THE ANATOMY OF BUYOUT FAILURE: THE CASE OF TOYS "R" US

BY

MISS PIMCHANOK MANEEPAN

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE PROGRAM IN FINANCE (INTERNATIONAL PROGRAM) FACULTY OF COMMERCE AND ACCOUNTANCY THAMMASAT UNIVERSITY ACADEMIC YEAR 2017

COPYRIGHT OF THAMMASAT UNIVERSITY

Ref. code: 25605902042273XIP

THE ANATOMY OF BUYOUT FAILURE: THE CASE OF TOYS "R" US

BY

MISS PIMCHANOK MANEEPAN

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE PROGRAM IN FINANCE (INTERNATIONAL PROGRAM) FACULTY OF COMMERCE AND ACCOUNTANCY THAMMASAT UNIVERSITY ACADEMIC YEAR 2017

COPYRIGHT OF THAMMASAT UNIVERSITY

Ref. code: 25605902042273XIP

THAMMASAT UNIVERSITY
FACULTY OF COMMERCE AND ACCOUNTANCY

INDEPENDENT STUDY

BY

MISS PIMCHANOK MANEEPAN

ENTITLED

THE ANATOMY OF BUYOUT FAILURE: THE CASE OF TOYS "R" US

was approved as partial fulfillment of the requirements for
the degree of Master of Science (Finance)

on 11 MAY 2018

Chairman _____
(Assistant Professor Chaiyuth Padungsaksawasdi, Ph.D.)

Member and advisor _____
(Associate Professor Seksak Jumreornvong, Ph.D.)

Member _____
(Thanomsak Suwannoi, DBA.)

Dean _____
(Associate Professor Pipop Udorn, Ph.D.)

Ref. code: 25605902042273XIP

Independent study title	THE ANATOMY OF BUYOUT FAILURE: THE CASE OF TOYS "R" US
Author	Miss Pimchanok Maneepan
Degree	Master of Science (Finance)
Major field/Faculty/University	Master of Science Program in Finance (International Program) Faculty of Commerce and Accountancy Thammasat University
Independent study advisor	Associate Professor Seksak Jumreornvong, Ph.D.
Academic year	2017

ABSTRACT

The bankruptcy of Toy "R" Us is reportedly a third largest retail bankruptcy in the history of The United States of America. This paper examined several factors in both financial aspect and business aspect of this brick and mortar bankruptcy, where we able to conclude that the main reason that trigger this collapse were an immense debt burden of HLT transaction making the firm fall short on working capital. Hence, failed to compete with its online competitors. To ensure that the consortium were not shortsighted on accounting manipulation data we deployed Benish M-Score to test the accuracy of financial statements pre and post buyout and our study found that the financial statements were sound. Additionally, we also applied both MDA (Altman) and Logit (Olson) technique of Bankruptcy prediction model in our testing and found that MDA methodology suggested that the likelihood of Bankruptcy increases after Buyout. While Logit technique suggested the firm is already at risk at the time of pre-buyout.

Keywords: Leveraged Buyout, Bankruptcy, Case study, Altman, Olson, Benish

Ref. code: 25605902042273XIP

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude towards my independent study advisor Associate Professor Seksak Jumreornvong , Ph.D who shed me the light on the study of this Bankruptcy event his knowledge and support help me tremendously throughout this independent study, the Committee Assistant Professor Chaiyuth Padungsaksawasdi, Ph.D and Ajarn Thanomsak Suwannoi, DBA, I am thankful for their aspiring guidance, constructive criticism and friendly advice, My family and friends and colleagues for being so supportive and understanding without all of your support I would not be able to reach this step.

Miss Pimchanok Maneepan

Ref. code: 25605902042273XIP

TABLE OF CONTENTS

	Page
ABSTRACT	(1)
ACKNOWLWDGEMENTS	(2)
LIST OF TABLES	(5)
LIST OF FIGURES	(6)
CHAPTER 1 INTRODUCTION	1
1.1 Case Problem	1
1.2 What is Leverage Buyout?	1
1.3 What is Chapter 11	4
1.4 Company Overview, History and Background	4
1.5 Where the Trouble Begins	5
1.6 What is Club Deal?	6
1.7 Structure of Toys R Us Deal	7
1.8 Post-Acquisition Management Team and Bad Timing of IPO	9
1.9 Toys Industry Overview	11
1.10 Retails Market	13
CHAPTER 2 REVIEW OF LITERATURE	16
CHAPTER 3 DATA AND RESEARCH METHODOLOGY	19
3.1 Was Toys R Us a good Investment for LBO?	19
3.2 Can Toys R Us services the debts and have capital left to reinvest	21
3.3 Estimating Toys R Us's Probability of Default Using Altman Z- Score and Olson O score	21

Ref. code: 25605902042273XIP

CHAPTER 4 RESULTS AND CONCLUSION 24

4.1 Was Toys R Us a good Investment for LBO? 24
4.2 Can Toys R Us services the debts and have capital left to reinvest? 26
4.3 Estimating Toys R Us's Probability of Default Using Altman Z- Score 28
4.4 Estimating Toys R Us's Probability of Default Using Olson O score 32

CHAPTER 5 EPILOGUE 34

REFERENCES 36

BIOGRAPHY 38

Ref. code: 25605902042273XIP

LIST OF TABLES

Tables		Page
1.1	LBO's Target characteristic	2
1.2	Original Bidding Price	5
1.3	New born per year compared with Toys R Us Sales	12
1.4	Correlation among birth rate and sales	13
4.1	Operating margin from 2000 to 2016	24
4.2.	Benish M-Score result	26
4.3	Operating income compared to Interest expense	26
4.4	Benish M-Score Model	28
4.5	Altman Z-Score result	30
4.6	Ohlson O-Score	31

Ref. code: 25605902042273XIP

LIST OF FIGURES

Figures		Page
1.1	LBO process	1
1.2	PE-backed distressed exits by year	3
1.3	12 M Libor rate from 1998 to 2017	7
1.4	Interest Expense when compared with net sales	8
1.5	Toys R Us Sales 2000 to 2016	10
1.6	US toys sale from 2003 to 2016	11
1.7	Toys R Us Operating expenses	14
1.8	Retails and E-Commerce sales chart from 2000 to 2017	15
4.1	Operating margin from 2000 to 2016	25
4.2	Operating income compared to Interest expense	27

Ref. code: 25605902042273XIP

CHAPTER 1
INTRODUCTION

1.1 Case Problem

The bankruptcy of Toy "R" Us is reportedly a third largest retail bankruptcy in the history of The United States of America where there has been numerous debate regarding factors leading to its downfall. Many believed that reason behind the financial distress of a category killer firm is its online competitors, Amazon, Walmart, and Target, while some expert says that the factors behind its downfall were a burden of debts from a buyout in 2005. So why do Toys R us fail? Is it really from being acquired by private equity or do the buyout failures arise from an inadequate capital or is it from governance problems?

1.2 What is Leverage Buyout?

Leveraged Buyouts refers to a type of investment where buyout firm (typically Private Equity Firm) aimed to gain significant, or complete, control of the target company equity using highly levered debt financing in the hopes of earning a high return to compensate the risk of default. The name of Private Equity itself refers to the fund activity where they invested in either privately owned company or a publicly owned company where they aimed to take private.

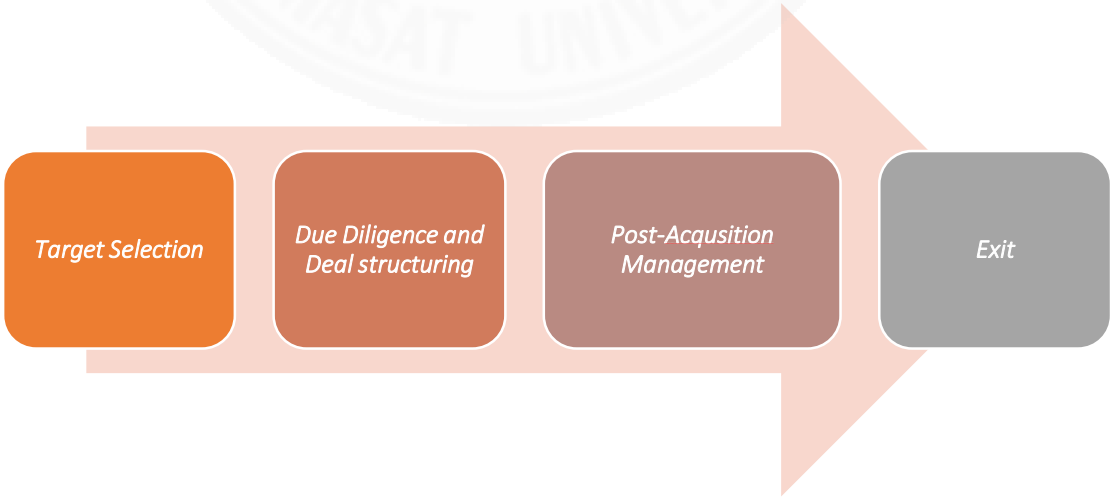


Figure 1.1 LBO process

Ref. code: 25605902042273XIP

Preferences of the target Company can be varied from acquiring the company at matured stage, or growth stage with a high potential management team under “buy and build” strategy or even late stage. Moreover, buyout firm management style can be different between each firm either “an active” or “a passive” (Kaplan 1989) buyout firm tend to invest in more mature companies with solid management and business plan rather than the company in growth where a large proportion of the money has to be used in research and development stage where there is no certain cash flows or with deficits in Earnings Before Interest and Taxes According to (Smith 1990b).

