Outsourcing and the Collection Function

When? Why?

The
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Outsourcing and the Collection Function:

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Foreword

Outsourcing is a management strategy by which an organization sub-contracts major, non-core functions to specialized, efficient service providers. The use of a collection agency as an aid to the credit professional, introduces the concept of outsourcing through the use of a third party element to the collection of a debt. The value of this approach can only be recognized when the costs, both direct and indirect, are weighed against the likelihood of being paid.

There comes a time in every collection effort when the credit grantor should abandon efforts to collect an account. In practice, the time when pursuit is abandoned is usually determined for each customer either by judgment or some person who is assigned that responsibility, or set for all delinquent accounts according to certain rules that are incorporated in the credit policy. A more scientific approach is presented here by Dr. Isberg in an attempt to present an economic decision-making tool. The creditor does not want to continue to spend money in unprofitable efforts and, likewise, does not want to forfeit an opportunity to salvage the account for want of a little extra effort. The aim is to place the account in the hands of a third party at the right time.

This monograph, the eighth in CRF's monographic series, represents the work of Dr. Steven C. Isberg. The Foundation is grateful for the funding of the research used in this study to STA International.

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Introduction

Over the past 10 years, Corporate America has been merged, acquired, leveraged, bought-out, divested, taken public again, total quality managed, continuously improved, strategically repositioned, core-concentrated, restructured, downsized, right-sized, and more recently, outsourced. Is there substantive value to outsourcing or is it the latest new buzz-concept?

In many ways, outsourcing seems to be the answer to the question of what we are going to do now that almost all of the costs have been cut about as far as possible. Companies are increasingly turning to outside specialists to provide technical and managerial products and services that represent the “non-core” elements of their businesses. This ostensibly enables the company to devote more of their primary resources to developing and offering their core products and services.

One of the reasons that outsourcing has become so popular is that advances in technology have created excess capacity in the non-core business functions. One example is accounting. Nowadays, a single accountant equipped with a PC can do the work that 30 would perform with worksheets and hand-held calculators. For very large firms this has often led to automation of processes and cutbacks in the number of staff personnel performing non-core functions. Small and mid-sized companies however, are sometimes caught in a bind. It doesn’t make sense to engage in work the “old fashioned way,” but it may be prohibitively expensive to make a significant investment in hardware technology and keep up with the changes in software technology that inevitably come about. In these areas, it may make sense to engage the services of an outsource provider who can trade on an economy of scale by serving multiple clients with the same technology.

Credit is one of the least outsourced functions however, recent trends indicate that more and more companies are considering it. The past five years has seen rapid growth in the number of providers of outsourced credit services. What

began as an industry of third party collectors is now developing into an industry of full-service credit management agencies. Given the existence of these opportunities and the likelihood that competitors will use them to cut their own operating costs, companies must now consider more carefully the questions of when, how and why it outsources elements of its credit function. Yet, in a competitive environment where maintaining and/or growing a solid customer base is a number one priority, the issue of control of the credit function looms large in that decision process.

Another factor differentiating credit from many other functions is that personal contact can be one of the most valuable tools available to credit managers. The age of automation has also brought about situations in which customer companies have made deliberate efforts to slow down their payables process in order to capitalize on a greater float. This often calls for personal intervention on the part of the credit manager in order to get the customer back up to speed (pun intended). On the credit side, automation has enabled tremendous staff reductions. It is not unusual to see a firm with 40,000 customers having a credit department consisting of three managers. While systems can handle transactions and information at a much higher speed, the human beings can not. In this setting, how many important personal contacts are missed simply because there is not enough time to do so? Can outsourcing help here?

The purpose of this publication is not to provide the final answer on whether or not to outsource, but rather, to look at several issues in outsourcing. First, we will consider the question of traditional credit outsourcing; that of the collection function. This type of outsourcing has been in existence for years, yet is becoming more sophisticated every day. Next, we'll review and discuss the results of a study on the performance of collection agencies. Third, an overview of the general literature on credit outsourcing will be provided, and finally, a decision context for outsourcing will be proposed.

Outsourcing Collections

Outsourcing for collection of past due accounts has been the most common form of credit outsourcing pursued by companies. There are several thousand collection agencies operating in the United States. With the exception of the top 25, these companies are small and regionally focused. There is an extensive body of literature available on what to look for in an outside collection agency, so we will not take the time to review it here. The main question to be addressed is; ***when*** does it make sense to outsource a past due account for collection?

Costs of Pursuing Past Due Accounts

Past due accounts create a drag on the cash flow and performance of a company in a variety of ways. First, the company is without the use of its own funds, and hence, suffers from the effect of a negative float as it "carries" its customers. Second, pursuing payment of the past due account encumbers the resources of the credit department and robs it of opportunities to pursue other value-adding activities. This encumbrance can be described as a "transaction cost" of pursuing the past due account for payment. These costs consist of two components.

The first component of the collection transaction cost can be described as a "direct cost." Direct costs include the time spent by credit personnel in analyzing the past due accounts, determining a course of action to pursue payment and the actual implementation of the action plan (i.e., phone calls, letters, etc.). In addition to personnel time, other resources are expended as part of the direct cost of pursuing the past due account (postage, paper, faxing, long distance calls, etc). Direct costs are measurable, and depending on the nature of the collection problem, could be large or small.

The more important cost of pursuing a past due account can be described as an "indirect cost." One of the major impacts of technology has been to increase the

“productivity” of personnel. As a result, the number of credit managers per customer has significantly declined over the past ten years. In general, productivity of the credit staff has increased as more of the tasks involved in the function have been systematized and automated. Collection of past due accounts, however, requires a bit more human intervention, and this creates an indirect opportunity cost that may weigh very heavily on the company. This opportunity cost manifests itself in a number of ways.

