

ACCOUNTS RECEIVABLE MANAGEMENT DURING THE RECENT RECESSION

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CHAPTER I

INTRODUCTION

Recent recessionary downturns have sparked interest in the importance of issues surrounding business-to-business credit and credit risk management in relationship to a company's success. As witnessed during times of extreme financial distress, undergoing a credit crunch restricts the ability to trade and conduct business, while hindering the recovery process.¹ The recently endured credit crunch during the "Great Recession" tightened the lending supply of money from banks to businesses, and in turn translated into increased pressure on firms to find other credit sources.² The ability of firms to finance their customers via trade credit establishes an alternative to borrowing from financial institutions.³ Today, approximately two in five businesses use trade credit or bank credit.⁴ This reiterates the importance of credit risk management as an indispensable requirement in order to eliminate or reduce bad debt within a firm. As the goal of all firms is to make a profit, an efficient credit risk management system

¹Marc Auboin and Moritz Meier-Ewert. "Improving the Availability of Trade Finance during Financial Crisis." *World Trade Organization* (2003).

²Christopher J Cowton and Leire San-Jose. *Giving credit where it's due – but no more: an ethical analysis of trade credit*. University of Huddersfield Financial Ethics & Governance Research Group. (2010): 1-15.

³ Mitchell A Peterson and Raghuram G Rajan. "Trade credit: theories and evidence" *The Review of Financial Studies*. 10 no.3(1997): 662-691.

⁴Rebel A. Cole *Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances*. Depaul University. (2010): 1-48.

increases the likelihood to be paid back on credit extended, and in turn aids in profit maximization.

Background

Trade Credit in a Recessional Economy

The effects of the recently sluggish economy tightened credit availability to both buyers and suppliers due to a decrease in overall economic confidence.⁵ As a result, credit dried up, and funds necessary for economic expansion were depleted. As the credit supply tightened, firms were forced to re-examine their amount of capital risk within the market, by focusing on the analysis of optimal debt levels.⁶ Businesses maintaining higher debt levels were often placed in riskier financial situations, and as a result, the collection of these debts became a necessity to avoid payment default and bankruptcy of the firm. Sequentially, the extension and availability of trade credit and financing opportunities was affected as companies attempted to minimize risk by carefully monitoring potential credit customers.

Much of trade credit and financing is not measurable by official statistics due to the lack of studies, however the International Monetary Fund (IMF) and World Trade Organization (WTO) sponsored surveys directed towards global participants involved in trade credit and finance within their industries. The survey concluded that North America and Europe endured a greater decrease of trade financing than other regions during the economic slowdown. This decrease in available financing occurred as firms

⁵ Bertola Giuseppe, Richard Disney, and Charles Grant *The Economics of Consumer Credit* (Cambridge: MIT Press, 2006): 1-378.

⁶Jayant Kale, Thomas Noe, Gabriel Ramirez “The Effect of Business Risk on Corporate Capital Structure: Theory and Evidence” *Journal of Finance* 46 no.5 (1991): 1693-1715.

had less capital to extend in the form of credit. Additionally, due to a lack of capital available, it became a necessity for firms to eliminate bad debt expenses and closely monitor credit customers for potential defaults on payments. The surveys also found businesses blamed a lack of trade financing as the number two cause of the international market slowdown.⁷ This chain reaction of a lack of credit, resulting in reduced business growth, ends with the recession becoming entrenched in the financial system.

As the recession deepens, companies under financial distress tend to delay their payments of trade credit as a cash flow management strategy.⁸ Late payments and defaulted payments add to the overall economic distress of the economy as a whole. As a supplier endures late customer payments on trade credit, in turn this forces the supplier to delay payment of credit to their own suppliers. This relationship ripples through all suppliers and users of trade credit throughout the economy, and has the ability to exponentially decrease the amount of credit available to all firms. As trade credit dries up, and banks are unwilling to loan money because of the economic downturn, the business world is placed in a colossal financial predicament.

This chain reaction, as a result of delayed payments, exemplifies the necessity for firms to be able to collect credit extended as quickly as possible. This thesis will examine the impact of the most recent recession on firms' accounts receivables. It will pinpoint qualities of firms that are most efficient at collecting credit extended during recessionary downturns, and determine reasons for their success. Additionally, this thesis will analyze the most effective collection techniques employed by companies

⁷Jesse Mora and William M. Powers. "Decline and gradual recovery of global trade financing: US and global perspectives." (2009): <http://www.voxeu.org/index.php?q=node/4298#fn>

⁸Vicente Cugat and Financial Markets Group, "Trade Credit: Suppliers as Debt Collectors and Insurance Providers," *The Review of Financial Studies* (2002): 1-61

before and during the recession, and how the usage of these techniques changes as a result of economic downturns.

Overview of Chapters

Chapter II begins by defining several key terms that are used frequently throughout this thesis. It then examines the importance and advantages of credit as a source of financing to credit customers and suppliers within the United States economy. Specific emphasis is placed on the importance of managing accounts receivable efficiently in order to maintain profit within a firm. The chapter then emphasizes an even greater importance of credit collections during recessionary downturns. Chapter II presents the methodology of my study. It explains my survey conducted and data collection process. Chapter III interprets the survey's results, and findings reported. The final chapter focuses on the implications of the study, suggests topics for future research, and provides practical accounts receivable collections techniques for firms enduring a recession.

Chapter II

Literature Review

This chapter begins by defining several key terms used in the credit and finance literature (see Table 2.1). Then, an overview of the structure of the use of trade credit and financing within the organization of a business will be given. Analyzing proactive approaches to managing credit within a company's receivables department as a result of economic influences will follow this section. This leads into an explanation of the characteristics, which have inspired previously written literature, and a conclusion.

Key Term	Definition	Sources
Trade Credit	When a business supplier allows a business consumer to delay payment of goods already delivered	Cunat (2002) p.1
Bank Credit	When a financial institution allows delayed payment of funds loaned.	
Default Payment	When a credit consumer does not meet the legal obligations tied to the firm's credit contract.	
Bad Debt	An expense that is written off by a business as an uncollectible debt owed after collection attempts had been made	
Accounts Receivable	Money owed to a credit supplier from credit consumers Accounts Receivable	
Accounts Payable	A company's obligation to pay off a debt	
Credit Policy	The strategic guidelines businesses use to determine the extent of credit lent to consumers	
Operating Trade Credit	Credit payment due within the agreed upon contractual time frame	Cowton & San-Jose (2010) p.10
Financial Trade Credit	If a supplier agrees to extend credit beyond the originally agreed upon period for payment. 'Acting like a quasi-bank'	Cowton & San-Jose (2010) p.10
Net 30	A term agreement of credit usage that the net amount outstanding is to be paid within 30 days after goods are dispatched or service is completed.	

Trade Credit and Financing Framework

According to the United States Small Business Administration (SBA), the small business sector within the United States economy represents 99.7 percent of businesses and employs over 57.4 million people.⁹ Although the size and definition of a small business varies by industry, the availability of credit extended by banks and other

⁹ John McDowell. "Small Business Drives The U.S. Economy." U.S. Small Business Administration, 9/28/2006. Web. 16 Nov 2010. <<http://www.sba.gov/advo/press/06-17.html>>

financial institutions to small businesses becomes extremely influential on the economy as a whole. Cole describes the extent of the economy's dependence on credit and reveals that one in five small business firms use bank credit as a primary means for external financing. One in five businesses use trade credit as their only source of financial support, one in five firms use bank credit as their only source of financing, and two in five firms use both trade credit and bank credit.¹⁰ Therefore according to Cole and the S.B.A., approximately 80 percent of the United States' corporations used some form of credit within their business structure. However, because trade credit and bank credit share similarities, much debate has arisen as to whether trade credit is a substitute for, or a complimentary asset to bank credit.

Schwartz argues that during times of increasing monetary restraint and expanding business, financial interest rates and credit rationing increase. This tightening of the money supply results in firms' inability to obtain bank credit, turning firms to substituting bank credit for trade credit.¹¹ Expanding on this view, Fisman and Love conclude that this form of substitutability is sustained only through the availability of business-to-business credit lines.¹² Firms are inclined use trade credit as a substitute when the banking sector is doing poorly, or when banks are unwilling to lend to small businesses. Trade credit offers an additional method for funding within the structure of

¹⁰Rebel A. Cole *Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances*. DePaul University (2010): 1-48.

¹¹Robert Schwartz. "An Economic Model of Trade Credit." *The Journal of Financial and Quantitative Analysis* 9 no. 4 (1974): 643-657.

¹²Raymond Fisman and Inessa Love. "Trade Credit, Financial Intermediary Development, and Industry Growth." *American Finance Association*. 58.1 (2003): 353-374

a business, especially when financial institutions become more rigid with their lending guidelines.

Although the point of trade credit being used as an alternative to institutional financing has been noted, the argument has also been made that trade credit has the ability to be used as a complementary source of financing. Kunt and Maksimovic (2001) argue that as supplying firms have greater access to institutionalized credit, also known as bank credit, their supply of trade credit is amplified. In markets where financial intermediaries have the means to efficiently monitor their loans, credit is supplied directly to customers. However, if companies that supply business credit are more efficient at monitoring financial contracts, financial intermediaries lend to business credit suppliers that, in turn, establish a trade credit market with other businesses.¹³ As a result, businesses tend to lend more trade credit to their customers when access to bank credit becomes more readily available. If funds within the institutionalized credit market are more concentrated, suppliers of trade credit have fewer funds readily available to extend to customers.

