

**The Value of Assurance Service:  
An Example from the Market for Baseball Cards**

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The need for reliable information for decision makers is a fundamental principle underlying the demand for audit and assurance services. Yet, individuals and companies often do not understand the value of independent third-party assurance. This paper uses the market for baseball cards to provide an empirical analysis of the value of assurance services. Paired observations for baseball cards were identified on eBay; one with a third-party assurance regarding its quality and one with only the seller's statement. Comparative analysis indicates that bidders were willing to pay significantly more for the items when third-party assurance was provided.

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Another, still broader option would be to define assurance services as services that reduce information risk for economic decision makers. Information risk is the risk that decisions are wrong because of defects in the information used, e.g., information that is wrong (unreliable), too late, unsuited for the decision to be made (irrelevant) or incomplete (Elliot 1994, p. 120).

### **1. Introduction**

*Information risk* is the probability of an adverse decision made on the basis of inaccurate or misleading information. Information risk is a critical aspect to many individual decisions. The risk increases dramatically when the decision maker has no evidence as to the reliability of the information that is used for the decision at hand. The need for reliable decision-making information is a fundamental principle underlying the demand for assurance services. Indeed, it is widely acknowledged that investors, creditors, employees, and other users of financial information require third-party assurance that the information they receive in the form of financial statements is reliable.

Information risk exists in many other decisions that do not involve financial statements. Indeed, fundamental to the definition of assurance services is the expression of an opinion on an expanded set of financial and non-financial information. For example, in contractual relationships one party may first seek assurance and later remedy when the quality of products or services is unknown and can be misrepresented. As the means of assurance, purchasers may require warranties or obtain information about the products from an independent third-party such as Consumer Reports or J.D. Powers. These assurance services, which extend beyond the scope of a financial statement audit, are often difficult to sell because the companies and individuals in a position to contract for the service do not often see the value that is derived from the service.

In today's marketplace individuals often lack the ability to personally validate the reliability of the information. Assurance services, provided by experts with a knowledge specialty, can assist consumers in determining the credibility of the information assertion presented by the seller. The AICPA has acknowledged this risk and the need for third-party assurance through many initiatives including PrimePlus Services and WebTrust. However, the purchase of assurance services often meets resistance from information providers who may not see the value in such a service.

Assurance services are not an easy sell. We tested a long laundry list of possibilities on various interest groups. We had business people, we had consumers, and so on. We had public sector, we had private sector, we had big companies, we had small companies. And generally, they had a hard time understanding the concept and the value of independent third-party assurance. That was kind of the reality for all of us. A bit of a dose of cold water. –  
David Scott, Managing Partner of National Auditing Services at Price Waterhouse, 1998 Audit Symposium Panel Discussion on Assurance Services (Boritz and Cockburn, 1998, p. 135).

This paper uses the market for baseball cards to provide an example of a business model and a niche where a company (PSA) has successfully created a market for information assurance services. We further present an empirical analysis suggesting the value of assurance services in this setting. Finally, we discuss what business model enabled PSA to achieve success where attempts of others nearly failed.

## **2. Theory and Hypothesis Development**

### **2.1 Assurance Services**

The market for assurance services stems from the decision makers' desire to receive an independent expert's assurance that information used for decision evaluation is accurate (Kinney,

2000). However, experience shows that the primary difficulty in marketing assurance services is in convincing the provider of the information that the benefits received from having a third-party assurance exceed the costs of obtaining the assurance (Boritz and Cockburn, 1998).

