

# Supplement Online Material

## Mergers and Acquisitions: An Experimental Analysis of Synergies, Externalities and Dynamics

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### A Instructions for the sessions

#### Overview

There are three roles in this exercise: Axel.com, BRing.com, or Cparts.com. All three are business to business (B2B) Internet companies. Each of you has at your seat a role assignment sheet with your role assignment (along with some other information that will be explained later) printed on it. This is the role you will play throughout the session.

The consensus among analysts is that acquisitions and consolidations in the B2B sector are opportunities for creating greater value in the marketplace. Specifically, Axel.com, BRing.com, and Cparts.com have all independently concluded that there are quantifiable synergies that could be achieved by combining operations. All three are currently considering either acquiring or being acquired by the other companies.

In this session, you will participate in a number of periods of potential consolidation. In each of the periods you will have the opportunity to acquire or be acquired. You will earn points as a result of your acquisition decisions. **When a new period begins, everything starts over with independent firms and new acquisition activity.**

At the end of the session, we will randomly choose one of the periods as the payoff period. You will receive \$ 0.11 for each point you earned in that period. For example, if you earned 150 points in the payoff period, we would pay you \$ 16.50 (plus the \$ 15 base pay for your participation). The more points you earn, the more the shareholders of your firm (yourself included) will earn and (in real life) the more money you will earn from this session.

#### Procedure

- All interactions will take place over the computer. You will be connected through an on-line communication tool with two other parties. The attachments at the end of this packet provide pictures of the computer screens at different points during a period and explain how you will communicate and make / accept / reject offers during each period.
- All interactions will be anonymous, please do not identify yourself in any way.
- You will have one role throughout the periods, as noted on your role assignment sheet.

- You will be interacting with representatives of both of the other companies in each period. You will never interact with the same parties more than once. In particular, your counterparts in period 1 will be different than your counterparts in period 2, and so on.
- Each period will last **ten minutes**.
- When each period is over, please wait until instructed before you exit your screen to begin a new period.
- Each period is completely independent of all other periods. When a new period begins, the screen will be cleared and you will be connected with two new and different players.
- All communication, including offers and acceptances/rejections is public information and will be displayed on all three parties' screens throughout the entire period.
- You may not enter an offer greater than the value of the three-way consolidation. For example, if an A - B - C merger is worth 400 points, A's offers to B and C cannot sum to more than 400 points. If A makes offers (or a single offer) that total more than 400 points, the offer(s) will not be transmitted. Likewise, any offer less than 0 points (or a blank offer box) will not be transmitted.
- Only one offer can be outstanding at a time. Offers remain active for 15 seconds. If the seller either rejects the offer or fails to respond within 15 seconds, the offer is automatically withdrawn. Similarly, if an offer is made to two sellers simultaneously, **both** firms must accept within 15 seconds in order for the deal to proceed.
- If the seller(s) agree to the offer, the transaction takes place and the points are distributed as listed in the offer box (See computer screen shots, attached). Once an offer is formally accepted, the sale is final. Payoffs are noted on your screen.
- Once a sale is final, the representative of the selling company is restricted from taking part in any further communication. If only one company has been purchased, the remaining companies (one consolidated and one independent) may continue communicating up to the ten-minute time limit. All three parties will still be able to see all messages exchanged, but only the parties still holding companies are able to communicate.
- More than one sale may occur in a single period. Note that a second sale will change the earnings of the parties involved.
- *History Form.* A blank 'History' form is provided in your folder. At the conclusion of each period, please fill out this form. The completed form provides you with a history of your past deals, and you may reference it at any time during the session.
- You will be paid for only one, randomly selected period.

(Please Note: The payoffs and role on these screens may not match your own payoffs or role)

### Initial Screen

Game Time: 600

AXEL.COM: This is the communication box.

BRING.COM: All communication is public and shows up on the screens of all 3 players.

CPARTS.COM: you can add to the dialog box by typing into the input box below.

Offer

Offer

Offer

Offer

Offer boxes: This is where you make formal offers

Structure of industry	Value of firms
No merger	
A and B merger	
A and C merger	
B and C merger	
A, B, and C merger	

Game clock

Send  This is the input box, where you type your input

Formal Offers

Accept offer button

Reject offer button

Accepted Offers

Type your company name into this box, A, B, or C

Type your password noted on your role sheet into this box

Company

Password

Connect

Accept

Reject

This is where the current payoffs are shown.