Because bank credit and trade credit are the two most prominent external funding sources for small firms, a niche for trade credit's accessibility is ingrained within the economic market for both consumers and suppliers. However, it has been implied that trade credit agreements result in extremely high interest rates when compared to that of bank credit. In order to understand why small businesses still turn to trade credit despite its high interest costs, a more developed understanding of the

¹³Asli Kunt and Vojislav Maksimovic. "Firms as Financial Intermediaries: Evidence from Trade Credit Data." World Bank and University of Maryland at College Park. (2001): 1-50.

nature of the advantages of using trade credit and financing within the business world is required.

Consumer Advantages of Trade Credit

Trade credit is established within the business model because of the advantage it provides to the companies using credit lines. Schwartz (1974) notes the advantages to buyers if bills can accumulate for periodic payment. “Trade credit gives buyers time to plan for the payment of unexpected purchases, enables them to forecast future cash outlays with greater certainty, and simplifies their cash management.”¹⁴ As credit buyers receive their product, supplementary time is given to sell their merchandise prior to having to pay back their suppliers, which greatly aids in accounts payable management.

The benefits of purchasing items on credit also entail the ability to refuse payment to a supplier, or reject goods of inadequate quality.¹⁵ As credit buyers receive goods on terms, if the product they are receiving does not match the contractual agreement or standard of what they ordered, they have increased leverage to return or refuse the goods because no monetary transaction took place. This, in turn, translates to suppliers’ necessity to provide high-grade products and services in order to maintain quality consumer relationships and sustain a profit.

Additional perks lie within the advantages trade credit has to consumers when compared to credit extended by finance institutions. Peterson and Rajan find that low

¹⁴Robert Schwartz "An Economic Model of Trade Credit." *The Journal of Financial and Quantitative Analysis* 9 no. 4 (1974): 643-657.

¹⁵Nishant Dass, and Jayany Kale, and Vikram Nanda, “Trade Credit, Product Market Power, and Relationship Specific Investment”. *Journal of Banking and Finance* 33 no.2(2009): 300-307

quality credit buyers are more driven towards trade credit as a source of financing because of the invariant terms between customers.¹⁶ Because terms are often invariant across buyers, a buyer with a bad credit score will often receive the same or similar terms as a buyer with a good credit score. Additionally this gives low-quality credit buyers the ability to receive credit through the use of trade credit, and in turn reduce production costs within their firm. As a result of the benefits to consumers, suppliers developed a need to establish a trade credit market in order to effectively market to their consumers' needs.

Suppliers' Advantages of Trade Credit

As buyers have the ability to reduce production costs within their company as a result of borrowing credit, suppliers benefit from their customers' profitability. As a result of buyers becoming more profitable through the use of trade credit, their spending budget has the ability to increase, resulting in higher sales for credit suppliers. Schwartz defines this relationship as the financing motive behind the drive for a trade credit supply.¹⁷ Peterson and Rajan delve into the theories behind the competitive advantage for suppliers' use of trade credit when compared to credit extended by financial institutions. If a supplier's salespeople regularly visit a credit customer, monitoring of a buyer's credit-worthiness can become a by-product of maintaining a business relationship.¹⁸ This gives the supplier "an advantage over traditional lenders in

¹⁶Mitchell Peterson and Raghuram Rajan, "The Benefits of Lending Relationships: Evidence from Small Business Data" *American Finance Association* 49 no.1 (1994): 3-37

¹⁷Robert Schwartz. "An Economic Model of Trade Credit." *The Journal of Financial and Quantitative Analysis* 9 no. 4 (1974): 643-657.

¹⁸Mian Shehzad and Clifford Smith Jr. "Accounts Receivable Management Policy: Theory and Evidence." *American Finance Association* . 47no. 1 (1992): 169-200.

investigating the credit worthiness of his clients, as well as a better ability to monitor and force repayment of credit.”¹⁹ Therefore, maintaining an adequate business relationship benefits the supplier as closer relationships are established with customers, translating to increased sales, and risk of default payments becomes minimized through regular customer contact.

Cunat adds that suppliers of trade credit have an advantage in the enforceability of the collections of their credit extended because of the high cost to borrowers if forced to switch suppliers.²⁰ If there are few economic alternatives to the goods being supplied, customers are forced to pay their suppliers. Peterson and Rajan agree that if a supplier can threaten to cut off merchandise, buyers will be forced to pay their bills if there are no other cost-worthy suppliers to turn to.²¹ This has increased relevance in the opposite situation, however. If the buyer has many alternative supply options, the risk for potential default on payments increases as the credit consumer can easily switch vendors with little to worry about.

Operating vs. Financial Trade Credit

Cowton and San-Jose analyze the difference between operating trade credit and financial trade credit within a firm to explain how a company can drift towards

¹⁹Mitchell Peterson and Raghuram Rajan, “Trade Credit: Theories and Evidence” *Oxford Journals: The Society for Financial Studies* 10 no.3 (1997) 662-691.

²⁰Vicente Cunat and Financial Markets Group, “Trade Credit: Suppliers as Debt Collectors and Insurance Providers.” *The Society for Financial Studies* 20 no.2 (2007): 491-527

²¹Mitchell Peterson, and Raghuram Rajan. “Trade Credit: Theories and Evidence .” *Society for Financial Studies*. 10.3 (1997): 661-691

commercial lending, and act more like a lender of bank credit.²² Cowton and San-Jose stress the importance of firms to offer operating trade credit and not financial trade credit in order to avoid allocating credit for longer than the contractually legitimate period. Credit extended by banks differs in the ability of banks to screen out companies with poor credit, and collects interest on loans extended.²³ However, suppliers can unknowingly drift from extending operating trade credit and shift towards functioning as a source of financial credit if they allow customers to take longer than the contractual period to pay their debts. If a firm runs on financial credit rather than operating trade credit, the ability to screen for customers with poor credit are diminished when compared to the screening process of a bank. Additionally, a firm is not subject to the same governmental controls and regulations as banks and thus is increasing their potential for credit default. As a result, if firms are too lenient with their collections and financial debt builds up, borrowers may find it more costly to pay off their debt rather than switch suppliers, creating an increase in bad debt expense for companies as credit lenders. Ryan agrees, “Small businesses are particularly vulnerable to the problems caused by late payment especially with large corporate customers who can use their market position to dictate their own payment terms. Many large firms use their small-firm suppliers as a bank – taking, what is in effect, an interest free overdraft.”²⁴ This brings up an issue of an ethical analysis of delayed payments of trade credit.

²²Christopher J. Cowton and Leire San Jose, “Giving credit where it’s due – but no more: an ethical analysis of trade credit.” *University of Huddersfield Repository*, (2010): 1-17

²³Mitchell Peterson and Raghuram Rajan, “The Benefits of Lending Relationships: Evidence from Small Business Data.” *American Finance Association* vol.49 no.1 (1994) 3-37

²⁴Ryan B.. *Finance and Accounting for Business*. (Thomas Learning Center, 2008).

Cowton and Leire argue that a company should pay its credit debt as soon as the purpose for which the money was “borrowed” has been accomplished.²⁵ Although this would be an ideal situation, and even though contractual terms are set prior to the extension of credit, a free and advantageous source of financing to credit consumers is found in delaying payments as long as possible to credit suppliers. The most basic cash management strategy of a firm is to pay accounts payable as late as possible without damaging the firm’s credit rating and supplier relations.²⁶ Although customers may breach their contractual payment terms, it is most often not a profitable scenario for a supplier to take this issue to court due to the high cost of court fees. As a result, suppliers are caught in a bind, and must be able to properly screen credit consumers prior to extending credit.

Accounts Receivable

Management

Accounts receivable are created when firms sell merchandise on credit terms. Because many firms’ transactions are often tracked through accounts receivable, the analysis of the structures used to manage accounts receivable warrants detailed attention. Mian and Smith describe the necessity of management responsibilities that must be taken in order to extend trade credit. “The credit risk of the potential account debtor must be assessed, the credit granting decision (including setting credit terms) must be made, the receivable must be financed until maturity, the receivable must be

²⁵Christopher J. Cowton and Leire San Jose “Giving credit where it’s due – but no more: an ethical analysis of trade credit.” *Financial Ethics and Governance Research Group* (2010): 1-17

²⁶Lawrence J. Gitman, Keith Forrester, and John Forrester Jr.,” Maximizing Cash Disbursement Float.” *Financial Management* 5 no. 2 (1976): 15-24.

collected, and the default risk must be borne.”²⁷ Firms must decide either to manage all facets of their credit-administration within their company, or to contract out the supervision to specialized credit monitoring agents. Shehzad and Smith argue that although the firm has a choice on whether to internally supervise management of credit extensions, the less contact in the relationship between the credit extender and buyer, the more likely account management is to be outsourced. Additionally, if firms have market power, and are frequently involved and in contact with a particular customer, they are more likely to coordinate credit policies from within the company.²⁸ Whether credit is managed within the firm, or externally, a strategic credit policy must be developed in order to successfully manage credit accounts.