The indirect opportunity cost of pursuing past due accounts is increased as a result of the importance of customer relationships and customer service to the typical firm operating in a competitive environment. As conditions become more competitive, personal attention paid to new and existing customers becomes more important in certain areas. Credit managers have become a more integral part of the sales team, and as we all know, sales drive performance. Promoting sales at the credit level involves a number of different activities. These include credit approval for new customers, updating the credit status for existing customers, working with the sales staff to set terms that will attract new customers and provide benefits to existing customers, and resolving questions such as deductions and exceptions. If the credit managers are not available to engage in these activities, customers may be more likely to turn to the company’s competitors for the products and services they need.

The indirect opportunity costs of pursuing past due accounts are elusive and difficult to measure. The actual costs themselves are represented by a loss in sales volume, current and/or future, that may have occurred had credit managers *not* been spending their time in pursuit of past due collections. For each given loss in sales dollars, the company loses gross margin dollars that go toward covering the operating costs and generating a profit. If operating costs are relatively fixed at the margin, this loss goes straight to the bottom line.

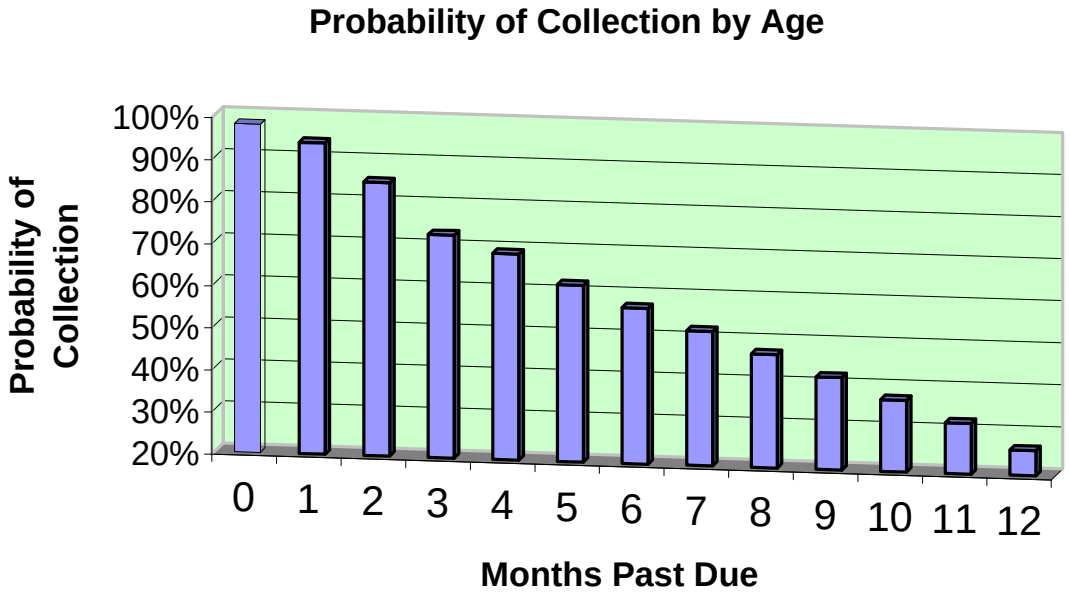
It is very difficult to determine what the sales level ***would have been*** in the absence of another event. By developing a simple model, however, we can

provide a context in which to view the problem and begin to shed some light on the decision of when to place a past due account for collection.

A Simple Model for Outsourcing Collections

A number of studies have shown that as an uncollected receivable gets older, the likelihood of collection decreases. Figure I, below, provides an example of the results of one of those studies, provided by the Commercial Law League of America. This shows a steady decline in the probability of payment when the account is beyond 90 days past due. By the end of one year past due, the collection probability falls to 25%.

Figure I



The decision to outsource a collection is driven by two principle factors: 1) the likelihood, or probability, of collection, and 2) the cost to make the collection. Both of these factors are relevant whether the collection is made internally or externally. To build the outsourcing decision model, let us define the following terms:

A = the account value to be collected,

Prob[C] = the probability of collection given the age of the account,

$\mathbf{T_{direct}}$ = the direct transaction cost of internally collecting the account,

$\mathbf{T_{indirect}}$ = the indirect cost of internally collecting the account,

EV[C] = the expected net value of the collection.

Given these terms, the expected net value of pursuing past due account collection is equal to the expected value of the account payment, given its age, less the transaction cost to collect, as follows:

$$\mathbf{EV[C] = (A * Prob[C]) - (T_{direct} + T_{indirect}).} \qquad \mathbf{[1]}$$

If the company chooses to outsource the collection, the expected value may be different. In the case of outsourcing, let us consider and additional term:

$\mathbf{T_{out}}$ = the cost to outsource collection as a percentage of the account.

Assuming for the moment that the probability of collection is not affected by outsourcing, the expected value of the collection if outsourced is:

$$\mathbf{EV[C]_{out} = (A*(1-T_{out})) * Prob[C].} \qquad \mathbf{[2]}$$

When considering whether to outsource a collection, a company should compare the expected value of internal collection to that of outsourced collection. When an account is relatively young, the probability of collection tends to be high and the direct and indirect transaction costs of internal collection are relatively low. As the account gets older however, the collection probability declines and the transaction cost rises, which makes outsourcing more attractive. We can use equations [1] and [2] to identify a point at which a company is indifferent between internal and external collection by setting the two equal:

$\mathbf{EV[C] = EV[C]_{out}}$, or,

$$\mathbf{(A * Prob[C]) - (T_{direct} + T_{indirect}) = (A*(1-T_{out})) * Prob[C].} \qquad \mathbf{[3a]}$$

By expanding the right hand side equation [3a] we have,

$(A * Prob[C]) - (T_{direct} + T_{indirect}) = (A * Prob[C]) - (A * T_{out} * Prob [C])$. [3b]

By canceling like terms on each side of equation [3b], we are left with our indifference point, as follows:

$(T_{direct} + T_{indirect}) = (A * T_{out} * Prob [C])$. [3c].