Business transactions always involve an element of risk. Risks may emanate from poor communication of expectations, a difference in perceptions concerning the subject of the transaction, or from one party's desire to deceive the other in order to maximize gains. Consider a negotiation for a used automobile. It is very possible that the seller may not communicate the exact condition of the car and expect to sell the car "as is", while the buyer may expect that the seller has disclosed all the aspects that may materially impact the valuation of the car or that later discovered faults will be repaired at the seller's cost. Further, the seller may adversely believe that the car is in sound working order or look at the car with a bias towards its value because of personal sentiment. Finally, the seller may attempt to deliberately misrepresent the car in order to maximize the profit on this one-time deal. In each of these situations the buyer incurs the risk that the transaction will not be consummated on the basis of his expectations and he will not end up purchasing what he anticipated. Being in such a situation, or perceiving a possibility thereof, the buyer may desire to pay an expert to examine the subject of the transaction and express an independent opinion. This expert service constitutes a third-party assurance, the purpose of which is to reduce the buyer's transaction risk. Kelly Blue Book value assessment (a book of used car values used by banks and insurance companies in assessing used car values) or a professional mechanic's examination of the car are possible third-party assurance services that the car-buyer in our example can use.

Our information intensive society is filled with situations where buyers lacks relevant knowledge and cannot rely on the seller's product presentation only. This is especially common

with e-commerce. Anonymity of market participants, global access, ease of obtaining or changing identity, and underdeveloped moral and legal codes of conduct are possible reasons why some consumers perceive buying on the Internet is not worth the savings it has to offer and others seek ways to minimize risk.

One strategy consumers may employ to minimize risk is to buy from “safe” sellers only. Prevalence of this consumer behavior is evident in the rapid growth of online sales for large department store chains (Wal-Mart, Sears, JC Penny) in the post-2001 era (Laudon and Traver 2007). However, while this strategy is a natural choice for a conservative consumer, the choice clearly indicates market inefficiency because it creates undue consumer focus on a few “Big names” and places mistrust on scores of other merchants. This situation also defeats the dream and the advantage of e-commerce: letting consumers buy directly from a multitude of merchants.

An alternative consumer strategy is to include most of the sellers in the scope of the choice, with the exception of clearly high risk sellers. Selection of a seller within this scope requires knowledge which may come as a result of the consumer’s attempt to collect information about the seller and the product from sources on the Internet (e.g., Google, Froogle, MySimon) or through expert advice (e.g., Consumer Reports or “online assurator”). Expert advice to the consumer at this stage or previous accreditation of the seller (or the product) by an independent trusted knowledgeable assurator is valuable to consumers and facilitates trust in the seller(s). Enablement of such a consumer strategy is clearly in the best interests of society because sellers will enjoy higher demand for their wares and consumers will have a variety of sellers competing for their dollar. Thus, assurance mitigating information risk may be a valuable service to the market participants enabling higher market efficiency. The absence of such assurance providers in the market can only be explained by inability to create a viable business model with a strong

consumer/merchant value proposition. At the same time, the demand for assurance services and the existence of the market niche is intuitively felt by the professional services firms and other businesses. Many (TRUSTe, BetterWeb, BBBOnline, WebTrust, ePinions, MySimon) have begun experimenting with business models addressing various components of consumer information risk and have achieved diverse degrees of success. The development of an exemplary model is still anticipated.

One of the key questions in developing an assurance business model is the assessment of an objective value that consumers or/and merchants place on information assurance services. In an ideal situation, the value of assurance services could be deduced by comparing two identical products or services, such as two identical used automobiles, where one product carries a third-party assurance and the second product does not. In our search we found only one study (Blackwell et al. 1998) that addressed this issue by estimating the economic value of audit services by analyzing whether auditor association leads to reduced interest rates on revolving credit agreements. The authors concluded that the firms that purchase audits pay lower interest rates after controlling for firm-specific risk factors and relevant loan characteristics. However, loans were made to different companies under similar but different conditions and the study involved audits rather than a broader assurance service. The Blackwell et al. (1998) study includes controls for many endogenous variables, but is still limited by the approximations necessary when using proxies in mathematical modeling.

This study contributes to the research on the topic of online assurance. It addresses the question of the value of information assurance services and does it in a non-audit setting. The study conducts an empirical test in a setting which is nearly ideal: paired observations in our sample are fundamentally identical in all aspects except for third-party assurance.

