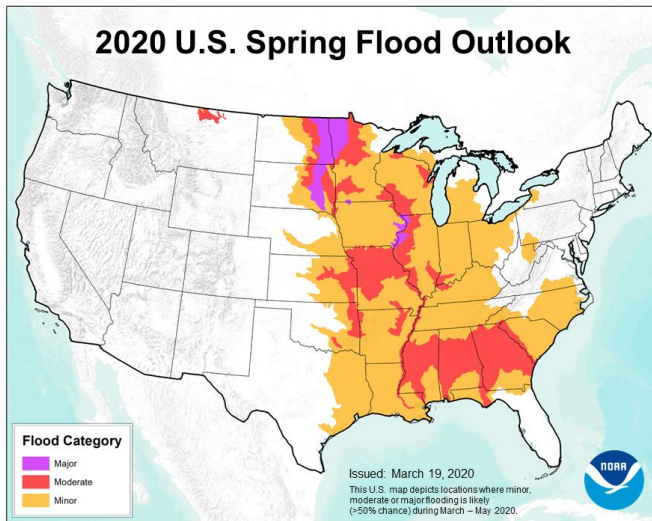


Figure 2.2

Figure 2.2 is a spring 2020 flood threat map from the National Oceanic and Atmospheric Administration. This map focuses mainly on the threat of flood due to river flooding and does not necessarily reflect the potential for flooding caused by natural disasters (U.S., 2020). This map shows that all Happy Tails' locations are under at least a minor threat of damages to flooding. For this reason, I recommend that Happy Tails purchase flood insurance through the NFIP. The most that any one location can be insured under the NFIP is \$500,000 for the building and \$500,000 for the contents of the building. I recommend that Happy Tails purchase the full amount of flood insurance available through the NFIP, so Happy Tails would purchase \$500,000 of flood coverage at a rate of \$0.49 per \$100 of coverage for a total cost of \$9,800 to insure the four owned buildings. To insure the contents of those buildings plus the contents of

the rented building, Happy Tails would need to purchase \$500,000 of NFIP coverage for each of the five locations at a rate of \$0.91 per \$100 of coverage for a total cost of \$22,750. I do not recommend purchasing flood insurance beyond that which the NFIP provides because Happy Tails' locations are not in geographic areas that would be subject to highly severe flooding that would cause extreme losses to the firm.

After purchasing the special coverage form for the four owned buildings, the special coverage form for the contents at all five locations, maximum NFIP coverage for each of the four owned buildings, and maximum NFIP coverage for the contents of all five locations, Happy Tails would pay \$132,377 for property insurance each year. This is more expensive than using narrower cause of loss forms or lower limits, but the financial security that comes with being insured against all losses covered by the special coverage form and the NFIP is an invaluable asset to Happy Tails. With such comprehensive property insurance, Happy Tails can focus its funds on servicing debt and funding growth opportunities rather than retaining property losses or raising capital in a costly way to finance property losses.

3. CYBER LIABILITY

As technology continues to develop rapidly, the threat of cyber related loss has risen to the forefront of risk managers' and insurers' attention. A 2020 report from Allianz Global Corporate and Specialty notes that businesses face more cyber risks now than ever before. Business interruptions, ransomware incidents, data breaches, destruction of data servers, and ensuing litigation following cyber incidents all impose severe challenges to businesses operating in today's markets. The report from Allianz points out an increasing trend in the number of cyber-related claims per year since 2015, peaking at 982 in 2020 (Cyber, 2020).

Allianz's report points out several factors contributing to the rise in cyber-related claims in recent years. "Digital disruption has become a much more significant driver of cyber losses while cyber risk in supply chains is a growing exposure, given the increasing reliance on technology," the report highlights (Cyber, 2020). The growth in frequency and severity of ransomware attacks is concerning for businesses who have extensive operations online. Data breaches are also a topic garnering much attention, given that regulation and third-party liability both drive up the cost of data breaches. Regulators can fine firms whose online security is weak, as shown in Capital One's July 2019 data breach impacting approximately 100 million customers in the United States. Capital One was fined \$80 million by bank regulators for its failure to maintain proper cyber security (Cyber, 2020).



Figure 3.1 Source: Allianz Global Corporate & Specialty

Happy Tails experiences the same cyber risks facing all businesses today. These cyber threats will continue to grow as Happy Tails expands operations and increases its reliance on digital technology. Happy Tails should implement some simple risk management solutions to protect itself from growing cyber threats. Cyber risk is the top liability risk for Happy Tails because of the severe impacts a cyber incident could have not only on Happy Tails, but also on Happy Tails’ customers. A cyber incident would entail significant costs related to business interruption, data recovery, third party liability claims for leaked sensitive information, and regulatory penalties due to insufficient cyber security, as shown by Capital One’s incident in 2019.

My first recommendation for Happy Tails is to purchase a data backup system. Despite Steve Phillips’ assertion that a data backup system is too expensive, data backup is essential. When cyber threats are present, it is worth the time and resources to invest in a data backup system. Important and sensitive information related to customers and operations is critical to Happy Tails’ operations, and any interruption caused by a data breach, destruction, or loss would have severe ramifications for the company. At the end of each week, Happy Tails should perform a full backup of all necessary files to ensure that no important or sensitive data is lost.

My second recommendation for Happy Tails is to implement basic safe use policies throughout the company. Microsoft offers a Cybersecurity Awareness Kit, delivered in partnership with Terranova Security (Empowering, 2020). I recommend that Happy Tails use this Microsoft Cybersecurity Awareness Kit to train employees in best practices for online operations. Educating and empowering employees, especially managers who consistently use digital interfaces, is key in reducing the likelihood that malware or viruses will create havoc in operations for Happy Tails. Other safe use policies include frequent password changes and two-factor authentication for all logins to company systems. Working with Steve Phillips to put these features in action will ensure that Happy Tails' data and systems are only accessed by employees and managers authorized to access the systems.

A third recommendation is that Happy Tails diversify its data storage systems. Keeping all important records on Steve's web server is risky because if it is destroyed or compromised in any way, Happy Tails faces severe costs related to business interruption, cyber liability, and data recovery. Copying this data and storing it on servers in a separate, secure location greatly reduces the risk that Happy Tails experiences severe cyber loss due to data server failure or destruction.

Happy Tails should work with BizAssist to learn more about the server facilities in Spartanburg, SC. Learning more about what other businesses use the server facilities to store data and who has access to those servers is crucial to identifying potential threats. The computerized retail management system stores sensitive data and manages the flow of information and cash for all of Happy Tails' needs, and Happy Tails should learn all it can about the servers used to store this crucial data.

I also recommend that Happy Tails purchase Kaspersky Select Endpoint Security for Business for each of the 15 laptops provided by BizAssist. This cyber security program mitigates risk by blocking threats early, maintains user productivity by having minimal impact on system performance, and uses real-time intelligence about exploits to help apply the latest security patches for a wide range of

applications (Kaspersky, 2021). The cost of this security package would be \$465 each year, an insignificant cost compared to the online safety and security provided by Kaspersky.

Finally, I recommend that Happy Tails instills a corporate culture of awareness surrounding cyber issues. Employees should not be afraid to speak up if they see any potential problems with Happy Tails' data storage procedures or online operations. If everyone in the company is confident in their ability to safely use the digital interfaces and respond to potential threats, Happy Tails will find itself in a much more cyber-secure situation.

4. COMMERCIAL GENERAL LIABILITY

Commercial general liability should be a major concern for Happy Tails because of the frequency and severity of liability losses at Happy Tails’ premises. From slip and falls to falling boxes, Happy Tails has experienced an assortment of liability losses in the most recent two years of loss data and should insure against these losses to transfer general liability risk. Factors contributing to the recommendation to insure rather than retain the general liability risk include a limited amount of data (uncertainty about future claims), a small number of exposure units (only operating five retail locations), and a closely held ownership structure (Happy Tails is owned by the Golden family, not shareholders).

Happy Tails experienced sixteen liability claims totaling \$221,280 in incurred losses from 2018 to 2019. Of these sixteen claims, seven were from customers, seven were from third party workers (e.g., truck drivers, vendors, suppliers), one was from an inspector, and one was from a neighboring facility. A full breakdown of liability claims is presented in Table 4.1 and Figure 4.2.

Loss Summary Data 2018-2019			
Affected Party	Incurred	Paid	Number of Claims
Customer	\$ 70,550	\$ 58,200	7
Inspector	\$ 18,000	\$ 18,000	1
Neighboring Facility	\$ 16,500	\$ 13,600	1
Third Party Worker	\$ 116,230	\$ 92,700	7
Totals	\$ 221,280	\$ 182,500	16

Table 4.1

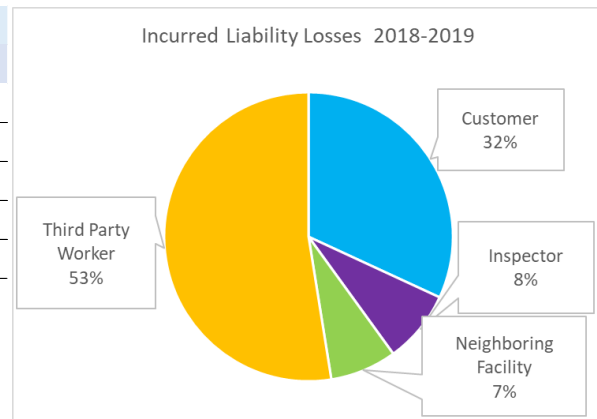


Figure 4.2

These sixteen claims handled in the most recent two years of loss history can all be categorized as losses related to the premises and operations of Happy Tails. These sorts of losses can

mostly be covered by the ISO's Commercial General Liability (CGL) policy. I recommend that Happy Tails purchase premises and operations coverage with increased liability limits of \$500,000. This amount of coverage would cost Happy Tails \$10,740 and would allow the insurance company to handle any expenses related to claims that are covered by the CGL policy. It is important to note that some liability losses incurred by Happy Tails may not be covered by the CGL policy. For example, the incidents involving employee(s) punching a customer and a truck driver in 2019 would not be covered because the CGL policy excludes "intentional acts" (Goodwin, 2020). I recommend incident analysis for these two incidents involving the truck driver and the customer being punched. Whether it was the same employee in both incidents or two different employees who punched the truck driver and customer, action must be taken to ensure that no Happy Tails associates are violent towards customers in the future. Also, the claim made by the neighboring facility that was damaged by runoff from rainwater would not be covered by the CGL policy. The CGL policy excludes pollution damage, so Happy Tails would not receive coverage for losses related to polluting neighboring facilities under the CGL policy (Goodwin, 2020).

Risk exposures not included in the liability loss data include liability due to Happy Tails' dog food making harming customers' dogs. Contamination from poor quality packaging and overestimates in the amount of vitamin D have negatively impacted Happy Tails' reputation and could expose Happy Tails to costly lawsuits. I recommend that Happy Tails purchase products liability insurance through the CGL policy with increased liability limits of \$500,000. This insurance with a limit of \$500,000 would cost Happy Tails \$7,986 and would cover losses related to Happy Tails' products injuring the end user, which is customers' dogs in this case.

Additionally, I recommend that Happy Tails purchase umbrella liability insurance to cover any losses exceeding the limits already purchased. For umbrella liability coverage to operate with no gap in coverage, Happy Tails must maintain underlying limits of \$500,000, which is why I recommended limits of \$500,000 for premises/operations and products liability coverages. \$2,000,000 in umbrella liability insurance would cost Happy Tails \$12,500. I recommend an umbrella limit of \$2,000,000 and not more because the scope of Happy Tails' operations does not expose the firm to lawsuits on a grand scale that could incur losses of more than \$2,000,000 over primary layers of insurance and limited amounts of retention. I recommend an umbrella limit of \$2,000,000 rather than only \$1,000,000 because this umbrella liability policy can be used to cover extreme liability losses not covered by the CGL, making a large limit versatile for Happy Tails and protecting against highly severe losses for an additional cost of only \$5,000 more than the \$1,000,000 limit would have cost.

For a total cost of \$31,225, Happy Tails can be insured against commercial general liability exposures up to \$2,500,000 when considering both CGL coverage and umbrella liability coverage. Figure 4.3 shows the layering effect of the insurance policies. Purchasing this layered coverage will greatly reduce Happy Tails' exposure to third party liability losses.

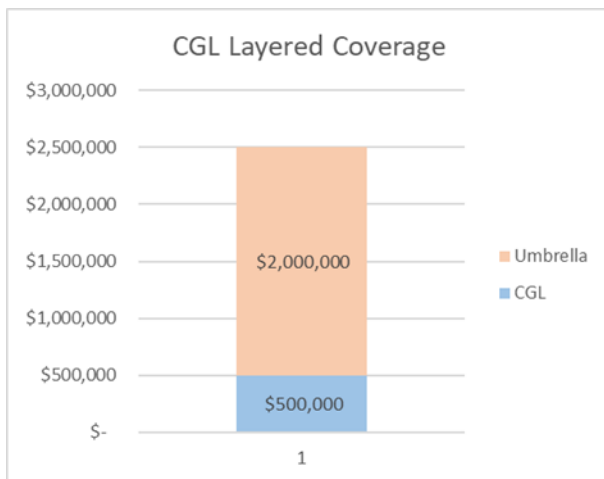


Figure 4.3

5. WORKERS' COMPENSATION

Workers' compensation claims at Happy Tails have shown increasing trends in both frequency and severity since 2015. As a growing firm, it seems logical that workers' compensation claims would increase over time, but the exponential nature of the trend for total incurred losses suggests that steps must be taken to better manage risks posed by workers' compensation issues.

Claims frequency has increased each year since 2015 for Happy Tails, a trend that is to be expected from a growing business. However, an increase from 15 claims in 2018 to 26 claims in 2019 is concerning. Figure 5.1 shows the causes of the 26 claims in 2019, and Figure 5.2 illustrates the causes of all claims from 2017-2019.

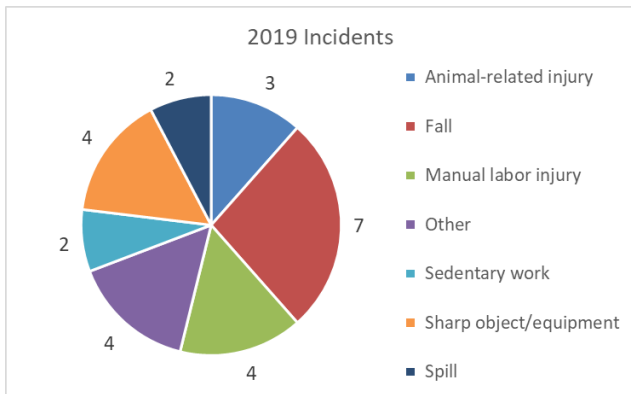


Figure 5.1

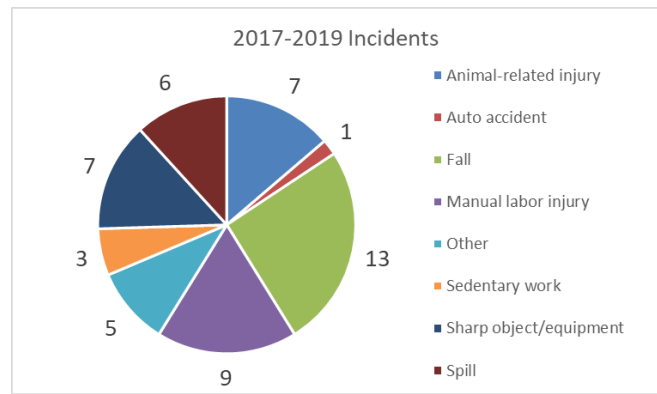


Figure 5.2

The figures above show that falls are the most common cause for workers' compensation claims at Happy Tails. This includes slips, trips, and falls from height. Slips, trips, and falls cost Happy Tails \$327,400 in incurred losses from 2017 to 2019, making up 24% of all incurred losses. Slips, trips, and falls are accidents that can be prevented with adherence to OSHA workplace safety standards and

employee training. OSHA guidelines require that employers ensure basic standards of safety in the workplace to prevent worker injuries. These basic requirements include keeping passageways and storerooms clean, orderly, and sanitary; inspecting and maintaining walking-working surfaces regularly; and ensuring that walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards or cords, leaks, and spills. OSHA also requires that employees face the ladder when climbing up or down it and use at least one hand to grasp the ladder when climbing up or down it. OSHA prohibits employees from carrying any object or load that could cause the employee to lose balance and fall while climbing up or down the ladder. Happy Tails should perform yearly training to ensure that employees comply with these guidelines to prevent injuries related to slips, trips, and falls (Occupational, 1974).