The decision-making policies for the extension of credit to a firm are a vital decision impacting a firm’s success or failure. The objective of the credit granting process is to determine the optimal amount of credit to allocate to a buyer after taking into account the perceived default risk against potential returns from credit granted.²⁹ As all firms’ aim to generate profitable returns, the motivation in creating a successful credit granting policy results in minimizing bad debt accounts, while maximizing or increasing profits. Orgler argues, “Loan losses tend to be related to lack of attention as much as inadequate credit standards or inadequate analysis at the outset.”³⁰ If a policy is

²⁷Shehzad Mian and Clifford Smith. "Accounts Receivable Management Policy: Theory and Evidence." *American Finance Association*. 47 no.1 (1992): 169-200.

²⁸Ibid.

²⁹Venkat Srinivasan and Kim Young. "*Credit Granting: A Comparative Analysis of Classification Procedures.*" *Journal of Finance*. 42 no.3 (1987): 665-681.

³⁰Yair Orgler. "A Credit Scoring Model for Commercial Loan." *Blackwell Publishing*. 2 no.4 (1970): 435-445.

too restrictive, sales and profits will be diminished, too lenient of a policy will result in excessive uncollectible accounts.³¹

Methods employed within accounts receivable collections translate directly into the profitability of a firm. If a business is unable to collect outstanding accounts, profits are lost, and the accumulation of debt can send a company to the point of no return. A formal system makes the collection process more efficient, starting with the creation of a credit policy.

Credit policies are tied directly to a firm's sales strategies because of their ability to change based on a company's monetary stance, economic happenings, and goals within the firm. The higher goals a company desires in sales, the greater amount of credit must be extended. Credit collections manager Doug Swafford agrees, "More aggressive goals demand a looser spigot."³² However, in order to maintain accounts and to help prevent default, the extension of credit and the amount of risk companies are willing to handle within their business structure must be taken into account. In order to monitor and manage the amount of risk a company is taking on with a particular customer, a customer's credit worthiness must be evaluated. According to Investopia, factors such as a customer's payment history and credit score translate into likelihood of default and credit worthiness of a consumer.³³

³¹Harold, Bierman Jr, and Warren Hausman. "The Credit Granting Decision." *Management Science*. 16 no.8 (1970): 519-532.

³²"How to Create a Smart Credit Policy." *Inc.*. Available from <http://www.inc.com/magazine/20090301/how-to-create-a-smart-credit-policy.html>. Internet; accessed 25 November 2010.

³³"Credit Worthiness." <http://www.investopedia.com/terms/c/Credit-Worthiness.asp>. Available from <http://www.inc.com/magazine/20090301/how-to-create-a-smart-credit-policy.html>. Internet; accessed 25 November 2010.

Collection Period

As the success of companies depends on their ability to collect and prevent default on their accounts, average days in collections gives insight into how efficiently companies are running. The quicker the collection period is, the sooner capital can be freed allowing for reinvestments back into the company. Conversely, the longer the collection period of a particular credit consumer, the higher probability that those receivables will not be collected. The most common pre-established collection terms are Net 30, though several other collection periods do occur.³⁴ Typically accounts receivable are broken down into categories within the accounts receivable aging report, placing a credit consumer's invoice zero to thirty days old, thirty to sixty days outstanding, sixty to ninety days unresolved, and ninety or more days outstanding.³⁵ Categorizing credit consumers by days spent in accounts receivable allows for better management of potential default of credit consumers. By and large, the typical standard is that days accounts are outstanding should not exceed a third to one-half of the originally agreed upon terms.³⁶ For instance if terms of an invoice are thirty days, collections credit suppliers should be attentive of accounts that are more than forty-five days old.

Credit Application

The first step to analyzing a potential consumer's credit history is by having the potential customer fill-out a credit application form. The credit application form

³⁴Ng Chee. "Evidence on the Determinants of Credit Terms Used in Interfirm Trade." *The Journal of Finance* 54 no. 3 (1999): 1109-1129.

³⁵2007. "collection ratio." Bloomsbury Business Library - Business & Management Dictionary 1639. Business Source Complete, EBSCOhost (accessed February 3, 2011).

³⁶Ibid.

typically contains the requested credit amount, the potential consumer's bank information, and previous credit suppliers' contact information. By providing this information, the credit supplier is given the opportunity to contact the potential consumer's previous credit suppliers to check on payment tendencies. This allows the credit supplier to have a better understanding of the likelihood of payment default, and amount of capital tied up in accounts receivables, based on the total amount of credit extended. Credit references aren't foolproof because the customer picks which references to put down, but does provide additional insight into the customer's inclinations to pay.

Credit Reports

When a firm has potential to extend credit and not get paid back, assurance of a borrower's potential risk is a necessity, and can be found in a customer's credit report. Credit reports show an accounts manager data on payment history of a customer, bankruptcy records, lawsuits, liens and court judgments, and a precise risk rating that predicts how likely a customer will be to pay its bills.³⁷ Managing credit requires insight into a company's previous records of borrowing and repaying credit. The Dun and Bradstreet Corporation maintains a database of more than 177 million businesses' records to provide firms with risk management solutions.³⁸ While late payments and bankruptcy have a profoundly negative impact on a company's credit history, many other variables also affect the credit rating of an individual firm. The Dun and

³⁷"Checking a Customer's Credit." *All Business*. Web. 27 Nov 2010.
<http://www.allbusiness.com/business-finance/cash-management-collections/435-1.html>

³⁸D & B. "About D & B." *Dun & Bradstreet*. Available from <http://www.dnb.com/about-dnb/14881789-1.html>. Internet; accessed 14 February 2011.

Bradstreet Corporation provides specific additional information about each firm in its database to include factors such as a firm's year started, location, number of employees, sales, and net worth, to help give a broader perspective on the potential credit customer.³⁹ Credit customers are given a commercial credit score equivalent to the potential level of risk for default or delayed payments.⁴⁰ This data allows credit suppliers to quickly assess key factors that will mitigate the amount of financial stress a credit supplier handles with their credit buyers.

As seen in Table 2.2, a Class of 1-5 segments businesses into five distinct categories, a one represents the lowest possibility of severe delinquency, and a five represents the highest possibility of severe delinquency. This allows credit suppliers to allocate the proper credit policies based on the ability to quickly segment credit consumers into the proper risk class.

As seen in Table 2.3, a Class of 1 represents the lowest probability level of financial stress, while a Class of 5 represents the highest probability financial stress. The 1001-1875 is the raw output of the Financial Stress Modeling Scorecards, while 1,001 represents the highest risk, and 1875 represents the lowest risk of business failure. Each Financial Stress Score within the range of 1001-1875 has a related probability of delayed payments of credit within a 12-month period.

The main difference between Tables 2.2 and 2.3 the difference between delinquency and financial stress. Although a company might have a bad financial stress score, this number does not specify that a customer will necessarily default on credit

³⁹D.J., Storey. "Small business: critical perspectives on business and management." *Routledge*: 2000.

⁴⁰D & B. "Glossary of D&B Terms." *Duns & Bradstreet*. Available from <https://www.dnb.com/product/birgloss.htm#commercial>. Internet; accessed 14 February 2011.

payments, but rather, it indicates how likely a customer is to be late on payments causing increased stress to a firm's receivables department. Table 2.2 indicates the likelihood that a customer will be delinquent and default on credit payments, rather than showing stress taken on by the firm.

TABLE 2.2

**DISTRIBUTION OF COMMERCIAL CREDIT SCORE RISK CLASS IN DUN AND
BRADSTREET'S FILE**

Credit Score Risk Class	Percent of Businesses within this Credit Score Class	Credit Score Percentile	Commercial Credit Score	Delinquency Rate
1	10%	91-100	482-670	6.0%
2	20%	71-90	451-481	10.6
3	40%	31-70	404-450	18.4%
4	20%	11-30	351-403	31.5%
5	10%	1-10	101-350	

TABLE 2.3
DISTRIBUTION OF FINANCIAL STRESS RISK CLASS IN DUN AND
BRADSTREET'S FILE

Financial Stress Risk Class	Percent of Businesses within this Financial Stress Class	Financial Stress Percentile	Financial Stress Score
1	80%	21-100	1377-1875
2	10%	11-20	1353-1376
3	6%	5-10	1303-1352
4	3%	2-4	1225-1302
5	1%	1	1001-1224

Upon analyzing credit applications and customer credit reports, if credit is granted, account managers must consistently supervise how timely a customer pays, and how many purchases are being made in order to decide whether to expand, contract, or maintain the granted credit lines.⁴¹

Sales Discounts

Incorporated into a firms' credit policy are the terms of sale, which contractually set the payment period and typically set discounts for early payment in order to speed up the payment process. Cunat discusses the most common sales discount for early payment, 2/10 net 30. A customer has the ability to receive a 2 percent discount if the credit due is paid within the first ten days subsequent to the initial transaction.