## **2.2. The Market for Baseball Cards**

The market for baseball cards has been used as means of collecting empirical data for research studies in economics, labor, and social science. Nardinelli and Simon (1990), Andersen and La Croix (1991), and Scahill (2005) used data from the baseball card market to show that race was a determining factor in the price that consumers were willing to pay for a card. This study was subsequently refuted by McGarity, Palmer and Poitras (1999) again using the baseball card market as a source of data. Stone and Warren (1999) found similar results using the market for basketball trading cards. Gabriel, Johnson, and Staton (1999) studied racial discrimination in the market for players at both the start and end of a player's career. The authors concluded that discrimination against black and Hispanic athletes exists in rookie cards more so than in cards at the end of the player's career. It is posited that at the beginning of the player's career performance, expectations are more critical in the potential value of a baseball card and bias appraisal may exist.

Gill and Brajer (1994) used the baseball card market to investigate the relationship between baseball card prices and players salaries. Card prices were used as a proxy for the player's popularity or "star quality" in studying the free-agent market for baseball players. The authors found a monopsony exploitation of non-free-agent players. Mullin and Dunn (2002) also utilized baseball card prices to study labor economics in a monopsony market with results similar to Gill and Brajer.

## **2.3 Professional Sports Authenticator**

You want to be able to buy cards with the confidence that they are accurately graded – and that's where we come in. (PSA website)

Professional Sports Authenticator (PSA) is the world's largest third-party trading card authentication service. PSA rated over 1 million trading cards in its fiscal year 2005 generating

over \$8 million in Revenue<sup>1</sup> (Collectors Universe Inc. 2005 10-K, 2005). Cards are sent to PSA, graded on a scale of 1 to 10, and are sealed in a plastic case to ensure that cards are not damaged following the rating. The grading system is described in Table 1 and an example of a PSA graded card is shown in Figure 1. PSA has been so successful in the market place that the word/abbreviation rating scale shown in Figure 1 has become common terminology in the trading card market.

## **2. 4 eBay**

eBay was formed as a sole proprietorship in September 1995. In 1998, ebay had 30 employees and 300,000 users. These users spent less than \$200 million on eBay products (eBay Annual Report, 2001). By the end of 2002, eBay had become the premiere online marketplace for the sale of goods and services. In 2005, individuals and companies sold more than \$44 billion dollars to more than 180 million registered members representing the listing of over 1.6 billion items. People spend more time on eBay than any other internet site ([www.ebay.com](http://www.ebay.com)).

The eBay trading platform is a fully automated, topically arranged, and easy-to-use online service that enables sellers to list items for sale in either auction or fixed-price formats. Buyers may buy or bid for items placed on eBay by sellers from anywhere in the world (eBay 10K, 2001). In fact, eBay has become the only truly global auction place.

## **2.5 Hypothesis**

Trading cards, coins, stamps and other collectible items provide a unique opportunity for studying assurance services. Items can be identified as fundamentally the same on all characteristics except quality. For example, a 1960 Roosevelt dime minted at the Denver mint is fundamentally the same as every other 1960 Roosevelt dime minted at the Denver mint. The only difference in the numismatic value of two coins is the amount and type of wear.

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<sup>1</sup> PSA is a division of Collectors Universe.

Trading cards offer a similar collectible market as coins. Cards are distinctively identified by year, player, card manufacturer, and card number. A 1962 Mickey Mantle card, manufactured by the Topps Trading Card Company and identified as #200 in the set, is fundamentally the same as all other cards with these identifiers, except for the damage it may have sustained over the course of time. PSA certification establishes a quality rating that can be used to compare the condition of baseball cards.