Emphasis on adhering to OSHA's workplace safety standards through employee training and education can reduce the frequency and severity of injuries caused by slips, trips, and falls.

The second most common cause for worker injuries at Happy Tails is manual labor. This includes mostly back injuries resulting from lifting dogs, moving boxes, and unloading trucks. The OSHA Technical Manual offers suggestions for preventing back injuries caused by physical labor. Worker training and education are key to preventing back injuries. Training on the basics of ergonomics, recognition of hazards, procedures for reporting hazardous conditions, and methods of reporting injuries are all helpful in the prevention of back injuries. Rotating employees, providing short periodic breaks, and using two-person lifting techniques can alleviate some of the issues caused by physically demanding tasks (Occupational, 1990).

Figure 5.3 shows the body parts injured in workers' compensation incidents at Happy Tails. Hand and arm injuries are the most common, and Figure 5.4 illustrates what the leading causes of hand and arm injuries were from 2017 to 2019.

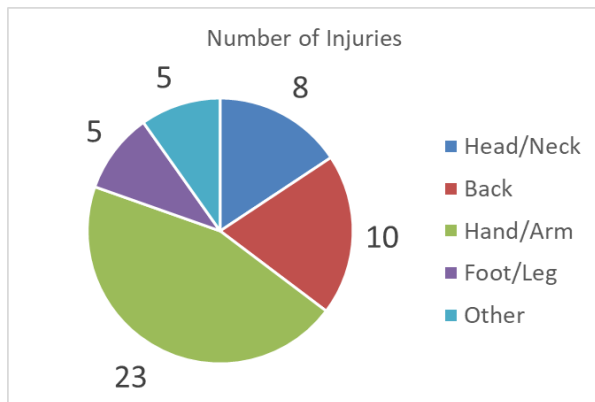


Figure 5.3

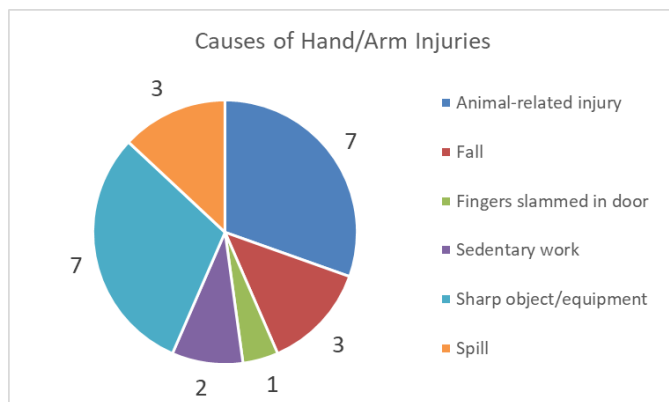
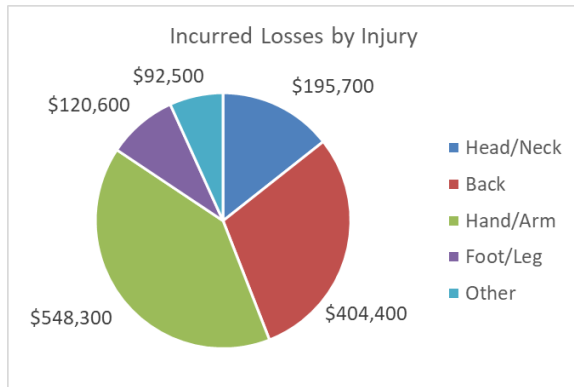


Figure 5.4

The two leading causes of hand and arm injuries at Happy Tails are animal-related injuries (dog bites) and the misuse of sharp objects and equipment, ranging from staplers to heavy machinery. To prevent hand and arm injuries due to dog bites, I recommend that Happy Tails purchase a Groomers Helper Professional Set for each of the five locations that offer grooming services. The Groomers Helper Professional Set costs \$400 and is the only dog grooming tool on the market that is “scientifically designed to calm dogs down, allow you to groom hands free, and reduces the bite radius by 90%” (Groomers Helper, 2018). Animal-related injuries cost Happy Tails \$52,400 in incurred losses in 2017, \$61,700 in 2018, and \$102,300 in 2019. With the Groomers Helper Professional Set, Happy Tails can reverse this increasing trend in the frequency and severity of dog bite injuries and bring workers’ compensation claims to a manageable level.

In order to prevent hand and arm injuries due to the misuse of equipment, I recommend that all employees be required to wear protective gloves appropriate for their tasks and undergo proper training for the safe use of equipment yearly. Protective gloves are a simple and cost-effective way to protect employees when operating machinery and can prevent serious injuries such as lacerations and cuts. The kinds of protective gloves can vary; for example, someone

slicing ingredients or using grooming shears need not wear the same heavy duty protective gloves worn by someone operating machinery.



Back Injuries			
General Cause	Incidents	Incurred	Paid
Auto accident	1	\$ 101,700	\$43,000
Manual labor injury	8	\$ 152,700	\$90,100
Pushed by drunk customer	1	\$ 150,000	\$70,000

Table 5.6

Figure 5.5

Figure 5.5 and Table 5.6 above highlight the severity of back injuries at Happy Tails. Despite only ten claims due to back injuries, back injuries account for \$404,400 of incurred losses since 2017. \$251,700 of that \$404,000 is accounted for by two outlier incidents: one employee being run over by a truck, and one employee being pushed by a drunk customer at the Canine Cantina. I recommend an in-depth incident analysis for both incidents. Happy Tails should find out what caused these incidents, evaluate what could have been done to prevent them, and learn what it can do in the future to prevent such severe outlier incidents.

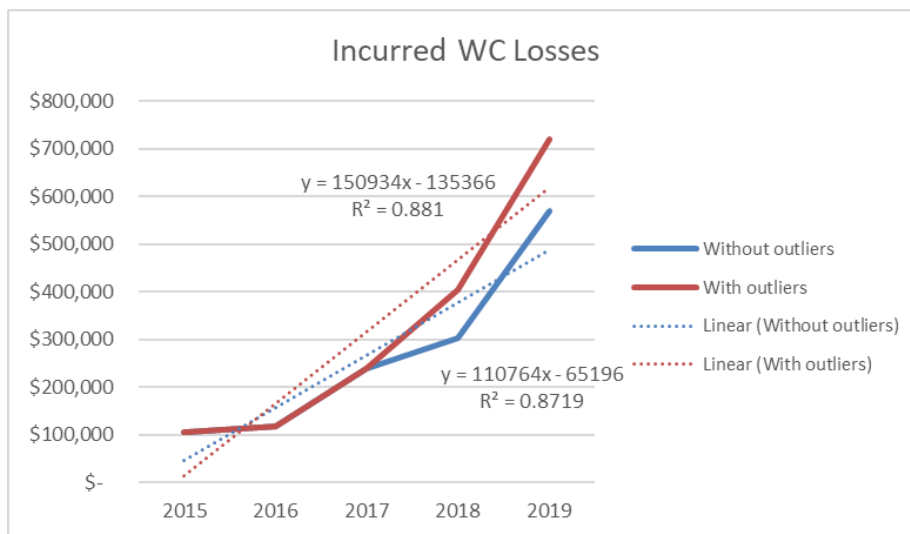


Figure 5.7

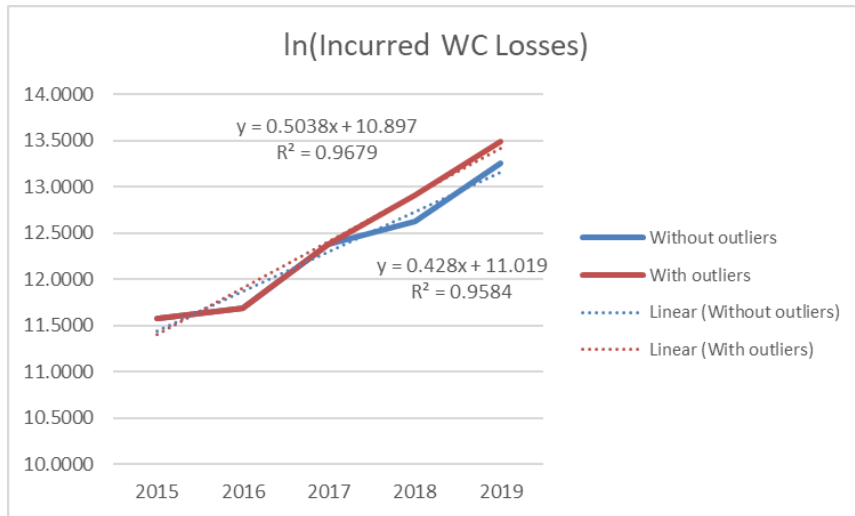


Figure 5.8

Figures 5.7 and 5.8 illustrate the growth trends for incurred workers' compensation losses and the natural logarithm of incurred workers' compensation. With higher R^2 values, the models for the $\ln(\text{Incurred WC Losses})$ have more explanatory power. Transforming the data into logarithmic units helps account for the exponential trend in growth and offers more predictive capability. Regression analysis for the natural logarithm of incurred losses with no outliers yields a model with $R^2 = 0.9584$, Significance $F = 0.0036$, P-value for Intercept < 0.0001 , and P-value for Coefficient = 0.0036. All these regression outputs suggest that the model is valid, and the model predicts that $\ln(\text{incurred losses})$ for the year 2020 will be 13.5875, and using the exponent function gives a final calculation of predicted incurred workers' compensation losses at \$796,116. Regression analysis for the natural logarithm of incurred losses including outliers yields a model with $R^2 = 0.9679$, Significance $F = 0.0025$, P-value for Intercept < 0.0001 , and P-value for Coefficient = 0.0025. All these regression outputs suggest that this model also has valid explanatory power, and the model predicts that $\ln(\text{incurred losses})$ for the year 2020 will be 13.9197 and incurred workers' compensation losses will be \$1,109,811. Table 5.9 shows the increasing trends in workers' compensation losses, including the outlier incidents, and provides a projection for 2020 incurred losses.

Claims Forecasting									
Happy Tails, Inc.									
Accident Year	Period	Years Ago	Claims Frequency	Total Losses	Inflation-Adjusted Total Losses (2.8%)	Average Severity	In(Total Losses)		
2015		1	4	5 \$	106,680.00	\$ 119,139.42	\$ 21,336.00		11.5776
2016		2	3	9 \$	119,000.00	\$ 129,278.50	\$ 13,222.22		11.6869
2017		3	2	10 \$	238,500.00	\$ 252,042.98	\$ 23,850.00		12.3821
2018		4	1	15 \$	404,300.00	\$ 415,620.40	\$ 26,953.33		12.9099
2019		5	0	26 \$	718,700.00	\$ 718,700.00	\$ 27,642.31		13.4852
projected 2020		6			\$ 1,109,810.68				13.9197

Table 5.9

If Happy Tails can avoid severe outlier incidents such as an employee getting run over by a truck or an employee getting injured by a drunk customer, the firm could reasonably expect to achieve the lower workers' compensation losses of \$796,116. Happy Tails should have a goal of achieving much lower incurred losses through emphasized OSHA compliance, Groomers Helper equipment, and protective handwear when using hazardous equipment. Table 5.10 shows the effect that different reduction rates would have on workers' compensation losses at Happy Tails.

Workers' Compensation Sensitivity Analysis		
Reduction %	Projected WC Losses (With outliers)	Projected WC Losses (without outliers)
0%	\$ 1,109,811	\$ 796,116
10%	\$ 998,830	\$ 716,504
20%	\$ 887,849	\$ 636,893
30%	\$ 776,868	\$ 557,281
40%	\$ 665,887	\$ 477,670
50%	\$ 554,906	\$ 398,058
60%	\$ 443,924	\$ 318,446
70%	\$ 332,943	\$ 238,835
80%	\$ 221,962	\$ 159,223
90%	\$ 110,981	\$ 79,612
100%	\$ -	\$ -

Table 5.10

With the loss control methods recommended in this report, it is possible to achieve significant reductions in workers' compensation losses. Happy Tails could realistically achieve a 40%-60% reduction in workers' compensation claims by reducing the frequency and severity of losses through the discussed loss control methods.

According to a 2021 report from The Hartford, average rates for workers' compensation insurance in the United States were \$1.05 per \$100 of payroll in 2020. Assuming Happy Tails has access to the national average workers' compensation insurance rates, Happy Tails would pay \$1.05 per \$100 of payroll on \$3,800,253 of total payroll for a total of \$39,903 annually. Transferring workers' compensation risks via insurance would greatly benefit Happy Tails and provide a reliable way to finance losses, rather than retaining uncertain workers' compensation risks.

6. PANDEMIC

The most significant uninsurable risk facing Happy Tails is pandemic risk. A pandemic is a systematic risk that cannot be diversified away through typical risk management techniques, and it cannot be insured because insurance companies are not designed to handle the stress of systemic risks that negatively impact entire economies. Pandemic poses multiple related threats such as increased cyber risk, business interruption, extra expenses, and more. In this section, I will discuss the severity of pandemic risk and what Happy Tails can do to maintain success in the event of a pandemic that stops normal business operations. As evidenced by the COVID-19 pandemic, a pandemic can have severe detrimental effects on entire markets and the individual firms within those markets.

ICF, a management consulting firm specializing in digital communications, produced a podcast hosted by Marko Bourne, ICF's Senior Vice President of Disaster Management. On an episode of this podcast, Marko discussed the risks posed by COVID-19 and how to best prepare in the future for similar threats with two risk management experts. The podcast begins with Susan West, Vice President of Risk Management for ICF, identifying some of the key outcomes that are likely when a pandemic occurs. Potential fallout can include "loss of revenue, [a firm's] inability to retain employees, supply chain impacts, employment lawsuits, and more" (Bourne, 2020). West goes on to note that once the risks associated with a pandemic are identified, a firm must determine the probability of occurrence for pandemic. Given that pandemics have caused strife in the past, and the past is taken into consideration when planning risk management strategies, it would be foolish to say that pandemic risk is unlikely (Bourne, 2020).