However, if the customer does not pay within the first ten days, the firm is effectively

⁴¹"How to Create a Smart Credit Policy." *Inc.*, Available from <http://www.inc.com/magazine/20090301/how-to-create-a-smart-credit-policy.html>. Internet; accessed 25 November 2010.

receiving an interest rate of 2 percent for 20 days. When compared to the interest rate of this deal for a year, it is equivalent to approximately 44 percent, which is extremely high when compared with a loan from a bank.⁴² Although the interest rate is particularly high for not paying balances of trade credit early, borrowers have the capacity to have access to additional capital, and also have the ability to increase their leverage by using trade credit when rationed within the banking credit market.

Additional benefits lay in the hands of suppliers that implement cash discounts into their credit policies. According to Hill and Riener by employing cash discounts for early payments, suppliers benefit as cash is received sooner, reducing the need to borrow or allocate more cash for investment. Secondly, a price reduction on goods can result in higher sales volumes. Lastly, if customers receive incentives for paying early, bad debt losses may be reduced.⁴³

Credit and Collections during Recession

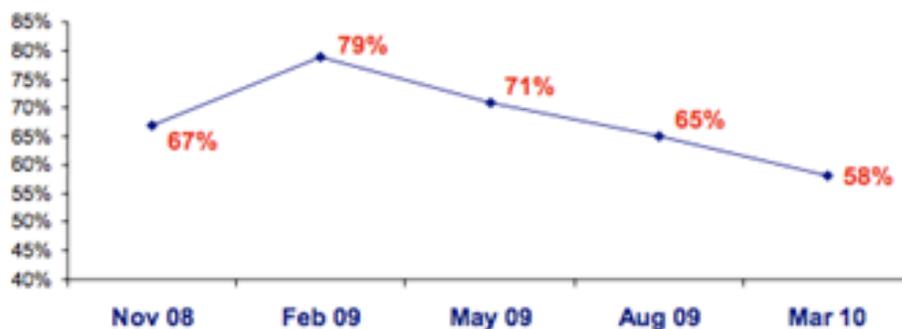
During times of business cycle contractions, many businesses find themselves placed in a situation of limited funds as a result of decreased sales and slower customer payments. As seen in Figures 2.4 and 2.5 companies have indicated a general slowdown of customer payments, which has led to an increased strain on working capital. As credit consumers take longer to pay back due accounts, credit suppliers are forced to work with less operating capital.

⁴²Vicente Cunat and Financial Markets Group, "Trade Credit: Suppliers as Debt Collectors and Insurance Providers," (2002): 1-61

⁴³Ned Hill, and Kenneth Riener. "Determining the Cash Discount in the Firm's Credit Policy." *Southern Finance Association Annual meeting* 68-73. Web. 27 Nov 2010. <<http://marcelodelfino.net/files/Hills.pdf>

FIGURE 2.4

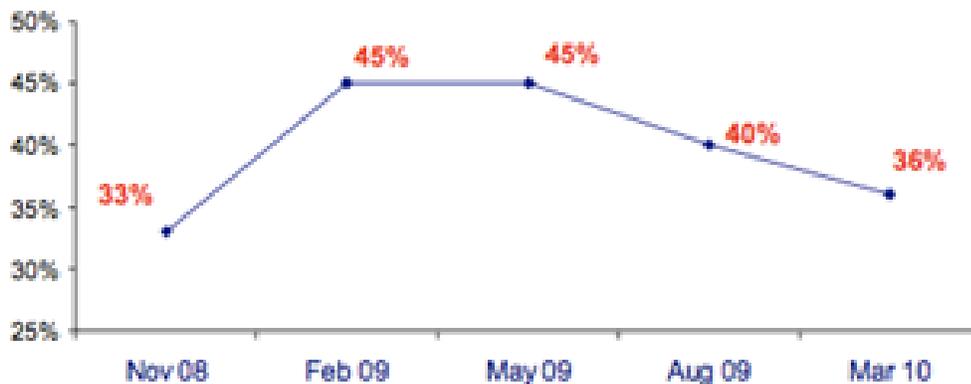
PERCENT THAT EXPRESS THEY ARE EXPERIENCING A GENERAL SLOWDOWN IN CUSTOMER PAY



Source: *Credit Research Foundation*, April 2010

FIGURE 2.5

PERCENT THAT INDICATE THE FINANCIAL CRISIS IS CAUSING A STRAIN ON THE WORKING CAPITAL AVAILABILITY OF THEIR COMPANY



Source: *Credit Research Foundation* April, 2010

There are many interpretations to the causes of the recent Great Recession, but for the purpose of this thesis, the focus is on the role of credit in deepening the recessionary wounds. Choi and Kim conclude that during times of increased interest rates and increased monetary constraints, firms increase their accounts receivable more

than their accounts payable. This increase in accounts receivable can be described by an increase of trade credit relative to a firm's assets.⁴⁴ Businesses have turned to the use of trade credit during recessionary times, because the utilization of increased trade credit within a firm has the ability to boost a firm's sales and increase liquidity.

However, Schaeffer notes that as the economy goes into a recession, most companies will experience an increase in bad debt. "So, in light of declining economic conditions, companies should either increase their bad debt reserves or tighten their credit policy."⁴⁵

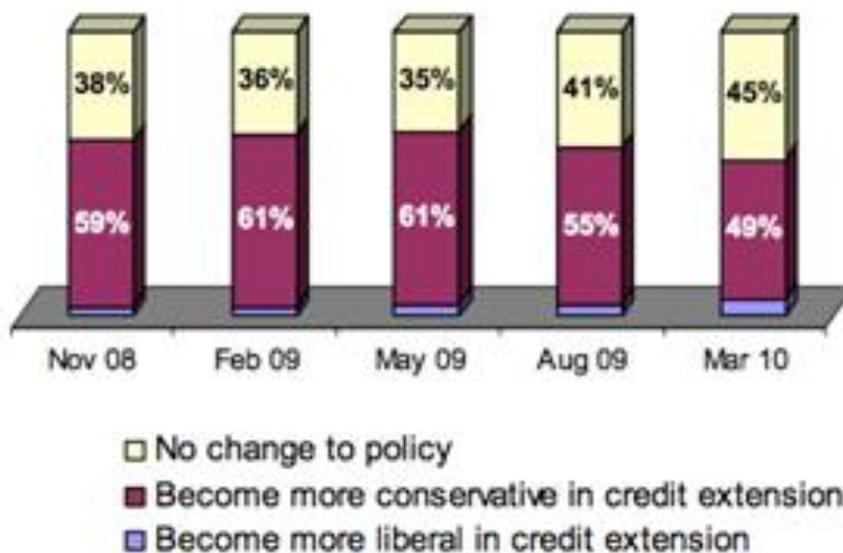
Figures 2.6 and 2.7 below illustrate the percent change in companies who have altered its credit policies and extension of credit in light of the recession. If companies refuse to re-examine their current credit policies based on the macro-economic happenings around them, the firms within a market will suffer substantially as a result of increased bad debt expenses.

⁴⁴Woon Choi, and Yungsan Kim. "Trade Credit and the Effect of Macro-Financial Shocks: Evidence from U.S. Panel Data." *Journal of Financial and Quantitative Analysis*. 40.4 (2005): 897-925.

⁴⁵Mary S. Schaeffer *Essentials of Credit, Collections, and Accounts Receivables*. (Hoboken: John Wiley and Sons, 2002) 1-256

FIGURE 2.6

PERCENT THAT CHANGED CREDIT POLICY OR APPROACH TO EXTENDING CREDIT AS A RESULT OF THE CURRENT ECONOMIC SITUATION



Source: Credit Research Foundation April, 2010

FIGURE 2.7

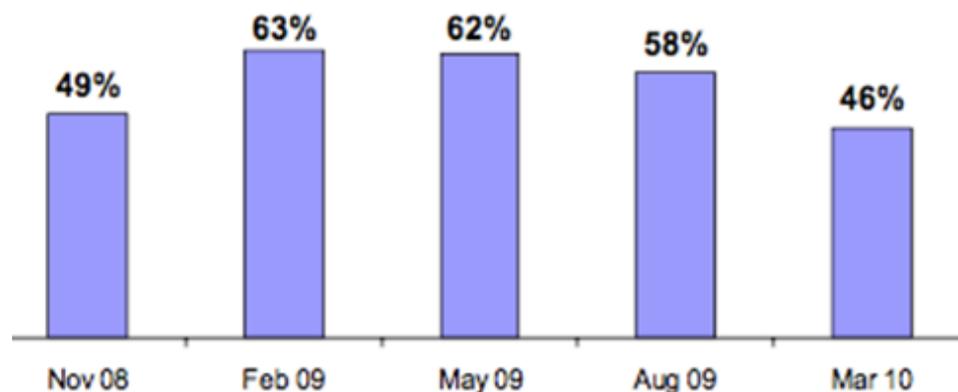
PERCENT THAT CHANGED COLLECTION STRATEGY AS A RESULT OF THE ECONOMIC DOWNTURN



Source: Credit Research Foundation April, 2010

It is important to note conversely, that an increase of bad debt expense does not only affect the supplier of credit, but has the capability to impact the entire chain of relationships between suppliers and customers of credit within a marketplace. Figure 2.8 illustrates the percent of companies increasing bad debt reserves as a result of the economic slowdown.