Offering a card in an online auction, a seller may indicate the quality of the card in two ways. First, the seller may provide a textual description and pictures of the card attesting to the card's quality. Unfortunately, as we suggested above, the seller's assessment of the card's condition and resulting description may be biased. Furthermore, the seller also has an incentive to make pictures of the card that minimize its defects. At the extreme, the seller may copy a picture of the card posted by someone else in a prior auction and include it as the image of the card in his possession. Potential for seller bias or manipulation creates information risk for buyers. The second and fundamentally different way is for the seller to have the card rated by a third-party grading service such as PSA in addition to self-disclosing information about the card.

Two cards (same player, same number) were fundamentally identical at the time when they left the printing press. The only factor that mediates any value difference between the cards today is relative card quality. This factor is not directly observed by the buyer. Instead, the buyer has to base the purchase decision either on seller-provided information or on seller-provided information *and* a third-party independent assurance service. Since the seller-provider information is subject to a standard in our case (seller stating that the condition of the card meets PSA grade X in his opinion) and may be perceived as less trustworthy than the independent

review, we suggest that it is only the third-party assurance service that can explain the difference in the price paid for the two identical cards. We formulate this in the following hypothesis:

H1: The auction price paid for a baseball card with third-party assurance is higher than the price paid for an identical card without third-party assurance.

### **3. Methodology**

The authors searched the eBay website for baseball cards that met specific study criteria (see sample selection below) in order to find a matched set of cards. One card must have indicated a specific PSA rating in the title of the auction. The corresponding matched sample must have included quality wording as outlined in Table 1 that was equivalent to the PSA rating. Neither card could include any additional rating or quality assurance. At the time the auction was completed, the authors collected information regarding the auction price of the card.

#### **3.1 Sample Selection**

During the active bidding for an item, bidders may browse a category for items that met the criteria of the study. The researcher browsed the eBay main section “Trading card,” subsection “Baseball MLB.”<sup>2</sup> The researcher selected items of interest and viewed the remainder of the site to identify a corresponding sample (see section on sample matches).

It should be noted that once the bidding is complete, the auction items could no longer be viewed in the browsing area of the auction category. Completed items can only be viewed if you know the item number or other pertinent information regarding the item. Therefore, potential sample items were identified prior to the completion of the bidding, and the potential sample matches were made before the final dollar value was known to the researchers.

#### *Sample matches*

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<sup>2</sup> MLB indicates Major League Baseball. Baseball trading card sections exist for minor league baseball.

Samples were matched when two duplicate cards were found with the following criteria:

- 1) To ensure the cards were duplicates, each card had to be identified by player, year, card manufacturer, and card number;
- 2) One card needed to include a PSA rating in the title of the auction item;
- 3) The duplicate card had to be a non-rated card and include a corresponding PSA wording or abbreviation;
- 4) The auctions for the two cards in the pair must have closed within 10 days of each other.

Figure 2 provides an example of a matched set.

### **3.2 Sample Control Criteria**

Auctions must have been completed. As previously mentioned, potential samples were identified prior to the completion of the auction. In order to be included in the sample, the auction must have been successful and complete. Items were eliminated for several reasons:

- 1) There were no bids made on the item. This sometimes occurred when the seller placed a minimum bid that was too high. The auction was deemed unsuccessful and not included in the sample.
- 2) The item sold prior to completion of the auction. eBay sellers may include a “buy it now” option for the auction. For example, if the opening bid is \$10, the bidder may be given the option to avoid the risk of the bidding process and buy the item immediately for \$30. The “buy it now” option may be eliminated once the bidding has started or the reserve price of the items is met. If the bidder accepted the “buy it now” option, the auction was deemed as following a different trading model and the item was not included in the sample.

3) It is possible that the highest bid is below the reserve price established by the seller. In this case the seller has no obligation to sell the card and the auction is deemed not successful; thus, items for which the reserve price was not met were excluded from the sample.

Players must be retired. Many factors could change the value of the trading card.

