SI 680 - Contracting and Signaling, Winter 2008

MacKie-Mason, Jeffrey K.


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1 Introductory Material

“RIM’s case highlights a business problem that countless technology companies have had to deal with: when a company creates a revolutionary product whose software becomes critical to the establishment of a market, it has to figure out whether to keep its software all to itself or to license it in an effort to make its technology the industry standard.”

**QUESTION: Other examples?**

- PalmOS
- Netscape (modularity problem)
- MacOS

According to executives, “RIM’s goal was to build a middleware platform for mobile e-mail that was compatible with multiple devices, applications, networks, and protocols that spanned the globe.”

"We always wanted to go there but the question was, Would anyone go with us?” CEO Jim Balsillie. **QUESTION: Why go there?**

- If they retained a single closed system, then someone else could create a better / faster / cheaper system and unseat them: could offer entire soup-to-nuts package to major clients
- If Blackberry is a middleware standard, then everyone can make devices, license and sell the software, but they all become dependent of the Blackberry std., have to pay a toll
Increasing number of devices wanted wireless push-email. If BB wouldn’t license, these devices would have had to roll their own or find another supplier. By licensing, BB makes it less attractive for competitors to invest in entering (Palms, cell phones, etc.)

## 2 Case Assignment Material


Come prepared to discuss the following:

1. Calculate the (approximate) total % growth (or decline) in Research in Motion’s (RIM’s) stock price (adjusted for splits) from Nov 2002 to end of Feb 2008. From this calculate the average annual compound rate of growth (or decline).
   - From Yahoo! Finance: 11/02 adj close: 2.55; 2/08 adj close: 109.05
   - Total return \( \left( \frac{y_1 - y_0}{y_0} \times 100\% \right) = 417.647\% \)
   - Number of months: 63
   - Monthly return: \( y = (1 + r_m)^{t/m} \) so, \( r_m = \left( \frac{y}{x} \right)^{1/t} - 1 = 6.1\% \)
   - Annual return: \( (1 + r_m)^{12} - 1 = r_a = 104.5\% \).

2. What is the average annual compound rate of growth (or decline) of the S&P 500 from Nov 2002 through Feb 2008?
   - From Yahoo! Finance: 11/02 ad close: 936.31; 2/08 adj close: 1,367.68
   - Annual return 7.5%

3. What is Blackberry’s approximate market share of”smartphones” (phones that can receive email) in the US (or North America) around the end of 2007 or start of 2008? What is your source for this measurement? Do you trust it?
   - possible source: [http://blogs.techrepublic.com.com/hiner/?p=575](http://blogs.techrepublic.com.com/hiner/?p=575) See Figure [1]. From Canalys (source of graphic): “Canalys estimates that Apple took 28% share of the fast growing US converged device market in Q4 2007, behind RIMs 41%, but a long way ahead of third placed Palm on 9%. This was also enough to put Apple ahead of all Windows Mobile device vendors combined, whose share was 21% in the quarter according to Canalys figures.” (http://www.canalys.com/pr/2008/r2008021.htm).

The smartphone market is shaping up like a three-horse race in 2008. BlackBerry remains the leader, Windows Mobile continues to make slow and steady progress, and Apple has come out of nowhere with the hottest and most widely hyped product of the year to become a legitimate contender with the iPhone.

A study by the IT analyst firm Canalys revealed that the iPhone surpassed Windows Mobile market share in Q3 (see graph below).

![North American Smartphone Market Share, Q3 2007](source: Canalys)


4. How does RIM's licensing strategy help it in the growing battle with the iPhone? How does it hurt?

• There are considerable user switching costs. The more who have already invested in / committed to Blackberry, the fewer are likely to adopt iPhone (soon). (QUESTION: What are some of the switching costs? Long-term contract, learning interface, getting used
to features (e.g., iPhone has no keyboard but Blackberries (generally) do. Etc.)

- Apple is insisting on design control. The more hardware mfgs who have committed to Blackberry, the fewer are likely to feel it worthwhile to give up design control for an iPhone that competes with their already offered BBs.

3 Hidden characteristics

- **QUESTION:** What hidden characteristics problems does RIM face in its software licensing?
  
  Doesn’t know how much a license is worth to each customer

- **QUESTION:** What structure of licensing should it adopt?
  
  - Flat fee for unlimited installations of BB software?
  
    Info remains hidden, all pay same price
  
  - Flat per installation fee?
  
    Captures one type of hidden heterogeneity in WTP
  
  - Different fee per installation based on number of installations?
  
    2nd degree PD: self-selection contract
  
  - Should there be both fixed fee and variable fee? Why?

    Variable fee provides incentives
    
    * Quantity discount or quantity premium?
    * Why? Which design result tells us that?
    * Lower fee for bigger customers (quantity discount)
    * Then use fixed fee to extract profit / rent: so those with lower variable fee pay higher fixed fee