FIGURE 2.8
PERCENT OF COMPANIES THAT ARE INCREASING THEIR BAD DEBT
RESERVE COMPARED TO BEFORE THE CRISIS



Credit Crunch

The foundation of trade credit is embedded within the vertical relationship of both credit suppliers and customers.⁴⁶ Because of this vertical relationship, if customers are unable to pay-off outstanding debt, it not only affects its suppliers of credit, but also creates a chain reaction that affects several other credit suppliers and customers. If a

⁴⁶Nishant Dass and Jayany Kale, and Vikram Nanda “Trade Credit, Product Market Power, and Relationship Specific Investment.” *Journal of Banking and Finance* 33 no.2 (2009): 307

firm finds itself short for capital, it may be forced to delay payment of due balances to its suppliers. Brechling and Lipsey discuss how suppliers of credit are forced to constrain their money if credit customers delay payment. Once credit suppliers constrain their funds, they may be forced to delay payment of their balances due to their own credit suppliers. The consequences of this domino effect of delayed payment of due balances to suppliers, results in all firms involved enduring an increase in past due bills.⁴⁷ As a result of a slowdown in monetary transactions, all involved firms tighten their money supply and credit extensions to avoid deeper losses. Because a steadily functioning system of credit is a necessary asset to the success and confidence of a capitalistic economy, funds necessary for economic expansion are depleted when credit dries up.⁴⁸ Businesses maintaining higher debt levels are often placed in riskier financial situations as a result of a lack of customer payments. If debt levels of a company are at a level higher than usual, the collections of these debts become even more important in order to stay out of the grasps of bankruptcy. If customers are not making credit payments, capital is depleted within the firm, which hinders normal business activity. As the credit supply tightened businesses were forced to re-examine their risk levels within the market in order to succeed, by focusing on the analysis of optimal debt levels.⁴⁹

⁴⁷F.P.R. Brechling and R.G. Lipsey, Trade Credit and Monetary Policy. *The Economic Journal* 73 no.292 (1963): 618-641

⁴⁸Anastasia Nesvetailova "United in Debt:Towards a Global Crisis of Debt-Driven Finance." *Science & Society* 69 no. 3 (2005): 396-419.

⁴⁹Jayant Kale "The Effect of Business Risk on Corporate Capital Structure: Theory and Evidence." *American Finance Association* 46 no. 5 (1991): 1693-1715.

Risk Levels

In order to maintain a consistent level of profitability and success, firms must have the ability to properly manage their risk levels in order to allocate funds based on economic changes. With business capital reliant on the position of the economy within the business cycle, debt and risk levels are constrained by a company's asset illiquidity during recessionary downturns.⁵⁰ Hackbarth, Miao, and Morellec explain that when a firm's cash flow is dependent on current economic conditions, it is imperative to adjust financing policies and default risk allotment within the company based upon the firm's overall stance within the given business cycle phase.⁵¹ If policies and the allotment of funds for default risk are not changed, companies are gambling that the potential of increasing their firm's risk factor within the marketplace due to possible increases in bad debt expense, and augmented periods of days sales outstanding.

Concluding Summary

The use of business-to-business trade credit has proved to be a necessary source of capital for businesses in addition to the use of institutional financing within the United States economy. Because firms extend what can be viewed as an interest-free loan, it is imperative that firms monitor and manage accounts receivable in order to minimize the possibility of credit customers defaulting on payments. There are several possible techniques firms can chose to employ within their infrastructure such as credit

⁵⁰Andre Schleifer and Robert Visny. "Liquidation Values and Debt Capacity: A Market Equilibrium Approach." *Journal of Finance*. 47 no.4 (1992): 1343-1366

⁵¹Dick Hackbarth, Miao Jianjun, and Morellec Erwan. "Capital Structure, Credit Risk, and Macroeconomic Conditions." *International Center for Financial Asset Management and Engineering*. (2004): 1-39.

terms, the use of credit reports, and sales discounts in order to help minimize the risk of default and maximize returns.

The recent recession constricted cash flow between business credit suppliers and business credit consumers. The recession caused a general slowdown in credit payments, creating a domino effect as suppliers of credit are forced to constrain their money if credit consumers delay payment. Although funds were constrained and credit was being paid more slowly, the ability of trade credit to boost a firm's working capital and liquidity increased the demand for more trade credit. As a result, companies must increase bad debt reserves and/or reanalyze existing credit policies, terms, and risk levels in order to survive recessionary downturns.

CHAPTER III

METHODOLOGY

As economic crisis hits and a recession is endured, “there is universal agreement that managing cash is critical to surviving the downturn and to position a company for a turnaround.”⁵² As cash management is directly tied with the ability to collect accounts receivable, a firm’s success relies heavily on its ability to properly manage receivables. As mentioned previously, poor accounts receivable management by businesses compounded the problems endured during the recent recession. As the purpose of this thesis is to answer how firms specifically alter credit policies in order to avoid bad debt expenses as a result of a recessionary downturn, the purpose of this chapter is to describe the research conducted via the use of surveys to answer this question. It will describe the data collection process and the survey design.

Data Collection

As there were many possible approaches I could have taken to obtain this data set, I chose to send out surveys to as many businesses in the El Paso County (Colorado) and Los Angeles County (California) as possible, within the given time that my thesis allowed. By taking this approach, it was intended to bring in the highest number of responses from diverse industry sectors or different-sized firms, within two different geographical locations in the same economy. Rather than collecting previously

⁵²Stephen Goldberg, Mary Phillips, and H. Williams. "Survive the Recession By Managing Cash." *Journal of Corporate & Accounting Finance* (2009): 3

recorded data results on different industries' days in receivables, percent current, and average days delinquent, my survey attempts to gain specific responses with respects to how firms collect accounts more efficiently and avoid higher days in receivables (or default on payments). A possible alternative to sending out surveys would have been calling or meeting with specific companies to interview its financial executives on specific and efficient collection methods. While this method may have provided a more in-depth and personal response as to which collection methods have worked best for specific firms, this would not have allowed for a greater understanding of specific industries as a whole. The purpose of my study is to analyze the general collecting tactics of industries, and what successful collection techniques firms have employed. Surveys were sent, and responses were collected exclusively from firms employing the use of business-to-business trade credit within their business models. By obtaining a wide range of company responses, my results could be categorized by industry type and also generalized across firms.

Survey Design

This survey was designed to reach the largest number of companies that regularly employ business-to-business credit as possible. Along with contacting several companies from my previous line of work in the freight industry, in order to reach the high volume of companies needed to provide adequate results, the website <http://www.Lead411.com> was used in order to find more companies within the industries of study. When considering who would obtain a copy of the survey to fill out, it was understood that the more firms contacted, the greater chance was of receiving responses. Companies were searched for within the services, retail, and manufacturing

industries. Individual email addresses were obtained for the chief financial officer, accountant, president, or office manager of each firm selected. Only one email was sent to each firm as to avoid multiple responses from the individual company.

The Qualtrics Survey Software was used to format this survey. The Colorado College email system was used to send out emails to the specific firms. Respondents were briefed on the purpose of the study, and were aware that all responses were to remain anonymous in order to ensure confidentiality of the survey respondents' answers.

The design was intended to uncover similarities between different industries' collection techniques before, during, and after the recession, regardless of the difference in type of business conducted. To start, the respondents were asked to select which industry best described their specific nature of business in services, retail, manufacturing, or other industry.

In order to analyze if there were differences lying in credit collection methods and firm age, companies were then asked to state how long the company had been in business. Additionally, to analyze similarities between firm age and firm size, respondents were also asked to indicate how many employees worked within the organization. The research intended to find a correlation between firm age, firm size, and firm collecting efficiency.

To make sure the survey was being conducted efficiently, firms were then asked to note the percentage of sales generated from the use of credit sales. If respondents noted that zero percent of their company's sales were accounted for by the use of credit

sales, answering the remaining survey questions was not allowed. All other percentages of credit sales were accepted, and respondents were allowed to continue with the study.

Commonly used credit terms for credit sales were then identified by the respondents. By understanding the credit terms being used for each organization, firms were then asked how many days were typically required for collection before and during the most recent recession. The results of this data will expose whether or not a correlation exists between recessionary downturns and a slowdown in customer payments. Additionally, to compliment and reassure the results from the previous questions, respondents were then asked what percentage of customers fell behind on payments before and during the most recent recession.

To find out which collection methods firms were utilizing to help customers make payments on time, respondents were asked if customers were offered discounts for early payments, and the percentage of customers who took advantage of these payments before and during the recession. Because not all firms offer sales discounts, respondents were asked which additional methods were employed most often to avoid high-risk customers and to ensure payments were collected on credit sales. Respondents were also asked about collection methods used before and during the recession. A final space was provided to allow respondents to share remarks not covered in the survey.

CHAPTER IV FINDINGS

The purpose of this chapter is to present and examine the data analysis. The chapter will describe the survey's results, following with an in-depth focus on the causes for changes within days in receivables, customer discounts usage, and altering account collection methods as a result of the recession. Additional analysis will spotlight the age of the firm in relationship with changes in days in receivables, customer discounts usage, and altering collection methods.