Changes in the status and information concerning a player could change the value of a playing card. An active player could do something of note on any given day (such as pitch a no-hit baseball game) that could affect the player's stature and hence the value of the trading card. Even a player trade from a small market franchise (e.g. Milwaukee Brewers) to a large market franchise (e.g. New York Yankees) may affect the demand for the player's card and the cards market value. In order to minimize these occurrences, trading cards for active players and managers were excluded from the sample.

### **3.3 Potentially Confounding Variables**

As previously mentioned, events and information concerning players can affect the value of the trading card. Where intervening variables were identified, auctioned items were eliminated. For example, during the sample selection Ted Williams, a great baseball player and a member of baseball's Hall of Fame passed away. While there are auctions of Ted Williams baseball cards included in the sample, both cards in the matched pair had completed their auctions either prior to Ted Williams's death or both auctions were started following his death. No auctions were used where either auction was in process when his death occurred. Similarly, events such as awards and honors would void a matched pair if these honors were announced during the auction of either card in the pair. To minimize the possibility that such events might

occur undetected, as previously stated the auctions for the two cards in a pair must close within 10 days of each other.

### 3.4 Control Variables

We included the following control variables in our analysis: Payment method, subscription to Square Trade seal, quality of reputation feedback, and length of seller tenure on eBay.

We distinguish between three categories of payment methods including cash or money order only coded as 0, online payment only coded as -1, and all forms of payment accepted (online, check or money order) coded as 1. We conducted sensitivity analysis by coding payment in various ways. None were statistically significant.

**Comment [f1]:** Since this is a categorical variable, it would not make a difference if we coded it differently.

We include a binary variable SquareTrade (ST) to indicate sellers that exhibit this insurance seal and participate in mediated disputes. Prior academic literature (Nikitkov 2006) suggested positive association between the presence of this seal and consumer purchasing behavior.

We also control for seller reputation. Multiple studies (Resnick and Zeckhauser 2002, Dellarocas 2003, Nikitkov 2006) suggest that higher reputation feedback quality and length of trading on eBay instill consumer confidence in a purchase from the seller and thus result in higher purchasing prices. To control for these two effects, we include variables that represent the percentage of positive feedback left by unique trading partners and the number of previous sales that the seller participated in. Both statistics are calculated by eBay.

Information was collected regarding each of the aspects indicated above and a control variable was utilized to determine if any of these situations had an affect on the matched-pair auctions.

### **3.5 Value Requirement**

The minimum incremental bid in an eBay trading card auction is \$.25. For cards with a low dollar value (e.g. \$2.00) the increase of \$.25 is a large percentage increase. At these low values, even minor differences in price may result in large percentage differences in the matched pair. Such differences may skew the results. Therefore, an arbitrary minimum dollar value was imposed. To be used in this study, one of the auctions must have closed at a value of at least \$20.

### **3.6 Data Collection**

Matched pairs were identified based on player, year, card manufacturer, card number, and grade. Pairs were also matched by grade, however, one card was graded only by the seller and the other card was graded by PSA. Once a potential matched pair was identified the researchers waited until the auction ended. At that time, the researchers used the search mechanism available on ebay and the auction identification number to view the completed auctions. If the auction successfully completed, the ending auction pages were printed. The researchers recorded the card identification information, card rating (either PSA or seller), and the time and date the auction ended, seller information, payment information, and the final auction price.

### **3.7 Nature of the Sample**

As the researchers attempted to identify matched pairs it became apparent that several characteristics of the baseball card market significantly influenced the sample. First, the supply of baseball cards printed prior to 1951 is considerably smaller than the supply of cards printed after 1951. One reason for this is simply the age of the cards and the market for baseball cards in the early years. Prior to the 1950's, few individuals collected baseball cards. In fact, prior to 1933 baseball cards were mainly provided in cigarette packs and were not marketed as a

collectable. In 1951, the Topps Bubblegum Company began to include a baseball card with its bubble gum in order to sell more gum. Topps was extremely successful, and the printing and collecting of baseball cards expanded greatly with Topps becoming the major producer of baseball cards for the next 40 years. Because of the small supply of cards prior to 1951, the probability of finding a matched set of cards was extremely small. Therefore, none of the matched pairs are from cards prior to 1952.