Equation [3c] tells us that we are indifferent between internal and external collection if the transaction cost of attempting to collect the past due account (left hand side) exceeds the expected transaction cost of outsourcing the account for collection.[1] A company should prefer to outsource the collection if the transaction costs of internal collection exceed the expected costs of outsourced collection (i.e., the left hand side of [3c] exceeds the right hand side).

The relationships in equation [3c] also tell us a lot about the best point at which to outsource collection of a past due account. It can be clearly understood that the higher the direct and indirect transaction costs of internal collection, the sooner a company should be willing to outsource the account. The lower the probability of collection (i.e., the older the account), the greater the incentive to outsource as well. As can be further seen, there is a disincentive to outsource larger account balances (A), unless the percentage fee charged by the collection agency (T_{out}) is reduced.

Customer Concentration: Effect of the 80/20 Rule

Many firms operate in markets where a relatively small number of customers provide a majority of their sales. Known as the 80/20 rule, it can be characterized

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[1] This analysis assumes that the only fee charged by the agency is applied as a percentage of the accounts actually collected, and that no fee is charged if the account is not collected. The analysis can be easily modified to include any fixed fees that may be charged regardless of collection status.

in a variety of ways. We will define a factor called “customer concentration” that will measure the relative number of firms providing 80% of a company’s annual sales. For the sake of simplicity, we’ll define the customer concentration factor as the number of firms generating 80% of a company’s total sales divided ***into*** the total number of customers, as follows:

Concentration factor = Customers / Customers providing 80% of sales. [4]

For example, a firm having 500 customers where 10 of those are responsible for 80% of the sales, the concentration factor would be 50. What this means is that there are 50 total customers for each one in the group that provides 80% of the company’s sales. If a company has two people staffing the credit function, and responsibilities for dealing with customers are evenly distributed, that would mean that each credit manager would be responsible for five principle customers and service a total of 250 customer accounts. It is clear to see that the remaining 245 accounts to be serviced by each staff member may create a lopsided cost burden if any of them go past due and need to be pursued for collection. Let’s look at an example of what this could mean for outsourcing.

For the purposes of the example, let’s assume that our company has $100,000,000 sales, and ten of its customers generate 80% of those sales dollars. Additionally, let’s assume a 40% gross margin on sales. Suppose that 10% of the smaller 490 accounts go past due at 30 days. This would amount to 49 accounts for a total of $2,000,000. Should these past due accounts be outsourced for collection as a portfolio, or should your in-house credit managers pursue collection at the risk of neglecting to pay attention to your larger customers? Let’s use equation [3c] to make an assessment.

If we outsource the accounts immediately after they go 30 days past due, the probability of collection is going to be about 94% according to Figure I, page 8. An outside agency has offered to collect the accounts for a 2.5% contingency fee. The expected cost of outsourced collection is $47,000, as per the table below.

Table I: Cost of Outsourced Collection	
Account Balance	$2,000,000
Percentage fee	2.50%
Collection probability	94.00%
Total Cost of Collection	**$47,000**

If, on the other hand we collect the account internally, we will incur a direct cost of $5,000 and may incur additional indirect costs. Instead of trying to estimate those indirect costs, let's calculate the minimum percentage sales loss from a "top 80%" customer that would lead us to be indifferent between in-house collection and outsourcing. This percentage sales loss would result in an indirect in-house collection cost of $42,000 (the outsource cost of $47,000 less the direct cost of $5,000). The calculation is provided immediately below.

Table II: Analysis of Sales Loss Indifference Level	
Total Cost	$47,000
Direct costs	$5,000
Indirect costs (Indifference level)	$42,000
Total Sales	$100,000,000
Number of Customers Making Up Top 80%	10
Top 80% Customer Sales Level	$80,000,000
Gross Margin	40.00%
Gross Margin for Top 80% Customers	$32,000,000
Percentage Sales Loss Leading to Indifference Level	**0.13%**

The results of the calculation are somewhat striking. The loss of 0.13% of the annual sales from the "top 80%" customers in this case would create an indifference point between in-house and outsourced collection at only 30 days past due. This turns out to be a fairly small amount. At an average annual sales level of $80,000,000 per year, your "top 80%" customers would be invoiced $6,666,666 per month. The value of 0.13% of the annual sales amounts to only $111,250, about 2% of the invoice amounts in any given month.

The result is more striking when considered in terms of the loss per your average "top 80%" customer, of which there are only 10, averaging $8,000,000 per year. How likely would it be that $11,125 of potential sales to an $8,000,000 per year customer can be lost? In a competitive market where response time is important,

that likelihood is increased. Lack of a timely response to a customer could lead them to go elsewhere for a purchase. Alternatively, what if that customer had taken a $12,000 deduction that your credit manager didn't have the time to handle properly? Multiply this by 10 and you have now lost more than the cost to outsource collections. This shows that the magnitude of the indirect cost of collecting a small account may be larger and can increase more quickly than you realize.

The problem is exacerbated if the small accounts are older. In this case, the probability of collection decreases and the in-house transaction cost to collect increases. Here, the indirect costs could be even larger than before.