Results

Sample Results

As seen in Table 4.1, the results of the survey brought back a much higher response from firms within the services sector. The results of the distribution of employees working at each responding firm had an equal distribution from firms with less than 10 employees through firms with over 100 employees. As seen in Table 4.2, the responding firms fell largely into the category of having been established for over 20 years. The likely reason for this skewed response, is the fact that according to the Small Business Administration, over 50% of small businesses fail in the first five years of existence, therefore younger firms are a lot harder to obtain responses from.⁵³ Six respondents noted that they did not use trade credit, and stopped the survey at this point.

⁵³Robert Longley "Why Small Businesses Fail: SBA." [About.com US Government Info](http://usgovinfo.about.com/od/smallbusiness/a/whybusfail.htm). Available from <http://usgovinfo.about.com/od/smallbusiness/a/whybusfail.htm>. Internet; accessed 15 March 2011.

Approximately half of the remaining respondents noted that between 81-100% of their firms' sales are generated through the use of trade credit, exemplifying the importance of trade credit within the respondents' businesses structures. The remaining half of the respondents were equally distributed between 1%-80% of all sales being produced through business-to-business credit sales. Of the respondents who use trade credit, an overwhelming 73% establish net 30 credit terms, 9% use net 45, and 7% employ net 60 or more. Although several firms regularly use early payment incentives, an insignificant number of companies noted that their credit terms' foundation revolved around discounts for early payment.

TABLE 4.1

ALL FIRMS' PERCENTAGE RESPONSES OF INDUSTRY

#	Industry		%
1	Services		57%
2	Retail		14%
3	Manufacturing		18%
4	Other (please specify):		14%

Other (please specify):
Promotional Products- branded apparel
software
Not-for-Profit
Distributor
distribution
Internet
publishing and professional services

TABLE 4.2

ALL FIRMS' PERCENTAGE RESPONSES OF FIRM AGE

#	Firm Age		%
1	Less than 3 years		4%
2	3-5 years		6%
3	5-10 years		18%
4	11-20 years		18%
5	20 or more years		53%
	Total		100%

Tables 4.3 and 4.4 below illustrate the changes in average days in collection as a result of the recession. Although the vast majority of firms previously noted that net 30 credit terms are the normality within their companies, average days in collection prior to the most recent recession generally lagged and fell within the collection period of 61-90 days. Once the recession hit, firms noted a drastic slowdown in average days in collection as a 30% increase in the 61-80 days category was seen.

TABLE 4.3

ALL FIRMS' AVERAGE DAYS IN COLLECTION BEFORE THE MOST RECENT RECESSION

Average days in collection before the most recent recession?		%
1-15 days		5%
16-30 days		27%
31-60 days		64%
61-90 days		5%
90 or more days		0%

TABLE 4.4

ALL FIRMS' AVERAGE DAYS IN COLLECTION DURING THE MOST RECENT RECESSION

Average days in collection during the most recent recession?		%
1-15 days		2%
16-30 days		16%
31-60 days		44%
61-90 days		35%
90 or more days		2%

Although days in collections provides insight into how quickly a firm can turnover accounts receivable into revenue, proper management of customer accounts can result in less late payments. According to respondents, 81% declared 0%-20% of their customers to be behind on payments prior to the recession, while 14% declared that 21%-40% fell behind on payments. As a result of the economic slowdown witnessed during the recession, Table 4.5 illustrates problems witnessed within the accounts receivable department during the downturn.

TABLE 4.5

ALL FIRMS' PERCENTAGE OF CUSTOMERS BEHIND ON PAYMENTS DURING THE RECESSION

#	Percentage of customers behind on payments during the recession		%
1	0%-20%		50%
2	21%-40%		27%
3	41%-60%		20%
4	61%-80%		2%
5	81%-100%		0%
	Total		100%

Considering the necessity for high returns on collecting credit accounts, account managers must do everything within their power to ensure payment on credit extended. Respondents noted that prior to the recession, obtaining credit histories or consumer credit checks, sending multiple invoices, and follow up telephone calls were the most frequently used collection techniques. Firms tended to avoid whenever possible negotiating special collection terms with customers, litigation or arbitration, the use of collection agencies, and the sale of receivables to factoring companies. As a result of the recession, firms used credit histories and credit checks, sent multiple invoices, called customers with follow ups to bills, and even began to negotiate special terms with customers more frequently than before. As noted previously, the avoidance of the use of litigation, collection agencies, and the sale of receivables to factoring companies maintained the same low usage results. These sometimes-unavoidable collection techniques are seldom exercised by companies due to the high cost of collection to the supplying firm.

Industry Specifics

As different industries carry different business practices, policies, and normalities, it was natural to break down and analyze industry specific collecting attributes. Although, when separated and broken down by different industries' responses, the number of employees in each firm, firm age, percent of sales accounted for by business-to-business trade credit, and commonly used credit terms all shared nearly exact responses, regardless of industry sector.

The first noticeable trend in differences was shown in average days in collection before the most recent recession. As seen in Table 4.6, the retail industry maintained

the most efficient average days in receivable prior to the recession, while the manufacturing and services industries had the worst average days in receivable prior to the recession. As a result of the recession, average days in collection increased exponentially for each industry. As shown in Table 4.7, although every industry had a major increase in average days required for collections, the service industry was able to maintain the lowest percentage of average days 61 and higher. Both the retail and manufacturing industries resulted in nearly half of their accounts sitting in collections for over 61 days.

TABLE 4.6

INDUSTRY BREAKDOWN AVERAGE DAYS IN COLLECTION BEFORE THE RECESSION

Average Days in Collection Before the Recession	Services	Retail	Manufacturing
1-15 days	4%	14%	0%
16-30 days	25%	57%	33%
31-60 days	67%	29%	67%
61-90 days	4%	0%	0%
90 or more days	0%	0%	0%

TABLE 4.7

INDUSTRY BREAKDOWN AVERAGE DAYS IN COLLECTION DURING THE RECESSION

Average Days In Collection During the Recession	Services	Retail	Manufacturing
1-15 days	0%	14%	0%
16-30 days	22%	29%	11%
31-60 days	48%	14%	44%
61-90 days	26%	43%	44%
90 or more days	4%	0%	0%

The next most noticeable trend showed the extreme impact of the recession on different industries' ability to collect payments. Table 4.8 shows the efficiency of firms' timely collections prior to the recession. Of the reported firms within the service, retail and manufacturing sectors, 75% or better reported to possess 0%-20% of their customers' accounts being late prior to the recession. Table 4.9 however illustrates the extent to which the recession impacted credit consumers falling behind on payments to the supplying firms. Each industry reacted differently in percentages of customers falling behind, but each industry resulted in a severe delay in payments being made. Although a general increase in late payments was seen, the services industry was able to maintain the highest percentage of customers having current accounts.

TABLE 4.8

**INDUSTRY BREAKDOWN PERCENTAGE OF CUSTOMERS BEHIND ON
PAYMENTS BEFORE THE RECESSION**

Percentage of Customers Behind on Payments Before the Recession	Services	Retail	Manufacturing
0%-20%	75%	100%	89%
21%-40%	17%	0%	11%
41%-60%	8%	0%	0%
61%-80%	0%	0%	0%
81%-100%	0%	0%	0%

TABLE 4.9

**INDUSTRY BREAKDOWN PERCENTAGE OF CUSTOMERS BEHIND ON
PAYMENTS DURING THE RECESSION**

Percentage of Customers Behind on Payments During the Recession	Services	Retail	Manufacturing
0%-20%	54%	43%	44%
21%-40%	17%	43%	33%
41%-60%	29%	0%	22%
61%-80%	0%	14%	0%
81%-100%	0%	0%	0%

Age of Firm

As previously discussed, by the percentages, it is a coin toss as to whether or not small businesses will survive. In large part, a great amount of success is determined in a firm's ability to manage its cash. As a result, it would be understood that older firms, typically would have a more efficient accounts receivable department since they have not failed. No noticeable differences were found within the age of firm when compared to employees working in the firm, percent of sales accounted for by business-to-business credit, or the commonly used credit terms.

The first clear dissimilarities were found in average days in collection before the most recent recession. Prior to the recession the majority of firms 11 years and older noted that average days in collections were typically collect between 31-60 days and also reported having moderate averages within 16-30 days in collection. Firms 10 years and younger reported to have a much larger majority of average days in collections between 31-60 days prior to the recession. As a result of the recession, all firms regardless of age saw an increase in average days in collections. However, firms 10 years and younger reported having a notably higher percentage of average days in

collections, and 8% even reported having an average days in collections of 90 or more days.

All firms regardless of age reported to have a very low percentage of credit customers fall behind on payments prior to the recession. However, as a result of the recession, firms 11 years and older reported to maintain lower percentages of customers who fell behind on payments than firms 10 years and younger. The sample of all firms aged 10 years and under found 42% to have between 21%-40% of all of their customers fall behind on payments.

Firm Size

In all likelihood, larger firms typically would employ more accounts receivable managers, often due to a larger customer base and higher revenues, while the opposite situation holds for smaller firms. Therefore, it is imperative to study whether or not firm size impacts the efficiency of receivable collections.