For Happy Tails, pandemic risk identification begins with Happy Tails' business structure and operations. Happy Tails has a strong reliance on in-person retail sales. By the end of 2019, 75% of revenues for Happy Tails were from the five physical locations, and 25% of revenues were from online sales. Additionally, Happy Tails has 83% liabilities in its capital structure and must meet regular interest payments on those liabilities in order to remain operational. Any impediment to cash flows brought on by a sharp decline in sales due to business closure during a pandemic could put Happy Tails at risk of bankruptcy. Major losses could also occur during a pandemic due to the negative effects a pandemic has on businesses contingent to Happy Tails' operations. For example, the dog food packaging manufacturer in China would likely be difficult to work with due to the significant impact a pandemic can have on international transportation. Pickens Chickens could also have significant changes in operations due to a pandemic, creating a shortage of ingredients for Happy Tails' brand of natural dog food. The compounding effect of supply chain risks and risk of lost sales leading to an inability to service debt is a recipe for disaster for Happy Tails, but there are steps that can be taken to mitigate these risks as much as possible.

In the podcast with Marko Bourne, Reid Sawyer, U.S. Cyber Risk Consulting Practice Leader at Marsh, notes the importance of evaluating counterparty risks such as firms that provide IT services or business processing services. He elaborates by stating that firms should ask the question, "How much stress can that organization sustain?" when evaluating the third parties that provide crucial business services. Asking this question and assessing counterparty risks leads firms to create intelligence layers of risk management that have not been common outside the context of a pandemic (Bourne, 2020).

Heeding Reid Sawyer's advice, Happy Tails should carefully assess its relationships with BizAssist and the computerized retail management system (CRMS) startup. BizAssist provides the computer hardware such as laptop, docking station, monitor, mouse, keyboard, and mobile phone to all corporate employees and to the operator of each store location. Happy Tails relies on BizAssist to fulfill their obligations of the lease agreement if hardware malfunctions, and Happy Tails should ensure that BizAssist can meet these obligations even in the event of a pandemic. If Happy Tails were to suffer a loss related to office technology during a pandemic in which everyone in the firm relies on technology for communication and remote operations, there would be severe obstacles and delays in achieving firm goals during the pandemic. Also, the CRMS startup is crucial to the operations of Happy Tails and would be even more vital to sustained limited operations during a pandemic. The CRMS manages cash flow, stores credit card information, and assists in inventory, payroll, and invoicing. If the CRMS startup cannot handle the stress presented by a pandemic, Happy Tails would find itself crippled and unable to even complete online sales as usual, leading to severe business interruption.

Happy Tails should also evaluate the capabilities of its supply chain for its brand of dog food. As previously mentioned, the packaging supplier in China and Pickens Chickens in Georgia should both be carefully examined to ensure that operations can continue, at least at some capacity, amid a pandemic. If Happy Tails does not feel confident in its supply chain's ability to operate under a pandemic environment, it should explore the possibility of diversifying its supply chain as discussed in the business interruption chapter of this report.

Susan West explains that a good pandemic preparation plan defines the essential roles, the protocols for remote work, employee training, and emergency communication plans (Bourne, 2020). I recommend that Happy Tails' pandemic plan divide workers into two categories:

corporate and retail. The corporate workers would be able to work remotely using the technology provided by BizAssist, relying on email and phone calls to communicate efficiently and effectively. It is crucial for Jane Golden, as CEO, to assess the responsibilities of each corporate employee and describe in detail the expectations for each role in the event of a pandemic. Retail employees include the store operators and employees that work in the stores. Jane Golden should outline a plan detailing the responsibilities for store operators, and operators should be responsible for implementing plans at their respective locations. Important factors to consider when designing a pandemic plan for retail locations are modified hours of operation, scheduling employees under modified hours, and compliance with government requirements (local, state, and federal). Happy Tails should consider that retail sales at the physical store locations will likely decrease if a pandemic occurs and should be prepared to increase public awareness of online availability for Happy Tails products through online marketing.

In a March 2021 update, PetSmart detailed its current plans for operating during the COVID-19 pandemic. In this update, PetSmart informed customers of operating hours, online alternatives to shop with PetSmart, face covering requirements in compliance with government guidelines, and cleaning and safety measures (COVID-19, 2021). I recommend that Happy Tails employ a similar approach to inform customers of any changes to operations during a pandemic. Customers appreciate easy access to information, and communication with customers during times of uncertainty is vital. If Happy Tails works carefully to quickly respond to changes in operations with digital communication to customers, Happy Tails can reduce the losses in sales experienced during limited operating conditions.

I recommend that Happy Tails launch an employee training program educating employees how to handle working under the new circumstances that a pandemic can present.

Simple periodic training and education on best practices to prevent the spread of illness in addition to a description of changing responsibilities in a modified work environment can provide a sense of stability and preparedness when Happy Tails needs to respond to a pandemic.

Finally, I recommend that Happy Tails select one week each year to practice remote work for senior management. The practice and rehearsal of remote operations for the firm's executive officers would allow for a smooth transition if/when in-person working conditions become suddenly unavailable due to a pandemic. If Jane Golden implements a policy of remote work for one week each year, the senior management for Happy Tails will be at least moderately comfortable and confident in Happy Tails' ability to continue operating as smoothly as possible under remote working conditions.

The risk aggregation component present with pandemic risk is the most troubling and complex to manage. Reid Sawyer explains that firms must redefine what enterprise risk means to the company itself and understand how a pandemic or similar systematic risk can impact the firm, the firm's supply chain, and the firm's business partners (Bourne, 2020). For Happy Tails, I believe that most of the risk aggregation threatens bankruptcy. Due to Happy Tails' financial structure, any bump in the road that disrupts cash flows could have a compounding effect that leads to Happy Tails' inability to meet debt obligations, thus making it more difficult or costly to obtain new debt, and so on. The large-scale impacts that a pandemic might have on Happy Tails are severe, but with careful planning and effective response to crisis, Happy Tails should be able to navigate the challenges of a pandemic and remain competitive in the pet supply retailing and grooming business.

7. INTEREST RATE RISK

The second most pressing uninsurable risk for Happy Tails is interest rate risk. Happy Tails uses liabilities to fund over 83% of its total assets, which is reasonable for a firm that does not rely on large equity issuance. However, this unbalanced capital structure gives Happy Tails significant exposure to interest rate risk. Due to the large portion of total assets funded by liabilities, any shock in the interest rate environment or any unexpected changes in the terms of Happy Tails' borrowing could have severe impacts on Happy Tails' net income.

Happy Tails, Inc. Selected Income Statement Data Year End Dec. 31, 2019		Interest Rate Changes and Impacts				
Current int rates 4.45%		If rates increase to 4.95%	If rates increase to 5.50%	If rates increase to 6.00%	If rates increase to 8.00%	If rates decrease to 4.00%
EBIT	\$ 888,358	\$ 888,358	\$ 888,358	\$ 888,358	\$ 888,358	\$ 888,358
Less Interest	\$ 382,192	\$ 425,062	\$ 472,291	\$ 515,226	\$ 686,968	\$ 343,484
EBT	\$ 506,166	\$ 463,296	\$ 416,067	\$ 373,132	\$ 201,390	\$ 544,874
Taxes @ 21%	\$ 106,295	\$ 97,292	\$ 87,374	\$ 78,358	\$ 42,292	\$ 114,423
Net Income	\$ 399,871	\$ 366,004	\$ 328,693	\$ 294,774	\$ 159,098	\$ 430,450
% change in NI	-	-8.47%	-17.80%	-26.28%	-60.21%	7.65%
TIE ratio	2.32	2.09	1.88	1.72	1.29	2.59

Table 7.1

Table 7.1 above shows the impact of several interest rate changes on Happy Tails' net income. For this sensitivity analysis, I held Happy Tails' EBIT constant, which is an unrealistic assumption considering that goals for Happy Tails should include sales growth and increased efficiency. However, holding EBIT constant is an effective way to illustrate the impacts of any shifts in interest rates.

In 2019, Happy Tails reported \$382,192 in interest expense and \$8,578,105 in total liabilities (Appendix G), for an average rate cost across all liabilities of 4.45%. As shown in Table 7.1, a 50 bps increase in interest rates would cause net income to drop to \$366,004, a decrease of 8.47%. At the extreme end, interest rates at 8% would decrease Happy Tails' net income by 60.21% to only \$159,098. While it is unlikely that market interest rates would change so drastically in such a short period of time, certain aspects of Happy Tails' financial data suggest that it is subject to firm-specific risk of borrowing rates increasing.

Happy Tails has a quick ratio of 0.56x and a current ratio of 1.50x, both of which fall below the industry medians of 0.7x and 1.9x, respectively. These indications of poor liquidity could cause suppliers to tighten credit terms by either demanding payment sooner or by charging higher short-term credit rates. Either of these restrictions on credit would negatively affect Happy Tails. Furthermore, banks might be hesitant to lend to Happy Tails because of these poor liquidity metrics. If banks perceive Happy Tails as a risky client, borrowing rates will increase, and one of the undesirable circumstances depicted in Table 7.1 could occur.

Interest rate risk is not a pure risk, which means that Happy Tails cannot insure against it and could potentially benefit from changes in interest rates. Table 7.1 shows that a decrease in interest rates to 4% would increase Happy Tails' net income by 7.65% and improve Happy Tails' TIE ratio to 2.59. Happy Tails specifically is unlikely to see a decline in interest rates due to its current financial situation (poor liquidity and efficiency relative to peer industry group), but macroeconomic conditions could cause a decrease in market interest rates, allowing Happy Tails to profit from reduced interest expenses.

Happy Tails' 2019 income statement reflects a times-interest-earned ratio of 2.32, a healthy number suggesting that Happy Tails should be able to meet interest payments with

relative ease. However, as Table 7.1 shows, that times-interest-earned ratio drops to 1.88 with just a 105 bps increase in average interest rates across all liabilities. This decrease in earnings relative to interest expense would signal to lenders that Happy Tails is less likely to meet interest obligations on time and would raise the rates on Happy Tails' borrowings as a result. This cause-and-effect relationship leading to multiple increases in rates would be very costly for Happy Tails due to its reliance on liabilities to fund assets and operations.

To manage interest rate risk, I first recommend that Happy Tails work with its lenders and suppliers to contractually lock in current interest rates or establish variable-rate arrangements such that the average interest rate across all liabilities does not exceed 4.95%. Table 7.1 shows that an increase in rates to 4.95% would only decrease net income by 8.47% and drop TIE ratio to 2.09. These are small setbacks that can be managed and overcome, and with a TIE ratio over 2, Happy Tails would still be in a decent situation for further borrowings.

Second, I recommend that Happy Tails tighten its own credit terms. Based on Happy Tails' 2019 financial statement data, Happy Tails has an average collection period of 39.48 days, much longer than the industry median of 19.0 days. This reflects an efficiency problem for Happy Tails and contributes to poor liquidity. If Happy Tails can tighten its credit terms and demand earlier payment from its buyers, Happy Tails can better match the durations of its accounts receivable and its accounts payable to achieve more stable liquidity. Stable liquidity would signal to creditors that Happy Tails is capable of meeting interest obligations, and thus allow Happy Tails to secure more favorable borrowing terms.

Refer to Appendix D for more detailed information regarding Happy Tails' key financial ratios relative to its peer industry group.

8. BASIC FINANCIAL ANALYSIS

Table 8.1 below, also provided in Appendix D, shows key financial ratios for Happy Tails and how Happy Tails compares to other firms in the miscellaneous retail store industry.

DUN AND BRADSTREET KEY BUSINESS RATIOS						
Miscellaneous Retail Stores, Not Elsewhere Classified						
<u>SOLVENCY</u>	<u>HAPPY TAILS</u>	<u>UPPER</u>	<u>INDUSTRY</u> <u>MEDIAN</u>	<u>LOWER</u>	<u>FAVORABLE OR</u> <u>UNFAVORABLE</u>	
Quick Ratio (Times)	0.56	1.7	0.7	0.2	U	
Current Ratio (Times)	1.50	3.1	1.9	1.0	U	
Current Liabilities to Net Worth (%)	231.73	20.8	61.5	116.2	U	
Current Liabilities to Inventory (%)	109.67	57.2	90.7	199.4	U	
Total Liabilities to Net Worth (%)	490.16	26.8	85.7	232.3	U	
Fixed Assets to Net Worth (%)	241.68	14.0	33.0	66.1	U	
<u>EFFICIENCY</u>						
Collection Period (Days)	39.48	7.0	19.0	44.0	U	
Sales to Inventory (Times)	3.78	15.4	7.5	3.4	U	
Assets to Sales (%)	73.96	30.3	45.2	58.8	U	
Sales to Net Working Capital (Times)	6.83	9.6	5.8	3.6	F	
Accounts Payable to Sales (%)	16.47	2.2	4.4	9.4	U	
<u>Profitability</u>						
Return on Sales (%)	2.86	8.2	2.0	0.2	F	
Return on Assets (%)	3.87	15.0	4.1	0.1	U	
Return on Net Worth (%)	22.82	35.9	7.9	2.3	F	

F = Favorable
U = Unfavorable

Table 8.1

Despite many of Happy Tails' key ratios marked as unfavorable relative to industry peers, Happy Tails exceeds the industry median in return on sales (net income/sales) and return on net worth (net income/net worth). To understand what is driving these two favorable ratios, refer to Appendix G to view Happy Tails' balance sheet and income statement as of December 31, 2019. With net income of \$399,871 and net sales of \$13,978,500, Happy Tails has a return on sales of 2.86%. This is above the industry median, and Happy Tails should seek to maintain this favorable ratio in the future. These metrics are standard and do not indicate anything out of the ordinary for Happy Tails. However, Happy Tails' return on net worth is magnified by the heavy use of leverage in Happy Tails' capital structure. As

a closely held, not publicly traded firm, Happy Tails relies on debt to finance assets much more than equity. This leads to a relatively small value of net worth on the balance sheet and magnifies the return on net worth ratio. With net income of \$399,871 and net worth of \$1,751,910, Happy Tails has return on net worth of 22.82%, much higher than the industry median.

Although Happy Tails' heavy use of debt positively magnifies return on net worth, it also negatively impacts solvency ratios such as quick ratio, current ratio, and total liabilities to net worth. \$4,059,700 in current liabilities significantly lowers both the quick and current ratios. The quick ratio is roughly 1/3 of the current ratio, which shows the impact that carrying high inventory has on liquidity. The effect of carrying high inventory is also reflected by the sales to inventory ratio of 3.78x, which is below the industry median of 7.5x. Happy Tails' high inventory numbers reduce efficiency and likely impose unnecessary costs of holding inventory. As previously described, Happy Tails uses large amounts of debt to finance assets and does not use common equity, which is most easily seen in the total liabilities to net worth ratio of 490.16%. This is significantly unfavorable relative to the peer industry group, but it is important to note that this unfavorable ratio is driven by Happy Tails' capital structure decisions rather than poor equity valuation.

Happy Tails' assets to sales ratio is a key measurement of efficiency. This ratio reflects how well assets are being used to generate sales, and Happy Tails' ratio is far below the industry median. Happy Tails' assets to sales ratio of 73.96% means that for every \$0.7396 of assets, Happy Tails generates \$1.00 of sales. This could be an indication that Happy Tails is not utilizing its assets efficiently enough, or it could reflect the challenges of operating in the pet supply retailing and grooming industry.