Generally speaking, firms that have a high customer concentration factor and a fairly small credit management staff may be well advised to outsource collection of smaller accounts much earlier than the typical 90-150 days found in our survey (to be discussed in the next section). Outsource agencies are increasingly offering a seamless service where customers do not necessarily know that they are dealing with a third party. It may be more beneficial for in-house credit managers to focus more of their activity on the concentrated end of the customer base, where retention and sales growth are going to be more important. This also enables credit managers to spend more time in the area of developing sales from new and preferably larger customers.

While it may be difficult for your firm to measure the indirect cost of in-house collection, repeating the exercise above and identifying the minimum percentage sales loss from your larger customers will help put the decision in perspective. In these cases, outsourcing doesn't necessarily lead to staff reduction, but rather, better application of staff resources. In the next section, we'll discuss some of the factors to be considered in selecting an agency, and review the findings of a study on collection agency performance.

Company Experiences with Third Party Collection Agencies

What factors should a company consider to be most important in choosing a collection agency? How many agencies should a company use? What kind of collection performance should a company expect from an outside agency? Is the method of collection important to a firm involved in business-to-business relationships? These were several of the questions asked by a group of credit professionals in a recent continuing education class sponsored by a chapter of the National Association of Credit Management. While the credit literature provides advice on how to choose and work with an outside collection agency (Wolner (1992) Mavrovitis (1994)), little documentation exists regarding the factors actually used in the selection process. Further, there has been little done in the area of measuring the subsequent performance of agencies in collecting delinquent receivables. The purpose of this part of the study is to develop insights regarding these questions. To accomplish this, member companies of the Credit Research Foundation were surveyed. The following reports on the results identifying key selection factors and collection agency performance for the years 1995-1997.

Survey and Sample

The survey used in this study was administered to over 300 member companies of the Credit Research Foundation. A total of 71 responses were received, 61 of which contained the complete set of information necessary to properly score the survey results. Ten were eliminated because the answers to the questions were incomplete or unclear. The 20% usable response rate is considered to be excellent. The respondents are primarily involved in business-to-business, rather than business-to-consumer transactions, so many of the account referrals are large in value. Most of the firms are involved in some kind of manufacturing industry.

Respondents were asked to provide information regarding account referral and collection experiences. Referral information included whether or not they used outside collection agencies, important factors used in choosing agencies, how many agencies were used, and how many accounts, measured in both number and dollars, were referred to outside agencies for the period 1995-1997. Regarding collection, respondents were asked to provide information on both the number and dollar value of the accounts collected, fees charged and length of collection period. Data measuring firm size based on annual sales volume were also collected as a way to screen and categorize the results.

Factors Influencing Company Choice of an Outside Agency

Credit literature suggests that selection of an outside agency is based on a number of factors. Among these factors, reputation and method of collection are thought to be most important (Wolner (1992)). Reputation captures factors that include the length of time an agency has been in business as well as the skill of its employees. In the competitive business-to-business (and business-to-consumer) environment, maintaining customer relationships is extremely important. This makes consideration of the method of collection applied by an agency a critical issue. If an outside agency uses a tough approach to collection, it risks damaging the relationship between its client and the client's customers. Outside agencies often typically operate in manner in which the customers do not necessarily know that they are even dealing with a third party collector. Therefore, anything the agency does will be a direct reflection on its client.

In the survey document, respondents were asked to score each of ten factors as either "very important," "important," or "not important" to the selection of an outside collection agency. Scoring of each was independent of the others, meaning that it was possible that all ten could be rated as "very important." Equally so, all ten could be ranked as "not important." The average ratings for each of the ten factors are provided in Table III.

Table III: Key Factors in Selecting Outside Agencies

Factor	*Score*
Reputation	1.77
Cost and Fees	1.44
Approach to Collecting (e.g., hard vs. soft)	1.30
Method of Collecting (e.g., letters, phone calls)	1.26
Access to Legal Facilities	1.26
Referral	0.67
Size of Accounts Referred	0.65
Location of Agency	0.40
Multiple Service Centers	0.39
Size of Agency	0.28

2 = Very Important
1 = Important
0 = Not Important

The findings provided in Table III are generally consistent with what appears in the credit literature. Of the ten factors listed in the survey, five stood out from the rest as most important. The highest scoring factor is the “reputation” of the outside agency, with a 1.77 out of a possible 2.00. Virtually all of the credit literature suggests that reputation is an important factor in choosing an outside agency. The second highest scoring factor is “cost and fees,” scoring a 1.44. Given the level of competition in today’s markets and the increasing importance of cost containment, this is not surprising.

The next two highest scoring factors related to the methods used in the collection process. Scoring 1.30, and 1.26 were the factors of “approach to collecting,” and “method of collecting,” respectively. “Approach to collecting” referred to whether or not the agency tended to be “hard line” or “soft line” in the manner in which they sought to collect customer accounts for their clients. “Method of collection” referred to the means by which customers were contacted regarding collection (e.g., written letter or phone call). By assigning a high ranking to these factors, respondents showed that they are indeed concerned with how an outside agency will go about collecting an account. This is of critical importance in a market environment where customer service and relationships are increasingly valued.

The next highest factor, also scoring a 1.26 out of 2.00, is “access to legal facilities.” The high rating assigned to this factor indicates that respondents preferred to work with agencies that could handle the entire scope of the collection process as opposed to the company itself going out and hiring attorneys to pursue collections through the legal system on its own. It is also supported by the fact that collection agencies would have access to attorneys and law firms specializing in the collection area, saving the company the additional time it would take to determine which attorneys would be best at collections.

The remaining five factors scored substantially below the top five. The sixth most important factor, referral from another company, scored only 0.67. Size of accounts referred scored a 0.65, location of the agency 0.40, agencies with multiple service centers 0.39, and size of the agency 0.28. There were a variety of other factors listed in response to the “write-in” opportunity, but none that showed up more than one time.