There is a substantial evidence that LBOs during the study period in the late 80s target company fit the profile as follows;

Table 1.1 LBO’s Target characteristic

Criteria	
Financial	**Business**
• Strong steam of cash inflow with demonstrate profitability to services post acquisition immense finance costs • Stability in maintaining its profit margin • Readily liquidate assets or can be achieve without great effort	• Have a room to enhance its competitive advantage by lower production cost to achieve greater margin. • In a mature state with strong brand recognition and carry strong product • Capable and competent management team • Having core products that not subject to rapid technology change or product that affect by seasonal swing

Ref. code: 25605902042273XIP

As forward looking managers began to take a hold over US Corporation in the late 1970s, many of them were willing to consider to change the Company's capital structure to rely more on debt financing of its following characteristics.

- Tax shield from debt financing,
- An incentive for the manager to become a shareholders' and held a significant percentage of a firm's Equity driving operational improvements.

While previous study, Jensen (1989) firmly believed that from being a highly leverage firm the firm then being less exposed to tax risk and can be greatly beneficial in the case that tax shield would then prevail the costs of financial distress because HLT is somewhat privatized. However, the record of HLT retail firm filing for bankruptcy shows otherwise.

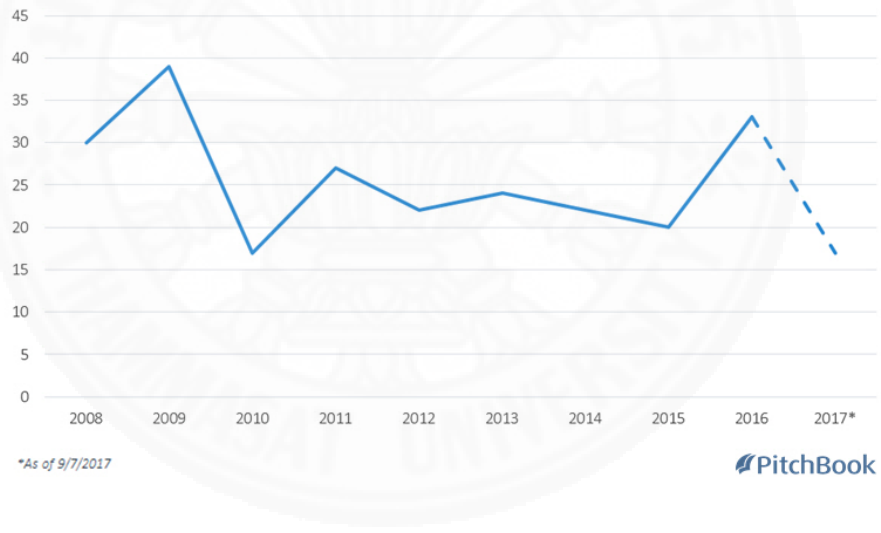


Figure 1.2 PE-backed distressed exits by year

Contrary to the popular buyout target in figure 1.2, it is noted that rivalry among retails industry can be very competitive and the business can capture a rather thin margin from competing in term of price and promotion with another retailer but an entrance of online shopping change the face of this industry entirely which should make this sector less appealing toward PE shop additionally for Toy's retailer in which it's particularly sensitive to an effect of seasonal spending but why does PE shop seemingly

Ref. code: 25605902042273XIP

favor this sector?. According to the data from pitchbook in figure 1.3 we can see that numerous number of PE backed retails went bust and ended up filing for Chapter 11.

1.3 What is Chapter 11?

Notably under chapter 11 the firm can govern and restructure its debt and obligations which can be greatly beneficial toward owner of retailers firm. Since the characteristic of retail business where retailers have numerous creditors after filing for Chapter 11, the firm can make an arrangement with creditors in a single class. Secondly, under Chapter 11 the distressed firm can now issue a debtor-in-possession new source of loan which can be vital for the health of the firm.

1.4Company Overview, History and Background

Founded in 1948 in Washington, D.C by Charles Lazarus who's take a first claim of unchartered territory Toys and Baby Products in a post-war baby boom era, Toys "R" Us is a leading American toys, Clothing and Newborn products by follows the successful footstep of supermarket by offered wide range of children-oriented products by introduced Kid "R" Us in 1983, the birth of Babies "R" Us in 1996 and the acquisition of its rival Imaginarium, an educational toys stores, Consequently, Toy "R" Us is the largest kids retails empire.

The Company went through a significant transformation in late 1990, by launching its first online store in 1998. Meanwhile, Amazon started to expand its services beyond books. Toy "R" Us then invented its new image to represented kids and fun. Through expanding the empire in 2001, The Company introduced the Center of the Toy Universe in New York Times Square, where it quickly becomes the top tourist attraction in New York City.

1.5 Where the Trouble Begins

In 2005 after The disappointing 2003 holiday sales which was larger than what analyst and shareholder has expected and continuous downgrade in term of credit rating, The company then announce closing of all 146 of its standalone Kids "R" Us clothing stores and Imaginarium, Shortly after the closing of Kids "R" Us, the Company went under strategic review in 2004 led by John Eyler its CEO, during the course of

Ref. code: 25605902042273XIP

strategic review, the Company redefined its business model and its competitive position with advise from the appointed financial adviser “Credit Suisse First Boston”suggested in order to maximize shareholders’ value it would be best to sell its core business, Global Toys excluding Toys Japan and retain the remaining business, after extensive meeting of the Board of over 14 times and exclusive committee met over 18 times

Originally there were six groups who interest in buying Global Toys Once said group conducted due diligence investigations of the global toys business. Ultimately, two of the original bidding groups dropped out of the bidding procedure. When due diligence was concluded, A group of bidders was put into a two final round bidding process for the Global toys business. The quoted price from each bidder were as follows

Table 1.2 Original Bidding Price

Bidders	**Price Per Shares For Global Toys**
KKR	$ 13.62
Apollo	$ 13.21
Cerbesus	$ 13.10
Bain/Vernando	$ 12.73

During the due diligence process one of the four bidders “Cerberus Capital” expressed an interest in buying the whole company considering it is absurd to separate Global Toys from Babies "R" Us, because they share the same facility. By offering to buy the whole company for $23.25 per share and later topped to $25.25 per share, without a due diligence condition, and signaled that might be willing to pay $1 dollar more per share. The Board decided to solicit bids for the entire Company, but only from the four existing bidders for Global Toys. (Which later led to a lawsuit from shareholders) But shortly after due diligence on Babies "R" Us Cerberus Capital stand their ground on offering to buy $25.25 per share while The KKR Group joint with Bain and Vernando to do ***club deal*** by raise their stake by offer to pay $26.75 per share. The board then designed to sell the whole operation to the KKR group which was led by Kohlberg Kravis Roberts & Co, Bain Capital and Vornado Realty Trust for the price of $26.75. or 8% premium to the company's closing price of $24.77 a share, a 123% premium or double the closing price of $12.02 on Jan. 7, 2004, the trading day prior to

Ref. code: 25605902042273XIP

the announcement by its CEO of separating Global toys business. As part of the deal, Current management led by John H. Eyler, Jr. (chairman, CEO, and president of Toys "R"Us) and Christopher K. Kay (Executive Vice President) have to leave the firm which is rather unusual considering that typically in LBO environment the sponsors tend to have the Company current management to lead given that the company now burden with debt and difficulty in operating in a rather more challenging environment.

1.6 What is Club Deal?

It is having long been known that private equity firms seek a complete control over a target since it required to make a judgmental strategic decision to create value to their fund, sourcing out a perfect capital structure and create an exit strategy which can be ambiguous if the PE firm were to partner up with some other firm. Therefore, preferred to complete acquisition on their own. However, as the asset class develops form 1980 the value of deal grows substantially larger than their predecessor in the 80s private equity firm, then seek a joint investment with other financial institution where it allowed them to acquire companies that were too large in a size for one private equity firm to solely acquire. Moreover, by joining in club deal it also diversified their investment portfolio where many funds set limits on the percentage of investment to be invested in a certain class of asset. Additionally, club deal can somewhat enhance potential returns form the deal since each PE firm expertise in different field and can be vital when conducting a due diligence and assessing an investment and it would limit competition from joining as one unit.

For this particular deal there were two private equity firms (The KKR Group joint with Bain) and one real estate investment trust (Vernando) partner up doing the deal. The KKR Group have a very strong track record in a highly complex leveraged transaction and investing in a high profile firm such as the deal of the decade, an acquisition of RJR Nabisco while Bain Capital (founded by Mitt Romney in 1985) has a notorious reputation in retails business and Giving the characteristic of Toys R Us where large chunks of the assets were real estate having an expert in the field involved would not hurt. But if everything looks so perfect, then what could possibly go wrong that later causing the third largest retail bankruptcy.

Ref. code: 25605902042273XIP

1.7 Structure of Toys R Us Deal.

The acquisition price of $6.6 billion seem reasonable when compare with the valuation price at the time of an acquisition of $5.6 billion. The fair market value valuation process was conducted by Duff & Phelps an appointed financial advisor of the Company by performing analysis separate by two core business units Global Toys and Babie R Us. Since the two business units having significantly different growth and margin attributes. From their valuation analysis Duff & Phelps determined a price of $3.6 billion for Global Toys and $2.0 billion for Babies R Us Business totaling $5.6 billion.

