A Forrester Total Economic Impact™ Study
Commissioned By CyberSource
October 2018

The Total Economic Impact™ Of CyberSource Decision Manager

Cost Savings And Business Benefits Enabled By Fraud Management Services

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ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

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Benefits And Costs

Reduced cost of chargebacks:
$1,068,512

Avoided cost of staff to manually review transactions:
$650,049

Total cost of CyberSource Decision Manager, including implementation and configuration:
$500,569

Executive Summary

CyberSource helps companies manage the cost of fraud for online transactions. To measure the financial impact realized by customers, CyberSource commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying CyberSource Decision Manager and Managed Risk Services.

The purpose of this study is to provide readers with a framework to evaluate the potential financial impact on their organizations. To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six customers that adopted CyberSource to manage fraud with online orders.

Prior to using CyberSource, most of the customers managed fraud with an internal team that reviewed orders and created rules to reduce chargebacks. They struggled and repeatedly received warnings from merchant services at banks and credit card companies. One executive described their situation: “Our banking partners recommended that we have a tool in place instead of our previous manual approach. Fraud was becoming more sophisticated and we were not keeping up.”

After adopting Decision Manger, the companies experienced a dramatic reduction in chargebacks. An executive told Forrester: “We have not breached any merchant threshold for the several years that we've been with CyberSource. And that’s something that we really appreciate! We don’t get warnings from the bank anymore. We work in close coordination with CyberSource to work on that particular fraud issue.”

Key Findings

Quantified benefits. The following risk-adjusted present value (PV) benefits are representative of those experienced by the companies interviewed:

- **Reduced cost of chargebacks of $1,068,512.** The organizations reduced the level of chargebacks, regardless of industry or geography. Forrester’s model is based on a company with one million orders and a 1.5% chargeback rate, which realizes an 75% reduction in chargebacks after adopting Decision Manager.
- **Avoided cost of manually reviewing transactions of $650,049.** Using Decision Manager helped the organizations avoid hiring the additional staff that it would have required to keep up with company growth and increasingly complex fraud attacks. In this calculation, Forrester calculates the benefit of avoided hiring eight employees.

Unquantified benefits. The interviewed organizations experienced the following benefits, which are not quantified for this study:

- **Ability to communicate up and downstream at CyberSource.** The organizations benefited from a partner that listens. They reported that CyberSource repeatedly listens to their experience and shares insights from other clients on the front lines of actively managing and anticipating new types of fraud attacks.
- **Value from using Decision Manager.** Several of the interviewed executives told Forrester that Decision Manager tool was a highly effective tool that allowed them to configure more flexible and nuanced rules.

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ROI
243%

Benefits PV
$1.7 million

NPV
$1.2 million

Payback
<3 months

› **Increase in customer experience.** Several organizations reported that customer experience (fewer rejected orders and customers that become disenchanted) is important to their fraud strategy. While all experienced an improvement in the customer experience, one reported a measurable boost of 35%.

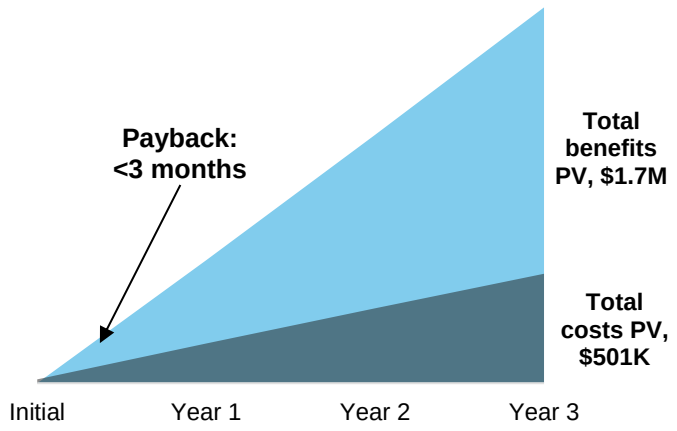
Costs. The interviewed organizations experienced the following risk-adjusted PV costs:

› **Cost of Managed Risk Services for three years totaling $483,506.** The organization paid fees to CyberSource over three years that included core services and access to Decision Manager.