Collection Agency Performance

To better understand the nature of collection agency performance, the sample of responses was broken down into four categories based on the size of the companies. In this case, size was measured by annual credit sales volume. The breakdown can be seen in the first column of Table IVa, which provides account referral statistics for the entire sample of 61 companies. As the data were analyzed, it was determined that there were some significant outlier[2] observations in the sample. Most notably were three companies whose dollar value of accounts referred for collection exceeded $800,000,000! To determine the impact of these “outlier” companies on the sample results, all analysis was conducted a second time excluding these outliers.

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[2] Outlier observations are those that are substantially different from others and / or are large enough to change the appearance of a set of findings.

Account Referrals to Outside Agencies

As mentioned previously, account referral statistics for the entire sample are provided in Table IVa. As can be seen, there is a substantial increase in the number of accounts referred for collection when moving from Size Category II (annual credit sales between $100 MM and $500 MM) to Category III ($500 MM - $1,000 MM). This can, in part, be attributed to the fact that most of the firms responding to the survey (37 out of 61 overall, and 29 of the 48 companies that use agencies) reside in the two largest size categories, with only eight firms in the smallest group. Overall, about 80% of the firms surveyed do refer accounts to outside agencies. Firms in the sample used, on average, 2.25 outside agencies.

The most interesting finding in Table IVa is that the larger companies tend to refer a greater percentage of their customer accounts for collection than do the smaller companies. Accounts referred by the smallest firms represented only 1.31% of all customer accounts (Table IVa, column (9)). For the next largest group, the percentage is 1.75. The two largest groups are combined in the lower panel of Table IVa, to reveal that, jointly, their account referrals represent 2.80% of their customer accounts.[3] These findings are most likely attributable to the volume of customer accounts managed by the larger firms, which average almost 11,000, as opposed to 1,700 and 4,470 for the smaller size categories (Table IVa, column (9)). It would appear that the smaller the customer base, the more likely it is for a company to work directly with its customers in regard to collections rather than getting a third party involved. This may also be a sign of the fact that company/customer relationships are closer and individually more valuable for smaller companies.

Table IVb shows the impact on the results of eliminating one outlier observation from Size Category III, and two from Category IV. As will be seen later, this

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[3] The two largest categories are combined on the basis that they are similar in terms of the average number of customer accounts and other factors, as can be seen in Tables IV and V.

substantially reduces the value of the accounts referred for collection in each category. Interestingly, the removal of the outliers does not substantially reduce the number of accounts referred for the two largest size categories combined. That number only falls from 8,753 to 8,467 (compare column (5), bottom panels of Tables IVa and IVb). Further, this adjustment does not substantially affect the findings in regard to the percentage of customer accounts referred, as can be seen by comparing column (9), in the bottom panels of Tables IVa and IVb. The larger the company size, the greater the percentage of customer accounts referred for collection.

Table IVa: Account Referral Statistics: Three Year Period: 1995-1997

Company Size Category as Measured by Annual Sales Levels	Sample	Use Agencies	Percent Using Agencies	Average Number of Agencies	Number of Accounts Referred	Average Accounts Referred	Number of Customer Accounts	Average Number of Customer Accounts	Percent of Accounts Referred
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
I. $0-$100MM	8	7	87.50%	3.57	156	22	11,899	1,700	1.31%
II. $100MM-$500MM	16	12	75.00%	1.67	939	78	53,637	4,470	1.75%
III. $500MM-$1,000MM	11	9	81.82%	2.22	3,330	370	107,950	11,994	3.08%
IV. >$1,000MM	26	20	76.92%	2.15	5,423	271	204,780	10,239	2.65%
Sample	**61**	**48**	**78.69%**	**2.25**	**9,848**	**205**	**378,266**	**7,881**	**2.60%**

Results with Categories III & IV Combined	Sample	Use Agencies	Percent Using Agencies	Average Number of Agencies	Number of Accounts Referred	Average Accounts Referred	Number of Customer Accounts	Average Number of Customer Accounts	Percent of Accounts Referred
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
I. $0-$100MM	8	7	87.50%	3.57	156	22	11,899	1,700	1.31%
II. $100MM-$500MM	16	12	75.00%	1.67	939	78	53,637	4,470	1.75%
III/IV. >$500MM	37	29	78.38%	2.17	8,753	302	312,730	10,784	2.80%
Sample	**61**	**48**	**78.69%**	**2.25**	**9,848**	**205**	**378,266**	**7,881**	**2.60%**

Table IVb: Account Referral Statistics: Outlier Observations Removed: Three Year Period: 1995-1997

Sales Size Category with Outliers Removed	Sample	Use Agencies	Percent Using Agencies	Average Number of Agencies	Number of Accounts Referred	Average Accounts Referred	Number of Customer Accounts	Average Number of Customer Accounts	Percent of Accounts Referred
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
I. $0-$100MM	8	7	87.50%	3.57	156	22	11,899	1,700	1.31%
II. $100MM-$500MM	16	12	75.00%	1.67	939	78	53,637	4,470	1.75%
III. $500MM-$1,000MM	10	8	80.00%	2.13	3,085	386	81,950	10,244	3.76%
IV. >$1,000MM	24	18	75.00%	2.28	5,382	299	200,180	11,121	2.69%
Sample	**58**	**45**	**77.59%**	**2.29**	**9,562**	**212**	**347,666**	**7,726**	**2.75%**

Categories III & IV Combined with Outliers Removed	Sample	Use Agencies	Percent Using Agencies	Average Number of Agencies	Number of Accounts Referred	Average Accounts Referred	Number of Customer Accounts	Average Number of Customer Accounts	Percent of Accounts Referred
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
I. $0-$100MM	8	7	87.50%	3.57	156	22	11,899	1,700	1.31%
II. $100MM-$500MM	16	12	75.00%	1.67	939	78	53,637	4,470	1.75%
III/IV. >$500MM	34	26	76.47%	2.23	8,467	326	282,130	10,851	3.00%
Sample	**58**	**45**	**77.59%**	**2.29**	**9,562**	**212**	**347,666**	**7,726**	**2.75%**

Agency Success Rates in Collecting Accounts

The most interesting findings in the analysis of account collection success rates have to do with company size effects. Table Va displays the account collection statistics for the entire sample of 48 companies that use outside agencies. As in prior analysis, the top panel shows results for four categories, and the bottom panel shows the results after combining size categories III and IV.