Second, as the baseball card market grew in the late 1970s and 1980s, many new companies entered the trading card market. In addition, existing companies, such as Topps, greatly increased production. As a result, few cards escalated in value as compared to the older cards. Since there is a cost to the rating service, few individuals are willing to incur the cost of rating a card with a perceived low value. This makes finding matched pairs more difficult. In addition, many cards in the late 1980s and 1990s are for players who are still active players. Because of the dollar value requirement and the active player requirement, few players from the 1970s are included in the sample and no pairs later than 1978 were identified.

One hundred matched pairs were identified (see Table 2). Panel A of Table 2 shows the breakdown of the sample by card grade. Most of the matched pairs occurred in grades 5, 6, 7 and 8 (88.0%). This is most likely because cards in poor condition usually have low value and would not warrant the expense of paying for professional grading, thus proving it difficult to find a matched pair. In addition, cards with grades of 9 and 10 are uncommon and make finding a matched pair more difficult. Table 3 indicates that that the graded card (PSA) auction closed before the ungraded card (non-PSA) 40 % of the time. Twenty-one (21%) of the matched pairs had auctions that closed on the same day.

#### **4. Results**

Table two indicates that the PSA card sold for a mean higher price in seven of the eight grades (2-9) for which there is data. Only in grade three, for which there is only one matched pair, did the non-PSA card sell on average for more the PSA card. For the entire sample, the mean value of the PSA card was over \$88 more than that of the non-PSA card.

All results presented were obtained using an analysis of covariance model defined as follows:

$$CP = \text{Datecat} + GR + \text{PSA} + \text{Pay} + \text{ST} + \text{Sell} + \text{\#sell} + e$$

CP = Card Price

Datecat = Date and order of the auction closing

- 1- PSA graded card closed before the non-PSA graded card (not on the same day)
- 2- Non-PSA graded card closed before the PSA graded card (not on the same day)
- 3- PSA graded card closed before the non-PSA graded card (auctions closed on the same day)
- 4- Non- PSA graded card closed before the PSA graded card (auctions closed on the same day)

GR – The grade indicated on the card (2 – 9)

PSA – 1 if PSA graded; 0 if not PSA graded

Pay – Payment method

- 1- All forms of payment accepted (online, check, money order)
- 1 - On line payment only
- 0 – Cashiers check or money order only

ST – 1 if seller has square deal; 0 if no square deal

**Comment [ 2]:** Square deal or square trade seal?

Sell – eBay percentage of positive feedback for card seller

\#sell – Number of sales for seller

The analysis of covariance indicates that information assurance, the PSA grading of the card, has high statistical significance in explaining variation in the card auction prices. None of the control variables were statistically significant. The model exhibited sufficient fit with R-squared of .163 (adjusted 0.089). The difference between assured and non-assured card prices for

matched pairs was also significant in terms of value: overall mean (median) difference (PSA closing price – non-PSA closing price) amounted to \$88.15 (\$41.79).