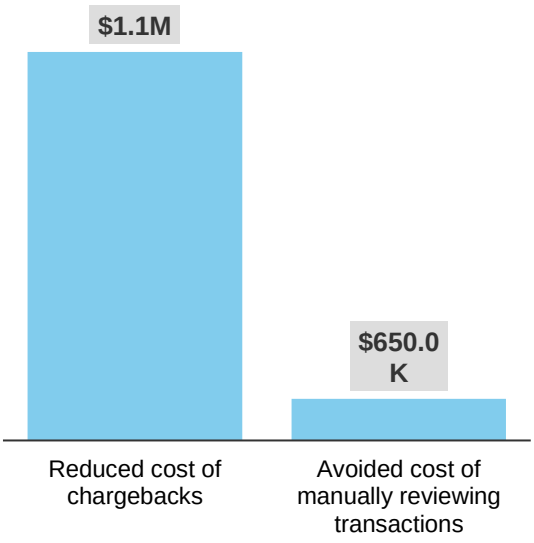
› **Cost to implement and configure environment of $17,063.** The organization dedicated two employees who spent 50% of their time for three months to implement and configure their rules for Decision Manager.

Forrester's interviews with six existing customers found that an organization based on these interviewed organizations experienced PV benefits of nearly $1.7 million over three years versus PV costs of $500,569, adding up to a net present value (NPV) of $1.2 million and an ROI of 243%.

Financial Summary



Benefits (Three-Year)



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TEI Framework And Methodology

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing CyberSource Decision Manager and Managed Risk Services.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that CyberSource's fraud management services can have on an organization:

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed CyberSource stakeholders and Forrester analysts to gather data relative to CyberSource fraud services.

CUSTOMER INTERVIEWS
Interviewed six organizations using CyberSource to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION
Designed a composite organization based on characteristics of the interviewed organizations.

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.

CASE STUDY
Employed four fundamental elements of TEI in modeling the impact of Decision Manager and Managed Risk Services: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by CyberSource and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis. Some savings documented were parallel to using Decision Manager and Managed Risk Services. Forrester did not ascertain the direct cause and effect relationship of parallel decisions on savings.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in CyberSource solutions.

CyberSource reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

CyberSource provided the customer names for the interviews but did not participate in the interviews.

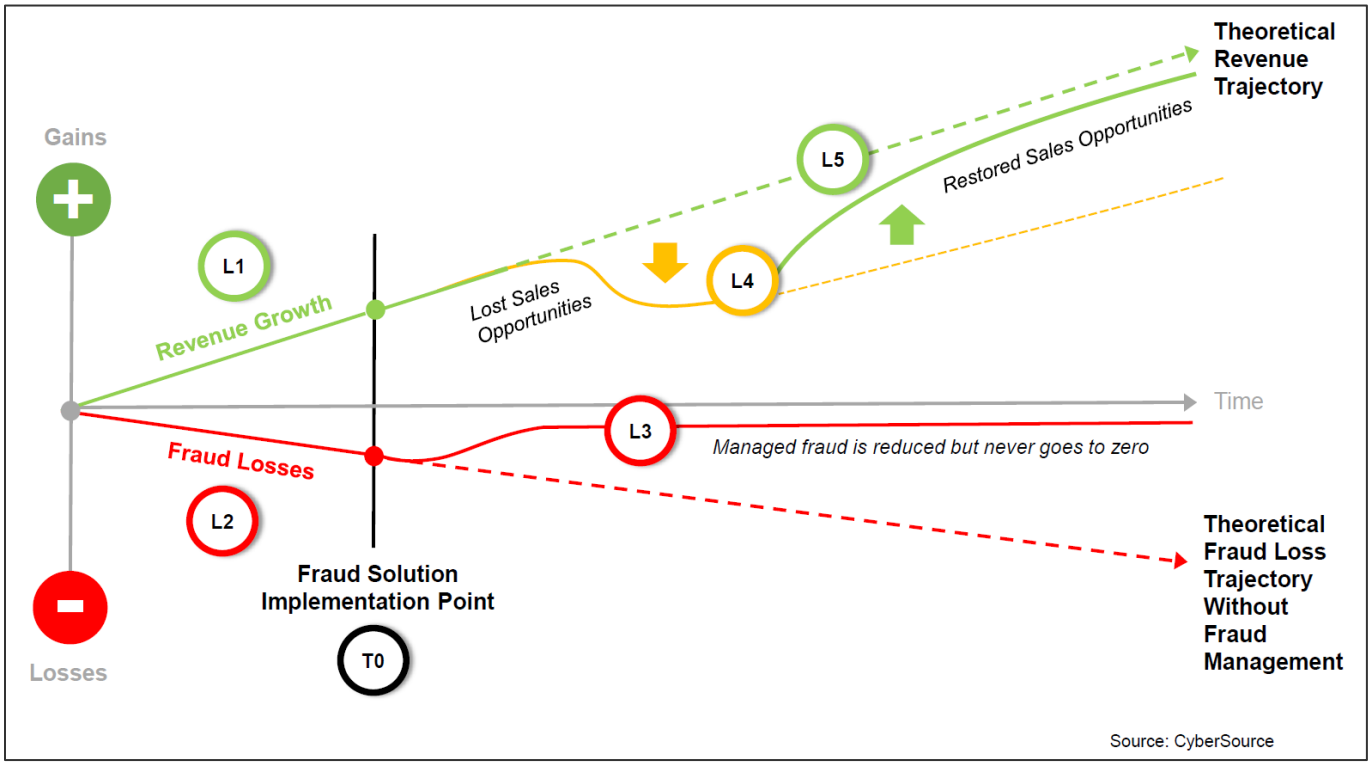
Fraud Management That Combines Machine Learning With Rules