Another takeaway from Happy Tails' financial data is how much loss Happy Tails should be prepared to retain. Based on common risk retention practices, recommended levels of retention are 1%-5% of total assets, 2%-15% of working capital, 1%-8% of pre-tax earnings, 1%-10% of earnings, or 0.5%-2% of annual revenue (Liebenberg, 2021). The table in Appendix D displays recommended levels of retention for Happy Tails based on the lower and upper metrics commonly used for risk retention. I recommend that Happy Tails retain losses as given by the average of the lower estimates, \$55,000. I recommend lower retention for the reasons listed with the table in Appendix D. Happy Tails has a closely held ownership structure with a high concentration of the owners' wealth in Happy Tails, making retention more costly than firms with diversified ownership structure. Happy Tails is also a smaller firm, operating only five retail locations. This means that with fewer exposure units, losses are less predictable and therefore more costly to retain. Finally, Happy Tails' high debt usage makes retention more expensive because of the higher probability of bankruptcy if Happy Tails were to retain high levels of losses.

My recommendation to retain only \$55,000 of losses differs from the \$1,099,448 displayed in the table in Appendix F. The main cause for this difference is the buildings exposures. In order to retain the full loss of \$1,099,448, Happy Tails would need to suffer complete losses at multiple of their owned buildings, which is highly unlikely. It is much more likely that Happy Tails will be able to retain the \$55,000 of losses and transfer most of its significant risks via insurance.

CONCLUSION

Happy Tails faces various risks that all firms face, but it also has some very unique exposures due to its line of business. As a closely held firm with high debt usage, Happy Tails exposes itself to risks related to capital structure and interest rates. Some of the major risks affecting the marketplace today, such as cyber risk and pandemic risk, could have devastating impacts on Happy Tails. Despite high levels of risk in various aspects of Happy Tails' business, Happy Tails can manage these risks through an enterprise risk management program. Understanding the relationships between risks can allow for easier decision-making and more efficient methods of managing risk. Risk transfer via insurance will be most beneficial for many of Happy Tails' risk exposures due to the nature of the business, but other risk control methods such as cyber security, OSHA training, pandemic planning, and general awareness of important risks are all integral to Happy Tails' ability to operate smoothly and safely.

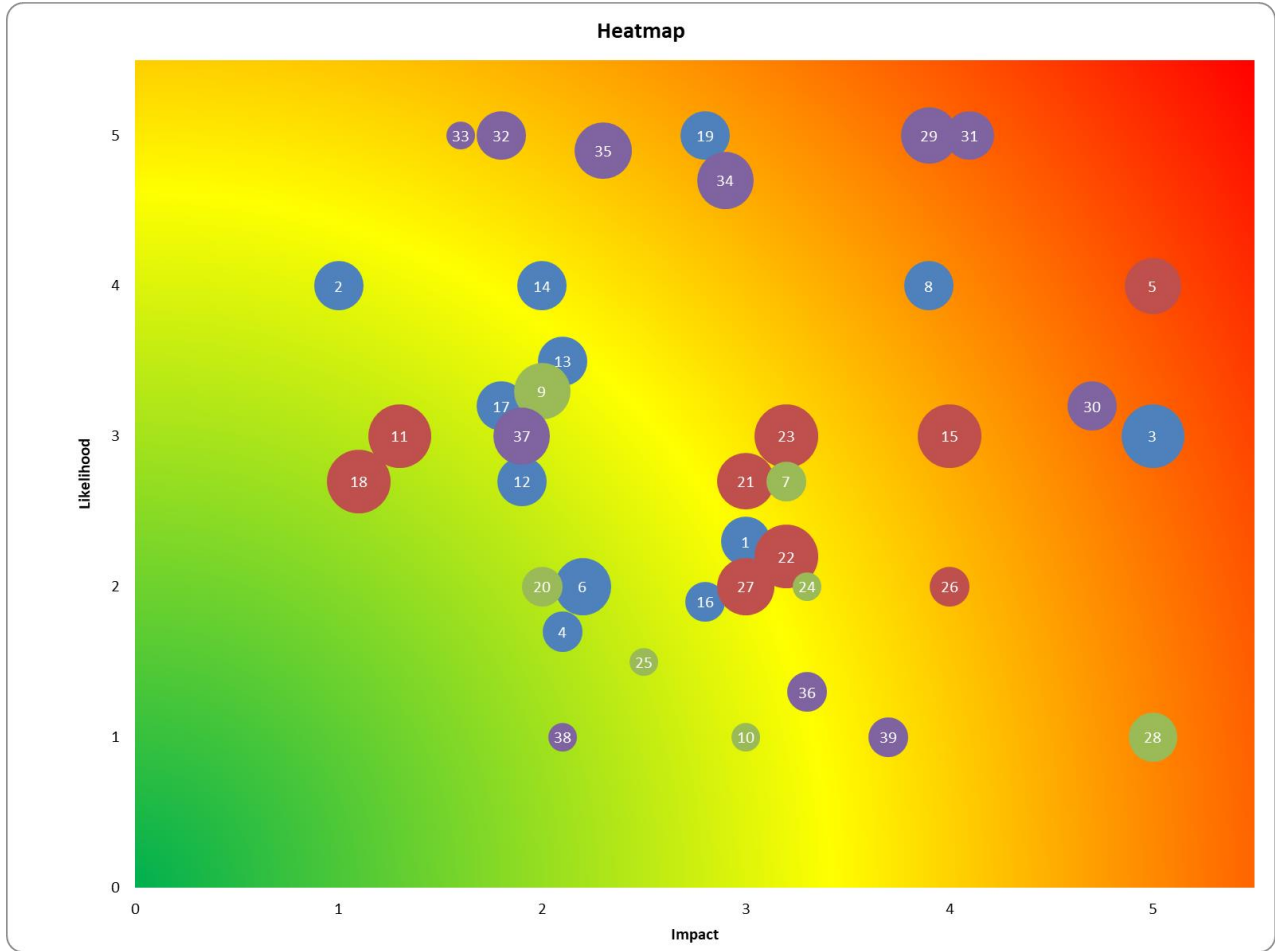
APPENDIX A

ID	RISK IDENTIFICATION					SEVERITY					FREQUENCY					SPEED					RISK MANAGEMENT METHOD	
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5		
	Product liability - food making pets sick																					reevaluate dog food manufacturing operations, CGL policy
	Liability from handling pets while grooming Richard (groomer)	X																				CGL policy, fire Richard
	Cyber - personal info stolen																					enhance cyber security, work with server facility
	Dog park with bar and food truck - oversawing liab		X																			AVOID - do not let Canine Cantina be affiliated with HT
	Supply chain risks only one supplier for packaging and chicken																					diversify supply chain
	Product liability - packaging contaminates food		X																			work with supplier, CGL
	Exchange rate risk - packaging company requires payment in Chinese yuan																					futures contracts to stabilize exchange risk
	Auto liability - accidents in company cars																					business auto policy, safe driving practices
	Reputation damage - bad publicity for various reasons Dog food makes dogs sick Ingredient supplier abuses chickens		X																			strong PR representatives work to maintain good image
	No business continuation plan in place																					develop business continuation plan for when Jane retires
	theft by employees																					better hiring processes
	Employment practices liability Passing over minority applicants																					diversity training, EPL
	Harassment lawsuits																					sexual harassment prevention training, EPL
	Liability dispute with contract truckers																					hold harmless agreements
	Website failure																					improve web servers
	Breach of lease contract																					carefully read and fulfill lease contract
	Golden family vehicles registered under Happy Tails																					business auto policy
	Store robbery																					install security measures

ID	RISK IDENTIFICATION	SEVERITY					FREQUENCY					SPEED					RISK MANAGEMENT METHOD
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
	Customers/third parties injured on premises ex: slip and fall in Athens location		X														maintain safe and clean storefronts, CGL
	Potential oil wells at Charleston location																investigate issues, pay for removal if needed
	Storm damage to building			X													commercial property insurance
	Flood damage to building			X													NFIP coverage
	Building Fire no sprinkler system at Greenville location																commercial property insurance, install sprinkler system
	Customer preferences change																aggressive marketing campaigns
	New entrants to market																provide high levels of service to keep customers
	Work stoppage > 1 week																BI insurance, preparation for interruptions
	Work stoppage < 1 week																BI insurance, preparation for interruptions
	Global pandemic																pandemic planning in place, preparation for remote work
	Workers' Compensation																
	Animal-related injuries dog bites																Groomer's Helper, work gloves
	Auto accidents																safe driving practices
	Falls off ladders, trip & falls, etc.																OSHA training and emphasis
	Manual labor injury injury while moving boxes, loading/unloading trucks																OSHA training and emphasis
	Sedentary work ergonomic concerns, carpal tunnel from typing																OSHA training and emphasis, protective gloves
	Sharp object injury grooming shears, box cutters, machinery																OSHA training and emphasis
	Spills hot water, cleaning solution																OSHA training and emphasis
	Breathing in toxic chemicals																safety mask requirement when working with chemicals
	Slammed finger in door																encourage extra care around doors
	Vocal cord injury																contest this claim
	Drunk customer injures EE																incident analysis, train employees to recognize drunken hazards

ID	Risk	I	L	S
1	Product liability - food making pets sick	3.0	2.3	3
2	Liability from handling pets while grooming	1.0	4.0	3
3	Cyber - personal info stolen	5.0	3.0	5
4	Dog park with bar and food truck - overserving liab	2.1	1.7	2
5	Supply chain risks	5.0	4.0	4
6	Product liability - packaging contaminates food	2.2	2.0	4
7	Exchange rate risk	3.2	2.7	2
8	Auto liability - accidents in company cars	3.9	4.0	3
9	Reputation damage - bad publicity for various reasons	2.0	3.3	4
10	No business continuation plan in place	3.0	1.0	1
11	theft by employees	1.3	3.0	5
12	Employment practices liability	1.9	2.7	3
13	Harassment lawsuits	2.1	3.5	3
14	Liability dispute with contract truckers	2.0	4.0	3
15	Website failure	4.0	3.0	5
16	Breach of lease contract	2.8	1.9	2
17	Golden family vehicles registered under Happy Tails	1.8	3.2	3
18	Store robbery	1.1	2.7	5
19	Customers/third parties injured on premises	2.8	5.0	3
20	Potential oil wells at Charleston location	2.0	2.0	2
21	Storm damage to building	3.0	2.7	4
22	Flood damage to building	3.2	2.2	5
23	Building Fire	3.2	3.0	5
24	Customer preferences change	3.3	2.0	1
25	New entrants to market	2.5	1.5	1
26	Work stoppage >1 week	4.0	2.0	2
27	Work stoppage <1 week	3.0	2.0	4
28	Global pandemic	5.0	1.0	3
29	Animal-related injuries	3.9	5.0	4
30	Auto accidents	4.7	3.2	3
31	Falls: slip & falls, from ladders	4.1	5.0	3
32	Manual labor injury	1.8	5.0	3
33	Sedentary work	1.6	5.0	1
34	Sharp object injury	2.9	4.7	4
35	Spills	2.3	4.9	4
36	Breathing in toxic chemicals	3.3	1.3	2
37	Slammed finger in door	1.9	3.0	4
38	Vocal cord injury	2.1	1.0	1
39	Drunk customer injures EE	3.7	1.0	2

I: Impact, L: Likelihood, S: Speed of Onset



Blue: Liability, Red: Property, Purple: Workers' Compensation, Green: Other

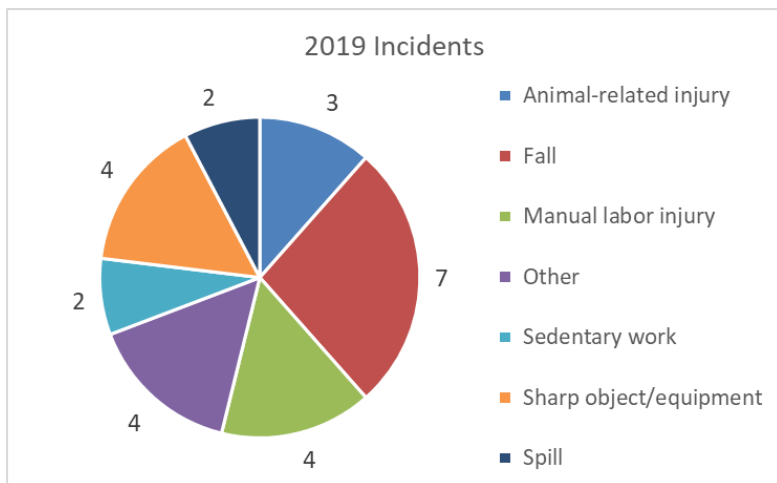
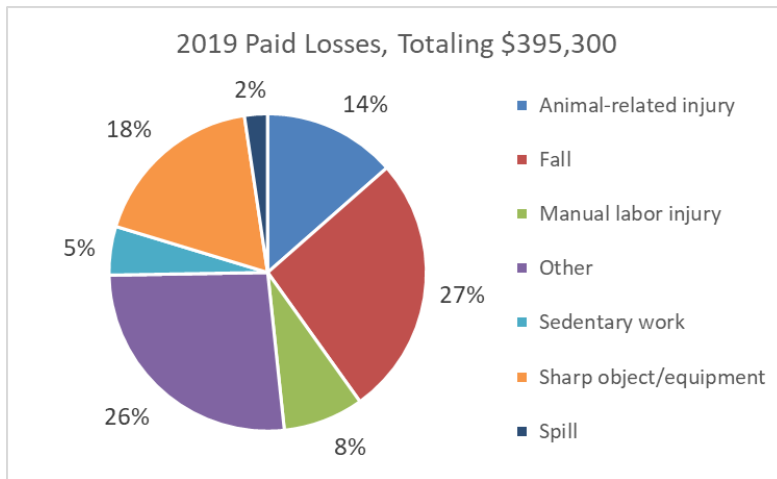
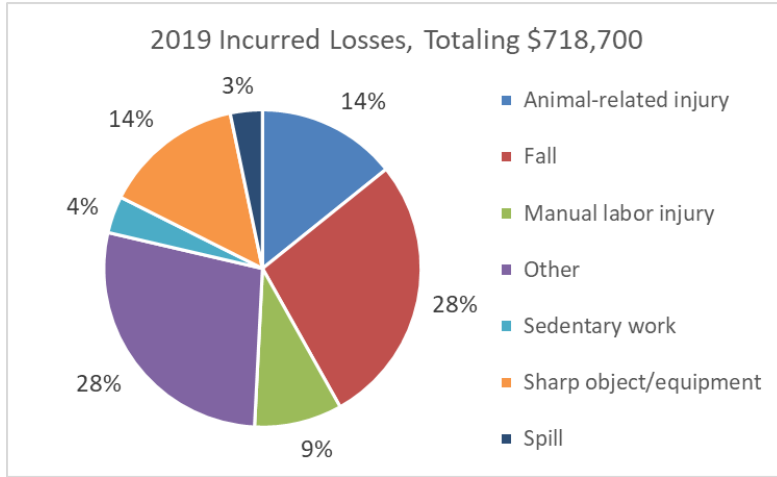
Severity Rating	Descriptor	Criteria
5	Extreme	Loss greater than \$2 million (~33% of current assets), significant injuries or fatalities
4	Major	Loss greater than \$1 million, up to \$2m (~17% of current assets), limited in-patient care needed
3	Moderate	Loss greater than \$250,000, up to \$1m, out-patient medical treatment required
2	Minor	Loss greater than \$50,000, up to \$250k, minor injuries
1	Incidental	Loss less than \$50,000, no injuries

Frequency Rating	Descriptor	Criteria
5	Extreme	Up to once in 1 year or more
4	Major	Once in 1 year up to once in 5 years
3	Moderate	Once in 5 yrs up to once in 25 yrs
2	Minor	Once in 25 yrs up to once in 50 yrs
1	Incidental	Once in 50 yrs or less

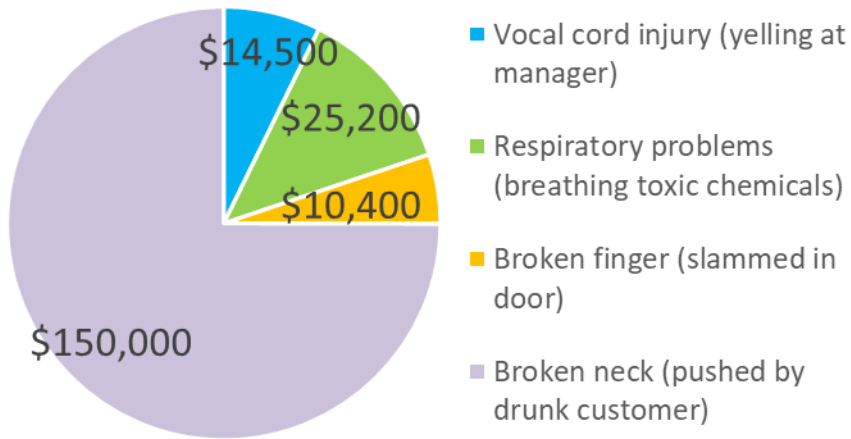
Speed Rating	Descriptor	Criteria
5	Extreme	little or no warning, instantaneous
4	Major	matter of days to a few weeks
3	Moderate	matter of a few months, up to six
2	Minor	matter of 6-12 months
1	Incidental	over a year

(Curtis, 2012).