Firms with 30 or fewer employees were 20% more likely to be involved within the services sector, while firms with 31-100 employees were approximately 50% more likely to have credit terms of net 30, and 20% more likely to be 20 years or older. Therefore, based on previous results of firm age, it would be likely that as a result of the recession, larger firms would be more likely to have less average days in collections and fewer customers behind on their accounts than smaller firms.

Both firms with 31 or more employees, and firms with 30 or fewer employees reported to have similar results in average days in collection prior and during the recession. Additionally, as seen in Table 4.10, both companies with 31 or more employees, and companies with 30 or fewer employees reported to have comparable

results with customers that fell behind on payments prior to the recession. However, Table 4.11 illustrates that smaller firms tended to have a higher percentage of customers behind on payments as a result of the most recent recession.

TABLE 4.10

FIRM SIZE IN RELATION TO PERCENTAGE OF CUSTOMERS BEHIND ON PAYMENTS BEFORE THE MOST RECENT RECESSION

Percentage of customers behind on payments before the most recent recession	30 or more Employees	Fewer Than 30 Employees
0%-20%	79%	83%
21%-40%	16%	13%
41%-60%	5%	4%
61%-80%	0%	0%
81%-100%	0%	0%

TABLE 4.11

FIRM SIZE IN RELATION TO PERCENTAGE OF CUSTOMERS BEHIND ON PAYMENTS DURING THE MOST RECENT RECESSION

Percentage of customers behind on payments during the most recent recession	30 or more Employees	Fewer Than 30 Employees
0%-20%	53%	48%
21%-40%	32%	24%
41%-60%	16%	24%
61%-80%	0%	4%
81%-100%	0%	0%

Customer Discounts

As emphasis has been strongly placed on the fact that accounts receivable management will never return 100% of credit distributed to credit consumers, proper accounts receivable management attempts to collect as close to 100% of accounts as possible. Understandably, the sooner accounts are collected, the less likely a customer will be to default. As a result, firms sometimes extend small

discounts to credit consumers as an incentive to pay earlier. Approximately half of all responding firms implement some form of discount to its customers for early payment. Of the respondents who incorporate early payment incentives, Tables 4.12 and 4.13 illustrate an increase in the percentage of credit customers' usage of sales discounts for early payment as a result of the recession.

TABLE 4.12

PERCENT OF FIRMS THAT OFFER SALES DISCOUNTS, CUSTOMERS WHO TOOK SALES DISCOUNTS BEFORE THE RECESSION

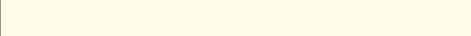
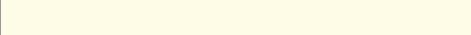
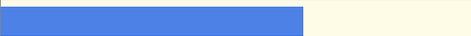
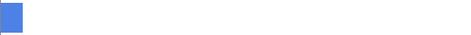
		Customers who took sales discounts before the recession
1%-15%		63%
16%-30%		38%
31%-60%		0%
61%-90%		0%
91% or more		0%

TABLE 4.13

PERCENT OF FIRMS THAT OFFER SALES DISCOUNTS, CUSTOMERS WHO TOOK SALES DISCOUNTS DURING THE RECESSION

		Customers who took sales discounts during the recession
1%-15%		64%
16%-30%		14%
31%-60%		14%
61%-90%		4%
91% or more		4%

As credit customers tended to take advantage of sales discounts during the recession more frequently when offered, it resulted in showing that firms who offered

some form of early payment incentive had higher average days in collection during the recession. Although this number was relatively high, pre-existing credit terms may not necessarily mean that these slower payments are late payments. Firms who offered early payment incentives reported having less customers fall behind on payments prior to and during the recession when compared to credit suppliers who refused to offer any customer discounts. Tables 4.14 and 4.14 depict the recession's consequences for firms offering discounts for early payment versus those that did not. Although both firms who did offer discounts for early payment and firms who did not offer discounts had large percentages of customers fall behind on payments, firms who offered discounts maintained to have less customers fall behind overall.

TABLE 4.14

PERCENTAGE OF CUSTOMERS THAT FELL BEHIND BEFORE THE
RECESSION WHEN DISCOUNTS WERE OFFERED AND WHEN DISCOUNTS
WERE OFFERED

Percentage of customers who fell behind on payments <i>before</i> the recession	No Customers offered discounts	Some or all customers are offered Discounts
0%-20%	79%	88%
21%-40%	17%	6%
41%-60%	4%	6%
61%-80%	0%	0%
81%-100%	0%	0%

TABLE 4.15

**PERCENTAGE OF CUSTOMERS THAT FELL BEHIND DURING THE
RECESSION WHEN DISCOUNTS WERE OFFERED AND WHEN DISCOUNTS
WERE NOT OFFERED**

Percentage of customers who fell behind on payments <i>during</i> recession	No Customers offered discounts	Some or all customers are offered Discounts
0%-20%	47%	31%
21%-40%	13%	44%
41%-60%	33%	25%
61%-80%	7%	0%
81%-100%	0%	0%
Total	100%	100%

Table 4.16 illustrates the breakdown in firms' percentage of sales being accounted for by business-to-business credit as a result of offering incentives or withholding incentives for early payment. Although companies who offer discounts and companies who don't offer discounts both generally account for high percentages of trade credit usage, credit suppliers who do not offer customer discounts for early payment, generally contain a higher overall percentage of business-to-business credit sales

Table 4.16

**PERCENTAGE OF BUSINESS-TO-BUSINESS CREDIT SALES WHEN
DISCOUNTS ARE OFFERED AND WHEN DISCOUNTS ARE NOT OFFERED**

Percentage of sales business-to-business credit	No customers are offered discounts	Some or all customers are offered discounts
0%	0%	0%
1%-20%	0%	13%
21%-40%	12%	6%
41%-60%	12%	6%
61%-80%	0%	38%
81%-100%	72%	38%
Total	100%	100%

Additionally, prior to the recession, firms with 30 or less employees were four times as likely to have customers take advantage of discounts for early payments when compared to firms with 30 or more employees. Shockingly, during the recession, firms with fewer employees reported having customers less likely to take advantage of early payment discounts than larger firms, who showed a substantial increase in customers who took early payment incentives. Additionally, all industries reported similar percentages when deciding whether or not to offer discounts for customers except for firms associating with the manufacturing industry, which recorded percentages twice as high in the category of offering discounts for earlier payments. Again, as reported previously, firm age was equally dispersed between companies that did and did not offer discount incentives.

Collection Techniques

Given the results of the recession, credit histories and credit checks, the sending of multiple invoices, and follow up telephone calls were used more frequently than prior to the recession. However, given the overall increase in all firms employing these collecting methods, firms who experienced 0-20% of all customers falling behind on payments during the recession used these collection methods less frequently than all other companies. Additionally, the use of costly accounting methods such as litigation or arbitration and the sale of receivables to factoring companies were also used less frequently by firms experiencing 0%-20% of all customers falling behind on payments during the recession. As shown in tables 4.17, 4.18, and 4.19 firms that send more invoices, obtain more credit histories, and made more follow up telephone calls saw a higher percentage of customers fall behind on payments as a result of the Recession.

This was most likely due to increased pressure within the firm to collect credit extended, once a higher percentage of customers began falling behind on payments.

TABLE 4.17

RESPONDENTS THAT RECORDED FREQUENTLY OR VERY FREQUENT SENDING OF INVOICES DURING THE RECESSION

	Percentage of Customers Behind on Payments Prior to the Recession	Percentage of Customers Behind on Payments During the Recession
0%-20%	74%	37%
21%-40%	21%	42%
41%-60%	5%	21%
61%-80%	0%	0%
81%-100%	0%	0%

TABLE 4.18

RESPONDENTS THAT RECORDED VERY FREQUENTLY CHECKING CUSTOMER CREDIT REPORTS DURING THE RECESSION

	Percentage of Customers Behind on Payments Prior to the Recession	Percentage of Customers Behind on Payments During the Recession
0%-20%	85%	38%
21%-40%	15%	46%
41%-60%	0%	15%
61%-80%	0%	0%
81%-100%	0%	0%

TABLE 4.19

**RESPONDENTS THAT RECORDED VERY FREQUENTLY MAKING FOLLOW
UP TELEPHONE CALLS DURING THE RECESSION**

	Percentage of Customers Behind on Payments Prior to the Recession	Percentage of Customers Behind on Payments During the Recession
0%-20%	67%	23%
21%-40%	25%	54%
41%-60%	8%	15%
61%-80%	0%	8%
81%-100%	0%	0%

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter presents a summary of the thesis and its importance. The chapter presents the implications of the study as well as limitations within the research conducted and suggests topics for future research. Then, it defines the implications of the research conducted and connects my findings with the literature base. The thesis concludes with suggestions for businesses' accounts receivable management during economic downturns.

Summary of the Thesis

The purpose of this thesis was to identify how accounts receivable was impacted as a result of the recession. Additional insight focused on what collection techniques companies most often utilize in order to ensure the collections of credit extended.

The literature review covered the importance of the use of trade credit within the United States economy. Because the use of trade credit is necessary for businesses to succeed, the profitability of firms depends on the ability to collect credit extended through efficient accounts receivable management. Additionally, the implications of recessionary downturns place a greater emphasis on proper accounts receivable management due to a tightening of the economy's available funds, and firms' business capital.