According to the traditional definition of artificial intelligence (AI), machine learning is an advanced form of AI that has "the ability to learn without being explicitly programmed." When applied to fraud management, AI requires machine learning that can detect subtle emerging fraud patterns which are impossible to see on a human level. Virtually all fraud management systems today use some form of machine learning.

CyberSource Decision Manager was designed from the beginning to leverage machine learning, and now as part of Visa, continues to receive high levels of investment into software and infrastructure advancements to stay ahead of the ever-changing tactics devised by fraudsters. As part of the Visa family, Decision Manager leverages insights from over a hundred billion combined Visa and CyberSource annual transactions around the globe. These transactions come from merchants that span a wide variety of industries, geographies, and business models. This data functions similar to neurons in the machine learning brain. Better data leads to better fraud detection decisions.

During interviews, the customers that Forrester interviewed indicated that Decision Manager had powerful and flexible rules for managing fraud. The specific rationale for the various benefits outlined in this study can be capture in the following diagram. Specifically:

- **Line L1 shows revenue growth before applying a fraud prevention tool.** In theory, revenue grows according to the success of business operations and growth is not impacted by the efforts of fraudsters, but reality is less simple and the impact of fraud less benign.



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- **Line L2 shows fraudulent activity as a percentage of revenue.** Thus, as revenues grow, the level of fraud grows at a relatively constant rate. Fraud is communicated as a percentage of revenue and varies widely by industry, geography, transaction size, and other variables. In the interviews, fraud rates ranged from over 8% to less than 1%.
- **Line T0 represents the point in time when an organization implements a fraud management solution.** Executives typically implement a solution when they realize significant fraud losses or face scrutiny from external auditors.
- **Line L3 shows the reduced level of fraud by using a fraud management program.** While actively managing fraud significantly reduces the level of fraudulent transactions, as the fraud management system starts learning from that business' transaction data, the fraud loss level will be reduced as shown on line L3.
- **Line L4 represents the reduced level of revenue due to a poor customer experience while managing fraud.** False positives can lead to lost revenues as shown on line L4, not only due to the loss of the immediate sale, but even more by potentially losing a customer forever due of the rejected transaction. This has the impact of reducing revenue growth not only by interfering with business one transaction at a time, but tarnishing the experience for a legitimate buyer and compromising the lifetime value of customers.
- **Line L5 shows what active fraud management can do to restore revenues closer to the theoretical level.** By implementing rules and conducting regular fraud strategy reviews, merchants could reduce false positives, improving the customer experience and restoring revenues that would otherwise have been lost. This is shown in line L5.

Understanding one's business and acceptable risk tolerance are important factors in developing an effective risk strategy. Risk analysts can use this information in a comprehensive set of data-driven decisions when determining which review and reject rates. For instance, digital products might have a higher tolerance for risk because of a low cost of goods sold, while retailers selling high-value physical goods are more likely to route transactions to manual review prior to fulfillment.

Risk analysts can elevate the quality of fraud management by combining rules with good manual review practices. In fact, during the interviews with CyberSource customers, several reported a reduction in fraud. Customers can also configure the rules within Decision Manager to activate at a specific time of day or date ranges, which can accommodate a variety of cyclic, seasonal and periodic sales promotions – maximizing acceptance rates and revenues.