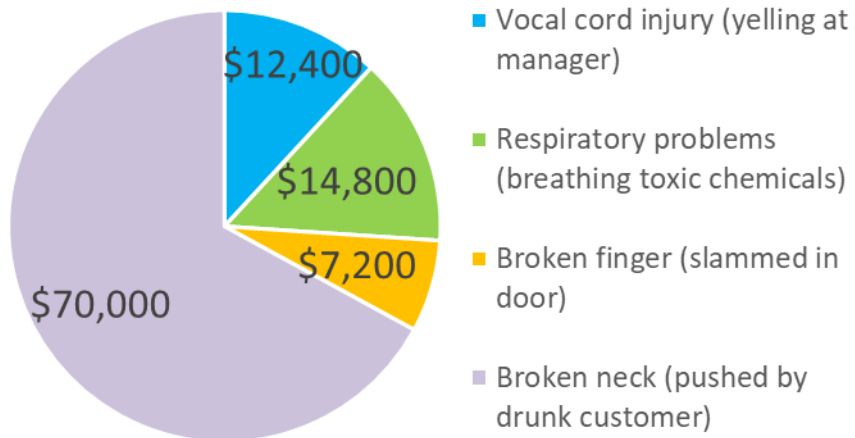
APPENDIX B

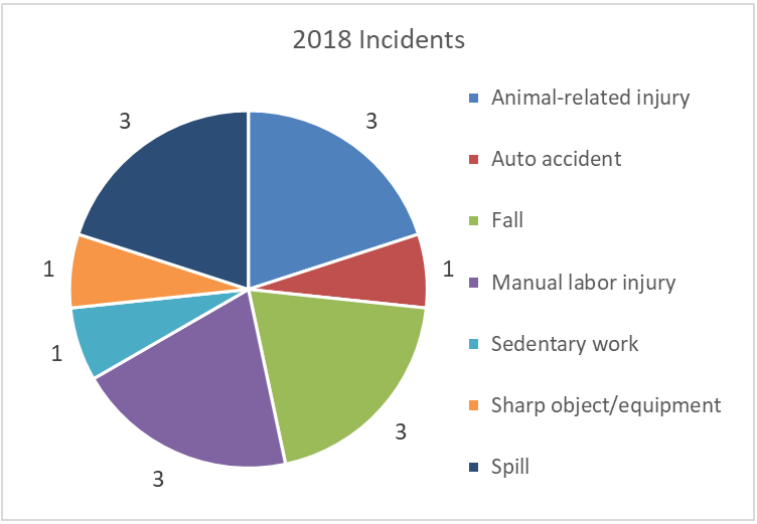
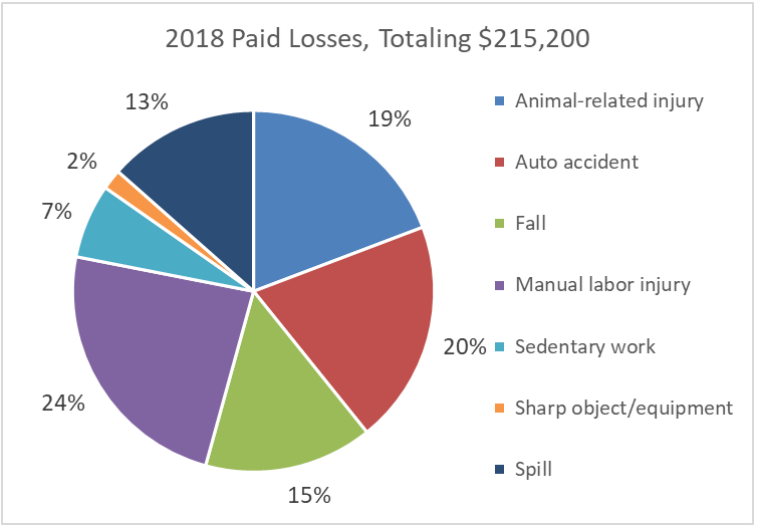
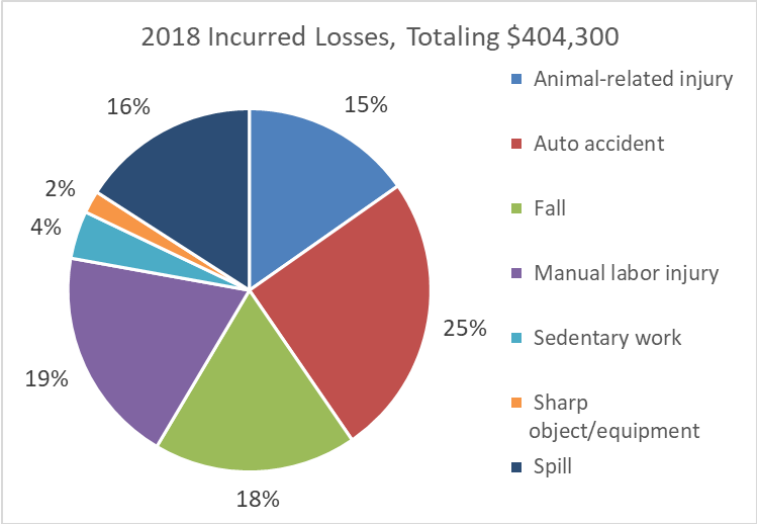


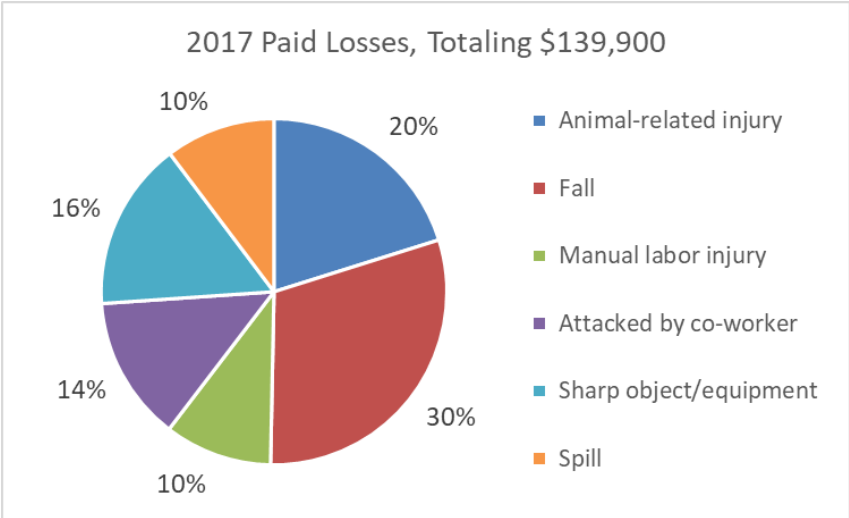
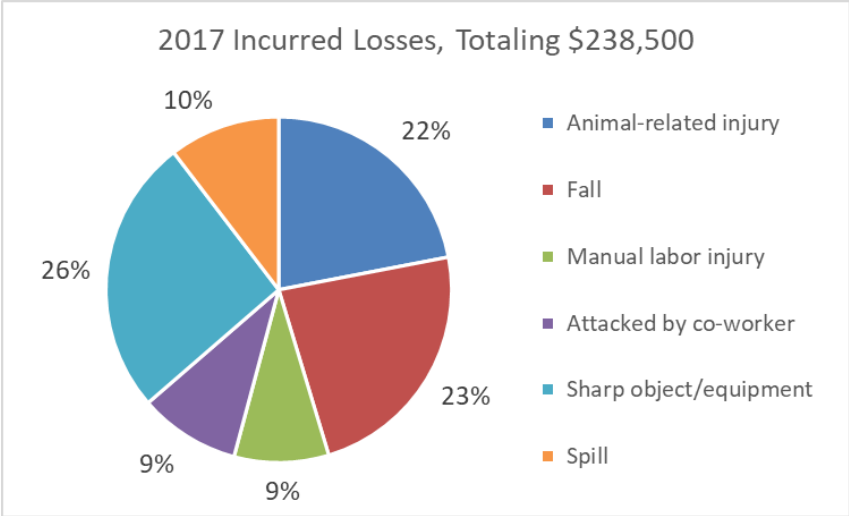
2019 "Other" Incurred Losses

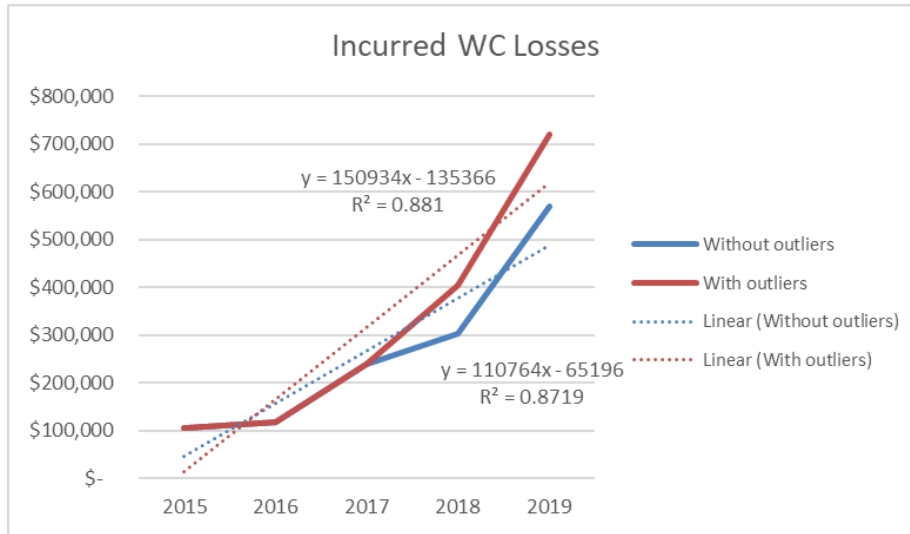


2019 "Other" Paid Losses









SUMMARY OUTPUT Incurred Losses without outliers

Regression Statistics	
Multiple R	0.9338
R Square	0.8719
Adjusted R Square	0.8292
Standard Error	77507.6757
Observations	5

Regression data for Incurred WC Losses, excluding outliers

Model: $y = 110764x - 65196$

Predicted Incurred WC Losses 2020: \$599,388

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1.2269E+11	1.2269E+11	2.0422E+01	2.0258E-02
Residual	3	1.8022E+10	6.0074E+09		
Total	4	1.4071E+11			

	Coefficients	Standard Error	t Stat	P-value
Intercept	-65196	81290.7360	-0.8020	0.4812
Period	110764	24510.0791	4.5191	0.0203

SUMMARY OUTPUT incurred losses with outliers

Regression Statistics	
Multiple R	0.9386
R Square	0.8810
Adjusted R Square	0.8413
Standard Error	101280.5647
Observations	5

Regression data for Incurred WC Losses, including outliers

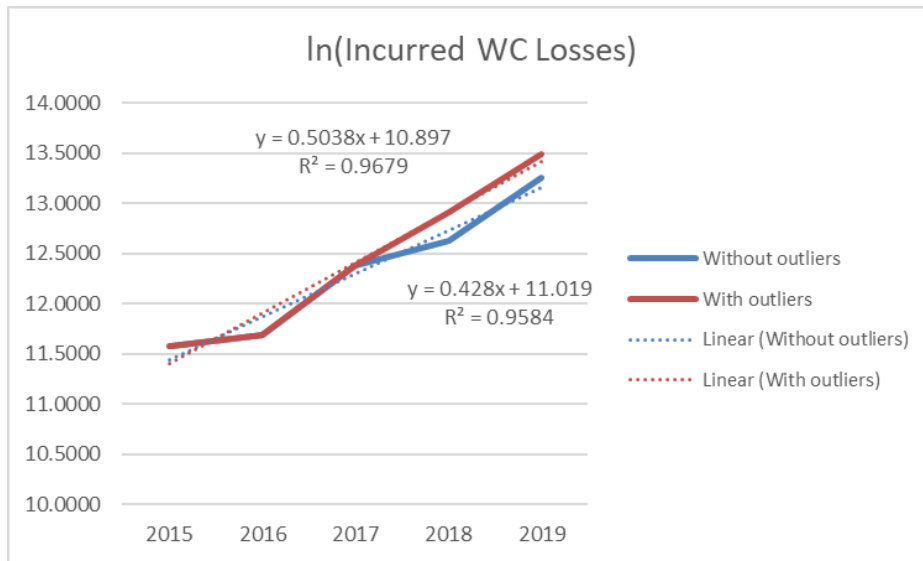
Model: $y = 150934x - 135366$

Predicted Incurred WC Losses 2020: \$770,238

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.2781E+11	2.2781E+11	2.2209E+01	1.8089E-02
Residual	3	3.0773E+10	1.0258E+10		
Total	4	2.5858E+11			

	Coefficients	Standard Error	t Stat	P-value
Intercept	-135366	106223.9524	-1.2743	0.2923
Period	150934	32027.7267	4.7126	0.0181



SUMMARY OUTPUT ln(Incurred Losses) No outliers

<i>Regression Statistics</i>	
Multiple R	0.9790
R Square	0.9584
Adjusted R Square	0.9446
Standard Error	0.1627
Observations	5

Regression Data for ln(Incurred WC Losses), excluding outliers

Model: $y = 0.4280x + 11.0195$

Predicted ln(Incurred WC Losses) 2020: 13.5875

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.8321	1.8321	69.1774	0.0036
Residual	3	0.0795	0.0265		
Total	4	1.9115			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	11.0195	0.1707	64.5614	0.0000
Period	0.4280	0.0515	8.3173	0.0036

SUMMARY OUTPUT ln(incurred losses) with outliers

<i>Regression Statistics</i>	
Multiple R	0.9838
R Square	0.9679
Adjusted R Square	0.9572
Standard Error	0.1675
Observations	5