1.7.1 Source of Fund

Out of $6.6 billion the PE shop only pitch in $1.3 billion ($425.83 million from Vernando) while used the company's assets to raise $4.4 billion in additional debt, which comprises the following

A. $0.7 billion secured revolving credit (LIBOR plus 1.75%-3.75%)
B. $1.9 billion unsecured bridge loan (LIBOR plus 5.25% due in 2012)
C. $1.0 billion secured European bridge loan (LIBOR plus 1.50% due in 2006 – 2011)
D. $0.8 billion mortgage loan agreements (LIBOR plus 1.30% due in 2007) under interest rate caps



Figure 1.3 12 M Libor rate from 1998 to 2017

Ref. code: 25605902042273XIP

At 2006 Libor rate were at its highest at 5.69% which make interest expense during the time were as high as nearly 10% for an unsecured bridge loan, during the course of 12 year Toys R Us average cash outflow service interest for borrowing were about $467 million a year an accounted for approximately 3.63% of net sale per year.

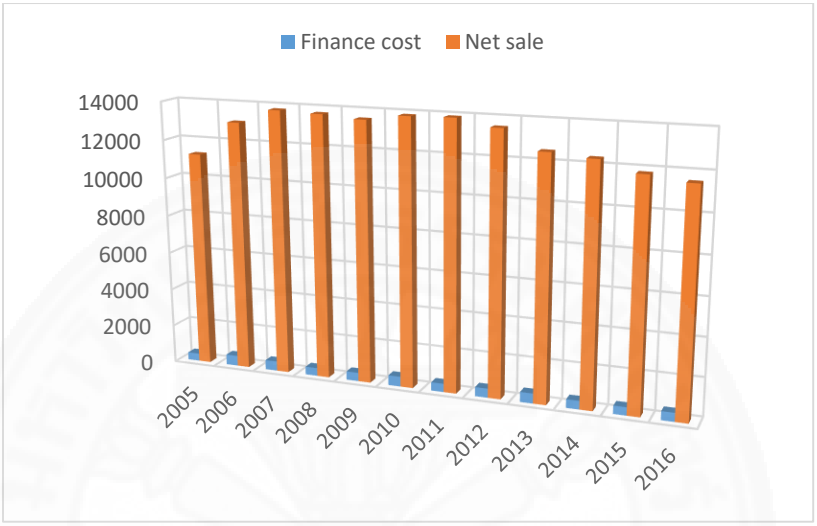


Figure 1.4 Interest Expense when compared with net sales

1.7.2 Use of Fund

Proceeds from funding were to use on a purchase of common stock outstanding of approximately $5.9 billion and a purchase of all stock options, restricted stock, and restricted stock units of the Company under the terms of the Merger Agreement of approximately $227 million and a settlement of equity security units of approximately $114 million and a purchase of all stock warrants of approximately $17 million Severance, bonuses and related payroll taxes of approximately $36 million to management. And lastly fees and expenses related to the Merger Transaction and the related financing transactions of approximately $364 million

1.7.3 Fees and expenses

The fees and expenses related to the Merger Transaction and the related financing transactions principally consisted of advisory fees and expenses of $78 million, financing fees of $135 million, sponsor fees of $81 million, and other fees and

Ref. code: 25605902042273XIP

expenses of $70 million. Of the $364 million of costs, approximately $163 million was expensed, $144 million as transaction related costs and $19 million as amortization of debt issuance cost, interest expense, and real estate taxes. The remaining amount of $201 million is capitalized debt issuance costs and other prepaid expenses in the amount of $199 million and $2 million,

Notice that the fee was paid to the sponsor upfront by $159 million why paying so much money from the debt that you just borrow? By charging a fee it is one of the way that the PE shop can cash out money in the early stage in form of advisory expense. By doing so it is increased additional debt to the firm and place risk on to other creditors and lenders.

1.8 Post-Acquisition Management Team and Bad Timing of IPO

John H. Eyler Jr who has been with Toys R Us since 2000 has to left the firm, John H. Eyler Jr. has been recognize as a man who make Toys R Us friendlier and approachable to customer by training staffs into the prioritize and understanding customer needs mindset and changing store appearance to make it more appealing to client after it's long reputation of poor customer services and its warehouse style shelves. John also shift Toys R Us interest into an online field by co-producing Toys R Us website with Amazon.com.

Typically, a successful buyout will exit within 7 years during the course of 7 years the management source of value creation were through improving of operation, enhance work flow mechanism and cost cutting through reduction of redundant cost, Toys R Us is no different, under improvement of operating efficiency and reorganization Toys R Us were able to exceed $13 billion under the wing of Gerald Stroch but why does it fail to exit through IPO?

Shortly after the buyout took place in 2006 Toys R Us filled John shoes with Gerald Storch a previous chairman of another retailer giant "Target" where he found target.com and launched target grocery business. After joining Toys R Us Gerald continued to invest in online website through acquisition of eToys.com and Toys.com. During his 7 years tenure Gerald has tremendously success in achieving 13 billion sales revenue where the figure can be seen in Figure 1.5.

Ref. code: 25605902042273XIP

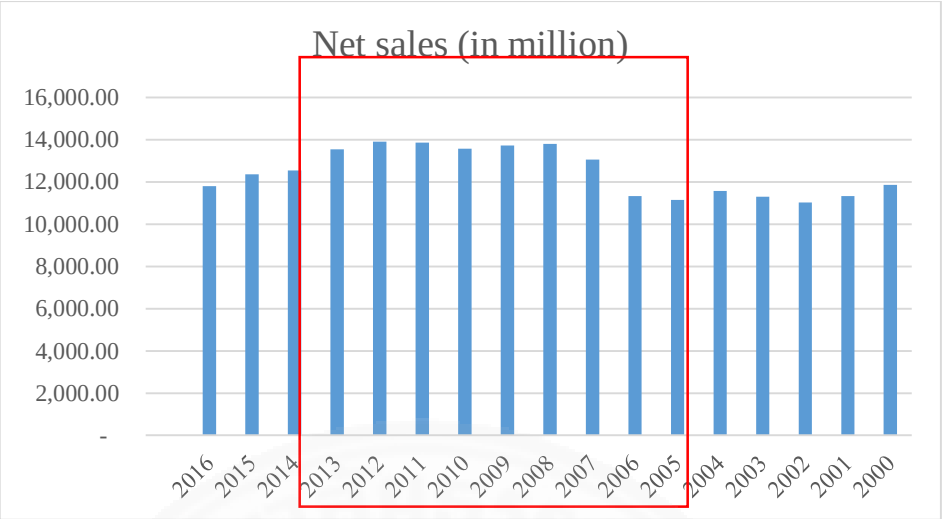


Figure 1.5 Toys R Us Sales 2000 to 2016

In May 2010, under the wing of Gerald Storch, Toys R Us filed for an initial public offering of 800 million US dollar, in 2011 the Company postpone its IPO from the worsen in market condition, in a hope to raised more in the following year the Company facing with declined in net profit from the effect of interest expenses together with poor financial performance make the IPO went south and Toys R Us then withdraw its IPO in 2013 the same time of CEO departure of Gerald. Up on his departure of Toys"R"Us, Inc. Board of Directors said, “We are grateful for his leadership over the past seven years and for the strong foundation he has built for the future. Jerry has delivered some of the best financial results in the more than 60-year history of the company, including multiple years of achieving $1 billion or more in adjusted EBITDA. Under Jerry's leadership, we rolled out the integrated store strategy around the world and made a number of strategic acquisitions. Most recently, in acquiring the majority stake in the company's business in Southeast Asia and Greater China, he has provided the company with a long runway for growth abroad. We thank Jerry for his strategic repositioning of the business."

In 2015, the board of directors appointed David Brandon as a new CEO, analyst expected that the new CEO will pick up its IPO project. David was accustomed to Bain since he has been working with the consortium on a well-known initial public offering of Domino Pizza where Bain able to achieve 500% return on initial investment during

Ref. code: 25605902042273XIP

his tenure Toys R Us is now in red, The Company having net loss which mainly arises from goodwill impairment of Toys-Domestic and Toys-Japan reporting units of $378 million following by Bankruptcy Filing On September 19, 2017.

1.9 Toys Industry Overview

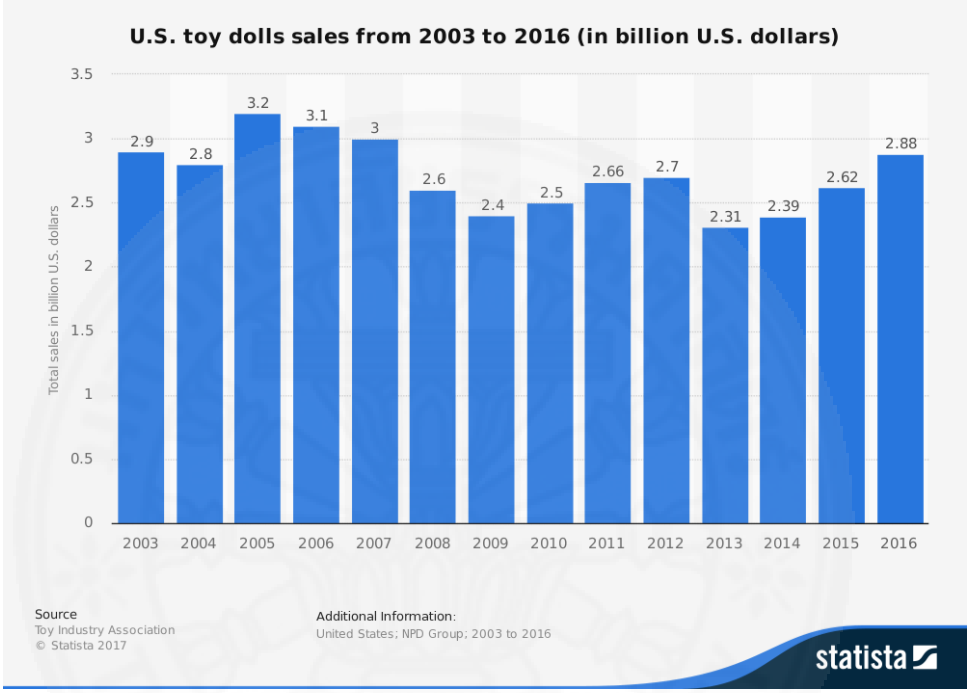


Figure 1.6 US toys sale from 2003 to 2016

The graph from statista shows the total revenue of the U.S. retail sales toys and games market from 2003 to 2016. Toys play significant role in children development in their early stage of life, it is far more than a tools for entertainment and keeping them occupied. Toys play a rather important role by developing youngster cognitive, imagination and help shaping character of a child.

