



Chapter 6

Ten Lessons that Internet Auction Markets Can Learn from Securities Market Automation

J. Christopher Westland

Hong Kong University of Science and Technology

Internet auction markets offer customers a compelling new model for price discovery. This model places much more power in the hands of the consumer than a retail model that assumes price taking, while giving consumers choice of vendor and product. Models of auction market automation has been evolving for some time. Securities markets in most countries over the past decade have invested significantly in automating various components with database and communications technologies. This paper explores the automation of three emerging market exchanges (The Commercial Exchange of Santiago, The Moscow Central Stock Exchange, and Shanghai's Stock Exchange (with the intention of drawing parallels between new Internet models of retailing and the older proprietary networked markets for financial securities.

INTRODUCTION

Internet auction markets, such as those offered by Amazon, eBay, Priceline, OnSale, and CNET's Shopper.com, are earning increased business and investment by offering customers a new model for price discovery. This model places much more power in the hands of the consumer than a retail model that assumes price taking, while given consumers choice of vendor and product. The monetary impact on retailing is currently small (Internet E-commerce in the U.S. in 1998 totaled US\$7.8 billion. Compare this to Wal-

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Mart's retail sales in 1998 of \$130 billion, or total U.S. retail sales in 1998 of \$1.7 trillion. But Internet sales are growing faster than traditional retailing, reflecting the appearance of auction based price discovery that has been made possible by Internet automation of many retailing outlets.

Models of auction market automation have been evolving for some time. For example, securities markets in most countries over the past decade have invested significantly in automating various components with database and communications technologies. Various other technologies have mechanized securities markets for over a century; for example, stock tickers have provided automated real-time reporting of securities prices for nearly a century. Without automation, markets are constrained to operate at the speed of their human facilitators — frequently too slow and localized for complex or high volume market services.

This paper explores the automation of three emerging market exchanges (The Commercial Exchange of Santiago, The Moscow Central Stock Exchange, and Shanghai's Stock Exchange) with the intention of drawing parallels between new Internet models of retailing and the established proprietary networked markets for financial securities.

Emerging market innovations can elucidate more clearly specific issues arising in automation, because the projects are not hampered by tradition, volumes may be smaller, trading more localized, and offerings more homogeneous. It may thus be easier to discern the rationale behind a particular technology choice.

Each of these three exchanges has, over the past decade, experimented with information technology appropriate for its market. Each discovered unique issues and pitfalls in automating its particular exchange operations. This article summarizes what was learned from market automation. The implications for automation of retail markets in general (what has come to be called electronic commerce, or *e-commerce* — are drawn from the lessons learned in automating these securities markets.

CASE STUDY IN THE AUTOMATION OF SHANGHAI'S STOCK EXCHANGE

Deng Xiaoping initiated the "responsibility system" in 1979 — a capitalist innovation which abolished central quotas and allowed farmers and some township enterprises to sell their goods on the open market. Many became rich in the ensuing decade. Savings grew with the growing wealth of the populace, endowing China with one of the highest savings rates in the world — between 35% and 40% of GDP over the past decade. With the introduction of economic reforms in the 1980s, average annual growth was pushed to nearly

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