## **5. Conclusion**

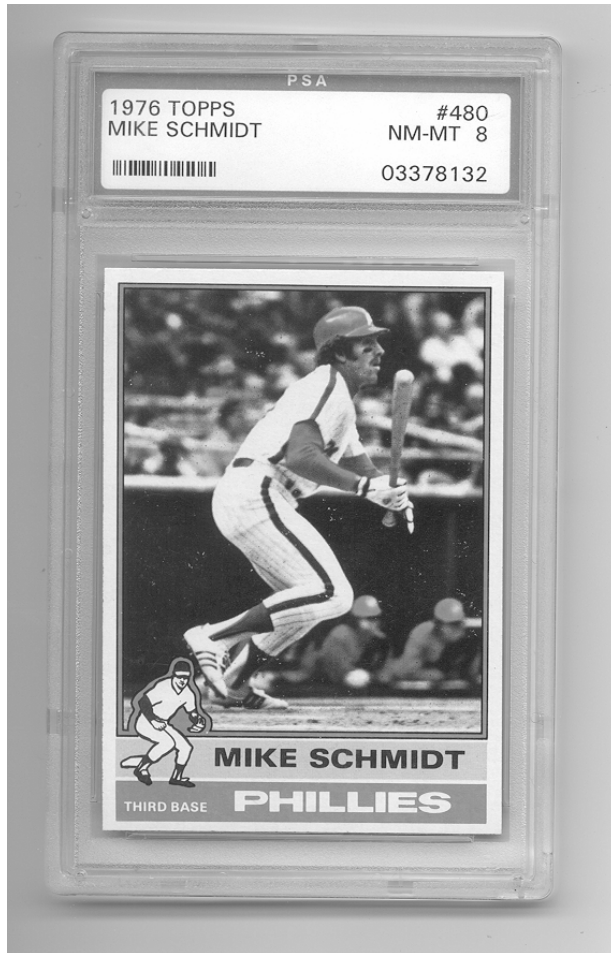
Our results obtained from the baseball card market indicate that online auction buyers place high value on independent information assurance. Bidders were willing to pay on average \$39 – 142 more, depending on card grade, if the card was certified by a third-party professional assurance provider. While these results were obtained from a specific collectors' market, we suggest that they may hold for other online market makers employing trading models similar to eBay. The existence of the need for an independent information assurance provider is corroborated by many attempts to develop a viable assurance seal (e.g., Square Trade, Buy Safe, Trusted Seller, BBB online). Furthermore, our results suggest that lack of success with the WebTrust initiative comes not because of lack of the demand or market opportunity for such a service, but rather possibly because of the insufficiently developed value proposition. It appears that while online customers realize a need for expert advice, they are not knowledgeable as to how exactly WebTrust or another independent assurance provider can fulfill their needs. In order to convince sellers to purchase assurance services, Web Trust or other assurance providers need to convince buyers that the service offered effectively mitigates information risks at the focus of the buyers' concerns. Thus, we suggest that the demand for assurance service on the part of the sellers comes as a result of fulfilling the needs of sellers' customers, the need to have an independent opinion regarding the seller or seller's product quality. This is exactly the model exercised by PSA and it has worked since 1991.

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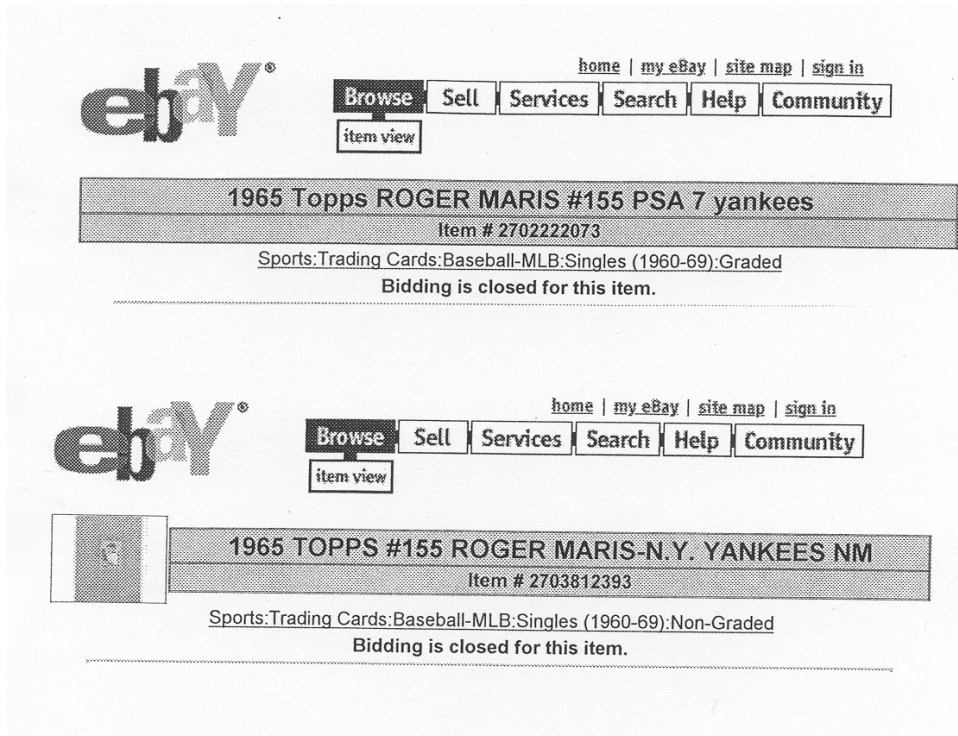
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**Figure 1**  
Example of PSA rated card