The tablet, gaming device, mobile phone and computer market also breach in to the child play industry and can be quite troublesome toward toys maker. According to recent study from NPD kids spend most of their time watching favorite TV character and playing with traditional toys rank by number 2. Stephanie Wissink, industry analyst at Piper Jaffray, comment that “the journey from womb to web is getting shorter. Most children experience a character in digital form before physical play”. While parent

Ref. code: 25605902042273XIP

prior to making a purchase of toys they tend to do a lot more research to ensure money that the toys were worthy hence, it is harder to make them spill money from their pocket. Moreover, 80% of sale from toys segment arise from holiday sale where it represents the firm financial operation for the year which does not fit the great candidate for LBO transaction where the firm should be able to maintain a steady sale.

Table 1.3 New born per year compared with Toys R Us Sales

Year	New Born Per Year	Change YOY	Toys R Us Sale (In Million)	Change YOY
1999	28,849,814	N/A	11,862	N/A
2000	28,589,874	-0.90%	11,332	-4.47%
2001	27,695,131	-3.13%	11,019	-2.76%
2002	27,181,196	-1.86%	11,305	2.60%
2003	26,810,105	-1.37%	11,566	2.31%
2004	26,469,338	-1.27%	11,155	-3.55%
2005	26,157,684	-1.18%	11,333	1.60%
2006	26,067,226	-0.35%	13,050	15.15%
2007	25,954,968	-0.43%	13,794	5.70%
2008	25,950,581	-0.02%	13,724	-0.51%
2009	25,718,767	-0.89%	13,568	-1.14%
2010	25,591,175	-0.50%	13,864	2.18%
2011	25,233,983	-1.40%	13,903	0.28%
2012	25,024,350	-0.83%	13,543	-2.59%
2013	24,342,520	-2.72%	12,543	-7.38%
2014	24,250,598	-0.38%	12,361	-1.45%
2015	23,886,805	-1.50%	11,802	-4.52%

Nowadays, the birth rate per capita gradually declined from numerous reason such as an advancement in birth control and change in lifestyle where family size tends to be smaller According to BabyCenter.com the U.S. the average age of first-time mothers in 1970 was 21, and in 2008 the average age of first-time mothers had risen to 25.1. We aimed to extract birth rate information from worldbank organization from 1999 to 2015 using data from given 1 lag year from according to parenting.com parent tends to buy a first toy for infant on their first birthday which mean that the parent first shop for kids entertainment once the kids have reach 1 year of age, Using said data to compared with the sale from 2000 to 2016 from 41 countries that Toys R Us operates in to see whether there were a positive correlation between declined in birth rate with Toys R Us sales.

Ref. code: 25605902042273XIP

From Pearson correlation coefficient testing we noted that there is a negative correlation between the birth rate and sale of Toys R Us at -0.4676 in which we were able to conclude that the decremented in birth rate does not affect sales of Toys R Us.

Table 1.4 Correlation among birth rate and sales

	New Born Per Year	*Toys R Us Sale (In Million)*
New Born Per Year	1	
Toys R Us Sale (In Million)	-0.467597718	1

1.10 Retails Market

With ecommerce jump into play it is indeed a war zone. In 2000 John H. Eyler has signed a 10-year partnership contract with Amazon, in which it paid Amazon $50 million a year plus a percentage of sales to be a sole Toys exclusive seller on Amazon's site where when customer enter into Toys R Us site it will redirect to Amazon causing Toys R Us to lack of online present in the 2000s decade. Moreover, through the course of 10 years Amazon has learned how profitable Toys and Babies product can be and Amazon too penetrate this market once the end of 10 years' contract has reach. These online retailers (Amazon and Target) are cutting down prices, which then led to a relatively lower gross profit margins. With traditional store such as Toys R Us who has to keep up with both operational expenses such as wages of its standalone store, in mall the Company also have to reinvest in its online platform resulting in increases in operating expenses which then left the firm with even lower margin than its online competitor.

Ref. code: 25605902042273XIP



Figure 1.7 Toys R Us Operating Expenses

Moreover, the behavior of shopper has drastically change from the previous decade, according to Bloomberg Business, 2015 retails sales hit the lowest they have been since 2009. Consumer now motivate by the desire to shop where there need can be manage at the fingertip through online shopping, Customer is now more time oriented where they are less likely to visit physical store, customer visiting toys store is now just to window shopping and then get a better deal on the online. Retailer's site such as Amazon can make a Hugh impact toward traditional toys retailer like Toys R Us. Research from wolfstreet.com shows that e-commerce sales surpass traditional department store sales in the past decades making a difficult field for retailers let alone the highly levered retailers to compete with them. Later in 2017 Its Former CEO Gerald Storch told CNBC "It got a lot worse when Amazon got in, the internet's a perfect vehicle for trashing the margins on those products," while Barbara Kahn said "Amazon changed customers' expectations about convenience, particularly millennial parents who were a prime segment for Toys R Us." and Toys R Us business is in a great danger.

Ref. code: 25605902042273XIP

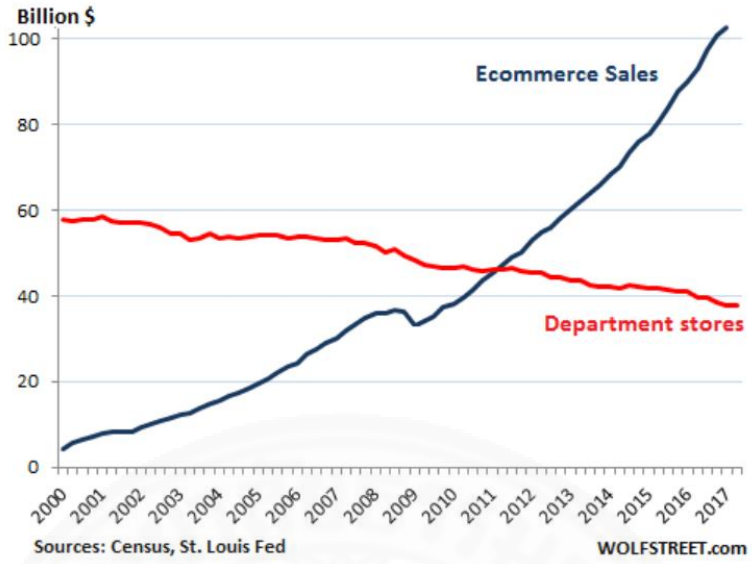


Figure 1.8 Retails and E-Commerce sales chart from 2000 to 2017

During the past decade of Amazon present PE-Backed retailers has flee through bankruptcy rather than traditional IPO such as Gymboree which was acquired by Bain in 2010 filed for Bankruptcy in late June, Payless ShoeSource filed for bankruptcy in April 2017 after a short run under Golden gate capital and Blume partner, BCBG Max Azria filed for bankruptcy in March under Guggenheim Partners management.

Ref. code: 25605902042273XIP

CHAPTER 2
REVIEW OF LITERATURE

There has been many research from previous academia who conducted research in bankruptcy of retails sectors Smith, Jeff and Hairston, Peyton 2013 examined the case of circuit city one of the largest retailer bankruptcy in the past decade, they concluded that the demise of circuit city arise from operation aspect where they cannot keep up with its competitors and its expansion in capital expenditure where they trying to stay ahead of the game led to large research and development cost.

Karen H. Wruck 1991 examine the bankruptcy case of REVCO where it shares similar characteristic as Toys R Us the writer acknowledge that the effect of financial distress is greater than the tax benefit from HLT. The author also stating that too much leverage was the fundamental cause of Revco's problems.

In order to access the quality of accounting information a notorious publication of Benish M.D. (1999) The Detection of Earnings Manipulation has successfully created statistical model where it can detect the earning manipulation but not with 100% accuracy

Morris 1998 suggested that the cause of bankruptcy was unpredictable, therefore, the attempt of creating financial models to predict an unforeseeable cause of this event would be counterproductive. Contrary to the publication from many practitioners and academia who has successfully developed a static and time hazard model financial model to examine financial distress, which is a pre-condition to firm's failure. Where it yields a satisfactory result e.g., Altman 1968; Zmijewski 1984; Kida 1998; Shirata 1998; Shumway 2001 it assesses the probability of bankruptcy in both static models and time hazard model. Among all of the models Altman Z Score is the most favorable bankruptcy prediction model as it appears to be used in many literatures. Out of 66 firms Altman (1968) himself noted that the five compulsory ratios measuring profitability, solvency, liquidity, level of leverage and operating performance of two years prior to the bankruptcy of the firm can indicate the likelihood of bankruptcy. Altman can classify typse of firm into bankrupt and non-bankrupt firms with over 95% accurate. The ratios used in this model were as follows

Ref. code: 25605902042273XIP

- Working Capital/Total Assets
- Retained Earnings/Total Assets
- EBIT/Total Assets
- Market Value of Equity/Total Debts
- Sales/Total Assets

The Altman Z-score also have its limitation where the model does not fit all industry given the specific industry model types. Specific industries as such Toys R Us have its key characteristics similar to retails; therefore, the result of using generic model would not yield a 100% accurate prediction.