### Second Screen: After signing in (Example for Cparts.com)

Game Time: 597

Offer  points for Axel.com

Offer  points for BRing.com

Offer  points for Axel.com and  points for BRing.com

Structure of industry	Value of firms
No merger	A=100 B=100 C=100
A and B merger	AB=300 C=40
A and C merger	AC=290 B=50
B and C merger	BC=260 A=90
A, B, and C merger	ABC=400

Possible payoffs in points

Send

Formal Offers

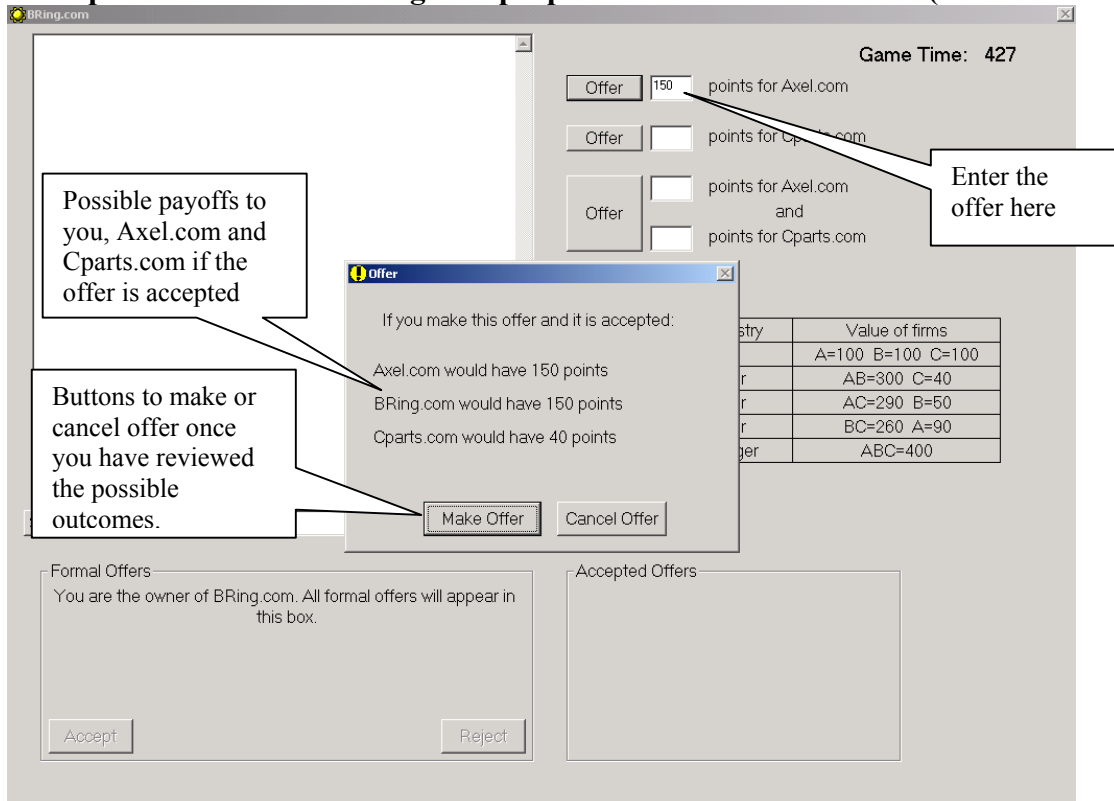
You are the owner of CParts.com. All formal offers will appear in this box.