**Figure 2**  
Example of Matched Sample



**Table 1**  
PSA Ratings

PSA rating number	Description of PSA rating	Commonly used abbreviation for PSA rating
10	Gem Mint	GM MT
9	Mint	MT
8	Near mint - Mint	NMMT
7	Near mint	NM
6	Excellent – Near mint	EXNM
5	Excellent	EX
4	Very Good	VGEX
3	Good	VG
2	Fair	PVG
1	Poor	PR

**Table 2**  
Sample Statistics

Card Grade	Number of Matched Pairs	Mean Difference of PSA vs. Non-PSA Prices	Median Differences of PSA vs. Non-PSA Prices
2	1	45.26	45.26
3	1	(24.55)	(24.55)
4	7	8.54	24.00
5	15	73.43	13.52
6	28	31.31	24.78
7	26	94.60	52.98
8	19	157.42	164.57
9	9	435.25	373.00
Total	100	88.15	41.79

**Table 3**  
ANCOVA Results

$$CP = \text{Datecat} + \text{GR} + \text{PSA} + \text{Pay} + \text{ST} + \text{Sell} + \text{\#sell} + e$$

Source	Type III Sum of Squares	df	Mean Square	F	P-value.
Corrected Model	828738.753(a)	16	51796.172	2.222	<b>.006</b>
Intercept	1433.323	1	1433.323	.061	.804
Datecat	8793.719	3	2931.240	.126	.945
GR	237455.412	7	33922.202	1.455	.186
Pay	47069.463	2	23534.732	1.010	.366
PSA	357596.844	1	357596.844	15.342	<b>.000</b>
ST	15133.507	1	15133.507	.649	.421
Sell	1685.227	1	1685.227	.072	.788
\#Sell	34504.455	1	34504.455	1.480	.225
Error	4265512.711	183	23308.813		
Total	7894942.710	200			
Corrected Total	5094251.464	199			
R Squared	.163		Adjusted R Squared	.089	

CP = Card Price

Datecat = Date and order of the auction closing

- 1- PSA graded card closed before the non-PSA graded card (not on the same day)
- 2- Non-PSA graded card closed before the PSA graded card (not on the same day)
- 3- PSA graded card closed before the non-PSA graded card (auctions closed on the same day)
- 4- Non- PSA graded card closed before the PSA graded card (auctions closed on the same day) – the coding of this variable was a bit confusing to me. I do know the mechanics of the coding. Could David possibly try to revise the variable coding explanation?

GR – The grade indicated on the card (2 – 9)

PSA – 1 if PSA graded; 0 if not PSA graded

Pay – Payment **method**

- 1- All forms of payment accepted (online, check, money order)
- 1 - On line payment only
- 0 – Cashiers check or money order only

**Comment [f3]:** This is a categorical variable. It will not matter if it is coded 1, 0, -1 or 1, 2, 3.

ST – 1 if seller is registered with Square Trade and exhibits the seal; 0 if no seal

Sell – eBay percentage of positive feedback for card seller

\#sell – Number of sales for the seller