The CyberSource Customer Journey

BEFORE AND AFTER THE CYBERSOURCE INVESTMENT

Interviewed Organizations

For this study, Forrester conducted six interviews with CyberSource customers using Decision Manager and Managed Risk Services. Interviewed customers include the following:

INDUSTRY	GEOGRAPHY	INTERVIEWEE	USE CASE
Retailer of jewelry and luxury consumer goods	North America	Director, fraud management	Launched direct-to-customer channel and needed a partner for payment processing and fraud screening. All order processing and risk management was handled by a sophisticated retail partner and the organization needed to become proficient rapidly.
Retailer of commercial office supplies	Latin America	Risk manager	Managed fraud using an internal team. Adopted Decision Manager and reduced fraud by 89%.
Financial services company	Europe	Risk manager	Because of money laundering and government oversight, the fraud requirements are unique for this company. The fraud prevention process includes verifying government identification and validating other personal information. Many fraudulent transactions also involve another country, which brings international law into the equation.
Regional transportation and hospitality provider	Asia	Manager, fraud management	Internally managed fraud with a "simplistic set of black and white rules." After repeated warnings from merchant services, company executives were compelled to elevate the focus on fraud.
Retailer of consumer products	North America	Director, fraud prevention	Managed fraud using an internal team before adopting Decision Manager. Experienced reduction of 85% in chargebacks within 3 months after adopting Decision Manager.
Manufacturer of activewear	North America	Online operations manager	Originally managed fraud with a small, internal team of employees. As the company experienced significant growth in online sales, executives realized that their organizational structure wouldn't scale to keep up with business needs.

Key Challenges

After conducting interviews with six companies, Forrester identified the following challenges that they experienced prior to adopting Decision Manager. The challenges included:

- **Handled fraud with an internal process that didn't scale with online business growth.** The online operations manager told Forrester: **"**We had a small team looking at orders. As we started getting bigger and bigger, we realized that this was something that we couldn't keep doing in-house. We couldn't find or hire the skills that we needed fast enough. We chose to turn to a specialty provider who could provide this as a service to us."

- **Deployed a new "direct to customer" channel and needed to ramp up quickly.** The director at one retailer explained: "Previously, we went to market through other retailers who managed fulfillment and things such as fraud. When we launched our direct channel, fraud was a new type of problem for us and we needed the best partner that we could find and ramp up quickly."
- **Struggled to meet shipping deadlines and fraud approval guidelines.** As a retailer of high-end consumer products, one organization offers rapid shipping, but struggled to balance rapid delivery with fraud prevention. The director said: "We have only two types of shipping: overnight and two-day shipping. We need to clear an order that is being held for credit review very quickly or we hurt the customer experience. Although the typical SLA prior to Decision Manager was 72 hours, we are currently averaging nine hours."
- **Faced risk management requirements imposed by international business laws.** One executive said: "We are part of a German company that must follow German laws and restrictions. It's mandatory to have a risk management system. We can't have orders go through without any type of fraud check or authorization. We had a mandate come down from our global headquarters."
- **Received notices and warnings from merchant services providers (e.g., Visa, Mastercard, and Bank of America).** The manager at the travel and hospitality company told Forrester: "Our banking partners recommended that we have a tool in place instead of our previous manual approach. Fraud was becoming more sophisticated and we were not keeping up. At one point, a merchant services partner gave us a warning that we crossed their 8% threshold. Today with Decision Manager, we are below 1%."

> "We had a small team looking at orders. As we started getting bigger and bigger, we realized that this was something that we couldn't keep doing in-house. We couldn't find or hire the skills that we needed fast enough. We chose to turn to a specialty provider who could provide this as a service to us."
>
> *Online operations manager, manufacturer of activewear*

Key Results

The interviews revealed that key results from the CyberSource fraud solution investment include:

- **Making routine changes to fraud management rules.** The jewelry retailer director told Forrester: "We have a regular meeting every week or so to review which rules are stopping too many orders and not impacting fraud. Every month, we tweak our rules to make sure that we are not stopping too many orders unnecessarily. We also test results between channels and apply results to our rules."
- **Learn and modify rules every day.** A director said: "Decision Manager will use machine learning to derive new rules (Rules Suggestion Engine) or ideas that will help us catch fraudsters and their malicious orders. They then monitor for new behaviors and get the best results that they can. Every day is a learning curve of catching up with these people because they change the way that they act every day, so we have to learn every day as well."
- **Monitor false positives (legitimate orders flagged as fraud).** The activewear manager told Forrester: "I document every order that generates a false positive. Every false positive creates a problem in serving our good customers. We look into what happened and we identify steps to avoid flagging such orders in the future. After a recent period of high fraud, we put in place some aggressive fraud rules. Within the next week, our net promoter score for checkout fell by a full 30%!"