Similar to Altman models Shirata (1998) developed an alternative static model for a prediction of firm bankruptcy with different ratio and it can predict the bankruptcy with more than 86.14% accuracy regardless of industry and size.

Al-Rawi, Kiani and Vedd (2008) The Use of Altman Equation for Bankruptcy Prediction in an Industrial Firm (Case Study)". Found that the z-score of the firm in the case study using two years prior to bankruptcy data was less than 1.81 which indicates that said firm fallen into "red zone" aka Distress. They also pinpointed that the firm where it is highly leveraged will have a high likelihood of filing for bankruptcy.

Gerantonis Vergos and Christopoulos (2009) found that Altman Z-score models can predict the bankruptcies of Greece by using financial data from the three previous years. They finally concluded that the used by Altman Z-score proven to be beneficial for investors, management fund manager and regulator.

Ramaratnam and Jayaraman (2010) found that by using Altman Z-score to measure the financial soundness of select firms with special reference to Indian steel industry. Their study revealed that all the selected companies are financially sound during the study period.

Sanesh (2016) using the Altman Z-score of National Stock Exchange of India's benchmark 50 companies, but excluding financial institutions and noted that Altman Z-score can still apply

However, some other academia (Chava nd Jarrow 2004; Addullah et al. 2008, etc.) have proven that other non-static models are more accurate when predicting the bankruptcy and measuring financial soundness than Altman's

Ref. code: 25605902042273XIP

James A. Ohlson research in 1980 came up with the modification of Altman Z score where it can be over 90% accurate when compare to the earliest model accuracy of 70%

John MacCarthy Using Altman Z-score and Beneish M-score Models to Detect Financial Fraud of Enron Corporation his study concludes that the financial statements were manipulated to hide the debt of the company, inflate profits with the intention to support the stock price, so that the company's value would be overstated.

Ref. code: 25605902042273XIP

CHAPTER 3
DATA AND RESEARCH METHODOLOGY

To shed some light on what cause this event and whether the highly leverage transaction is to blame we aimed to study the following;

3.1 Was Toys R Us a good Investment for LBO?

To measure whether Tos R Us is a good candidate for a HLT transaction, we opt to know what HLT is according to Farlex Financial Dictionary Highly Leveraged Transaction is "A loan to a company or other institution that already has a high amount of debt. A highly leveraged transaction carries a great deal of risk and may increase the likelihood of bankruptcy. Where highly leveraged firms have high cost of debt of the risk of going bankrupt incorporate in the firm similar to what we have learned from the tradeoff theorem.

In general, when you place your bet knowing that the risk is high as a skyrocket, you tend to carefully select your best bet, with this in mind picking an exceptional candidate for a highly leveraged transaction is no exception. Jensen (1989) describe LBO capital structure as a highly levered transaction where the acquirer uses a fraction of its equity while employing a considerable portion of debt financing. Consequently, a favorable target is undeniably required to be a mature entity where the stock price was traded at a lower end, has a strong capability of generating sufficient cash flow to meet its debt repayment on a timely basis.

Uniquely, such ideal firm has a tendency to have a capable management team who understand their business territory and able to conform to an unanticipated business scenario. For this reason, Management team then creates value to sponsor by improving operating performance through cost reduction and reduced capital requirements. Coupled with numerous studied and documented by academia and practitioner of process improvement and source of value creation of LBO. Kaplan (1989), Bull (1989), Hall (1990), Lichtenberg & Siegel (1990), Muscarella & Vetsuypens (1990) In order to sustain a steam of cash flow, an extensive support from sponsor through the business transition is equally vital.

Ref. code: 25605902042273XIP

From the surface, Toys “R” Us was a well-established, mature company, however, it cannot stimulate a steady steam cash flow from its characteristics where sales during holiday season accounted for the sale of the year as a whole.

We aimed to focus on its profitability ratio to ensure that the Company were able to produce and exceeding a necessitate re-invent in its own enterprise, we aimed to collect profitability ratio in this particular case operating margin ratio specifically to understand whether the consortium was buying a sunset business at the time. Additionally, we aimed to use Benish M-score model to validate whether the financial statement of the company has been manipulated prior to the time of buyout buy collect financial data 5 years prior to the buyout event from 2000 to 2005 where the model use 8 keys financial ratio as follows;

- ***Days Sales in Receivables Index***
  (DSRI) DSRI = (Net Receivables / Sales) / (Net Receivablest-1 / Salest-1)
- ***Gross Margin Index (GMI)***
  GMI = [(Salest-1 - COGSt-1) / Salest-1] / [(Sales - COGSt) / Salest]
- ***Asset Quality Index (AQI)***
  AQI = [1 - (Current Assetst + PP&Et + Securitiest) / Total Assetst] / [1 - ((Current Assetst-1 + PP&Et-1 + Securitiest-1) / Total Assetst-1)]
- ***Sales Growth Index (SGI)***
  SGI = Salest / Salest-1
- ***Depreciation Index (DEPI)***
  DEPI = (Depreciationt-1/ (PP&Et-1 + Depreciationt-1)) / (Depreciationt / (PP&Et + Depreciationt))
- ***Sales General and Administrative Expenses Index (SGAI)***
  SGAI = (SG&A Expenset / Salest) / (SG&A Expenset-1 / Salest-1)
- ***Leverage Index (LVGI)***
  LVGI = [(Current Liabilitiest + Total Long Term Debtt) / Total Assetst] / [(Current Liabilitiest-1 + Total Long Term Debtt-1) / Total Assetst-1]
- ***Total Accruals to Total Assets (TATA)***
  TATA = (Income from Continuing Operationst - Cash Flows from Operationst) / Total Assetst

Ref. code: 25605902042273XIP

Where the formula was

M-Score = −4.84 + 0.92 × DSRI + 0.528 × GMI + 0.404 × AQI + 0.892 × SGI + 0.115 × DEPI −0.172 × SGAI + 4.679 × TATA − 0.327 × LVGI

3.2 Can Toys R Us services the debts and have capital left to reinvest

Bruner (1992) suggested that to pinpoint the cause of leveraged buyout failure, it has to be able to show that, post LBO effect left the firm with insolvency and inadequate capital. To test the insolvency of the firm we aimed to estimate whether the company has the ability to repay its interest expense and has the margin left for reinvesting by comparing operating income with interest expenses from pre and post buyout.

3.3 Estimating Toys R Us's Probability of Default Using Altman Z- Score and Olson O score

This study is the Case study of Toys R Us which is owned by a group of private investors The KKR Group,Bain and Vernando we aimed to use Altman Z-score by obtain the figure from Toys R Us Annual report for the period of 11 years after the buyout period from 2005 to 2016 to predict the likelihood of its bankruptcy. We noted that in order for Altman Z-score model to works efficiently we have to ensure that the financial statements were manipulated while Beneish M-score is used to diagnose whether the financial statement is manipulated. Hence, it is most feasible to deploy Beneish M-score model prior to of Altman Z-score model.

3.3.1 Altman Z score Analysis:

Following Altman's Bankruptcy Prediction Model where it was developed in 1968 where he gathers data from 66 large companies. The Z-score as a linear combination of several ratios which measure the firm profitability, solvency, liquidity, level of leverage and operating performance to test the validity of Multivariate model. It represents the firm financial health.

Ref. code: 25605902042273XIP

The hypothesis were;

H_0 : The values of X_1, X_2, X_3, X_4, and X_5 are uniform in the sample units

Where **X_1** = Net Working Capital/Total Assets

The net Working capital is the difference between current assets and current liabilities and the Total assets is the total of current assets and fixed assets.

X_2 = Retained Earnings/Total Assets

Indicates the amount reinvested, the earnings or losses, which reflects the extents of company's leverage.

X_3 = EBIT/Total Assets

Measure of the company's operating performance and also it indicates the earning power of the company.

X_4 = Market Value Of Equity/Total Debts

the measurement of the long-term solvency of a company.