As can be seen by inspection of columns (3) in each panel of Table Va, the percent of accounts referred that are actually collected increases with the size category of the companies. Looking particularly at the bottom panel of Table Va, the account collection percentage increases from 36.54%, to 47.28% to 69.53% as the size category increases from smallest to largest. This cross sectional effect is also experienced in regard to the percentage dollar value of referred accounts collected. Again looking at the bottom panel, the percentage of value of accounts collected increases from 28.59% to 31.52% and to 51.78% as size increases from smallest to largest. It appears from this finding that collection agencies have more success in collecting accounts for larger firms.

This finding may be biased by the fact that small companies appear to be less likely to refer accounts to collection agencies in the first place. If we assume that smaller companies are successful in collecting accounts that otherwise might be referred by a larger company, the overall success rate of collections for small companies (combining internal and outsourced efforts), would be greater. It is interesting to note that larger companies not only refer a greater percentage of their customer accounts for collection, but they tend to do so much more quickly. Average days outstanding for accounts referred by companies in the two largest size categories is about 115 days, whereby the smaller companies refer at 150 to 169 days. Hence, it would appear that the smaller companies only refer the real “hard core” accounts for collection, and one would expect the collection rate to be lower in those cases.

Table Va: Account Collection Statistics: Three Year Period: 1995-1997

Company Size Category as Measured by Annual Sales Levels	Number of Accounts Referred	Number of Accounts Collected	Percent of Accounts Collected	Dollar Value of Accounts Referred	Average Dollar Value of Accounts Referred	Dollar Value of Accounts Collected	Average Dollar Value of Accounts Collected	Percent of Value of Accounts Collected
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
I. $0-$100MM (7)	156	57	36.54%	$473,838	$3,037	$135,479	$2,377	28.59%
II. $100MM-$500MM (12)	939	444	47.28%	$3,382,252	$3,602	$1,065,981	$2,401	31.52%
III. $500MM-$1,000MM (9)	3330	2482	74.53%	$341,352,303	$102,508	$159,079,632	$64,093	46.60%
IV. >$1,000MM (20)	5423	3604	66.45%	$531,627,682	$98,032	$292,923,115	$81,283	55.10%
Sample (48)	**9848**	**6587**	**66.88%**	**$876,836,075**	**$89,037**	**$453,204,207**	**$68,805**	**51.69%**

Results with Categories III & IV Combined	Number of Accounts Referred	Number of Accounts Collected	Percent of Accounts Collected	Dollar Value of Accounts Referred	Average Dollar Value of Accounts Referred	Dollar Value of Accounts Collected	Average Dollar Value of Accounts Collected	Percent of Value of Accounts Collected
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
I. $0-$100MM (7)	156	57	36.54%	$473,838	$3,037	$135,479	$2,377	28.59%
II. $100MM-$500MM (12)	939	444	47.28%	$3,382,252	$3,602	$1,065,981	$2,401	31.52%
III/IV. >$500MM (29)	8753	6086	69.53%	$872,979,985	$99,735	$452,002,747	$74,272	51.78%
Sample (48)	**9848**	**6587**	**66.88%**	**$876,836,075**	**$89,037**	**$453,204,207**	**$68,805**	**51.69%**

Table Vb: Account Collection Statistics: Outlier Observations Removed: Three Year Period: 1995-1997

Company Size Category (Annual Sales) with Outliers Removed	Number of Accounts Referred	Number of Accounts Collected	Percent of Accounts Collected	Dollar Value of Accounts Referred	Average Dollar Value of Accounts Referred	Dollar Value of Accounts Collected	Average Dollar Value of Accounts Collected	Percent of Value of Accounts Collected
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
I. $0-$100MM (7)	156	57	36.54%	$473,838	$3,037	$135,479	$2,377	28.59%
II. $100MM-$500MM (12)	939	444	47.28%	$3,382,252	$3,602	$1,065,981	$2,401	31.52%
III. $500MM-$1,000MM (8)	3085	2359	76.47%	$8,352,303	$2,707	$2,079,632	$882	24.90%
IV. >$1,000MM (18)	5382	3568	66.29%	$62,627,682	$11,637	$26,923,115	$7,546	42.99%
Sample (45)	**9562**	**6428**	**67.22%**	**$74,836,075**	**$7,826**	**$30,204,207**	**$4,699**	**40.36%**

Category III & IV Combined with Outliers Removed	Number of Accounts Referred	Number of Accounts Collected	Percent of Accounts Collected	Dollar Value of Accounts Referred	Average Dollar Value of Accounts Referred	Dollar Value of Accounts Collected	Average Dollar Value of Accounts Collected	Percent of Value of Accounts Collected
Column Number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
I. $0-$100MM (7)	156	57	36.54%	$473,838	$3,037	$135,479	$2,377	28.59%
II. $100MM-$500MM (12)	939	444	47.28%	$3,382,252	$3,602	$1,065,981	$2,401	31.52%
III/IV. >$500MM (26)	8467	5927	70.00%	$70,979,985	$8,383	$29,002,747	$4,894	40.86%
Sample (45)	**9562**	**6428**	**67.22%**	**$74,836,075**	**$7,826**	**$30,204,207**	**$4,699**	**40.36%**