> "Decision Manager Rule Suggestion Engine will think of new rules or ideas that will help us catch fraudsters and their malicious orders. They then monitor for new behaviors and get the best results that they can. Every day is a learning curve of catching up with these people because they change the way that they act every day, so we have to learn every day as well."
>
> *Director, fraud prevention, retail*

Composite Organization

Based on the interviews, Forrester constructed a composite entity that illustrates the areas financially affected. The composite organization is representative of the companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has:

- **1 million orders per year.** The number of orders grew at 12% each year. This number of orders and the cost of fraud per order referenced (see page 10) in the study are both appropriate for consumer retail companies. While some of the interviewed companies would have fewer orders (e.g., hospitality), the cost per fraudulent transaction would also be significantly higher.
- **1.5% chargeback rate.** Prior to working with CyberSource, the organization had a chargeback rate of 1.5%. Among the companies that Forrester interviewed the 1.5% is a conservative assumption to avoid overstating the benefit of using Decision Manager and Managed Risk Services.

Key assumptions

- 1 million orders
- 1.5% chargeback rate
- 75% reduction in chargebacks using Decision Manager

Analysis Of Benefits

QUANTIFIED BENEFIT DATA AS APPLIED TO THE COMPOSITE

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr[1]	Reduced cost of chargebacks	$384,750	$430,920	$482,630	$1,298,300	$1,068,512
Btr[1]	Avoided cost of manually reviewing transactions	$234,000	$263,250	$292,500	$789,750	$650,049
	Total benefits (risk-adjusted)	$618,750	$694,170	$775,130	$2,088,050	$1,718,561

[1]See detailed explanation of the variable calculations in the tables on page 10.

Reduced Cost Of Chargebacks

The composite organization reduced the number of chargebacks by using Decision Manager and Managed Risk Services. The financial model assumes that the organization:

- **Had a baseline of one million orders per year and is growing 12% annually.** The companies that participated in the interviews ranged from travel providers to financial services to consumer goods, which had a wide range in the type and volume of transactions. Readers should adjust the number of values in this table to their specific business model.
- **Experienced an average chargeback level of 1.5%.** During interviews, the fraud rates ranged from less than 1% to over 8% depending on the industry and the dollar value of each transaction.
- **Reduced the number of chargebacks by 75% using Decision Manager and Managed Risk Services.** The companies that Forrester interviewed experienced substantive reductions in chargebacks. Several of the organizations lacked reliable “before and after” statistics to accurately report the change.
- **Changed additional operational processes in addition to working with CyberSource.** The organizations made changes to their relationships with banks, screen processes, and stepped up their fraud strategy review frequency.

Forrester applied a 10% risk to the benefit to account for the wide variation across industries and customers. The savings resulted in a PV savings over three years of over $1.7 million.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of over $1.7 million.

Reduced Cost Of Chargebacks: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Number of orders/transactions	12% growth	25,000,000	28,000,000	31,360,000
A2	Average order value		$38	$38	$38
A3	Total revenue	A1*A2	$38,000,000	$42,560,000	$47,667,200
A4	Chargebacks using manual processes (before CyberSource)	A3*1.5%	$570,000	$638,400	$715,008
At	Reduced cost of chargebacks	A4*75%	$427,500	$478,800	$536,256
	Risk adjustment	↓10%			
Atr	Reduced cost of chargebacks (risk-adjusted)		$384,750	$430,920	$482,630

Avoided Cost Of Manually Reviewing Transactions

Several of the interviewed organizations were able to reduce headcount that they would have otherwise required to maintain a manual review process. Maintaining a manual process became unwieldy because fraud techniques became more complex, which in turn increased the scrutiny required for each transaction. The composite organization found that it avoided the need to hire an additional eight employees to work in reviewing transactions.