X_5 = Sales/Total Assets

the interpretation of Z-Score were classified as Zones of discrimination where $Z > 2.99$ – "Safe" Zone $1.81 < Z < 2.99$ – "Gray" Zone and for the firm with $Z < 1.81$ – "Distress" Zone or financial distress firm

3.3.2 Ohlson O-score analysis

Ohlson (1980) states that there are problems when using the Multiple Discriminant Analysis methodology like Altman(1968) when applied MDA methodology where it is use match paring and the variable and characteristics can be differs among bankrupt and non-bankrupt firm, He also noted that some statistical assumption may be invalid, Hence He uses logit technique to build his model to predict corporate bankruptcy

Ref. code: 25605902042273XIP

Where the formula was

$$T = -1.32 - 0.407\log(TA_t/GNP) + 6.03\frac{TL_t}{TA_t} - 1.43\frac{WC_t}{TA_t} + 0.0757\frac{CL_t}{CA_t}$$
$$- 1.72X - 2.37\frac{NI_t}{TA_t} - 1.83\frac{FFO_t}{TL_t} + 0.285Y - 0.521\frac{NI_t - NI_{t-1}}{|NI_t| + |NI_{t-1}|}$$

Where

TA = total assets
GNP = Gross National Product price index level
TL = total liabilities
WC = working capital
CL = current liabilities
CA = current assets
X = 1 if TL > TA, 0 otherwise (Dummy variables)
NI = net income
FFO = funds from operations
Y = 1 if a net loss for the last two years, 0 otherwise (Dummy variables)

The outcome of a logit model is a probability where it is easier to interpret, where probability of default was exp(O-Score) is divided by 1 + exp(O-score) any results larger than 0.5 suggests that the firm will default

Ref. code: 25605902042273XIP

CHAPTER 4
RESULT AND CONCLUSION

4.1 Was Toys R Us a good Investment for LBO?

From extracting data of pre-buyout and post buyout event there is a strong evidence suggested that the firm profitability is in line with industry norm, From S&P 500 industry specific it's quite clear that retailers pocketed home a very thin margin ranging from 0.5% to 4.0% where the table below shows that Toys R Us was walking on the same path as many other retailers except on 2006 the first year of transition and 2014. In summary, when taking characteristics of target firm into consideration, Toys R Us is a moderate candidate for buyouts firm given that the firm has long reputation, well recognized and in mature stage with low amount of outstanding debt, strong management team and held a strong position in market. However, the consortium were shortsighted on the future working capital requirement such as investing in online platform and the cash flow pattern that it tend to rely heavily on holiday sales together with the character of retails itself make this deal infeasible.

Table 4.1 Operating margin from 2000 to 2016

	2016	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**
Operating Margin	3.20%	1.55%	(2.79%)	4.11%	4.19%	4.66%	5.78%	4.52%	5.05%

	2007	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**
Operating Margin	4.97%	(1.25%)	2.73%	2.27%	4.17%	1.82%	3.76%	4.38%

Ref. code: 25605902042273XIP

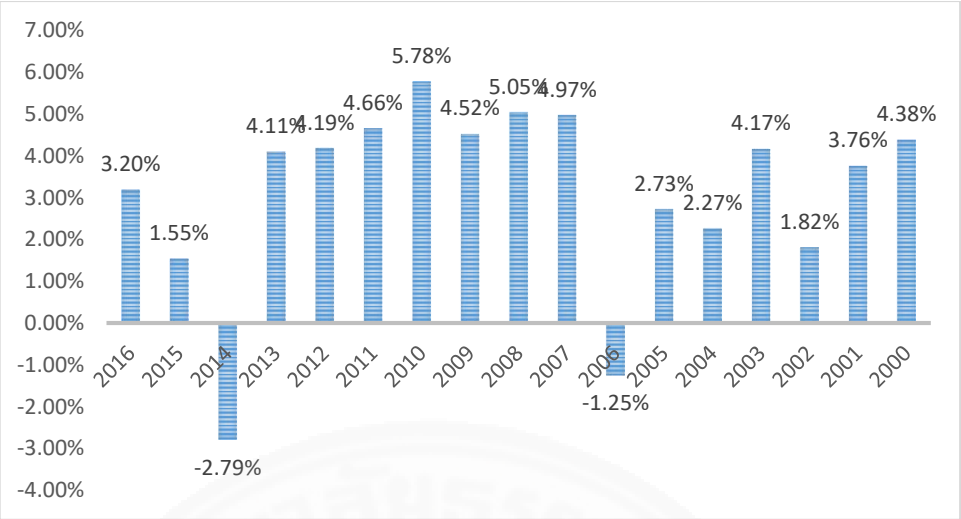


Figure 4.1 Operating margin from 2000 to 2016

4.1.2 Was the pre-acquisition accounting information manipulated?

In order to estimate whether the consortium was making an offers with fault information that would diverse their judgment using data from a publicly disclose financial statements from 2000 to 2005 we applied Benish M-Score to our testing to ensure that the pre buyout information were not under management manipulation where it would convey the consortium to make an offer. We noted that Benish M-Score model did not detect earning manipulation that might cast a doubt over the quality of financial statements since the M-Score of 2000 to 2005 is less than -1.78.

Ref. code: 25605902042273XIP

Table 4.2 Benish M-Score result

		2005		2004		2003		2002		2001	
Variable	**Coef**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**
	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84
DSRI	0.92	1.086556	0.999632	0.706462	0.649945	0.93757	0.862564	0.959845	0.883058	1.294084	1.190557
GMI	0.528	0.982438	0.518727	0.96501	0.509525	0.999326	0.527644	1.001422	0.528751	0.961839	0.507851
AQI	0.404	1.111312	0.44897	0.823748	0.332794	1.02444	0.413874	1.06419	0.429933	0.854334	0.345151
SGI	0.892	0.964465	0.860303	1.023087	0.912594	1.025955	0.915152	0.972379	0.867362	0.95532	0.852145
DEPI	0.115	0.937695	0.107835	0.882229	0.101456	1.017266	0.116986	1.004716	0.115542	0.920948	0.105909
SGAI	-0.172	1.029639	-0.177098	1.086757	-0.186922	0.973627	-0.167464	0.988097	-0.169953	1.080734	-0.185886
TATA	4.679	-0.050778	-0.23759	-0.068604	-0.321	-0.036714	-0.171784	-0.054111	-0.253185	0.069349	0.324484
LVGI	-0.327	0.949592	-0.310517	1.027433	-0.33597	0.989387	-0.32353	1.007603	-0.329486	1.024078	-0.334874
M-Score			**-2.629739 Not Manipulate**		**-3.177578 Not Manipulate**		**-2.666558 Not Manipulate**		**-2.767978 Not Manipulate**		**-2.034663 Not Manipulate**

4.2 Can Toys R Us services the debts and have capital left to reinvest?

Per our investigation we take noted that the post buyout interest expense double up from the pre-buyout whereas operating income increase in a small proportion and the sign of trouble shows from 2011 onwards where management failed to increased operating income and operating income decline from that year onwards resulting in the Company lack of cash flow to that necessitate to finance interest obligation let alone repay the principle that will be mature in 2018 causing the largest one of a kind category store to its doom.

Ref. code: 25605902042273XIP

Table 4.3 Operating income compared to Interest expense

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Operating income	378.00	191.00	(350.00)	556.00	582.00	646.00	784.00	621.00	696.00	649.00	(142.00)	304.00	262.00	471.00	200.00	426.00	520.00
Interest expense	429.00	451.00	524.00	480.00	442.00	521.00	447.00	419.00	503.00	537.00	394.00	130.00	142.00	119.00	117.00	127.00	91.00
Margin	(51.00)	(260.00)	(874.00)	76.00	140.00	125.00	337.00	202.00	193.00	112.00	(536.00)	174.00	120.00	352.00	83.00	299.00	429.00

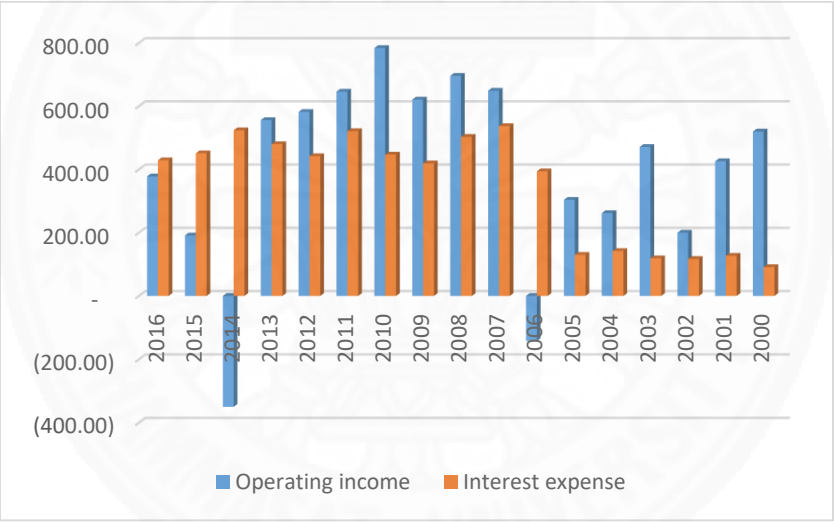


Figure 4.2 Operating income compared to Interest expense

Ref. code: 25605902042273XIP

4.3 Estimating Toys R Us's Probability of Default Using Altman Z- Score

Benish M-Score test

To assess the probability of default we deploy Benish M-score prior to our assessment of Altman Z-score and Olson O-score whether the pre and post buyout financial statements were manipulated.