Regression Data for ln(Incurred WC Losses), including outliers

Model: $y = 0.5039x + 10.8968$

Predicted ln(Incurred WC Losses) 2020: 13.9202

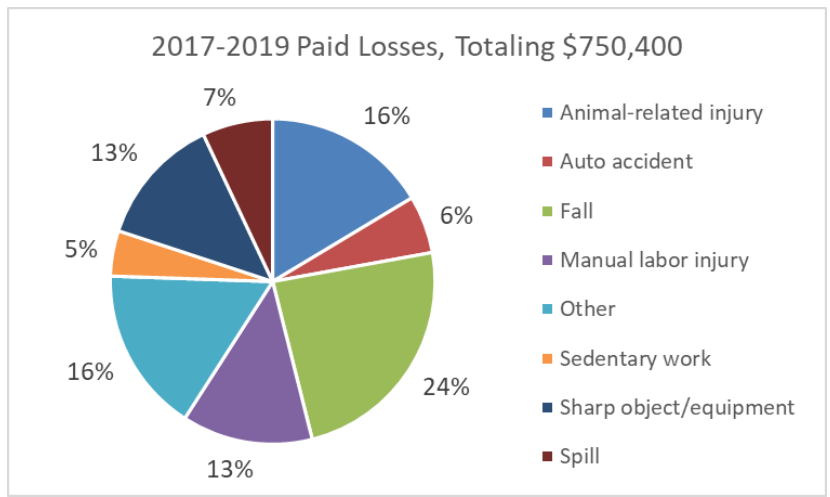
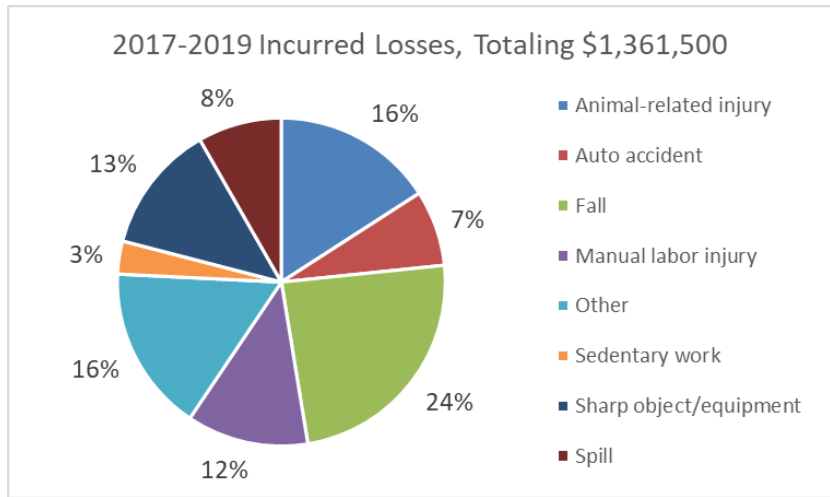
ANOVA

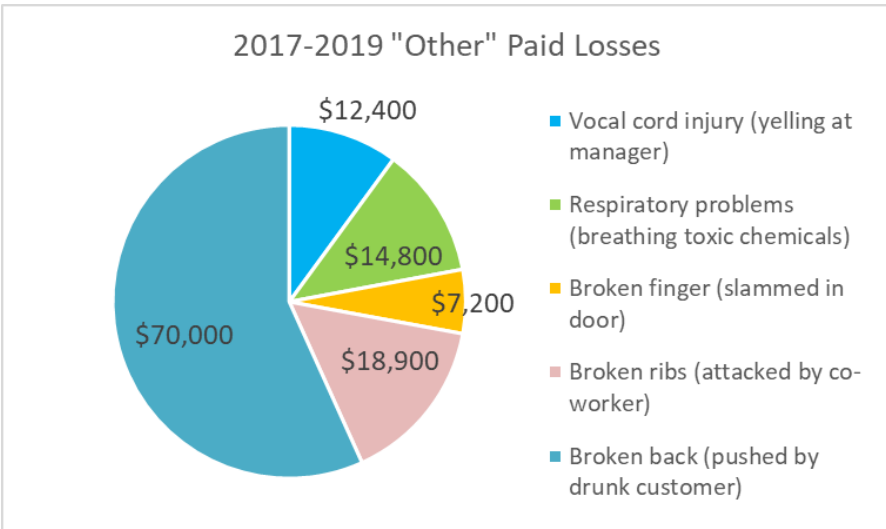
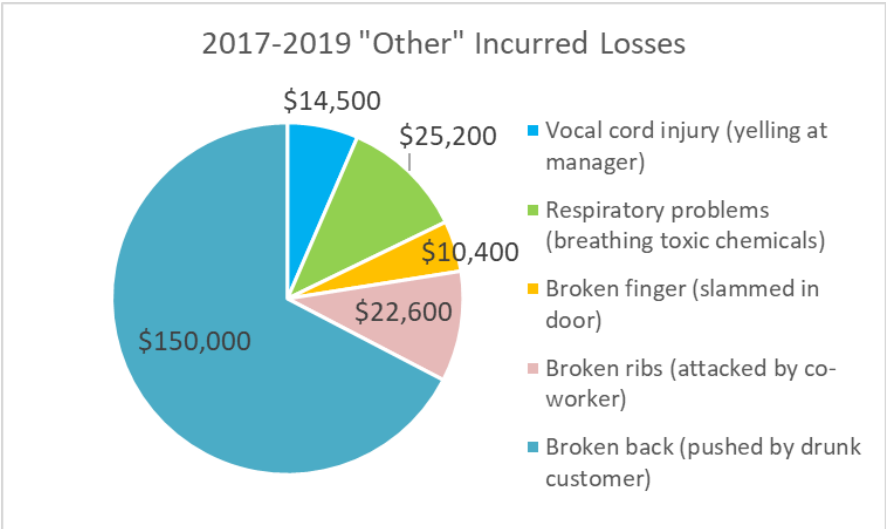
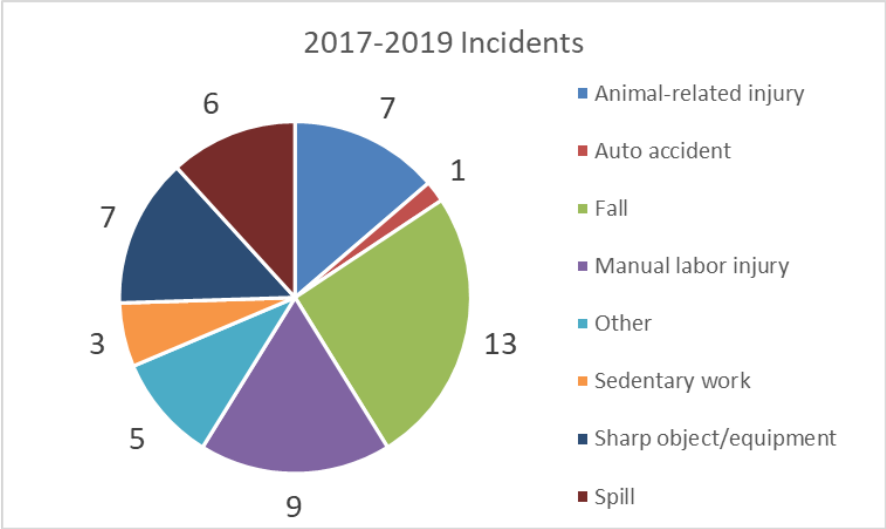
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2.5387	2.5387	90.4920	0.0025
Residual	3	0.0842	0.0281		
Total	4	2.6229			

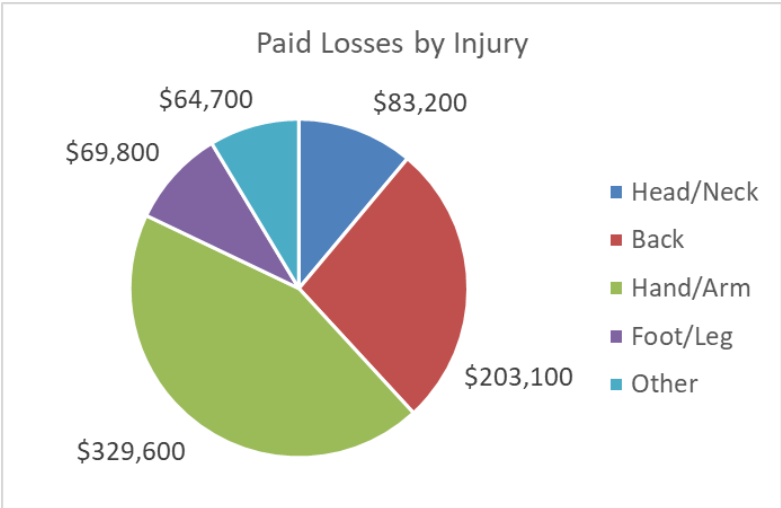
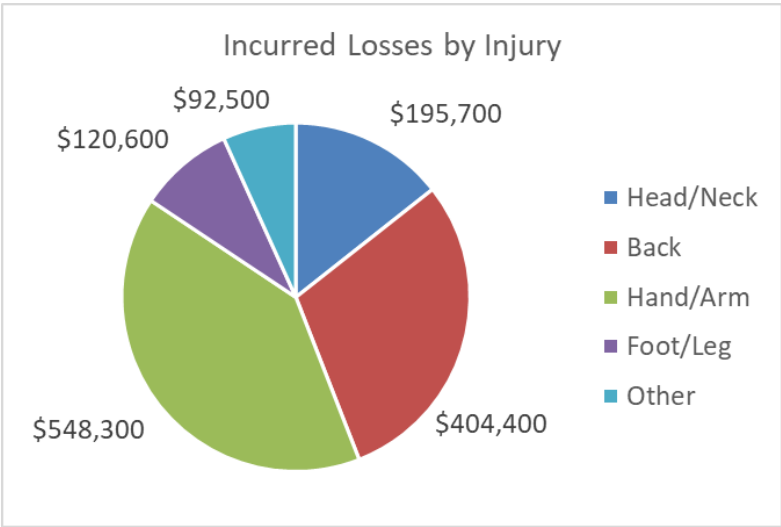
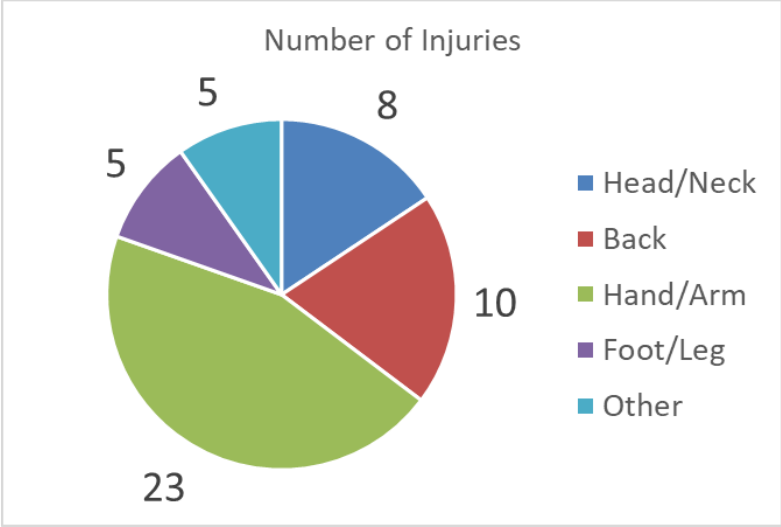
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	10.8968	0.1757	62.0295	0.0000
Period	0.5039	0.0530	9.5127	0.0025

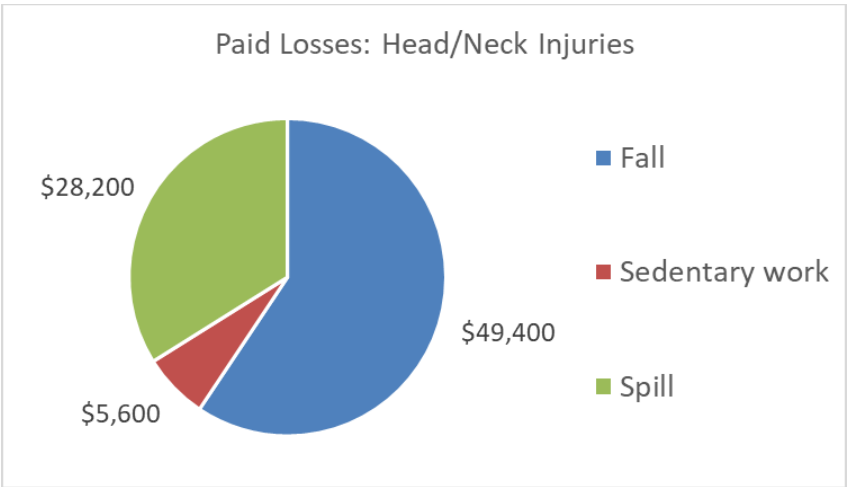
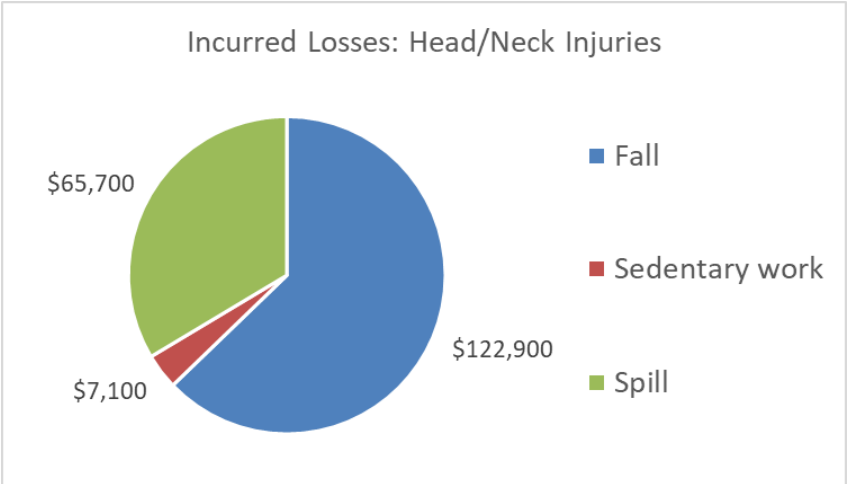
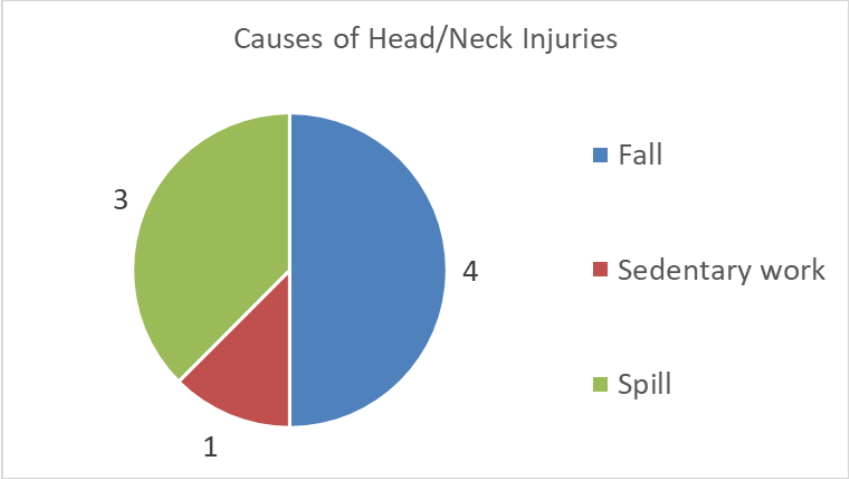
The following charts and tables describe Happy Tails’ workers’ compensation claims history from 2017 to 2019 and provide details on the causes of worker injuries, various bodily injuries suffered, and the costs related to the causes of injuries as well as the kinds of injuries suffered.