Another interesting finding is that the percent of the value of referred accounts collected appears to be smaller than the percent of the number of referred accounts collected for each size category. This can be seen by comparing columns (3) and (8) in both panels of Table Va. It appears that collection success decreases with the size of the referred account (this has been verified with a correlation statistic). This indicates that bad debtors are more likely to pay off on a smaller account balance than a larger one. This finding is in spite of the fact that most credit professionals agree that incentives exist for collection agencies to spend more time seeking to collect larger accounts. It may be that it takes less effort to collect the smaller accounts, and therefore, success rates there are much higher. Further, if customers are not paying on a larger balance, it may be a sign of a distress situation, where often the payoff, when made, is less than the full account balance.

Removal of the outlier observations from the two largest size categories changes the magnitude but not the overall direction of the findings in Table Va. Turning to column (3) in both panels of Table Vb, it can be seen that removing the outliers does not significantly effect the percentage number of referred accounts collected. Examination of column (8), however, reveals that removing the outliers does have a significant impact on the percentage value of referred accounts collected. For size category III, this falls from 46.60% (column (8), Table Va), to 24.90% (column (8), Table Vb). For the combined large size categories (column (8), lower panels of Tables Va and Vb), the percentage value of referred accounts collected falls from 51.78% to 40.86%. As before, the success rates are higher for larger rather than smaller companies, but with the outliers removed, the difference is not nearly as substantial.

Do Collection Agencies Increase Collection Probability?

It is evident both from the information provided in Figure I and the survey results, that the older an account, the less likely it will be collected. The larger firms in the study tended to refer accounts for collection at an average age of 115 days past

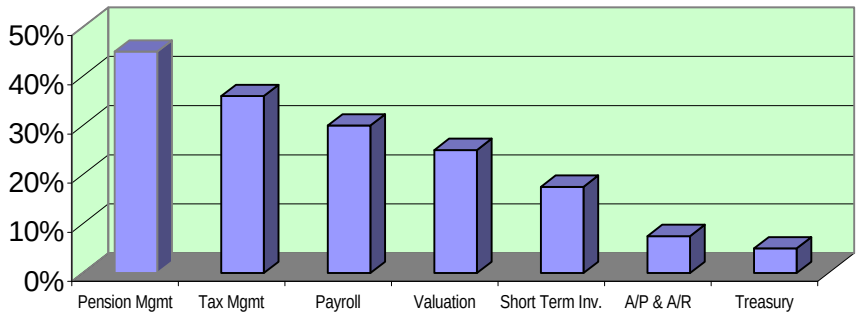
due. According to Figure I, the collection probability for accounts of that age is 69%. This matches the experiences of the large companies in the survey, for whom the account collection rate lies between 65% and 70%. The smaller companies in the survey tended to wait until the accounts were much older before outsourcing collection. Here the average was about 160 days past due, where according to Figure I, the collection probability is about 60%. The smaller company experiences with outside agencies, however, were lower collection rates of between 36% and 47%. This may be an indication of a size bias in the findings displayed in Figure I, where results for larger firms are going to weigh more heavily in the overall outcome. It may also be an indication of the greater leverage wielded by larger firms in collecting past due accounts. Beyond a certain point, the costs of pursuing a past due account become prohibitive. Since larger firms tend to pursue collection of larger account balances, it is more likely that they will spend more money and longer periods of time in legal channels before writing them off. Smaller companies, on the other hand, are often not in a financial position to do so. As a result, the collection probability table may look completely different for smaller firms, as the survey results seem to indicate.

Outsourcing of the Credit Function in General

As mentioned earlier and often, outsourcing in general has become a popular trend in business and appears to be here to stay. Over the years, different aspects of the finance function have been outsourced to varying degrees. Figure II provides an overview of the extent of outsourcing of different finance functions.

Figure II

Outsourcing of Financial Functions



As can be seen in the figure, payables and receivables are among the least of the outsourced finance functions. Most of the decisions to outsource these elements have been based on the opportunity to capitalize on both economies of scale and expertise owned by the outsource providers.

The content of the current body of literature on outsourcing credit is indicative of the fact that studies of actual outsourcing performance are lacking. Rather, the issue of outsourcing in credit is still a question, as illustrated by recent titles such as "Outsourcing Receivables and Credit Services: An Alternative to Consider,"[4] and "Outsourcing: Will it Work for Credit?,"[5] as well as a magazine cover reading: "Outsourcing: Is It a Bright Alternative for Credit Managers?"[6]

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[4] Joyce R. Ochs and Kenneth L. Parkinson, *Business Credit,* September 1999.

[5] Joyce R. Ochs and Kenneth L. Parkinson, *Business Credit*, September 1999.

[6] *Business Credit,* April 2000

Most of the literature on outsourcing the credit function has been written by managers and executives of firms that actually provide the outsourcing services, so it is important for a credit professional to read these pieces very critically and discerningly. Keeping that in mind, we'll review what these articles say in the next section.