A survey was used to collect data from as many businesses as possible that use business-to-business credit within Los Angeles County (California) and El Paso Country (Colorado). When compared to results prior to the recession, the survey showed a general slowdown in average days in collections and percentage of customers who fell behind on payments during the recession. As a result of the recession, credit customers began using early payment incentives more frequently when compared to prior to the recession in order to limit expenses. Additionally, because not all firms offer discounts for early payment, credit suppliers began to utilize collection techniques more frequently during the recession in order to maintain functional levels of cash flow.

Limitations

Although this study was conducted in the most professional manner possible, the deadlines for this thesis allotted a limited amount of time for data collection. The more responses obtained, the more precise the entire study's results would be. Additionally, several firms refused to respond to the survey, or give out information on their accounts receivable department due to the sensitive subject matter. This severely limited the responses collected.

Future Research

As my study was only able to collect a limited amount of responses, it would be advantageous to conduct future research reaching out to more companies who employ business-to-business trade credit. By obtaining more responses we would have a better understanding of the most efficient recessionary accounts receivable collection techniques. Additionally, since my research focused primarily on accounts receivable

management, future research of the impact on firms' accounts payable departments' strategies during recessionary downturns would give a broader understanding of proficient cash management strategies.

Implications of This Study

While previous research has attempted to explain the reasoning behind cash management strategies and accounts receivable management prior to and during a recession, no research has been done analyzing the implications for trends as to why some organizations are better than others at collecting accounts receivable. As the goal of any organization is to make a profit, if customers are falling behind on payments, profit is not being maximized. By analyzing firms that reported 0%-20% of their customers behind on payments as a result of the recession, the most efficient collections methods are found.

Slowdown of Payments

It is important to understand that cash flow management is imperative to the success of an individual firm and the overall well-being of the economy. As noted previously within the literature, credit-consuming firms take as long as possible to pay back credit in order to maintain high amounts of capital within their organizations. As a result of these cash management strategies, a general slowdown of accounts receivables occurs to credit suppliers.. The results of this study support the conclusions of Gitman, Lawrence, and Forrester (1976) who noted that the faster money is moved into a company as a result of sales and collection, and the slower money is moved out of a company for accounts payable (without hurting a firm's credit rating or supplier

relations), the more profitable a firm will generally be. The majority of all firms' days in collection were paid-off as late as possible within the prior established credit terms in order to maintain cash management strategies. Also the results are consistent with Choi and Kim (2005) who found that firms increase their accounts receivable in times of recessionary downturn.

Credit Research Foundation

The Credit Research Foundation (CRF) is an independent, non-profit, member-run organization with a vested interest in improving and fostering the field of business-to-business credit.⁵⁴ Similarly to my research, over the past several years, the CRF has collected data from specific industry groups and have tracked firms' results for days sales outstanding, average days delinquent, percent current, and percentage of accounts 91 days or older. Although both my survey and the CRF's research have similar intents, the main differences between my survey conducted and the CRF's results lie within the characteristics of the responding firms. My survey reached out to as many firms as possible that employ the use of business-to-business trade credit, whereas the CRF's research conducted included mainly Fortune 1000 companies with most being in the Fortune 500. Additionally, the objective of my research was aimed at defining successful accounts receivable collection methods in rough recessionary times. The CRF merely reports changes in accounts receivable on a yearly basis, but does not analyze why these changes occur. Additionally, the vast majority of my survey's responses fell into the services sector, whereas the CRF's had the least amount of

⁵⁴ "About CRF" <http://www.crfonline.org/aboutcrf/experience.asp>

responses from businesses in the service sector, which could possibly explain differences between my findings and the results of the CRF.

Tables 5.1 and 5.2 illustrate the averages of the CRF's responding firms' accounts receivable collection methods prior to the recession for the years of 2006 and 2007. As my survey results noted, prior to the recession, 64% of all respondents had average days in collection between 31-60 days, similarly to the CRF's results for Days Sales Outstanding (DSO). My survey found that 81% of all firms claimed to possess 0-20% of customers behind on payments prior to the recession, which is similar to CRF's results for percent current. Lastly, my survey found 0% of all firms reporting that average days in collection before the recession were 90 or more days whereas the CRF noted approximately 1% of accounts over 91 days past due.

TABLE 5.1

CRF YEAR 2006 INDEPENDENT BUSINESS MEDIAN CALCULATIONS SHOW:

Data	This Quarter	Last Quarter	Year Ago
Days Sales Outstanding	42.00	41.37	40.54
Average Days Delinquent	7.10	6.50	7.50
Percent Current	81.85	83.33	81.02
Percent Over 91 Days Past Due	0.90	0.98	1.10

TABLE 5.2

CRF YEAR 2007 INDEPENDENT BUSINESS MEDIAN CALCULATIONS SHOW

Data	This Quarter	Last Quarter	Year Ago
Days Sales Outstanding	40.00	42.30	42.00
Average Days Delinquent	7.00	6.10	7.10
Percent Current	81.39	83.73	81.85
Percent Over 91 Days Past Due	1.00	0.90	0.90

When analyzing my survey's results, companies noted an increase in days in average days in collection, an increase in customers falling behind on payments, and an increase in the percentage of accounts over 91 day past due. However, when comparing the CRF's results on a yearly basis during the recent recession from 2008-2009, DSO, Average Days Delinquent, Percent Current, and Percent over 91 days past due did not change significantly. Although these results may seem to contradictory, there are several reasons to why my results differed from that of the CRF. The results of my study support the conclusions of Cunat (2002), who found that suppliers of trade credit have an advantage in the enforceability of credit extended if there are few economic alternatives to the goods being supplied. Because most Fortune 1000 and Fortune 500 companies are key suppliers to their customers, the likelihood of getting paid back is much higher. Smaller suppliers are less likely to get paid back because they don't have the same amount of leverage when dealing with customers as larger key suppliers. Credit customers of smaller supplying firms have a much wider array other financially viable credit suppliers to switch to because of the lack of necessary monetary dependence to their suppliers. Additionally, according to an interview with Terry Callahan, president of the Credit Research Foundation, "Fortune 1000 and Fortune 500

companies tend to hire more and in many cases better employees giving them the ability to produce better results”⁵⁵. As these larger firms generally tend to have greater human resources at their disposal, the ability to collect accounts receivable is maintained at a much higher percentage. Terry also noted how these firms also often have better technological resources at their disposal. Enterprise Resource Planning (ERP) systems help maintain efficiencies within accounts receivable management while translating and coordinating this information across an entire organization’s business functions. Smaller firms often do not have these technologies integrated within their infrastructure often merely because of their size and high cost to incorporate these systems into the firm

Practical Suggestions

According to the U.S. Census Bureau, the majority of firms in the United States have 1-4 employees.⁵⁶ When creating an efficient accounts receivable department, it is sometimes impossible for small businesses to afford hiring more or higher qualified account managers. This deficiency of smaller firms’ accounts receivable departments often limits the ability to ensure payments on credit extended. Respondents of smaller firms reported several additional techniques to improve collections when customers had failed to make payments. One respondent reported that during the recession they had “increased our use of credit insurance.” Business credit insurance is a type of insurance available for purchase in which credit suppliers are assured payment of credit extended.

⁵⁵Terry Callahan “Interview with Terry Callahan” interview by Michael Wendorf (Winter 2010).

⁵⁶“Statistics about Business Size (including Small Business) from the U.S. Census Bureau” Available at <http://www.census.gov/epcd/www/smallbus.html#EmpSize>

Additionally, several other respondents described the ability to hold the delivery of products until credit payments have been made.

Regardless of collection techniques being used, the main purpose of the accounts receivable department is to have as few customers behind on payments as possible, especially during tough economic times. When analyzing respondents that recorded 0%-20% of their customers being behind on payments, a similar trend was found. The most efficient credit collectors were found firms with 31-100 employees, organizations that regularly employed the use of trade credit, companies that had lower days in receivable prior to and during the recession, and firms that do not regularly employ the use of early payment incentives.

Most importantly however, all respondents that reported 0%-20% of customers behind on payments during the recession recorded that 0%-20% of their customers were behind on payments before the recession. If accounts receivable can be managed efficiently before the recession, it translates to a more efficient accounts receivable department during the recession. Of these respondents, when comparing usage before and during the recession, credit checks, sending multiple invoices, follow up telephone calls, and negotiating special collection terms with customers did not see a significant change in usage. However supplying firms that had more than 20% of customers behind on payments during the recession saw more drastic increases in these collection methods. As firms notice more customers behind on payments, the ability to collect these accounts becomes a necessity in order for the supplying firm to maintain profitability. In order to ensure collections when customers fall behind, firms scramble to use collection methods such as credit checks, sending multiple invoices, follow up

telephone calls, and negotiating special collection terms because of their low cost to the firm and because of their ability to acquire credit extended.

Although it is easier said than done, the key to creating an efficient accounts receivable department during a recessionary downturn is to establish a competent system during economic up-swings. If the accounts receivable department is in a state of disorder during market booms, not only is a firm's profitability diminished, but the outstanding bills owed to a firm can only increase exponentially during economic recessions.

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