Accepted Offers

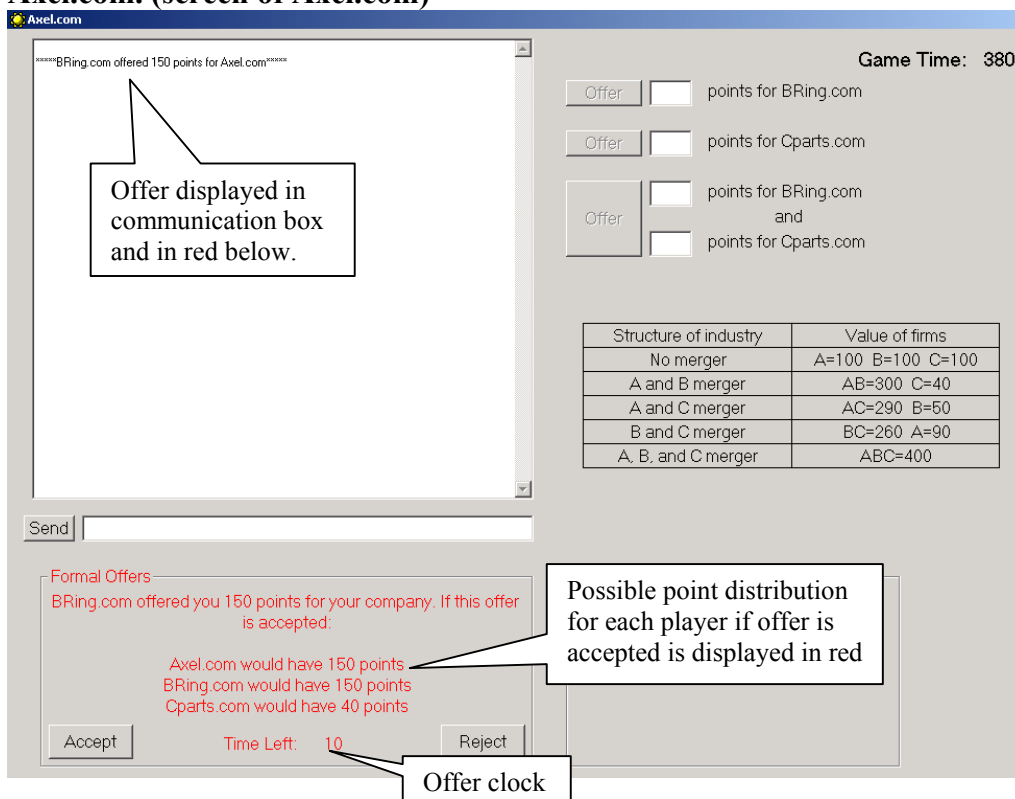
Reject

This indicates your role.

**Example of screen when Bring.com proposes an offer for Axel.com (screen of Bring.com)**



**Picture of screen after the “Make Offer” button was selected. Bring.com made offer for Axel.com. (screen of Axel.com)**



## Example of Cparts.com screen after an offer by Bring.com for Axel.com is accepted

Game Time: 308

Offer  points for the combined company BRing.com/Axel.com

**The accepted offer**

Structure of industry	Value of firms
No merger	A=100 B=100 C=100
A and B merger	AB=300 C=40
A and C merger	AC=290 B=50
B and C merger	BC=260 A=90
A, B, and C merger	ABC=400

Accepted Offers  
Axel.com was sold to BRing.com for 151 points.

Current Values:  
Axel.com = 151  
BRing.com = 149  
Cparts.com = 40

**Offer accepted**

**Offer option left for Cparts.com**

**Current (but possibly not final) point distribution**

## Example of final screen after two offers were accepted:

Game Time: 205

**All offers recorded in communication box**

Structure of industry	Value of firms
No merger	A=100 B=100 C=100
A and B merger	AB=300 C=40
A and C merger	AC=290 B=50
B and C merger	BC=260 A=90
A, B, and C merger	ABC=400

Do not press "Exit" until you are instructed to do so.

**Exit**

**Final point earning of each player**

**Exit button: DO NOT PRESS UNTIL INSTRUCTED TO DO SO.**

Results  
Axel.com earned 151 Points.  
BRing.com earned 94 points.  
Cparts.com earned 155 points.  
Please wait for further instructions.

## B Quiz

Please fill in the missing numbers.

### Problem 1:

Axel.com and Cparts.com agree to consolidate. Cparts.com offers Axel.com **3** points to purchase Axel.com, and Axel.com accepts. No other consolidation takes place.

- Axel.com earns \_\_\_\_\_ points (from sale to Cparts).
  - BRing.com earns \_\_\_\_\_ points (default points from AC consolidation).
  - Cparts.com earns **2** points (\_\_\_\_\_ AC consolidation points - \_\_\_\_\_ to Axel).
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### Problem 2a:

Imagine that the above negotiation between Cparts.com and BRing.com continues after Cparts.com purchase of Axel.com in the question above.

BRing.com offers to buy the newly consolidated company of Axel/Cparts.com. BRing.com offers Cparts.com **50** points to purchase the Axel/Cparts.com consolidated company. Cparts.com accepts.

- Axel.com earns \_\_\_\_\_ points (from previous sale to Cparts.com).
  - BRing.com earns \_\_\_\_\_ points (**400** ABC consolidation points - \_\_\_\_\_ to Cparts.com).
  - Cparts.com earns **47** points (\_\_\_\_\_ from BRing.com - \_\_\_\_\_ previously paid to Axel.com).
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### Problem 2b:

Again imagine that the negotiation between Cparts.com and BRing.com continues after Cparts.com purchase of Axel.com in problem #1.

In this scenario, Cparts.com offers to buy BRing.com to form the consolidation of all three companies. Cparts.com offers to buy BRing.com for **350** points. BRing.com accepts.

- Axel.com earns \_\_\_\_\_ points (from previous sale to Cparts.com).
- BRing.com earns \_\_\_\_\_ points from Cparts.com.
- Cparts.com earns **47** points (**400** ABC consolidation points - \_\_\_\_\_ from Cparts' previous payment to Axel - \_\_\_\_\_ to buy BRing's rights to the consolidated firm).

## C Negotiation History

At the end of each negotiation, record all points in points and then your own earnings (if this negotiation were selected in the lottery) in dollars. Each point is worth US\$ 0.11.

Negotiation 1      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 2      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 3      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 4      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 5      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 6      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 7      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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Negotiation 8      Axel.com points \_\_\_\_\_      BRing.com points \_\_\_\_\_      Cparts.com points \_\_\_\_\_

Your earnings if this negotiation is chosen for payment: US\$ \_\_\_\_\_

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