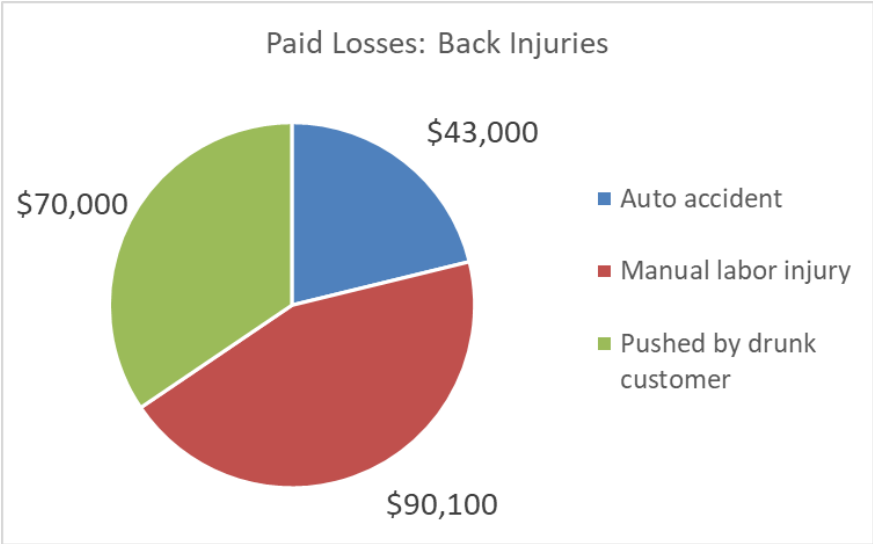
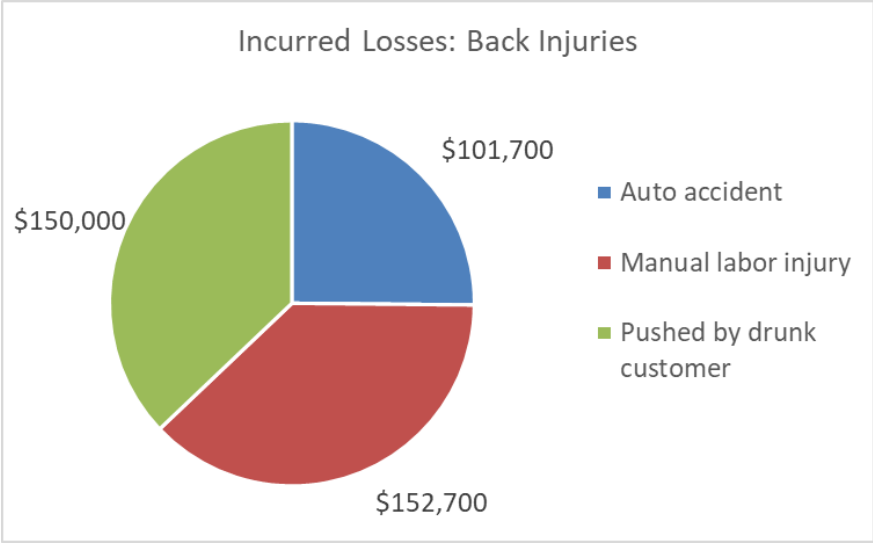
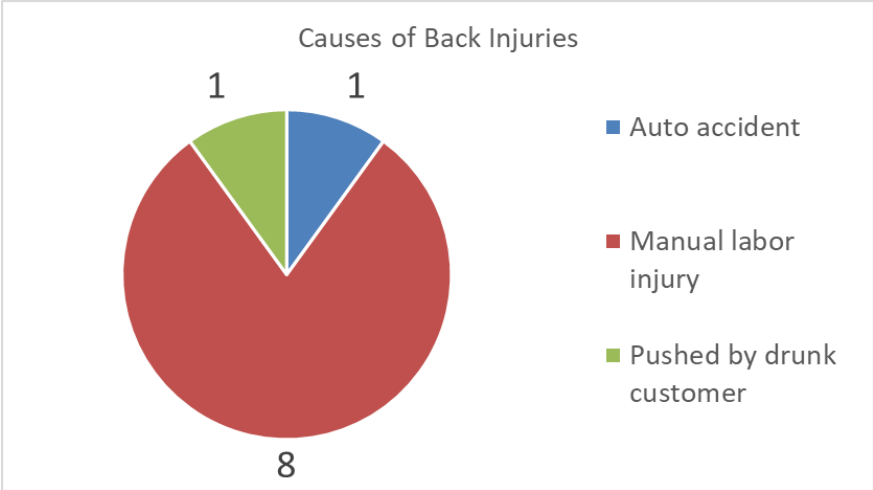
2017-2019 Summary Data					
General Cause	Number of Incidents	Incurred \$	Incurred %	Paid \$	Paid %
Animal-related injury	7	\$ 216,400	16%	\$ 123,100	16%
Auto accident	1	\$ 101,700	7%	\$ 43,000	6%
Fall	13	\$ 327,400	24%	\$ 179,700	24%
Manual labor injury	9	\$ 163,500	12%	\$ 97,700	13%
Other	5	\$ 222,700	16%	\$ 123,300	16%
Sedentary work	3	\$ 44,300	3%	\$ 33,900	5%
Sharp object/equipment	7	\$ 172,900	13%	\$ 97,000	13%
Spill	6	\$ 112,600	8%	\$ 52,700	7%
Totals	51	\$ 1,361,500	100%	\$ 750,400	100%

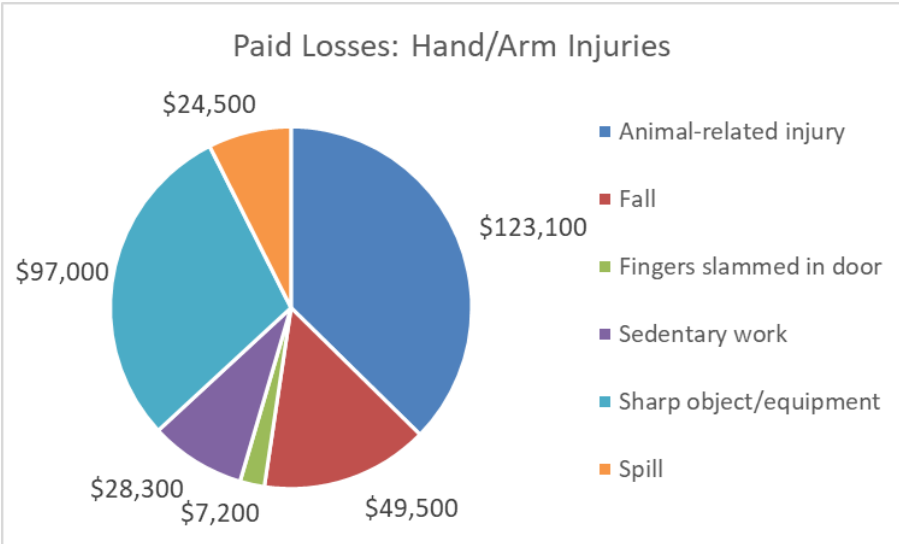
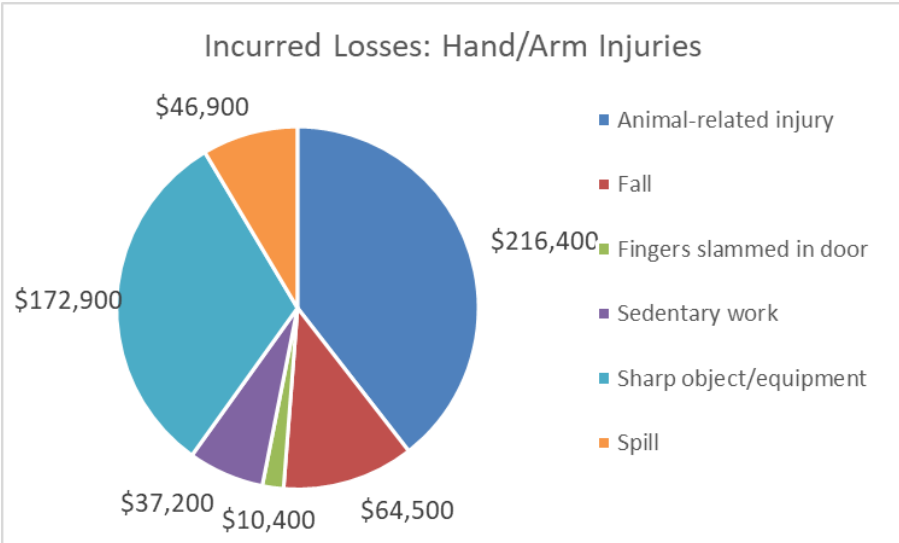
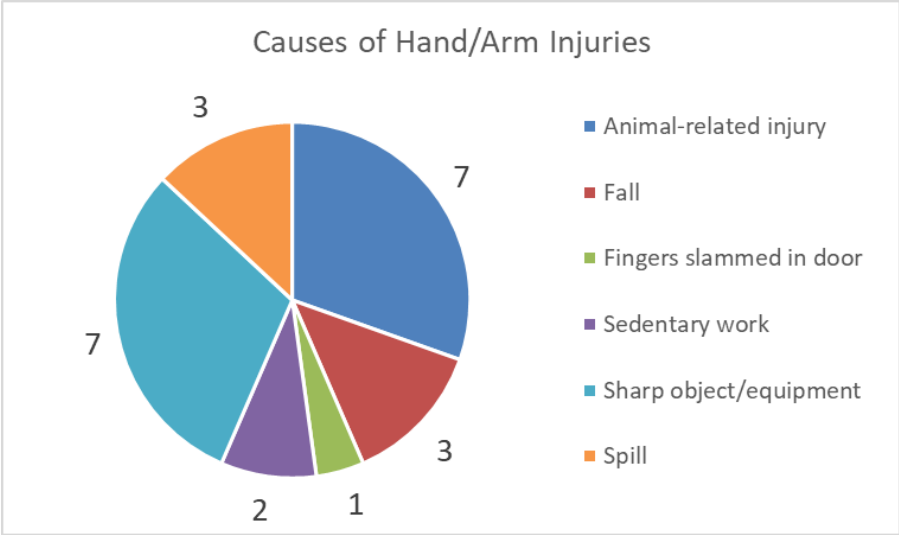




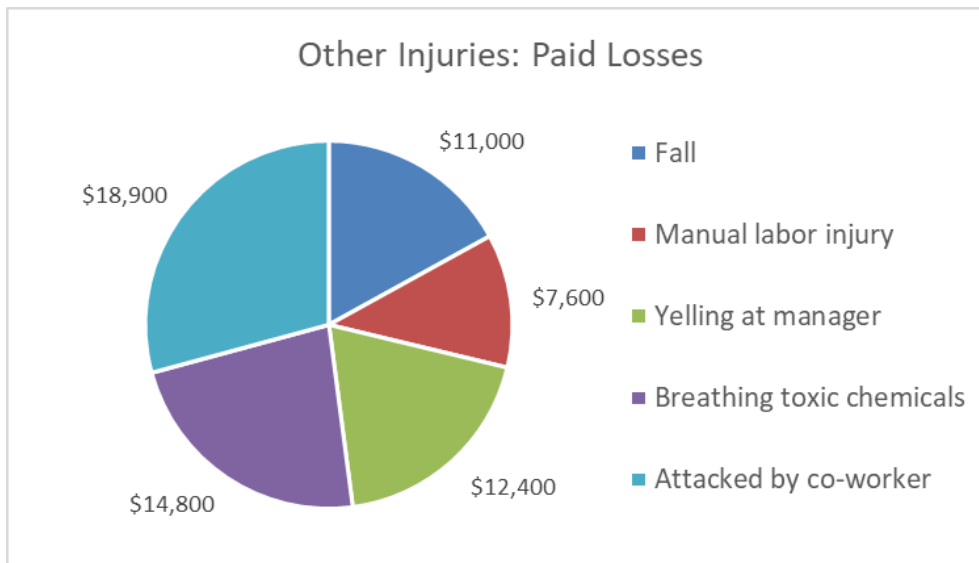
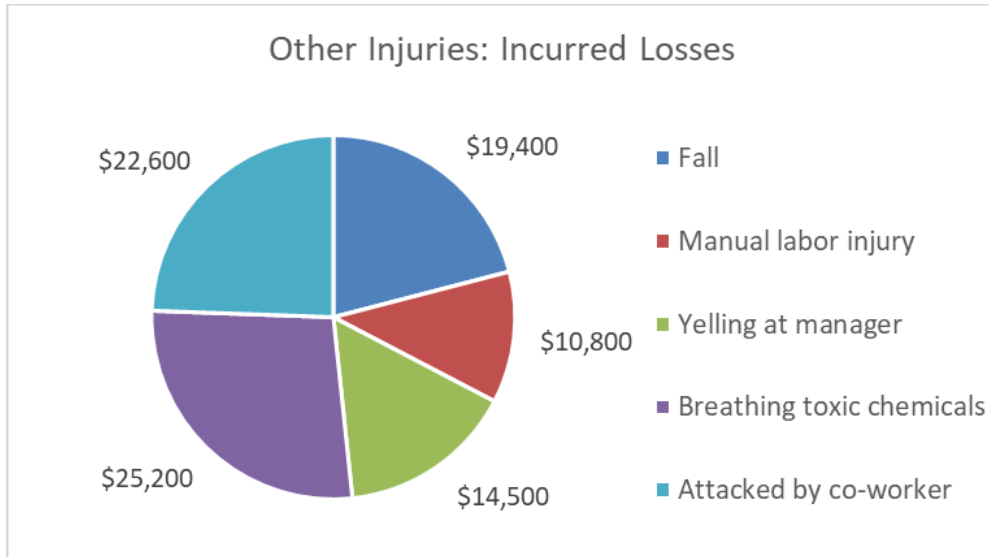








Foot/Leg Injuries			
General Cause	Incidents	Incurred	Paid
Fall	5	\$ 120,600	\$ 69,800

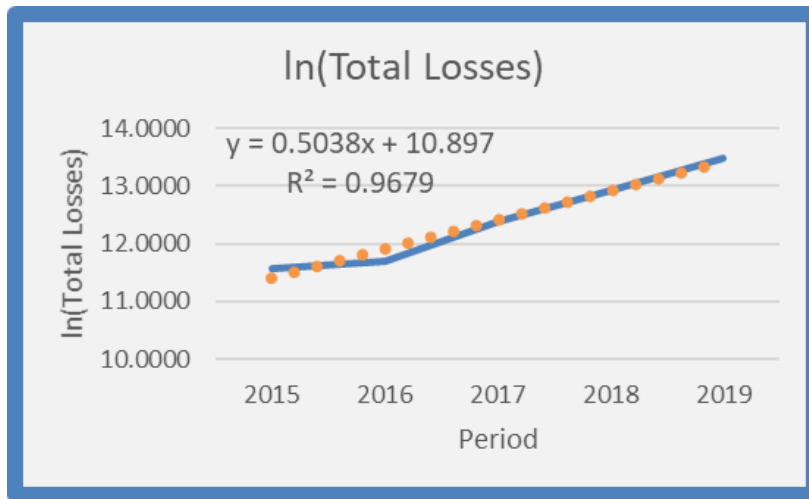


APPENDIX C

Claims Forecasting

Happy Tails, Inc.