Table 4.4 Benish M-Score Model

		2016		2015		2014		2013		2012	
Variable	**Coef**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**
	-4.84		-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84
DSRI	0.92	1.047365	0.963576	0.916919	0.843566	1.05432	0.969975	1.030624	0.948174	0.993284	0.913822
GMI	0.528	1.000867	0.528458	0.976369	0.515523	1.044754	0.55163	0.977845	0.516302	0.993733	0.524691
AQI	0.404	0.843302	0.340694	0.961193	0.388322	0.687362	0.277694	0.870273	0.35159	1.178265	0.476019
SGI	0.892	0.954777	0.851661	0.98549	0.879057	0.926161	0.826136	0.974106	0.868903	1.002813	0.894509
DEPI	0.115	1.038129	0.119385	0.948909	0.109125	0.982585	0.112997	0.955277	0.109857	0.964078	0.110869
SGAI	-0.172	0.961221	-0.16533	0.990684	-0.170398	1.071443	-0.184288	1.02964	-0.177098	1.019203	-0.175303
TATA	4.679	(0.05)	-0.247111	(0.11)	-0.505056	(0.16)	-0.733244	(0.06)	-0.261722	(0.02)	-0.08996
LVGI	-0.327	1.023957	-0.334834	1.061644	-0.347158	1.149387	-0.375849	1.002674	-0.327874	0.981219	-0.320859
M-Score			-2.783502		-3.127019		-3.394949		-2.811868		-2.506212
			Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate

Ref. code: 25605902042273XIP

Table 4.4 (Continued)

		2011		2010		2009		2008		2007	
Variable	**Coef**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**
	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84
DSRI	0.92	1.235424	1.13659	0.814034	0.748911	0.98547	0.906632	1.05301	0.968769	0.916233	0.842934
GMI	0.528	0.991317	0.523415	0.982426	0.518721	1.007289	0.531848	0.970155	0.512242	0.960718	0.507259
AQI	0.404	1.004404	0.405779	0.905526	0.365832	1.088798	0.439874	0.984469	0.397726	1.245484	0.503176
SGI	0.892	1.021816	0.91146	0.988633	0.881861	0.994925	0.887473	1.057011	0.942854	1.151504	1.027142
DEPI	0.115	0.966682	0.111168	1.032015	0.118682	0.94759	0.108973	1.046171	0.12031	1.013695	0.116575
SGAI	-0.172	1.034273	-0.177895	0.978446	-0.168293	1.034063	-0.177859	1.027781	-0.176778	1.013902	-0.174391
TATA	4.679	(0.01)	-0.027548	(0.08)	-0.382961	(0.04)	-0.170783	(0.04)	-0.195481	(0.04)	-0.170351
LVGI	-0.327	0.974457	-0.318647	0.955241	-0.312364	0.989575	-0.323591	0.964933	-0.315533	0.9902	-0.323795
M-Score			-2.275678		-3.069611		-2.637432		-2.585892		-2.511452
			Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate

		2005		2004		2003		2002		2001	
Variable	**Coef**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**	**Variable**	**Value**
	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84	0	-4.84
DSRI	0.92	1.086556	0.999632	0.706462	0.649945	0.93757	0.862564	0.959845	0.883058	1.294084	1.190557
GMI	0.528	0.982438	0.518727	0.96501	0.509525	0.999326	0.527644	1.001422	0.528751	0.961839	0.507851
AQI	0.404	1.111312	0.44897	0.823748	0.332794	1.02444	0.413874	1.06419	0.429933	0.854334	0.345151
SGI	0.892	0.964465	0.860303	1.023087	0.912594	1.025955	0.915152	0.972379	0.867362	0.95532	0.852145
DEPI	0.115	0.937695	0.107835	0.882229	0.101456	1.017266	0.116986	1.004716	0.115542	0.920948	0.105909
SGAI	-0.172	1.029639	-0.177098	1.086757	-0.186922	0.973627	-0.167464	0.988097	-0.169953	1.080734	-0.185886
TATA	4.679	(0.05)	-0.23759	(0.07)	-0.321	(0.04)	-0.171784	(0.05)	-0.253185	0.07	0.324484
LVGI	-0.327	0.949592	-0.310517	1.027433	-0.33597	0.989387	-0.32353	1.007603	-0.329486	1.024078	-0.334874
M-Score			-2.629739		-3.177578		-2.666558		-2.767978		-2.034663
			Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate		Not Manipulate

Ref. code: 25605902042273XIP

then we aimed to use both Altman Z-score and Olson O-score whether it can detect the probability of default using key financial ratio we noted that Altman Z-score identified that pre-buyout Toys R Us were at grey status where it might be facing with distress but not in a red flag zone However, the post buyout data show otherwise where in all of the year after acquisition the high level of debt and a frequent interest payment leave the firm insolvency and Altman suggested that Toys R Us is in financial distress zone.

Ref. code: 25605902042273XIP

Table 4.5 Altman Z-Score result

Variable	Coef	2004		2003		2002		2001		2000	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
X1	1.2	0.19	0.22	0.13	0.15	0.08	0.10	0.07	0.08	0.00	0.01
X2	1.4	0.41	0.58	0.43	0.60	0.42	0.59	0.43	0.60	0.44	0.62
X3	3.3	0.01	0.04	0.04	0.13	0.01	0.04	0.08	0.26	0.05	0.17
X4	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X5	1	1.13	1.13	1.20	1.20	1.36	1.36	1.42	1.42	1.42	1.42
Z-score			1.98		2.08		2.09		2.36		2.22
			Gray Zone		Gray Zone		Gray Zone		Gray Zone		Gray Zone

Variable	Coef	2009		2008		2007		2006		2005	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
X1	1.2	0.07	0.09	0.08	0.09	0.04	0.05	0.04	0.05	0.18	0.22
X2	1.4	(0.03)	(0.05)	(0.04)	(0.06)	(0.08)	(0.11)	(0.09)	(0.13)	0.44	0.62
X3	3.3	0.03	0.09	0.02	0.08	0.02	0.06	(0.06)	(0.21)	0.02	0.07
X4	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X5	1	1.63	1.63	1.54	1.54	1.57	1.57	1.44	1.44	1.14	1.14
Z-score			1.76		1.65		1.57		1.15		2.05
			Red Zone		Red Zone		Red Zone		Red Zone		Gray Zone

Variable	Coef	2016		2015		2014		2013		2012		2011		2010	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
X1	1.2	0.07	0.08	0.05	0.06	0.09	0.11	0.13	0.16	0.08	0.10	0.06	0.07	0.07	0.09
X2	1.4	(0.18)	(0.25)	(0.15)	(0.22)	(0.09)	(0.12)	0.05	0.08	0.06	0.08	0.04	0.05	0.01	0.01
X3	3.3	(0.01)	(0.02)	(0.04)	(0.12)	(0.11)	(0.38)	0.01	0.03	0.02	0.06	0.01	0.05	0.04	0.13
X4	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
X5	1	1.69	1.69	1.74	1.74	1.66	1.66	1.52	1.52	1.57	1.57	1.57	1.57	1.58	1.58
Z-score			1.50		1.46		1.27		1.79		1.80		1.75		1.81
			Red Zone		Red Zone		Red Zone		Red Zone		Red Zone		Red Zone		Gray Zone

Ref. code: 25605902042273XIP

4.4 Estimating Toys R Us's Probability of Default Using Olson O score

Ohlson O-Score test

We also noted that Ohlson O-Score were on the same direction as Altman Z-score mainly from the large sum of debt from buyout event accordingly.

Table 4.6 Ohlson O-Score

Variable	Coef	2004		2003		2002		2001		2000	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
	-1.32		-1.32		-1.32		-1.32		-1.32		-1.32
AS	-0.47	2.05	(0.96)	2.01	(0.94)	1.94	(0.91)	1.94	(0.91)	1.96	(0.92)
LM	6.03	0.59	3.54	0.57	3.44	0.58	3.48	0.57	3.45	0.56	3.37
WCM	-1.43	0.19	(0.27)	0.13	(0.18)	0.08	(0.12)	0.07	(0.10)	0.00	(0.01)
ICR	0.757	0.59	0.45	0.67	0.51	0.75	0.57	0.81	0.61	0.99	0.75
Discontinuity Correction for Leverage Measure	-1.72	-	-	-	-	-	-	-	-	-	-
ROA	-2.37	0.01	(0.02)	0.02	(0.06)	0.01	(0.02)	0.05	(0.12)	0.03	(0.08)
FTDR	-1.83	0.08	(0.15)	0.13	(0.23)	0.09	(0.16)	0.20	(0.37)	0.15	(0.28)
Discontinuity Correction for Return on Assets	0.285	-	-	-	-	-	-	-	-	-	-
Change in Net Income	-0.521	0.14	(0.07)	(0.28)	0.14	(0.61)	0.32	1.00	(0.52)	1.00	(0.52)
O-Score			**1.1980303**		**1.3604537**		**1.8420038**		**0.7252528**		**0.993502**
Prob of failure			**0.77**		**0.80**		**0.86**		**0.67**		**0.73**
			At Risk		**At Risk**		**At Risk**		**At Risk**		**At Risk**

Ref. code: 25605902042273XIP

Table 4.6 (Continued)

Variable	Coef	2009		2008		2007		2006		2005	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
	-1.32		-1.32		-1.32		-1.32		-1.32		-1.32
AS	-0.47	1.92	(0.90)	1.96	(0.92)	1.93	(0.91)	1.92	(0.90)	2.03	(0.95)
LM	6.03	1.03	6.23	1.04	6.29	1.08	6.52	1.09	6.59	0.56	3.36
WCM	-1.43	0.07	(0.10)	0.08	(0.11)	0.04	(0.06)	0.04	(0.06)	0.18	(0.26)
ICR	0.757	0.80	0.60	0.80	0.60	0.88	0.67	0.88	0.66	0.59	0.45
Discontinuity Correction for Leverage Measure	-1.72	1.00	(1.72)	1.00	(1.72)	1.00	(1.72)	1.00	(1.72)	-	-
ROA	-2.37	0.03	(0.06)	0.02	(0.04)	0.01	(0.03)	(0.05)	0.12	0.03	(0.06)
FTDR	-1.83	0.07	(0.13)	0.07	(0.12)	0.06	(0.11)	(0.01)	0.02	0.10	(0.18)
Discontinuity Correction for Return on Assets	0.285	-	-	-	-	-	-	-	-	-	-
Change in Net Income	-0.521	0.18	(0.09)	0.17	(0.09)	1.00	(0.52)	(1.00)	0.52	0.05	(0.02)
O-Score			**2.4966386**		**2.5794645**		**2.5137776**		**3.903672**		**1.000197**
Prob of failure			**0.92**		**0.93**		**0.93**		**0.98**		**0.73**
			At Risk		**At Risk**		**At Risk**		**At Risk**		**At Risk**