Brief Review of Outsourcing Literature

As outsourcing plays on both the specialized knowledge and economies of scale possessed by the outsource provider, it is claimed that firms that will benefit most from outsourcing fall into three categories. First is a group of high growth firms which are not staffed to handle an increasing volume of business, yet, do not want to pass up additional opportunities while their internal resources catch up with their growth. Second are companies with poor cash flow and/or slow paying customers, for whom outsourcing is considered to be either a temporary or permanent solution to the credit problem. Finally is the group of firms seeking to focus on core competencies who want to reduce fixed costs (Ochs and Parkinson, 1998). In regard to the latter, it is important to note that outsourcing is something that should supplement, but not replace the core competencies of a company. In this sense, outsourcing is something that should be part of an overall strategic plan. Some situations should be handled internally, such as the issue of generating cash from receivables itself. The company, even if it outsources for services, should maintain a competent in-house credit team (Corbett, 1999).

The magnitude and amazing rate of change in technology have also made credit outsourcing a more attractive prospect to many companies. With the current move toward integrated systems, many firms are faced with the necessity of making substantial investments in both hardware and software in order to be competitive. For firms with rapid and high growth opportunities in the product markets, however, it may not make sense to plow a lot of funds and talent resources into acquiring and managing such systems when outsource providers

are readily available to do the work. It is important to note that the firm should maintain an in-house team to determine and manage credit policy, while outsourcing the mechanical end of the work. As the company grows, it can expand into the capacity of the outsource provider, which should be configured to handle the additional volume. This alleviates the problem of managing expansion of internal functions on the part of the high growth firm. Should the company want to take the credit function in-house, it can then make the decision to implement at a time when the investment necessary to do so will be more clearly identified.

Just about all outsource providers claim to interact with a clients customers as if they were the clients themselves. The customers, therefore, do not even know that they are dealing with a third party credit function. Technology and telecommunications have enabled efficient off-site outsourcing, making it a lot easier for this to occur. In many cases, however, outsource providers actually work on site, so from all outward appearances, it wouldn't even seem as if an outsource relationship were in place. This is especially true if the outsourcer is a provider of deduction and exception management services, which are more easily performed on-site (Ochs and Parkinson, 1998).

Technology has in some ways worked against the credit function as well. Many customer firms have begun engaging in an organized effort referred to as "payables stretching," which is a technique that delays payment without necessarily affecting the business relationship (Ochs and Parkinson, 1999). Since these systems are quite well organized and practiced, an outsource provider may be more skilled in recognizing and circumventing them for a client.

The central issue to be dealt with from the company's point of view is the transfer of control of the credit function to the outsource provider. As mentioned earlier, the credit function is becoming a more important element of the sales team, and therefore, of more strategic importance to the firm. Companies are well advised to keep control of critical elements of the credit function, in particular policy-making. One potential risk that a company runs when it outsources is that

providers represent more than one company. Often when an outsource provider calls on a company's customer, it will be doing so on behalf of a number of its own clients, some of whom may be the company's competitors. Will ethical problems be created it a single outsource provider represents several companies who compete for the same customer group? Will the outsource provider be giving the same advice to all of the competitors? Will employees of the outsource provider be competing with each other to secure the best results for the clients they represent? The situation may become similar to that which we observed in investment banking in the mid-to-late 1980's. At that time, many investment banking companies had M&A departments who advised clients on market strategies; and, trading departments that made money by taking positions on the transactions on behalf of the investment bank itself. The firewalls between these departments were not always adequate to keep information from passing between the two, to the detriment of some of the clients. Will there be adequate firewalls between outsource personnel handling accounts for competing clients? Will credit policy become more of a generic commodity as a result of being handled by a smaller more concentrated number of outsource providers? Answering "no" and "yes" respectively would be unacceptable to in-house credit professionals.

To Outsource or Not?

There are an increasing number of credit service providers, and credit professionals should not be afraid to talk to them about what they can offer. A good place to begin searching for an outsource provider is right on the World Wide Web (for a good list of websites, see Fensterstock, 1999). Again, outsourcing parts of the credit function does not necessarily lead to additional personnel cuts in the credit area. Rather, it should mean that in-house resources are applied more efficiently to value adding transactions.

As far as whether a company should outsource, the decision is very complex. The depth of this question will be addressed in a forthcoming study. For now,

what credit professionals should think about when considering the decision to outsource is maximizing the value of each transaction in which they are engaged. In the model of outsourcing collections outlined earlier in this publication, it was evident that outsourcing should be pursued in cases where the cost of completing the transaction in-house is greater than the cost of outsourcing. The cost of in-house completion, however, includes a critical “indirect” component that may be difficult to measure. This indirect component is best measured in terms of lost sales volume, and as everyone knows, sales are the most important generator of value, for without them, we’re not in business! Any model used to make a decision on outsourcing should, therefore, include this indirect cost as a key variable. In a future study, we’ll attempt to identify this more precisely using data from the CRF Benchmarking study and other places where available. On a trial basis, it may not be a bad idea for companies to consider retaining in-house service of their “top 80%” customers, while outsourcing management of its smaller customer accounts.

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About The Author

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As a teacher, Dr. Isberg has developed a variety of graduate courses in areas including general corporate finance, valuation and corporate restructuring, entrepreneurial organization and finance, organization creation and growth, business ethics, financial statement analysis and working capital management. He has been recognized for excellence in teaching as the winner of five departmental and college level awards.

As a researcher, Dr. Isberg has published a variety of articles in academic and practitioner journals. These include pieces in *The Journal of Banking and Finance, Journal of Economics and Finance, Economics Letters, Small Business Economics, The Journal of Consumer Marketing,* and *Credit and Financial Management Review.* As Credit Research Fellow, Dr. Isberg is a member of the National Research Committee of CRF and is engaged in research that led to this publication and others that will appear in some form in the future.

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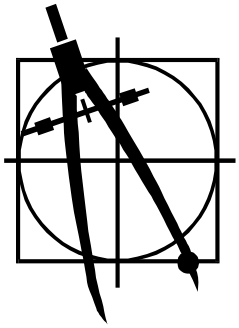

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