

Chapter 4.7

Evolution of Online Financial Trading Systems: E-Service Innovations in the Brokerage Sector

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ABSTRACT

This chapter focuses on the theme of e-service innovation in financial electronic markets. The discussion will cover the theories of “technology bundling” and how bundling creates value-added in servicing electronic markets. More specifically, this chapter looks at innovations created through e-service bundling for online brokers connected to various financial electronic markets. The proliferation of different e-trading systems raises the question of which systems provide better service to online stock traders. Many online brokers (e-brokers) now provide low-cost transactions and financial research capabilities, so where is the next level of innovation? The objective of this chapter is to show that several innovations in broker e-services are critical in the following areas: (a) how order processes are

efficiently managed in financial e-markets; (b) how responsive e-trading systems are in handling trading rules and regulations; (c) how different systems address unique niches in financial e-markets; and (d) improving systems stability and reliability.

BACKGROUND

Introduction

In this chapter, we start analyzing an entire sector (the brokerage service sector) rather than one particular business organization in order to understand the case studies. The reason for using the entire sector as the *unit* of analysis is that the e-service problems and challenges are similar for the entire sector and is not unique to one organization alone (see next section, which discusses the problem of

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this sector). More so, the best way to illustrate the e-service innovations of online brokers, we need to relate their unique e-service solutions to the problem facing the entire sector.

E-service in this chapter is defined as the service provided by electronic brokerage systems used to facilitate the buying and selling of publicly traded corporate stocks and financial securities online. If you want to own/buy shares of stocks in companies like Microsoft or IBM, you can trade their shares electronically through e-brokerage systems like Scottrade, E-Trade, and Ameritrade. By trading shares online, you are using an electronic service similar to an online auction system, where sellers and buyers bid for the prices of different stocks and financial securities. Buyers want to get the cheapest prices and sellers want to sell at the highest prices, and the electronic trading systems help them with that objective. This is a critical e-service for the trillion-dollar global financial market, where stocks, futures, options, bonds, foreign exchange, and commodities are traded daily. These electronic brokers do not necessarily own stocks or financial securities. They process the orders electronically by channeling the orders through different networked financial market systems via the New York Stock Exchange, the London Stock Exchange, the Shanghai Stock Exchange, and many other stock exchanges around the world.

Another critical e-service that needs to be defined is the service that assists online investors and traders to make informed decisions whether to buy or sell stocks and when to execute such trade. E-brokers provide bundled e-services like real-time news reports, real-time charting of stock price movements, the demand and supply of stocks, stock analyst ratings, and research on the company's financial health. This is how different e-services are "bundled" to help facilitate critical decisions in electronic financial markets. Different information systems, software applications, real-time databases, and networking technologies are used in the bundling of e-services.

In previous studies (Yap & Lin, 2001), the transaction capabilities of online trading systems as well as their knowledge-based components have been explored. These studies showed that earlier Web-based trading systems took one to three minutes to execute market orders; whereas more current systems can execute orders in one to three seconds. Transaction speed is not the real issue anymore. The real concern is whether traders are getting the "best price" for their trade executions. The demand for financial research and knowledge-base services online also needs to be more innovative to distinguish the uniqueness of e-services provided by different e-brokers. So the issue is what more can e-brokers provide their clients? In what areas can e-service innovation take place in the online brokerage sector? To get an idea of where innovation needs to happen, the problems of the online brokerage sector needs to be defined. Only then can we see how innovations in technologies and its bundling can provide solutions to such problems.

Defining the Problem in the Online Brokerage Sector

The problems with the electronic services provided by most online brokerage outfits are threefold: (1) *Not all systems comply with the U.S. Securities and Exchange Commission (SEC) Trading Requirements (rules and regulations).* Most information systems used for financial trading have loopholes in terms of preventing traders and investors from breaking SEC rules and U.S. government laws. This is important because many amateur traders are not familiar with laws governing the trading of financial instruments in U.S. financial markets. Breaking the law could be very costly and may prevent a trader from trading stocks again. This is a very serious problem not adequately addressed by e-service systems in the brokerage sector. (2) *There is a need to connect fragmented financial electronic markets to reflect more realistic stock quotes.* There are financial e-trading systems that

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