Variable	Coef	2016		2015		2014		2013		2012		2011		2010	
		Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value	Variable	Value
	-1.32		-1.32		-1.32		-1.32		-1.32		-1.32		-1.32		-1.32
AS	-0.47	1.80	(0.84)	1.81	(0.85)	1.84	(0.87)	1.92	(0.90)	1.92	(0.90)	1.93	(0.91)	1.93	(0.91)
LM	6.03	1.18	7.12	1.15	6.96	1.09	6.55	0.95	5.70	0.94	5.69	0.96	5.80	0.99	5.95
WCM	-1.43	0.07	(0.10)	0.05	(0.07)	0.09	(0.13)	0.13	(0.19)	0.08	(0.11)	0.06	(0.09)	0.07	(0.10)
ICR	0.757	0.85	0.64	0.89	0.67	0.78	0.59	0.70	0.53	0.79	0.60	0.85	0.65	0.82	0.62
Discontinuity Correction for Leverage Measure	-1.72	1.00	(1.72)	1.00	(1.72)	1.00	(1.72)	-	-	-	-	-	-	-	-
ROA	-2.37	(0.02)	0.04	(0.04)	0.10	(0.14)	0.33	0.00	(0.01)	0.02	(0.04)	0.02	(0.05)	0.04	(0.09)
FTDR	-1.83	0.04	(0.07)	0.01	(0.03)	(0.06)	0.11	0.06	(0.11)	07	(0.12)	0.06	(0.11)	0.09	(0.16)
Discontinuity Correction for Return on Assets	0.285	1.00	0.29	1.00	0.29	-	-	-	-	-	-	-	-	-	-
Change in Net Income	-0.52	0.38	(0.20)	0.56	(0.29)	(1.00)	0.52	(0.59)	0.31	(0.06)	0.03	(0.30)	0.16	0.18	(0.09)
O-Score			**3.84795**		**3.73049**		**4.061061**		**4.008851**		**3.819208**		**4.126187**		**3.902756**
Prob of failure			**0.98**		**0.98**		**0.98**		**0.98**		**0.98**		**0.98**		**0.98**
			At Risk		**At Risk**		**At Risk**		**At Risk**		**At Risk**		**At Risk**		**At Risk**

Ref. code: 25605902042273XIP

CHAPTER 5
EPILOGUE

Despite its will to create value for investors, the consortium failed to exit through IPO instead ended up filing for Chapter 11 in September 19, 2017 In a hope to reorganized and negotiate payment term with creditors and debtors expect to start off fresh. As of March 9, 2018 the management has announce that Toys R Us will go out of business through Chapter 7. What bring the Brick and mortar one of a kind Toys store to it ended is the combination of change in consumer preferences and behavior, debts burden from HLT resulting in failed to compete with online retailers, leaving the 30,000 lives of Toys R Us workers with no Jobs, secured creditors will be paid second in line to the legal and advisory fees of this transition while vendors will be left with proceeds after the liquidation which barely cover the minimum. Vernado one of the consortium stock price drop sharply after an announcement of Bankruptcy since September 19, 2017 and failed to recovered since. While David Brando, CEO pocketed home $2.8 million up on the completion of liquidation of Toys R Us and Bain and KKR pocket home advisory fee leaving wounded investors, Toys R Us employee with no jobs and creditors with no repayment behind while they are in search of their next target.

Recipe for disaster

The recipe for this tragedy is more than just greed combined with overconfidence practitioners. In an early stage the effect of overconfidence plays important role where it induces the consortium to invested in a fundamentally unprofitable sector and shortsighted by the technology advancement in the next decade. With greed the consortium is too optimistic about the outcome, expecting unrealistic return resulting in hyperbolizing the purchase price in which trouble the firm with too much debts. However, greed merely solely the only emotional factor that were to blame here other factor as fear of missing out also play a great deal, sometime investment manager can be too caught up with the game and addicted to wining seeing that some deal might be going in their favor making the rational man goes irrational. With other ingredient as such failed to find economic advantage from its own pooled of investment

Ref. code: 25605902042273XIP

asset where the consortium failed to capture possible synergy among its investment. Complexity of the business is also one of the properties that make this deal infeasible by having over 900 branches with massive store space and Hugh inventory load requiring precise forecast and effective operation management together with a complicate financial structure making it difficult to find management who capable of leading this ship.

In later stage response time toward the change in business which is strayed far from projection were not acted on a timely manner, when business did not go as expected make it deviate from the Company plan such as e-commerce or seasonal sales the management action towards these unplanned event was not quick enough and then it feasts on the debts and compound this poorly made decision in form of loss of sale or over spending cost make the Company in a more troubling stage. But why does the agent take long period of time to response to arising threat? Was it from the effect of poorly govern? The answer is no, thing would have turn out differently if the belt were not so tight, True that debts put pressure to management and encourage them to operate in the most efficient way. However, without flexibility carrying too much debts from an effect of overpayment discharge management ability to act quickly.

Ref. code: 25605902042273XIP

REFERENCES

1. Al-Rawi, K, Kiani, R. and Vedd, R.R. (2008). “The Use of Altman Equation for Bankruptcy Prediction in an Industrial Firm (Case Study)”, International Business & Economics Research Journal, 7(7): 115-127.

2. Altman, E.I. (1968). “Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy”, The Journal of Finance, 23(4): 589-609.

3. Benish (1999). “The Detection of Earnings Manipulation”, Financial Analysts Journal, Vol. 55, pp. 24-36

4. Begley J., Ming J. and Watts S. (1996). “Bankruptcy classification errors in the 1980s: An empirical analysis of Altman’s and Ohlson’s models”.

5. Bull, "Management Performance in Leveraged Buyouts: An Empirical Analysis," in leveraged Management Buyouts: Causes and Consequences, Y. Amihud (ed.), Homewood IL, Dow Jones-Irwin, 1989, pp. 69-94.

6. Chava, S. and Jarrow, R.A. (2004). “Bankruptcy Prediction with Industry Effects”, Review of Finance, 8: 537-569.

7. Gerantonis, N., Vergos, K. and Christopoulos, A.G. (2009). “Can AltmanZ-score Models Predict Business Failures in Greece?”, ResearchJournal of International Studies, 12: 21-28.

8. John MacCarthy (2017) Using Altman Z-score and Beneish M-score Models to Detect Financial Fraud and Corporate Failure: A Case Study of Enron Corporation, 159-166.

9. Karen H. Wruck (1991) WHAT REALLY WENT WRONG AT REVCO Journal of applied corporate finance, 80-91.

10. Kida, C.Y. (1998). “Financial Ratios as Predictors of Bankruptcy in Japan: An Empirical Research”, Journal of Finance, 123: 589-609

11. Morris, R. (1998). “Bankruptcy Prediction Models: Just How Useful Are They?”, Credit Management, pp. 43-45,

12. M.C. Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," American Economic Review, Papers and Proceed- ings (May 1986), pp. 326-329.

Ref. code: 25605902042273XIP

13. Muscarella and M.R. Vetsuypens, "Efficiency and Organizational Structure: A Study of Reverse LBOs," Journal of Finance (December 1990), pp. 1389-1413.

14. Ramaratnam, M.S. and Jayaraman, R. (2010). “A study on measuring the financial soundness of select firms with special reference to Indian steel industry – An empirical view with Z score”, Asian Journal of Management

15. Robert F., Kenneth M. (1992), “The Crash of the Revco Leveraged Buyout: The Hypothesis of Inadequate Capital” The Journal of Financial Management Vol. 21, No. 1, Leverage Buyouts Special Issue (Spring, 1992), pp. 35-49

16. S.N. Kaplan, "Sources of Value in Management Buyouts," in lever- aged Management Buyouts: Causes and Consequences, Y. Amihud (ed.), Homewood, IL, Dow Jones-Irwin, 1989, pp. 95-102.

17. S.N. Kaplan, "The Effects of Management Buyouts on Operating Performance and Value," Journal of Financial Economics (October 1989), pp. 217-254.

18. S.N. Kaplan and J.C. Stein, "The Evolution of Buyout Pricing and Financial Structure in the 1980s," Working Paper, University of Chicago, 1991.

19. Sanesh, C. (2016). The analytical study of Altman Z score on NIFTY 50 Companies. IRA-International Journal of Management & Social Sciences (ISSN 2455-2267), 3(3). Research, Online Open Access publishing platform for Management Research, pp. 724-735

20. Shirata, C.Y. (1998). “Financial Ratios as Predictors of Bankruptcy in Japan: An Empirical Research”

21. Shumway, T. (2001). “Forecasting bankruptcy more accurately: A simple hazard model”, Journal of Business, 74(1): 101-124,

22. Smith, Jeff and Hairston, Peyton, "Circuit City's Chapter 11 Bankruptcy" (2013).

23. Zmijewski, M. E. (1984). “Methodological issues related to the estimation of financial distress prediction models”, Journal of Accounting Research, 22(1): 59–82,

Ref. code: 25605902042273XIP

BIOGRAPHY

Name	Miss Pimchanok Maneepan
Date of birth	November 23, 1990
Educational attainment	June 2009 to March 2014, Bachelor degree in commerce and accountancy Major in Accounting Thammasat University
Work position	Senior Auditor in Assurance service Deloitte Touche Tomatsu Jaiyos
Scholarship	Year 2017: Deloitte Scholarship
Work Experiences	July 2014 to Present Senior Auditor in Assurance service Deloitte Touche Tomatsu Jaiyos

Ref. code: 25605902042273XIP