Accident Year	Period	Years Ago	Claims Frequency	Total Losses	Inflation-Adjusted Total Losses (2.8%)	Average Severity	In(Total Losses)
2015	1	4	5	\$ 106,680.00	\$ 119,139.42	\$ 21,336.00	11.5776
2016	2	3	9	\$ 119,000.00	\$ 129,278.50	\$ 13,222.22	11.6869
2017	3	2	10	\$ 238,500.00	\$ 252,042.98	\$ 23,850.00	12.3821
2018	4	1	15	\$ 404,300.00	\$ 415,620.40	\$ 26,953.33	12.9099
2019	5	0	26	\$ 718,700.00	\$ 718,700.00	\$ 27,642.31	13.4852
projected 2020	6			\$ 1,109,810.68			13.9197



SUMMARY OUTPUT ln(Total Losses)

Regression Statistics	
Multiple R	0.9838
R Square	0.9679
Adjusted R Square	0.9572
Standard Error	0.1675
Observations	5

This is the same regression analysis as included in Appendix B. It is included again to show its use in forecasting workers' compensation claims for 2020, excluding outliers. Highlighted data reflect statistical significance of the model.

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.5384	2.5384	90.5052	0.0025
Residual	3	0.0841	0.0280		
Total	4	2.6225			

	Coefficients	Standard Error	t Stat	P-value
Intercept	10.8969	0.1756	62.0386	0.0000
Period	0.5038	0.0530	9.5134	0.0025

APPENDIX D

DUN AND BRADSTREET KEY BUSINESS RATIOS Miscellaneous Retail Stores, Not Elsewhere Classified

<u>SOLVENCY</u>	<u>HAPPY TAILS</u>	<u>UPPER</u>	<u>INDUSTRY</u>	<u>LOWER</u>	<u>FAVORABLE OR UNFAVORABLE</u>
			<u>MEDIAN</u>		
Quick Ratio (Times)	0.56	1.7	0.7	0.2	U
Current Ratio (Times)	1.50	3.1	1.9	1.0	U
Current Liabilities to Net Worth (%)	231.73	20.8	61.5	116.2	U
Current Liabilities to Inventory (%)	109.67	57.2	90.7	199.4	U
Total Liabilities to Net Worth (%)	490.16	26.8	85.7	232.3	U
Fixed Assets to Net Worth (%)	241.68	14.0	33.0	66.1	U
<u>EFFICIENCY</u>					
Collection Period (Days)	39.48	7.0	19.0	44.0	U
Sales to Inventory (Times)	3.78	15.4	7.5	3.4	U
Assets to Sales (%)	73.96	30.3	45.2	58.8	U
Sales to Net Working Capital (Times)	6.83	9.6	5.8	3.6	F
Accounts Payable to Sales (%)	16.47	2.2	4.4	9.4	U
<u>Profitability</u>					
Return on Sales (%)	2.86	8.2	2.0	0.2	F
Return on Assets (%)	3.87	15.0	4.1	0.1	U
Return on Net Worth (%)	22.82	35.9	7.9	2.3	F

F = Favorable
U = Unfavorable

Basis for Retention	Data from Financial Statements		
		Low	High
Total Assets	\$ 10,339,015.00	\$ 103,390.15	\$ 516,950.75
Working Capital	\$ 2,045,330.00	\$ 40,906.60	\$ 306,799.50
Pre-tax Earnings	\$ 506,166.00	\$ 5,061.66	\$ 40,493.28
Annual Revenue	\$ 13,978,500.00	\$ 69,892.50	\$ 279,570.00
		\$ 54,812.73	\$ 285,953.38

Retention Amount: **\$55,000**

Reasoning:

closely held ownership structure, relatively small firm size, and high leverage all suggest that Happy Tails should prefer to retain a small amount of risk

The table above presents data relevant to retention recommendations for Happy Tails. It is common to retain losses based on the following criteria: 1%-5% of total assets, 2%-15% of working capital, 1%-8% of pre-tax earnings, or 0.5%-2% of annual revenue (Liebenberg, 2021). I averaged the amounts given by the lower, or more conservative estimates to reach a value of \$55,000 in retention for Happy Tails.

APPENDIX E

Coinsurance Basis	Maximum shutdown (months)	EML	Quotient	Coins %	Limit
\$ 8,808,814	7	\$5,138,475	0.5833	60%	\$5,285,288

Rate adjustment factor	80% coins basic form rate for buildings with sprinklers	BI rate for Happy Tails	BI premium for Happy Tails
73%	0.005	0.00365	\$ 19,291

The table above shows data relevant to calculating business income insurance limit and premium for Happy Tails.

Business Income Report/Worksheet
Financial Analysis
Page 1 of 3

INCOME AND EXPENSE	12 Month Period Ending Dec. 31, 2019	Forecasted Rate of Increase	Estimated For 12 Month Period Beginning Jan. 1, 2020
	Manufacturing Non- Manufacturing		Manufacturing Non- Manufacturing
A. Gross Sales	\$ 13,978,500.00	3.40%	\$ 14,453,769.00
B. Deduct: Finished Stock Inventory (at sales value) at Beginning			
C. Add: Finished Stock Inventory (at sales value) at End			
D. Gross Sales Value of Production			
E. Deduct:			
Prepaid Freight	\$ -		\$ -
Returns & Allowances	\$ -		\$ -
Discounts	\$ -		\$ -
Bad Debts	\$ -		\$ -
Collection Expenses	\$ -		\$ -
Total	\$ -	3.40%	\$ -
F. Net Sales Net Sales Value of Production	\$ 13,978,500.00		\$ 14,453,769.00
G. Add: Other Earnings from your business operations (not investment income or rents from other properties):			
Commissions or Rents	\$ -		\$ -
Cash Discounts Recd	\$ -		\$ -
Other	\$ -		\$ -
Total Other Earnings	\$ -	3.40%	\$ -
H. Total Revenues	\$ 13,978,500.00		\$ 14,453,769.00

Business Income Report/Worksheet
Financial Analysis
Page 2 of 3

		12 Month Period Ending Dec. 31, 2019 Non- Manufacturing	Forecasted Rate of Increase	Estimated For 12 Month Period Beginning Jan. 1, 2020 Non- Manufacturing
I. DEDUCT: The cost of the following (net of any cash discounts received):				
1. Cost of Goods Sold: Inventory (including stock in process at beginning of year):	\$ 4,759,334.00			
ADD: Cost of the following purchased during the year: Raw Stock Consumed	\$ -			
Factory Supplies Consumed	\$ -			
Merchandise Sold	\$ -			
Other Supplies Consumed (including transportation charges)	\$ -			
Total Purchase Costs	\$ -			
Cost of Goods Available for Sale	\$ 4,759,334.00			
DEDUCT: Inventory including stock in process) at end of year	\$ -			
Cost of Goods Sold	\$ 4,759,334.00			
2. Services purchased from outsiders (not your employees) to resell, that do not continue under contract	\$ -			
Total (Mining Properties-see next page)		\$ 4,759,334.00	3.40%	\$ 4,921,151.36
J. 1. Net income and Expenses (Business Income Basis for Coinsurance if a Coverage Modification does not apply)				
		\$ 9,219,166.00		\$ 9,532,617.64
J. 2. Combined (for firms engaged in both manufacturing and non-manufacturing operations)				
		\$ 9,219,166.00		\$ 9,532,617.64
K. Business Income Basis for Coinsurance if a Coverage Modification does apply (see reverse side)				
		\$ 8,519,162.00		\$ 8,808,813.51
L. Amount of Insurance Required (Multiply the amount in J.1, J.2 or K specified in the Declarations)				
		\$ -		\$ -

**Business Income Report/Worksheet
Coverage Modification
Page 3 of 3**

NET INCOME AND EXPENSES (Item J.1 or J.2)	12 Month Period Ending Dec. 31, 2019		Forecasted Rate of Increase	Estimated For 12 Month Period Beginning Jan. 1, 2020	
	Manufacturing	Non- Manufacturing		Manufacturing	Non- Manufacturing
1. If Ordinary Payroll Limitation form is attached:					
Deduct: All Ordinary Payroll Expenses If "90 days" or 180 days" is indicated for Ordinary Payroll Limitation:					
Add: The largest amount of Ordinary Payroll Expense incurred during the specified number of days	\$	1,400,008.00	3.40%	\$	1,447,608.27
Total	\$	700,004.00	3.40%	\$	723,804.14
2. If Power, Heat and Refrigeration Deduction form is attached:					
Deduct: Power, heat and refrigeration expenses that do not continue under contract	\$	-	3.40%	\$	-
BUSINESS INCOME BASIS FOR COINSURANCE (Transfer to Line K on previous page)	\$	8,519,162.00		\$	8,808,813.51

APPENDIX F

Premium Expenses										
Exposure	Coverage	Cause of Loss	Blanket/Specific	Exposure Value	Coinsurance	Rate	Limit	Premium	Deductible/SIR	
General Liability	CGL (premises and ops)					0.000768	\$ 500,000	\$ 10,740		
	CGL (products)					0.000571	\$ 500,000	\$ 7,986		
Buildings	BPP	Special	Blanket	6,232,254	0.9	0.0107	\$5,609,029	\$ 60,017	\$ 623,225	
	NFIP (4 locations)					0.0049	\$2,000,000	\$ 9,800		
Contents	BPP	Special	Blanket	4,756,226	0.9	0.0093	\$4,280,603	\$ 39,810	\$ 475,623	
	NFIP (5 locations)					0.0091	\$2,500,000	\$ 22,750		
Employment Lawsuits	EPL						\$3,000,000	\$ 7,500		
Workers' Compensation	WC			3,800,253		0.0105		\$ 39,903		
Nick's BMW X3	BAP						\$ 47,800	\$ 120	\$ 250	
Taylor's Audi A3	BAP						\$ 45,500	\$ 120	\$ 250	
Grooming Ford Transit	BAP						\$ 18,500	\$ 199	\$ 100	
Business Interruption	BI	Special		8,808,814	0.6	0.007811	\$5,285,288	\$ 41,283		
D&O Liability	D&O						\$5,000,000	\$ 2,500		
Total Premiums								\$ 242,727	\$ 1,099,448	

The table to the right shows premium calculations for Happy Tails.

APPENDIX G

HAPPY TAILS, INC.			
INCOME STATEMENT			
YEAR END DECEMBER 31, 2019			
NET SALES	\$	13,978,500	\$ 13,978,500
EXPENSES			
COGS		4,759,334	
Payroll		3,800,252	
Rent		30,200	
Mortgage		434,482	
Utilities		80,563	
Depreciation		3,985,311	
Total Expenses		13,090,142	13,090,142
EARNINGS BEFORE INTEREST & TAXES			888,358
Less Interest			(382,192)
EARNINGS BEFORE TAXES			506,166
Less Taxes			(106,295)
NET INCOME			\$ 399,871

HAPPY TAILS, INC.
BALANCE SHEET
YEAR END DECEMBER 31, 2019

ASSETS

CURRENT ASSETS

Cash and Marketable Securities	756,305
Inventory	3,701,725
Accounts Receivable	1,512,000
Notes Receivable	86,000
Other Current Assets	49,000
Total Current Assets	6,105,030

LONG TERM ASSETS

Buildings	7,164,796
Less Depreciation	(3,533,911)
Property & Equipment	1,054,500
Less Depreciation	(451,400)
Total Fixed Assets	4,233,985

TOTAL ASSETS

\$ 10,339,015

LIABILITIES

CURRENT LIABILITIES

Account Payable	2,301,900
Other	1,757,800
Total Current Liabilities	4,059,700

LONG-TERM DEBT

Long-Term Debt	4,527,405
Total Long-Term Debt	4,527,405

NET WORTH

Shareholders' Equity	1,165,701
Retained Earnings	586,209
Total Net Worth	1,751,910

TOTAL LIABILITIES & STOCKHOLDERS' EQUITY

\$ 10,339,015

BIBLIOGRAPHY

- Bourne, M. (Host). (2020, April 28). *Risk management and the COVID-19 pandemic*. [Audio podcast]. <https://www.icf.com/insights/disaster-management/risk-management-covid-19-pandemic>
- COVID-19 Update: You and your Pet's health are our number one priority. (2021, March). Retrieved March 25, 2021, from <https://www.petsmart.com/coronavirus-update-your-health-and-safety-is-our-priority.html>
- Curtis, P., Carey, M. (2012). Risk Assessment in Practice. Retrieved March 29, 2021, from https://blackboard.olemiss.edu/bbcswebdav/pid-2312239-dt-content-rid-74310008_1/courses/Fin_542_Online_1_Liebenbe_2020-2021_SPRG/COSO%20Risk%20Assessment.pdf
- Cyber risk TRENDS 2020: AGCS. (2020). Retrieved March 19, 2021, from <https://www.agcs.allianz.com/news-and-insights/reports/cyber-risk-trends-2020.html>
- Dun & Bradstreet Key Business Ratios. (n.d.). Retrieved March 29, 2021, from <https://mergentkbr-com.umiss.idm.oclc.org/reporting/kbrreports/>
- Empowering your remote workforce with end-user security awareness. (2020). Retrieved March 19, 2021, from <https://www.microsoft.com/security/blog/2020/05/13/empowering-remote-workforce-security-training/>
- Goodwin, D., Schulder, E., & Rubio, G. (2020). Commercial General Liability (CGL) Insurance. Retrieved March 24, 2021, from <https://www.lexisnexis.com/supp/LargeLaw/no-index/coronavirus/insurance/insurance-commercial-general-liability-insurance.pdf>
- Groomers Helper. (2018). Groomers Helper® Professional Set. Retrieved March 19, 2021

from <https://www.groomershelper.com/product/best-dog-grooming-tool-groomers-helper-professional-set/>

Hoyt, R., Liebenberg, A. (2015). Evidence of the Value of Enterprise Risk Management.

Retrieved April 1, 2021, from https://blackboard.olemiss.edu/bbcswebdav/pid-2312260-dt-content-rid-74310010_1/courses/Fin_542_Online_1_Liebenbe_2020-2021_SPRG/Hoyt%20Liebenberg%20JACF%202015.pdf

Hoyt, R., Waldron, L. (2020). Happy Tails, Inc.

Kaspersky Total Security for Business. (2021). Retrieved March 19, 2021, from

<https://usa.kaspersky.com/small-to-medium-business-security/total>

Liebenberg, A. (2021). Enterprise Risk Management [Microsoft PowerPoint].

Occupational Safety and Health Administration. (1974). *Occupational Safety and Health*

Standards: Ladders (Standard No. 1910.23).

Occupational Safety and Health Administration. (1974). *Occupational Safety and Health*

Standards: General Requirements (Standard No. 1910.22).

Occupational Safety and Health Administration. (1990). *OSHA Technical Manual* (Section VII:

Chapter 1).

U.S. Spring OUTLOOK FORECASTS another year of widespread river flooding. (2020, March

19). Retrieved March 28, 2021, from <https://www.noaa.gov/media-release/us-spring-outlook-forecasts-another-year-of-widespread-river-flooding>