The financial impact of not hiring additional employees at an average burdened annual salary of $65,000 resulted in a Year 1 savings of $234,000. Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $650,049.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Avoided Cost Of Manually Reviewing Transactions: Calculation Table					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Avoided FTEs that would have been required to manually review orders		4.0	4.5	5.0
B2	Average burdened salary		$65,000	$65,000	$65,000
Bt	Avoided cost of manually reviewing transactions	B1*B2	$260,000	$292,500	$325,000
	Risk adjustment	↓10%			
Btr	Avoided cost of manually reviewing transactions (risk-adjusted)		$234,000	$263,250	$292,500

Unquantified Benefits

In addition to the benefits outlined above, the organizations shared other benefits that did not have specific financial implications. Specifically, CyberSource help them by:

- **Ability to communicate up and downstream at CyberSource.** The activewear manager said: “Our CyberSource Managed Risk Analyst anonymously shares with us some of the types of fraud problems that are happening at peer companies. At the same time, when we tell them about things we’ve found, they listen and share the learnings with others. The fact that they clearly communicate and care about our opinion is awesome. It is easy to take that for granted, but I’ve worked with a number of providers that don’t do the same.”
- **Value from using Decision Manager.** One executive told Forrester: “Compared to other tools that we looked at in the market, Decision Manager has a lot more choices about how to build rules so that they line up with business goals. It gives experienced fraud managers more control and yet simplifies the experience for those who want more guidance. Personally, I like having a lot of control over the fine details of rules and Decision Manager gives me that ability.”
- **Increase in customer experience.** A retail executive said: “It’s very important for us that the customer has an excellent shopping experience. With Decision Manager, customers have a much better experience and our approval rates increased by 35%.”

Some of the most important value that clients get from CyberSource comes from benefits that don’t have measurable, discrete financial results.

Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Decision Manager and later realize additional uses and business opportunities, including:

- **Actively monitoring and documenting false positives.** One manger said: “We just implemented a change about two months ago to monitor every false positive. It’s definitely a work in progress. Every time we get a false positive, we get call from customer service. I document everything that customer service passes along to me and I work with our CyberSource Managed Risk Analyst. We use Decision Manager Replay to replay all orders from the previous week that met the same fraud criteria and we go through one by one and make the decision if it was a false positive or a legitimate risky order that was rejected. This is changing how we define rules.”

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix A).

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

Analysis Of Costs

QUANTIFIED COST DATA AS APPLIED TO THE COMPOSITE

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Ctr[1]	Subscription cost of Managed Risk Services	$0	$181,000	$194,800	$210,256	$586,056	$483,506
Dtr[2]	Cost to implement and configure CyberSource	$17,063	$0	$0	$0	$17,063	$17,063
	Total costs (risk-adjusted)	$17,063	$181,000	$194,800	$210,256	$603,119	$500,569

[1]See detailed explanation of variable calculation in table below on this page.
[2]See detailed explanation of variable calculation in table on page 13.

Subscription Cost Of CyberSource Fraud Management Solution

Forrester used a standard price of $115,000 per year based on a transaction volume of one million orders. For a company with this volume of orders:

- List price per transaction was $0.115 per order.
- License fees for Decision Manager totaled $6,000 per year.
- The cost for Managed Risk Services (manually screening of transactions and/or fraud management consulting services) averaged $5,000 per month.

The total PV cost over three years was $483,506.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of $500,569.

Cost Of Managed Risk Services: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
C1	Subscription cost of Decision Manager	A1*.115		$115,000	$126,500	$139,150
C2	Decision Manager license fee			$6,000	$6,000	$6,000
C3	Cost of Managed Risk Services			$60,000	$60,000	$60,000
Ct	Cost of Fraud Solution	C1+C2		$181,000	$194,800	$210,256
	Risk adjustment	↑0%				
Ctr	Cost of Fraud Solution (risk-adjusted)			$181,000	$194,800	$210,256

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Cost To Implement And Configure Decision Manager

The composite organization employed two employees for 50% of their time for three months working to implement and configure Decision Manager. The cost for the organization was 0.25 FTE years. At a burdened salary of $65,000, the total cost was $16,250. Due to variations in the cost and complexity for readers, Forrester risk-adjusted this cost upward by 5%, yielding a risk-adjusted total of $17,063.

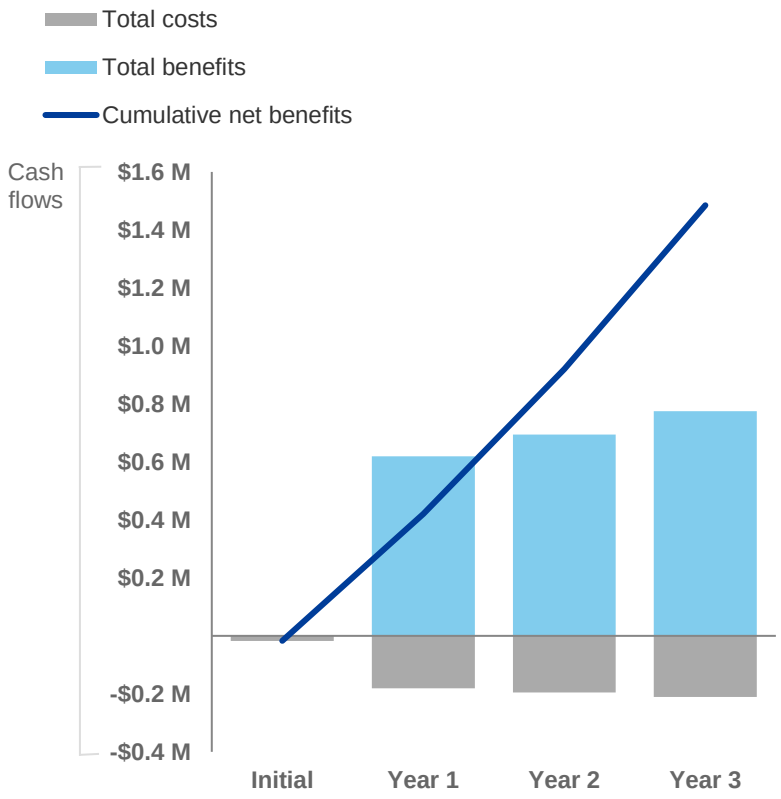
Cost To Implement And Configure Decision Manager: Calculation Table

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
D1	Two employees for three months at 50% of time (FTE years)		0.25			
D2	Average burdened salary		$65,000			
Dt	Cost to implement and configure Decision Manager	D1*D2	$16,250			
	Risk adjustment	↑5%				
Dtr	Cost to implement and configure Decision Manager (risk-adjusted)		$17,063			

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($17,063)	($181,000)	($194,800)	($210,256)	($603,119)	($500,569)
Total benefits	$0	$618,750	$694,170	$775,130	$2,088,050	$1,718,561
Net benefits	($17,063)	$437,750	$499,370	$564,874	$1,484,932	$1,217,992
ROI						243%
Payback period						<3 months

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CyberSource Fraud Management: Overview

The following information is provided by CyberSource. Forrester has not validated any claims and does not endorse CyberSource or its offerings.

Decision Manager

- The only fraud management solution that gains insights from more than 68 billion worldwide transactions that Visa and CyberSource process annually.
- Utilizes multiple machine learning methods to generate risk scores.
- Customizable rules-based engine helps you automatically screen and sort orders based on your business rules—no IT coding required.
- Leverages the proven effectiveness of conventional static models with agile data analysis capabilities.
- Works with any payment platform.
- Incorporates business rule console, case management system and reports.

Rules Suggestion Engine

- Brings machine learning into the realm of rules creation.
- Suggests new fraud rules to consider implementing and testing.
- Leverages the outputs of Decision Manager's advanced machine learning models.

Decision Manager Replay

- Confidently quantify fraud strategies in real time prior to activating in your live production environment.
- Test various 'what-if' rules profiles against your own historical data.
- Produce real-time reports of proposed changes to the transaction disposition and fraud rates.
- Works with any payment platform.

Managed Risk Services

Service Component	Performance Monitoring Gold	Performance Monitoring Platinum	Screening Management Gold	Screening Management Platinum
Decision Manager with Replay	♦	♦	♦	♦
Enterprise Support	♦	♦	♦	♦
Dedicated MRA	♦	♦	♦	♦
MR Launch Engagement - Onsite	♦	♦	♦	♦
Global Emerging Fraud Trend Insight	♦	♦	♦	♦
Implement Changes		♦		♦
Customized Reporting		♦		♦
Chargeback Guarantee		♦		♦
Quarterly Business Reviews		♦		♦
Global Order Review			♦	♦
24 / 7 / 365 Coverage			♦	♦
Third Party Checks			♦	♦
Public Record Checks			♦	♦
Advanced Third Party Verifications			♦	♦

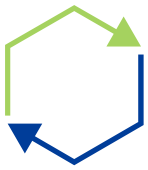
Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

Total Economic Impact Approach

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.



Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.